

## **Why Activity Based Costing (ABC) is still tagging behind the traditional costing in Malaysia?**

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### **Abstract**

This study compares activity-based costing (ABC) model and traditional costing method in Malaysia. Activity based costing (ABC) which was developed into the manufacturing/service sectors in Malaysia. It calculates the cost and performance of activities, resources and cost objects. It can be considered as an alternative model to Traditional Cost-based accounting systems. In this study the results indicated that most operations managers believed that their present cost systems were adequate for decision making. In certain circumstances, operations managers evaluated their cost systems as more effective than those using other cost systems. Activity-based costing systems were evaluated as somewhat more useful, but no relevant literature was found to indicate that either the external or internal environment of the firm was correlated with the choice of cost system.

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## 1 Introduction

Generally costing systems are information systems. They require a specific type of information such as direct labour hours and units produced, to be of value. It is from the input data that product costs and other information are determined according to the specific costing system defined methodology. The results obtained would depend on the costing system used, since the same input data could be used in different ways. In this case the traditional costing system or an activity based costing system.

The objective of this study was to compare the Activity-based costing (ABC) with traditional costing in Malaysia. In brief, Activity-based costing (ABC) and Traditional costing symbolises two competing product costing methods. Traditional costing approach is where only the unit-level drivers assign costs to products. Shannon and Don, (2007) indicated that ABC varies from traditional costing, for instance it utilises more cost pools and more cost drivers. Andrade, Filho, Maia and Qassim (1997) found that Activity-based costing (ABC) is being extensively implemented as an alternative to traditional costing. By examining through the background research and literature review, we can justify, investigate and give more definite information about Activity-based costing (ABC) and the Traditional costing.

In comparison, Maliah, Nik Nazli and Norhayati, (2004), mentioned that the cost allocation in traditional costing was based on labour hours or machine hours which are hard to reveal the actual cause and effective relationship between indirect costs and individual products. Carsten (2002) also pointed out that the approach of Activity-based costing (ABC) is trying to allocate overhead costs to cost objects more precise than traditional cost systems or traditional costing.

Traditional Cost Accounting looked at what was spent, while Activity-Based Methods look at what was done in terms of activities. From the point of

view of the latter, it was much easier to identify opportunities to reduce costs and improve performance, while maintaining the quality of care provided. According to Shannon and Don (2007), Activity-based costing (ABC) differed from traditional costing based on the number of cost pools and the number and type of cost drivers. The activity cost pool was the total cost correlated with an activity. In the meantime, a cost driver was an aspect that had direct influence on the cost and performance of the activities. The cost drivers presented the ultimate explanation on why costs in an activity cost pool altered over time (Kennedy, 1996).

## **2 Background Research**

Based on Peter B.B. Turney (1998) and Jan Emblemvag (2008), Activity-based costing (ABC) was developed in the mid-nineteen eighties due to the increasing of lower significance of traditional cost accounting methods. Activity-based costing (ABC) method was first initiated in an organization, which was called John Deere Company in United States. Many impressive United States companies such as Hewlett-Packard, Procter & Gamble, Tektronix and Caterpillar have adopted Activity-based Costing (ABC). However, organizations in Japan favored to put into practice traditional method at that time. March and Kaplan (1987), indicated that they choose volume to determine under traditional method, like using direct labor hours to allocate overhead cost to products as an alternative when using ABC. On the other hand, Jan Emblemvag (2008) also asserted that the traditional cost accounting methods originated around 1870 - 1920 and in those days, industries were labor intensive because there was no automation. On other hand, the product varieties was insignificant and the overhead costs in companies were generally very low contrast to this new globalization age, where human have achieved great success in the development of technology.

