

Practice Note**Maturity of Cost Management Systems in Organisations**

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Abstract

Cost accounting is generally viewed as a manufacturing industry specific function. The service industry gives lesser emphasis on the adoption of mature cost management systems. Business managers across industries tend to assume that since the price is decided by the market, there is little need for investing time and resources in creating and maintaining elaborate costing systems.

Irrespective of whether there is a statutory requirement for statutory reporting of costs (as in the case of India, Pakistan and Bangladesh), very few organisations undertake the study of maturity of their prevailing cost management systems.

This study shows that Activity Based Costing (ABC) and Activity Based Management (ABM) are of greater significance for organisations who aspire to remain relevant and profitable in today's hyper competitive business environment.

Keywords

Activity Based Costing (ABC)
Activity Based Management (ABM)
Activity Based Planning (ABP)
Cost Management
Enterprise Performance Management (EPM)

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Introduction

There are various modern techniques that are available in cost management, some of these are customer profitability analysis, activity based costing, strategic cost management, target costing, lifecycle costing etc. For each of these techniques, the level of maturity can be very different within and across organisations. The levels could be just measuring, managing or optimising the use over time. At each of this level the use of the technique could be 'one off', process centric or systematically adopted across the organisation. Therefore, in trying to gauge the maturity of cost management within an organisation, at least across three different dimensions must be recognised: (a) type of technique used (b) level of maturity in the use of technique and (c) scale of operation. The level of maturity would be different in different organisations and across different dimensions.

Type of Technique Used

There are various techniques that are available for cost management (see Sharma and Ratnatunga, 1997). Some are traditional techniques like Standard Costing and Absorption Costing which aim at calculating the product costs and variances. While there are modern techniques like Activity Based Costing, Target Costing, Lifecycle Costing which aim at strategic cost management. In the manufacturing industry, the fundamental use of costing is for inventory valuation.

For this, generally, the absorption costing method is used, where the expenses booked in the period are charged to the products as manufacturing or administrative or sales overheads. The method to charge the overheads to the products is based on volume drivers. In service industry on the other hand there is no statutory requirement for inventory valuation. Most of the time, the same information is used in product profitability and in business decision making. The lack of sound costing practices therefore leads to incorrect decisions making.

Activity based costing is used to calculate the product cost for customer profitability analysis. Here the cost of the cost objects is calculated by calculating the cost of the

activities first. The cause and effect relationship is used. The cost objects consume the activities and activities consume resources. Based on this relationship the cost flows to cost objects. This is a better way to arrive at product and customer profitability.

Target costing is used by organisation when developing a new product. Before doing this a market survey is conducted to understand the features that are desired by the target customer segment and the price that they are ready to pay. A study of competitors' product features and the corresponding prices are also done. Based on this information the features of the new product are defined. A target price is decided with an expected profit. The cost is the resultant factor. $\text{Target Price} - \text{Target Profit} = \text{Target Cost}$. Once this is done, a cross-functional team is formed to work on the design of the product, material, processing, marketing etc. Vendors are involved in this process. With the help of this team the organisation tries to achieve the target cost.

In Lifecycle costing, the organisation looks at the costs of the product throughout the life of the product from design, R&D, introduction, enhancements to the phasing out of the product. This helps the organisation to plan the costs as well the price at various stages of the lifecycle of the product. A company can plan the overall profitability of the product and manage the costs accordingly. The similar concept is now being introduced for customers also and called as Customer Lifecycle Value (CLV).

Strategic Cost Management relates the management of the costs based upon the strategic direction of the organisation. It is the management of the costs according to the strategy of the organisation. This is similar to a cost benefit ratio. Typically, it uses the Porter's concept of competitive strategy where there are two ways of competing namely (a) Cost Leadership (b) Differentiation.

In case of *Cost Leadership*, the organisation has to manage the costs in such a way that costs are at a minimum level without compromising the value to the customer. For this one can use cost driver analysis, waste elimination etc. Activity based costing can help the organisation to understand the non-

value adding consumption of resources. In case of differentiation, the organisation looks at capturing the market, beating competition and making money by having a differentiation in product features, customer services etc.

