

The development of the Activity-Based Costing method: A comparison between France and China

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ABSTRACT. In France, like in the USA, ABC was considered as a remedy for the crisis of management accounting. Now, the level of diffusion in France is as important as in Anglo-Saxon countries. Not surprisingly, the ABC method is more developed in western countries than in China. Chinese scholars began to do researches on ABC in the 1990s and at the beginnings of the 21st century, we can observe some ABC implementations in Chinese manufacturing enterprises and then in the service industries. We can also find a similarity between the Chinese and French situations. In France, we have observed some resistances to the Anglo-Saxon way of manage firms and at the beginnings, a tool like ABC has been strongly criticised.

Keywords: *Management accounting; Activity-Based Costing method; Sino-French comparison*

1 The ABC method in western countries

1.1 Introduction about the ABC method in western countries

Traditional management accounting practices have been under attack for their failure to provide detailed and timely information (Cooper & Kaplan, 1991; Gosselin, 1997; Kaplan, 1984). Since the work of Johnson and Kaplan (1987) on the “Relevance Lost” of management accounting practices, the Anglo-Saxon scholars have been very dynamic about the study of the diffusion of cost and management accounting innovations (Anderson & Young, 1999; Chenhall & Langfield-Smith, 1998; Cooper & Kaplan, 1991; Gosselin, 1997; Johnson, 1992).

The ABC method was designed in the United-States during the 80’s (Cooper and Kaplan, 1988)¹. It is a refined cost system which enables classifying more costs as direct, to expend the number of indirect-cost pools and to identify cost drivers. ABC favours better cost allocation using smaller cost pools called activities. Using cost drivers, the costs of these activities are the basis for assigning costs to other cost objects such as products or services. With the historical research of Johnson and Kaplan, we understand the context from which ABC arose. Looking for management accounting methods which could clarify the decision making process, Johnson and Kaplan suggest: First, to analyse more deeply the organization activities and processes and second, to link together the strategic and the operational management. The ABC method was conceived at first to correct misleading overhead allocations. It

¹ General Electric experimented with a kind of ABC during the 60’s.

was a response to the inaccurate standard costing American methods. But several scholars, like Lebas (1999) in France, explain that rapidly, the ABC method has gained managerial (ABM) and strategic dimensions (Jones and Dugdale, 2002). Today, the ABC systems follow three objectives:

1.2. The impact of cultural differences on management accounting principles and techniques

An important fact is that the Management Control is built on a North-American reference grounded on strong hypotheses about the representation of the firm, motivations of employees and managers' role. It fits more with a contractual type of management. It suggests a disciplinary approach (Agency and Transaction Costs theories) where the objectives of the management control activities are (Jensen and Meckling, 1992; Brickley et al. (1997)) to reduce conflicts and provide control, to tie the strategy to the resources allocation and to facilitate the firm's internal coherence.

The situation is clearly different in countries like France, Germany or Northern countries of Europe where the cultural features are different. For instance, French and German managers see the checking behind control, while the Anglo-Saxons see steering there. In the French tradition, management accounting is mainly used to identify the cost of a product, an activity or a process whereas in the North American approach, Management accounting is used in a cybernetic process, by which the standards are compared with the real data and the deviations are identified and decomposed. Firms from Northern countries of Europe (Sweden, Denmark ...) are more sensitive to knowledge-based approach of management (cf. Argyris and Schön (1978) with the Organizational Learning Theory) where the participative approaches are favoured. How to allocate the indirect costs was the major problem for French and German management accounting pioneers. This problem led them to build an accounting technique very similar to Activity Based Costing (method of the homogeneous sections).

1.3 The Diffusion of ABC in the western countries

ABC was initially popularized in the USA in the mid-1980s (Jones and Dugdale, 2002). It was then diffused gradually in many other western countries throughout the 1990s (Bjornenak, 1997; Malmi, 1999). We can say that today, it is a widely developed method in the western countries. But differences in diffusion remain strong. U.K., Australian and Scandinavian firms followed the ABC adoption in U.S. in its early days without too much gap in the implementation time frame. The major problems associated with the introduction of ABC system have been enumerated as follow (Green and Amenkhienan, 1992): the increased amount of detailed information needed by the new system, the increased paperwork, the difficulty in cost driver identification, and the insufficient support by top management.

2 ABC implementation in France

2.1 The beginnings

Until 1999, France had a highly detailed legislation covering how firms should managerially account for their transactions. Today, the situation is quite similar as in the other European countries.

