

Research and concepts

Activity-based cost management in financial services industry

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Abstract

The rapid advancement of enormously expanding information technologies and vigorous global competition have caused the irrelevance of conventional management accounting systems (MAS) in providing useful information to assist management's decision making, planning and control in both service and manufacturing organizations. The shortcomings of traditional MAS, in terms of validity, accuracy, completeness, consistency, understanding and relevance, increase the need for modern MAS, like activity-based costing (ABC). In growing inadequacies of traditional MAS, ABC can be used as a tool for planning, control and decision making in service management. ABC traces costs to activities rather than products, which provides a more accurate and correct picture of the cost consumption. Furthermore, ABC uses a larger number of cost drivers instead of one or two volume-based cost drivers in a traditional cost management. However, activity based management (ABM) helps management to make decisions and formulate plans to provide new services, improve existing services and measure performances in order to achieve overall competitive strategies advantages of organizations. Thus, this study attempts to demonstrate the shortcomings of traditional MAS, and the usefulness of ABC and ABM in making decisions on product profitability and performance measurement in services with a particular reference to the financial industry.

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1. Introduction

Management accounting (MA) is recognized as a tool to assist managers to make decisions, formulate plans and operate controls, but the rapid changes of technology and vigorous global competition can quickly render management accounting systems (MAS) irrelevant (Johnson and Kaplan, 1987; Bhimani and Brimson, 1989; Antons, 1992). The advanced, technology-oriented, competitive environment challenges the adequacy and appropriateness of traditional MAS and the relevance of new tools in the service sector, as well as in manufacturing (Kaplan, 1984b; Berliner and Brimson, 1988; Turney and Anderson, 1989).

The shortcomings of traditional MAS, in terms of validity, accuracy, completeness, consistency, understanding and relevance, increase the need for modern MAS, like ABM, balanced score-card (BSC), etc. Parallel with this growing recognition of the inadequacies of traditional MAS in the new competitive environment, dissatisfaction with traditional performance measurement (PM) has also been increasing (Kaplan and Norton, 1992; Neely, 1994; Govindarajan and Shank, 1992; Hussain *et al.*, 1998). Traditionally, performance measurement systems (PMS) were a means of maintaining control and financial goals in hierarchical manufacturing organizations (Nanni *et al.*, 1990), but contemporary business organizations no longer conform to the patterns identified in the traditional management control literature. In particular, they are smaller, less diversified, less hierarchical and more internally interdependent than the theory admits (Otley, 1994). The shortcomings of traditional accounting and accounting-based performance measures in today's uncertain economic and complex competitive environment have been demonstrated by a number of MA researchers (Lee, 1992; Kaplan, 1983a, 1983b; Vijay, 1984; Eccles and Pyburn, 1992; Euske *et al.*, 1993; Gregory, 1993).

During the last two decades, we have witnessed substantial changes in the service sector with new competitors emerging as a result of deregulation which has also given companies greater freedom in setting prices and determining the mix of products offered. Well-managed service firms with a good understanding of their markets, customers

and information technologies can become much more profitable in a deregulated, more competitive environment. In manufacturing companies, functions such as marketing, selling, distribution, service, research and development, and general administration have become more significant expense categories than in the past. Traditional cost accounting systems, with their emphasis on cost accounting for inventory valuation, have neglected the flourishing investments and expenses in an organization's service functions. Moreover, conventional cost systems are not able to accurately assign the costs of non-volume-related overhead activities. Assigning overhead costs by using only volume as a basis can supply management with an incorrect picture of how costs are created. In addition, product costs can be distorted if the non-volume-related overhead costs are a significant proportion of total overhead costs. The solution to this problem in service firms, as well as in manufacturing, is to implement activity-based cost management (ABCM).

Despite the need for MA in the increasingly important service sector, review of the MA literature shows that the research in services is far lower than that in manufacturing, although some studies, like Morissette (1998), concern both manufacturing and services. Brignall (1997) proposes theories to guide cost system design in services and shows performance measurement system (PMS) as part of the wider management information system. He discusses the change of PMS in relation to changes of life cycle, external environment, business mission, strategy, etc. Ballantine *et al.* (1998) describe cost traceability [1], with reference to the service process type theory of Silvestro *et al.* (1992), as harder in "mass" and service "shop" than "professional" services.

