SECTION 3. General issues in management

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Traditional cost systems of South African private higher education institutions

Abstract

This paper undertakes a historical and empirical study of the costing systems of private higher education institutions (hereafter referred to as PHI's) in South Africa from 1990 to 2005. PHI's have changed their costing systems, greatly since 1997. This was due to the changes in the Higher Education Act of 1997, which made their registration compulsory and subjected them to further conditions. A further complication was the merger of public institutions which created mega-universities, and made it impossible for even the largest PHI to compete equally. A research questionnaire was sent out to forty-five registered PHI's focussing on cost analysis. It was found that although PHI's were using traditional costing systems, a large number (70%) were in the process of adopting modern cost systems, to include Activity Based Cost systems and "balanced scorecards". However, the study revealed that in terms of the PHI's size based on student numbers, the costs far exceeds the benefits of introducing modern cost systems. This study is not only important to the national education department, public higher education institutions, students, sponsors and shareholders but more important to prospective overseas countries like the United States, England and Australia, who wish to invest in South African higher education.

Keywords: costing systems, private higher education, conventional costing systems, activity based costing.
JEL Classification: M, M4, M41.

Introduction

It is expected that private higher education institutions in South Africa will face a financial crisis in the near future. The latest legislation by the Education Department to limit these institutions, coupled with the merger of public higher education institutions into mega-institutions, have made it imperative for private institutions to re-examine their costing systems and adopt new systems.

To add to the problem outlined above, private higher education institutions are perceived to be placing profits before the education and training of learners. Private higher education institutions in South Africa, similar to their counterparts in other countries around the world, have generally pursued the profit motive as the reason for their existence, although their mission statements may not openly declare this (Kruss, 2004: 15, Mabizela, 2002: 48, Vergnani, 2001: 2, Froneman, 2002: 39, and Levy, 2002: 2).

Private higher education institutions have generally had a negative stigma attached to their existence. Many critics view private higher education as 'bad', and public higher education as a 'public good' that the government must regulate and provide for (Kruss, 2004: 1). The government and students are frequently sceptical of private provider's promises and tend to focus on their ulterior motives, which are their profit making intentions (Kruss, 2004: 1). The White Paper on Higher Education states that private higher education should not allow "poor quality, unsustainable 'fly by night' operators into the higher education market" (South Africa, 1997: 255).

According to article 29 (3) of the South African constitution, "everyone has the right to establish and maintain, at their own expense, independent educational institutions", provided that they do not discriminate on the basis of race, that they register with the government and that their standards are in keeping with those of similar institutions in the country (Bitzer, 2002: 24). Private higher education should not be labelled 'evil' since it has a vital role to play. Private providers should be seen as playing a complementary and competitive role with public providers.

The clampdown on private higher education by strict government regulations has resulted in numerous institutions closing down. To add to the woes of the sector, the regulations and increased responsibilities of private higher education institutions have led to increased costs. This, in turn, has led to a drop in income and profits for institutions that pursue the profit motive and run as a business enterprise, with shareholders requiring high returns.

One of the major factors in looking at this reconfiguration is the question of managing costs and funds to finance these costs. In order to survive, it is obvious that most institutions will have to acquire more funds from every possible source or try to manage the cost side of the budget. The proper management of costs is pivotal to the survival of private higher education institutions.

1. The South African higher education act of 1997 (as amended in 2000)

Private higher education institutions are not only facing the problem of strict government regulation, but also the "scorn" of public higher education. During the mid-1990s, private higher education institutions increased substantially on the back of students' interest in the types of programmes offered, the declining quality of public education, and the instability of public higher education institutions (South Africa, 2004: 48). The Higher Education Amendment Act (Act No. 54 of 2000), amended a number of sections of the Higher Education Act 101 of 1997, and, in particular, four aspects relating to private institutions:

- The Minister of Education was given the power to determine the scope and range of both individual and public and private higher education institutions.
- The Registrar of private higher education institutions could at its discretion grant registration to private institutions in terms of the Companies Act (61 of 1973).
- The Registrar also was given the discretion to determine whether private higher education institutions could use the term "university" or "technikon".
- The Registrar was given the discretion to differentiate between local and foreign providers.

In order to regulate the private higher education institutions, the Regulations for the registration of private higher education institutions were published in the Government Gazette No. 24143. This was promulgated on 13 December, 2002 and came into effect on 1 April, 2003. These regulations were only applicable to private higher education institutions, and not to public institutions (South Africa, 2005: 5-6). In terms of the regulations, three important requirements had to be met by the institutions:

- The institution must meet the requirements of quality assurance as laid down by the Higher Education Quality Committee (HEQC) of the Council of Higher Education (CHE). The quality assessment of the HEQC is referred to as the accreditation evaluation, as to whether the institution has the capacity to provide the programmes, whether the programmes belong to the higher education level and whether they meet the requirements of South African professional practice.
- The second requirement is that of financial sustainability. The institution must be able to financially sustain its programme offerings, maintain operational continuity and meet its financial obligations to students. Furthermore, it must submit proof of financial surety and guarantees.
- The institution must finally comply with the health and safety regulations those on its delivery site.

