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## **IMPLEMENTING ACTIVITY-BASED COSTING AND ITS IMPLICATIONS FORA SERVICE FIRM IN THE TIMESHARE EXCHANGE INDUSTRY**

Sakthi Mahenthiran and Bruce D. Marshall

### **ABSTRACT**

This study reports on how an activity-based cost accounting (ABC) system was implemented in a service firm in the timeshare exchange industry. In addition, the study highlights the similarities of implementing ABC in a service firm and a manufacturing firm. An important contribution of this field study is to illustrate the separation of labor activities into those that are productive versus those that are not. Further, the study shows the importance of separately allocating the non-productive activities, which are traceable to the primary service lines from those that are not traceable to them. This is analogous to separating the product sustaining activities from the facility sustaining activities when implementing ABC in a manufacturing firm. The Results and Discussion section illustrates the implications of using the ABC information for making decisions about service mix in operating departments, for assessing the implication of employee productivity on service cost, and for service pricing.

The pseudonym of the company that is the subject of the study is VAC, which is in the business of exchanging timeshares. VAC is a for profit public corporation, with approximately 2,000 employees and 3,000 affiliated resorts worldwide. Timeshares (TS) come in blocks of a week, and consumers buy a week or more of a resort facility. This purchase entitles the TS owner to stay at that resort during the designated week, every year in the future. When you buy a TS, you may become a member of VAC. Membership in VAC is optional, but to use its services, you have to be a member. The company manages most of these properties and receives an annual membership fee from its members. In addition to paying an annual membership fee, members also pay a fee for depositing their TS for the purpose of obtaining an exchange week in another resort. In the United States, there are only a few companies in this business; hence, the market for TS is oligopolistic.

Various factors determine the overall success of exchanging TS. The week owned and the desirability (i.e., the location and the level of luxury) of the resort are prominent factors. Thus, a member who requests an exchange in a popular resort at a peak time of year is not likely to have his/her wish completed in one phone call. Instead, a search request is entered into the computer system, which continually scans the TS inventory until an appropriate match for the request is found. In the interim period, the member can make incoming calls to check on his/her request, and the worker can make outgoing phone calls about potential matches found until the exchange is confirmed.

In service firms, profitability results from taking steps to control cost, by taking

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steps to provide new services, for improving the quality of existing services, and by providing them at competitive prices. At VAC, most of the service functions are directly involved in serving customers. Furthermore, VAC's inventory, unlike the inventory of a manufacturing firm, does not have physical substance. However, its inventory is perishable in the sense that deposited TS have a finite life. Therefore, because time is of the essence, to be successful, VAC has to provide services, receive feedback, and respond to customer demands more or less on the spot. To be profitable, the departmental managers must know if their decisions deliver value to customers in excess of the cost of providing the services. The costs vary by the different services provided and by the types of customers served. For managers to be able to judge the impact of their decisions on the cost of providing services, the company's management accounting system must provide information that looks beyond the traditional transaction-based financial accounting information. This study elaborates on the steps taken to provide such information through an activity-based cost accounting (ABC) system, which was implemented in VAC's operating departments.

The customers of VAC are also members of the firm. The major sources of revenue are the services offered by VAC to its members. These services include membership renewals, TS deposits, and confirmation of exchanges in other resorts, which were the three primary service lines chosen for the ABC study. The premise *Implementing Activity-based Costing and Its Implications for a Service Firm 67* of ABC is that services consume activities, and it is the activities that consume resources (Johnson 1988; Cooper 1988; Cooper and Kaplan 1991). Therefore, cost is controlled by managing activities, particularly, by identifying and eliminating non-value-adding service activities. Thus, the first objective of the study was to collect information about the cost, quality, and flexibility of these service lines offered by VAC's operating departments. The second objective was to provide information to managers that will enable them to assess their department's long-term profitability of offering the current mix of services to members.

