

# Crucial Factors for the Implementation of Activity-Based Costing System: A Comprehensive Study of Bangladesh

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## Abstract

Activity-Based Costing (ABC) System has played a dominant role in the manufacturing process since its adoption. It became a vital element for the efficient and effective recording of direct costs as well as indirect costs in the developed countries. The developed countries get competitive advantages by using the ABC system. Unfortunately, the application of ABC is rare. However, in recent years, a few cases have been found where the system was implemented but that represents only slightly above 1% in comparison with the total industries. Hence, through this paper, it has been attempted to find out the crucial reasons behind the few application of ABC and to provide practical suggestions as to how to overcome these in the developing countries especially in Bangladesh.

## Keywords

ABC System, Crucial Factors, Overhead Absorption

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## INTRODUCTION

In the earlier years, the majority of the manufacturing companies resorted to traditional costing systems where the production operations were mostly labor-intensive and because of that, the total indirect costs amounted to much lower than direct costs. The traditional system used to spread all operating expenses uniformly and it used to distort the cost and profitability figure of individual product lines and products. However, things took a sharp turn when different technologies emerged causing massive changes in the accounting treatment of manufacturing companies as these companies switched from labor base to a technology base. As a result, the major costs represent the support or overhead cost rather than the direct costs such as material, labor etc. Because of the introduction of automation, direct labor cost has decreased and

indirect expenses have increased. As a result, product ranges have increased and competition has spread internationally. Increasing levels of competition have been complemented by shortened product life cycles and a new kind of consumer that is both more quality-conscious and better informed than consumers were in the past. These changes have increasingly influenced world-class companies to adopt new strategies, innovations and more complex costing systems such as Activity Based Costing (ABC) in order to maintain a competitive advantage. In this modern ever-changing business world, companies that are relying on traditional overhead costing techniques are more likely to face dire consequences resulting from misjudgment. Conversely, the employment of ABC has been estimated to reduce costs by between 3%-5% and to increase revenue growth by between 5%-15% (Sartorius *et al.*, 2007). A small proportion of Bangladeshi companies have endeavored to realize the benefits of the activity-based costing and management technique (Hasan & Akter, 2010). The reason for adopting ABC by few numbers of companies might be due to a lack of adequate resources or perceived technical or organizational difficulties. It appears that the organizational problems that might be encountered during the implementation process are the cornerstone to the successful implementation of ABC. Therefore, this paper will provide an outline, more specifically the main bottlenecks of adopting the ABC and how to overcome these bottlenecks.

## ABC SYSTEM IN DEVELOPING COUNTRY

To find out whether ABC is feasible in developing countries or not some comprehensive list of activities has been identified that derive estimates of activity costs based largely on the estimation of work time devoted to the different activities, obtain service volumes, and relate these costs to products or services to obtain unit costs. Four requirements became apparent to make ABC feasible in developing countries (Waters *et al.*, 2001).

- ABC requires complementary accounting systems that provide reasonably accurate costs organized by cost category and department. The special software may be useful, but probably not essential.
- ABC requires accurate information on the volume of services provided
- Access to and strong cooperation from personnel is important.
- Technical assistance and guidance on the ABC methodology may be necessary at the beginning of the process...

The usefulness of ABC in developing countries probably depends on its incorporation into an ongoing information and management decision-making system. One-time data collection efforts are unlikely to result in information that will be useful over time. Furthermore, a major advantage of ABC is the trend data it provides on unit costs, but this requires an ongoing information system. Thus, while the potential benefits of ABC in developing country organizations remain to be established, this reflects substantial evidence that ABC is feasible in developing countries.