Further requirements. The institution has to be responsible for the following (South Africa, 2005: 7):

- Displaying the registration certificate conspicuously on the premises.
- Publishing a prospectus, calendars or brochures with the manager's details, details of the academic staff, admission requirements, assessment practice, fees, etc.
- Ensuring accurate advertising.
- Maintaining academic records.
- Sending an annual report to the registrar before 30 April each year.

2. The higher education market

The increased state regulations and lack of state funding for private higher education makes it increasingly difficult for these institutions to survive. The recent merger of public higher education has further compounded the survival problem for private higher education institutions. In 2005, public higher education institutions were reduced from thirty-six (36) to twenty-two (22), of which eleven (11) were universities, five (5) were "universities of technology" and six "comprehensive institutions" (South Africa, 2004: 49). Private higher education institutions now have to compete with mega public institutions not only in terms of student enrolments but also for quality academics and appropriate programmes.

These mega institutions receive the full financial benefit from the government. The government firmly believes that it is responsible for furthering higher education due to the inequalities that existed in the past in the South African education system. The State believes that only via public higher education institutions this responsibility can be achieved.

The government's attitude to private higher education institutions has been contradictory. On the one hand, they want private institutions to create the complementary and competitive role in higher education. On the other hand, it has created regulations to restrict or curb their development. From student recruitment to the programmes of study, private institutions have limited room to manoeuvre in the face of relevant government policies.

However, private higher education institutions must be seen as playing an equally important, if not complementary role, to that of public higher education institutions. It is not possible for public higher education to meet the higher education demands alone. There is a need for private higher education to assist public higher education institutions in meeting the demands created by higher education.

Increasing student fees may be an option, but probably not a good solution since higher fees may turn away prospective students. Furthermore, the fees of private education institutions are already significantly higher than those of public institutions. In fact, it has been estimated that fees at private institutions are about three times more than those at public institutions (Vergnani, 2001: 2). To increase fees any more may further reduce enrolments and, thus, income levels.

Private higher education institutions have always adopted efficient costing systems in order to survive in the higher education market. They have used ingenious marketing strategies in order to sell their programmes, so that they can compete with public higher education institutions. They have established partnerships and collaboration agreements with local public institutions and those overseas. Private higher education institutions began by researching the market and targeting different groups of students (Kruss, 2004: 75-90):

- Privileged students by offering them "better" education.
- Non-traditional constituency for those students who could not access the higher education market due to racial, socio-economic and educational barriers.
- Students who sought mobility and international qualifications were able to progress further with their qualifications and have their qualifications recognised world-wide.

The emerging higher education scenario in South Africa has great financial implications for private higher education institutions. The decrease in enrolments at tertiary institutions must be of concern not only to the private institution but also the government since it will have a far-reaching negative socio-economic impact. This is coupled with the state's attempt to achieve a high skills growth rate of around five percent (South Africa, 1999: iv).

Private higher education institutions have greater autonomy because they are financially independent and do not receive any subsidies or grants from the Government (Vergnani, 2001: 1). However, they are subject to the same government policies that public institutions are subjected to. Private higher education institutions are effectively made to compete on an unequal footing since public institutions are subsidized by between 50 and 60 percent per student by the government (South Africa, 2004: 196).

By far the greatest problem facing private higher institutions is the issue of proper financial management. This is crucial to their existence and to the further development of private higher education. This paper examines one aspect of financial management, namely, the costing systems of private higher education institutions and its impact on stakeholders.

3. Institutional structure of private higher education institutions

This section focuses on the location of private higher institutions and their programme offerings.

Over 60% of private higher institutions are in the Gauteng province (Figure 1). Only 16% of these institutions are located in the Western Cape and Kwa-Zulu Natal. The Free State province, Mpumulanga, Limpopo and the Northern Cape, do not have a single registered private higher education institution. One of the main reasons for such a large concentration of institutions in Gauteng is the fact that Gauteng is the economic hub of the country; it produces about 60% of the country's Gross Domestic Product (GDP). It is also home to the second highest concentration of the population of South Africa, in spite of it being the smallest province in terms of its physical size (South Africa, 2004: 315). For prospective investors, like Australia and the USA, markets exist in Mpumulanga, Limpopo and Northern Cape, to start offering tertiary education programmes.