For the study, monitoring more than three thousand phone calls across all the operating departments helped to derive a population of activities. In the past, VAC had only tracked the total length of the calls, regardless of the kind of services delivered in each phone call. However, because of the labor-intensive nature of operations, the time to perform each activity is the primary cost driver of the different service lines. The calls and the length of time required to complete the services were timed (i.e., with a stopwatch) to find the cost driver of each service process. In addition to the time to conduct activities, it was known to VAC that the desirability of the resort (i.e., the location, the level of luxury, and the time of year of the TS) also influenced the length of a call. To illustrate the importance of this factor, profiles of two TS owners who are members of different resort types are used as the final cost objects in this study. The study finds a stark contrast in the costs of serving these two resort members; one of who belongs to a popular resort (i.e., Orlando, FL.) and the other belongs to an unpopular resort (i.e., Gatlinberg,

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TN.). The implication of this finding is troublesome to VAC because they had not practiced discriminatory pricing (e.g., different membership fees) prior to implementing ABC. Furthermore, the results of this study also has implications for the service mix offered by VAC's operating departments, which is discussed in the results and discussion section of the study.

## **THE MOTIVATION FOR IMPLEMENTING AN ABC SYSTEM**

It was clear to VAC that in the long run, only organizations that understand their sources of profitability for their service lines are likely to survive in this industry. The sources of profitability are a function of the frequency, and the intensity with which VAC's members uses its services. Members of VAC are not a homogeneous group of customers. This means that a customer with a more desirable TS resort is likely to be more profitable (e.g., it takes less time on the phone to satisfy his/her request for an exchange), than a customer who owns a TS in a less desirable resort. Hence, in order to attain the same profit margin across all customer groups, VAC came to believe in its need to engage in price discrimination strategies, which required detailed cost information to be implemented.

At VAC, different departments have emerged to provide the same types of services to different resort members. This emergence of departments was caused by the need for specialized skilled sets to serve the needs of heterogeneous groups of customers. The specialized employees in different departments were compensated differently (i.e., had more or less at risk incentive pay structures) in line with the difficulty and complexity of their tasks. According to Heskett et al. (1994), employee satisfaction and productivity are key variables that influence the revenue growth and profitability of a service-profit chain. According to these authors, in the service-profit chain, "customer satisfaction is largely influenced by the value of service provided to customers. Satisfied, loyal, and productive employees create value. Employee satisfaction, in turn, results primarily from high-quality support services and policies that enable employees to deliver results to customers" (p. 165). For customers, value is a function of their expectations about both the quantity and quality of services. A member becomes a loyal customer when the actual quantity and quality of services provided exceeds their expectations, which was VAC's objective of having different departments offering the same types of services.

The motivation for the study was that the firm felt it was time to evaluate the profitability of these same services offered by the different operating departments. Developing and implementing an ABC system was viewed as a means of undertaking service line profitability analysis. According to Cooper and Kaplan (1991), there is essentially no difference between undertaking an ABC analysis for a support department of a manufacturing firm and doing the same for the operating units of a service organization. However, the study shows that there are major challenges to be overcome in order to determine the costs of service lines. In a

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manufacturing firm, the demand for support services arises mainly from increased product volume and product variety. In a service firm, customers demand greater service variety and quantity, which causes higher expenses. Further, the quality and quantity demands are so interrelated that to determine the source of demands, customer behaviors have to be modeled. For example, in a service firm, a service line is only an intermediate cost object, and the final cost objects are the customer groups who consume the variety of different services. This is unlike a manufacturing firm where the products made, rather than customers, are typically the final cost objects. This can cause a major challenge for undertaking ABC analysis in a service firm, which is overcome in this study by profiling the TS resort types based on their popularity (Le., demand).

For a firm in the vacation TS industry, the quantity and the quality of the service demanded will depend on the type of member served. In turn, the membership types are a function of the resorts to which they belong. The members who belong to popular resorts are those who could afford to buy good TS. For example, the cost of the least expensive TS can vary from \$5,000-\$10,000 per TS week, while the cost of popular resorts can vary from \$25,000-\$30,000 per TS week. Consequently, members who belong to popular resorts compared to those who belong to less popular resorts are likely to be wealthier. Since VAC charges the same fee from all its resort members, if possible, it would like to offer the same number of *Implementing Activity-based Costing and Its Implications for a Service Firm* 69 services at more or less the same quality level to all members, regardless of the resort type they owned. However, given the heterogeneity of demands, it was important for VAC to determine whether all members should be treated the same and be charged the same fees.