Besides that, Shannon, James, Mark Young (1892) , N.S Ong, L.N Lim, K.T Yeo (1993), Gunasekaran and Sarhadi (1996) also found that the development and endorsement of Activity- based costing (ABC) had been stimulated and largely persuaded by the work of Cooper and Kaplan (1987) especially in the manufacturing sector. This technique was later explained in 1999 by Peter F. Drucker in his book called the Management Challenges of the 21st Century. Waeytens and Bruggeman, (1994); and Gunasekaran and Sarhadi ,(1996) indicated that though initial Activity-based Costing (ABC) on implementation it emphasised primarily on manufacturing in factories. Today the Activity Based Costing approach has widely spread to non-manufacturing functions such as marketing, engineering and research and development

Work carried out by Kingcott (1991), John and Mitchell (1995), and David and Robert (1995), highlighted the benefits and advantages for the Activity-based Costing (ABC), which was also the new cost system targeting cost reduction, performance measurement and different cost object. Besides that, Kingcott (1991), Evan and Ashworth(1995) also found that the disadvantages or limitation of the new cost system such as the Activity-based costing (ABC) can be expensive to implement and maintain, both in time and money. More details about the pros and cons of ABC and the traditional costing will be elaborated in the Literature Review.

### **3 Objective of the study**

The objectives of the research are as follows:

1. To compare the Activity-based costing (ABC) with traditional costing.
2. To find out why activity based costing is still tagging behind traditional based costing in Malaysia.

## **4 The problem statement**

In Malaysia many companies are still using the traditional based costing or using some other methods of costing.

### **4.1 Literature Review**

Lere (2000) mentioned that in order to comprehend the potential power of Activity-based costing (ABC) cost data in pricing, it is important to comprehend how Activity-based costing (ABC) cost data is different in contrast to the traditional method. The attribute of Activity-based costing (ABC) is that it does not vary with volume; however it may differ with some other measure of activity. Activity-based costing (ABC) recognizes that activities cause cost.

According to a study conducted by Cooper (1990), the first group of activity, unit level activities refers to activities that must be carried out for each unit of a product manufactured. The second group of activity is batch level activities. Batch level activities refer to other activities that are performed for each batch of units. The cost of batch activities vary with the number of batches and not the number of units manufactured because batches can contain different number of units. The third group of activity is product-level activities. Once product-level activities are performed, it will benefit all units of a particular product. Cost incurred to carry out the groups of activity mentioned before this all vary in response to changes in some measure of the activity called the “cost driver”. This means cost of the three groups activities can all be changed by changing the amount of the activity’s cost driver.

Under Activity-based costing (ABC), there is no change in the short-run because these costs are correlated with supplying the capacity essential to carry out the manufacturing operations, marketing operations, or administration. They consist of facility-level costs such as depreciation, property taxes and insurance on the

facilities. Facility-level costs are like fixed costs under traditional cost performance cataloguing and will be controlled in the same way. Conversely, the quantity of facility-level costs are smaller since they correspond to only that fraction of the Traditional fixed costs that does not vary with batch- or product-level activities (Cooper, 1990).

The implementation of the ABC system has the following steps:

### **ACTIVITY BASED COSTING METHOD**

1	Identify & Classify activities
2	Estimate cost for whole activity
3	Compute a cost driver rate
4	Apply activity costs using cost drivers

Source: Anderson (1995), Shields (1995), Innes and Mitchell (1995), Gosselin (1997), Foster and Swenson (1997), Malmi (1997), McGowan and Klammer (1997), Krumweide (1998); Chenhall and Langfield-Smith (1998), Anderson and Young (1999).

Activity based costing is based on actual performance, consumption and expense data taken out from the organization's existing information system and combined with the knowledge of those directly involved in the distribution of goods and services. Here the cost is designated to activities based on the resources they use for processing. The ABC also provides insights into the starting place of costs and also the probable outcome of different decisions by the process managers. Apart from providing the information required for this process, it also realizes performances breakthrough.

### **TRADITIONAL BASED COSTING**

1	Identification of indirect cost
2	Estimation of indirect cost
3	Choose cost drivers
4	Estimation of value for cost drivers
5	Computation of overhead rate
6	Application of overhead rate

Source: Anderson (1995), Shields (1995), Innes and Mitchell (1995), Gosselin (1997), Foster and Swenson (1997), Malmi (1997), McGowan and Klammer (1997), Krumweide (1998); Chenhall and Langfield-Smith (1998), Anderson and Young (1999).

In Traditional costing, there is a certain amount of estimation in cost allocation. The cost systems do not focus on why or where cost occurred. Generally, there is little insight into the causes of variances. The reporting methodology is accounting –oriented, inaccurate, not flexible and often not timely. The operational managers often cannot understand since it is very analytical and does not relate to the cost of a product or services applied.

