

Charaf, Karim; Rahmouni, Ahmed Fath-Allah

Article

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Using importance performance analysis to evaluate the satisfaction of Activity-Based Costing adopters

Karim Charaf^{a,1}, Ahmed Fath-Allah Rahmouni^b,

^a *Groupe ISCAE, Morocco,*

^b *National School of Business and Management,
Chouaïb Doukkali University, El Jadida, Morocco*

Abstract: This paper examines the satisfaction of the users of Activity-Based Costing (ABC) of Moroccan companies. Relying on the Importance Performance Analysis (IPA) tool, we attempt to analyze the importance and the performance that ABC uses to identify strengths and weaknesses; and therefore, develop a possible method to improve different applications. Using the survey method, two types of companies were studied: Activity Based costing (ABC) adopters and non-ABC adopters. The results suggest that the ABC adopters were more efficient and more satisfied with their cost system. However, they did not fully benefit from the contributions of the ABC system. Some uses such as budgeting, outsourcing decisions and customer quotes were low. In general, Moroccan companies should put more effort into improving the use of their costing system. This research contributes to explaining how companies can use IPA to analyze their ABC systems to improve resource allocation and for better decision-making.

Keywords: Activity-Based Costing/Management, Importance Performance Analysis, Cost information, Moroccan Companies.

JEL codes: M41

1. Introduction

Management accounting is a system that provides managers with full and trustworthy information necessary for making correct management decisions, planning, control and performance measurement (Drury, 2008). Management

¹ *Corresponding author:* Karim Charaf, Groupe ISCAE, Km 9,500 Route de Nouasseur BP. 8114 - Casablanca Oasis, Casablanca, Morocco. Email address: kcharaf@groupeisca.ma

Accounting System (MAS) provides a set of applications including budgeting, profitability analysis, cost reduction, outsourcing decision, etc.

Several researchers have studied the satisfaction of users of MAS. These studies revealed two interesting results; generally, the management accounting system is unique for every company depending on the need of that particular business entity. Furthermore, the user satisfaction concerning cost systems is different depending on the model developed on that particular area. (Fortin *et al.*, 2007; Innes and Mitchell, 1995; Innes *et al.*, 2000; Pierce and Brown, 2004; Wu *et al.*, 2007). Obviously, the higher the need is, the more importance is given to some practices. MAS performance depends on the quality of the system implemented. However, we noticed in these studies that the performance of some important practices of MAS may be low, but it may be high on some practices that are weakly or moderately important.

As one management accounting system innovation, Activity-Based costing (ABC) has enjoyed a high profile for more than two decades. ABC has been implemented in a wide variety of sectors (manufacturing, retail, services to business/particular and banking/insurance industry). Improving the use of ABC is important to reap benefits from it. For that, we should identify strengths and weaknesses of MAS, the most important uses, the perceived satisfaction of uses, the importance of attributes of a system that allows for the undertaking actions to improve the use of MAS.

The purpose of this paper is to study the satisfaction of the users of ABC of Moroccan companies. Data was collected by questionnaire in order to attempt to analyze the satisfaction of ABC adopters versus non-ABC adopters, to identify strengths and weaknesses and therefore develop a possible method to improve different uses of costing systems. To analyze the results, we relied on a marketing tool devoted to the study and analysis of customer satisfaction known as Importance Performance Analysis (IPA).

This matrix involves the analysis of user expectations (Importance) and user satisfaction (Performance) for different MAS applications. For efficient system utilization and a better resource allocation, the comparison of importance and performance is indeed necessary. This will improve the result analysis and therefore help with the decision making process.

The IPA is a marketing tool used in the study of customer satisfaction with regard to the attributes of any service or product. It is originally illustrated by Martilla and James (1977) to measure customer satisfaction related to automobile dealer services. It was then applied in different areas of marketing services, and became widely used as an approach of measuring customer and user satisfaction and was regarded as a simple and useful management tools. Taking into account the survey

respondent satisfaction with respect to the criteria evaluated, the IPA is an approach to measure customer/user satisfaction of a product, service or tool performance.