Since all members of VAC have to obtain the same basic services (i.e., to exchange a TS week in one resort for another), there is no difference between the types of services offered. Furthermore, the option of charging less popular resort members a higher fee for their service demands has never been considered as an alternative, because VAC's management believed that doing so would conflict with the objective of resort developers, which is to sell more TS units. However, VAC believed that the manner in which the quality of services were differentiated and delivered offered the opportunity for profitability and revenue growth. In the mean time, because of the similarity of basic services, there is the likelihood for a variety of marginally different and/or duplicated service activities to develop and to be offered by the operating departments of the firm. The goal of continuous improvement would be to find such activities, which are generators of excesses, delays, and unevenness in the services carried out in the various departments (Hall 1987; Johnson 1988). In order to do this, the competitive performance indicators, such as the time needed or elapsed to provide the services by the different operating departments had to be captured using time-and-motion studies. Providing such information was another goal of this study.

## **COSTING SERVICE ACTIVITIES VS. COSTING MANUFACTURING ACTIVITIES**

In a manufacturing firm, employees of a particular department have the same skill set, and perform a unique activity that is not performed by other departments. However, in VAC, different departments use varying specialized skill sets (e.g., telemarketing for renewals vs. answering calls for exchanges) to perform the same basic services. These basic services are performed in very different ways, necessitating different incentive pay structures. Furthermore, members' calls are also routed to different departments. For example, in Figure 1, the Departments I, T, and O have performance incentives, while Department S, and the Buffer Department pay a fixed salary. Because of these departmental pay structures, the cost of services offered are different, but presently VAC charges the same fee regardless of the mix of services used by its members. Further, as shown in Figure 1, the basic business processes or primary service lines can be classified into confirmation and exchange (CE), timeshare deposit (TD), and membership renewal (RE) services. The CE process involves the act of searching the computer database for available TS space that matches the needs and desires of members. The TD process involves members giving their TS week to VAC for use to exchange with another member, and RE is the process of extending the membership, which entitles the member to

*Figure 1 not available, please see publisher's version*

use VAC's services. Figure 1 shows that service Department I takes all in coming calls, Department T promotes TS deposits and membership renewals, Department O makes out going calls, the Special Client Department (or Department S) offers services to exclusive members who belong to special resorts, and the Buffer Department (or Department B) gets all the overflow calls that cannot be handled by Departments I, S, and O. Figure 2 shows the member service resource centers, primary service lines, and the cost objects used. This figure shows that potentially a member can call or be called by any department to receive any of these services. Service firms are labor intensive. Hence, labor hours are used as a base to trace resource costs from the operating departments to the activity centers. However, it is important to capture the different types of labor used by the departments. Most traditional systems in a service firm ignore these differences and pool all labor hours to obtain a single allocation base (Homgren, Foster and Datar 1994). A traditional cost system distinguishes services only by the volume of labor hours consumed. Because more labor hours are consumed by high volume services, they are usually allocated more overhead cost compared to lower volume services. The resulting cost distortions are similar to a manufacturing firm using a volume based cost driver such as labor hours to allocate the overhead costs of support departments to the products manufactured. To capture the service differences, it is important to differentiate the types of labor activities used in the operating departments of a service firm.



*Figure 2 not available, please see publisher's version*

Table I shows the conversion cost of service activities in the operating departments, when using a labor hour base. When VAC applied its departmental costs to activities based on staff working hours, the department responsible for making out-going calls (Department O), and the telemarketing department (Department T) were the most expensive. This result was due to the fact that both departments had incentive pay structures, fewer staff hours, and the conversion rate calculations ignored the productivity differences between departments. Therefore, these conversion rates are not useful to make decisions about which department is most

*Table 2 not available, please see publisher's version*

costly, because they ignore the productivity differences (e.g., the possibility of conducting multiple transactions on a call).

According to Cooper (1990), there is a need for two new sets of activities batch and product sustaining-to explain the demand individual customers make on an organization's departmental resources. The challenge is to separate the batch and product-sustaining activities from the volume based unit level activities. In a manufacturing firm, batch level activities can include setting up a machine to produce a batch of products. At VAC, this is analogous to identifying activities that are typically consumed by members who belong to a TS resort. In implementing ABC, profiles of members were developed to facilitate identification of batch level activities. If customer profiles were not developed, batch level and unit level activities would not have been distinguishable.