#### ***Cost Drivers***

Carolfi (1996) claimed that Activity-based costing (ABC) allowed managers to get rid of costs related to non-value added activities and develop the efficiencies of present development since Activity-based costing (ABC) offered better visibility into business development and their cost drivers. When information visibility improved, it also enabled the consumption of quality-related initiatives by classifying activities that were related with poor product quality, and their cost drivers (Ittner, 1999; Cooper, Kaplan, Maisel, Morrissey and Oehm, 1992).

### ***Performance Measurement***

Apart from that, another advantage of this system is performance measurement. Kingcott (1991) indicated that the information provided by Activity-based costing (ABC) on cost drivers and cost driver rates illustrated that there are potentially powerful affect on the deed of staff and they are used as performance determined (Kingcott, 1991). Cost drivers provided volume determined on a different kind of operational performance which reflected the effectiveness and accuracy of the activity concerned. So, they helped in assessing the efficiency with which activities were carried out when it was linked to cost.

### ***Direct and Indirect Costs***

Traditional costing systems were used on the bases like direct labour and machine hours to allocate expenses to products and services (Banker et al., 2008). The bases are associated with indirect and keep up activities. The expenses of indirect and keep up resources are segregated by activities under Activity-based costing (ABC), and then those expenses were allocated based on the drivers of these activities (Cooper & Kaplan, 1991). This is why Activity-based costing (ABC) provided plant managers with a more structured approach to evaluate the expenses associated with specific activities used to keep up a product.

### ***Cost Objectives***

Different cost objectives is one of the advantages of Activity-based Costing (ABC). John and Mitchell (1991) highlighted that the Activity-based costing (ABC) methodology can be applied to cost objects except for the product. Indirectly, this allowed customer profitability to be analysed and so provided management with a market-oriented view of how proceeds have been earned. Activity-based costing (ABC) was used as a tool for decision making especially for product mix costing and pricing decisions (Kee, 2008).

### ***Economics of costing***

Activity-based costing (ABC) has helped to capture the economics of production development more closely and provided more accurate costing data than traditional cost-based systems (Cooper & Kaplan, 1991; Ittner, 1999). Other researchers had found that Activity-based costing (ABC) had lead to operational and strategic benefits within organizations (Anderson & Young, 1999; Cooper & Kaplan, 1991) activity.

### ***Identifying work activities and costs***

By classifying the work activities and its costs in relation to manufacturing a product, delivering a service, or performing a process, Activity-based costing (ABC) helped to fill in the gaps of the traditional costing method. A comprehensible picture of the total cost of a process becomes transparent when the individual costs are added. Activity-based costing (ABC) can even make a distinction between the cost of serving the different segment of customers (Shank, 1996). In a recent study by Marie Attiea (2010), indicated that regardless of claims that it is a reduced amount of significance than recent accounting methods, standard costing is far-flung from obsolete, and, in fact, it is commonly used in countries such the United Kingdom, Malaysia, and the United Arab Emirates. Further to this Marie Attiea (2010), also indicated that with the advent and wide use of methods such as activity-based costing (ABC), Just-in-Time (JIT), the balanced scorecard, and target costing, a number of researchers had predicted the demise of standard costing and variance analysis on the grounds that these tools had developed into disconnected from actual practices at the industry level where an extreme competitive environment often requires a higher level of sophistication in costing system.

### ***Cost Performance***

If traditional cost performance is applied, industrial marketers would not be competitive with non-manufacturing costs. This is because traditional cost performance assumes that an order is typical of overall operations such that all activities are performed in proportion to the volume measure with which variable costs varies. In Malaysia, Activity-based costing (ABC) is used in a number of activities, such as shipping and order processing, that may be tailored made in negotiations with a customer to yield a more competitive proposal and this is why Activity-based costing (ABC) acknowledges industrial marketers to be more competitive with non-manufacturing costs (Lere, 2000).

