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Paper Title: Dollars and Sense in International Education

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Abstract

This paper examines the pricing of international student tuition fees, accounting for international education offices, capital budgeting and the financial management of international student programs offered outside Australia. It is based on research recently completed at the University of Canberra and draws on the authors' practical experience in and theoretical knowledge of accounting. The paper also examines the financial management of international education, accounting approaches and methods in Australian institutions and makes recommendations about the approaches that should be taken to ensure that institutions take advantage of modern financial management and accounting.

Paper

INTRODUCTION

The value of international students on the Australian economy is enormous. International students bring billions of dollars into the economy and earn millions of dollars for many Australian education institutions.

Accounting for and financial management of these funds should be an important aspect of the overall management within Australian educational institutions. But is this the case?

This paper examines aspects of the accounting for and the financial management of international education in Australia institutions. The paper particularly deals with:

- pricing of international student tuition fees,
- accounting for international education offices and
- capital budgeting for and financial management of international student programs offered outside Australia.

This paper considers:

- the processes that accounting and financial management theory considers should be taken to each of these aspects of accounting for international education
- the processes that are actually being taken by Australian institutions
- the approaches that the authors recommend be taken in the light of circumstances existing within Australian education institutions

The research backing this paper concentrates on accounting processes and does not attempt to examine the financial performance of institutions. The paper is based on research recently completed at University of Canberra as well as drawing on the authors' practical experience in and theoretical knowledge of accounting

Although virtually every Australian institution and many overseas institutions offer awards in accounting the researchers have been unable to discover any research into the accounting for and financial management of international education in educational institutions. This is considerable contrast to accounting for other Australian export industries, such as accounting for agriculture and the mining industry.

There is, however, a growing body of knowledge of pricing and costing within tertiary education institutions as whole outside Australia, particularly resulting from the work of the United Kingdom's Joint Costing and Pricing Group (www.icpsg.ac.uk).

Because of its preliminary nature of the research which is reported in this paper the research is exploratory not causal research.

Research methodology

As an accounting academic with eighteen years practical experience in accounting before entering tertiary education the principal researcher possesses a good knowledge of accounting theory relating to pricing, financial measures of performance and capital decision making however to ensure his perception of the general accounting literature was correct an unstructured focus group session of five accounting academics at University of Canberra was conducted seeking their views. This group included Professor Alan Dunk, a leading expert in management accounting.

The processes being followed by Australian institutions were ascertained by way of a structured telephone survey. A copy of the telephone questionnaire is available on request.

To ensure the responses were confidential the survey was carried out by a research assistant specifically employed for this purpose and the answers provided by individual institutions are only known to her.

Thirty one of Australian universities were approached to participate in the research together with three TAFEs. Unfortunately despite the fact that the survey was seeking to determine accounting processes rather than the financial performance twelve universities were unwilling to participate in the research, most indicating that the information being sought was commercial in confidence.

There was no particular trend in those institutions who were unwilling to participate and with a response rate of 68% the researchers are confident that the results of the surveys fairly represent the accounting processes of Australian tertiary institutions.

PRICING ONSHORE TUITION FEES

There is agreement in the accounting, marketing and management literature that there are four factors that need to be considered in determining the price for each product namely:

- Organisational strategy
- Competitors
- Customers and
- Costs

Organisational strategy is an important component within the pricing decision. For example an institution may be willing to lose money with a particular course to achieve a particular institutional strategy. For example an institution may be willing to lose money on a research doctoral program to raise its overall research profile while another institution may be willing to lose money on its ELICOS activities to enable it to increase numbers within its award programs.

Clearly what competitors are charging is also a vitally important factor to be considered and no matter how prestigious every institution needs to compete with competitors' prices.

The key in looking at customers is to determine the elasticity of demand, that is how responsive demand is to a change in price.

If international education is to at least break even it is essential that revenue is equal to or greater than cost and an organisation needs to determine the cost of each product. But which cost?

There are many types of costs including total costs, direct costs and marginal cost.