In a manufacturing firm, product sustaining activities can include resources consumed to implement engineering change notices, which are used to design processes and test routines for producing individual product lines. In a manufacturing firm, such activities can be traced to a product line. The product sustaining activities ~ consumed more often as the product variety increases. At VAC, the nonproductive staff activities can be traced to particular service lines, or it may be a common activity, which supports all service lines. An example of a traceable staff activity would be discussing with members about CE, TD, or RE but not completing the transaction. An example of a non-traceable common service activity would be sending promotional brochures to members.

An additional category of resources that is typically separated and allocated to a production facility is referred to as "facility-sustaining." In a manufacturing plant facility-sustaining activities are administrative, such as the activities and costs involved in managing the plant personnel. This form of resource consumption is generally identical for both manufacturing and service firms. As shown in Figure 2, this included "Administrative" and "Departmental Non-Staff" costs, which were separately identified and allocated to the operating departments in VAC.

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Figure 3 shows how non-productive activities can fall into two categories: (1) "Cost Element 2" activities that are directly traceable to one of the three primary services, and (2) "Cost Element 3" activities that are not directly related to a primary service. An example of "Cost Element 2" activity is discussions on the phone of the possibility of a CE, but no transaction is completed and thus, no revenue is generated. In this situation, the phone time and the staff costs are consumed, and these times and costs are traceable to a primary activity. Although these activities are non-productive, they are traceable to the primary service lines and have revenue generating potential (Le., customer could have accepted the offers). For example, in table 2, activity id numbers 19,20,21,22,23, and 24 were identified as non-productive activities for the CE activity. As in a manufacturing environment, this is classified as a service-sustaining activity.

An example of "Cost Element 3" activity would be the general education of members about the exchange process. These costs are not directly traceable to

*Figure 3 not available, please see publisher's version*

primary service but they are caused by the existence of these primary service lines, and hence, they were also allocated to the primary services.

## **IMPLEMENTING THE ABC SYSTEM**

To calculate the percentages of productive and non-productive time, and to distinguish the different types of staff workers in the operating departments, separate time-and-motion studies were undertaken in each department. The activities carried out for CE, TD, and RE processes do not always generate revenue. Productive activities are transactions that generate revenue and, they count towards a worker's incentive wage. Non-productive activities are defined as the time consumed for activities that do not result in additional revenue. VAC had a performance tracking database system that provided the transaction count of productive activities for the services offered by the departments.

The first step was to separate the worker's tasks based on serving different callers' requests for each of three primary service lines shown in Figure 2. VAC's performance tracking system was capable of taking into consideration transactions where an activity to assist a member may go to a worker in one department while the consummation of the transaction may take place in another department. Further, if a member owns three separate TS weeks and deposits all of them during the same call, that one call would include at least three separate activities. Likewise, a worker may consummate two or more TS exchanges for one member during the same phone call; this would also count as multiple exchange activities in the system. For two months, time-and-motion studies were undertaken, which recorded on time sheets how workers spent their times on live phone calls in all the operating



departments. Table 2 shows how, in the Buffer Department, the times were averaged using activity identification numbers. For the same time period, transaction counts of productive activities were obtained from the performance tracking system.

The same procedures were followed to obtain the average time and transaction counts for all five operating departments. Table 2, summarizes the average time ( $m$ ) spent performing each CE activity and activity counts ( $n$ ) by the nature of calls. Table 2 displays CE activities that are productive and revenue generating, and the "Cost Element 2" non-productive activities that are traceable to the primary service activities. A similar sampling procedure was undertaken to determine the productive and non-productive times for conducting TD and RE activities. Omitted from the table are non-productive (i.e., Cost Element 3) activities that are not traceable to a primary service line but are service sustaining. A random sample of 100 transactions that related to CE was made to determine what proportion were confirmed on the first phone call. The sample was derived from the computer records of the confirmed exchanges over a period of time. The computer records reflect each incident of telephone contact with a member. By counting the number of contacts, an average number was computed. Of the sample, 25 calls were confirmed on the first phone call, and the remaining 75 calls took an average four calls to confirm. This information was used (i.e., in Table 10) to perform the CE activity analysis for the two different resort members. Table 3 provides the percentages of total minutes (i.e., derived from Table 2) consumed by departments in both productive and non-productive activities, which are directly traceable to CE, TD, RE services. In Figure 3, the "Cost Element 2," non-productive service sustaining activities were directly traced to the primary services, and the "Cost Element 3" non-productive activities were allocated to the primary services based on these percentages. Furthermore, the departmental nonstaff and administrative costs such as supervision, rent, and telephone costs, were directly allocated to each department, and were traced to the three primary service lines based on the percentages shown in Table 3.