For this the Lifecycle costing concept, can be useful, as it will help the organisation to make money on overall life of the product and pricing can be defined at various levels of the life-stage of the product. Activity Based Costing can help here to understand the future resource requirement and costs. Another way of defining strategy is by 'target customer segment' management. In this, the organisation defines its target customer segment and tries to capture, retain and benefit from the customer segment. In this case the target costing can help the organisation to manage the product costs.

Level of Maturity in the Use of Technique

The maturity level can be classified in terms of measurement, management and optimisation. The level measurement is where the organisation is collecting the data. For example, in product costing, the organisation is just calculating the cost of the product for inventory valuation purposes. No other use of the information is made. Here the typical argument made is "the price is defined by the market and we cannot do anything about it". Here the view is that an organisation can neither manage the price nor the costs (which at least is in their hands).

Some organisations do calculate the costs and start managing those costs. For example, they have budgets at expense level; they have standard costs for products. They compare the actual expense and product costs with the standard periodically find the variance, the reasons for the variance and take action plan to improve upon the 'unfavourable' variances. Executives who take the time to examine the cost structure throughout their business and embed cost discipline within their organisation's culture will see gains that can be sustained over the long term.

To do this, organisations need to look at costs across whole processes, not just within functions. Ultimately, this means rethinking

the entire business model around lower costs, possibly taking out whole layers of the organisation or supply chain, examining customer interfaces, and considering outsourcing, shared services, and off shoring.

The focus should be on creating a leaner, more efficient organisation, with cost reduction as the consequence, not necessarily the target. The other way of looking at maturity level is the ‘SMILE’ pattern. S – see M – measure I – improve L – Learn E – Evolve.

Operationalisation

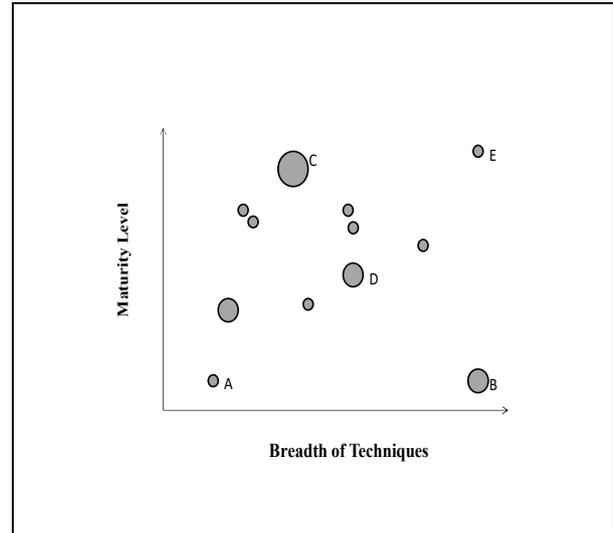
The third dimension that that was mentioned earlier was the operationalisation of the use of the technique. In here one must first have to look at how frequently the techniques are used. Sometimes techniques are used once in lifetime, may be due to the influence by someone at the top and then it ends there. The word ‘used’ here means used in taking business decisions including defining and managing strategy. Often, various variance reports are generated, but nobody looks at them seriously.

In some cases, the information generated is very useful, but it is given the status of ‘confidential’ and kept in the hands of few people. What is meant by real operationalisation is a technique that is used regularly for creating information, used for taking business decisions and used to provide information to the people who are going to take those decisions. In the current scenario, the operationalisation can also be looked from the angle of ‘use of technology’ for the cost management techniques.

Spreadsheets are the minimum that people use and they know it is not the best of the ways always. There are various standalone software solutions are available in the market and use of those does help the organisation to make most of the techniques. Going further, the results of cost management techniques can be integrated with other cost techniques or overall performance management methodologies.

The maturity of the organisations can then be plotted as shown in Figure 1.

