

Organisational problems in respect of the implementation of activity-based costing in South Africa

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Abstract

In this study the extent and nature of organisational problems that are encountered in South Africa in respect of the implementation of activity-based costing are examined and compared with difficulties experienced by companies in the British Isles, United States of America and Australia. The investigation comprised a literature survey as well as an empirical study of the companies listed in South Africa.

Contrary to the findings of overseas studies, South African companies experience less difficulty in respect of support from senior management and consider the employee resources allocated to the ABC projects to be adequate and satisfactory. ABC objectives are aligned with organisational goals, culture and company strategy. However, whilst implementers are adequately trained, the insufficient training of users and managers is perceived to be a hindrance to success and in the majority of companies other priorities take precedence to the ABC project.

Key Words

Activity-based costing (ABC)
ABC implementation problems
ABC organisational problems

1 Background

The benefits of activity-based costing (ABC) are well known. The original aim, namely more accurate product costing, is achieved by assigning

overheads to cost objects in accordance with their consumption of the activities that cause costs (Drury 1992:275; Troxel & Weber 1990:14; Johnson 1990:27; Cooper & Kaplan 1991:268). ABC and related techniques can also be applied to accomplish a wide variety of other purposes, including budgeting, the reduction of costs and the improvement of processes and activities (Miller 1996:18,21) as well as benchmarking and the determination of customer profitability (Friedman & Lynne 1995:16,33). Further applications include value-added analysis and new product or service design (Innes & Mitchell 1995:6). The advantages associated with the aforementioned applications of ABC can probably be summarised as improved decision making due to more informative product-cost information, improved insights into managing the activities that lead to overheads and easier access to relevant costs for a wider range of decisions (Cooper & Kaplan 1991:276).

However, in spite of the far-reaching rewards associated with ABC, only a small proportion of South African companies have endeavoured to realise the benefits of this revolutionary costing and management technique. Wessels (1999:43,53) observed that only 15.18% of the responding listed companies in South Africa have attempted to implement ABC. This might be due to a lack of adequate resources (Innes & Mitchell 1995:148) or perceived technical or organisational difficulties.

Based on the findings of overseas studies, including that of Cobb, Innes & Mitchell (1992:24), Evans, Ashworth, Chellew, Davidson & Towers (1996:24) as well as Selto & Jasinski (1996:38), it appears that the organisational problems that might be encountered during the implementation process are the biggest hindrance to success.

The objective of this article is to investigate the extent and nature of organisational problems actually encountered in the implementation of ABC by listed companies in South Africa. The findings can provide guidance to prospective implementers and users of the technique in South Africa.

2 Organisational problems with the implementation of ABC

2.1 Introduction

Shields & Young (in M.D. Shields 1995:149) developed a comprehensive model about the implementation of cost management systems that treats the implementation of a system such as ABC as an administrative rather than a

technical innovation. According to them the fate of ABC therefore depends on how well it matches the preferences, goals, strategies, agendas, skills and resources of dominant or powerful groups of employees, particularly top management. The key to the successful implementation of ABC is to deal effectively with these specific behavioural and organisational factors. Their view is similar to that of Ansari, Bell, Klammer & Lawrence (1997) who suggest that the effectiveness of a management accounting system depends on its ability to incorporate strategic as well as technical, behavioural and cultural considerations.

Empirical studies on the implementation of ABC confirm the view of Shields & Young (Cooper, Kaplan, Maisel, Morrissey & Oehm 1992:10; Cobb *et al* 1993:71; Shields 1995:163). These studies found that, even though firms used advanced technical approaches to ABC design, problems were still experienced at behavioural and organisational level, leading them to conclude that the success of ABC primarily depends on effectively dealing with the specific behavioural and organisational factors affecting ABC implementation.

2.2 Management support

One of the first prerequisites for the success of an ABC implementation is top management support for the project. Morrow & Connolly (1994:76) are of the opinion that failure of ABC projects can generally be attributed to a lack of visible, active management sponsorship and support. When senior management are committed to the project it indicates to the project team that there is a high value in what they are doing and ensures that the project is focused on business issues (Morrow & Connolly 1994:76). Evidence suggests that top management involvement is clearly associated with ABC success (Shields 1995:163; Innes & Mitchell 1995:142; Compton 1996:21; Dub 1997:35; Pemberton, Arumugam & Hassan 1996:20; Dederer 1996:56). A lack of top management involvement is evident when they fail to give of their own time, the help of other dedicated people or the funding required to implement the project.