Total cost is all direct costs and indirect costs associated with an activity. Direct cost is expenditure which can be economically identified with and specifically measured in respect to a relevant cost object (Chartered Institute of Management Accountants definition). Marginal cost is the additional or incremental cost that will be incurred as a result of an increase in a particular activity.

All are important. Ultimately if an organisation's total revenue does not cover both its total indirect and total direct costs it will make a loss. Marginal cost is important when an institution is considering an increase in a specific activity or recruiting a particular cohort of students.

But the key is direct cost. If a course's revenue exceeds its direct costs it is making a positive contribution towards indirect costs and profits. While it is desirable that tuition fees for a particular course cover total costs, unless an institution has specifically decided to run a course at a loss, it is essential that revenue from a particular course covers the direct costs.

To calculate direct costs accurately an organisation needs to use activity based costing.

Activity based costing (ABC) is “an approach to the costing and monitoring of activities which involves tracing resource consumption and costing final outputs. Resources assigned to activities and activities to cost objects based on consumption estimates. The latter utilize cost drivers to attach activities cost to outputs”. (Chartered Institute of Management Accountants definition).

The UK Joint Costing and Pricing Group recommend that an institution use a minimum of four to six drivers including student numbers, staff numbers and square metres of usable space.

(A good summary of ABC for beginners written from the viewpoint of Australian tertiary education is the conference paper by Bradley and Mozjerin from RMIT)

What actually happens in relation to pricing of international tuition fees within Australian institutions?

Because it is regarded as commercial in confidence institutions were not asked to explain their overall strategy in relation to international student fees. However anecdotal information indicates:

- that a number of Australian institutions are willing to charge research students tuition fees below the direct costs involved in order to maintain the level of research in the institution, and
- in determining the tuition fees they should charge many institutions have regard to where they consider they are in the “pecking order” of Australian institutions.

Not surprisingly all of the institutions who participated in the survey check competitors’ prices at least once a year.

Institutions intuitively consider the customer rather than actually estimating the elasticity of demand for each course. In practice to actually calculate the elasticity of demand for each course would be a very task not merely because of the number of courses involved but because the elasticity of demand varies from market to market. For example the Indian market is very price sensitive while the Singapore market is far less price sensitive.

Completing an analysis of elasticity of demand for each course and each market would be an impossible task.

What is also apparent is that the elasticity of demand varies from institution to institution. While the courses conducted by institutions which are regarded by the market as less prestigious are price sensitive the courses conducted by institutions which are regarded by the market as prestigious are far less price sensitive. One incident related to the researchers by a “prestigious” university is that when they increased the price of their commerce course demand actually increased.

While all of the institutions interviewed examined competitors prices it was a very different story when it came to considering an institutions costs. The results of the interviews reveal:

Table 1

Extent to which institutions calculate cost

Never (to the knowledge of the interviewee)	32%
By institution only	17%
By faculty using government WEFTSU funding (as estimate of cost for local students) plus additional direct costs attributable to international students	14%
By faculty using actual cost	32%
By course	5%

Typically those institutions who do calculate costs will examine costs once every one to three years.

However when it comes to looking at direct costs and marginal costs as opposed to total costs of the 68% of institutions who measure cost only 26% of these institutions measure direct costs and, when needed, only 53% calculate marginal cost.

Costs of courses within faculties can vary considerably. For example research courses are in general far more expensive per student than coursework courses.

Our conclusion is that in practice while the institutions interviewed have a reasonable estimation of the overall financial contribution that onshore international students make to their institution very few have any idea how much each course is contributing to the overall position or whether the contribution from particular courses are positive or negative.

This is in considerable contrast with the position in the United Kingdom where the impact of the Joint Costing and Pricing Group has been considerable and Activity Based Costing is now widely used by universities and other tertiary institutions enabling them to determine the financial contribution made by international students within a particular course.

