

Empirical Analysis on Revenues and Expenses of Taiwanese Higher Education

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Abstract

There is no doubt that higher education institutes (HEIs) in Taiwan have faced many unprecedented challenges in the past decade, such as international competitiveness; commercialization operations from marketization; and accountability with autonomy etc. Moreover, the factor of financial resources among institutes, which is integrated from the government funding or fundraising, and “self-funding” for university itself, has become the imperative issue, whereas there is corporate difference between the public and the private institutes. The government sees the public institutes as a part of the civil service system while considering the private institutes as legal persons. The aims of this chapter are to explore the financial issues of Taiwanese higher education by analyzing their financial reports which were provided by the Ministry of Education (MOE), the Department of Accounting (DoA), within 162 Higher Education institutes. As a whole, there are 31 public comprehensive universities or colleges (UoCs) and 36 private ones. Besides, there are 22 public universities of technology or institutes of technology (UToITs) compared with 73 private ones (MOE, 2010; MOE, 2009; MOE, 2008). The author attempts to carry out data diagnostic comparison based on the financial data from the 2007 to 2009 annual reports in order to interpret the fundraising issues in Taiwan. The conclusions in this paper are relevant either for the leaders or the policymakers regarding higher education in Taiwan in the coming stage, such as the concepts of fundraising accountability and skill for the leaders and administrative teams, the professional capacity of staffs who are responsible for financial planning and executing, and the upward spiraling changes for the Taiwanese HEIs.

Keywords: *Taiwanese higher education, funding and fundraising, revenue, expenditure*

JEL classification: *H52, I22, I23, I28*

1. Introduction: Background Review

In the 1980s, the HEIs in Taiwan, no matter public or private, are controlled by the Taiwanese government because of the semi-closure political situation and elite higher education at that moment. Hence, the leaders of these institutes did not have to worry about funding or fundraising. The civil-service budgeting system was one of the major accounting systems at that moment. As Teng (2002) shows, in the past, there was always the problem of implementation rate at state-run universities. If a school did not use up its budget, the school president could actually be punished. As a result, every year at the end of the fiscal year, schools rushed to buy new equipments and contract out new projects, and were often accused of wasting money. Another problem was that research programmes had to show short-term results. If the annual research budget was cut, the research plan would have to be terminated in mid-course. Such civil-service type budgeting methods hardly suited the operations of a university.

Since 1994, market mechanisms for education, in particular the higher education system, are introduced according to the consensus of the 1996 Education Reform Report. The University Act was also passed to reduce the power of the central government by granting more academic autonomy, institutional flexibility and self-reliance to universities. Meanwhile, as Chou (2008: 297) pointed out, Taiwan also experienced an unparalleled expansion in universities and student enrollments as a result of public elections and economic deregulation. Following this expansion, the private higher education institutions came to outnumber the public; the latter traditionally have enjoyed more resources and social prestige. Currently, there are 64 public HEIs and 109 private ones (MOE, 2010). The trends of individual institutions are to become more competitive and accountable by creating an overall market mechanism within the Taiwanese higher education system. As Tang (2008) shows, one of the steering factors to promote market mechanism is to empower the public institutes with the responsibility on fundraising ability by the endowment fund system. MOE also passed the Enforcement Rules of School Funds for National Universities/Colleges (ERSF) and Regulations Regarding the Management and Supervision of School Funds at National Universities/Colleges (RMS), and have those public HEIs divided into four groups to respond to the Enforcement Rules of School Funds (ERSF) year by year. The first group to respond to the ERSF in the year of 1996 had a total of five Institutes. They are the National Taiwan University (NTU), National Cheng Kung University (NCKU), National Tsing Hua University (NTHU), National Chiao Tung University (NCTU) and National Taiwan University of Science and Technology (NTUST). By the end of 1999, all public institutes have established their own foundations for School Funds.

As we mentioned, since 1996 an endowment fund system followed by the ERSF has been in place in Taiwan to help provide funding for public universities. The school fund system is a reform method which can solve problems of rigidity of civil service budgeting rules, lack of autonomy for schools, and lack of flexibility. One important difference is that allocated funds can be rolled over to future years, so that the school fund can increase over time, which will be helpful to the long-term development of HEIs. This means that while they are still mostly subsidized by the MOE, these universities must come up with 20 per cent of their own funding. The consequences of the changing way of funding in HEIs have been varied. Nevertheless, these results may provide valuable experiences about raising money for universities and colleges.