Modell (1996) investigates the accounting control implications of various characteristically perceived organizations, based on the framework of Ansari (1977), in order to distinguish services from manufacturing. Brignall *et al.* (1992) empirically demonstrate the indicators of the positive relationship between increasing environmental uncertainty for competition and more elaborate control systems in three service companies. However, Brignall and Modell (2000) explain the deficiencies of PM in the public health services by reference to

institutional theory. Ballantine *et al.* (1998) present two comparative cases of PM in the health services. They use the "results and determinants framework" of Fitzgerald *et al.* (1991) for PM in services to conduct "gap analysis" and draw lessons for improving the management of health services performance in the UK and Sweden. Gummesson (1994), however, elicits different aspects of service management and describes the societal issues and quality (along with "triplets" of service productivity and profitability).

West and West (1997) demonstrate the need of activity-based costing (which is rooted in manufacturing) implementation in services with a reference to the healthcare industry. Lee and Nefcy (1997) discuss a new cost management system in group health cooperatives. Acton and Cotton (1997), however, demonstrate the use of ABC to improve cost management in a university support center, resulting in more accurate costing of the services. Harr (1990) reports a case study (Naval Supply Systems) which uses an activity-based accounting approach to budgeting and financial performance. Euske *et al.* (1998) provide a comprehensive approach for developing and applying activity-based performance measurements to different services processes within organizations. Likewise, our study (Hussain and Kock, 1994) discusses the need for ABC in service organizations and, particularly, in the financial industry.

McSweeney (1996) explores the circumstances which enabled an enduring attempt to radically alter the structures and ruling of the UK's civil service departments through the imposition of management by objectives. Wright (1998) examines some of the important issues involved in identifying and setting appropriate measures of operational performance in services. Brown *et al.* (1999) describe the importance of non-financial PM for the improvement in a telephone call center's PM. Additionally, there are some studies, like Harris and Hazzard (1990), Scrace and McAulay (1997), Sweeney and Mays (1997), Modell (1997), concerning MA practice in services, but not ABCM, and thus, the discussion of these studies is not particularly important for this paper. However, there are a few more studies devoted to the service industries, notable of which are Ballantine *et al.* (1998); Modell and Norling (1996); McSweeney (1996); Evans *et*

al. (1997); Biema and Greenwald (1997). Only very few studies particularly concern MA in service shop/mass (Fitzgerald *et al.*, 1991; Ostinelli and Toscano, 1994), and thus so far, there has been no publication available on PM in banks/financial institutions (BFI). Although, the measurement of some performances, like quality, is notoriously difficult in services (Smith, 1998). Moreover, according to service process type theory of Silvestro *et al.* (1992), cost traceability[2] is easier in “professional services” than in “mass” (Brignall, 1997) as “service shop”.

Therefore, considering the importance of the contribution of services to advanced economies, the comparatively lower frequency of research on MA practice in the service sector, the difficulty of PM in services by using traditional MAS, and the absence of research on MA for PM in BFI in particular, the study of ABM in BFI is the focus of this research. The purpose of this paper is to demonstrate the need and usefulness of ABCM in service organizations with a particular reference to financial services industry.

2. Management accounting in services

Traditional accounting systems were developed for goods because services[3] have traditionally only been seen as a small part of the total problem solution offered to customers. Today, many researchers state that services are as important as goods, perhaps even more important, and that it is difficult to distinguish services from goods. Gummesson (1987) questions whether it is useful at all to talk about service and manufacturing industries. He concludes that it would be more reasonable to talk about service activities and manufacturing activities, irrespective of the kind of firm in which they appear. Giarini (1991) goes further and claims that without services most goods produced within the industrial sector cannot contribute to today’s economic wealth.

According to Whitt and Whitt (1988), management accounting systems are needed in professional service firms for two reasons:

- (1) increased competition demands improved planning and control; and
- (2) professional service firms have grown in size and organizational complexity and now need systems comparable to those used by manufacturers.