Figure 1: Maturity of Cost Systems in Organisations



The horizontal axis plots breadth of techniques that the organisation is using. The vertical axis plots overall maturity of various techniques. The diameter of the circle shows the level of overall operationalisation in the organisation. What is meant by ‘overall’ is the combined effect for all the techniques that are used. Organisation ‘A’ is using only one technique and at a very low level i.e. measurement and it is still not operationalised. Organisation ‘B’ is using many techniques but its overall maturity of use is low but they have achieved some progress in operationalisation. Organisation ‘C’ is using couple of techniques only but achieved best of the overall maturity and operationalisation. Organisation ‘D’ is using few techniques with middle level of maturity and operationalisation. Organisation ‘E’ is using most of the techniques at a very high maturity level but not operationalised it. Companies can conduct such a study to understand the cost maturity of the organisation, industry, geography and help the organisations to see which type of technique at what level of maturity and operationalisation.

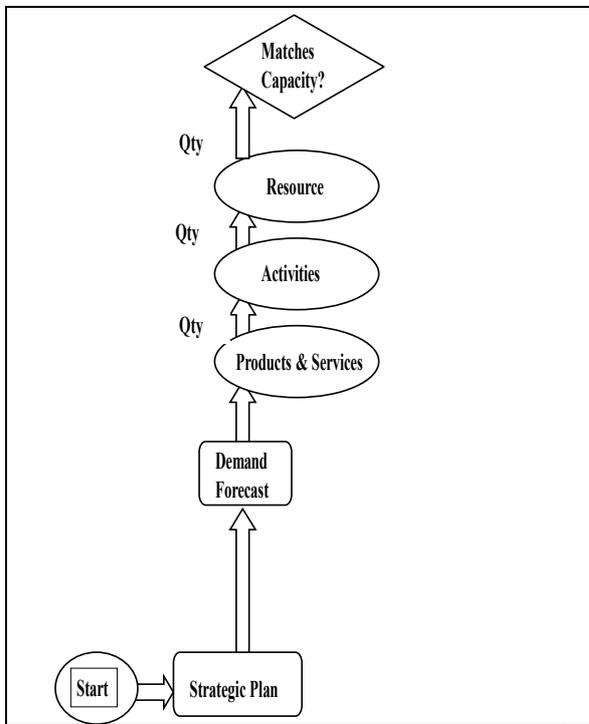
Activity Based Planning (ABP)

Activity Based Costing (ABC) is a cost allocation model that links the activities that resources perform to cost objects such as products, services, customers and organisational processors via cost drivers (Kaplan and Cooper, 1998; Ratnatunga, Tse and Balachandran, 2012). ABC has three

major uses for a company adopting it as system of costing. These benefits are as follows; (1) To measure and understand product, customer and channel profitability, (2) To measure and understand cost of processes by identifying cost drivers and (3) To perform Activity Based Planning (ABP).

Several companies have streamlined the first two uses of ABC. But Activity Based Planning is not fully explored by companies using ABC. Activity Based Planning can be divided into two parts namely ;(a) Activity Based Resource Planning and (b) Activity Based Financial Planning.