### ***Variables and fixed costs***

The disparity between traditional costing performance and Activity-based costing (ABC) is that traditional cost divides cost into variables and fixed categories, while Activity-based costing (ABC) divides the costs into those that vary with unit-level activities, batch-level activities and facility-level costs. Activity-based costing (ABC) can be a powerful tool in three ways when the cost is recognized to be varying with something other than volume. First is it reflects significant disparity among product specifications since Activity-based costing (ABC) influences cost estimates to use in pricing. The cost approximation under traditional cost performance assumes that overall company resource usage is typical of resource usage for each product. Secondly,

### ***Adjustment to product specification***

Activity-based costing (ABC) guides the industrial marketers to decide which product specifications may be adjusted in negotiations to yield important cost reductions which may result in a more competitive price. Under traditional cost performance estimates, a change in volume is the only way to reduce costs. Lere

(2000), indicated that Activity-based costing (ABC) allows cost reductions that will allow the company to satisfy the customers' aspires better by indicating sections for change in operations.

### ***Effects on Small and medium sized companies***

Normally in Malaysia, many small and medium sized companies use the traditional system which is inclined to be simplistic, mainly because they are inexpensive to manage, making widespread use of arbitrary cost allocations, and comprising of low level accuracy, high costs of errors and so on. On contrast, Drury, (2000), indicated that activity-based costing (ABC) systems tended to be more sophisticated, because they were expensive to operate. Thus, creating far-reaching use of cost and affected cost allocations, with high level of precision, low cost of errors and so on.

### ***Cost Reduction***

The first and most prevailing benefit of an ABC system was revealed by John, Evans and Ashworth (1995) in targeting cost reduction. The detailed analysis of activities and costs that are required for costing provided an enriched visibility and a new perspective on allocation of overhead costs (John, 1995). It provided a profile for management on what is being done with resources provided. This information has proven to be adequate for screening against different criteria relating to the value of each activity to the organisation. Where the costs are high and the value of the product is low, the activity becomes a target for cost reduction and improvement.

There are many advantages and disadvantages of Activity-based costing (ABC) as pointed out in the literature review. John, Evans and Ashworth, (1995) indicated that the core advantages of Activity-based costing (ABC) mentioned previously

are targeting cost reduction, performance measurement (Kingcott, 1991), tool for decision making especially for product mix costing and pricing decisions (Kee, 2008) and offers a more accurate costing data (Cooper & Kaplan, 1991; Ittner, 1999). The main disadvantages or limitations of Activity-based costing (ABC) is that it is expensive to use (Evans and Ashworth, 1995), increased the frequency of errors in product cost measurement (Datar and Gupta, 1994) and offered beneficial results only under specific conditions (Noreen, 1991).

### ***Advantages of Activity based costing and Traditional based costing.***

In Malaysia some organisations that have changed to the Activity-based Costing (ABC) system since as far back as 1980 as the system had proven its usability in the appropriate product mix decision and overheads management (Gunasekaran, 1999). However, many Malaysian companies are still attached to implementing the equivalent traditional costing system that was developed decades ago in this globalization age (Cooper and Kaplan, 1991). Johns, Evans and Ashworth (1995), indicated that the question that lingers in our minds is why those companies even now implement traditional costing instead of Activity-based Costing (ABC)? It is because the Activity-based Costing (ABC) has its pros and cons (John, Evans and Ashworth, 1995).

Advantage of Activity-based costing (ABC) according to Qian and Ben-Arieh (2008) is Activity-based costing (ABC) is more accurate cost-estimation method. They argued that Activity-based costing (ABC) helped managers to become aware of original parameters that created demands on indirect and keep up resources which can identify and remove non-value adding activities. Ben-Arieh and Qian (2003) and Qian and Ben-Arieh (2008) illustrated that Activity-based costing (ABC) approach had demonstrated to be more accurate than the traditional cost estimation.

Singer and Donoso (2008) conducted several tests on the validity of Activity-based costing (ABC) cost estimation and they concluded that the accuracy of estimation

of costs made by Activity-based costing (ABC) was valid. Activity-based costing (ABC) was a more accurate product-costing system than traditional volume-based costing systems especially when organizations were facing higher product diversity. These findings were later confirmed by Charles and Hansen (2008). Even though Activity-based costing (ABC) often provided better product cost than traditional volume-based systems, it still had some limitations (Evans and Ashworth, 1995). First and foremost, Activity-based costing (ABC) systems were found to be expensive to use. In Malaysia the increased cost of identifying multiple activities and applying large amounts of cost drivers deterred many organisations from using Activity-based costing (ABC). Kingcott (1991) advised that if the costs of Activity-based costing (ABC) exceeded the benefits, company should not apply Activity-based costing (ABC) systems. If so, the capital expenditure on the activity based system and its subsequent running costs can be a road block for firms.

