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Implementation and Comparison between Activity Based Costing and Traditional Cost Accounting System for Small and Medium Scale Industry

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ABSTRACT

The fundamental of ABC is that product consumes activities, activities consume resources and resources consume costs. Based upon this fundamental principle ABC can trace the cost of each activity, accurate cost, and true cost of product for customer satisfaction. There are some limitations in TCA method, so by using ABC method limitation of TCA method can be removed. ABC can give answer how much product cost in different production line L1, L2, L3. For cost calculation a firm of cement industry as a case study is taken. Where a three production line work for producing cement. And using this case study a TCA and ABC method is calculated for product cost and compared between them for getting better result.

Keywords:—*ABC, TCA, resources, activities, direct labor, costing data.*

I. INTRODUCTION

In this global competitive market cost of product is increasing day by day in small and medium scale industries. Costing is important factor for all small and medium industries as well as for customer. In this research project work selection of costing method is playing most important role. And also in this project there is comparison between costing method i.e activity based costing and traditional cost counting method. In this project work also show the best method. Now a days, global completion force manufacturing services and organization to become more flexible, integrated and highly automated in order to increase their productivity and reduce cost. But it is not possible without accurate cost calculation in any industries to gain the productivity. This project attempts to emphasize the necessecity of implementation of never costing system in small and medium scale enterprises by carrying a case study and compare the ABC (activity based costing) method with TCA (Traditional cost accounting) method for getting the best result regarding cost factor. Activity Based Costing (ABC) is an accounting technique that allows an organization to determine the actual cost associated with each product and service produced by the organization without regard to the organizational structure Ali Khozein (2011)[1]. Therefore, Activity Based Accounting System is one of the most modern costing systems; such as system can alone or with current costing systems be applied to provide essential information to make decisions Horngren et

al. (2005)[2].Traditional cost accounting method is another costing method for calculating the cost of product in small and medium scale industries. Traditional cost accounting (TCA) method is not best method because it does not calculate the true cost of product or accurate cost of product.

II. Literature Review

A.K.Turker (2004)[3], proposed a Activity based costing in advanced manufacturing system for estimating the manufacturing and product cost which run under the just in time (JIT) system. In this research work it introduces ABC system to eliminate the drawback of TCA method. Also in this work author describe the implementation of ABC method with the help of mathematical model for estimating product cost.

Sungki Kim (2015)[4], used ABC method (activity based costing) is used in the place of engineering cost estimation method which calculates the cost based on conceptual design of the pyro-process facility. In this research work after calculation it evaluates the pyro-process facilities unit cost.

Smith and Leksan (1991)[5], evaluated that how ABC (Activity based costing) can grow more effective regarding product pricing and profitability, capital investment and performance measurement**.**

Tandung Huynh (2013)[6], Traditional cost accounting (TCA) has been utilized numerous decades and exceptionally famous with associations since it is basic and cheap. In the present business condition, overhead cost has a noteworthy extent in all out cost, utilizing TCA for appointing overhead cost prompt mistake of item cost.

III. Problem Definition

The actual cause and effective relationship between the indirect cost and individual products and service cannot be revealed with the help of traditional costing The current costing system are not able to define distinct methodology for efficient implementation as they only average value of aggregated cost, whereas the optimized controlling of supply chains system demand a correct data base, which shall support the operational as well strategic management function. In the most of the small scale and medium scale business organization operates on traditional costing systems.

IV. Objective of Project

To compare the Activity based costing (ABC) with traditional costing method (TCA) by collecting a data base with the help of case study on manufacturing organization. To propose suggestion for design and implementation of an effective costing system. Also this study aims to suggest procedure for the implementation of costing system in small and medium scale enterprises, In order to gain advantages on economies of scale with the help of analysis on TCA and ABC system.

V. Methodology and Case Study

Objective of this research work it to calculate the accurate cost of all activity involved in industries for producing the final product. In the proposed research work two costing method has to calculate and show their comparison between them to find out the true value of cost. In research methodology ABC and TCA method will be discussed with step by step in this project work. For cost calculation there should be cost data taken from selected industry and these data is taken from different department in small and

medium scale industry. In this project work the Approximate data is collected from Birla cement Satna after selection of suitable costing method. For cost calculation a ABC and TCA method is applied. The steps of ABC and TCA Method is discussed step by step.

Steps of ABC methods Derya Eren Akyol (2007)[7].

Step 1- Identifying the activities, such as engineering, Machining, Inspection etc.

In order to implement in ABC method firstly identifying the activities involved in manufacturing process that form the foundation of system for calculating the accurate cost of product, the activities involved in firm have already discussed in introductory part.

Step 2-Determine the activity cost.

After identification of activities from industries next focus on the calculating the cost of activities with the help of costing formulae, the costing formulae will discussed in case study.

Step 3- Determining the cost drivers such as machining hours, number of setups, engineering hours…,etc,

After determining the activity cost next step is to calculate the cost drivers with help of mathematical formulae, which will discussed in case study.

Step 4-Collecting the activity data.