*Tables 2, 3, & 4 not available, please see publisher's version*

Table 4 shows the relative percentages of non-productive time taken to perform non-productive activities on the phone for the three primary services: CE, TD, and RE. These detail percentages were the basis for allocating the traceable non-productive staff costs to the primary service activities, which is referred to as onphone staff cost element 2. In Figure 3, the "Not-Directly Traceable" staff time constitutes cost element 3, and was spread to the primary services using the percentages from Table 3.

### **Analysis of Input Working Hours**

For the fiscal year 1995, the total number of CE, TD, and RE activities were obtained from the performance tracking database, and information on the total

number of working hours were obtained from each department. Table 5 annual totals were used for calculating the transactions per working hour for the fiscal year. This table shows that Department 0 was the most productive in obtaining CE, and Department T was the most productive in both TD and RE activities.

*Table 5 not available, please see publisher's version*

Recall from Table 1 that Departments 0 and T had the highest cost per working hour, but they are the most productive. To calculate the departmental productive working hours, the workers' total time-card hours were reduced by the paid-timeoff, official holidays, and off the phone hours. Table 6 shows the ratios of "Working Hours" (loosely defined as the on the phone and available to take calls) to "Time Card Hours" by each department. These percentages were used to separate the departmental costs by "On-Phone" staff activities versus "Off-Phone" staff activities, which are shown in Figure 3.

### **Building a Cost Model to Apportion the Pay-Rates of Workers by Activity**

In Figure 2, the most significant "Departmental Non-Staff Costs" at VAC were labor, rent, telephone, and computer costs, which represented roughly thirty percent of the total expenses. With the exception of rent, the remaining costs were allocated based on a staff time. The rent was allocated in two steps to the activities. In the first step, the rent was allocated to the departments based on square feet occupied by the departments, while in the second step, it was allocated to the activ-

*Table 6 not available, please see publisher's version*

ities based on staff time in each department. Hence, the study builds a full absorption cost model to calculate the cost by activity in each department. This includes the total costs of the entire member service departments, and does not include the cost of non-member service departments, such as Accounting and Human Resources. Further, the cost model reconciles to the total fiscal year general ledger costs of operating departments that serve the members of VAC.

The accounting system at VAC traces the supervisors' and managers' salaries to their respective departments. This is identified as the "administrative cost" of each department in Figure 2. Figure 3 shows the separation of departmental staff costs into the following four elements: the "On-Phone" staff costs that are productive and revenue generating, the "On-Phone" staff cost that are non-productive but directly traceable, the other "On-Phone" staff costs that have no production potential, and "Off-Phone" staff costs. Figure 3 also provides references to the tables that have the corresponding percentages of staff-time worked on these four staff cost elements.

To determine the total departmental cost by activity in Table 9, the total departmental

costs; the administrative costs, and the non-staff related costs were allocated from each department to the primary activities based on the percentage spread of minutes consumed directly by the traceable activities shown in Table 3. The challenge was to allocate the staff-related costs to the primary service lines. The four cost elements shown in Figure 3 are traced separately to the activities. The direct staff cost of generating revenue (i.e., cost element 1) was calculated by *Implementing Activity-based Costing and Its Implications for a Service Firm 79* multiplying the number of primary service transactions by the labor rate for conducting each transaction. Given that transaction counts are available in the performance tracking database system, steps were taken to calculate the labor rates per transaction for conducting the primary services. Table 7 shows the base pay and the incentive pay rates of Departments I, O, and T. To trace cost element 1, the departmental incentive and base pay rates were separated by the service centers for CE, TD, and RE processes. The departmental pay rates shown in Table 7 are based on the average pay rates for the fiscal year. The incentive plan was established to emulate a "piece rate" system. By allocating a certain number of points for each productive service activity, the performance tracking system produced average production points per working hour for each department. Using this information, the average incentive pay per hour was calculated and then converted into incentive pay per rate by activity. For allocating the base pay earned by workers to the primary activities, calculation of base pay per hour and the time consumed in performing each activity was determined. The departmental base pay was not a large component of the cost per activity because, through time-and-motion study, it was found that it took only a few minutes of staff time to facilitate a transaction.