## LITERATURE REVIEW

There has been a tremendous change in the business environment particularly in recent decades. The recent decade has seen the application of some of the most sophisticated techniques such as Just-In-Time (JIT), Total Quality Management (TQM), target costing etc. there has been a rise in the level of competition accompanied by fleeting product life cycle and a more informed consumer base. Such environment has caused a rise in the product ranges,

decrease in direct labor cost and a significant increase in facility costs (Ashton *et al.* 1995; Bjornenak & Olson, 1999; Jayazeri & Hopper, 1999; Mia & Clarke, 1999). These changes have forced companies to adopt and apply new strategies, innovations and complex costing systems such as Activity Based Costing(ABC) with a view to maintaining competitive advantage (Drury & Taylor, 2005). ABC is based on George Staubus' Activity Costing and Input-Output Accounting. The concepts of ABC were developed in the manufacturing sector of the United States during the 1970s and 1980s. During this time, the Consortium for Advanced Management-International, now known simply as CAM-I provided a formative role for studying and formalizing the principles that have become more formally known as Activity-Based Costing. Activity-based costing was first clearly defined and structured by (Kaplan & Cooper, 1992). They initially focused on manufacturing industry where increasing technology and productivity improvements have reduced the relative proportion of the direct costs of labor and materials, but have increased the relative proportion of indirect costs. For example, increased automation has reduced labor, which is a direct cost, but has increased depreciation, which is an indirect cost. At the beginning of 1988, Cooper and Kaplan described ABC as an approach to solve the problems of traditional cost management systems (Cooper & Kaplan, 1988). Drucker (1999) explained activity-based costing in a broader perspective. He states that traditional cost accounting focuses on what it costs to do something, for example, to cut a screw thread; activity-based costing also records the cost of not doing, such as the cost of waiting for a needed part. Cooper describes two stages in the ABC model (Cooper, 1987). In the first stage, it assigns all costs of resources to the activities in activity centers based on the resource drivers. The amount paid for a resource and assigned to an activity is called a cost element or pool. Cost pool can be formed by classifying a large number of activities into a few groups. A basic assumption of ABC is that cost pools are homogenous, which means that the costs of activities in each cost pool should have the same cause-and-effect relationship with the chosen cost driver. In the second stage, costs assigned to the cost pools are then assigned to the products based on the product's consumption of each activity. The final costs assigned to a product are called a cost object. Cost drivers are used to assigning the costs of activities to products. According to (Kaplan & Cooper, 1992) the steps of ABC Implementation procedure consist of the review the company's financial information, identification of main activities, determination of operating cost for each activity, selection of cost drivers and calculation of product cost. Kaplan & Anderson (2004) recommended that companies in such environment that continue to apply traditional overhead absorption techniques are more likely to produce erroneous cost management decisions. In addition, it has been suggested that an increase in fixed costs significantly affect the requirement of a more advanced and accurate overhead allocation techniques. This is even more urgent where the product diversity is high and different products use the different amount as well as different type of resources (Baird *et al.*, 2004). In the same manner, due to a rise in competition mistakes made by firms are more likely to exploited by competitors, intensifying the need for a more accurate and reliable cost management system that results in a minimal error (Mia & Clarke, 1999). Moreover, because of the larger size, since firms have to coordinate a greater number of activities, they tend to invest in more sophisticated systems than small firms do (Baird *et al.*, 2004). There are several reasons for adopting the ABC system. These include cost accounting and cost management purposes, performance measurement purposes, decisionmaking reasons, general management reasons and the fostering of better relationships (Cohen *et al.*, 2005). Although there are several advantages of ABC over traditional management accounting system Despite the advantages of ABC over Traditional Management Accounting Systems (TMAS), the implementation of ABC

in developed countries is often encountered with many problems (Cohen *et al.*, 2005). These problems include the difficulties of selecting, designing and maintaining an optimal ABC model (Better Management 2005), the indifference of top-management and/or the resistance from employees and management (Cohen *et al.*, 2005; Kiani & Sangeladji, 2003; Leahy, 2004; Swenson, 1995) and the fact that the complex nature of ABC makes its implementation and use time-consuming and expensive (Cohen *et al.*, 2005). In addition, the need for expensive IT, the difficulty in accessing, reporting and disseminating ABC reports (Better Management 2005) and increase competition of ABC against other innovations such as JIT and TQM often lead companies to prefer other techniques and innovations over ABC (Leahy, 2004; Swenson, 1995). Other obstacles to implementing ABC include the identification and selection of activities and cost drivers, the problems of accumulating the necessary data (Cohen *et al.*, 2005), as well as a lack of resources such as a qualified workforce, time and effort, which companies claim they cannot afford (Innes & Mitchell, 1995; Krumwiede, 1998). The major reason for which ABC is not implemented include the complexity and cost implicit in the design and implementation of ABC (Cohen *et al.* 2005; Innes & Mitchell, 1995; Leahy, 2004; Pierce & Brown, 2004; Swenson, 1995), executive orders from top management (Cohen *et al.* 2005) or a group policy that requires companies to implement systems of costing other than ABC (Cohen *et al.* 2005; Pierce & Brown 2004).