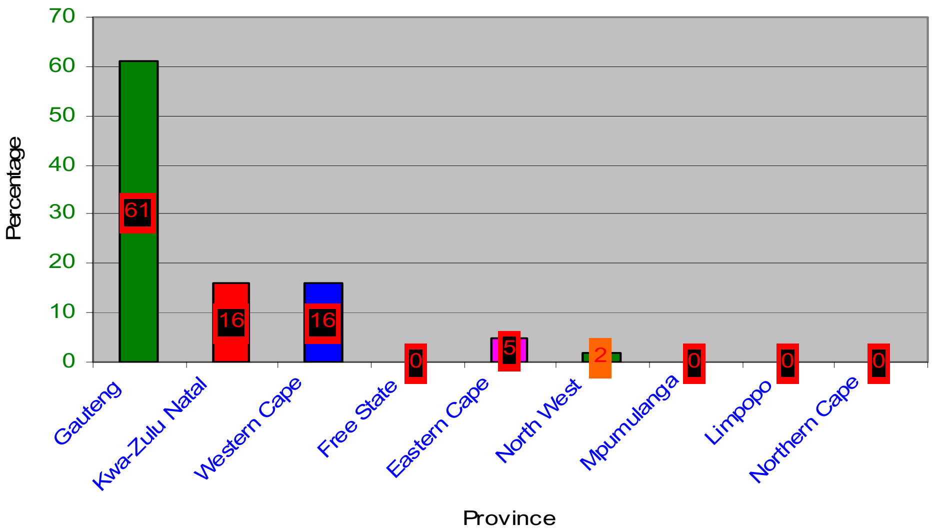


Fig. 1. Percentage, private higher education institutions per province

It may be noted from Figure 2 that religious programmes and Aromatherapy are the second and third most popular areas of study to Business Administration. The figure indicates that very few, if not none of the providers, offer programmes in the sciences, education and training or architecture and manufacturing. This may be due to the fact that these programmes require specialized resources and staff and the initial costs are expensive. A further reason for this could be that public higher institutions do not focus on religious programmes, as well as the fact that certain programmes in a particular discipline are more profitable.

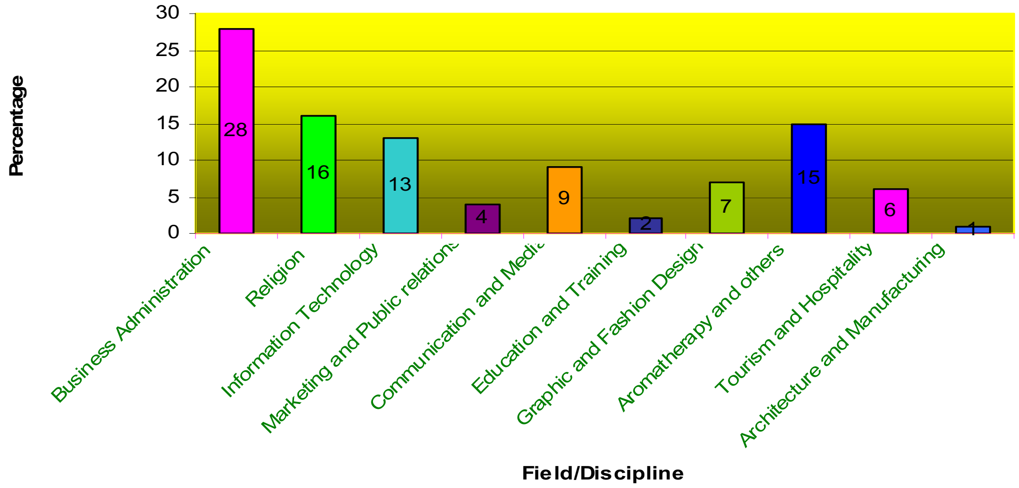
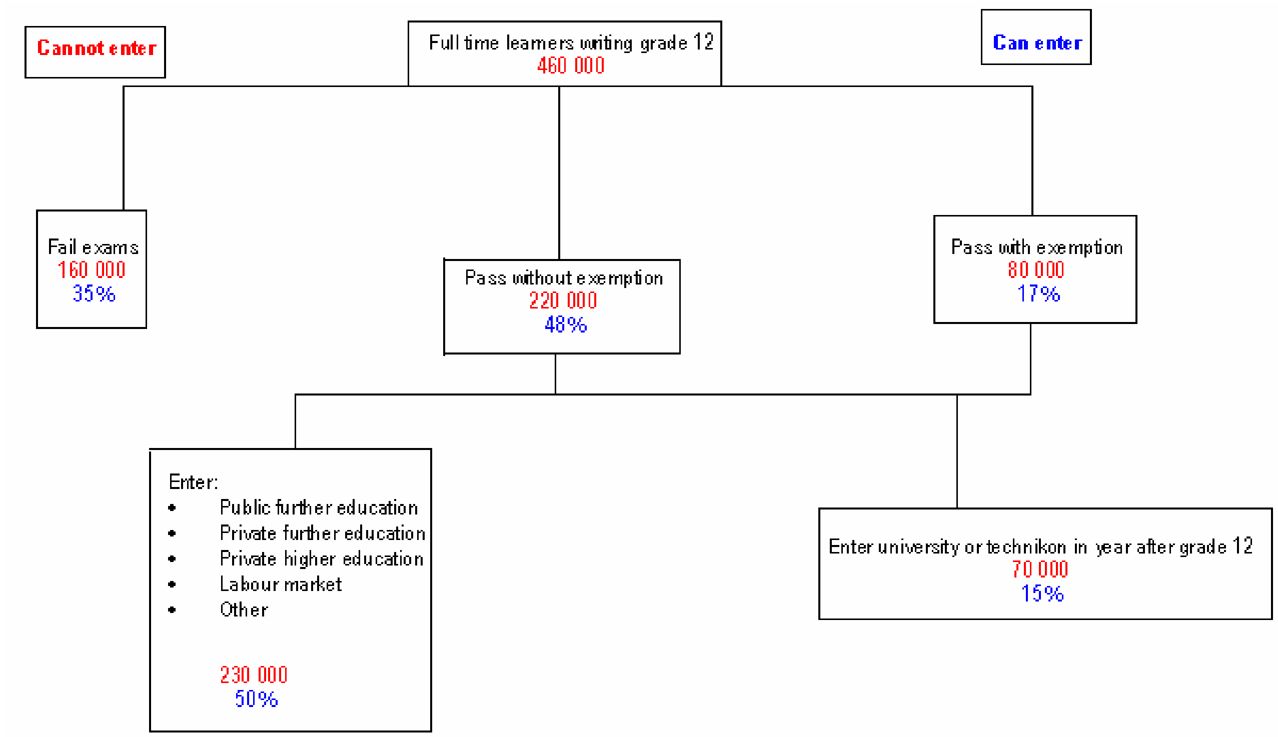