To weight the base pay by activity, the average base pay per hour was multiplied by a time factor. In table 7, for departments I, and O, the incentive pay rate, and the base pay rate per activity are combined to obtain the pay rate per activity. The combined pay rate was increased by a factor of twenty-five percent to recover the additional costs of benefits paid to employees in each department. Table 7 shows this activity rate per service transaction in the last column as the "Total Productive Staff Cost per Activity."

Table 8 shows how the total general ledger cost of each department was separated into costs with revenue generating potential and without it. Table 6 information, the percentage of working hours to time card hours, was used to separate the total general ledger cost of each department into cost with revenue generating potential and costs without such potential. Table 8 shows the direct cost of generating revenue (i.e., cost element one) as the transaction count by departments' (Le., the information in Table 5) times the productive "Total Productive Staff Cost per Activity" (i.e., the information in Table 7). The second and third cost elements, namely, the "Non-Productive On-Phone" costs and the "Other On-Phone" staff costs by departments are the remaining on-phone staff costs that needed to be allocated to the primary services.

Table 9 shows that cost element 2, which is the traceable non-productive cost, is allocated to activities based on the percentages shown in Table 4. The cost elements 3 and 4 were allocated to the primary activities using the percentages in Table 3. Once the cost elements 3 and 4 were determined in total, they were then divided by their respective transaction counts to obtain the unit cost information. The same procedure was carried out to calculate the unit "Departmental" and "Administrative" unit costs. The "Total Departmental Cost Per Unit" in the last column of Table

*Tables 7, 8, & 9 not available, please see publisher's version*

9 consists of costs that were traced more rationally to the primary activities than was done previously using undifferentiated staff working hours in Table 1.

## **RESULTS AND DISCUSSION**

Table 9 shows that Department I and Department O have the lowest cost for conducting the CE activity, and Department T has the lowest cost for carrying out TD and RE activities. These results could have been predicted using the productivity information in Table 5 which shows that Departments I and O have the highest levels of productivity for the CE service, and Department T has the highest level productivity for TD and RE services. Department T presently operates like a telemarketing department reminding members of upcoming renewals and requesting them to deposit their TS weeks on time. Department T has since found that these two service activities can be combined and conducted on the same phone call.

The fixed salary Department S deals with special clients. Hence, it has to offer all three primary service lines. Since it costs \$11 more (i.e., \$38 vs. \$27) to offer CE activity to special clients, management has begun to question the value of offering preferential services for the CE activity. Surveys of special clients and regular members are being conducted to find out whether the services provided by Department S are any different from those offered by the incentive Departments I and O. The implications of the ABC results for the Buffer Department was the most significant. Based on the service availability in Departments S, I, and O, which is determined by the volume of calls and the availability of employees in these departments, the Buffer department provides services to callers who cannot be routed to them. Table 9 shows that the cost of offering CE and RE services are high. Hence, management has questioned the benefits of having a separate buffer department offering all three-services. It is considering the profitability and member service implications of transferring the staff from this department to the other incentive departments, and gradually discontinuing the Buffer Department.

VAC used different incentive pay structures, which are an important control mechanism in influencing employee behavior. In a service firm, when there is a close relationship between employees and customers, it is important to periodically examine whether the induced behavior produces the desired level of employee productivity.

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While the same primary services were performed in all departments in VAC, the manner in which they were conducted varied significantly. As was found through the time-and-motion study, the length of time required for completing the primary services varied from one department to another. An ABC system was used to contrast the impact that varying incentive pay structures have on the service costs. It revealed that generally, the salaried departments have a higher cost per transaction than the departments with incentive pay structures. However, it would be wrong to assume that incentive programs always lead to higher productivity, and therefore, result in a lower cost per transaction. For example, in the department handling outgoing calls, the point value for accomplishing CE was the highest (i.e., 101 points 84 SAKTHI MAHENTHIRAN and BRUCE D. MARSHALL as shown in Table 7). Hence, workers in this department were likely to "pick the low hanging fruit" namely, the CE activity at the expense of slighting TO and RE activities, reaping the rewards of their incentive pay structure. Table 9 showed, to the dismay of VAC's management, that the RE services performed in this department costs approximately \$31, while the RE services in Department handling incoming calls cost only \$11. The study's results were so profound that VAC has revamped the incentive pay structures of the workers in its member service departments.