## METHODOLOGY OF THE STUDY

To find the most influential factors for the successful implementation of activity-based costing system, an effort has been given to collect the most important measures from the literature review of ABC implementation. However, these factors are collected from the developed and developing countries literature review. After that, a pilot study was conducted to find out the applicable factors for developing countries, especially in Bangladesh through interviews of several cost managers of different industries in the country. After the successful completion of the pilot study, twelve important factors have been found to be important in case of implementing the ABC system in Bangladesh.

## CRUCIAL FACTORS IN ABC IMPLEMENTATION IN DEVELOPING COUNTRIES

### ***Managerial Support, Assistance, and commitment:***

One of the first prerequisites for the success of an ABC implementation is top management support for the project (Hasan & Akter, 2010). Top management support is the unconditional patronage offered by the Chief executive officer or the head of management. Failure of ABC projects can largely be attributed to a lack of visible, active management sponsorship and support (Morrow & Connolly, 1994). When top management shows interest as well remain committed to the projects, it acts as a moral impetus for the project team as a whole. Top management involvement is clearly associated with ABC success (Shields, 1995; Innes & Mitchell, 1995; Compton, 1996). The lack of assistance can be implied from the fact that the top management is showing reluctance to contribute their valuable time to the project. On the other hand, when the top management or any vital member of top management is patronizing the project in a way that is evident, it shows that the top management is willing to offer

assistance. A further critical success factor is training, as it helps employees to understand how ABC differs from Traditional system and why ABC is superior (Krumwiede, 1998; McGowen & Klammer, 1997; Shields, 1995).

### ***The linkage between Target, Achievement, and Remuneration:***

Since employee remuneration and welfare is largely dependent on employee performance evaluation, the linkage between performance evaluation and ABC implementation is significant. In order to successfully implement ABC, there has to be established target which employee will attempt to reach and a related remuneration has to be provided so that employees strive toward making ABC implementation a success.

### ***Technical-Know-How:***

Technical expertise is significant in explaining how the ABC system is different from traditional cost accounting and why ABC provides a better measurement of cost and information. It also enhances non-accounting ownership. ABC requires training from the senior management to the shop floor. Training can include readings, lectures, hands-on projects, and on-the-job training (Gurses, 1999).

### ***Agency Relationship between ABC Management and Owners:***

A potential risk arises when accountants own ABC system to fulfill their needs and expectations. One of the few strong reasons why some companies did not have a successful implementation of the ABC system is that some accountants had retained ownership instead of sharing ownership with non-accountants. Due to this, not only accountants but also non-accountants should be viewed as the owners of the new system. Non-accounting Ownership is also vital to minimize resistance across the firm (Krumwiede, 1998; McGowen & Klammer, 1997; Roberts & Silvester, 1996; Shields, 1995). Non-accountants should be involved in the initial decisions to invest in ABC, and in the design and implementation of ABC. In this way, the chances that non-accountants will support and promote ABC, and be committed to its use and success will increase (Gurses, 1999).

### ***Adequacy of Resources:***

The process of designing and implementing an ABC system requires companies to have adequate resources. Adequate resources are one of the variables that appear to be correlated with ABC success. The necessary resources primarily include the time and commitment of accountants, top management, operating employees, software, and external consultants. The implementation of ABC often takes more time than expected. In order to succeed, project members should be able to spend a sufficient amount of time on the ABC initiative (Hasan & Akter, 2010). Interestingly, however, the other types of resources, such as commercial or custom-made software and also external consultants, are not that important to the success of ABC implementation. Most companies surveyed use commercial software to help structure their ABC design and to process ABC information (Gurses, 1999).

### ***Knowledge of Information Technology:***

In order to successfully implement and maintain the ABC system a superior technological sophistication is required. ABC implementation will be much smoother if the IT of a company has successfully integrated its subsystems. ABC implementation was also found to be easier to implement where the information technology (IT) of the implementing company has characteristics such as good sub-system integration, a user-friendly query capability and the necessary data (Gurses, 1999).