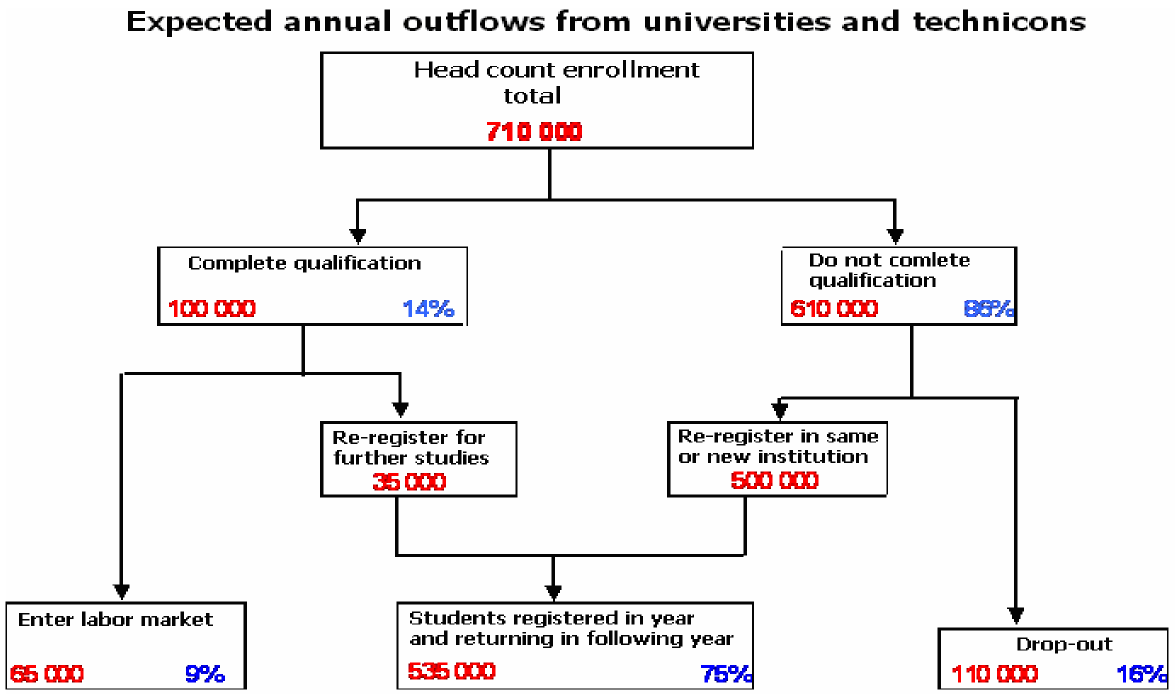
Fig. 2. Different fields/disciplines of programmes at private higher education institutions

Figure 3 indicates that sixty-five percent (65%) (about 300 000 students in 2003) of students can enter higher education but only fifteen percent (15%) (about 70 000 students) can enter a University. Figure 4 reveals that in 2004, that only 100 000 students complete their qualification and of this about 35 000 continues with further studies. This means that about 65 000 places are available for the school leavers. Public tertiary institutions limit their intakes on the basis of students Grade 12 results. This leaves a large number of vacancies at the 100 private higher institutions. This means that countries like, Australia, the USA and UK can target this band of students that are "thirsty" for higher education.



Source: South Africa, 2004 (10).

Fig. 3. Flow of students from grade 12 into higher education (South Africa)



Source: South Africa, 2004 (11).

Fig. 4. Flow of students from public higher education institutions

4. Empirical studies

4.1. Research design. On 23rd November 2005, there was one-hundred (100) private higher education institutions registered with the Department of Education which comprised the population of this study (South Africa). It was decided to eliminate fifty-five (55) institutions from the population since they had fewer than fifty (50) students enrolled. The remaining forty-five (45) institutions were ranked in terms of their student enrolments. There were 30 institutions which had student enrolments below 600 and 15 had enrolments over 600. Of the forty-five (45) questionnaires sent out, eight (8) declined to respond citing confidentiality reasons and that the study was irrelevant to them. There was no response from six (6) institutions. In total, thirty-one (31) questionnaires were returned, resulting in a response rate of sixty-nine percent (69%).

