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Full costing of business programs: benefits and caveats

Full costing of
business
programs

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Abstract

Purpose – To suggest an approach to program costing that includes the approaches and concepts developed in activity based costing.

Design/methodology/approach – The paper utilizes a hypothetical case study of an Executive MBA program as a means of illustrating the suggested approach to costing.

Findings – The paper illustrates both the benefits of using an activity based costing approach and the danger of allocating organizational sustaining costs to a specific program for the purpose of assessing the profitability of that program.

Practical implications – University and faculty administrators will understand the benefits of activity based costing and they will understand that they should not evaluate the profitability of a program (nor make decisions about the termination of a program) on the basis of allocated organizational sustaining costs.

Originality/value – The value of the paper is to university and faculty administrators, who will be able to utilize a new approach to costing university programs.

Keywords Activity based costs, Cost allocations, Cost drivers, Business schools

Paper type Case study

Introduction

Determining the accurate costs of university programs is critical for administrators in today's environment of fluctuating enrollments, increased competition, and tightening government funding. Too often universities respond to apparent revenue generating opportunities, such as executive development courses, specialized MBA programs, or continuing education, without a clear understanding of the impact of this response on total organization cost. In order to determine whether these apparent opportunities are in fact worth pursuing, administrators need to have a clearer understanding of both the full and differential cost of such activities. Activity based costing (ABC), if used appropriately, can provide valuable information for administrators trying to determine the full impact of the expansion or contraction of programs. Used incorrectly, however, ABC can prove to be a time-consuming process resulting in a minimum level of useful data and potentially bad decisions.

Business schools provide a valuable case study of the need for a clear understanding of cost. Such programs experienced a tremendous increase in demand for their traditional degree programs in the 1970s and 1980s. This was especially true of the MBA program, which saw a doubling in the number of annual MBA graduates from 1974 to the mid-1980s (Prokesch, 1985). With this growth in demand, schools previously offering only undergraduate programs or subject-specific Master's degrees began offering MBA programs. Schools already offering MBAs expanded by adding full or part-time MBAs, distant MBAs, or specialized MBAs. With the increased cachet of a business degree, schools also began to expand their offerings of executive programs including corporate and executive MBAs (degree granting) as



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well as such non-degree programs as “mini MBAs”, directors’ seminars, corporate retreats, and training programs in subject-specific areas like negotiations, leadership, or marketing.

With more schools providing increased offerings came increased competition and a demand for improved student services, including wireless classrooms, job placement services for alumni, international study tours, and even gourmet breakfasts. Schools also found that with the larger number of programs came an increase in administrative and support costs to manage their “multiple product lines”. While the market for these programs remained high, the price tag for the increased support they required was often considered just a “cost of business”. The assumption was that such programs were generating high returns because they were commanding a high price.

Recently a number of factors have caused administrations to focus more closely on costs. In general government grants have not kept pace with the rising cost of business school programs, resulting – in the worst case – in overall operating deficits, or at least an ever-increasing dependence on other forms of revenue generation. This increased dependence has made business schools more vulnerable to changes in demand, especially for their executive programs, the perceived source of much needed funds. The second factor has been a slowdown in demand.

In the past couple of years business schools have seen the demand for their executive education programs lessen as corporations facing lower profits began to cut their executive training budgets (Merritt, 2003). Corporations began demanding more customized executive training programs (which cost more for the business school to develop) while also demanding lower prices. Merritt (2002) reports that executive education revenue declined by over 15 percent at top schools, with a projected decline of 20 percent for Northwestern, 15 percent for Wharton and 22.5 percent for Michigan from 2001 to 2002. Applications to executive as well as traditional MBA programs have slowed. The Graduate Management Admission Council (2003) reported that 65 percent of the 289 schools responding indicated either no increase (12 percent) or a drop (53 percent) in applications for their EMBA programs compared to the year before. The Association to Advance Collegiate Schools of Business (2004) showed that US schools had experienced a 7 percent decrease in international MBA student numbers together with a flat demand for domestic students.

A common complaint is that universities do not operate sufficiently like a business. It is argued that universities “tend to acquire ‘property rights’ for new programs once they are started” and “the kind of continuous pruning of activities that characterize for-profit entities is rare” (Mensah and Werner, 2003, p. 298). With the increased cost of operating business schools, reduced dependence on government support, and the changing demand for and expectations of programs, schools need to be able to determine accurately which programs are generating sufficient resources as one of the decision criteria for offering or keeping that program. A clear and accurate understanding of the costs of these programs is necessary for making this determination.

