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Surian sa mga Pag-aaral Pangkaunlaran ng Pilipinas

Rationalizing National Government Subsidies for State Universities and Colleges

Rosario G. Manasan

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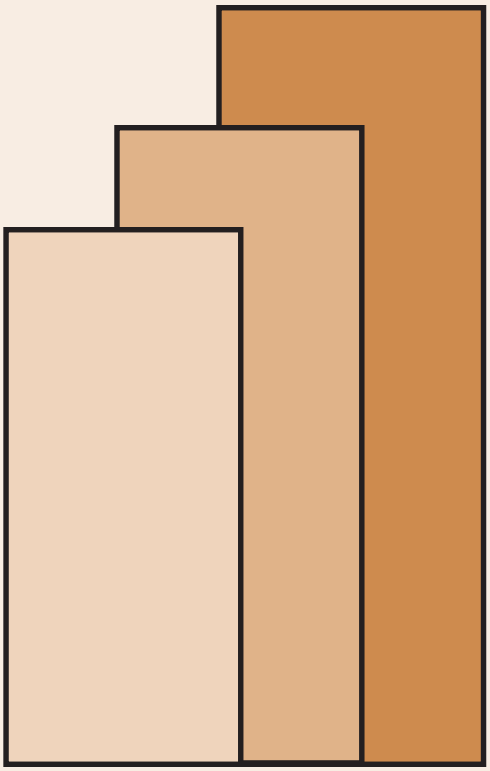

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Rationalizing National Government Subsidies for State Universities and Colleges

Rosario G. Manasan

Abstract

This study aims to review and assess (i) the sources and uses of funds of SUCs, (ii) the impact of the application normative funding formula (NFF) for SUCs and (iii) the utilization of the Higher Education Development Fund (HEDF) with the end in view of rationalizing the allocation of national government funding of SUCs by improving the effectiveness in the use of public funds for higher education and by increasing the efficiency of SUCs spending.

The study found that while the application of the normative funding formula has clearly resulted in the SUCs' greater reliance on internally generated income, the implementation of the NFF has not exhibited the desired effect on (i) shifting SUCs enrollment toward priority courses, and (ii) improving the quality of instruction.

On the other hand, the study'sinquiry into the major cost drivers of SUCs provision of higher education indicates that there are economies of scale in the SUC sector that can be harnessed. This finding supports proposals for the amalgamation of SUCs. Also, the multiplicity of program offerings amongst SUCs is found to push SUCs' per student cost upwards. The number or the proportion of faculty members who are MS/ PhD degree holders are likewise found to have a significant influence on per student costs. In contrast, the analysis also reveals that the number of satellite campuses and the size of SUCs enrollment in MS/ PhD programs are not good determinants of per student costs.

The study also looked into the determinants of the quality of education provided by SUCs (as proxied by the passing rate in licensure examinations). The analysis reveals that the number of faculty with MS/ PhD degrees and the number of Centers of Developments (CODs) both have positive and statistically significant relationship with the passing rate in licensure examinations. Surprisingly, per student cost is not found to have statistically significant influence on the licensure examinations passing rate. This result suggests that there is some scope for reducing per student cost without necessarily affecting the quality of education provided by SUCs.

In order to better understand what drives the internally generated income of SUCs, the study regressed receipts from tuition and other income from students against plausible explanatory variables like poverty incidence (as a proxy for ability to pay of households in SUCs' catchment area), size of SUCs, and enrollment size. The analysis suggests that per student SUCs receipts from school fees is not related with ability to pay of households. Together with the low overall level of schools fees, this finding tends to indicate some scope for SUCs to increase tuition and other school fees.On the other hand, the analysis indicates that that size of SUCs appear to have a statistically significant impact on per student income from tuition. Specifically, the coefficients of the dummy variable for large-sized and medium-sized SUCs are positive and statistically significant, thus providing further support for the amalgamation of SUCs.