4.2. Research findings. *4.2.1. Separate cost and management department*. Most private higher education institutions were very small since they had fewer than five academic and non-academic departments. Furthermore, sixty-eight percent (68%) did not have a separate cost management department (Figure 5), rather preferring to integrate their cost and financial functions. Although, most institutions indicated they have fewer than five qualified employees involved in a cost management role, confirms that the institutions are serious about cost management.

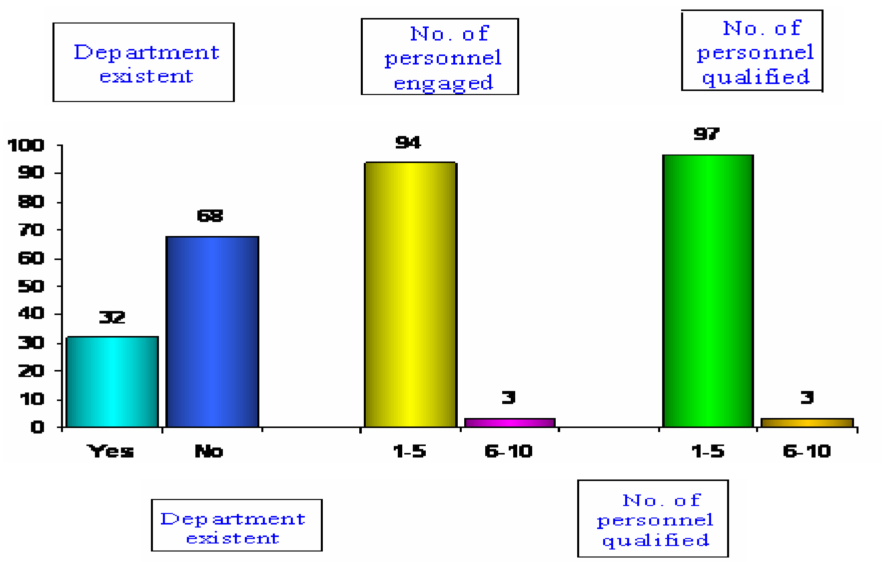


Fig. 5. Cost and management departments

4.2.2. Cost analysis. A large proportion of the respondents (with a mean of over 3 out of 5), stated that they trace costs to faculties/schools, individual courses and student types (Figure 6 on page 10). Since all respondents indicated that there is at least some tracing of costs, it means that this represents an important aspect of cost control in private higher education institutions.

More than 51 percent of the respondents fall in the "Always" and "Often" categories indicating that tracing costs to student type is very important. This is important considering that private higher institutions are concerned with maximizing profits and minimizing costs. Thus, incorrect analysis of costs could lead to under-pricing or over-pricing of programmes.

It was found that smaller institutions tend not to trace costs and that a great proportion of larger institutions trace costs. This may be due to the fact that smaller institutions tend not to have fewer cost drivers when compared to larger institutions.