The ABC approach

Activity based costing rose to prominence in the corporate literature in the mid-1980s as a way of dealing with cost distortions in a multi-product manufacturing or service firm. It has also been applied, in various forms, to the costing of university programs in

the UK and New Zealand, as well as institutions in Canada and the USA. The ABC approach involves an in-depth analysis of the process or organization in order to make an accurate determination of what is “driving” cost, the goal being to avoid simple but inaccurate cost allocations.

Traditional costing systems for profit entities were designed for organizations producing or servicing a limited number of products. When, as is common today, a company provides a variety of products or services, it can prove difficult to determine a full and accurate cost for each. Failure to do so, however, can lead to a number of problems, including non-competitive pricing and loss bids or the insidious error of unknowingly pricing goods below their true cost, the result of the latter being the erosion of the bottom line without an understanding of why. Activity based costing is a tool designed to overcome these difficulties and provide the organization with the costing information it needs.

Modern business schools are in effect multi-product service firms and face the problem of a proliferation of product lines and the resultant difficulties of rising costs and accurate cost tracing. Undergraduate programs, PhD programs, full-time MBA, part-time MBA, executive MBA, mini MBA, and executive training programs designed around specific topics or businesses are offered in part or total by the modern business school. Within the differing “product lines” there is a wide range of student numbers. Some have a large number of students, such as an undergraduate program; others have small numbers of numbers, such as an in-house executive development program. In most instances the larger “main line” programs such as a Bachelor of Commerce or part-time MBA are funded predominately by the government and designed to break even. Many of the smaller executive programs, on the other hand, charge high fees (for non-credit programs) or significant differential tuitions (for credit programs) and are designed to be a net contributor of resources back to the school. Like the multi-product manufacturing firm, the costing of these specialty “lines” can be inaccurate, the result being that the programs can appear profitable while losing money.

Consider the costs of offering an executive MBA program in a distant country. In determining the financial benefits of the program, revenues (tuitions, fees, etc.) would be added and the direct costs of professors, airline tickets, classroom space, etc., would be deducted. There may even be a charge by the school and/or the university to cover overhead such as utilities, secretaries, or computer time. Still without a clear understanding of what the true impact of offering a degree in a foreign location will be on the operations of the school, determining the true financial impact is not possible.

Activity based costing provides a technique that allows for a more accurate cost determination than that of traditional systems when dealing with multiple product lines. In a traditional system, overhead or support costs are often allocated to programs in the form of a percentage charge to revenues, or on the basis of student numbers, the result being that no one understands what is making the cost of the support areas rise, programs are being charged with costs of services they may or may not use, and large programs often unknowingly absorb the costs of smaller programs, hiding the true profitability of all. The ABC approach asks that you have a clear idea of what it is you are costing (the cost object), that you determine which costs should be considered, and, importantly, that you specify the activity that gives rise to these determined costs. This three-step process appears straightforward, but often requires a significant change in the way organizations view cost. Still, this change provides superior information to

decision makers. Knowing the reasons why costs occur and charging programs on the basis of their use gives a more accurate profit picture. Equally important, once all the activities are clearly understood, wasteful, ineffective or duplicated activities can be eliminated, leading to cost savings and increased profitability.

Application

While there are various approaches to the application of activity based costing techniques, an important first step is to have a clear understanding of the activities that are carried out. This understanding is aided by arranging the activities into four hierarchical levels or types. They are:

- (1) unit activities;
- (2) batch activities;
- (3) product activities; and
- (4) organization sustaining activities (Horngren *et al.*, 2000)[1].

Unit level

Unit level activities are those carried out each time a unit is “produced”. In some institutions applying the concepts of ABC, the emphasis has been on allocating “full” cost down to the program or even student level (see Burt, 1999) without giving sufficient consideration to which of the costs would remain and which would go away should the program be dissolved or the student not be admitted. Starting at the smallest “unit” level and working up through the program to the school or university level allows a decision maker to clearly understand differential costs (for example, the additional cost required should one more student be admitted) *and* full cost (for example, the pricing level required to guarantee a “profit” on an executive program course).