While DEST has funded a number of exploratory ABC activities for particular activities within Australian universities the implementation of Activity Based Costing, a common technique in Australian business, is in its infancy in Australian tertiary education institutions.

While we do not have any evidence from this study to confirm our suspicions costing and pricing activities carried out by the principal researcher in a number of institutions indicates that most courses make a positive contribution to indirect costs and profits and it is only in a few, typically expensive, courses that institutions lose money.

But wouldn't it be nice to know which courses offered by your institutions have a negative contribution.

Recommendations

So what are we recommending in relation to approach that should be taken in relation to pricing of international tuition fees. We recommend that:

1. institutions develop an overall policy in relation to prices and in particular the institution take make conscious decisions about which activities that they are prepared to conduct at a loss.
2. the present practice of examining competitors prices continue.
3. institutions not attempt to determine the price elasticity of their individual courses but in setting their prices institutions need to consider the elasticity of demand for individual markets.
4. in the absence of Activity Based Costing being introduced throughout Australian education, institutions carry out an analysis of their costs of recruiting, admitting, teaching and support of international students once every three or four years and then use a mathematical model to estimate costs for individual courses in interim years so that the contribution which each course makes to indirect costs and surpluses.

ACCOUNTING FOR INTERNATIONAL OFFICES

Modern accounting acknowledges that:

- statistical combined with financial information should be used to measure the performance of service units
- expenses need to be matched to revenue to determine the financial performance of a service unit
- in the funding of service units and the measurement of their performance regard must be paid to the level of activity undertaken by the unit through the use of flexible funding and flexible budgets.

What does this mean in the context of an international office within a tertiary education institution?

First that measures such as cost per enquiry, application, offer, admission and student load should be used to measure the performance of international offices.

Secondly that if the expenses incurred by an international unit are to be matched against revenue it is necessary to take into account the timing differences between the period in which international offices' expenses are incurred and the revenue is earned have to be taken into account.

Think about when the expenses your office is currently incurring will result in revenue being earned. Unless you are enrolling students into short term courses such as ELICOS it is probable that much of the revenue earned from expenses incurred in 2003 will be earned in 2004 and later years.

For example if you are incurring expenses recruiting and admitting a student who will commence an engineering degree much of the expenses will be incurred this year while the revenue from this student will be earned over four years commencing in 2004.

What it is incorrect to do is to match the revenue earned from international students in 2003 with the expenses incurred in 2003.

What accountants agree is that when funding and measuring the financial performance of an international office the level of activity of the unit needs to be taken into account. It is simply inappropriate to fund an international office or to measure its performance based on fixed rather than flexible budgeting.

As enquiries, applications, offers, admissions and student numbers increase or decrease it is essential that, using Activity Based Costing drivers, international units should be funded and their financial performance measured taking into account the level of activities of each of these drivers.

We are not arguing however that funding should be provided nor performance measured based on a straight proportion to the number of enquiries, applications, offers, admissions or student numbers because there is an element of fixed costs within international office costs.

How does all of this fit within the normal budget and financial performance measures of Australian institutions? It simply does not.

Typically Australian institutions have one line, fixed rather than flexible budgets and although they are now required to adopt accrual accounting we have not been able to find any institution which correctly matches revenue against international office expenses.

Institutions are increasingly employing management accountants but the financial information provided to management is still largely based on financial accounting techniques and as we have previously mentioned Activity Based Costing is in its infancy in Australian institutions.

Our survey of the institution revealed the following approaches to funding international offices:

Table 2 - Methods of funding international offices

Percentage of student fees for the year	23%
Fixed amount for the year	63%
Combination of percentage of fees & fixed amount	14%

Of those who are funded on a fixed amount 71% enter into negotiations between the institute as whole and the international unit as to the level of funds provided while the 29% are simply told the amount of money they will be provided each year.

While the fixed amount system of funding international offices fits well within budgeting techniques commonly used in tertiary education it fails to meet the requirement of modern accounting which would expect that international units be funded to reflect the level of activities undertaken by the unit.