A project sponsor/champion that is a member of top management is one way of illustrating the commitment of senior management. Evans *et al* (1996:26) define a project sponsor as a member of top management that approves and lends support to the ABC project. They suggest that this involvement by top-level leadership is required to send a clear signal to the organisation of the importance of the development. Cooper *et al* (1992:10) found that the most successful implementations of ABC occurred where there was a sponsor that was a member of top management. And this finding is supported by the results of various case studies (Dederer 1996:48; Ness & Cucuzza 1995:131).

Management support is furthermore essential in ensuring that other projects in the firm do not take precedence over the ABC initiative. Innes & Mitchell (1995:148) found that the need to respond to more pressing priorities than ABC development is a serious constraint on the implementation of an ABC project. Top management often interrupts the implementation process when other issues are believed to be more critical, urgent or beneficial (Player & Keys 1997:13). Cobb *et al* (1992:7) found in their study that respondents who are considering ABC, but have not yet implemented it, perceived other priorities to be one of the biggest obstacles to success.

2.3 Adequate employee resources

Limited resources are seen as a major stumbling block in the implementation of ABC, and can in many instances prevent the project from even being started. In a number of studies on the implementation of ABC, respondents cited limited resources as an important hindrance (Corrigan 1996:51; Clarke, Hill & Stevens, 1996:10; Innes & Mitchell 1995:148), while adequate resources are one of the variables that appear to be correlated with ABC success (Shields 1995:161).

In order to succeed, project members should be able to spend a sufficient amount of time on the ABC initiative (Morrow & Connolly 1994:78). The Harris Corporation allocates 95-100 percent of the time of team members to the ABC project, because they had experienced that a project would stagnate or even fail if it is simply added to their existing responsibilities (Dedera 1996:48). Similarly, Compton (1996:21) is of the opinion that full-time members of the project team are necessary for large projects, but suggests that part-time members may be sufficient in the case of smaller projects.

Furthermore, the ABC project team must be able to draw on resources from all departments and disciplines in the organisation. This ensures that the implementation is approached from a variety of perspectives and, where a multidisciplinary team incorporates the people who will be using the information, these eventual users are committed to the success of the project. It also ensures that the data gathering and analysis processes are carried out as quickly and accurately as possible (Kroll 1996:20). Morrow & Connolly (1994:78) found that having a multidisciplinary team is the best way to maintain the team's enthusiasm. They also suggest that many ABC initiatives have failed because they have been the pet projects of the finance department, resulting in the project lacking credibility.

ABC initiatives sometimes also fail because the individual leading the project leaves the firm or moves to another position. Cobb *et al* (1992:24)

found that coping with changes in accounting staff was one of the problems experienced by companies that implement ABC.

2.4 Coherence with the organisation's goals and culture

Unless the ABC initiative is aligned with the strategic goals of the organisation, it is unlikely that the project team will get the responses and information needed to ensure that the project is successful (Selto & Jasinski 1996:37; Evans *et al* 1996:24). According to Evans *et al* (1996:25), the key question to be answered before pursuing the implementation of an ABC system is: How will it contribute to achieving the vision, strategy and objectives of the organisation and how will it play a part in achieving its success in the market?

Another factor that determines the success of the project is the receptivity of the culture of the organisation to change brought about by ABC. According to Morrow & Connolly (1994:76), personal sensitivities or insecurity can have a significant bearing on the quality and reliability of data collected. One of the advantages of ABC is the improved visibility and transparency of the behaviour 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. Cooper *et al* (1992:152) found that where employees resist the change brought about by the ABC information, there is a large probability that the ABC project will fail, in spite of top management support. According to Innes & Mitchell (1995:6), employees fear that ABC information will be used to achieve cost reductions. Evans *et al* (1996:24) suggest that an implementation plan should include specific change management initiatives designed to overcome any expected difficulty that individuals may have in adapting to new systems or approaches.