In this paper, we will attempt to answer two major questions: How can companies use the IPA to study levels of importance and performance for ABC system? And how the IPA can help them to optimize resource allocation to a different ABC application? By answering these two questions, we aim to meet several objectives:

1. To analyze the performance and importance of MAS applied to certain Moroccan companies. Following this further, we will study two types of systems: The ABC method and cost evaluation traditional method.
2. To test and implement a simple and functional tool, borrowed from the marketing field, to improve management control practices.
3. To help businesses improve the quality of their MAS through the use of the IPA.

The results suggest that the ABC adopters are more efficient and more satisfied with their cost system, compared to a user of the traditional method.

Finally, this work has some limitations. First, the study was focused on a convenience sample, composed of 350 of the largest companies ranked by Moroccan Kompas. Second, we only gathered 62 responses. This study does not analyze the connection between the satisfaction and importance of each attribute of the system in question.

This article is organized as follows: First, we present a literature review; then, we discuss the methodology used and finally, the results will be analyzed.

2. Literature Review

2.1 Previous Management Accounting Research in emerging economy

Research on management accounting is not well practiced in emerging countries. It has started to develop over the last two decades (Hopper *et al.*, 2009). The majority of these studies examined the adoption of new management and accounting techniques, notably ABC. In the next paragraphs, we will examine two points: the adoption of ABC in emerging countries and the adoption factors in these countries. Evidence from these studies point toward a growing interest given to the adoption of ABC in emerging economies. In South Africa, Rundora *et al.* (2013) reported in a survey of 48 small manufacturing firms, an adoption rate of 33.33 %. This rate is more important when compared to the previous study of Sartorius *et al.* (2007) who

found only 12%. In South Western part of Nigeria, Salawu and Ayoola (2012) surveyed 40 manufacturing companies; they found that 60% of the firms examined had adopted ABC. This result seems too high and it must be confirmed by other studies. In Cameroon, Ngongang (2010) examined 86 SMEs, he found an adoption rate (9.3%) relatively lower than South Africa and Nigeria. In Jordan, Bt Fadzil and Rababah (2012) reported that 19.5% or 82 Jordanian Manufacturing Companies have implemented ABC. Before this study, Mahmoud *et al.* (2009), in studying 61 companies listed on the Amman Stock Exchange, reported a high adoption rate (55.7%) This is important and deserves to be deepened by further studies on the listed companies having adopted ABC. In Morocco, Elhamma (2012) found that 12.9 % of the 62 companies examined (large and SMEs), had adopted ABC. During the same period, Charaf and Bescos (2013) investigated 62 large companies, they reported a more significant adoption rate (22.6%). This rate is almost the same as that found by Moalla (2007) in Tunisia (23.75% in a sample of 80 companies). In Thailand, Upping and Oliver (2010) in a study of management accounting change in 63 Thai public universities, report that 49.21% have adopted activity based costing (ABC). This rate is high relatively to that found in the study of Fawzi (2008) who found 26.3 % (167 private companies). This last rate is lower than the rate found by Maelah and Daing (2006) in Malaysia (36.11%, 108 companies examined) and high relatively to the Philippines companies (23.18% from 358 firms; Manalo, 2004). In the same zone, Danish Iqbal and Dr. Syed (2013) reported a lower adoption rate of ABC in Pakistan (12%). Nevertheless, in Vietnam, Huynh *et al.* (2013) have found in their study of 339 companies that no company adopted ABC. Finally, In Romania, Jinga *et al.* (2011) reported that 12.82% of the companies studied implemented ABC. In the same country, Cardos *et al.* (2012) found 6.5% of companies were applying ABC (from 146 companies examined). In Greece, Cohen *et al.* (2005) reported an adoption rate of 40.9 % (from 88 companies examined), this rate is confirmed by another study of Venieris and Cohen (2008) in the same country, which reported a rate of 40 % of ABC adoption¹.

Companies in emerging countries having adopted ABC are influenced by several factors, the most cited are: the inability of the traditional financial systems to provide a relevant cost in the new environment and financial crisis, product diversity, importance of overhead, growing product costs and administrative costs, market competition (Salawu and Ayoola, 2012; Bt Fadzil and Rababah, 2012; Nasser *et al.*, 2009), the importance of price to decision making (Charaf and Bescos, 2013).

