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The rise and fall of Activity Based Costing in Japan

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Abstract

Activity Based Costing (ABC) has come to light in an era where there was worldwide attention for Japanese management systems and management accounting practices. Despite the worldwide hype for ABC as a method capable of producing more accurate product costs, ABC gathered very little interest from the business community in Japan. However, in contrast, Japanese management and cost accounting researchers took a positive view on the concept and attempted to discuss its applicability to Japanese companies as a viable alternative for their existing cost systems. Although, the collapse of the Japanese bubble economy in early 1990s provided some impetus for Japanese companies to show interest in ABC, there was no evidence of them adopting the practice, nor any serious attempt to do so. This paper seeks to examine the response of the Japanese business community and academics with respect to ABC and to summarise the reasons for ABCs' lack of popularity in Japan as a viable cost accounting system for Japanese companies. This has been done predominantly via a review of Japanese academic literature, which has revealed that the main objective of the researchers was to introduce the concept of ABC and to open up discussion about its merits for Japanese businesses rather than to promote its adoption by them. The fact that Japanese companies already have good cost management systems, which are either effective or somewhat similar to the concept of ABC, and their interest lies on long term growth rather than short term profitability, are among the main reasons for the lack of popularity of this concept in Japan. Despite the lack of popularity of ABC in Japan as a useful costing system and the doubt about its usefulness for Japanese businesses, the academic discussions on the ABC have certainly provided Japanese companies a useful reference for assessing the strength and weakness of their own costing systems.

Keywords

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The Rise and Fall of Activity Based Costing in Japan

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Abstract

Activity Based Costing (ABC) has come to light in an era where there was worldwide attention for Japanese management systems and management accounting practices. Despite the worldwide hype for ABC as a method capable of producing more accurate product costs, ABC gathered very little interest from the business community in Japan. However, in contrast, Japanese management and cost accounting researchers took a positive view on the concept and attempted to discuss its applicability to Japanese companies as a viable alternative for their existing cost systems. Although, the collapse of the Japanese bubble economy in early 1990s provided some impetus for Japanese companies to show interest in ABC, there was no evidence of them adopting the practice, nor any serious attempt to do so. This paper seeks to examine the response of the Japanese business community and academics with respect to ABC and to summarise the reasons for ABCs' lack of popularity in Japan as a viable cost accounting system for Japanese companies. This has been done predominantly via a review of Japanese academic literature, which has revealed that the main objective of the researchers was to introduce the concept of ABC and to open up discussion about its merits for Japanese businesses rather than to promote its adoption by them. The fact that Japanese companies already have good cost management systems, which are either effective or somewhat similar to the concept of ABC, and their interest lies on long term growth rather than short term profitability, are among the main reasons for the lack of popularity of this concept in Japan. Despite the lack of popularity of ABC in Japan as a useful costing system and the doubt about its usefulness for Japanese businesses, the academic discussions on the ABC have certainly provided Japanese companies a useful reference for assessing the strength and weakness of their own costing systems.

Keywords

Activity-Based Costing, Japanese Management Accounting, Literature Review

The Rise and Fall of Activity Based Costing in Japan

1. Introduction

During the pre- and post-WWII era, Japanese companies learned management methods and techniques from the US and other countries, subsequently adopting and improving them to support their business operations. However, by the late 1980s, the tremendous success of Japanese companies attracted worldwide attention and the methods they used came to be known as ‘Japanese Management Systems’ and ‘Japanese Management Accounting’. These methods became a popular topic in both business magazines and in academic literature as a result of the high level of interest shown by the business and academic community worldwide (Okano and Suzuki, 2007). Activity Based Costing (ABC) came to light in such an era. Despite the worldwide hype, the business community in Japan showed a lack of interest in ABC. In contrast, Japanese management and cost accounting researchers took a positive view on the concept and attempted to discuss its applicability to the Japanese companies as a viable alternative for existing cost systems in Japan. Because of the different perspective ABC provides to the traditional cost accounting, these researchers viewed it as having the nexus to be “the base of framework of building a new cost management system ... a common denominator of cost accounting, performance evaluation, investment control, and non-value added accounting” (Sakurai; 1988). With the collapse of the Japanese bubble economy in the early 1990s, the business community in Japan started showing interest in ABC/Activity Based Management (ABM). However, there was no evidence that they had made any serious effort to adopt ABC in their business. By and large, ABC failed to gain serious attention from the business community as a viable option for traditional costing system, despite its rise in popularity as a topic in academic literature. The objective of this paper is to study the rise and fall of ABC/ABM in Japan through a review of various Japanese literature on ABC, which provides a background and outlines the reasons why ABC has faded away in Japan after having gained considerable attention amongst academics and practitioners.