Training can help to overcome the problem of resistance to change. According to Compton (1996:21) and Shields (1995:163), instruction is crucial for effective implementation, execution, use and acceptance of an ABC system. The implementation team requires training regarding technical design, software modelling and project organisation, while management also should be informed in order to effectively guide and support the ABC project. Furthermore, the users should be trained to enable them to understand the benefits of the ABC information system and how this knowledge can be applied in decisionmaking.

3 Empirical research methodology

The study investigated the nature and extent of organisational problems in South Africa by means of a survey. The investigation is based on a

questionnaire for companies listed on the Johannesburg Stock Exchange (JSE) and circulated in November 1997 among 454 companies, representing all the companies listed in October 1997, excluding cash shell, pyramid, property and foreign companies. These companies were excluded, because they were not actively trading and therefore unlikely to use ABC. Foreign companies were omitted because the investigation was restricted to South African companies.

A Spearman Correlation Co-efficient was calculated to indicate whether or not a linear relationship exists. Whereas 0 indicates no relationship, 1 indicates a positive and -1 an inverse linear relationship. A probability test on the factors that indicate a relationship reveals whether this relationship is statistically significant. A result of ≤ 0.1 indicates a meaningful relationship, with a 10% possibility of error, while results > 0.1 means that the possibility of error exceeds 10%, and no statistical conclusion can be based thereon.

Respondents used the following scale to indicate the degree to which they experienced the identified factors as problems in their organisation.

1 = serious	2 = moderate	3 = limited	4 = not at all	5 = uncertain
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Responses of 1 & 2 were interpreted as the existence of a problem, while responses of 3 & 4 were accepted as the absence thereof.

4 Results of the empirical analysis

4.1 Introduction

A response was received from 112 companies, resulting in a response rate of 24.67%. Of these 112 respondents, 17 attempted to implement ABC. Of the 17, 15 indicated that they are currently using ABC, i.e. 13.39% of the total response. In order to determine whether a relationship exists between the success of the implementation of ABC in South Africa, and the problems experienced, respondents were asked to indicate how successful they would rate the application of ABC in their organisation. Their response can be summarised as follows:

Table 1
Opinions regarding the success of companies attempting to implement ABC

Description	Number of companies	Percentage of respondents
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Very successful	5	29%
Moderately successful	6	35%
Limited success	3	18%
Not at all	2	12%
Uncertain	1	6%

The summary indicates that only 12% of the respondents that attempted to implement ABC did not experience the implementation as being successful. These two respondents abandoned the system during or subsequent to implementation and are not currently using ABC. It could not be deduced from their questionnaires at what stage the implementation process was abandoned, and due to the fact that this study investigates the actual experience rather than perceptions of users, it was decided to focus on the 15 companies that indicated that they currently use ABC.

Respondents who are currently using ABC were requested to indicate approximately how long ago (in years) their organisation started to implement the ABC process. Five respondents stated that they had launched it one year or less than one year ago, four specified between two and three years, and one respondent began the implementation of ABC between four and five years ago. The remaining five respondents commenced with the implementation of ABC more than five years ago. The period that has elapsed since the initial implementation of ABC in a company may cause a response bias. Respondents that complete the questionnaire a reasonably long time after the initial implementation may no longer regard certain factors as problems, although it had been a problem initially, or may change their perspective on the degree to which the problem was experienced.

4.2 Summary of the results

The results of the empirical work are summarised in the following table:

Table 2

Description	Experienced as a problem by respondents (%)
Management support	
Lack of top management support	40%
More emphasis on other priorities in the firm	53%
Too time-consuming for operational managers	53%
No project sponsor/champion	20%
Lack of adequate employee resources	
Too time-consuming for accounting personnel	27%
Turnover of ABC project team individuals	20%
Only accounting personnel on project team	47%
Lack of coherence with the organisation's goal and culture	
Incompatible with company strategy	20%
Inadequate training of managers	60%
Inadequate training of implementers	40%
Inadequate training of users	73%
Resistance to change in organisational culture	47%

4.3 Discussion of the findings

4.3.1 Management support

Most respondents did not experience a problem in respect of a lack of top-management support (60%) or a project sponsor/champion (80%). This could indicate that management supported the project or that project sponsors/champions were appointed in most cases.

Some problems were experienced in respect of other priorities in the firm being more important than the ABC initiative (53% of respondents). The intensity of the problem increases if there is a lack of top management support for the project (correlation co-efficient of 0.84457 and probability factor of 0.0001) or if the ABC initiative is not aligned with the company strategy (correlation co-efficient of 0.83877 and probability factor of 0.0001).