Apart from the above factors, the adoption of ABC is often influenced by top management support (Dubihlela and Rundora, 2014; Bt Fadzil and Rababah, 2012), non-accounting ownership, education, fashion, forced decision, fad and efficiency (Bt Fadzil and Rababah, 2012). Another research study reveals that the adoption of ABC can be facilitated by adequate training (Dubihlela and Rundora,

2014; Nasser *et al.*, 2009) and the existence of higher levels of information technology (Bt Fadzil and Rababah, 2012, Nasser *et al.*, 2009), In other studies, we find that the influence of cultural factors such as outcome orientation and innovation (Charaf and Bescos, 2013) and the presence of foreign capital and the size of companies are significant factors (Albu and Albu, 2012).

However, those studies have some limitations. The use of a small size of sample and the use of a perceptual approach to collect data, there is few studies per country to confirm results. In light of these limitations, the results obtained must be used with great caution.

2.3 Satisfaction with of Activity Based Costing

Since the emergence of ABC, several studies have been undertaken relating to the perceived satisfaction in ABC utilization (Anderson, 1995; Baird *et al.*, 2007; Brown *et al.*, 2004; Shields, 1995; McGowan and Klammer, 1997; Foster and Swenson, 1997; Rahmouni and Charaf, 2012; Fortin *et al.*, 2007). Recently, some authors have studied this topic in less developed countries (LDC) (Chongruksut, 2002; Bt Fadzil and Rababah, 2012; Charaf and Bescos, 2013).

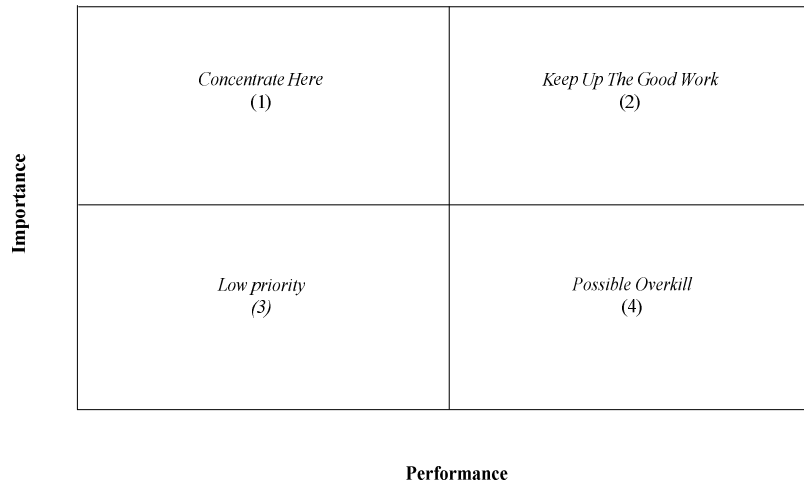
Chongruksut (2002) investigated the adoption of ABC in companies in Thailand. He noticed that the majority of companies, which used the traditional cost system were not satisfied with their costing system. They claimed that their system needs improvement. In contrast to this group, users of ABC had a quite high level of satisfaction with their system, especially in terms of more accurate product costs, cost control improvement, better performance measurement, continuous improvement and increase in competitive capability as well as increase in profitability (Chongruksut, 2002). Furthermore, he records that most ABC users perceived that ABC is very important and necessary in their environment. Bt Fadzil and Rababah (2012) measured the satisfaction of Jordanian ABC users in three areas: calculating methods, cost reduction, and gained benefits. His results show a high level of satisfaction with the three areas of utilization. In Morocco, Charaf and Bescos (2013) investigated the satisfaction of ABC users in a bank. The study revealed a high level of satisfaction about the majority of ABC practices. The aim of this current article is to examine the satisfaction of the users of Activity-Based Costing (ABC) of Moroccan companies by using the Importance Performance Analysis (IPA) tool.

2.3 Importance Performance Analysis

The of Importance Performance Analysis as a marketing tool to measure customer satisfaction, while emphasizing the importance and the performance achieved on the various product/service attributes (Magal *et al.*, 2005; Shieh and Wu, 2009).