Contrary to initial expectations, the study found that per student total SUCs income from internally generated projects does not exhibit a statistically significant relationship with the size of their landholdings. The finding suggests that ownership of assets is not a sufficient condition for the SUCs' success in mobilizing income from IGPs takes more than ownership of assets. It also indicates the need to build capacity in business planning and management in the SUCs leadership.On the other hand, per student total SUCs income from IGPs were found to have a negative and statistically significant relationship with poverty incidence, thus suggesting that SUCs income from IGPs is largely dependent on the domestic demand or size of the domestic market.

Keywords: *state universities and colleges (SUCs), income generating projects(IGPs),normative funding formula (NFF), cost efficiency, economies of scale, quality of instruction, scholarship*

RATIONALIZING NATIONAL GOVERNMENT SUBSIDIES FOR STATE UNIVERSITIES AND COLLEGES

Rosario G. Manasan

Philippine Institute for Development Studies
Department of Budget and Management

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Rationalizing National Government Subsidies for State Universities and Colleges

Rosario G. Manasan

Executive Summary

The main objectives of this study are to review and evaluate (i) the sources and uses of funds of state universities and colleges (SUCs), (ii) the normative funding formula (NFF) for SUCs and (iii) the utilization of the Higher Education Development Fund (HEDF). Additionally, the study attempts to formulate strategies and guidelines aimed at rationalizing the allocation of national government funding of SUCs by improving the effectiveness in the use of public funds for higher education and by increasing the efficiency of SUCs spending.

Impact of Normative Funding Formula. While the application of the normative funding formula has clearly resulted in the SUCs' greater reliance on internally generated income, the impact of the NFF on (i) shifting SUCs enrollment toward priority courses, and (ii) improving the quality of instruction has been very limited to date. This may be explained by a number of factors: (i) the application of the NFF is gradual, (ii) the CHED decided to put a cap on the year-on-year changes in the MOOE allocation of individual SUCs that resulted from straight application of the NFF in order to soften the NFF-induced adjustments that SUCs have to deal in any one year, and (iii) the personal services component of NG subsidy to SUCs has yet to be subjected to NFF.

The analysis shows that the proportion of high priority disciplines in total SUCs enrollment/ graduates in the aggregate dropped from 2003 to 2010. The same is true with the share of medium priority disciplines in total SUCs enrollment/ graduates. In contrast, the share of low priority disciplines to total SUCs enrollment/ graduates increased.

In this study, the passing rate in the Licensure Examinations for Teachers (LET) is used a s proxy for quality of instruction in SUCs. The data shows that the advantage of the SUCs over other HEIs in the elementary LET appears to have been eroded over time as indicated by the declining SUCs passing rate-to-national passing rate ratio. On the other hand, SUCs have persistently underperformed other HEIs in 2004-2009 in the secondary LET. Also, although the movement in the passing rate in the LET for both the elementary and secondary levels of all SUCs combined is erratic in 2004-2009, the decline in the passing rate for both examinations in 2009 is quite significant: from 36% in 2008 to 29% in 2009 for elementary LET and from 32% to 27% in secondary LET.

In contrast, the application of the NFF and the policy allowing SUCs to retain and use their income has clearly resulted in the SUCs' greater reliance on internally generated income. While SUCs of all sizes increasingly became less dependent on NG subsidies after the implementation of the NFF, the smaller-sized SUCs (i.e., SUCs with relatively smaller enrollment) have shown a greater propensity to increase internally generated income on a per student basis as indicated by the growth in their internally generated income between 2003 and 2009. Nonetheless, large-sized SUCs continue to be less dependent on the support of the national government than the smaller-sized SUCs.

Cost efficiency in SUCs. An analysis of the major cost drivers of SUCs provision of higher education indicates that there are economies of scale in the SUC sector that can be harnessed. This finding supports proposals for the amalgamation of SUCs. Also, the multiplicity of program offerings amongst SUCs is found to push SUCs' per student cost upwards. The number or the proportion of faculty members who are MS/ PhD degree holders are likewise found to have a significant influence on per student costs. In contrast, the analysis also reveals that the number of satellite campuses and the size of SUCs enrollment in MS/ PhD programs are not good determinants of per student costs.