2. What Are the Initiating Factors in Taiwanese Higher Education?

First of all, commercialization operations under marketization of higher education in Taiwan has been obvious. Not only in terms of student recruitment and enrollment but also of research and education, the growing influence of marketization and commercialization are apparent for every institute in Taiwan, with either positive or negative impacts on the campuses. Bok (2003) attributes much of the growing influence of the marketplace on higher education to the following factors: growing demand for funding to fuel the quest for increased size, reputation and prestige; the growing use of business practices in the management of universities; and declining federal and state support in the 21st Century. Also, he suggests that educators in the academy must be prepared to take a realistic look at the positive and negative impact of these trends, and then make sound decisions in the context of their own institutions. In Taiwan, the corporatization issue for the public HEIs has been discussed for years in order to remove barriers between different institutional independencies, e.g. public vs. private funding/tuition and fees/tax-exemptions. However, it has no operation rules so far unless the amended University Act is passed by the Executive Yuan. On the other hand, it is evident that the aims of the amended Private School Law are required to strengthen the private sectors from the management to entrepreneurial aspects. The increasing competitive trend between them is highly appreciated and reveals the results of commercialization actions under marketization among HEIs in Taiwan.

Secondly, organizational accountability to society or even industry is the counterbalance to the need for more autonomy the institutes require. Meanwhile, it is essential to open up the university governance structures through the transparency of decision-making by way of bringing in people from outside the campus. There are also increasing concerns about the way to strengthen relationships between universities and society in order to increase

governance effectiveness. For example, since 2004, the Taiwan government has set up several programmes such as the “Promoting Academic Excellence and Developing World Class Research Centers” programme which is also called the “5 years 50 billion” (5Y50B) or “Excellence in Teaching and Learning” (ETL). Indeed, autonomy will be the main theme. Another issue of accountability has emerged from embarking on institutional evaluation and departmental evaluation for all HEIs since 2004, under the “Regulations Governing University Evaluation” (RGUE). It is expected that with this transformation, there will be significant improvements in the quality of the higher education institute in the form of a global research university. Part of the accountability measures is built into those programmes, and every granted institute or centre is required to submit an annual functional report and further review the benchmarking accountability they fixed previously. It is important to find the right balance between accountability and autonomy, although those two elements have difference aspects (Whitefield, Escalera and Peppers, 2002).

Thirdly, internationalization of Taiwan’s higher education has become a crucial challenge for all institutes. Since 2001, the Taiwan government has been one of the members of the World Trade Organization (WTO) and there have been increased relations between Taiwan and China or even ASEAN, not only economic but also academic particularly as a result of the ECFA. It is necessary to raise the standard of internationalization within Taiwan’s educational systems while being a member of the global village. We believe that student mobility can enrich the learning career for students. However, Taiwan’s international education has been a significant part of the MOE’s policies and people expect a deeper push towards showcasing Taiwan’s competitive advantage in particular as a result of the positive cross-Strait development. The MOE believes that international students, including students from China, can create a dynamic learning environment for local students. Also, many local students are striving to enhance their language abilities in order to differentiate themselves from each other and enable themselves to study abroad. W.J. Chen, the ex-president of NTU, shows that internationalization requires an understanding of one’s widespread advantages which means internationalization and localization are absolutely complementary to each other (Chen, 2003). As for development in science and engineering, because the competition among countries around the world is already white-hot, Taiwan cannot afford not to pursue this area as well. On 28th-29th August 2010, the Ministry of Education held the National Education Development Conference, at which the central topic for higher education was “Promoting the Quality of Higher Education to Raise International Competitiveness”. As Chen (2003) further shows, in order to strengthen competitiveness, talented people are most important. Furthermore, to nurture

such superior talents, one must provide them with excellent environment and incentives. If only international talented students and scholars can be mobilized according to the principle of “rising tide lifting all boats”, the HEIs competitiveness will follow suit.

3. Financial Framework of Taiwanese Higher Education

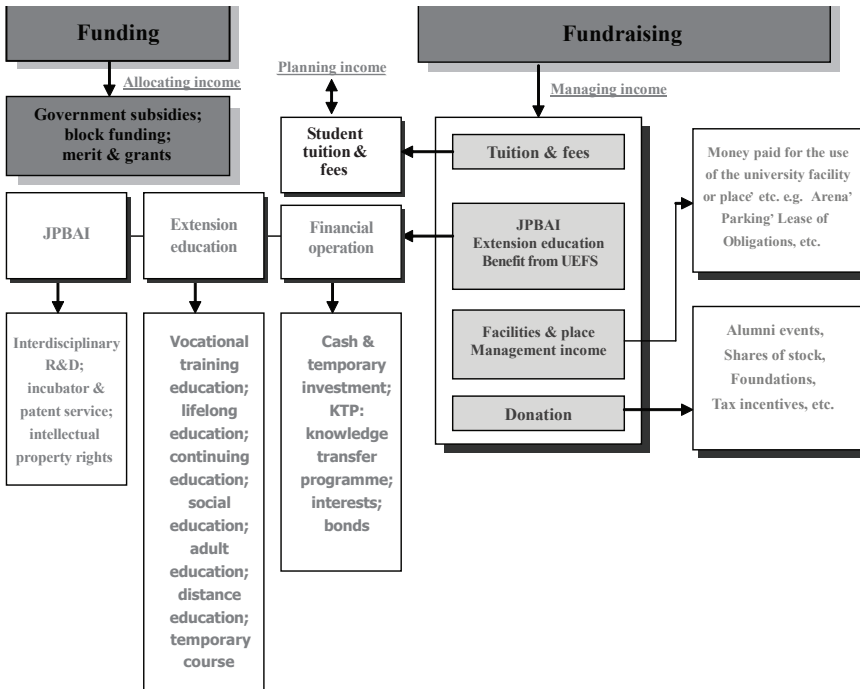
This section is to explore the financial framework including the institutes’ income and expenses. The financial income of higher education in Taiwan can normally be categorized into two aspects – funding and fundraising. The funding system – allocating income – is directly granted from the government in spite of the different backgrounds of public and private institutes. Generally, grants for the public HEIs from MOE whose subsidies are mainly based on the basic requirements and the previous conditions. However, the principles of funding the private HEIs are totally different from the public. The provision of grants for the private institutes is mainly based on the performance of their teaching merit and involvement. In recent years, the Taiwan government raises its block funding, which is also called competitive funding, for reaching some specific objectives such as the programmes of “Excellence in Teaching and Learning” (ETL).