Since its emergence in 1977 (Martilla and James, 1977), the IPA has become a commonly used tool in developing strategies in various fields (Riviezzo *et al.*, 2009 ; Skok *et al.*, 2001), such as transportation, (Feng and Jeng, 2005; Huang *et al.*, 2006), banking (Joseph *et al.*, 2005), education (Pike, 2004 ; Alberty and Mihalik, 1989; Siniscalchi *et al.*, 2008), public management (Riviezzo *et al.*, 2009; Lai and To, 2010), tourism (Zhang and Chow, 2004; Fuchs and Weiermair, 2003; Smith and Carol, 2009; Ziegler *et al.*, 2012), health (Dolinsky, 1991), industry (Sampson and Showalter, 1999), telecommunication (Pezeshki *et al.*, 2009), E-government (Wong *et al.*, 2011) and leisure (Tarrant and Smith, 2002; Rial *et al.*, 2008). The IPA can also be used to assess the strategy evaluation and therefore provides the necessary recommendations to improve resource allocation (Magal *et al.*, 2009; O'Neill *et al.*, 2001). However, to the best of our knowledge, no research has yet used the IPA in the study of management control system satisfaction.

The development of the IPA leads to the production of a graph in which each criterion is placed on a two-dimensional axis (Martilla and James, 1977). The x-axis is the horizontal axis of a two-dimensional plot. It represents the performance, which is measured by the average score of the criteria of all respondents. The y-axis is the vertical axis and it represents the importance, which is also measured by the average score of the criteria of all participants. Finally, the graph produces four zones enabling the classification of service attributes according to their importance and performance (see Figure 1). Each area is the combination of the importance and performance assigned by the users to each service attribute. By examining the points in each zone of the graph, managers can identify which attributes have the most or the least priority for improvement. Zone 1, called “concentrate here”, combines the attributes of low performance and high importance. This zone constitutes a priority for managers, in case an action should be taken immediately to improve the performance of the attributes. Zone 2, called “keep up the good work”, and represents the attributes for which the performance and importance are high. This area is not a priority for improvement, it is nevertheless necessary to maintain the current efforts on these attributes as they represent a strong competitive advantage for companies. Zone 3, called “low priority”, it contains elements with low importance and low performance. It is unnecessary to provide additional effort for these attributes. Finally, zone 4, called “Possible Overkill”, it combines attributes with high performance and a low importance score. The resources allocated to these attributes must be reduced or even reallocated for other attributes that are most important to customers. Several advantages arise from the use of IPA (Tarrant and Smith, 2002, p. 70). It displays the results as a grid, which makes finding the data easy for managers to read, to interpret, and then to make decisions, as each zone is associated with a particular strategy for resource allocation (add, maintain, reduce or remain at the same level). Additionally, the information collected allows managers to identify the users’ need for products and services and thereby constitutes a tool to prevent problems associated with the various decisions made by managers.



**Figure 1: Classical representation of Importance-Performance Analysis
(Adapted from Martilla and James, 1977)**

3. Method

Sample data were collected using the 2007 Kompas classification of 350 largest companies in Morocco. From this sample, we removed 49 companies with inaccurate mailing addresses, and/or with accounting and auditing practices deemed inappropriate for this analysis. The questionnaire was sent to the management controllers, using the Kompas 2007 database resources. Finally, we received 62 filled questionnaires, making a return rate of 20.6%.

Table 1. Demographics of Survey Respondents: By business sector

Business sector	N	%	%
Manufacturing	23	37,1	37,1
<i>Services to businesses and particulars</i>	22	35,5	
Service <i>Banking and insurance industry</i>	8	12,9	62,9
<i>Retail</i>	9	14,5	
Total	62	100	100

The survey was developed to measure both the satisfaction and the importance of each attribute. It contains questions regarding the management accounting system practices. Eight practices were selected from the literature review from previous studies on management and accounting (Albu and Albu, 2012; Chongruksut, 2002;

Fawzi, 2008; Joshi, 2001; Baird *et al.*, 2007; Bescos *et al.* 2002; Pierce et Brown, 2004; Innes *et al.*, 2000; Cohen *et al.*, 2005): Product-Service costing, Reducing costs, Product/Service pricing, Product/Services & Customer profitability analysis, Budgeting, Outsourcing decisions, Customer quotes, Financial performance measurement.