2. Introduction and recognition of ABC in Japan

The concept of ABC was introduced in Japan by Japanese accounting researchers who were interested in the concept. These researchers, while encouraging academics to conduct positive research on the applicability of ABC to Japanese businesses, advised businesses to implement the concept with caution.

2.1 Introduction of ABC by Sakurai (1988)

Sakurai (1988) was the first Japanese academic to discuss ABC in Japanese literature. In his paper, ‘America Genka-Kanri no Shin- Doukou (The new trend of cost management in America)’, he presented the concept of ABC to Japanese readers as ‘Activity-Oriented Cost Accounting’, which was being developed in the US at the time. Sakurai’s paper intended to present the new trends in cost management in the US to Japanese readers and discussed the findings of the research conducted by CAM-I (1987) and Berliner and Brimson (1988).

Sakurai (1988) positioned ABC as a common denominator of cost accounting, performance evaluation, investment control and non-value added accounting and believes that Activity Accounting can serve as a logical framework to integrate these unorganized systems. In addition to providing an explanation on the concept of function, activity and task, which are integral parts of activity accounting, Sakurai

also discussed the advantages of using activity accounting and cautioned that use of ABC may impede the development of new products as the cost of products with small lot sizes could be higher under ABC.

2.2 ABC literature since 1988

Since the first Japanese article on ABC in 1988, there have been numerous academic papers introducing and explaining the various aspects of ABC. Among them are Hiroshi Ito and Yoshihiro Ito (1989), Yoshihiro Ito (1990), Hiroshi Ito (1991,1992), Yamamoto et al. (1991), Sakamoto (1991), Shimura (1992), Kobayashi (1992), Obata (1992), Hasegawa (1992), Tanaka (1993), and Nakamura (1993). The views expressed by some of these writers are as follows:

Yamamoto et al. (1991)

Yamamoto et al. (1991) explained the mechanics of ABC, its use for strategic decisions and performance evaluation and product development. While not promoting the immediate adoption of ABC within Japanese businesses, he emphasised the need for conducting further research to assess the viability of ABC in Japan.

Kobayashi (1992)

Since the meaning and interpretation of the basic concepts of ABC differed from writer to writer, Kobayashi (1992) attempted to clear the confusion by providing a discussion on the concept of *cost driver* as used in the ABC literature. Kobayashi (1992) identified two objectives for using ABC: (1) cost accumulation on cost objects, and (2) cause of costs occurrence and improvement in business processes. In his discussion, he stressed the importance of considering the two objectives separately.

Hiroshi Ito and Yoshihiro Ito (1989); Yoshihiro Ito (1990)

On the arguments presented by Cooper and Kaplan (1988), Ito and Ito (1989) point out that their concept of *cost driver* is similar to Porter's (1985) concept of *competitive advantage* and supported the view that the concept of *cost driver* is useful for developing strategic cost accounting based on the *value chain* concept. Furthermore, Ito (1990) attempted to compare the concept of cost driver presented in Porter (1985) and ABC literature in terms of definition, cost behaviour, scopes of strategy, and terms of strategy in order to distinguish the difference to the readers. He also expressed the view that ABC will provide an opportunity to make management accounting more useful for strategic cost analysis.

3. The discussions on the adoption of ABC in Japan

3.1 The prospects for adaptation

Tanaka (1993)

Tanaka (1993) introduced the theoretical structure of ABC and discussed the reasons why Japanese companies would not be interested in adopting ABC in their businesses despite the high adoption rate in the UK and USA. According to Tanaka (1993), the reason ABC is rarely accepted by Japanese companies as a viable cost accounting system include:

- 1) Lack of interest in calculating more accurate product costs, as Japanese companies believe the price of a product is influenced by market forces, not the cost of the product;
- 2) Availability of other systems, such as KANBAN, TQC, KAIZEN for cost management activities, reducing the need for another cost management tool;

- 3) Ability to achieve cost reduction with the use of systems such as TQC and KAIZEN system, reducing the need for another tool for cost reduction.