VAC's customers should not be viewed as a homogeneous group, and its customer database has been stratified, and certain members of popular resorts are provided with "kid glove" type treatments. This planned discrimination of members takes place so that the firm can engage in discriminatory pricing strategies. The core value adding business of VAC is the exchange of TS weeks. Various factors determine the overall success in exchanging a TS week. Among these, the law of supply and demand for each timeshare week by type and location of the holiday resort is the most important factor. To illustrate the importance of this factor, profiles of two TS owners who are members of VAC is provided below:

Member G owns a week near the middle of April at a resort in Gatlinburg, TN.  
Member F owns a week at the end of December in Orlando, FL.

Almost all members would consider Orlando, FL., to be a desirable destination to travel to during the last week of December. By contrast, Gatlinburg, TN., is not likely to be considered a desirable destination in April, because it is too late for skiing, and is still cold for a spring vacation. Exchanges are based on weeks of comparable value, and, hence, "Member G" will have a difficult time exchanging his/her TS. The implication of member G's less than desirable week is that there are likely to be multiple phone calls made to complete the CE activity. Furthermore, to require member G to accept a similarly desirable week, the probability is that the CE will be conducted through Department 0. Member G will have to be persuaded to accept a week which requires selling skills on the part of VAC's workers. Such selling skills are likely to be found in Department 0, which has a higher number of experienced workers than Department I.

In contrast, "Member F," who probably paid more for his/her TS would face a seller's market. This member has a week that everyone else wants. The TO and CE activities for member F are likely to be accomplished in Department I with one phone call. When member F calls VAC, because of the demand for his/her TS, he/she must be encouraged to deposit the week before conducting any other activity. Once the TD activity is completed the search for a comparable TS can be initiated. Given the desirability of member F's week, many opportunities are likely to be presented. Member F should be able to choose on the spot among many attractive options. About one fourth of VAC's CE activities are done in one phone call. Members who fit the profile of member F are the majority of constituents who complete their business in one phone call. Table 10 presents data that illustrates the

*Table 10 not available, please see publisher's version*

difference in costs between serving members G and F. Table 10 shows that serving less popular timeshare resort members can cost two and a half times more than serving members who own popular timeshare resorts.

Should VAC develop a policy to do business with members whose desirability of their TS ownership (i.e., the luxury of their resort and timing of their week) fits a particular profile? Certainly not, because a profitable customer, regardless of the worth of the timeshare week owned, is a valuable member. VAC understood that the profitability of serving members varied widely, and as Haskett et al. (1994) predicted, it was influenced by employee productivity. Therefore, a "one price fits all" strategy will not maximize VAC's profitability. Members whose TS ownership is less than desirable have to be made to pay a premium for the additional services they require for completing their exchanges. One such means discovered by VAC's management was that in the past it had offered discounts to all members (e.g., for membership renewals greater than twenty-four months) regardless of the profiles of members. It is now considering offering promotional discounts only to members whom fit the profile of member F.

## **CONCLUSION**

If decisions had been made using Table I to cut the cost of Departments O and T, those decisions would have been wrong. Though incentive departments O and T are expensive, they have a higher level of productivity. As predicted by Haskett et al. (1994), using the ABC information, it was shown how employee productivity affected the cost of providing services to customers. Employee productivity was influenced by the incentive pay structure at VAC, and unless staff activity hierarchies were identified using an ABC model, the effect of pay structures on service costs would not have become apparent. It was shown that by understanding how services are accomplished and how costs are consumed, defensible pricing decisions

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could be made to appropriately match fees with the level of consumption of services by the firm's customers.

As shown in Table 10, using memberships at resorts as the cost objects, it was possible to evaluate the profitability of service lines. One reason for certain service lines being not very profitable was that owners of less popular TS resorts demanded a higher level of service attention from the operating departments compared to members of the more popular TS resorts. Members of the less popular TS resorts had paid significantly less for their TS week compared to members of the popular TS resorts, who had paid as much as three times more. To minimize the possibility of popular TS members subsidizing less popular TS members, it was fair that the latter paid more for receiving the higher level of service attention from workers at VAC. Offering discounts to the popular resort members preferentially was one such means of obtaining fairness. VAC now only offers popular TS members a discount when they renew their memberships for more than twenty-four months. Thus, in a service firm, understanding how costs are consumed in providing services is as important as knowing how customers behave in consuming those services.

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