Two standard questions were asked, one regarding the user satisfaction of the MAS (perceived performance) and the second one regarding the importance of each use of MAS (perceived importance).

To generate the IPA, each attribute is placed on a two-dimensional graph axis - the importance and performance. Then we performed a cut through the arithmetic mean of the available data to get the following four portions:

Quadrant 1: Concentrate here. This field indicates the major uses that are insufficiently perceived by the management controllers.

Quadrant 2: Keep up the good work. This field indicates the major uses that are sufficiently received by the management controllers.

Quadrant 3: Low priority. These uses are not very well perceived, but they are less valuable to the management controllers.

Quadrant 4: Possible overkill. These uses are well perceived, however they are less valuable to the management controllers.

The outcome is a matrix that exhibits the quality cost measurement (Q), which can be evaluated by the estimation of the average performance (\bar{x}_p) and the average importance (\bar{x}_i) of each attribute. Let $Q = \bar{x}_p - \bar{x}_i$:

- If $\bar{x}_p - \bar{x}_i < 0$, that means, user expectations have not been achieved and therefore dissatisfaction with the costing system implemented.
- If $\bar{x}_p - \bar{x}_i = 0$, that means that users expectations are met.
- If $\bar{x}_p - \bar{x}_i > 0$, the results have exceeded the user expectations, users are satisfied with their costing system implemented.

4. Results

Table 1 shows the gaps between importance and performance among users and non-users of ABC system. Overall, Management Controllers whose businesses have adopted the ABC system in Morocco are generally satisfied with the costing measurement system. They all expressed an average satisfaction (perceived performance) clearly higher ($\bar{x}_p - \bar{x}_i > 0$) than their expectation (importance). For

this group, we noticed that the product/service costing and financial performance measurement are the most important practices with the highest level of application, followed by the objective of the products / services and customers profitability analysis, Product/service pricing, cost reduction, budgeting, and outsourcing decisions. These uses recorded a medium level of importance. Finally, we noted that the ABC is rarely used to develop customer quotes. These medium results of importance in regard to the ABC are surprising. In our opinion, several reasons contribute to these results:

- For the introduction of ABC as a current aspect used by cost controller for traditional uses such as cost and financial performance analysis, but has not been “transferred” to commercial managers for the purpose of estimating prices or for analyzing products and customers profitability. Is there still a solid partition between finance and trade? Or, should we see the desire of commercials to keep using rudimentary techniques, but as fast as the coefficient of overhead added to the direct costs?
- With regard to the budget formation, the results can be explained, perhaps, by the lack of knowledge in the use of the ABC in the budgeting process, often called ABB (Activity Based Budgeting). Also, we believe that budgeting practices through responsibility centers is extremely infused so that the development of Activity-Based Budgeting (ABB) is curbed and promoted only by software, which still remains very expensive.
- Lastly, despite the potential role of ABC in outsourcing decisions, we note that firms in our sample show a medium interest with respect to this practice. Indeed this may be due to the limited use of this tool by the production services in comparing the cost of their various activities with outsourcing. In these businesses, the ABC remains the privilege of the cost controller and is poorly integrated to production services as a tool for decision making process.

Moreover, for the non ABC adopters, the results show, however, that they are less satisfied with their costing system. It appears that 3 out of 8 uses are not satisfactory ($\bar{x}_p - \bar{x}_i < 0$):

- Product/Services & Customer profitability analysis (use 4)
- Customer quotes (use 7)
- And financial performance measurement (use 8)

Among the practices proposed by the management accounting system within this group of businesses, we find a predominance of the more traditional practices including the product/service costing, budgeting and Product/Service pricing. We find, however, a limited use of their costing systems in outsourcing decisions and in financial performance measurement.