On the other hand, Tanaka also identified a number of reasons for Japanese companies to consider adopting ABC in their businesses, including:

- 1) With ABC, companies may be able to calculate the profit for each product segment more accurately than with the current systems, such as target costing (GENKAKIKAKU), standard costing, and actual costing which and to provide more accurate cost information for managerial decision-making;
- 2) Continuous improvement activities (KAIZEN) at Japanese factories places great importance to rule of thumbs. However, since ABC/ABM cost analysis is based on more analytical quantitative data, it may provide more possibilities for cost reduction;
- 3) Japanese companies may need to have good awareness of the concept as there is a possibility that the ABC may spread worldwide and become a global standard for cost accounting.

Sakurai (1990)

Sakurai (1990) identified two major differences between US and Japanese companies that make ABC less attractive for Japanese companies. Firstly, the focus of US companies is to produce and sell profitable products and to achieve their short-term profit target, while the focus of Japanese companies is to strengthen their long-term competitiveness through the development of innovative cost management systems, such as target costing. Secondly, many managers in the US believe that the product of multiple models in smaller lot sizes should bear more cost, while many managers in Japan believe that some degree of mutual compensation is necessary for strategic reasons. Sakurai (1995) finds Japanese companies' need to seek cost reduction using ABC is less, although manufacturing overhead costs in both US and Japan have increased due to the increased use of automation in factories. It is a commonly held view that setup costs of a Japanese company is several times less than that of a US company. Sakurai (1995) concludes that ABC is not so attractive to Japanese companies if it is useful only for product cost calculations and not for cost management. However, he sees a role for ABC in Japan if it is used in the form of ABM.

Ito (1990)

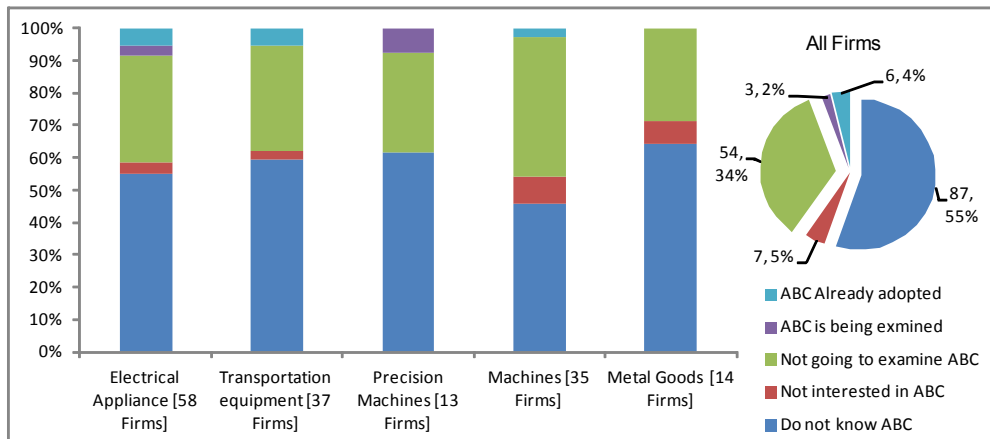
Ito (1990) presented his views from the perspective of developing ABC for strategic cost accounting. He agreed with Sakurai and Cooper's view that most managers believe ABC is not useful for cost management purposes, regardless of the complexity and the precision of the cost allocation procedures it utilizes, as long as it is considered as a cost accounting system. Ito (1990) stated that promoting ABC in Japan would be difficult as Japanese companies view it as a cost accounting system, not as a cost management system. However, he believes that some Japanese companies may feel the need to adopt ABC because they are trying to reduce costs to maintain the existing product price and product mix. Especially, since it is vital for companies to identify proper cost drivers for various cost items, particularly for cost calculations in Value Engineering (VE) and value chain analysis, which are used extensively by Japanese companies.

3.2 Industry responses

Survey by Sakurai (1992)

Sakurai (1992) conducted a survey between January and February 1992 to examine the Computer Intergrated Manufacturing (CIM) and cost management practices in Japan. In this survey he also inquired Japanese managers' views on the concept of ABC. The responses received for this question from 157 companies covering 5 major industries are depicted in Figure 1 below.

Figure 1
Current Situation of ABC



Data from Sakurai (1992)

As shown in Figure 1 above, 94 per cent of the companies that responded to the survey indicated that they either do not know ABC, are not interested in it or are not going to investigate it, showing their lack of interest to the concept. Only six per cent of the companies surveyed indicated that they either adopted ABC or are in the process of investigating it. The percentage of companies interested in ABC varied from 8 per cent in the Electric Appliance industry to zero per cent in the Metal Goods industry. These results clearly show the lack of popularity of the ABC concept in Japan. Sakurai (1992) believed the Japanese companies' use of "Direct Assignment to Product Line Method" may have contributed to ABC's lack of popularity (p.3).