Not surprisingly our survey disclosed that statistical measures of performance, often combined with financial information, are commonly used to measure performance of international units rather than institutions attempting to measure revenues from international students and international unit expenses. (This may also reflect the difficulty of matching revenue and expenses)

As international education becomes more sophisticated measures such as diversity of student population, diversity of courses within which students are enrolled, diversity of student backgrounds and admissions into newly created courses are being used to measure performance as well traditional numbers of commencing students and total students.

We are aware that increasingly international offices are involved with benchmarking exercises, particularly those conducted by Alan Olsen's company, and we believe that these are extremely valuable measures of

performance for international offices. If your organisation has not been involved with a benchmarking exercise we urge you to do so.

However we are also aware that institutions often have difficulty producing the necessary information required for benchmarking exercises and that there have been occasions when an institution has been unable to do so. Again the absence of Activity Based Costing in Australian tertiary education is a major inhibitor to effective financial management.

Recommendations

We recommend that:

1. institutions continue to use statistical measures of performance combined with financial information to measure the performance of their international unit
2. institutions not compare revenue earned in a particular year with the expenses incurred in the same year for to do so is inappropriate
3. international units be funded using a flexible funding arrangement which reflects the level of activity needed to be undertaken by the unit rather than on a fixed sum arrangement

OFFSHORE PROGRAMS

Do your offshore courses actually break even or make a profit?

While it is probable that most onshore courses make positive financial contributions to institutions it is far from certain that many offshore programs do so. While this research does not extend to the financial performance of international education anecdotal comments to the interviewer from different institution included:

"Many of our offshore programs are run for charity"

"Our program in China is a loss leader"

"None of the programs are making money"

"Many of the offshore programs that were doing very well earlier have started making losses as a result of the Asian economic crisis."

The accounting literature argues that when capital budgeting for and financial managing international student programs offered outside Australia institutions should:

- prepare capital budgets using decision making techniques base on the time value of money for the expected life of the course
- complete capital budgets on the basis of a number of scenario rather than on just one set of figures
- regularly prepare full financial statements, at least once a year, including budgetted and actual:
 - statements of cash flows
 - statements of financial performance (Profit & Loss Accounts)
 - statements of financial position (Balance Sheets)
- include all direct expenses associated with offshore programs in these financial statements
- carry our financial analysis (including ratio analysis) on these financial statements.

It is particularly important that institutions not just measure cash flows as there can be major timing differences between when payments are made and the associated revenue is received. How often will an institution pay all of the upfront and many delivery costs in one year and receive its share of students' fees or profits in the next or even a later year.

It is also important that all direct expenses are included in the Statement of Financial Performance. To fail to include expenses directly related to an offshore course, such as an appropriate share of the salary and oncosts of the course coordinator located in Australia, simply results in inaccurate results being presented and wrong conclusions being made.

To measure direct costs in the absence of ABC is a difficult task. A number of the institutions interviewed specifically commented on the problems of accurate measurement of costs.

Financial projections before offering offshore courses

While the accounting literature clearly indicates that capital decision making should be based on the time value of money our panel of accounting experts argued that because capital expenditure on offshore courses is normally fairly low there is no need to use time value techniques such as Net Present Value and Internal Rate of Return.

Certainly although all of the institutions interviewed had courses being offered overseas none of the institutions used time value capital budgeting.

(While this was strictly beyond the scope of this research it was pleasing that many of the institutions specifically mentioned always carrying out due diligence before entering into offshore agreements. Perhaps in the past too institutions have been burnt by failing to do so.)

As the following table indicates most tertiary institutions project revenues, expenses, cash flows, and to a lesser extent, assets and liabilities in advance before entering into offshore course offerings although amazingly 9% of the institutions indicated that they did not calculate any accurate figures.

Table 3 - Before you commence any offshore teaching program do you project?

Cash flows, revenues & expenses and assets & liabilities	45%
Cash flows and revenues & expenses only	32%
Revenues & expenses and assets & liabilities only	14%
None with accuracy	9%

Those that do carry out projections do so for a period ranging from one to ten years.