These systems must be applicable to service firms. Management accounting is beginning to reject standard cost systems, traditional variance analysis and the sole use of financial accounting for internal decision making. Instead, non-financial measures are supplementing traditional financial measures in evaluating performance. Additionally, the current pace of technological and economic innovation in the financial markets illustrates the critical need for information as an aid for sound decision making in financial institutions. Financial problems and failures in banks and other institutions are no longer considered unique, and yet, the production orientation of traditional cost accounting methods has led many observers to conclude that these methods are not useful for financial institutions that must cope with this new environment. In the results of their survey of the 70 largest banks in the world, Gardner and Lammers (1988) show that the most important goals are:

- product development and pricing;
- achieving cost reductions;
- performance evaluation; and
- industry cost comparison.

Understanding the cost and value of service activities is a requirement of the twenty-first century. Markets demand services that often increase business expenses without a corresponding increase in revenue. Businesses that understand and can quantify these costs are in the best position to control them. The objective is to minimize the cost rather than the service through the elimination of non-value-added activities[4]. Only a few companies have information that provides managers with a clear understanding of which customers and markets are profitable. As services become a more significant part of companies’ competitive advantage and cost structure, management tools must respond. The effective use of customer profitability information will greatly enhance a company’s ability to detect the right customers. The goal is to increase customer satisfaction and, in that way, achieve greater returns (Howel and Soucy, 1990).

The ABCM is useful as a decision-making framework for economic analysis when developing new products and improving existing products. ABCM is also a powerful tool in achieving competitive advantages and in providing operational and discretionary

project cost data. The approach further provides a more factual basis for decisions involving changes of the service or goods option offered which, at present, are probably being made incorrectly and intuitively in many cases. In addition, as a result of the emergence of activity-based costing, the accuracy of product costing is receiving new emphasis. This emphasis is also extended to performance reporting using multiple cost drivers allowing for more accurate budget calculations and, thus, for a more meaningful comparison of actual and budgeted costs. Operational measures, however, are increasing in importance in the production environment because increasing emphasis is being placed upon real-time feedback together with operational measures. This emphasis also influences quality performance, and, as a result, management must be seen as a total organizational approach focusing on customers' total perceived quality. However, ABCM is useful for management to find first, hidden profits, and second, hidden losses in relationships with customers.

3. ABCM in service management

Activity-based costing works in two stages in both service and manufacturing organizations. In the first stage of ABC, overhead costs are divided into homogeneous cost pools (Johnson and Kaplan, 1987). A homogeneous cost pool is a collection of overhead costs for which a single cost driver can explain cost variation. Overhead activities are homogeneous whenever they have the same consumption ratios for all products. Once a cost pool has been defined, the cost per unit of the cost driver is computed for that pool. This is the pool rate. Computation of the pool rate completes the first stage. Consequently, the first stage of ABC produces two outcomes:

- (1) a set of homogeneous cost pools; and
- (2) a pool rate.

In the second stage of ABC, the costs of each overhead pool are traced to products. This is done by using the pool rate computed in the first stage and the measure (the quantity of the cost driver used by each product) of the amount of resource consumed by each product. The overhead costs assigned from each cost pool to each product are computed

by multiplying cost drivers unit used with pool rate, i.e. applied overhead = pool rate × cost driver units used.

The total overhead cost per unit of products is obtained by first tracing the overhead costs from the pools to the individual products. The number of units produced then divides this total. The result, i.e. the unit overhead cost plus the per unit overhead cost to the per unit prime cost[5], yields the manufacturing cost per unit. In service firms, the most important cost is the labor cost for personnel. Direct labor costs are traceable to the service rendered. In service organizations, the most important cost would be the professional labor involved in producing the services, i.e. the direct labor cost must be traceable to the service rendered. In addition to the labor cost, various types of overhead costs will occur in any type of business. In a service firm, the overhead costs usually occur when offering a service. Consequently, they are classified as service overheads and can be compared with factory overheads in a manufacturing firm. Professional labor costs are considered service overheads rather than period costs (non-inventorial costs deducted as expenses during the current period without having been previously classified as costs of inventory).