Nagamatsu (1993) provided reasoning for Japanese companies' lack of interest in ABC. He states, "Japanese companies have overcome several crisis since WWII and have achieved rapid growth. They have been rated highly as very resilient companies that can overcome economic crisis and achieve economic growth amidst adverse domestic and international economic conditions. Until the collapse of the bubble economy in early 1990s, management systems used by Japanese companies have been hailed worldwide and known as 'Japanese Management System' which has not only been studied worldwide but also applied in many countries in the world. Fundamentally, Japanese companies attach high importance to growth than to profit and enjoy economics of scale through facility investment and financial management based on equity finance. For these reason, Japanese companies will not be interested in ABC/ABM which has come into light in the US as a measure to restructure their management to face the economic challenges caused by the recession"(p.14).

Kobayashi (1992)

Based on the information gathered from discussions with personnel in the industry, Kobayashi (1992) put forward two main questions that companies are interested to know with regard to the use of ABC in Japan. First, “why accurate cost allocation is so important?”. This question is based on the view that there is a certain amount of arbitrariness with cost allocation irrespective of the method used, ABC or otherwise. If that is the case, then rather than paying attention to ABC, companies should be paying more attention to other important matters, such as the development of more profitable products. Second, “Why it is a problem now?”. This question is based on the fact that Japanese companies have already dealt with multiple models with fine cost allocation for a long time and have not considered it as a major issue.

3.3 Researchers response to industry view

The lack of interest in ABC in Japan puzzled some researchers who thought that the industry was discarding ABC without giving it a proper consideration. For example, Hasegawa (1992) lamented on the lacklustre industry response to ABC stating, “I can say that Japanese industries do not rate ABC higher than the US. I think Japanese managers think that their system is superior to the US system. Is it really the case?” He advocated Japanese companies to have a positive outlook of the concept by stating, “If there is a uniform view in the US that ABC has potential to become a strong weapon for US, then Japanese companies should also have a careful look at it.”

Nagamatsu (1993) pointed out that some Japanese companies use cost accounting system similar to that of ABC. According to him, “Some Japanese companies are using a cost accounting or a cost management system similar to ABC but they are not working as an integrated ABC/M system like in the US. I think integrated system like ABC/M is useful for companies operating in an economy in recession as it enables companies to reduce cost and earn profit” (pp.14-15). He believes that for ABC to be widely accepted and used in Japan, it needs to function as a general management system supported by information systems, rather than to serve as a product costing method that provides more accurate product costs. Nagamatsu (1993) also highlighted the importance of examining the applicability of ABC in the context of the current economic situation in Japan, stating, “Since the collapse of the bubble economy, Japanese economy is in a serious and complex recession which has made the land and stock prices to fall to historical low levels. Companies are trying hard to increase their profitability by streamlining management and reducing costs through reduction of inventories and removal of non-value added activities. The traditional measures that companies are using have not provided an intergraded solution. Therefore, despite the fact that ABC has not yet been wide spread, it seems to have enough merits for consideration in Japan”(pp.16-17).

Hasegawa (1992) also agrees that ABC has not received due recognition in Japan. Identifying the role that accounting researchers need to play in this regard, he states that “it may not be necessary for Japanese companies to adopt ABC at this time if they believe that they have a superior cost accounting system or management system, or another system equivalent to ABC. If it is the case, then the mission of the researchers is to examine and report how these cost accounting system and management system work in Japanese companies”(p.53).

3.4 Change in Industry response to ABC

With the collapse of the Japanese bubble economy, the period 1993 to 1995, business journals such as ‘Kigyo-Kaikei’ ran special issues focusing on restructuring and

reengineering businesses. For example, “Restructuring and Management Accounting (1993)”, “Cost Management for Restructuring (1993)”, “Cost Reduction by Logistics Reengineering (1994)”, “Reengineering of administrative division (1994)”, “Reengineering and Management Accounting (1994)”, “Restructuring and Changed Accounting Division (1994)”, “ABC and Management of Overhead Costs (1995)”. Some articles on ABC, written by researchers appeared in these special issues, such as “Cost Management and ABC (Hiromoto, 1993)”, “Reengineering of Logistics with ABM for Logistics (Nishizawa, 1994)”, “Reengineering and Information from ABC (Yoshikawa, 1994)”, “Applicability of ABC for Reengineering (Iwafuti, 1995)”, and “Management of Overhead and ABC/ABM (Sakurai, 1995)” to name a few.