Table 2. Gaps between importance and performance among users and non-users of ABC system

Code	Attributes ABC uses	ABC adopters				Non adopters of ABC			
		Performance average \bar{x}_p	Importance average \bar{x}_i	difference $\bar{x}_p - \bar{x}_i$	Quadrant	Performance average \bar{x}_p	Importance average \bar{x}_i	difference $\bar{x}_p - \bar{x}_i$	Quadrant
1	Product / Service costing	4,54	4,15	+0,38	2	4,19	4,17	+0,02	2
2	Reducing costs	4,15	3,38	+0,77	2	3,44	3,30	+0,14	1
3	Product/Service pricing	4,31	3,69	+0,62	2	3,92	3,75	+0,17	1
4	Product/Services & Customer profitability analysis	4,31	3,77	+0,54	2	3,48	3,56	-0,08	1
5	Budgeting	4,54	3,38	+1,15	4	4,15	4,06	+0,08	1
6	Outsourcing decisions	4,23	3,23	+1,00	4	1,91	1,89	+0,02	3
7	Customer quotes	4,00	2,85	+1,15	4	2,79	3,15	-0,36	3
8	Financial performance measurement	4,46	4,31	+0,15	2	2,60	2,74	-0,15	3

The different attributes of the cost accounting system of the two groups in our sample are shown in Figures 2 and 3.

For the ABC adopters group, the majority of the applications are located in quadrants 2 “Keep up the good work” and 4 “Possible overkill” (see Figure 2). These two quadrants generally indicate that the applications of cost accounting are sufficiently well perceived by the companies. For the non-ABC adopters (see figure 3), the majority of uses appears in quadrants 1 “Concentrate here” and 3 “Low priority”. These two quadrants generally show that the application of accounting management systems is insufficiently well received by management controllers.

At this level we will present an explanation of each quadrant using the Importance-Performance Analysis:

- Quadrant 1: Concentrate here. For ABC adopters, no application is located in this quadrant. Concerning the non ABC adopters, the following applications are included: Reducing costs (2), Product/service pricing (3), product/services and client profitability analysis (4) and budgeting (5).
- Quadrant 2: Keep up the good work. For ABC adopters, the following applications are noted: Product/service costing (1), Product/service pricing (3), product/service and client profitability analysis (4) financial performance measurement (8). For the non ABC applicants, one application is located in quadrant 2, called Product/service costing (1).
- Quadrant 3: Low priority. For ABC adopters, we find only one application in this quadrant identified as Customer quotes (7). Regarding the non ABC adopters, the following are noted: Outsourcing decisions (6), Customer quotes (7) financial performance measurement (8). It’s surprising to find in this area the criteria (7) “Customer quotes”.
- Quadrant 4: Possible overkill. For ABC adopters, the following are noted: budgeting (5) outsourcing decisions (6). For the non ABC adopters, no application is located in this quadrant.

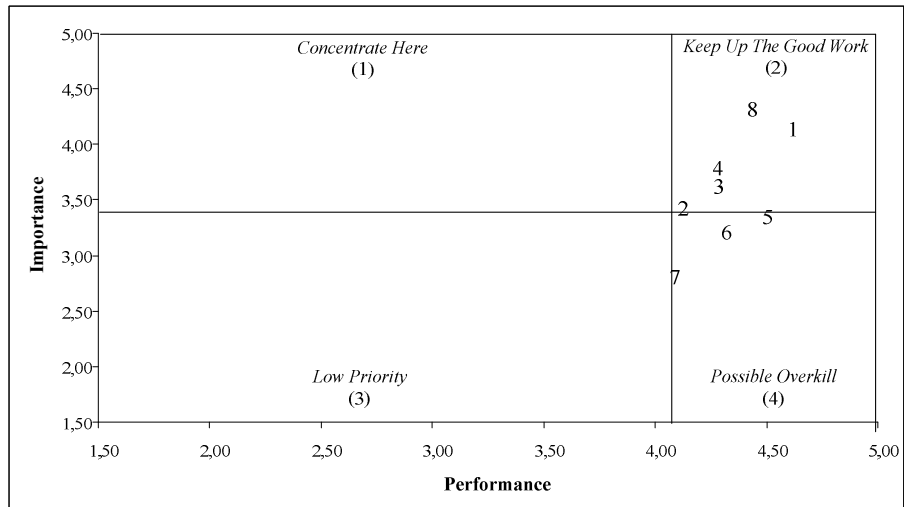


Figure 2: Importance-Performance Analysis for ABC adopters

Legend

1. Product/Service costing
2. Reducing costs
3. Product/Service pricing
4. Product/Services & Customer profitability analysis
5. Budgeting
6. Outsourcing decisions
7. Customer quotes
8. Financial performance measurement