Correlates of quality of instruction in SUCs. An analysis of the determinants of the quality of education provided by SUCs (as proxied by the passing rate in licensure examinations) reveals that the number of faculty with MS/ PhD degrees and the number of Centers of Developments (CODs) both have positive and statistically significant relationship with the LET passing rate. Surprisingly, per student cost is not found to have statistically significant influence on the licensure examinations passing rate. This result suggests that there is some scope for reducing per student cost without necessarily affecting the quality of education provided by SUCs.

Understanding the drivers of SUCs' internally generated income. In order to better understand what drives SUCs' receipts from schools fees (i.e., tuition and other income from students), the study regressed receipts from tuition and other income from students against plausible explanatory variables like poverty incidence (as a proxy for ability to pay of households in SUCs' catchment area), size of SUCs, and enrollment size. The analysis suggests that per student SUCs receipts from school fees is not related with ability to pay of households. Together with the low overall level of schools fees, this finding tends to indicate some scope for SUCs to increase tuition and other school fees.

On the other hand, the analysis indicates that that size of SUCs appear to have a statistically significant impact on per student income from tuition. Specifically, the coefficients of the dummy variable for large-sized and medium-sized SUCs are positive and statistically significant.

The explanatory variables for per student SUCs income from income generating projects (IGPs) that were considered for this study include: poverty incidence (as a proxy of ability to pay of the households in the geographical catchment area of the SUC), the size of the SUC landholdings (as a measure of income creating asset base that is available to many SUCs) and size of SUC in terms of enrollment. Contrary to initial expectations, per student total SUCs income from IGPs (as well as both of its components) does not exhibit a statistically significant relationship with the size of their landholdings. The finding suggests that ownership of assets is not a sufficient condition for the SUCs' success in mobilizing income from IGPs takes more than ownership of assets. It also indicates the need to build capacity in business planning and management in the SUCs leadership.

On the other hand, per student total SUCs income from IGPs and per student SUCs income from other sources (but not per student SUCs income accruing to the revolving fund) were found to have a negative and statistically significant relationship with poverty incidence. These results

indicate that SUCs income from IGPs is largely dependent on the domestic demand or size of the domestic market (as proxied in a negative fashion by poverty incidence).

Utilization of the Higher Education Development Fund (HEDF). HEDF spending rose from an average of PhP 220 million a year in 1995-2001 to PhP 430 million per year in 2002-2005 and PhP 742 million in 2006-2010. Various student assistance and scholarship programs capture the biggest share in the HEDF. In contrast, allocation to Centers of Excellence and Centers of Development (COEs/ CODs) was the second most important spending item in the HEDF in 1995-2005. However, spending on COEs/ CODs practically dried up to nil in 2006-2010. This is unfortunate considering that the COE/ COD program is envisioned to support identified COEs/ CODs which are supposed to serve as models of excellence and resource centers for other HEIs.

On the other hand, spending on rationalization of programs, standards and guidelines accounted for 13% of total HEDF spending in 2006-2010. The share of this spending item rose from 5% in 1995-2001 to 12% in 2002-2005. In comparison, the share of research in the HEDF is fairly stable and low – 4% in 1995-2001, 5% in 2002-2005 and 8% in 2006-2010.

Because of time and resource constraints, this study is not able to analyze in greater detail the effectiveness of HEDF spending on various activities. This is an area that should be further studied in the future. However, the discussion above regarding the determinants of the passing rate in licensure examinations suggests that the use of the HEDF for faculty development is money well spent.

Low utilization rate of HEDF

The utilization rate of HEDF is lackluster. CHED officials aver that said problem arise because many grantees/ awardees (e.g., COEs and CODs) are not able to liquidate the financial support that they receive from the HEDF in a timely manner. In the future, efforts to streamline the actual release of financial assistance to grantees and awardees should be undertaken, perhaps in the context of strengthening the processes leading to the selection and awarding of grants so as to possibly do away with the liquidation process. Alternatively, the financial assistance may be viewed as grants that are awarded on the basis of well-defined criteria or conditions that they have already complied with prior to the award rather than conditional on the awardees carrying out specific activities after the award.