Figure 2: Activity Based Planning



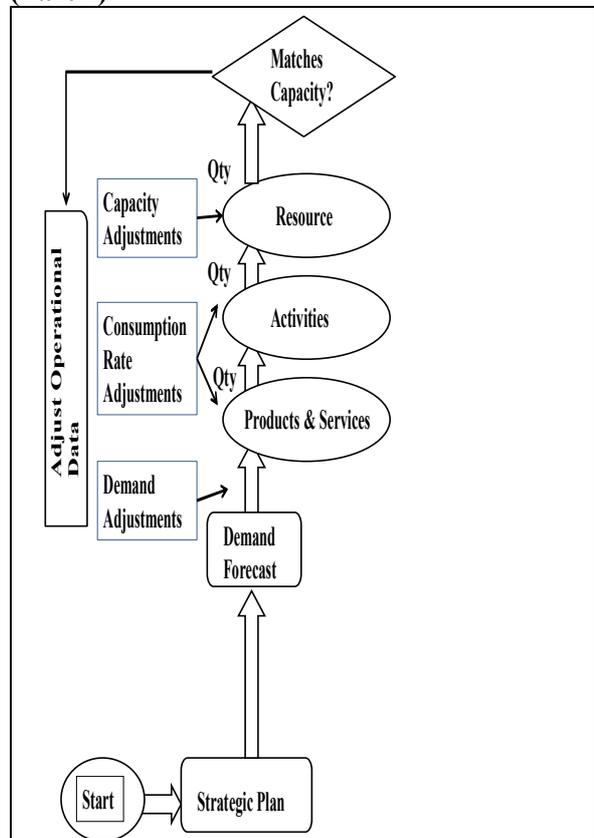
Activity Based Resource Planning

Activity Based Resource Planning helps to understand the requirement of resources based on the forecast done. In Activity Based Financial Planning, resources as well as costs and revenues are included to understand the complete profitability for the future period. The various steps in this process will now be discussed (Figure 2). The prerequisite for creating the ABP model is that the organisation should have a running ABC model.

Once the strategic plan has been finalised for the organisation (which may state what kind of products to be provided to which customer segments via which channels in the various geographies), it will help the sales function to convert it into the demand. This forecast will be used as the starting point for creating the ABP model. The cost objects as products, customer and channel combination will have the quantities from the sales forecast. These quantities will in turn back-calculate the volume of various activities to be performed to fulfil the requirement of various customers.

The relation between the products, customer and channels and the activities is used from the ABC model in the organisation. In the same manner, the resource requirements are calculated from the activity volume. These resource requirements generally consider the volume of various skills required. For example, 1200 hours of machining, 3000 hours of sales executive time etc. One must compare these resource requirements with the available resources and see if the plan can be carried out, or if adjustments are required.

Figure 3: Activity Based Resource Planning (Part 1)



If the resource requirement does not match with the availability of the resources, then a need arises to perform some operational adjustments. These could be of multiple types (Figure 3).

Capacity Adjustments: If the required resources are more than the available then an organisation may hire more or transfer skills from other functions where there is excess capacity and the cross-functional transfer is possible. If the available resources are more than those required, then one has to see if there is scarcity in other functions and if the resources can be transferred there. One has to also consider the seasonality of the business, before taking any drastic steps with respect to the excess resources.

Consumption Rate Adjustments: This is nothing but the driver quantities as in ABC. In simple terms, how much time is taken for various activities or how many times an activity is performed to provide a service to a customer. With respect to time taken by activities, internal benchmarking is very useful.

A company can compare the timing in other plants, branches, location etc. It can also look at the ‘non-value adding’ activities and try to eliminate them. Sometimes few of the customers are making an organisation perform certain activities or their recurrence which is not adding any value to it. In that case a discussion with the customer to make them understand this situation is useful. It is also seen that a ‘menu based’ pricing method can be adopted. The company has to understand that even if the customer is ready to pay for the activities, a company may face the resource crunch; until it gets paid by the customer.

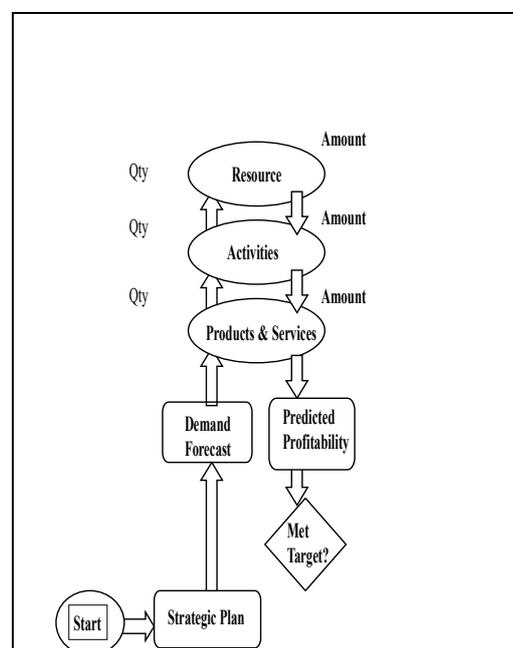
Demand Adjustments: Once both the above-mentioned adjustments are done then an organisation can consider adjusting the demand. This could be by taking certain strategic actions to either increase or decrease the demand for its products or services. Increasing the demand means getting more market share or creating more market segments (by adding customers, regions or products).

This has to be seen in conjunction with competition. Reduction of demand because of

scarcity of the resources also has to be seen in multiple ways. It may be that the demand in the market is temporary. If it is a sustaining requirement then investment in the machinery, people etc. can be considered.