As for the fundraising system, it is more complicated than government funding. In short, fundraising, which is also called self-funding, means that the incomes of HEIs are not subsidized by MOE, such as tuition and fees or endowment, etc. Thus, the core concept of fundraising system is more flexible on the implementation of budgeting and executing process, which means more flexible management and less supervision at their school funds. Even more important is that since the implementation of the endowment fund system, like the comments from Tang (2008) and Teng (2002), school incomes such as from tuition & fees, joint projects between academia and industry, continuing education, and intellectual property rights from R&D can all be freely used by the school, rather than being turned over to the national treasury as in the past.

The advantage of fundraising system is that the results of efforts to cut back waste and increase revenues will all end up in the school’s own pocket. The fundraising system, as Figure 1 shows, is divided into two: planning income and managing income. As for planning incomes, it refers to HEIs incomes from the tuition and fees. The managing incomes, referring to operating revenues, are money from the university management as listed below:

- Student tuition and fees (T&F): money paid by students;
- Extension education (EE): money from vocational training education, lifelong education, continuing education, social adult education or temporary course, etc.;

Figure 1 Financial Revenues of Higher Education in Taiwan



Notes: JPBAI – joint projects between academia and industry.

UEFS – University Endowment Fund System.

Source: Revised from Tang (2008).

- Joint programme between academia and industry (JPBAI): money from interdisciplinary R&D, incubator and patent service, intellectual property rights, etc.;
- Donation: money from alumni events, shares of stock, foundations, etc.;
- Financial operation (FO): cash and temporary investment, KTP programme or even interests and bonds, etc.;
- Facility and place management: money paid for the use of the university facility or place, etc., e.g., arena, parking, lease of obligations.

The spending on Taiwan’s higher education institutes is mainly examined in terms of four aspects according to the annual financial reports. They are:

- Teaching and learning cost (TLC): personnel costs, costs of library, apparatus and equipment, etc.;

- Student cost (SC): student scholarship, assistance payment, work-aided study payment, etc.;
- Management and general administration cost (MGAC): administration cost, etc.;
- Other costs: auxiliary expenses, etc.

Teaching and learning cost of institutes is also known as the educational and general expenses and calculated as the cost of instruction and department research needs with regards to expenditures on academic support. Student cost is mainly related to student services, such as scholarship and institutional support for student assistance or work-aided study. Management and general administration cost includes expenditures on the operation and maintenance of plant and the public service.

4. Messages from Empirical Data

How have HEIs done in the past three years, from 2007 to 2009, in seeking funding and fundraising? Who has been the most successful? As a whole, the total incomes of the four groups of institutes, which included the public UoC and the private UoC, the public UToIT and the private UToIT, are almost increasing slightly by the years: \$7.08b in revenues in 2007, \$7.31b in 2008 and \$7.22b in 2009. However, as Table 1 shows, there is a large gap between government funding for public institutes, as opposed to private institutes. Although roughly 60 per cent of the total money that goes to subsidize private HEIs (56.78 per cent in 2007, 56.55 per cent in 2008, 53.75 per cent in 2009), such public institutes in Taiwan numbered only 53 as compared to 109 private institutes in 2009.

Less than 50 per cent of the total income of public universities or colleges (UoC) is subsidized by the government in the past three years. More than half

Table 1 Differences in Total Income between Public and Private Institutes

Unit: thousand USD (\$)

	No. of HEIs; Total income		No. of HEIs; Public		No. of HEIs; Private	
2007	162	7,076,323 (100%)	54	3,058,065 (43.22%)	108	4,018,258 (56.78%)
2008	163	7,307,678 (100%)	54	3,174,968 (43.45%)	109	4,132,710 (56.55%)
2009	162	7,210,032 (100%)	53	3,334,613 (46.25%)	109	3,875,419 (53.75%)

Note: Taiwan HEIs include 31 public universities or colleges (UoC) (without counting the two Taipei city universities), 35 private UoC, 22 public universities of technology or Institutes of technology (UToIT), and 73 private UToIT.