Public-private subdivision

Some sectors have raised the concern that HEDF spending is skewed in favor of private HEIs. However, closer scrutiny of the data reveals that HEDF spending (outside of the portion spent on scholarship and student assistance) is almost evenly divided between the public and private sectors, with the former have a slight edge.

HEDF support for private HEIs is not a bad idea *per se*. The downward trend in the HEI enrollment in private HEIs that is evident in 2000-2009 should be a cause of concern. It highlights the need for national government support to private HEIs. However, the effectiveness of current HEDF activities in providing the support needed by private HEIs is another matter.

Scholarships and student financial assistance

The Student Financial Assistance Programs (STUFAPs) of CHED are highly fragmented. The scholarship program and the grants-in-aid program consist of numerous programs, many of which have low coverage individually. However, there is current initiative to streamline these programs.

The grants-in-aid programs are badly targeted. First, the household income cut-off for the STUFAP grants-in-aid program at PhP 300,000 per year is high, roughly 3.5 times as high as the poverty income threshold for 2009. Although means tested, the GIA programs make use of the income tax returns of the parents/ guardians of the grantees. The income tax return may not be the best means of verifying the income status of beneficiaries, given the degree of tax compliance of non-wage earners. Prospectively, the STUFAP should consider making use of proxy means test in targeting its beneficiaries.

On the other hand, the benefit level provided to GIA grantees at PhP 7,500 per year is just about equal to the average school fee (tuition plus miscellaneous fee) in SUCs. Ideally, the benefit should also cover the cost of living.

Finally, there might a need to revisit initiatives to fund the STUFAPs from the GAA instead of the HEDF, especially the reliance on PDAF of legislators and Congressional initiative. This practice not only tends to make funding unpredictable but also tends to make the selection of beneficiaries vulnerable to political intervention.

Recommendations. Given all these issues on NG subsidies for SUCs, the following recommendations were formulated: (i) expanding the application of the normative funding formula to include not just the allocation for MOOE but also the allocation for personal services of SUCs, (ii) updating parameters used in the normative funding formula and exploring the possibility of being more selective in the CHED's choice of priority programs, (iii) improving the mechanisms to effect the public financing of research in universities which is an important public good produced in higher education institution, (iv) encouraging SUCs to charge socialized tuition fees following the example of the University of the Philippines (UP) to further improve their self reliance, (v) creating a program to assist SUCs in the management of their IGPs so as limit their dependence on NG subsidies, (vi) reducing the number of programs offered by SUCs since the number of programs is a major driver of per student SUC cost, (vii) amalgamation of SUCs in the context of regional university systems since the number of satellite campuses is not found to be an important determinant of per student SUC cost, (viii) expanding the CHED faculty development program since the PRC passing rate in SUCs is correlated with the number of MS/ PhD faculty, (ix) expanding the STUFAPs to improve equity and increase support to private HEIs, (x) improving the targeting system used in selecting beneficiaries of the STUFAPs, (xi) revisiting the move to rely more on the GAA rather than the HEDF in funding the STUFAPs in order to avoid uncertainties in funding, (xii) increasing the benefit level of the STUFAPs to include cost of living to help avoid discrimination against very poor students, (xiii) shifting of NG funding for HEIs from subsidies to SUCs toward direct subsidies to students to improve the

quality of HEIs, and lastly, (xiv) harmonizing the program offerings of public and private HEIs to level the playing field and minimize the migration of students to public HEIs.

RATIONALIZING NATIONAL GOVERNMENT SUBSIDIES FOR STATE UNIVERSITIES AND COLLEGES

Rosario G. Manasan*

1. INTRODUCTION

This study aims to review and assess the sources and uses of funds of state universities and colleges (SUCs), the normative funding formula for SUCs and the utilization of the Higher Education Development Fund (HEDF). The study also attempts to formulate strategies and guidelines aimed at rationalizing the allocation of national government funding of SUCs by improving the effectiveness in the use of public funds for higher education and by increasing the efficiency of SUCs spending. The importance of this study is highlighted by need to improve the efficiency and effectiveness of government spending on SUCs given the prevailing issues and problems in the higher education subsector:

- Duplication of programs - SUCs continue to offer programs that are in direct competition with the private sector, thereby tending to result in the crowding out of private higher education institutions (HEIs).
- Inefficiencies in the allocation of public spending on SUCs
    - Large share of personal services in SUCs' budget
    - Low cost recovery in SUCs despite the fact that the distribution of students in SUCs tend to be skewed in favor of better-off segment of population
    - Large scope for generating income from land grants and other assets
    - Wide variation in per student costs among SUCs
- Low quality of graduates as indicated by low pass rates in professional licensure examinations.