Interestingly, these special issues also contain articles written by practitioners in the form of case studies on companies such as KIRIN Brewery, NEC System Integration Construction, and Alps Electric. Industries began to pay attention to ABC/ABM on the back of topics such as restructuring and reengineering, which had gathered considerable attention from the business community. Sakurai (1993) found two reasons for this interest. First, the changing characteristic of ABC around 1991, from accurate cost accounting method, focusing on tracing costs based on activities to cost management method (ABM), aiming to reduce costs. Second, the usefulness of ABC for restructuring products during the recession in Japan, which began in 1990, but became serious in 1991. However, Sakurai (1995) stressed that despite the increased interest in ABC/ABM by the industry, its use by Japanese companies was vastly different to that of US companies. Commenting on this point, Sakurai (1995) states, “even during the height of the recession, only a few Japanese companies try to use ABC for re-examination of their products strategies. I guess it is because many companies consider the long-term relationship is very important. ABC has been used in a bit different way in Japan and I think it is necessary to build a Japanese style of ABC”(p.29).

4. Japanese transposition of ABC

As mentioned earlier, a major reason why Japanese industries show a lack of interest in ABC is because they already have a kind of cost accounting system or cost management system that is fully or partially equivalent to ABC. The following section provides evidence of such practices.

4.1 Sakurai and Cooper (1990)

In August 1989, Michiharu Sakurai and Robin Cooper conducted an investigation on cost accounting practices of Japanese advanced enterprises. The results of their investigation revealed that many of these companies had found a way not to treat product overhead cost as overheads. Five of the seven companies investigated were found to have innovated their own method to manage product overhead costs in a three year period (Sakurai and Cooper, 1990). From this description, it appears that some Japanese companies have developed their own overhead management methods. Sakurai and Cooper (1990) provided three examples of companies with innovative overhead management systems: X (a raw material industry), Y (a heavy machine industry) and Z (processing and assembly industry).

(1) Company X

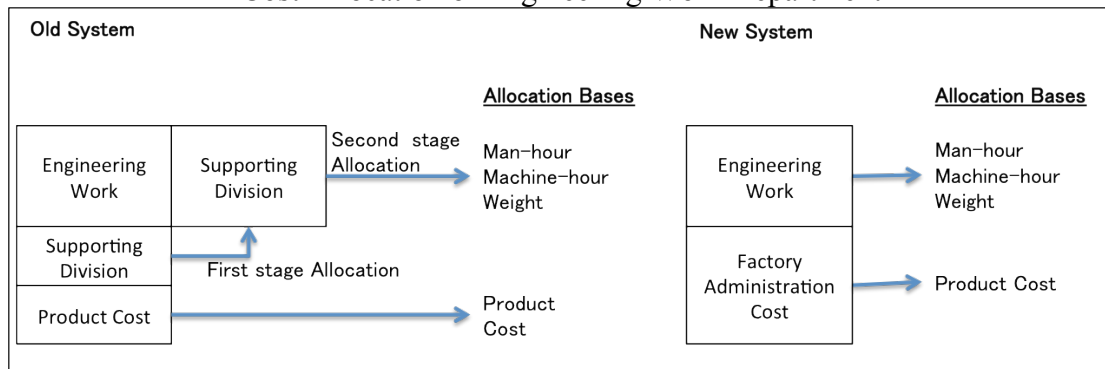
X classifies overhead into 4 levels, namely: Level 1—cost of energy, inspection, maintenance, and material handling; Level 2—cost of product planning, engineering staff, and factory administration; Level 3—cost of welfare; and Level 4—cost of the

head office. Since consumption is used for the calculation of level 1 costs, this cost is closer to a directly charged cost than to an allocated cost. The product planning cost and computer related costs included in level 2 are allocated using computer hours. As an ordinary overhead cost allocation, the level 3 costs are allocated in proportion to the sum of labour cost and depreciation cost. Although there is no necessity for allocating level 4 head quarter's cost for financial accounting purposes, these costs are allocated to the product lines in proportion to the composition ratio of sales and book value of facilities.