In the context of an executive MBA program, the student is the focus or “product” of the program – the unit. A unit-level activity would be one that is carried out every time a new student is admitted and the associated costs would be proportional to (vary with) the number of students in the program. An example would be a package of materials provided upon admission to each new first-year student. These materials could include a logo vest, their first semester course materials, meal and parking vouchers, etc. (see Table I).

When looking at the cost associated with each hierarchical level it is important to distinguish between those that are directly *traced* to the “cost object” and those that are charged (*allocated*) to the cost object on the basis of a driver. Traceable costs are assigned to the cost object (in this case the student) using an observable measure of consumption (they are provided with an admissions package and books). The more costs that can be directly traced, the more confidence we have that the final profit figure reflects the actual consumption by each unit.

A simple illustrative example would be the cost of a lunch between two friends. One friend, on a diet, orders mineral water and a salad at a total cost of \$8.50. The other, celebrating a promotion, orders a martini, steak, dessert, and coffee at a total cost of \$40. If the cost were added up, divided equally, and charged to each on the basis of “eating lunch”, we would be confident in the total price of the meal (\$48.50) but the charge of \$24.25 to each would not be reflective of their individual consumption. In the EMBA example, airline tickets for students living in outlying areas would be a direct unit-level cost traced only to the students requiring them.

	Total	Unit (student) level		
		Student 1	Student 2	... Student 40
Students (class 05)	40			
Revenue (tuition, fees, grants)	1,600,000	40,000	40,000	40,000
Less:				
Direct traceable costs				
1st semester admissions package	80,000	2,000	2,000	2,000
2nd semester books and materials	60,000	1,500	1,500	1,500
3rd semester books and materials	43,000	1,000	1,300	900
4th semester books and materials	45,000	1,100	1,250	1,100
Airline tickets for out of town students	93,600		15,600	
Course trip charges for spouse	85,000			4,250
Other	#####		####	
Allocated unit level costs				
Printing/course notes	32,000	800	800	800
Catering service	50,000	1,250	1,250	1,250
Graduation ceremonies	10,000	250	250	250
Other	#####	###		
Unit (student) margin	1,050,000	31,000	15,000	27,950

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Table I.
Unit level costing

Note: While based on actual figures, the costs shown are hypothetical

With some types of costs, the information gained from directly tracing it to the cost object is not worth the time and money spent to carry out the tracing. In these situations a charge rate per activity should be used. Printing costs provide the example here. It is possible that each EMBA student could be given a printing account and all printing by that student is charged out at, say, five cents a page. Printing costs are then directly traced to each student. Alternatively the total cost of printing for the EMBA student body could be determined and divided by the student population. The average cost per student for printing would then be considered in the determination of unit costs of the EMBA program. The determination and application of an average cost per student is simpler but less accurate and it would be up to the users of the information to determine if the increased accuracy afforded by direct tracing would be worth the cost of the effort to carry it out.

Once direct and indirect costs are determined, they should then be organized so that they fit together in a clear informative manner allowing the decision maker to determine the differential impact on revenues and costs for each additional unit. The example indicates the revenue per student and the costs that are either directly traceable to each student or that are driven by individual student presence. It shows the amount that can be applied to covering additional costs of the program (\$1,050,000) and the amount of money that would be lost if one less student was admitted. This arrangement should be extended hierarchically to the batch and program levels, thereby enabling the user to determine each level's incremental contribution to overall profitability.

Batch level

Moving up the ABC activity/cost hierarchy are batch-level activities. Batch-level activities are performed each time a batch of products is handled or processed, regardless of how many units are in that batch. An example of a batch in a university

context is a lecture/course section. In every lecture/course section, teaching activity takes place that requires an outlay of funds independent of the number of students in the course. Instructor compensation is a prime example of this. For programs such as an executive MBA, professors are often compensated for instruction on a course by course basis in addition to their regular pay for other university duties. An increase in enrollment from 39 students to 40 would have no effect on this cost amount. The instructor pay is a step fixed cost relative to student numbers. Only at the point where enrollments reach a level where a new course section is required (a new batch) would the cost of instructor compensation go up. It would increase incrementally by course section, not by student numbers in that section.