Activity data means cost related data which will found from industry for calculating the cost of product.

Step 5-Computing the product cost.

In this step the final product cost is to calculated, and cost of final product should be reasonable price. The accurate cost will increase the reputation of firm.

Steps of TCA Method, Anderson S. W. and Young (1999) [8].

Step 1- Identification of indirect cost.

Step 2- Estimation of indirect cost.

Step 3- Choose cost driver.

Step 4- Computation of overhead rate.

Step 5- Application of overhead rate.

Table 1: Data Required from Different Department(Aprox.)

S.No.	Different department	Cost incurred in Rs.
1	Receiving department	800000
2	Packing department	600000
3	Sales and production department	125000
4	Raw materials	1300000

Table 2: Overhead Cost Data of Selected Activities (Aprox.)

S.No.	Selected activities	Overhead cost of activities in Rs.
1	Setup cost	74000
2	m/c cost	1000000
3	Receiving cost	800000
4	Packing cost	600000
5	Engg. Cost	740000
6	**Total cost**	**3214000**

Table 3: Cost Data of Selected Activities for Production Line L1, L2, L3 (Aprox.)

Activities	L1	L2	L3	Total in Rs.
Sales and production unit	90000	30000	15000	135000
Raw materials usages (unit)	11	8	15	1455000
Direct material cost	30	40	15	4125000
Direct labor hours	3.5	4	2.5	472500
M/C hours	6	4	8.5	787500
Direct labor cost	20	30	10	2850000
No. of production run	6	11	51	68
No. of deliveries	19	8	51	78
No. of receipts	51	71	500	622
No. of production order	46	26	61	133

VI. Result and Discussion

Table 4: Comparison between ABC and TCA in term of cost (Rs.)

Method	Prod. Line L1	Prod. Line L2	Prod. Line L3
TCA	96.5	96	92
ABC	67.38	83.39	138.65

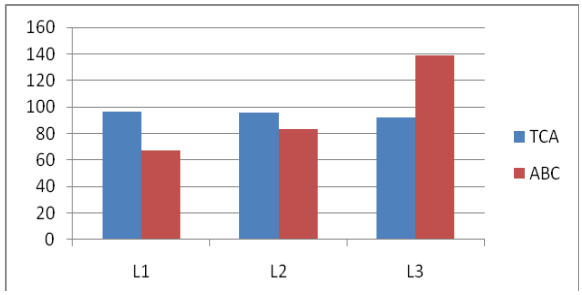

Figure 1: Comparison between ABC and TCA

Table 4 and Figure 1 show the result and comparison between ABC and TCA method for production line L1, L2,L3. From table and graph it is shown that the value of overall cost is maximum in TCA as compared to ABC method for production line L1 and L2. But in case for production line L3 the value of total cost is Maximum in ABC method.

Table 5: Comparison between ABC and TCA method in cost %

Method	Prod. Line L1	Prod. Line L2	Prod. Line L3
TCA	33.9%	33.7%	32.34%
ABC	23.2%	28.8%	47.9%

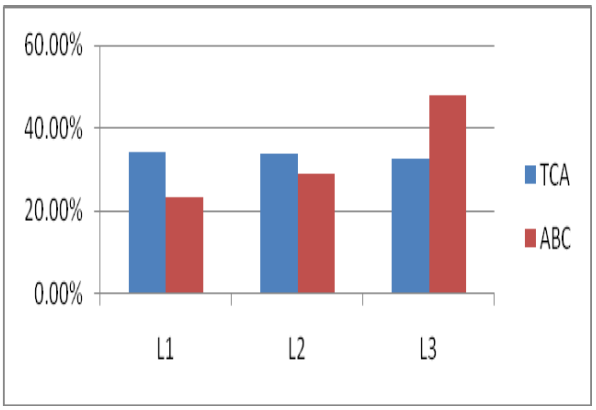

Figure 2:-Comparison between ABC and TCA in term of %

Table 5 and figure 2 show the value of cost % for TCA and ABC method for production line L1,L2 and L3. In TCA method the value of cost % is 33.9% for production line L1, and value of cost % in ABC method is 23.2%, and for production line L2 also the value of cost % in TCA is 33.7% and for ABC is 28.8%. But in case of L3 production the value of cost % is more in ABC method as compared to TCA method.

VII. Conclusion

This project primary aims to emphasize the limitations of traditional costing system in predicting the indirect cost. The analysis and comparison has been carried out in methodology pattern. With the help of Activity based costing (ABC), industries able to improve their efficiency and reduce cost. In the competitive environment the company's manager required better information about cost of each activity and cost of product. But traditional costing system does not provide this information in

better way. And TCA method does not calculate accurate cost of activity. ABC allows understanding where costs are being incurred, how much cost is incurred for small and medium scale industries. From the result and discussion it is shown that ABC is better than the TCA method. from table and graph no. it is shown that the value of costing is low in ABC method for production line L1, L2 as compared to TCA method. The result clearly indicate that around 18% of costing is reduced by using ABC method in small and medium scale industries.

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