Studies have revealed that activity-based cost systems need two sets of activities, batch-related and product-sustaining, to explain the demands that individual products place on resources (Cooper and Kaplan, 1991). Batch-related activities, i.e. setting up a machine to produce a different product, are performed each time a batch of goods is consumed. If more batches (production runs) are produced, more setup resources will be consumed. However, it is important to note here that the resources consumed are independent of the number of units produced. Another example is processing purchase orders. Product-sustaining activities are performed to enable individual products to be produced and sold. The expenses of these activities are independent of the number of batches or units produced. In addition, one more category might be needed: facility-sustaining expenses that occur in production facilities. Many of these activities are administrative, i.e. managing personnel and plant, taxes, housekeeping, landscaping, maintenance, security, lighting. These activities are necessary for providing a building where production can take place, but

they are not related to the volume and mix of individual products.

According to Grönroos (1990), the production system in service organizations is divided into a totally invisible part and a line of visibility. The invisible part consists of such items as systems support, management support and physical support. The visible part is more or less visible to the customer who usually participates in the production process. In the invisible or interactive part, interactions between the service firm's contact persons and customers take place. The augmented service offer includes the service process and the interaction between the organization and its customers. Because services are activities or processes in which consumption is partly inseparable from production, the service production is a dynamic phenomenon by definition. The service exists as long as the production process goes on. Hence, any model of services, such as the augmented service offering and the creation of such products, must include a dynamic aspect where the basic package facilities' services and goods and support products have to be planned according to the service concept. A service, both in the elements of the basic package and in the accessibility, interaction and customer participation aspects of service production and delivery, includes the desired features, which in turn creates the benefits that customers seek. Therefore, facility-sustaining expenses are dealt with best if they can be treated as an expense of operating the facility for the period and not allocated to products.

The process of developing activity-based cost systems for factory expenses is carried out (Cooper and Kaplan, 1991) first, by identifying the major activities performed; second, by classifying the activities into unit, batch-needed, product-sustaining and facility-sustaining categories; and finally, by attributing to individual products the expenses of the unit, batch-related, and product-sustaining activities using bases that reflect the underlying behavior of the products' demands for these activities.

When applying ABC to service organizations, we must distinguish the different services that the organization produces. In a firm producing professional services, it is probably easier to implement ABC, as the costs are not so difficult to trace to different activities. In an accounting firm,

the customers are limited, and the accountants and support people can quite easily keep record of the amount of time and material they use when dealing with a specific customer. Other professional services include consulting services, education services, or legal services. For example, a consulting firm providing educational services which gives courses in service marketing will have more or less the same costs for giving the course irrespective of how many persons are attending. Unit level costs will probably be rather low, consisting of copies and similar materials distributed during the course. Most of the costs can be traced to batch-level costs, i.e. cost for teachers and rents. Costs for planning, marketing and other similar activities for a specific course can be traced to product level. Costs at the facility level can, for example, be general administration and support. At a school, the library would belong to this category.

If the service firm produces common services, the possibilities to trace costs to activities used are more complex. Assume that a restaurant is implementing ABC. When a customer comes into the restaurant to eat, then he/she "consumes" certain activities. The problem is that different customers consume different activities. For example, one customer may wish more advice about what to eat and drink, while another customer decides what to eat and drink all by him/herself. On the other hand, the first customer may be a fast eater and leave quickly, while the second customer may stay longer, use all available services and spill food on the table and the floor so that cleaning is needed afterwards.

When analyzing production expenses in service organizations, the demand for support resources arises from product volumes and mixes. In a lot of service firms including financial institutions such as banks, some expenses are driven naturally by products, e.g. checking accounts, savings, mortgages, etc. A great deal of the expenses for service functions are caused by differences in customers' preferences, even though they are using the same service. The analysis starts by examining the expense structure of each operating department and proceeds by determining the factors that create the demands for the functions performed by the department. The objective of analysis is, therefore, to discover the nature of the demand and quantify it. The

basic goal of the analysis is to obtain the unit costs for processing transactions from products and customers. The equation that used to calculate product unit cost is: Product unit cost = hourly cost × product unit cost.

The hourly cost is calculated by dividing the operating expense budget for the department by the total number of available hours. For labor-paced operating departments, the available hours are measured by the total number of hours that people are available to work in the department, reduced by allowable time for holidays and breaks. For automated departments, the number of machines that can perform the function and their available processing time can estimate the available hours. Both types of departments may require adjustments for capacity utilization, i.e. the total quantity that could be produced if all of the machines were kept running continuously.