In the batch level, as in the unit level, differentiation should be made between costs that are directly traceable to the specific batch and those that are allocated – the decision criteria being the benefits versus the cost of direct tracing. In the example in Table II, the Accounting course requires a specialized computer program and a tutor; these are treated as direct charges to the course. Alternatively the charge for setting up the classroom with the appropriate presentation equipment (com media) has been averaged and allocated to those courses requiring that service – an indirect charge. It is important to note that even with indirect charges only, those course sections using the service are charged the allocated amount. In the case of Course 22, no media technology or support was required (the activity did not take place) so no \$500 charge was recorded.

Like unit costs, batch costs are organized by the activity driving them – in this case the offering of a lecture section. By attaching the batch-level costs to the individual course offerings it becomes clear how different costs vary between each lecture. In the above example, Accounting 600 requires the special computerized accounting program and a tutor, and HR 750 pays the instructor a higher amount, does not require additional software, but has visiting speakers.

	Total (22)	Batch (lecture) level		... Course 22
		Accounting 600 (40 students)	HR 750 (10 students)	
Lectures				
Revenue:				
Total unit (student)				
Margin		1,050,000		
Less: direct traceable costs				
Instructor	308,000	15,000	18,000	10,000
Tutors	25,000	5,000		
Computer programs	6,500	1,500		
Graders	10,000			1,500
etc.	####			
Less: allocated batch costs				
Com media support	10,000	500	500	
Gifts for visiting speakers	1,000		250	
etc.	###		###	
Table II.				
Batch level costing	Total costs	440,000	22,000	18,750
	Total batch (lecture) margin	610,000		11,500

In our analysis of the EMBA program, per-student revenue amounts are not allocated to the individual lecture sections. In such programs, students typically pay a yearly amount for the program itself as opposed to a per-course amount. The decision to run a specific course would be based on demand, total cost for the course, and whether it was a required course or an elective. Since students are required to take a full-time load, dropping one class would not reduce revenues but would only cause those revenues to be redistributed to another class. To include a revenue figure in the individual lecture column may cause the decision makers to mistakenly assume that increased enrollment in a specific lecture would increase the profitability of the program. It would not. The batch margin, the amount of money available to cover other program needs, is affected by the cost associated with specific and total lecture offerings, not the individual enrollments within those lectures.

Product level

Product-level activities are the next hierarchical level up, and are those that relate to specific product lines, in this example the EMBA program itself. The differential administrative and support costs of running the program including the stipend for the academic director and the cost of any course releases they receive. The salary of the administrative director and their secretary, a dedicated half-time person in information technology support or in the business library and EMBA marketing brochures are all examples of costs associated with setting up and running an EMBA program. Should a decision be made to shut down the program, these direct costs would go away over time as opposed to being redistributed to other programs. Program costs tend to be fixed relative to both the number of lectures and the individual students in that program (Table III).

Product (program) level, EMBA

Revenue for the year	
Annualized batch margin class 04	250,000
Annualized batch margin class 05	400,000
Total batch margin	650,000
Less: traceable program costs	
Academic Director stipend	13,000
Academic Director course release	10,000
Administrative Director salary	60,000
Secretary	40,000
Student Advisor	45,000
.5 Librarian	30,000
.5 IT Support	15,000
Brochures	40,000
Print advertising	125,000
Less: allocated program costs	
University overhead charge	216,000
Placement Office	30,000
Premium facilities charge	7,000
Other	####
Annual program contribution	19,000

Table III.
Product level costing

A complexity not found in many traditional manufacturing environments is the time required to complete a product in a university context. The example EMBA program being used here runs for two years. In contrast, many of the associated program expenses are annual expenses (such as the director's stipend); also, most budgets and statements of income are completed annually. Consideration will have to be given to this and adjustments made. In this example the batch contribution for the class of 04 and 05 has been annualized so that the computed program margin is for the year.

Organization sustaining

Organization sustaining activities are those activities that are carried out in order to maintain the infrastructure of the organization. Costs associated with this level would include depreciation and maintenance on the building; the salaries, course releases, expense accounts and support staff for the Dean's office; the staff and databases in the student placement office; information technology support; and student advising.

Including the costs of organization sustaining activities is critical when an understanding of full costs is needed, and it is at this level that many of the costs associated with offering a range of programs can be hidden. Student advising provides a good initial example. Assume there is a pool of advisors who explain the requirements of the program, help students develop a course schedule, discuss options should a course need to be dropped, or work with individual students on any of the details of organizing a program of study. This student advising office would be an organization sustaining activity. In an ABC system, an analysis of what is driving the costs within the advising office would need to be carried out.