(2) Company Y

Y manages overheads by cost. Every cost center has a general budget and it does not trace its details. Cost reduction of product overhead is done with physical unit (raw data) at the manufacturing floor. However, in company Y, almost all the literature on ABC are translated and examined, and they have come to the conclusion that the “collect” and “fine” allocation is not necessary, rather they select the “appropriate” and “easy” allocation method. That is, they only have to know which cost and which product line is connected. A cost center is broken into parts only when the difference of overhead cost is large. As a result, Y invented its own calculating method. For example, in the engineering work division, division cost is divided into direct conversion cost center (ex. engineering work, or casting) and factory administration cost center (ex. product engineering, or inspection, general affairs). The cost of direct conversion cost center is burdened costs in proportion to standard machine-hour, man-hour, and weight ratio as cost drivers. On the other hand, cost of factory administration cost center is charged to every product line and allocated based on uniform allocation base. This process is depicted in Figure 2 below:

Figure 2
Cost Allocation of Engineering Work Department



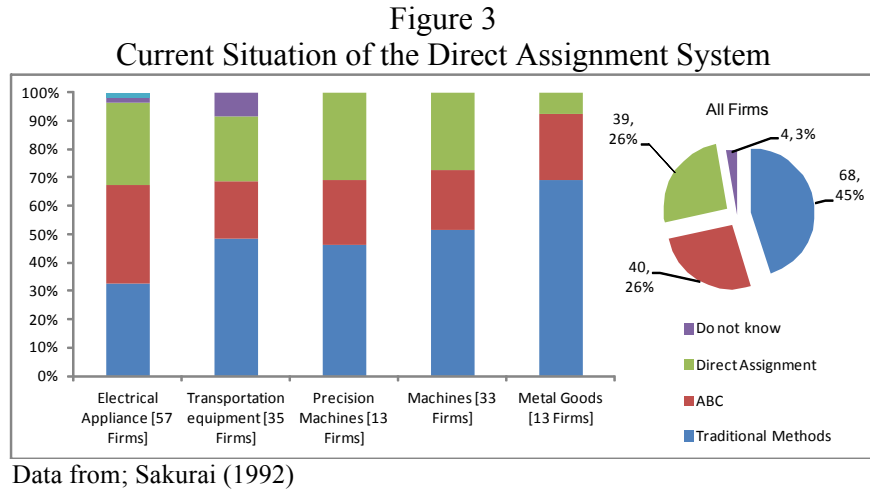
Adapted from Sakurai and Cooper (1990)

(3) Company Z

In Z, all costs used in the direct manufacturing division are considered as direct costs. For example, depreciation cost of machine and facility, cost for tools, labor cost for maintenance and material handling, those are not usually considered as a direct cost, are considered as direct costs. Only indirect labor costs and petty expenses are considered as overhead, and they are only 4.5 – 5% of the total product cost. This small amount of overhead is divided into levels and allocated in proportion to direct cost.

4.2 Direct Assignment to Product Line-Sakurai (1992)

As outlined above, Sakurai and Cooper (1990) discovered the cost accounting system used by some Japanese companies to overcome the defects on cost allocation by identifying the product line as a cost object, instead of product. Thereby, assigning costs directly to the product line. Sakurai (1992) named this the “Direct Assignment to Product Line Method.” He also examined the extent this method is used by Japanese companies. The result of this examination is depicted in Figure 3 below.



As shown in Figure 3 above, 68 of the 151 companies surveyed (45%) used the traditional overhead allocation method. Sakurai (1992) was not surprised by these results, as the results matched his prediction. In accordance with the original ABC model proposed in the late 1980s, ABC consists of three basic elements. They are: (1) cost driver, (2) long term variable costs, and (3) resource consumption (Borden, 1990; Sakurai, 1991). Although the respondents of this survey may have taken ABC in the true sense of the term with its evolvments since introduction, it can still be considered as ABC given the fact that it contains all of the above three elements. The survey results reveal 26 per cent of the surveyed companies were found to use ABC and 26 per cent using the Direct Assignment to Product Line methods, respectively. This shows a fairly high level of acceptance for both methods. Overall, the finding of this investigation suggest that Japanese companies prefer simple methods that are useful for cost reduction, whereas US companies place greater importance on sophisticated methods, which is more useful for analysing customer profitability than cost control.

4.3 A case of Alps Electronic Co.—Kawano (1995)

Alps Electric Co. is a manufacturer that produces multiple models of electronics. It predominantly produces ITproducts in small orders and is presented here as a case study of a Japanese company adopting ABC. However, the company’s cost accounting system could be considered as a system similar to ABC since it has been in use ten years prior to the introduction of the ABC concept.

The accounting system of Alps Electric Co. is designed to cater for its requirements. The company needs a system that is good enough for pricing orders and allocating resources. The traditional cost allocation based on direct labor hours or machine hours is appropriate for calculating accurate product costs, as it manufactures multiple models in small-lots on build to order method and has a high outsourcing

ratio. The procedure the company used for cost allocation is as follows: (1) Support departmental costs is not allocated to production department and assigned to product lines directly, (2) Overhead costs are accumulated into every responsibility units and functional units of the company, (3) 'Declared engagement proportion' method is used for allocating support departmental costs to each product line, (4) This system is used together with the Direct Assignment method, and (5) General administration cost and marketing costs are allocated using the same system.