The first series of French inscriptions on ABC date back to the late 1980s (Lorino, 1989 et 1991; Mevellec, 1991; Lebas, 1991). In France, like in the USA,

ABC was therefore problematized as a remedy for the crisis of management accounting. At the beginning (from 1991 to 1996), French scholars dedicated large amounts of their writings to the method's costing aspects, among which the general architecture of the system and the translation/adaptation of specific concepts, such as "cost driver", required to operate it. Thirty-five articles on ABC were published over this period. Bescos and Mendoza published the first book relating several ABC implementations in French companies (Bescos and Mendoza, 1994). Other publications followed.

2.2 Criticisms and evolutions

A few months after its importation by a network of pioneers, ABC faced a major controversy. It concerned its innovative character in comparison with an older French method: the *Sections Homogènes* (*the homogenous sections*). When implemented and used "correctly", ABC and the *Sections Homogènes* gave similar results in terms of cost calculation.

ABC has been in a second time a mode of modelling the functioning of organizations: According to Mevellec (1995, p. 38), "Such an approach is a lot more ambitious than a simple cost calculation technique..." One of the first French books about ABC (Lorino, 1991) suggests using ABC as a way to link strategy to operational management; and Chauvey and Naro (2004) described the strategic potential of ABC.

2.3 ABC in France: The facts about its diffusion

We find several studies dedicated to ABC diffusion in France: De La Villarmois and Tondeur (1996), Bescos et al. (2002), Alcouffe (2004), Godowski (2004) and Rahmouni (2008). Bescos et al. (2002) found a rate of adoption of 23%, Alcouffe (2004) a rate of 16% whereas Bescos et al. (2002) found an equivalent level of adoption between Canada (22.6%) and France (23%) (7% in Japan). French managers express a good opinion on ABC method, thanks to professional journals. But they frequently hesitate to entirely adopt the method. They prefer limited experiments. Alcouffe (2004) used the « innovations diffusion theory » (Roger, 1983, 1995) to the subject of ABC diffusion. Godowski (2004) studied the ABC diffusion in the French banking system.

A more recent inquiry (Rahmouni, 2008), find higher rate of adoption: 33.8% implemented and 18.2% in progress.

Table 1. Compared level of diffusion of ABC in France (Rahmouni, 2008, p. 217).

ABC system	Rahmouni (2008)	Bescos et al. (2002)
In progress	33.3 %	23 %
In project	18.2 %	23 %
Not retained	48.5 %	54 %
Total	100 % (66 French firms)	100 % (122 French firms)

Now, the level of diffusion in France seems as important as in Anglo-Saxon countries. It could be even more important than for instance in Ireland and New Zealand (p. 226). More precisely, the inquiry of Rahmouni (p. 227) reports that 30.2% of the firms of services use ABC, whereas this is the case for 39.1% of the industrial firms. Concerning the firms of services, 22.8% of them delivering services to firms or

customers are using ABC, whereas it is the case for 62.5% of the banks and insurances. About the firms that have the project to implement ABC, 23.2% of them are delivering services whereas only 8.7% are industrial ones; which means that the future of the ABC method in France concerns more especially the activities of services. Maybe it could be explained by the high level of competition in those sectors in such a country like France. In most of the cases (82%), the ABC method covers all the processes of the firms. The first objective of the method is to calculate the commercial costs and the customers' profitabilities, than the administrative (73%), research and development (64%) and information systems costs (59%).

Now, we are presenting the Chinese situation about the ABC method and we will compare it to the situation in the western countries and in France.

3 ABC implementation in China

3.1 Introduction

The popularity of Activity-Based Costing (ABC) in the west and its widespread coverage in the Chinese management accounting textbooks has made ABC an attractive costing method for academics and practitioners in China. Since the understanding of success and / or failure of ABC implementation has primarily been generated through empirical research in developed countries, it is rare to learn as to whether ABC techniques can be implemented successfully in organizations in developing countries such as China.

Chinese academia began to do researches on ABC in 1990s, and made some achievements (Pan and Zhou, 2002). After introducing the concepts and theoretic significance of ABC, they began to examine the implementation and some detailed calculation of ABC in Chinese manufacturing enterprises and then the service industries (Ou and Wang, 2000; Wang et al, 2000; Lin and Liu, 2001; Pan et al, 2003; Zhang et al, 2006; Yong & Liu, 2009; Yang and Chen, 2009). With more implementations of ABC in China, some researchers began to make investigations and try to discover the influence of industrial factors and enterprises scale on the implementation (Zhu and Chen, 2000; Hu, 2001; Pan et al, 2004). The results of investigations showed that in Hong Kong, it was not very long since many companies had begun to get in touch with ABC, and that scale of the companies of those applied ABC was much larger than the others, and that the main motivation for applying ABC was to get more accurate cost information; and that in mainland China, ABC had been hardly implemented. Some ABM ideas had also been represented in some management experiences.