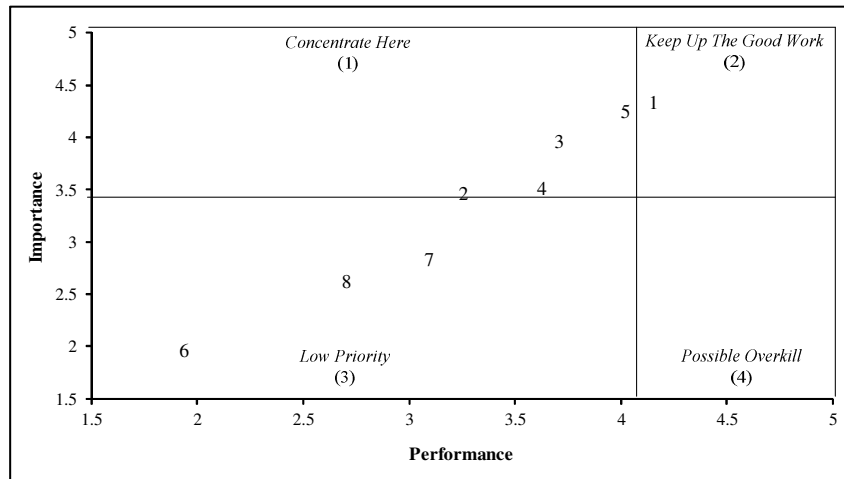


Figure 3: Importance-performance Analysis for the non-ABC adopters

Legend

1. Product/Service costing
2. Reducing costs
3. Product/Service pricing
4. Product/Services & Customer profitability analysis
5. Budgeting
6. Outsourcing decisions
7. Customer quotes
8. Financial performance measurement

5. Conclusion and discussion

Our goal, in this article, is to analyze the importance and the performance of ABC utilization to identify its strengths and weaknesses and therefore develop a possible method to improve different applications. Our literature review suggested that, although it is from the marketing field point of view, the IPA has been applied in many other areas such as health, education, industry, services and tourism. But, despite its value in the various fields, its application in measuring user satisfaction in the information systems remains very limited.

Our survey on the application of MAS in certain Moroccan companies indicates that the ABC adopters are more efficient and more satisfied with their cost system, compared to the non-ABC adopters. According to the ABC supporters, this tool

increases knowledge about the production and distribution cost structure for different products while allowing managers to decide wisely about pricing and sales composition (Horngren *et al.*, 2006). The identification of connections between resources, activities and products makes it possible to better manage the cost of a product and to act on the activity cost causes (Bouquin, 2011).

Activity-Based Costing supporters state, in particular, that it would allow them to have a more transversal vision of an organization, by identifying the processes in which several managers and activities can intervene jointly (Bertrand and Mévellec, 2008 ; Bescos, *et al.*, 2002). ABC is also considered by these supporters as a solution to the lack of relevance in cost system inherited from a context of continuous growth that followed World War II (Johnson and Kaplan, 1987). Its implementation is also motivated by the need for an effective way to meet competitive pressures resulting from globalization that introduces products and services with similar quality at a lower cost especially from Asian countries.

5.1 Contributions

The first contribution of this work is the proposal of a tool for evaluating the success of the implementation of the ABC or any other system of accounting management through the Importance Performance Analysis. Our contribution here consists of a simple tool to highly assess the impact of implementing Management Accounting System to improve the decision-making process and a better resource allocation. The second contribution of this work consists of the proposal of a set of information regarding the application of management accounting system in some Moroccan companies. Through a survey, we found that ABC has more advantages and visibility for the decision-making process. In contrast, the classical methods of cost measurement, though adopted by many companies in our sample present fewer opportunities for improving strategic decision making and company performance.