The company has organised its department structure, setting a cost center for each department. However, when one department has multiple functions, a cost center is established for each subsection or group. In the product development function, cost centers are established based on the development theme. A unique feature of this system is that a cost center is established for a responsibility unit or for a functional unit, not for an 'activity.' Second stage allocation is done using 'Declared Engagement Proportion' method. One would imagine that managers who know the task well would select this as the most appropriate allocation base. Although, this type of data may be inaccurate to varying degrees, using an appropriate base considered to be more important. However, in order to minimise the effect of arbitrary selecting of the allocation base, the selected allocation base is disclosed and discussed at a performance examination meeting. The impact this system has on gaining attention from the managers for product line resource allocation is significant.

The merits of using the company's ABC system are: (1) ability to calculate more accurate product costs for small-lot productions, (2) ability to shift to products or projects with growing demand by changing the method of overhead assignment, (3) ability to identify unprofitable products with excessive use of overheads, (4) ability to plan and to identify necessary measures to revitalise products through comparison of overhead costs between product lines or divisions. Also, there is an additional benefit of expediting the decision-making in the company due to the fact that the ABC based performance is much closer to the intuition of the managers.

5. Introduction and development of ABC in Japan

As described in the previous section, Japanese companies' lack of interest to adopt ABC seems to have been influenced by them having similar accounting methods for managing overheads. However, there are also cases where Japanese companies have examined the merits of ABC with a view to adopting the concept in their organization. Two examples of such companies are presented below.

5.1 A case of KIRIN Brewery Company- Masui (1995)

KIRIN Brewery Company (the Company) adopted ABC in an environment where they have to deal with issues such as low market growth, price-busting, low customer satisfaction, and increasing environmental responsibility. The following five factors can be considered as the main reasons that led the company to adopt ABC/ABM to find solutions to some of their existing problems: (1) Significant increase in conversion cost—conversion cost has increased from 29 per cent in 1980 to 37 per cent in 1994, (2) The contents of conversion cost became complex—business process has become complex because of coping with customer satisfaction and environmental responsibility, (3) Grasping cross-sectional costs— organization hierarchy has become flat, workers have become multifunctional, and cross-functional activities are

increasing, (4) Existing standard cost calculated is suit for conversion cost, and (5) ABC/ABM became feasible because of progress in IT.

The Company's existing cost accounting system is in conformity with Japanese Cost Accounting Standard and use different calculations based on such standards. The company uses a common database for calculating the cost of each item and each division, but uses another database for calculating product costs. For financial accounting purposes, the whole company is considered as one unit, having just two types of products. Only simple calculations are necessary for the company level. However, for management accounting purposes, calculations are required for each factory and product (15 factories X 10 liquid types X 10 container types). The conversion costs are divided proportionally based on the product quantity. The Company expected ABC/ABM to provide more precise costs to support their cost strategy.

5.2 A case of NEC System Integration Construction Company.

NEC System Integration Construction adopted ABC with a view to improving the cost allocation of its headquarters and management. During the implementation, it intends (1) to identify an appropriate allocation system for its headquarters for the purpose of re-examining the company's performance evaluation system, (2) to apply ABC in a loose manner, considering the cost/benefit associated with the implementation, (3) to entrust each department of the headquarter with the selection of the allocation base, and (4) to maintain fairness and agreement with the implementation. ABC was adopted in all departments of the headquarters. In the process, 66 cost pools and 40 cost drivers were set. Tracing of departmental costs to cost pools and calculation of cost driver ratio was conducted using computers. As a result of adopting ABC, the company was able to make clear the relationship between activities occurred in various departments of the headquarters and the costs incurred in these departments. There is also a consensus among the managers that the costs have been allocated fairly.