3.2 ABC implementation in mainland of China

Because of shortage of complete statistical data, we mainly describe the situation of ABC implementation in China in past 10 years from three aspects:

Rate of ABC adoption

Hu (2001) collected 531 reports on firms' advanced financing experiences. The samples distributed at least 27 provinces/cities and several tens of industries. Eliminating reports on regional industry and non-profit organizations, 397 valid samples were achieved. Using the 397 samples, he made statistical analysis on the methods involved with cost management and implementation of ABC and ABM.

Among the 397 sample, there were 189 using all kinds of cost management methods. The cost management methods which he examined include ABC, Target cost (including planning cost, fixed cost and standard cost), complete with life cycle cost, PDCA (Plan, Do, Check and Action), cycle management and quality cost management. Table 2 shows Hu's statistics results.

Table 2. Statistics of adoption of Cost Management Methods.

	ABC	Target costing	Life cycle costing	PDCA	Quality cost management	Others	Total
Firms distribution	6	161	2	2	10	8	189
percentage	3.17%	85.19%	1.06%	1.06%	5.29%	4.23%	100%

The ABC rate of adoption is very low. The idea of ABM can be seen in some management experiences. According to Hu (2001), ABC and similar experiences mostly came out of partial or special management, for instance from product design, technique design, and quality management. ABC similar experiences usually exist with target costing. They can coexist in different areas, and can also be compatible.

Hu also argue that the production and operation environments in China are not enough matured so that ABC could be widened developed. Before using ABC or ABM the firms should first judge whether it can bring them benefits. Second, the idea of ABC shall be adequately used to analyze and solve problems. It does not only work for hi-tech manufacturing firms. Third, the development of ABC must be achieved step by step.

Industries of ABC adoption

The implementation of ABC used to be focused on manufacturing industries, especially advanced or hi-tech manufacturing companies. While Wang et al. (1999) found that ABC was not only suitable for hi-tech manufacturing firms, but also for some non-hi-tech manufacturing firms, such as Xi'an Agricultural Machine Factory, in which the volume differences between products were large and the ratio of manufacturing overheads versus direct labor was high. They also argued that there were successful cases of ABC application in some foreign non-manufacturing industries, such as finance/insurance, commerce, medical/ health industries.

More recently, some researchers argued that ABC could be implemented in many other industries, such as colleges and universities (Gan and Tao, 2007), restaurants (Li and Shao, 2007), commercial banks (Chen, 2009; Deng and Wei, 2010) and coal mining industries (Li and Wang, 2010).

Main factors affecting the application of ABC

Pan et al. (2004) find that employees tend to lower their evaluation of ABC if their performance was to be adversely affected by adopting it. They also find that the quality of ABC accounting software would have great influence on the application of ABC.

According to an empirical research by Su et al. (2007), the factors of size of

company, management system, market competition and cost structure, have significant influences on the application of ABC in Chinese companies; but the industry field and the company's strategy have no influence. The scale of the company, the degree of centralization of its management, the percentage of overhead in the total cost all have a positive correlation with the probability that a company tends to adopt and apply ABC. Meanwhile, a company in a market with more competitions is less likely to adopt ABC and the degree of its application of ABC is comparatively low.

Main factors affecting the application of ABC

Zhu and Chen (2000) discover that the most significant motivation was to acquire more precise cost information and data, and that the biggest difficulty of ABC design and implementation lies in ABC information collect, and that the main reasons of not applying ABC was a lack of training staff and satisfactory with current systems.

3.5 Some limitations about ABC implementation in China

Generally speaking, ABC implementation depends mainly on the external and internal environment of a firm. Owing to restrictions of external and internal objective conditions, ABC method has not yet been popularized on large scale in Chinese enterprises by now (Zhao, 2007).

4 Discussion and conclusions

Not surprisingly, the ABC method is more developed in western countries than in China, because it represents a western way to manage the firms. Even if some internal and external factors can explain for a part a low level of adoption in China, the "cultural" dimension could be a major determinant.

But we can find a similarity between the Chinese and French situations. In France, we have observed some resistances to the Anglo-Saxon way of manage firms and at the beginnings, a tool like ABC has been strongly criticised. But today, the globalization phenomenon has an impact on the French firms, which explains the increase of the level of adoption of such a technique as ABC observed these last years.

In the future, we would like to study a Chinese-French joint venture where the ABC method has been settled. We could also extend our compared analysis to other management accounting tools like the Balanced Scorecard.

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