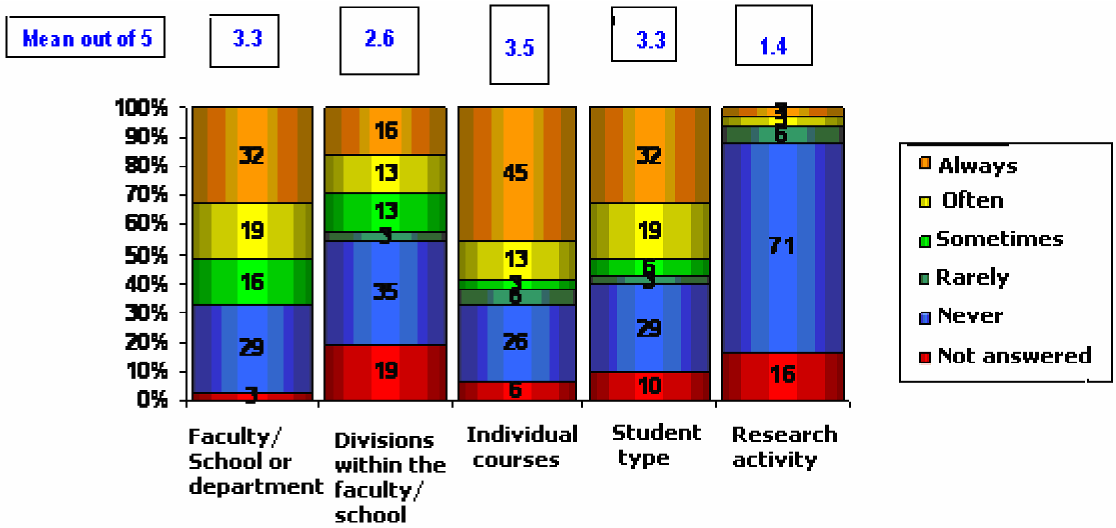


Fig. 6. Cost analysis – all respondents

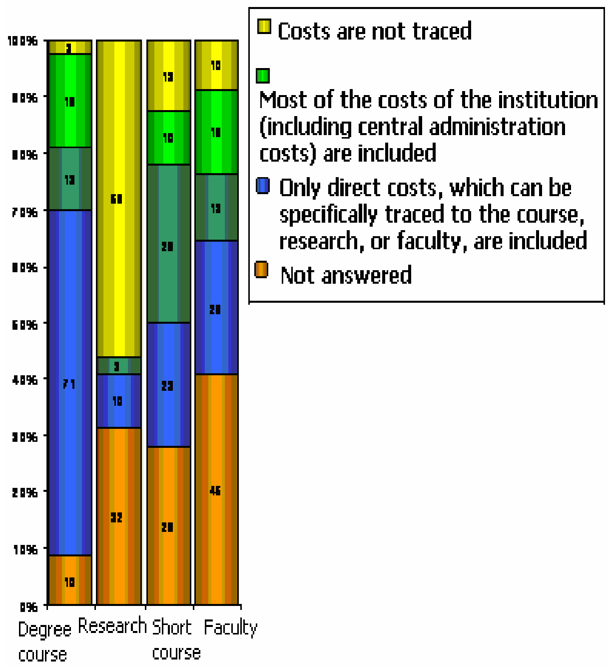


Fig. 7. Tracing of costs

Figure 7 reveals that 87% of respondents do not trace costs by research activity. One of the reasons for this is that private institutions do not receive any grants or subsidies for research unlike their public counterparts. This has discouraged private institutions from actively participating in research and publications. In keeping with the profit motive, private institutions focus on teaching of programmes that would generate greater profits at the least cost.

Another reason for private institutions being teaching intensive rather than research intensive, is based on the demand for teaching programmes from students rather than research programmes. The resources and planning of research based centres are expensive and require a greater capital investment with a delayed profit return. However, the returns from teaching are quicker and do not require a comparatively higher capital investment to that of research centres.

4.2.3. Tracing of costs. There is a positive indication that all institution costs are considered in tracing costs. The respondents indicated that they trace costs as follows: seventy-one per percent (71%) on the basis of degree courses, ten percent (10%) on the basis of research, twenty three percent (23%) on the basis of short courses and twenty-six percent (26%) on the basis of faculty. An alarming number of institutions did not answer this question, which may be due to confusion over the question or the fact that they do not have a specialized cost and management department. A large number of respondents do not trace costs for research (58%).

4.2.4. Cost allocation basis. A large number of respondents assign costs based on departmental size (67 percent) and based on student numbers (64 percent as per Figure 8). A small percentage of respondents do not use this method of cost allocation. In respect of the use of direct costs plus an overhead recovery rate, forty-two (42) percent of the institutions have used this method and twenty-three (23) percent have always used this method. However, thirty-nine (39) percent of the respondents did not answer this question or never use this method, which implies that they do not understand how to use and apply this method within their institutions.

A few (ten percent) have never used this method of assigning costs on the basis of employees, whilst 61 percent have used this method. A large proportion (29 percent) always uses this method indicating the popularity in its use. This could be indicative of the fact that the major costs in higher education institutions are linked to salaries, i.e. employee related costs. A reasonably large proportion, (48 percent) of respondents, utilize area as a basis. With a greater proportion having used this method it can be argued that it is easy to apply and assign indirect costs using the area as a base.