Table 4 - How far ahead are these projections made?

No projections	9%
One year	8%
Two years	4%
Three years	38%
Four years	12%
Five years	25%
Ten years	4%

However only fifty percent of institutions look at more than one scenario.

Table 5 - How many scenarios do you look at?

None	9%
One	41%
Two	17%
Three	33%

It is important that institutions make pessimistic and optimistic as well as realistic projections. As well as the obvious difficulties which arise if target students numbers are not achieved some Australian institutions have struck financial problems from under estimating student numbers and finding that they have to devote far more resources than expected to offshore teaching. This is a particular problem when academic staff are in strong demand in Australia and offshore.

Financial performance

When it comes to measure the financial performance of offshore all of the institutions measure cash flows. The frequency of doing so is set out in Table 6.

Table 6 - How often do you measure cash flows?

Each quarter	8%
Each semester	12%
Yearly	77%

As we have already mentioned because of timing differences cash flows are not necessarily an accurate measure of financial performance yet not all institutions. Yet as Table 7 indicates many institutions do not accurately measure revenues and expenses from offshore courses.

Table 7 - Do you measure actual revenues, expenses and profits?

No	23%
Yes, but not accurately	18%
Yes	59%

Those who do measure revenue and expenses normally do so once a year.

Table 8 - How often those who measure revenue and expenses do so

Every semester	12%
Yearly	82%
Every two years	6%

A majority of institutions measure return on investment.

Table 9 - Do you measure return on investment

No	41%
Yes	59%

Table 10 - How often those who measure return on investment do so

Yearly	69%
Every two years	23%
Every three years	8%

When measuring financial performance most institutions do so by comparing actual with budgetted figures but 9% do not do so.

What is clear is that the measurement of the financial performance of offshore courses conducted by Australian institution is often inadequate. With the growing number of offshore students this should be a matter of considerable concern for Australian education as a whole.

Recommendations

We recommend that:

1. in addition to carry out due diligence and other risk management activities before entering into an agreement to offer a course offshore all institutions project:
 - Cashflows
 - Revenues and expenses
 - Assets and liabilities
2. time value of money capital decision techniques not necessarily be used when considering whether to enter into an agreement to offer an offshore course, except in cases where there is considerable capital expenditure or establishment costs involved.

3. before entering into an agreement to offer an offshore course figures be projected at least until the first cohort of students has completed their course
4. before entering into an agreement to offer an offshore course institutions calculate at least three scenarios of projections - pessimistic, realistic and optimistic
5. in projecting and measuring expenses all direct expenses, including those incurred in Australia such as course coordinator and Head of School directly relate to the offshore course, be taken into account.
6. in measuring the financial performance of an offshore course institutions accurately measure actual and budgeted
 - cashflows
 - revenue and expenses
 - assets and liabilities

We realise that the absence of Activity Based Costing inhibits the preparation of accurate financial statements but even if estimates have to be used this is much better than not adequately accounting for offshore courses.

CONCLUSIONS

To summarise our major conclusions are that despite the value of international education to Australian tertiary education institutions and Australia as whole that:

1. the measurement of the financial performance of offshore courses in a significant number of Australian institutions is inadequate;
2. there is an incompatibility between the one line, fixed budgets commonly adopted by Australian institutions and the needs of international units within these institutions. A significant number of institutions fund their international offices on the basis of a one line, fixed model of funding rather than using a modern, activity based, flexible funding model;
3. while institutions take market factors into accounting in setting onshore international tuition fees a significant proportion of institutions do not accurately calculate the costs involved and very few institutions are aware of the cost and therefore contribution of individual courses, and
4. the absence of Activity Based Costing within most Australian institutions severely inhibits the accurate accounting for and financial management of international education.

We sincerely believe that if the realistic recommendations set out in this report are followed that many of the problems associated with accounting for and financial management of international education will be overcome.

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