Another problem experienced by 53% of the respondents is that the implementation of ABC is too time-consuming for operational managers. However, 55% of respondents who consider the implementation of ABC in their organisation to be very/moderately successful do not feel this way. This seems to indicate that managers in South African companies with a successful implementation of ABC are willing to devote their time to the project.

4.3.2 Adequate employee resources

The survey indicates that none of the factors that fall under this category were experienced as significant problems. A total of 27% of the respondents indicate that they consider the ABC project too time-consuming for accounting personnel, while only 20% of respondents see turnover of ABC project team individuals as problematic. Some companies (47%) experience difficulty when only accounting personnel form part of the project team, which may be related to the inclination to treat accounting departments and accounting projects as closed systems (Puxty 1993:31-40).

4.3.3 Coherence with the organisation's goals and culture

Most respondents (80%) do not experience any problems with the compatibility of the ABC project with the company strategy. It could be that the companies that have implemented ABC ensured that the project is aligned with the company's goals and therefore do not experience any difficulty with this factor. However, as indicated earlier, if the ABC project is not aligned with the goals of the company, it will result in other priorities in the firm receiving precedence.

Inadequate training of implementers is not perceived to be a problem and only 40% of respondents experienced difficulty in respect of this aspect. This can be due to the fact that implementers usually receive good training prior to commencing with the project. However, most respondents (73%) experience inadequate training of users to be a problem, while inadequate training of managers is seen as a hindrance by 60% of the respondents.

These two factors appear to be related. If the training of managers is inadequate, it can be assumed that the training of users will also be inadequate, based on a correlation co-efficient of 0.89367 and a probability factor of 0.0001.

The inadequate training of both users and managers becomes less problematic as the length of time since implementation of ABC increases (correlation co-efficient of -0.78429 and co-efficient of -0.64741 respectively, with probability factors of 0.005 and 0.0091 respectively). This may be because users and managers are more exposed to ABC, and are making use of the ABC information, thereby gaining a better understanding of the technique.

Resistance to change in organisational culture is experienced as a stumbling block by 47% of the respondents. This resistance is positively influenced by top management support of the project (correlation co-efficient of 0.77335 and probability factor of 0.007). Therefore, if senior managers support the project, it is more likely that the project will be accepted.

5 Conclusion

This study revealed that only a limited number of problems are experienced by South African companies that have implemented ABC and are still using it. Although a perception might exist, based on the findings of investigations abroad, that organisational factors should be a stumbling block to the successful implementation of activity-based costing, companies with experience of the implementation of ABC in South Africa only experience a limited number of organisational problems. In some instances, factors that were problematic abroad were not experienced as difficulties in South Africa, while in other respects, the extent of the obstacles were not as far reaching.

No difficulties were experienced in respect of a lack of top management support or with the absence of a project sponsor/champion. However, in the majority of 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. ABC is furthermore considered to be too time-consuming for operational managers.

Contrary to the findings of the studies in other countries, the South African companies consider the employee resources allocated to the ABC projects to be adequate and satisfactory. Companies in South Africa that have

implemented ABC do not experience coherence with organisational goals and culture as problematic and ABC initiatives are aligned with company strategy. Whilst implementers are adequately trained, the insufficient training of users and managers is perceived to be a hindrance to success. Resistance to change in organisational culture is generally not perceived to be an important obstacle, although some companies experience difficulty in this regard.

The reasons for the apparent gap between the problems encountered by the companies in South Africa and abroad are unknown. Possible explanations include differences in circumstances and the chance to learn from the experiences of counterparts in other countries. Many of the potential organisational problems can be avoided if they are expected and managed. The depth of the investigation, differences in the population researched as well as degree in which ABC has been implemented and applied could also be explanations. It could be speculative to suggest which of these reasons, if any, constitute the reason for the difference. Further research in this area is required.

Whatever the reason, it is clear that South African companies need not be discouraged by the problems that are perceived to be associated with the implementation of ABC. Although the degree of the success varies, 88% of the companies that implement activity-based costing experience it as being successful. The extent of the aforementioned problems cannot outweigh the benefits to be derived from this revolutionary management technique.

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