Table 2 Taiwanese HEIs' income, 2007-2009

Unit: thousand USD (\$)

Category \ Year	2007		
	Total income	Funding	Fundraising
Public UoC (32)	2,412,452	1,117,065 (46.3%)	1,295,387 (53.7%)
Private UoC (35)	1,990,032	236,161 (11.9%)	1,753,871 (88.1%)
Public UToIT (22)	645,613	330,517 (51.2%)	315,098 (48.8%)
Private UToIT (73)	2,028,226	198,807 (9.8%)	1,829,419 (90.2%)
Total	7,076,323	1,882,550 (26.6%)	5,193,775 (73.4%)
Category \ Year	2008		
	Total income	Funding	Fundraising
Public UoC (32)	2,502,387	1,139,420 (45.5%)↓	1,362,968 (54.5%)↑
Private UoC (36)	2,029,355	242,419 (12.0%)↑	1,786,936 (88.0%)↓
Public UToIT (22)	672,581	344,291 (51.2%)↓	328,291 (48.8%)↓
Private UToIT (73)	2,103,355	223,839 (10.7%)↑	1,879,617 (89.3%)↓
Total	7,307,678	1,949,969 (26.7%)	5,357,812 (73.3%)
Category \ Year	2009		
	Total income	Funding	Fundraising
Public UoC (31)	2,632,419	1,191,484 (45.3%)↓	1,440,936 (54.7%)↑
Private UoC (36)	1,944,677	253,323 (13.0%)↑	1,691,355 (87.0%)↓
Public UToIT (22)	702,194	359,517 (51.3%)↑	342,678 (48.7%)↓
Private UToIT (73)	1,930,742	230,452 (11.9%)↑	1,700,291 (88.1%)↓
Total	7,210,032	2,034,776 (28.2%)	5,175,260 (71.8%)

Note: All income units are from the MOE, DoA (2007, 2008, 2009), and include the 5Y50B and ETL programmes.

of UoCs' income is from their self-funding (53.7 per cent in 2007, 54.5 per cent in 2008, 54.7 per cent in 2009), as shown in Table 2.

The private UoCs depend on their fundraising income – an estimated 88 per cent in the past years (88.1 per cent in 2007, 88.0 per cent in 2008, 87.0 per cent in 2009). While examining the private UToITs, we found the number of fundraising modestly higher than the private UoCs (90.2 per cent in 2007, 89.3 per cent in 2008, 88.1 per cent in 2009). Due to the fact that the funding sources of the private HEIs in Taiwan differ, each institute should find it hard

to hunt for more donors or students in its freedom to pursue its own academic ideals. The results show that the government should do more to encourage well-run private schools. While these private schools do not need funds to survive, they do need money to improve the quality of education.

Table 1 also shows that for the different “corporations”, as a whole, no matter the UoCs or UToITs, the government subsidizes the public and private institutes with well similar standards. Meanwhile, with the rapid increase in the costs associated with higher education, there has been an ever-increasing pressure placed upon HEIs to raise funds for institutional support. However, the author believes that the government will actively support the enhancement of academic quality at Taiwan’s universities. However, while public HEIs, especially those that are strong in engineering and the sciences, have the upper hand in fundraising, private HEIs, which must come up with all of their own incomes, on the other hand, have their own independent strategies.

Figure 2 shows the range of fundraising in the past three years for the four groups of institutes. The public universities and colleges (UoCs) have been well increasing while both the private UoCs and UToITs are slightly declining. The public UTITs have been having steady results.

Table 3 shows the patchy distribution of several income sources from 2007 to 2009 – fundraising or self-funding, except government funding. Six items constitute the main concerns for the fundraising objectives. They include tuition and fees (T&F), extension education (EE), joint programme between academia and industry (JPBAI), donation (Dona), financial operation (FO) and facility and place management (FPM). Obviously, the biggest issue at the private HEIs or even public UToIT is in financial structure. What this