Activity-based costing (ABC) systems were mostly more accurate compared to traditional method, the limitation of Activity-based costing (ABC) utilized estimates because actual costs could not be traced back. Stapleton et.al (2004), indicated that the costs of finding true costs overshadowed the benefits of finding true costs. Gering (1999), mentioned that Activity-based costing (ABC) will work best with a minimum amount of detail and estimated cost figures. This means that companies in Malaysia wanting to change to Activity-based costing (ABC) needed to the appointment of a designer to come out with more precise measurement tools if more accurate costs are needed.

## **5 Disadvantage of Activity Based costing and Traditional Costing method**

Evan and Ashworth (1995) claimed that although more overhead costs can be allocated straight to products via ABC's multiple activity cost pools, but, some

overhead cost remained to be dispensed with the help of some arbitrary volume-based cost driver like machine or labour hours.

Datar and Gupta, (1994), indicated that the disadvantage of Activity-based costing (ABC) was that it increased the frequency of errors in product cost measurement through increasing in number of cost pools and improvement in specification of cost bases. Another disadvantage mentioned by Noreen (1991) is that Activity-based costing (ABC) implementation provided beneficial results only under specific conditions. Another study conducted by McGowan and Klammer (1997) suggested that many Activity-based costing (ABC) adopters had abandoned their implementations and this raised concerns on the potential impact of Activity-based costing (ABC) on performance.

The disadvantage of traditional costing systems is that they do not present non-financial information about Small and Medium Enterprises (SMEs). The traditional costing systems provided trivial information regarding the factors that was significant to the customers like quality and service. A traditional based costing system typically uses a single overhead pool that is a single collection of costs that are not directly peculiar as product part costs or as labour. This would comprise of supply and maintenance expenses, allotment of management salaries, depreciation, etc. Furthermore, Traditional costing systems show that only financial information while non-financial information like defect rates and throughput rates in each activity was beyond the capacity of traditional costing systems (Gunasekaran, Marri and Grieve, 1999). At first, managers viewed Activity-based costing (ABC) approach as a more accurate way of calculating product costs. However, Activity-based costing (ABC) had emerged as a tremendously useful guide to management action that translated directly into higher profits (Cooper and Kaplan, 1991).

### ***Weaknesses***

According to Dickinson and Lere (2003), one of the most significant weaknesses of the traditional costing method is that the cost of a sales representative's engaging in non-standard selling activities is frequently excluded from his/her performance review. This is a predicament because most people would be persuaded to maximize whatever standards that was established as a performance standard. Singular outputs such as sales volume or gross profit are achieved at the end without regarding the actual cost of those activities and the resulting erosion of profitability to the firm.

Traditional costing systems are not relevant in such dynamically changing environments since traditional costing systems are based on assumptions of long production runs of a standard product with static specifications. Keep upers of Activity-based costing (ABC) had argued that Activity-based costing (ABC) offered more precise information on the activities and dealings that impacted product costs in manufacturing environments characterized by production of smaller lot sizes, high broad mix, and frequent changeovers (Krumwiede, 1998). Kaplan (1989), indicated that at present time, a precise and accurate costing was necessary because a larger number of products were produced and competition among companies were increasing. However, L.Angote, Andrate, Espozel, Maia and Qassim (1996), highlighted that traditional methods were still functional and precise when an organization made a few products and indirect manufacturing costs were negligible relative to direct manufacturing cost.