If the pool of advisors includes one or more individuals specifically hired and trained to advise EMBA students, then the cost of these specific advisors would clearly be a program cost. Their salaries exist as a direct result of running the EMBA program. Should the program be closed, these positions would be closed and the advisors redeployed or let go. If, on the other hand, all the advisors were trained to deal with students at any level in the school, the portion of their salaries to be charged to the EMBA program would have to be determined. An appropriate method would be to track the type of student seeking advice and to charge the cost of the advising time to the appropriate program on the basis of student contact hours. This type of tracking system is often used in professional service organizations where staff keep track of the time spent dealing with specific client issues.

Not all of the student advisors' time is spent on program-specific activities, however. Staff meetings, computer software training, or attendance at information sessions on campus medical facilities can be an important part of the work day, and contribute to the cost of the office. For a full costing to occur, the EMBA program could be allocated a portion of these general, non-program specific costs. Unlike the traceable advising costs, however, these general, or common, costs would not go away if the EMBA program were shut down. We will return to this point later.

This type of "time and billing" system for charging costs to programs is not in alignment with the resource allocation methods typically used in universities. Departments such as student advising are likely to receive a line item amount from central administration to cover personnel and sundries. This dollar amount is then treated as fixed revenue with the functions of the office considered a free good and control being student wait times. In the case of student advising, the fact that there is a

multiplicity of offerings adds to overall costs by requiring specialized personnel or training is hidden and not charged to the program(s) causing it. Another problem to be aware of are those situations where organizational costs are allocated to programs on the basis of a non-causal driver, such as student numbers. Allocating an organization-level cost such as student advising to programs on the basis of student numbers would lead to two major problems:

- (1) it would hide the fact that it is the number of programs requiring specialized advising that is contributing to the rising costs; and
- (2) it misallocates these higher costs to the program with the most students.

In this example, the Bachelor of Commerce program with 2,000 students would be charged an amount 25 times that of the EMBA program with 80 students, even though it is the additional advising requirements of the EMBA program that are driving the increased cost.

Consider another example – the Dean’s suite or administration office. Schools catering predominately to a domestic undergraduate student cohort will tend to have a smaller administrative office. Even if the student body is large, the complexities associated with administering a more homogeneous group through a common program will be less than if dealing with a diverse student population or multiple program offerings. PhD, MBA and undergraduate programs each have a unique set of issues, and as the programs are added additional staff – often headed by an Associate Dean – will be needed.

An EMBA program will require a significant amount of administrative time to liaise with various business and government entities who will sponsor students, to hold information sessions advertising the program, or to meet with faculty over special curriculum concerns. If the school has an Assistant or Associate Dean and staff whose administrative duties are solely dedicated to the EMBA program, this would be considered a program cost. If, on the other hand, the Assistant/Associate Dean has a range of administrative duties involving a multiplicity of program offerings, their function would be considered organization sustaining and a monitoring of the actual time spent on the individual programs should be carried out and an appropriate allocation should take place.

Full cost versus differential cost

A common problem occurs in organizations seeking to develop a “full” cost, for such things as a pricing policy, as opposed to having a clear picture of “differential” cost in order to understand individual program contributions. The mistaken assumption being that if the program is closed, it is the *full* cost that will go away over time. ABC applied correctly should help decision makers understand that this is not always the case. In our example from student advising, an analysis of the activities of the advisors would allow a more accurate charge of the cost of this function to the EMBA program based on time spent on EMBA activities or with EMBA students. Should the EMBA program be shut down, a portion of these costs will go away over time, but not all – the costs associated with advisors attending general information sessions or training, for example. Such costs are sometimes called common costs. They exist as a result of having the function available, not as a result of the demands of a specific program. An organization may choose to allocate these costs in order to have a clear idea of the full costs of the program, but caution should be exercised.

Consider building depreciation. If a program such as an EMBA rents a downtown facility separate from the main campus in which to hold classes, the money spent obtaining such a facility would clearly be a program cost. If the program were closed the lease/rent would cease. If, however, the EMBA lectures were held within the existing campus facility, the determination of the program's cost would be less clear. Descriptions of the application of ABC in post-secondary institutions in Britain and New Zealand describe the approaches taken in calculating the full cost of a program including such common costs as rent, depreciation, or cleaning (Marshall and Yahanpath, 2001; Mitchell, 1996). An approach in these instances is to allocate depreciation (and other similar costs) on the basis of space utilized. This method distributes the cost to all users of the building. Confusion could result from the fact that these types of costs would continue if the program were shut down. To include them as a program cost gives the impression that the program is making less of a contribution than it really is. What may appear to be a money-losing program may be in fact contributing resources, and if it is shut down the school would find itself in a worse financial position.