Figure 2 Percentage of Fundraising of HEIs in Taiwan

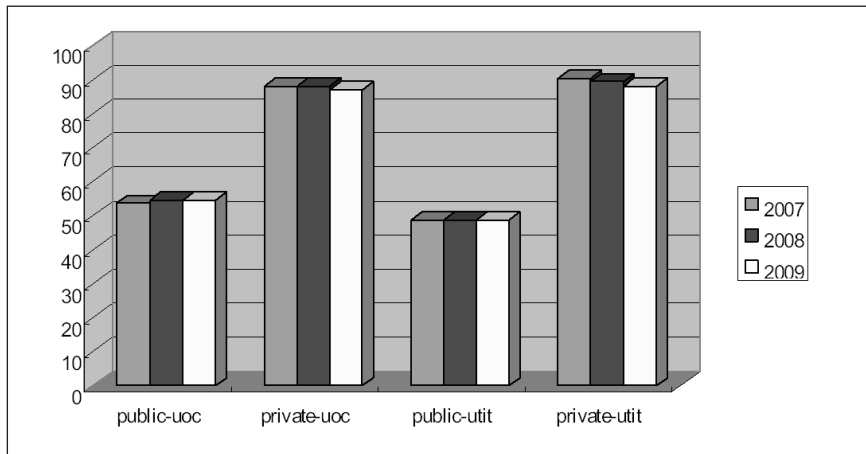


Table 3 Fundraising Income in Taiwanese HEIs, 2007-2009

		2007						2008									
		Total	T&F	EE	JPBAI	Dona	FO	FPM	Auxiliary	Total	T&F	EE	JPBAI	Dona	FO	FPM	Auxiliary
Public UoC	(32)	1,295,387 (100%)	445,161 (34.37%)	35,871 (2.77%)	611,936 (47.24%)	19,291 (1.49%)	37,323 (2.88%)	84,355 (6.51%)	61,452 (4.74%)	1,362,968 (100%)	456,162 (33.47%)	39,161 (2.87%)	655,291 (48.08%)	22,903 (1.68%)	43,452 (3.19%)	89,290 (6.55%)	56,710 (4.16%)
Private UoC	(35)	1,753,871 (100%)	1,098,000 (62.61%)	58,323 (3.33%)	173,162 (9.87%)	89,290 (5.09%)	131,613 (7.51%)	55,645 (3.17%)	147,839 (8.43%)	1,786,936 (100%)	1,105,291 (61.85%)	64,549 (3.61%)	182,000 (10.19%)	103,774 (5.81%)	126,258 (7.07%)	54,678 (3.06%)	150,387 (8.42%)
Public UToIT	(22)	315,098 (100%)	193,936 (61.55%)	5,935 (1.88%)	76,516 (24.28%)	2,194 (0.70%)	9,516 (3.02%)	15,742 (5.00%)	11,258 (3.57%)	328,291 (100%)	194,355 (59.20%)	5,290 (1.61%)	84,613 (25.77%)	2,839 (0.86%)	13,000 (3.96%)	17,581 (5.36%)	10,613 (3.23%)
Private UToIT	(73)	1,829,419 (100%)	1,344,581 (73.50%)	25,290 (1.38%)	74,419 (4.07%)	184,000 (10.06%)	90,645 (4.95%)	44,419 (2.43%)	66,065 (3.61%)								

Unit: thousand USD (\$)

Table 3 (continued)

	2009							Unit: thousand USD (\$)
	Total	T&F	EE	JPBAI	Dona	FO	FPM	
Private UToIT (73)	1,879,617 (100%)	1,347,871 (71.72%)	26,839 (1.43%)	81,839 (4.35%)	207,742 (11.05%)	104,452 (5.56%)	44,355 (2.36%)	66,419 (3.53%)
Public UoC (31)	1,440,936 (100%)	456,259 (31.66%)	38,291 (2.66%)	744,387 (51.66%)	25,096 (1.74%)	25,226 (1.75%)	94,258 (6.54%)	57,419 (3.99%)
Private UoC (36)	1,691,355 (100%)	1,127,226 (66.65%)	67,775 (4.01%)	200,774 (11.87%)	65,323 (3.86%)	48,936 (2.89%)	57,774 (3.42%)	123,548 (7.31%)
Public UToIT (22)	342,678 (100%)	196,129 (57.23%)	5,774 (1.69%)	96,774 (28.24%)	3,129 (0.91%)	8,355 (2.44%)	17,903 (5.23%)	14,613 (4.21%)
Private UToIT (73)	1,700,291 (100%)	1,377,323 (81.01%)	30,000 (1.76%)	97,226 (5.72%)	49,613 (2.92%)	49,387 (2.91%)	48,194 (2.83%)	48,548 (2.86%)

Note: Fundraising refers to HEIs' self-funding income, which includes in general tuition & fees (T&F), extension education (EE), joint programme between academia and industry (JPBAI), donation (Dona), financial operation (FO) and facility & place management (FPM).

means is that tuition and fees provide for more than 60 per cent of incomes. In comparison with universities overseas, this represents excessive reliance on tuition and fees. Public UoCs have been very involved in JPBAI, with nearly 50 per cent of their fundraising income (47.24 per cent in 2007, 48.08 per cent in 2008, 51.66 per cent in 2009), as shown in Table 2. Examining the public UToITs also reveals the relatively good performance of JPBAI (24.28 per cent in 2007, 25.77 per cent in 2008, 28.24 per cent in 2009). However, the fundraising income from JPBAI could be counted as buried treasury while institutes collect them only from the overhead returns which are estimated to be between 10-40 per cent. On the other hand, Table 2 shows that the private institutes should step up their efforts in JPBAI, funding for research, continuing education, and other areas in order to make up their financial deficit.