Companies have to also consider various other strategic possibilities and a SWOT analysis should be performed. Also, it is not the case that the adjustments have to be done in this sequence only. Practically it would be various steps with a combination of adjustments (Figure 4).

Figure 4: Activity Based Resource Planning (Part 2)



Once the operational adjustments are completed, one starts by entering the financial information like the rates for products or total revenue and the costs of the resources.

Once this information is entered one will get the predicted profitability of the organisation. This is a combination of product and customer profitability. The value calculated is the result of the strategic initiatives being put into action. A company may find that the best of the strategies at any point in time may not be giving it the best of the returns.

If the target for the profitability is not achieved, then financial adjustments can be undertaken, like reducing the resource costs or increasing the price (Figure 5). Both of these

could be very difficult to achieve. A practical combination of these two adjustments has to be performed.

Figure 5: Activity Based Resource Planning with Price Adjustments

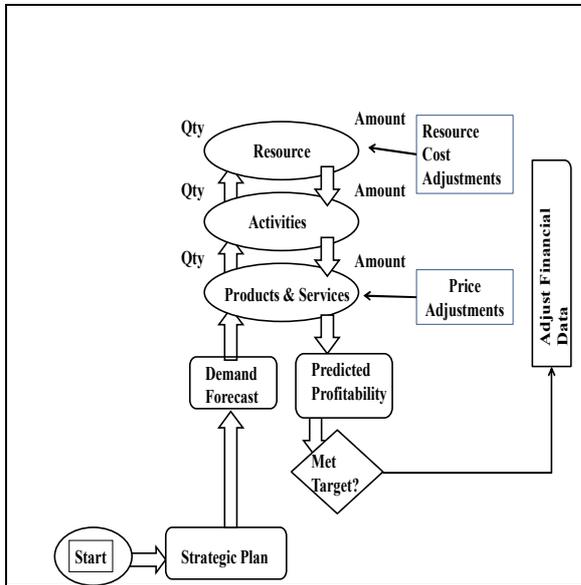
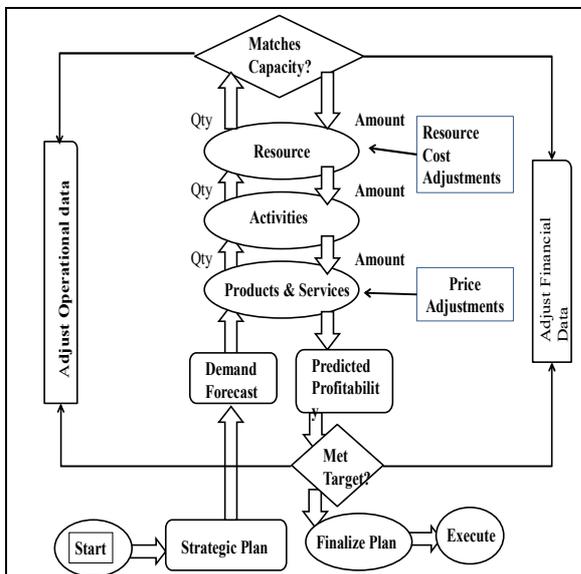


Figure 6: Activity Based Capacity Planning



This is an iterative process of adjustments (Figure 6). The various steps of adjustments or combination of the same can be saved as scenarios. The final accepted model is used as the planned model and the actual results are compared.

In the usual financial budget, the comparison of the actual expenses against the plan is

undertaken, GL account by account. With this comparison, the manager is provided with information of favourable or unfavourable variance. With this information, the manager can be happy or unhappy with the result; but still not have a deeper understanding as to he has utilised the resources of the company. The comparison of the ABP model with ABC model gives the variance of price, cost as well as resource utilisation, activity variance etc. This helps the organisation to revisit the strategic initiative to reach to the expected returns from the business.