### ***Coherence with the Organization's Goals and Culture:***

ABC initiative has to be linked with the strategic goals and objectives of the organization. Another critical factor that determines the success of ABC is the receptivity of the culture of the organization to the changes brought about by ABC. Individual sensitivities or insecurity can seriously harm the quality and reliability of the data collected. One of the key positive sides of ABC system is that it enhances transparency of the behavior of costs. However, this may result in some employees feeling exposed, either because they have to share information that has previously been available only to them, or because they interpret the sharing of information as a means of introducing unwelcome supervision (Hasan & Akter, 2010).

### ***The potential for Cost Distortions:***

As the organization gets more inclined toward implementing ABC, the possibility of cost distortions and manipulations escalates. As the companies adopting ABC have a higher diversity of products, more support departments, and processes and higher volumes, they tend to produce distorted information. Therefore, successful implementation of ABC requires information that is collected and measured reliably.

### ***Lack of System Initiatives:***

The successful implementation of ABC relies heavily on system upgrading. There are two ways as to how system initiative affects ABC adoption as well as implementation. First of all, it requires a considerable amount of time and effort to implement the ABC system. Within a stipulated period of time, the activities are to be separated for the purpose of allocating to the cost pools as well as selecting relevant cost drivers. Second of all, it is unwise to adopt ABC if the infrastructure of the company is not ready yet.

### ***Size of the Organization:***

The size of the organization is one of the deciding factors in ABC adaptation. Generally, the larger companies are more inclined in adopting ABC system. Nguyen & Brooks (1997) argue that larger firms are more likely to have greater access to individuals with the knowledge to design and implement ABC. Since ABC requires available resources and economies of scale, manufacturing units having low capital are not capable of installing and operating ABC. Besides, ABC requires continuous monitoring and improvement which demotivates companies with the scarce resources to back off from implementing ABC.



### ***Other Major Initiative:***

Many firms trying to implement ABC couldn't reach the usage stage because other major initiatives were being implemented concurrently. Several companies cannot commit enough resources to the implementation of ABC because of their need to implement other initiatives such as Total Quality Management (TQM), lean manufacturing, and Just-in-Time (Gurses, 1999).

## **CONCLUSION**

This study revealed that only a limited number of problems are experienced by Bangladeshi companies that have implemented ABC and are still using it. However, in the majority of the companies, the fact that other priorities in the firm can take precedence to the ABC project was experienced as an impediment. This problem increases with a lack of top management support and is also aggravated if ABC is not aligned with the company's strategy. The Bangladeshi companies consider the employee resources allocated to the ABC projects to be adequate and satisfactory. Companies in Bangladesh that have implemented ABC do not experience coherence with organizational goals and culture as problematic and ABC initiatives are aligned with company strategy. On the other hand, insufficient training of users and managers is perceived to be a hindrance to success. Resistance to change in organizational culture is generally not perceived to be an important obstacle, although some companies experience difficulty in this regard. Finally, the critical success factors for ABC design and implementation appear to be largely universal and the survey provided confirmation of the findings in the literature in respect of the critical nature of a range of technical, as well as management and organizational variables. In particular, top management support for and managing the technical problems of ABC were mentioned as critically important for successful implementation.

### ***Scope for Further Study***

The successful implementation of Activity Based Costing is a consolidation process as its effectiveness and efficiency depend on some other modern management accounting techniques. Hence to adopt the ABC system it must be assured that some other latest managerial accounting tools like JIT manufacturing, Total Quality Management Six Sigma, Lean Production, Kaizen Costing etc. should be applied simultaneously. To Implement and operate the ABC system smoothly, an integrated accounting system is a prerequisite. The ABC system will not work effectively in the long run if it does not include the said technique parallel. It is obvious that further study is required to find out the causal relationship among the ABC system and these modern managerial accounting techniques.

## **References**

- Ashton, D., Hopper, T., & Scapens, R. (1995). "The changing nature of Management: Issues in Management Accounting," London: Prentice Hall.
- Baird, K., Harrison, G., & Reeve, R. (2004). "Adoption of activity management practices: a note on the extent of adoption and the influence of organizational and cultural factors," *Management Accounting Research*, vol.15, no.4, pp.383-399.
- Bjornenak, T., & Olson, O. (1999). "Unbundling management accounting innovations," *Management Accounting Research*, vol. 10, no. 4, pp. 325-339.