Ironically, the percentage of institutes' donations seems to be very low in the case of those four groups of institutes although the private is obviously higher in percentage than the public. Incomes from donations are mainly used in purchasing hardware and in construction because the MOE budget in this regard is very tight, and the school knows it cannot get full subsidization. Thus, the donations to institutes always play the key role on financial management. However, to conduct donation fundraising in Taiwan, one can rely only on the goodwill of contributors. People in Taiwan, however, are more eager to donate their money to religious organizations or even political groups instead of higher education institutes. Although the private institutes' capabilities are better, the public institutes have been under two lateral effects (two-peak curve phenomenon). Those with tradition advantage and in the fields of science and electrical engineering always receive big gifts from the high-tech leaders among their alumni. As small as it is and limited by the number of domestic companies, money raised from donations is only enough to fund a small portion of academic activities. As Teng (2002) shows, although alumni are the most important resource, one has to develop other sources of funding as well. It is especially difficult to do fundraising in Taiwan, and everybody uses the same old tactics. It is even more important to set down roots and broaden participation to create regular and long-lasting sources of funds.

Institutes in Taiwan will have to rely on themselves for most of their fundraising, and the timing of low tuition will be over. This is because public and private schools understand that fundraising income has played an important part of institutes' executors if they would like to compete in the global higher education market.

Extension education is always a key factor in fundraising income. In particular, schools in Taiwan are exploring new sources of income. One of the hottest new approaches is to offer Executive MBA programmes, with tuition fees of USD1,000 or more per credit. Currently, not only the business

departments do that, but also some departments of the social sciences or law. Some of them develop different but market-oriented interdisciplinary programmes for people to update their skills. Thus, extension education includes a variety of training courses and in the future, schools will offer more learning services to meet the needs of the market in terms of the era of lifelong learning. Both the public and the private are devoted to arrange their extension education service not only for beneficial returns but also for the whole job market.

Figure 3 Total Expenses of Taiwanese HEIs (USD)

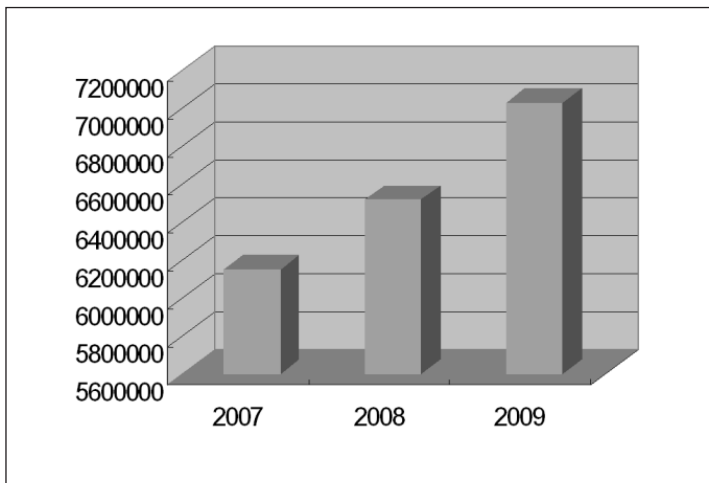
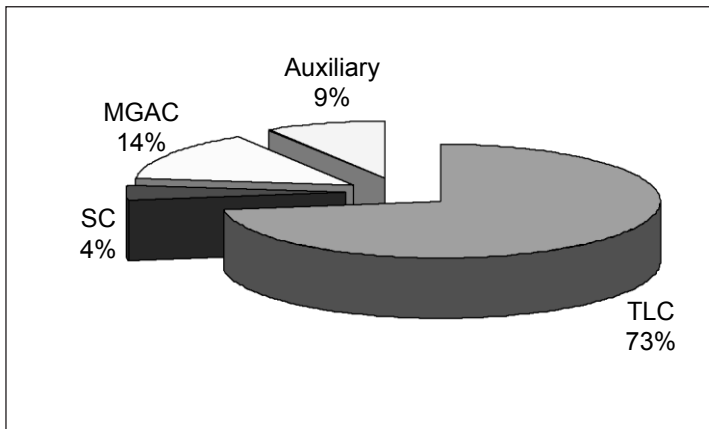


Figure 4 Percentage of Expenses of HEIs, 2009



The operating expenses of HEIs are shown in Table 4, which mainly include teaching and learning costs (TLCs), known as educational and general expenses. It is obvious that expenses have been growing for the past three years (\$6.15b in 2007, \$6.52b in 2008 and \$7.04b in 2009). The data also show that more than 70 per cent of the total expenses are on the public TLCs while less than 70 per cent are on the private. As we mentioned earlier, the majority of TLCs are the costs of personal expenses or equipment and library, etc. In other words, the government provides grant for most of the public institutes, but that is only enough to cover their personnel costs, and such is even far insufficient for the private institutes. If there are major projects, the school has to come up with funding somewhere else.

There are some regulations for the incomes of tuition and fees for every institute. For example, the institutes have to invest or facilitate students learning by using the sum of at least more than 5 per cent of the incomes of tuition and fees. As Table 3 shows, the calculation is based on the total expenses of the four groups of institutes and hence the percentages seem lower than the one we would expect. MGAC indicates the management and general affairs cost for each institutes. Normally, an estimated 15 per cent of the total expenses is put on that part of the schools' operation and management.