Enterprise Performance Management (EPM)

Nowadays one hears the term *Enterprise Performance Management (EPM)* in different ways. Sometimes it is also used interchangeably with the individual performance and organisational performance. There are also various definitions for EPM. Cokins (2001), states that performance management is the process of managing the execution of an organisation’s strategy. It integrates the business improvement methodologies with technology. It is neither the methodology only, nor the technology only in isolation. Activity Based Management (ABM) is the way to manage a business by managing the activities to provide improved value to the customer or organisational performance. EPM starts with the definition of the objectives and strategy of the organisation.

Defining the objectives and strategy for an organisation, preparing business plan according to the strategy and then measuring the performance and analysing the variances with reasons to modify the internal processes or strategy is a cyclic process. ABM fits into the ‘measure and analyse’ part of the cycle. Here, the ABM model is based on the business plan, and can provide the information on the resource requirement in the future as well measure the actual performance. Once a company analyses the actual performance against the planned one; the results can be further analysed using various techniques like root cause analysis, continuous improvement etc. The analysis will tell whether a company has to manage the processes to improve the customer value or organisational performance. The performance management is also seen as

the operational performance management or strategic performance management, as was mentioned in the earlier.

Operational Performance Management is looking at the processes to improve organisational performance and *Strategic Performance Management* is looking at the processes to improve the value to the customer. The ABM model can be designed to manage the performance at both the levels. It can also be used for some tactical purposes as managing a customer segment or a product group etc.

In typical strategic management methodology, a strategy map is created, the corresponding action plans and Key Performance Indicators (KPIs) are then developed. Based on the strategic plan the budgeting and planning solution can create the business plan. It can also use Activity Based Management (ABM) to create a driver based planning. ABM can also provide the actual values for various KPIs defined.

Activity analysis using the cost drivers and performance measures can provide information the performance of the organisation vis-à-vis the planned one. ABM fits into Enterprise Performance Management (EPM) conceptually as well as technologically and helps the organisation to manage the performance at the strategic level as well as operational level (including the tactical one).

Using ABC in a Profitable Company

Should an organisation use Activity Based Costing (ABC) when it is already making profits? It is a common notion that an organisation should seriously look at the costs when it is in serious trouble. This trouble could be that they are making losses or a competitor has come with a similar product with lower price or a possibility of losing an order because of pricing. Cost is also seen as something that has to be reduced in any case. Generally, because of this view, it appears that an organisation is serious about understanding costs only when it seems to be making losses.

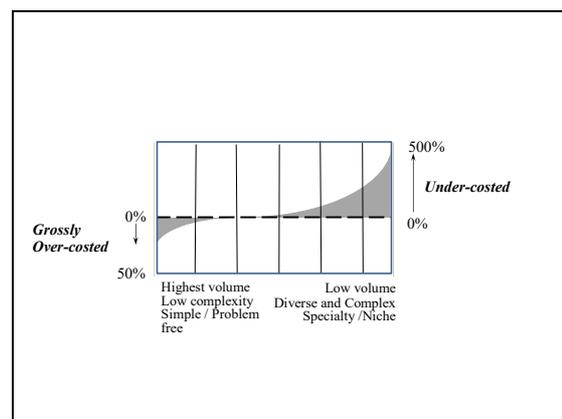
The management accountants have been trained professionally to take each and every unit of expense to the product. This is not true

with any kind of business. There are some costs that caused by the products/services, some are caused by customers, some are caused by running the business and not related to any product or customer are some caused by the installed capacity. A company should be able to segregate costs according these causes and relate them to the profit/loss the organisation is making.

ABC is based on the concept of ‘cause-and-effect’; hence it separates the costs that related product, customer, business and unutilised capacity. Even within the product and customer related costs, they are apportioned based on the consumption. With this calculation the organisation can understand the costs related to the products, customers, channels etc. and take proper decisions based on the information. To explain this, let us see Figure 7.

The horizontal dotted line in the diagram represents the cost of products according to the traditional way of costing and the ‘S’ curves represents the cost of products using ABC. It is generally seen that few products are grossly ‘overcosted’ and more than that products are grossly ‘undercosted’. The products that are overcosted have more cost up to 50% and the products that are undercosted have costs less up to 500%.