5.2 Applied implications

The IPA indicates that most ABC applications are well evaluated by the Moroccan companies", while for the non-adopters, the majority of applications are insufficiently well perceived by management controllers. This result is consistent with previous research in emergent countries (Chongruksut, 2002; Bt Fadzil and Rababah, 2012). Companies that have implemented ABC are quite effective in using their cost system. Despite this, we believe these companies do not fully benefit from the contributions of ABC. We note in particular, that the level of utilization is medium or even low on some applications. Moroccan companies should put more effort to implement cost control strategy through the deployment of Activity-Based Management (ABM). This method helps through activity and process analysis to reduce costs and improve the knowledge about product/services costs and any cost object. ABM also leads to the realization of continued progress

by a reorganization of production processes. Thanks to ABC, businesses will have a clearer vision of the composition of the cost of their products and services. This is essential in preparing estimates/quotes, to improve the cost object profitability analysis and to check the compatibility of the cost with market prices. In addition, a better understanding of the cost accounting system will facilitate and improve the strategic decision making process, particularly in terms of subcontracting and investment, creation or suppression of products / services or activities and improvement of production and sale conditions. Finally, this practice directs businesses towards a larger opening on their environment to find out about cost information from business rivals and third parties.

Concerning the budgetary practice, the results show that companies that have adopted ABC do not use it enough in budgeting. In contrast, companies that have not adopted ABC use their costing systems widely in order to elaborate budgets. These results may be explained by the lack of knowledge and practices in the use of ABC for the budgeting process, often referred to as Activity-Based Budgeting (ABB). This result indeed expresses the effect of cost reduction policies, which do not pass through ABC. Other solutions may be cheaper or faster to implement and can constitute an alternative option to the ABC method in reducing costs, but with a challenging budget monitoring. It is then a question of how to reduce the budget for purchasing, production, and overhead costs, particularly by selecting the suppliers more rigorously or by outsourcing of some activities.

This result shows, perhaps, a change in management practices is in order. The implementation of ABC can correspond to a consensual change strategy, to change attitudes and raise awareness of the company actors for an improved efficiency and performance processes. It seeks, in particular, to provide evidence by numbers. However, with the budget practices to reduce costs discussed below, we are under urgency with a management style that is more authoritarian and less participatory.

Compared to ABC, traditional methods of cost measurement do not permit an advanced use of cost information by organization. Relying on the results, most practices have medium to low levels of importance and performance. For these businesses, it is difficult to improve the quality of their cost systems. Based on the functional organizational structure, these methods cannot permit obtaining detailed information related to the various activities involved in the value creation for the customer, because they are inadequately adapted to the reality of the businesses. In fact, there is a clear separation between top and lower levels in the traditional cost measurement system of a company. Communication is formal, which means an operational agent has a relationship, only with his direct hierarchical managers but cannot communicate with other managers. Over time, this operation has a negative impact on a business performance, and this is mainly due to the lack of analytical tools adapted to make the connection between cause and consequence (Mévellec,

1995). In our view, it is difficult for these businesses to improve the quality of their cost measurement systems, as they are limited and do not provide detailed information relevant and useful for strategic decision-making and for cost and activity control (Cooper and Kaplan, 1988).

5.3 Limitations and directions for Future Research

Like any research study, this work has some limitations. First, a limitation of the study was the small sample size (62 responses). A larger size sample would have increased the validity of the sample. Second, the study was focused on a convenience sample, composed of 350 largest companies ranked by Moroccan Kompass. It would be interesting to widen the scope of the study to other businesses, especially SMEs to enhance the results of the Moroccan business practices in cost accounting system. Lastly, in this study, we presented the results of performance and importance of some Moroccan companies using the cost management system. Our study does not analyze the connection between satisfaction and importance of each attribute of the system in question. It would be interesting in future studies to statistically analyze the impact of the user satisfaction (performance) level on the degree of the use (importance) of different attributes. We also suggest using the structural equation method to study the connection between cultural and contextual variables and performance and importance level of management accounting uses. The structural equation method allows the researcher to test complex hypotheses that may include direct and indirect effects, interactions, and reciprocal relationships.

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¹ This article reports results of a study conducted in 1999.