Table IV shows the EMBA program making a positive financial contribution to the business school prior to the deduction of allocated *common* organization sustaining costs. Once these costs are allocated, however, the "bottom line" number is a loss of

	Organization (business school) level			Total business school
	EMBA	MBA	... PhD	
Total annual batch margin	\$650,000	*	*	\$5,432,100
Less: traceable costs				
Academic Director stipend	13,000	*	*	*
Academic Director course release	10,000	*	*	*
Administrative Director salary	60,000	*	*	*
Secretary	40,000	*	*	*
Student Advisor	45,000			
.5 Librarian	30,000	*	*	*
.5 IT Support	15,000	*	*	*
Brochures	40,000	*	*	*
Print advertising	125,000	*	*	*
Less: allocated program costs				
University overhead charge	216,000	*	*	*
Placement Office	30,000			
Premium facilities charge	7,000			
Other	####			
Program contribution	\$19,000	110,000	80,000	\$375,000
Less: allocated organization sustaining costs				
Building costs (depreciation, maintenance, cleaning)	100,000	*	*	*
General Business Library charge	20,000	*	*	*
General faculty administration/support charge	50,000	*	*	*
"Profit" (amount available to contribute to other needs)	-\$151,000	*	*	-\$850,000

Table IV.
Organization level
costing with allocation of
sustaining costs to the
EMBA program

\$151,000. Users of this financial report may mistakenly assume that shutting down the EMBA program would save the school \$151,000. This would not be the case. The building, together with its maintenance and cleaning, would continue to exist and be in use by the school. So too would the placement offices and the administration suite, both with general non-program specific expenses. Consideration of these expenses is important when developing a tuition or fee policy, since all the programs combined must generate sufficient resources to cover these costs, but to allocate these in order to determine the contribution of a specific program offering could lead to mistakes. In this example the EMBA program is contributing \$19,000 to covering general non-traceable school expenses, not losing \$151,000.

A solution to the possible confusion caused by the placement of this information would be to track these common costs at the organization level only, without distribution to the programs, as in the example shown in Table V. This presentation of cost information clearly shows that the EMBA is making a positive contribution to covering the organization sustaining costs.

A line item that disserves special mention is the "University overhead charge" under "Allocated program costs". This charge is from the university central administration. It is based on the revenues generated in the "for profit" programs and is used to cover university-level expenses, such as central administration staff, the

	Organization (business school) level			Total business school
	EMBA	MBA	... PhD	
Total annual batch margin	\$650,000	*	*	\$5,432,100
Less: traceable costs				
Academic Director stipend	13,000	*	*	*
Academic Director course release	10,000	*	*	*
Administrative Director salary	60,000	*	*	*
Secretary	40,000			
Student Advisor	45,000	*	*	*
.5 Librarian	30,000	*	*	*
.5 IT Support	15,000	*	*	*
Brochures	40,000	*	*	*
Print advertising	125,000			
Less: allocated program costs				
University overhead charge	216,000	*	*	*
Placement office	30,000			
Premium facilities charge	7,000			
Other	####			
Program contribution	\$19,000	110,000	80,000	\$375,000
Less: organization sustaining costs				
Building costs (depreciation, maintenance, cleaning)				700,000
General Business Library charge				175,000
General faculty administration/support charge				350,000
"Profit" (amount available to contribute to other needs)				-\$850,000

Table V.
Organization-level
costing without allocation
of sustaining costs to the
EMBA program

main library, etc. In the ideal, an activity based analysis would be carried out on the organization sustaining costs at the university level as well as the school level. This would add another dimension to the reporting, enabling a comparison of the contribution of programs from each school/faculty within the university. The same principles and techniques of activity analysis and driver allocation would apply.

Lessons from past practice

A number of universities throughout the world have attempted to use ABC to cost their programs. The success of these attempts has been mixed. In many cases the results have been positive, providing a clearer understanding of what is driving the cost of various offerings and programs. In other cases the attempts have been abandoned or the results considered questionable. In those negative cases we often read of a confusing allocation of fixed organization sustaining costs by a non-causal driver or a reversal of the unit, batch, program hierarchy recommended here. In these negative cases the emphasis appears to have been on developing full cost as opposed to understanding *both* differential and full costs for different types of decisions.