Figure 7: Relationship Between Cost of Products with Traditional Costing and ABC



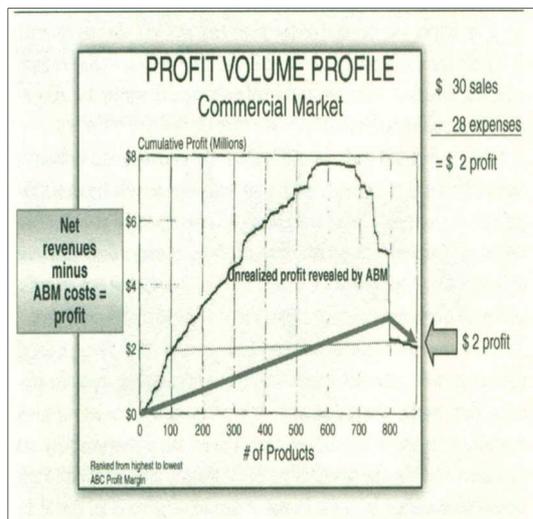
Source: Turney (2005)

The primary reason for this incorrect cost calculation is that generally the overheads are taken based on the volume produced. The complexity of product is not

considered. It is seen that the change in the overheads of the organisation is related to the additional complexity of the business. This complexity could be added due to more products, more customers, more channels etc. It can also be introduced due to the complexity of the product features. This complexity is generalised in the traditional costing and the same is converted into a logic for apportioning the overheads in ABC.

It is generally seen after the ABC modelling that the organisation is almost shocked after looking at the results. This is due to the fact that the products those were 'dear ones' earlier start looking loss making and vice-a-versa. Figure 8 shows another diagram, which is called with different names like profit cliff, whale diagram, profit umbrella etc. This diagram depicts the products or customers on the horizontal axis and the cumulative profit percentage on the vertical axis. This diagram can be plotted for products as well as customers.

Figure 8: Relationship Between Products and Profits.



Source: Cokins (2004)

In Figure 8, the horizontal axis represents the products and the vertical axis represents the cumulative profit in USD millions. The current profit shown in the financial records is \$2 million. When

analysing the diagram, one can see that the same \$ 2 million is achieved by first 13% of the products; i.e. from the products that are making most of the profits, the top 13% gives a company the current profit of \$ 2million. The story does not end there. The top 65% of the product by profitability provide the organisation a profit of \$ 8 million (400% of current \$ 2 million).

Then there are some products are neither profit making nor loss making. And almost 15% of the products which are actually making loss, bring the profits from \$ 8 million back \$ 2 million. Therefore, apparently the organisation is making a profit of \$ 2 million. It might be satisfied with that profit, but then it is not realising that the potential of the organisation is \$ 8 million and not merely \$ 2 million. With the use of ABC, plotting this graph the organisation can realise its full operational potential. It can also understand the loss in profit it is subject to. It will also understand which products are bringing the profit and which are eating into profit.

A similar diagram for customer profitability shows which customers are profitable and which are taking away the profits. This is where Activity Based Costing ends and Activity Based Management (ABM) starts. In ABM the organisation looks at the costs analyses them and takes appropriate actions. For doing so, organisation can use various techniques like root cause analysis, benchmarking, cost driver analysis etc. to understand the reason behind the profits or losses.

Therefore, managers not only understand 'what' leads to higher profit or loss but can also know why that happens. Based on this information organisation can take series of actions in order to optimise the profits by selling its best products to the best customers. It can also decide to give greater emphasis on loss making products and customers to drive change in organisational results.

Conclusion

Maturity of cost systems in an organisation can have significant impact on short-term and long-term business planning. Inaccurate cost information leads to incorrect decisions. Also there is a strong bias among business managers in service industry to perform an in-depth cost analysis before arriving at critical decisions. This phenomenon therefore impacts operational controls in business processes.

Even within the manufacturing industry, several large companies have not fully adopted ABC and ABM. With increasing sophistication in enterprise management systems, companies have not invested proportional amount of resources to measure, manage and control costs. Lack of awareness, high cost of implementation, low motivation and difficulty of timely updating cost driver data are some of the factors behind non-adoption of ABC and ABM practices. There remains huge opportunity for professional accountants in discussing, debating and leading in this area for an impactful contribution in business process excellence.

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