Hussain and Kock (1994) elicited an example (see Appendix 1) in which they demonstrate the determination process of different service costs in a bank. According to this, the estimation of the product unit time is a more complex calculation involving work measurement processes. Work is measured for each activity in a department that contributes to processing a transaction, i.e. a check, a deposit, or a cash payment on a loan. First asking the employees to keep track of the time spent on various activities and then measuring the output produced during the specific time interval calculate the unit times. The activities of professional and managerial employees, who are not performing repetitive activities, are measured by asking these employees to estimate the percentages of the available time they spend on each activity.

Once the unit times for processing each product type in each department have been calculated, the two quantities can be multiplied and added up across all the activities to obtain the cost of processing the transaction for a given product, i.e. the total cost of processing a check or a deposit, granting a loan. With this information, the bank can calculate the profitability of its various services, like the monthly profit of one service, reduced by the expenses associated with handling all the transactions for a check, a deposit, or a cash payment on a loan. The information helps the organization to define and retain highly profitable segments and to transform unprofitable segments into

profitable ones through actions on pricing, product features, operating improvements and technology introduction.

One of the qualitative differences between cost systems for services and goods is the need to model customers' behavior when analyzing the source of demand for service functions. With the exception of this, there is no essential difference between analyzing operating expenses in manufacturing support departments and performing the same tasks for the operating units of service organizations. The activity-based production expense analysis provides an estimate of the production cost of the service and supplements this with the specific expenses associated with a particular order, for instance, the cost of processing and delivering the order, the salesperson's commission and design costs. The production cost and the order-specific costs are subtracted from the selling price to obtain a profit or loss on the individual order. The profit or loss on the individual order can then be aggregated into several branches such as product line branch, customer branch, and profit branch[6].

For a manufacturer of goods, conventional managerial thinking includes three rules of thumb to follow in order to strengthen the competitive edge of the firm and increase profitability. Firstly, decrease the costs of production and administration in order to gain a decreased unit cost of the goods. Secondly, increase the budget for marketing efforts such as advertising, sales and promotion to make the market buy produced goods. Finally, strengthen the product development efforts. Other strategic management elements can also be included. The cost of production can be decreased, lower prices can be offered or higher margins can be obtained. The quality of goods produced is the same because the output of the production process does not change, even though different more cost-efficient technology or processes are used. Moreover, increased marketing efforts will usually have a positive effect on demand. Continuing product development is of vital importance to manufacturing as well as to services. In manufacturing, such decisions can improve profitability. In a service context, internal efficiency, the ways in which the firm operates and the productivity of labor and capital, are more important means when aiming at increased profitability. The internal efficiency of a service firm can be measured by

using the unit cost of production. For external efficiency, the customers' total perceived quality and the output of the firm can be used.

Customer profitability has become an issue of great importance in recent years. In marketing, the costs for maintaining and developing customer relationships have come into focus (Storbacka, 1994). An interesting question is how to find out which customers are profitable for the service provider and which are not. In other words, some relationships may look profitable now, but when all activities needed to produce a specific product are carried out, the relationships may not be profitable at all. For other relationships, we may find the opposite. In respect to this decision-making task, the management to discover first, hidden profits, and second, hidden losses in relationships with customers can use ABC. Additionally, profitability seems to increase when long-term relationships are established (Reichheld and Sasser, 1993).

Kaplan (Cooper and Kaplan, 1991) describes a case (Kantal) in which a Swedish firm implemented a cost-accounting system for decreasing activities that create losses and increasing activities that generate profits. In the new accounting system, each cost category was analyzed to determine whether it was related more to the volume of sales and production or to handling individual production and sales orders. Empirical findings were gathered by personal interviews in each department to establish the hours worked in each order and the volume-related activity. The hours worked for all activities within each cost center were added, and the percentage of total costs related to order and volume-related activities were determined. From a sample report for a group of domestic customers, they could see that the profit orders on individual orders ranged from -179 per cent to + 65 per cent. Only 40 per cent of the customers were profitable, and they generated 250 per cent of realized profits. The truth was that 5 per cent of the customers generated 150 per cent of the profits and 10 per cent of the customers lost 120 per cent of the profits. In addition, two of the most unprofitable customers were among the three largest buyers according to sales volume. The reason was that they had implemented JIT and, consequently, forced their suppliers to assume responsibility for the inventory. Moreover, one of them was using the supplier as a backup supplier for small special orders

of a low-priced item when the main supplier could not deliver. The supplier had always welcomed orders from these two large buyers. Now, they realized how expensive it had become to satisfy them.