Mitchell (1996) surveyed UK universities in 1994, and of the 64 respondents found that 16 used ABC in some fashion. Among the cited benefits were an improved awareness and understanding of costs, a more equitable allocation of costs, and the provision of an aid to decision making (Mitchell, 1996, p. 53). The stated reasons for not adopting ABC included the time and cost, the difficulty getting others such as faculty members to understand and accept it, and the difficulty conducting the necessary activity analysis (p. 54). Interestingly the universities in the study did not perceive sufficient value in using ABC costing at the university level.

In contrast Goddard and Ooi (1998) discussed the use of ABC as a tool to help with the problem of allocating the costs of central overhead at the University of Southampton. Central organization costs there had traditionally been allocated to faculties based on the number of students and staff and the amount of space utilized, and this was perceived to be unfair. The authors developed an ABC system for allocating the costs of the main library by using a two-stage approach:

- (1) analyzing the activities of the library staff and relating those to user activities; and
- (2) allocating the user activities to the faculties (Goddard and Ooi, 1998, p. 33).

One could determine the activities involved in processing an interlibrary loan and then allocate to the faculties the costs of the number of interlibrary loans requested by that faculty. The authors suggest the costs could be allocated down to the level of departments or programs within faculties, or even to the level of courses (p. 36). Goddard and Ooi caution that ABC systems can be expensive because "cost driver rates would have to be recalculated periodically" (p. 37).

In their study of British universities, Cropper and Cook (2000) found that 83 percent in the 1998/1999 survey were not satisfied with their costing systems and wished to improve them and 38 percent were considering implementing ABC compared to 17 and 19 percent, respectively, that answered the same way in the authors' 1993 survey (p. 64). There were eight institutions that had implemented ABC in the 1993 survey, and that number had increased to nine in the 1998/1999 survey. Those who adopted ABC stated that they had a better understanding of their costs and had better decision-making

processes. The number of cost drivers used was small, with 40 percent using one to four drivers, 50 percent using five to nine and only 10 percent using ten or more drivers (p. 65). This illustrates that it is possible to implement and obtain the benefits of an ABC approach without an overly complex and expensive system. Marshall and Yahanpath (2001) describe implementing ABC at the Eastern Institute of Technology in New Zealand using a simple spreadsheet and such cost drivers as the number of student enrolments, library usage, number of international students, the use of regional centres, and the amount of computer equipment (p. 70).

Conclusion

While cost information is an important element of program evaluation, other considerations – such as the quality of education offered by the programs and meeting the needs of stakeholders – should not be omitted. Swonger and Mead (1998) suggest that they

... undertook program-level contribution analysis at URI not with the assumption that every program should pay its own full cost but to determine accurately which programs were costing more than their associated revenues and to make sure that all such programs were ones that we truly want to invest in because of such nonfinancial considerations as centrality to the mission of the university, demand for the program, program quality, opportunities for graduates, and the needs of the state of Rhode Island, the region, and the nation. (p. 200).

The authors suggest that there is a danger that costing information could skew the basis of decisions towards the financial considerations “precisely because of its strength as an analytical tool” (p. 204). It is probably true that it is more difficult to assess the quality of a program and hence it is difficult to evaluate the quality of one money-losing program compared to another money-losing program. While program quality and meeting the needs of stakeholders must be part of the decision making process, so should financial considerations.

There are limitations to the use of activity based costing. It requires a change in thinking from the traditional approaches. It can be expensive and/or time consuming to come to a clear understanding of work processes especially at the organization sustaining level. It can even affect the politics of an organization by revealing hidden costs and changing the apparent profitability of different undertakings. Still, for business schools facing diverse product offerings, changing enrollment patterns, and budgetary pressures, ABC can be an invaluable tool to ensure that any decisions are based on a clear understanding of what costs are and what is causing them to occur.

Note

1. Some prescriptive guides include an additional category – customer level activities. This category of activities is difficult in a university context, in that many would argue that the individual student is both product and customer. Since the purpose of the University experience is to produce an educated person as opposed to providing them with a tangible object, the delineations, if possible, are not clear.

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