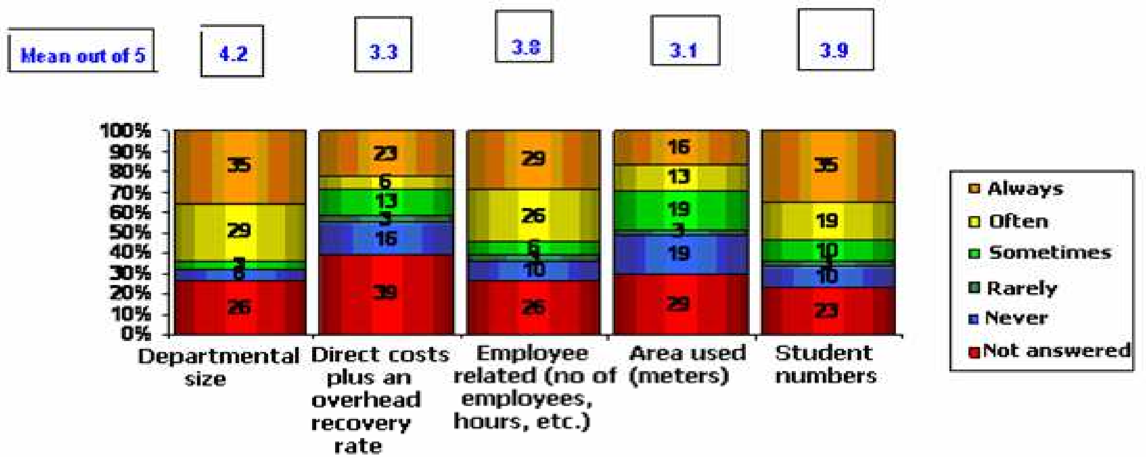


Fig. 8. Cost allocation basis assigned to service departments

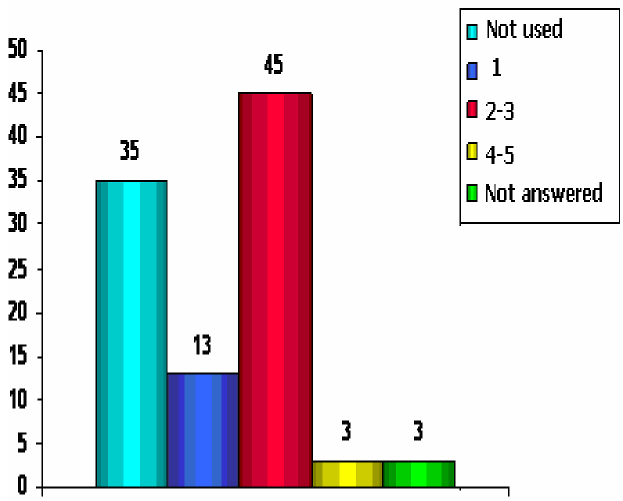


Fig. 9. Number of different allocation methods used to allocate costs

4.2.5. Number of different allocation methods used to allocate costs. It was found that thirty-five (35) percent of the respondents do not use and allocation method (Figure 9). This is rather concerning, as to how they determine their pricing of programmes. A possible way in which they price their programmes could be for them to use the rates of other institutions which may not be relevant to their institutions based on their institutions parameters. Over 61 percent use at least one method or more of cost allocation for indirect costs. The response that 48 percent of institutions are using more than one method indicates that there is an assignment of costs on more than an arbitrary basis in these institutions. It is also evident that fewer institutions (3 percent) are using four or more methods, which may be quite sophisticated and designed for use with better management information systems.

4.2.6. The initiation of cost analyses. The majority of the institutions (52 percent) started analyzing costs within the last 1-2 years, reflecting the recent application of cost within these institutions. It can be deduced from this that private institutions only recently realized the importance (or due to the changes in the legislation and merger of public institutions) of analyzing costs and factoring these costs into their costing systems to obtain a reliable cost structure when selling their programmes to prospective students. This also suggests that many of the early problems in developing and implementing cost systems have not yet been overcome by these institutions.

4.2.7. Purpose of course costing. A major proportion of respondents (97%), as can be seen from Figure 10, use course-costing information for pricing their courses. A fair number of respondents indicated that course costing information is used for decision-making (63), cost control (43), performance evaluation (23) and strategic planning (23).

It can be noted from Figure 10 that all small institutions use course costing to price their courses (100 percent). The majority of larger institutions (89 percent) use course costing in pricing their courses and decision-making.

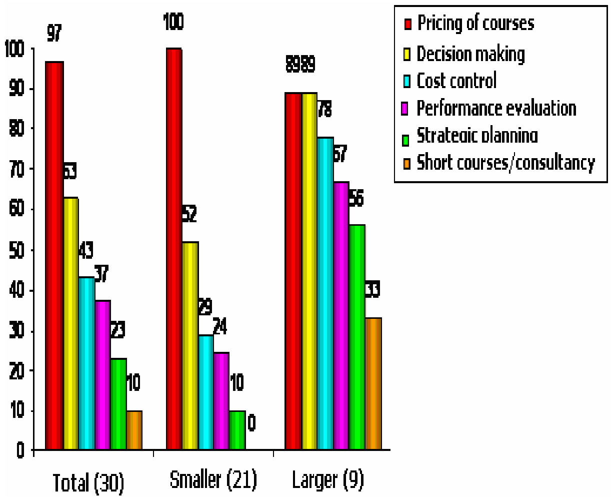


Fig. 10. If course costing used, what is the purpose

4.2.8. The most important cost driver in private higher education. According to Figure 11, the majority of institutions consider full costing of direct costs plus a fixed percentage overhead to be the most appropriate method of costing. This implies that both, large and small institutions depend on traditional cost drivers. However, there are a significant number of institutions that use activity based costing. The fair distribution of the different cost drivers indicate that institutions understand the principles of the different cost systems and are able to relate to a method, which is reliable and accurate for better-cost allocation in higher education institutions.