West and West (1997) demonstrate the need of activity-based costing implementation in services with a reference to the healthcare industry. They discuss the need of new and accurate costing methods for financial survival without which managers can not make effective decisions involving long-term captivated contract profitability. Lee and Nefcy (1997) discuss a new cost management system in group health cooperatives that makes better and more timely decision making possible to help senior management to monitor the overall performance of the organization. Acton and Cotton (1997), however, demonstrate the use of ABC to improve cost management in a university support center, resulting in more accurate costing of the services. According to Acton and Cotton, there should be no fundamental difference between analyzing the costs for manufacturing support departments and the costs for the support activities of service organizations. Harr (1990) reports a case study (Naval Supply Systems) which uses an activity-based accounting approach to budgeting and financial performance and reduces its costs without losing either the timeliness or the quality of its services. Euske *et al.* (1998) provide a comprehensive approach for developing and applying activity-based performance measurements to different services processes within organizations; they discuss the different applicability of services processes, support as well as operational, from manufacturing organizations.

Likewise, Hussain (2000) discusses the usefulness of ABCM in performance measurement in financial services industry. He studied MA practice of 12 banks and found that four out of 12 BFI's management used ABCM to measure both financial and non-financial performances (see the summary of PM practices in BFI in Appendix 2). The major aspects of non-financial performances, that are measured, are customer satisfaction, quality, commitment, on-time service, social wellbeing, environment, etc. According to which three out of four BFI are well contented with their present performance measurement methods like ABCM. However, four out of 12 BFI are not satisfied with their different PM

methods (including one bank's ABCM) though they recognized PM is very important and need to measure regularly. It is demonstrated in his study that, ABCM is the second most commonly used method of performance measurement (after benchmarking) in BFI, though the usefulness of the systems is not recognized at a higher degree (very useful) than "somehow". There are a number of reasons he empirically identified that effect on PM in financial services industry, among which the economic impact is the highest and subsequently the coercive, normative and mimetic pressures/factors.

4. Conclusions

The ABC is a tool that helps the management in service firms to get an accurate picture of costs caused by different services, which can be extended to management's decision-making framework for different purposes including PM. The overhead costs often constitute a substantial part of the total costs in service firms, and it is essential to derive them to the activities causing the costs when producing a service. By using ABCM, the management in service firms can distinguish profitable customers from non-profitable ones. In other words, the management has a tool that helps them to allocate resources to activities that generate profits and vice versa decision for losing ones.

In spite of the advantages of ABCM, the management must be aware that ABCM does not solve all the problems involved in decision making. If the management focuses too strictly on ABCM, it might overlook the fact that other basic analyses are needed, for example, customer adaptation, flexibility and economies of scope. If the management forgets to focus on customers' needs and to adapt the products to their needs, the customers will be unsatisfied and turn to a competitor. Similarly, too much focus on costs leads to production systems with little flexibility and no advantage of economies of scope which has often been claimed in the manufacturing industry. The assumption of ABC is that all costs can be derived to specific products. However, when we are dealing with economies of scope, it may be difficult to analyze how the production of one component affects the production of other components. In that case, it might be an

important consideration in implementing ABCM in service organizations as well as in manufacturing industries. However, it is important to constantly focus upon customers' total perceived service quality and to maintain relationships to profitable customers. ABCM can then be accepted as a real tool for management to make strategic decision, formulate plan and operate control. However, we must keep in mind that every organization functions in a certain economic, social and cultural environment, i.e. the economic, coercive and normative pressures impact on the decisions of financial services industry's management and they do affect the implementation of cost and management accounting and PM (Hussain, 2000).

Notes

- 1 Costing and PMSs are integrated within wider management information systems (see Brignall, 1997).
- 2 Costing and PM systems are integrated within wider MISs (see Brignall, 1997). According to Brignall, the mode of use of costing and PM systems is determined by the lifecycle stage, but the costing method and how performance is measured are determined by process type.
- 3 According to Grönroos (1990), the characteristics of services are: (a) services are more or less intangible; (b) services are activities or series of activities rather than things; (c) services are produced and consumed simultaneously; and (d) the customer participates in the production process at least to some extent.
- 4 If an activity adds value to a customer, it might achieve a higher priority than activities that do not add value, and a reduction of resources on non-value-added activities must take place.
- 5 Prime cost = direct material + direct labor + direct expenses (traceable to specific products).
- 6 For a more extensive discussion, see Cooper and Kaplan (1991), pp. 470-3.