The study proper may be subdivided into four parts: (i) an analysis of sources and uses of funds of individual SUCs, (ii) review of normative financing formula, (iii) analysis of operations and outputs of the Higher Education Development Fund, (iv) preparation of financial projections for 2012-2016 of budgetary requirements of SUCs, and (v) formulation of strategies to encourage the mergers and specialization of SUCs.

However, before we present the main findings of this study, we first provide an overview the higher education sector in **Section 2** and a discussion of government spending in the sector in **Section 3**.

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*Senior Research Fellow, Philippine Institute for Development Studies. The research assistance of Janet Cuenca, Laarni Revilla and Lucita Melendez is gratefully acknowledged.

2. OVERVIEW OF THE STATE OF HIGHER EDUCATION

2.1. Enrollment

Total enrollment in higher education grew by 1.6% yearly on the average, from 2.4 million in 1999 to 2.8 million in 2009 (**Table 1**). This rate of growth is lower than the growth rate of the population aged 16-21. Thus, the gross participation rate showed a slight downtrend from 25.7% in 1999 to 23.8% in 2009.

Table 1. Higher Education Enrollment, by Sector and Type of Institution: 1999-2009

Number of students	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
Philippines	**2,373,486**	**2,430,842**	**2,466,056**	**2,426,976**	**2,420,856**	**2,402,315**	**2,483,274**	**2,604,449**	**2,654,294**	**2,625,385**	**2,770,965**
Public	**717,445**	**771,162**	**808,321**	**815,595**	**829,181**	**819,251**	**849,669**	**881,656**	**915,191**	**982,701**	**1,083,194**
SUCs	617,050	700,199	733,827	734,224	742,108	744,751	754,562	772,079	792,143	853,280	942,077
LUCs	55,018	61,954	67,749	74,382	80,037	68,731	89,315	103,812	117,504	123,379	134,871
CSIs	44,557	4,043	360	554	561	107	130	2,132	2,132	2,132	2,132
OGS	820	4,966	6,385	6,435	6,475	5,662	5,662	3,633	3,412	3,910	4,114
Private	**1,656,041**	**1,659,680**	**1,657,735**	**1,611,381**	**1,591,675**	**1,583,064**	**1,633,605**	**1,722,793**	**1,739,103**	**1,642,684**	**1,687,771**
Sectarian	517,206	527,753	500,753	505,068	492,438	477,438	372,710	401,614	391,534	443,002	462,267
Non-Sectarian	1,138,835	1,131,927	1,156,982	1,106,313	1,099,237	1,105,626	1,260,895	1,321,179	1,347,569	1,199,682	1,225,504
Memo item:											
Gross participation rate	25.7	25.7	25.7	24.9	24.4	23.9	24.3	25.1	25.2	24.5	23.8
Percent distribution (%)	**1999-2000**	**2000-2001**	**2001-2002**	**2002-2003**	**2003-2004**	**2004-2005**	**2005-2006**	**2006-2007**	**2007-2008**	**2008-2009**	**2009-2010**
Philippines	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
Public	**30.2**	**31.7**	**32.8**	**33.6**	**34.3**	**34.1**	**34.2**	**33.9**	**34.5**	**37.4**	**39.1**
SUCs	26.0	28.8	29.8	30.3	30.7	31.0	30.4	29.6	29.8	32.5	34.0
LUCs	2.3	2.5	2.7	3.1	3.3	2.9	3.6	4.0	4.4	4.7	4.9
CSIs	1.9	0.2	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.1	0.1
OGS*	0.0	0.2	0.3	0.3	0.3	0.2	0.2	0.1	0.1	0.1	0.1
Private	**69.8**	**68.3**	**67.2**	**66.4**	**65.7**	**65.9**	**65.8**	**66.1**	**65.5**	**62.6**	**60.9**
Sectarian	21.8	21.7	20.3	20.8	20.3	19.9	15.0	15.4	14.8	16.9	16.7
Non-Sectarian	48.0	46.6	46.9	45.6	45.4	46.0	50.8	50.7	50.8	45.7	44.2