- Cohen, S., Venieris, G., & Kaimenaki, E. (2005). "ABC: adopters, supporters, deniers and unawares," *Managerial Auditing Journal*, vol. 20, no. 9, pp. 981-1001.
- Compton, T. R. (1996). "The ABCs of ABC: Implementing activity-based costing," *The CPA Journal*, pp. 20-27.
- Cooper, R. (1987). "Does your company need a new cost system," *Journal of Cost Management*.
- Cooper, R., & Kaplan, R. S. (1988). "How Cost Accounting Distorts Product Cost," *Management Accounting*.
- Drucker, P. F. (1999). *Management Challenges of the 21st Century*.
- Drury, C., & Taylor, M. (2005). "Explicating the design of overhead absorption procedure in UK organizations". *The British Accounting Review*, vol. 37, no. 1, pp. 47-84.
- GURSES, A. (1999). "An Activity-Based Costing and Theory of Constraints Model for Product- Mix Decisions".
- Hasan, M. T., & Akter, S. (2010). *Organizational Views to Implement the ABC system in Bangladesh*. Cost and Management. vol. XLIII, no.04.
- Innes, J., & Mitchell, F. (1995). "A survey of activity-based costing in the UK's largest companies. *Management Accounting Research*," pp.137-153.
- Jayazeri, M., & Hopper, T. (1999). "Management accounting with world-class manufacturing: a case study, " *Management Accounting Research*, vol.10, no.3, pp.263-303.
- Kaplan, R. S., & Cooper, R. (1992). "Activity-based system: Measuring the cost of resource usage," *Accounting and Management: A Field Study Perspective*.
- Kaplan, R., & Anderson, S. (2004). "Time-driven activity-based costing, " *Harvard Business Review*, vol. 82, no. 11, pp. 136.
- Kiani, M., & Sangeladji, M. (2003). "An empirical study about the use of ABC /ABM models by some of the fortune 500 largest industrial corporations in the USA," *Journal of American Academy of Business*, pp.174-182.
- Krumwiede, K. P. (1998). "The implementation stages of Activity-based costing and the impact of contextual and organizational factors," *Journal of Management Accounting Research*, vol.10, pp.239-277.
- Leahy, T. (2004). Where are you on the ABC learning curve. *Business Finance*, vol. 10, no.12, pp. 47.
- McGowen, A. S., & Klammer, T. P. (1997). "Satisfaction with activity-based costing cost management implementation," *Management Accounting Research*, vol. 9, pp. 217-237.
- Mia, & Clarke. (1999). "Market competition, management accounting systems, and business unit performance, " *Management Accounting Research*, vol.10, no.2, pp.137-158.
- Morrow, M., & Connolly, T. (1994). *Practical Problems of implementing ABC*. Accountancy.
- Nguyen, H. V., & Brooks, A. (1997). "An empirical investigation of adoption issues relating to activity-based costing, " *Asian Accounting Review*, vol. 5, pp. 1-18.
- Pierce, B., & Brown, R. (2004). "An empirical study of activity-based systems in Ireland, " *Irish Accounting Review*, vol. 11, no.1, pp. 55.
- Roberts, M. W., & Silvester, K. J. (1996). "Why ABC failed and how it may yet succeed, " *Journal of Cost Management*, vol.9, no.4, pp.23-35.
- Sartorius, K., Eitzen, C., & Kamala, P. (2007). "The design and implementation of Activity Based Costing (ABC): a South African survey," *Meditari Accountancy Research*, pp.1-21.
- Shields, M. D. (1995). "An empirical analysis of firm's implementation experiences with activity-based costing, " *Journal of Management Accounting Research*, pp.148-166.
- Swenson, D. (1995). "The benefits of activity-based cost management to the manufacturing industry," *The Journal of Management Accounting Research*, vol.7, pp.167-180.
- Waters, D. H., Abdallah, H., & Santillán, D. (2001). "Application of activity-based costing (ABC) for a Peruvian NGO healthcare provider, " *The International Journal of Health Planning and Management*.