6. Conclusion

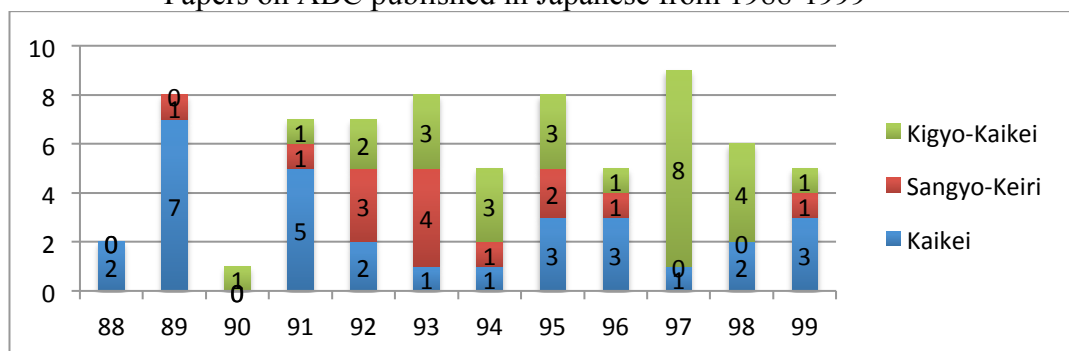
This paper sought to examine the response of both the Japanese business community and academics with respect to ABC and the reasons for its lack of success as a viable cost accounting system for Japanese companies. A review of various Japanese academic literature was undertaken, which covered the historical developments of ABC in Japan, the initial reaction to the concept by both business and academics, the reasons for the lack of interest from businesses for adopting ABC in their businesses, the experiences of actual uses of ABC and the views of the researchers, who despite the lack of interest from businesses found ABC a system worth considering for adoption in Japanese businesses. Our research revealed that ABC was never considered as a useful method that could help Japanese companies with their cost calculations. Many researchers in Japan saw the merits of using it in Japanese businesses, but continually argued that any adoption should be done with caution. Furthermore, we found that the main objective of the researchers who contributed to the academic literature was to introduce the concept of ABC and to stimulate a discussion about its merits, rather than to promote its adoption to Japanese businesses. The fact that Japanese companies already have a good cost management systems, which are either effective or somewhat similar to the concept of ABC, and their interest lies on the long term growth, rather than short term profitability are among the main reasons for the lack of popularity of this concept in Japan.

Overall, there is no doubt that ABC can provide benefits to any company, irrespective of where it is located. As Horngren et al. (1992) describes, ABC has many welcoming characteristics for company practices even if it is not used by a company. The eight such characteristics identified by them are: (1) Researchers took interest on its basic idea and began to study cost accounting systems of many companies than ever before, (2) The ABC concept highlighted the necessity to consider the 'cause and effect' relationship between activities (the actual process) and cost objects and highlighted the problems with traditional costing system that use broad averages for cost allocation, (3) Evocated the necessity for careful selection of allocation base, (4) Identified the problem of using single allocation base and promoted the use of multiple allocation base, (5) Promoted the idea that that managers should control the costs by watching activities not the products, (6) Emphasized the idea that the production cost is influenced not only production but also by all functions in the value chain, (7) Increased managers' attention to reconsidering the performance evaluation methods in companies that produce wide-range products, and (8) The supporters of ABC began to recognize that costing system have to pass the cost-benefit test and ABC may not be used because of its complexity. Certainly, some of these characteristics have applications for the development of Japanese practices. Despite the lack of popularity of ABC in Japan as a useful costing system and the doubt about its usefulness for Japanese businesses, the academics discussions on ABC have provided Japanese companies a basis for assessing strength and weakness of their own costing systems.

Note

1. For the analysis of this paper, we have reviewed papers published in three main Japanese accounting journals, namely—*Kaikei*, *Sangyo-keiri* and *Kigyo-kaikei*—during the period ABC was widely discussed in the academic literature. These three journals are considered as the main contributors to the Japanese accounting literature. *Kaikei* was first published in 1914 and has been the main publication of the Japanese Accounting Association. Traditionally, it has not adopted a refereed system, despite being a bulletin of an academic society. *Sangyo-keiri* and *Kigyo-kaikei* are industry journals published from 1941 and 1948, respectively. *Sangyo-keiri* was initially named as *Genka-keisan* but changed its name to *Sangyo-keiri* in 1946. Although it is difficult to identify the exact number of articles that dealt with the ABC concept, Figure 4 below depicts articles with 'ABC' in its title that have appeared in these three journals during the period 1988-1999.

Figure 4
Papers on ABC published in Japanese from 1988-1999



In general, due to their non-refereed system, all of these journals have covered a broad area of research and is not confined to specific research themes.

Also, since the long time lag between submission and publication of papers commonly seen in refereed journals is not seen in these journals, the papers published in these journals reflect the timely views of the academics and the industry.

2. It was not within the purview of this paper to review papers published beyond 1999. However, all such papers will be reviewed during the next stage of this research.

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