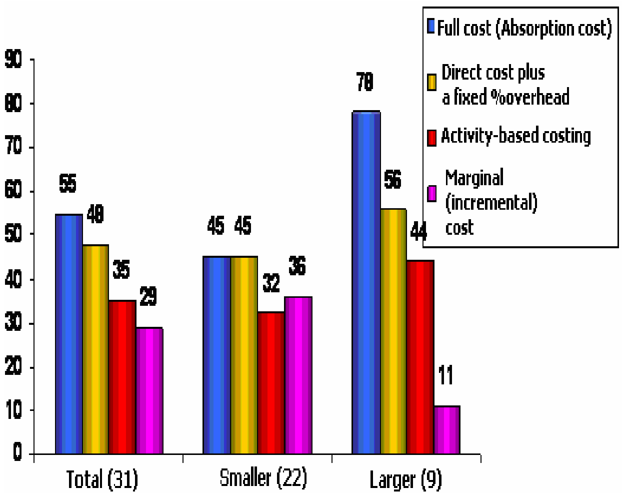


Fig. 11. Most important cost driver

4.2.9. Most appropriate cost driver for allocating costs. Figure 12 indicates that most respondents use the appropriate cost drivers. For finance and administration department, it is quite evident that departmental income and expenditure, salary amounts and staff size are predominantly used to allocate costs. For rentals, water and electricity and rates, space used is the predominant driver to allocate costs. The student size is used to allocate costs for the library. This is in keeping with what the industry uses as a basis of allocation. However, the introduction of an activity based costing system will enable a more accurate allocation of costs.

Some institutions also indicated that the following additional drivers were used:

- network points for allocating computer related costs;
- value of books as basis for library books;
- number of transactions for finance related costs.

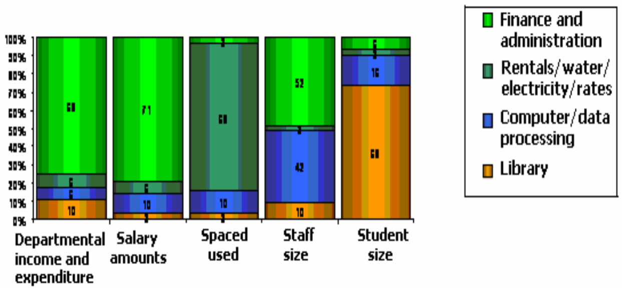


Fig. 12. Most appropriate cost driver for allocating costs – all institutions

4.2.10. In the process of changing from traditional costing system to modern costing systems. Figure 13 below indicates that seventy percent (70%) of all respondents are in the process of changing from their traditional costing systems to modern systems. This implies that there are plans to change to an ABC system or balanced scorecards. Since the costs of tertiary institutions have a large proportion of overheads, these need to be allocated accurately to determine the overall cost for the institutions.

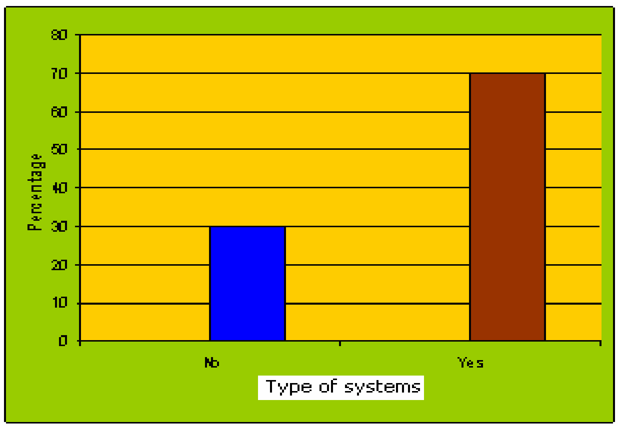


Fig. 13. Changing from traditional to modern cost systems

For example, Table 1, below, indicates the activities and activity drivers of a teaching department.

Table 1. Activities and activity drivers for a teaching department

Possible activities	Activity drivers
Teach lectures	Number of lectures
Teach tutorials	Number of tutorials
Mark assignments	Number of assignments
Set exams	Number of exams
Mark exams	Number of exam scripts
Assist students	Number of students
Type handouts	Number of pages
Print handouts	Number of students
Define syllabus	Life expectancy of the subject
Maintain class records	Number of students
Order materials	Number of inventory items
Maintain departmental accounts	Number of staff
Prepare departmental budget	Hours to produce

Source: Adapted from Langfield-Smith.

Another modern technique that can be used by higher education institutions is a balanced scorecard as proposed by Robert Kaplan and Davis Norton. A balanced scorecard is a system that combines traditional financial measures and non-financial measures to make the most of the information and research result to fill the information gap between departments in an organization. The system also enables managers to design and monitor series of effective processes in the whole organization to increase the business performance.

Conclusion

Although most private higher education institutions do not have a separate cost management department, it is quite evident that they are performing this function which is integrated into its financial accounting department. The fact that institutions are tracing costs and using different allocation basis, is a positive indicator that the fundamental principles of cost management is in place. The positive response by institutions on changes to their traditional costing systems, to modern costing systems indicates that the dynamic changes in the higher education sector in South Africa have compelled private institutions to focus on other systems like, activity based costing and "balanced scorecards". This study is not only important to the national education department, public higher education institutions, students, sponsors and shareholders but more important to prospective overseas countries like the United States, England and Australia, who wish to invest in South African higher education. One of the niche areas will be the research sector of higher education. Since very few higher education institutions in South Africa have well developed research centres, and Australia and the USA are well developed research centres, they can easily enter the market and establish themselves in this niche spot.

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