5. Some Important Implications

5.1. *Limitations of the Institutes*

As seen in the financial investigation results of this study, there exists a big gap between the public and the private. The different conditions of institutes in Taiwan from the perspectives of either traditional history or area of location may not have been included in the sample for analysis. These impacts from the diverse contexts of institutes would have influenced the results of the study. In particular, some of the public institutes would have attempted to transform themselves from civic-service bodies to more autonomous entities through the process of corporatization in Taiwan. Even though there are big gaps in resource-hunting ability or strategies among the public institutes, the private institutes in Taiwan, which are treated as legal persons, have been suffering from some inequities such as the tax-exemption system or tuition-adjustment policy. Therefore, their approaches of fundraising are facing constraints, hence jeopardizing their competitiveness.

The use of financial report data is an additional limitation of this study. The majority of the data used in this study were collected through MOE, DoA's document analysis. However, some of the data were self-reported annual financial information. Self-reported data may not be as accurate as data collected through alternate means. Therefore, some of the results may have

Table 4 Taiwanese HEIs' Expenses, 2007-2009

Unit: thousand USD (\$)

Year		2007				
Category	Total	TLC	Student C	MGAC	Auxiliary	
Public UoC (32)	2,493,645	1,963,742 78.75%	97,387 3.91%	294,710 11.82%	137,806 5.53%	
Private UoC (35)	1,482,033	897,291 60.55%	83,968 5.67%	278,710 18.81%	222,066 14.99%	
Public UToIT (22)	653,355	493,000 75.46%	20,645 3.16%	102,484 15.69%	37,226 5.70%	
Private UToIT (73)	1,523,065	1,082,161 71.06%	63,000 4.14%	260,807 17.12%	117,097 7.69%	
Total	6,152,098	4,436,194	265,000	936,711	514,195	
Year		2008				
Category	Total	TLC	Student C	MGAC	Auxiliary	
Public UoC (32)	2,614,516	2,079,742 79.55%	93,097 3.56%	292,678 11.20%	149,000 5.70%	
Private UoC (36)	1,587,033	984,065 62.01%	94,678 5.97%	268,065 16.89%	240,226 15.14%	
Public UToIT (22)	696,000	529,065 76.02%	22,871 3.29%	102,452 14.72%	41,613 5.98%	
Private UToIT (73)	1,624,065	1,136,355 69.97%	72,581 4.47%	286,516 17.64%	128,613 7.92%	
Total	6,521,614	4,729,227	283,227	949,711	559,452	
Year		2009				
Category	Total	TLC	Student C	MGAC	Auxiliary	
Public UoC (31)	2,785,516	2,227,226 79.96%	95,807 3.44%	294,968 10.59%	167,516 6.01%	
Private UoC (36)	1,766,291	1,097,936 62.16%	97,032 5.49%	298,936 16.93%	272,387 15.42%	
Public UToIT (22)	732,581	565,968 77.26%	25,742 3.51%	102,710 14.02%	38,161 5.21%	
Private UToIT (73)	1,749,645	1,221,742 69.83%	72,968 4.17%	311,904 17.83%	143,032 8.18%	
Total	7,034,033	5,112,872	291,549	1,008,518	621,096	

Notes: TLC – Teaching and Learning Cost.

MGAC – Management & General Affairs Cost.

been different if another method was used for that part of data collection. One more limitation is the lack of discussion to examine what they do, how they do it, and what impact their efforts have on the education of students through data analysis. Despite these limitations, the results of this study provided insight into the concerns of financial issues including incomes and expenses.

Finally, there is a limitation of the study related to data collection and analysis. When analyzed, some of the data produced inconclusive results, e.g., the background differences between the public and the private. Also, this finding did not provide an understanding of whether or not each individual institute has more efficiency or effectiveness. Findings with inconclusive evidence suggest that asking different or additional questions may have resulted in more conclusive results. If an alternate investigation would have returned different results, there may have been concerns of distinct budget items that were not revealed in this study.

5.2. Funding vs. Fundraising

Government funding in Taiwan has become more unpredictable and competitive. Fundraising issues and strategies play an important role within the individual institute's governance. In other words, an institute's ability in fundraising is the key factor for the institutes to trace their success in excellence. As Teng (2002) shows, fundraising after all is like a slow trickling stream. So long as a school can earn the respect and admiration of students, alumni and society, then one hundred streams will a great ocean make. Summarizing the experience of fundraising so far, besides the need for creativity in fundraising strategies, it is necessary to strengthen the consciousness regarding the importance of fundraising at universities. Leaders of Taiwan's higher education institutes still have not realized that they will have no choice but to raise funds for the future. For example, many schools have no one specifically responsible for fundraising and are passive about it; they lack any shop window, so that even people who want to donate money do not know where to send it.