## **6 Other costing methods**

Gerhard Plenert (1999), illustrated that there are many types of costing systems available for businesses to use such as Activity-based costing (ABC), Just-in-Time (JIT) Processing, Job Order Costing and Process Costing. Most of these costing

systems were intended to allocate costs to products. Mohamed (2003) stated that Just-in-Time (JIT) is a processing system devoted to having the right quantity of materials, parts, or products appeared as they are needed in order to reduce the amount of inventory. Under JIT processing, in an organisation such as Dell received raw material just in time for use in production and the complete finished goods were just in time to be sold. The main benefit of JIT is to reduce setup time. Hirano, Hiroyuki and Makota, Furuya (2006) claimed that cutting setup time allowed the organization to reduce or eliminate inventory for "changeover" time. Overall, Just-in-time (JIT) is an inventory strategy that tried to improve a business's return on investment by reducing in-process inventory and associated carrying costs. (Ohno, 1988).

## **7 Potential Pitfalls of Activity Based Costing.**

Companies that implement activity-based costing run the risk of:-

- Spending too much time, effort, and even money on gathering and going over the data.
- Exceptionally too many details involved in ABC.
- Lack of detail records can lead to insufficient data.
- Institutions' accounting system needs to be revamped keep up ABC.
- Requires at level of exactness that is both difficult to attain and time-consuming.
- Managers overlook some activities and the costs associated
- Activity-Based Costing software can be pricey.

## **8 Limitations**

There are limitations to this study. Although this review takes into deliberation the work of previous researchers in the area, it has to acknowledge that the empirical research on the subject in Malaysian environment is limited. Consequently, this review should be viewed as an initial step toward that purpose. As more data will be available, prospective researchers should pursue on issues presented in this review so that the latest advances of Activity Based Costing in Malaysia is properly documented.

## **9 Conclusion**

Ashish G, et al, (2003), indicated in their studies that developed countries have shown rates among companies as high as 73% in the U.K. and 86% in Japan. More specifically, David Lyall and Carol Graham (1993), stated that more than 90% of 231 companies surveyed in the U.K. apply traditional costing for cost control purposes and that 63% of the managers used this technique reported being pleased in terms of its decision-making keep up. David Lyall and Carol Graham,(1993) indicated in another study that , 76% of 303 accountants in the U.K. and 73% of 85 finance and accounting specialists in New Zealand used standard costing. The authors, Chris G et.al, (1998) found that accountants viewed modern costing and production management tools as having no impact on how widely standard costing and variance analysis are used. (The respondents even predicted an increase in the importance of the older tools.) A study by Maliah S et, al.,(2004), (2005), indicated that companies doing business in Malaysia found similar widespread dissemination and persistence of traditional costing: 70% of 66 local firms and 76% of 21 Japanese firms.

After reading through previous sections, more can be learned about both Activity-Based Costing (ABC) and Traditional Costing. First of all, Activity-based Costing

had been implemented as an substitute to Traditional Costing from Andrade, Filho, Maia and Qassim (1997). This shows that most organizations use Activity-based costing method as the contemporary costing system. Turney (1996), indicated that Activity-based costing (ABC) is a method of measuring cost and performance of activities and cost objects. Both Activity-based costing and Traditional costing are equally competing product costing methods.

Why companies continue to use other types of cost systems. One reason is that there are disparity in the nature and scope of information created by each system. For example, the cost systems may change in their capacity to offer information about performance measurement, revenue enhancement, or cost-reduction efforts. Knowing the internal and external pressures a company faces, one cost system may be better suited to provide its needs than another. Several factors such as the intricate of the production progression, frequency of operation at capacity, or the nature of competition may favor the acceptance of a particular type of cost system. If this is the case, then systematic disparity would be in both the quality of information offered by cost systems and the frequency of usage across industries. From the literature reviewed, it can be concluded that bigger companies use Activity-based costing based on Turney (1998) and Emblemsvag (2008). However, there are many medium and small companies which had a preference to utilize the Traditional Costing method. Work completed by Cooper and Kaplan (1987) was mainly influenced by Activity-based costing (ABC). It can be concluded that although many companies had converted to the Activity-based Costing (ABC) system (Gunasekaran, 1999), there were still some companies that remained to use the same traditional costing system that was developed decades ago in this new globalization age (Cooper and Kaplan, 1991). This is mainly because no matter what costing method, all of them do have their pros and cons. It's important for the organizations in Malaysia to know clearly what they require prior to deciding on which costing method to use. Organizations need to study the pros and cons of each costing method to know which one was more appropriate

for their organization. There is no such thing as the best costing method; there is only the most suitable costing method to use.

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