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Appendix 1

In the following example, we can see different costs that can be generated within a service firm. Assume that the loan department of a bank wants to determine the total costs incurred in processing a typical loan application. They have been asked to compute the cost of processing a normal home loan application (Anderson *et al.*, 1984). The necessary information concerning the processing of a loan application is given in Table AI.

In addition, the department discovers that all appraisal and title search activities are

Table AI The information concerning the processing of a loan application

	US\$
Direct professional labor:	
Loan processor's monthly salary (4 employees earning 3,000 US\$ each)	12,000
Indirect monthly loan department overhead costs:	
Chief loan officer's salary	4,500
Telephone expenses	750
Depreciation:	
Building	2,800
Equipment	1,750
Automobiles	1,200
Legal advice	2,460
Legal forms/supplies	320
Customers relations	640
Credit check function	1,980
Advertising	440
Internal audit function	2,400
Utilities expenses	1,690
Clerical personnel	3,880
Miscellaneous	290
Total overhead costs	25,100

performed by people outside the bank and that their fees are treated as separate loan costs. One hundred loan applications are usually processed each month. The loan department performs several functions in addition to the home loan application tasks; roughly one half of the department is involved in loan collection activities. After determining how many of the processed loans were not home loans, they concluded that only

25 per cent of the overhead costs of the loan department could be attributed to the processing of home loan applications.

A calculation for the cost of processing one home loan application is:

Direct professional labor cost: US\$ 12,000/
100 120.00 US\$
Service overhead cost: US\$ 25,100 ×
25 per cent/100 62.75 US\$
Total processing cost per loan: 182.75 US\$.

Appendix 2

Table AII MA practice in PM in 12 Finnish, Swedish and Japanese BFI

Facts/Issues	Finnish (4 banks)		Swedish (4 banks)		Japanese (4 banks)	
	NFP	FP	NFP	FP	NFP	FP
Methods/techniques used in PM:						
ABCM	1	1	1	2	1	1
Benchmarking	3	3	1	2	–	–
Performance pyramid (PM)	1	1	–	–	–	–
Process type theory (PTT)	1	–	1	1	–	–
Questionnaire/customer survey	1	–	–	–	1	–
Integrated performance M.M. (IPM)	1	–	–	–	1	3
Observation on customers	–	–	1	–	–	–
Life cycle theory	–	–	–	1	–	–
Balanced score-card (BSC)	–	1	–	1	–	–
Income expenditure ratio/cost budget	–	–	–	1	–	1
Importance of measuring performance:						
Very important	3	2	3	4	3	4
Somehow important	1	2	1	–	–	–
Not at all	–	–	–	–	1	–
Practice of measuring performance:						
Regular/every section	2	3	1	3	–	2
Sometimes/partly	–	1	3	1	3	2
Seldom/ In-importance	2	–	–	–	1	–
Importance/usefulness of MAS in PM:						
Very useful	–	–	1	–	–	3
Somehow	3	4	2	2	1	–
No effect	1	–	1	1	1	1
Fulfillment of the objective to use MAS in PM:						
Fully fulfilled	2	2	–	–	–	–
Somehow	–	1	–	2	1	1
Not at all	1	–	3	1	–	–
No comments	1	1	1	1	3	3
Contentment with the accuracy of MAS/problems with MAS in PM:						
Well contented/no problem	2	1	–	1	–	–
Somehow (SH)/SH problematic	2	–	3	2	–	–
Not at all/very problematic	–	–	1	–	3	–
Opinion/suggestion on improving PM:						
Present method OK	1	–	1	–	–	–
Need modification/new methods	3	4	3	4	3	3

Notes: NFP = Non-financial Performances, FP = Financial Performances. The Arabic numbers indicate the number of BFI (out of 4) that responded to the issues concerned, like one Finnish bank (out of 4) used ABCM for NFP measurement