Challenges exist in the era of fundraising and since the Ministry of Education's resources have diminished and been diluted, as Chen (2003) shows, many people say that one of the tasks of current university presidents is to raise outside funds. In term of the fundraising, which includes six main items as RMS shows, Taiwan schools will have to recognize that there is a change in the role played by the president. Lin (2002) noted that one of the main functions of university presidents in the US is fundraising, whereas in Taiwan in the past, people looked mainly at the personal character or academic ability of university presidents. Also, the main reason is that citizens in Taiwan are still not very familiar or comfortable with the idea of donating money to schools. Thus, while fundraising is a specialized field in itself, universities

should show better results simply by putting more efforts into getting the word out. However, it has been more than ten years that institutes have been trying to self-fund or to raise money from donations. Consequently, briefly speaking, the revolutionary task of institute fundraising has not yet been a success.

As showed previously, higher education in Taiwan has been facing the challenges of globalized competitiveness and commercialization. Even though suffering from the two-peak curve influence, they have to be very “self-sufficient” in their funding system if they would like to compete as one of the top-tier institutes in the higher education area.

The public institutes have to put in more efforts with regards to the ability of fundraising. This also means that the ability in terms of the institute’s fundraising has been the longstanding challenge for institute leaders and it could be one of the most demanding skills school leaders need to know in the future. In other words, financial management with a strong ability in self-funding is the main imperative solution to keep up with not only marketing commercialization but also international competitiveness.

5.3. Standard vs. Accountability

Both autonomy and accountability of institutes have also been emphasized by the leaders and staff within the institutes, in particular the public institutes. Meanwhile, the issue of institute autonomy has always been to demand their accountability on financial management and institutional development. From the results of this study, government funding is only a part of the institute’s incomes and its growth is always smooth but unexpected. It is important in the future that standards of accountability should be set by individual institutes. In an era where government funding is decreasing, demands for accountability in higher education are increasing (Alexander, 2000; Cohen, 1998; Wellman, 2001). Complying with standards of financial practice is one way of meeting calls for accountability. Given the increased calls for accountability, it is clear that standards of financial practice are needed for the government and taxpayers. Strictly speaking, the results of this study have not been impressive. However, they provide data about the characteristics of financial items either funding or fundraising that can be used as a basis for developing standards of financial practice for those who are concerned with higher education development.

6. Conclusion

In conclusion, there are some points this study emphasizes for the current development of Taiwan’s higher education. First of all, the institutes’ limitation between the public and the private is argued. The public HEIs are always

more funded by the Taiwan government than the private in the past decades. However, fairness in resource allocation is getting a critical concern amongst stakeholders. For example, how can they compete based on the fair basement of funding? Can each sector calculate the different costs per student in terms of providing the policymakers more accurate data for the tuition and fees policy? Is it possible that the funding mechanism has become more transparent and creditable than before? How does the funding formula reflect social justice and take into account the interests of the non-profit organizations?

Also, the ability in fundraising outcomes was a concern in the previous sections of our discussion. However, the strategies of university governance are always less focused on, hence that regards the funding income is limited from the numerous results. How do we motivate the chief executive officers, normally known as university presidents, to fundraise more resource in terms of accountability? Is it necessary to install the self-financial management system and enforce it among the staff following the internal auditing system? At least it includes budgeting system, internal control system and auditable accountability system with the coming stage of less government control. Then, those chief executive officers may be willing to hunt for more resources for higher education institutes.

Furthermore, it is a complication of institute governance in facing globalized competitiveness and commercialization. University autonomy is followed by the accountability of governance. However, what expertise or ability do the higher education leaders need in terms of financial management? How can we make sure that resource distribution and allocation are based on more appropriate mechanisms? The author raises these issues in order to remind the policymakers and taxpayers to look ahead as regards entrepreneurship for higher education officers.

Abbreviations

- 5Y50B: 5 Years 50 Billion Program
- ASEAN: Association of Southeast Asian Nations
- DoA: Department of Accounting
- ECFA: Economic Cooperation Framework Agenda
- EE: Extension Education
- ERSF: Enforcement Rules of School Funds for National Universities/
Colleges
- ETL: Excellence in Teaching & Learning
- FO: Financial Operation
- FPM: Facility & Place Management
- HEIs: Higher Education Institutes
- JPBAI: Joint Projects between Academia and Industry

KTP:	Knowledge Transfer Program
MGAC:	Management & General Administration Cost
MOE:	Ministry of Education
NCKU:	National Cheng Kung University
NCTU:	National Chiao Tung University
NTU:	National Taiwan University
NTHU:	National Tsing Hua University
NTUST:	National Taiwan University of Science and Technology
R&D:	Research and Development
RGUE:	Regulations Governing University Evaluation
RMS:	Regulations regarding the Management and Supervision of School Funds at National Universities/Colleges
SC:	Student Cost
T&F:	Tuition & Fees
TLC:	Teaching & Learning Cost
UoCs:	Universities or Colleges
UToITs:	Universities of Technology or Institutes of Technology
WTO:	World Trade Organization

Note

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