SUCs - state universities and college;, LUCs - LGU universities and colleges; CSIs- CHED supervised institutions, OGS - other government schools

Source: CHED MIS

Public-private subdivision. The private sector continues to account for the majority of total higher education enrollment during the period. However, the share of private institutions in total higher education enrollment has been eroded over time, contracting from 70% in 1999 to 61% in 2009. This came about as the growth in enrollment in public HEIs (4.2% yearly on the average during the period) outpaced that of private HEIs (0.2% per annum on the average). In toto, public HEIs appear to have crowded out private HEIs in 1999-2009. This trend, if it continues, will put even pressure on government funding of public HEIs. Moreover, it stands in sharp contrast to a global trend towards greater private sector role in the higher education sector. In many countries, enrolment in private HEIs has been increasing more rapidly relative to enrolment in public HEIs (ADB 2011).

The relative decline in the number of students enrolled in private HEIs during the period may be attributed to the rapid increase in the tuition fees charged by private HEIs following the deregulation of tuition fees starting in 1992 while school fees in public HEIs have remained at fairly low levels. Many private HEI officials are also of the opinion that the overall policy environment in the Philippines does not provide a level playing field for private HEIs and SUCs (ADB 2011). They say that while the regulatory framework for private HEIs is stringent (in terms of laying down very detailed policies, guidelines and standards for degree programs), the autonomy of SUCs is assured by their individual charters while the autonomy of LUCs is protected by the Local Government Code. Thus, SUCs and LUCs may open curricula and programs, and award degrees without the prior consent of the CHED (ABD 2011). Thus, private HEI officials propose that the competition between the course offerings of SUCs/LUCs and private HEIs should be minimized. That is, SUCs and LUCs should focus on programs and disciplines that private HEIs neither have the capacity nor the inclination to pursue.

Paradoxically, while the share of private HEIs in total enrollment declined during the period, their share in total number of institutions increased from 84% in 1999 to 88% in 2009 (**Table 2**). In particular, the number of private HEIs rose from 1,172 in 1999 to 1,573 in 2009 following the lifting of the embargo on the establishment of new private HEIs in 1992. In contrast, the moratorium in the creation of SUCs and the programmed shedding of CHED supervised institutions (CSIs) appeared to have been effective in reducing the number of public HEIs from 232 in 1999 to 218 in 2009.

Necessarily, this development has had some impact on the scale of operations of public and private HEIs. Thus, the average school size (i.e., number of students per institution) in the public sector increased from 3,092 in 1999 to 4,969 in 2009 while the average school size in the private sector declined from 1,413 to 1,073.

Public HEIs. Enrollment in SUCs increased by 4.3% yearly on the average from 617,050 in 1999 to 942,077 in 2009 (**Table 1**). State universities and colleges account for close to 90% of total enrollment in public HEIs in 1999-2009. However, the share of SUCs in total enrollment in public HEI contracted somewhat from 91% in 2000 to 87% in 2009 (**Figure 1**). This came about following the creation of many local universities and colleges (LUCs) by local government units (LGUs) during the period. To wit, the number of LUCs surged from 37 in 1999 to 93 in 2009 (**Table 2**). Concomitant with this, the growth in LUCs enrollment was dramatic as well at 9.4% yearly on the average during the period.

While the number of LUCs grew at a phenomenal pace, the number of SUCs was kept under control with the moratorium in the creation of SUCs. The impact of the relative growth in the number of institutions on the scale of operations of public HEIS predominated that of the relative growth in their enrollment. Thus, the average school size of SUCs improved from 5,768 in 1999 to 8,463 in 2009 while that of LUCs declined almost imperceptibly from 1,487 to 1,450.

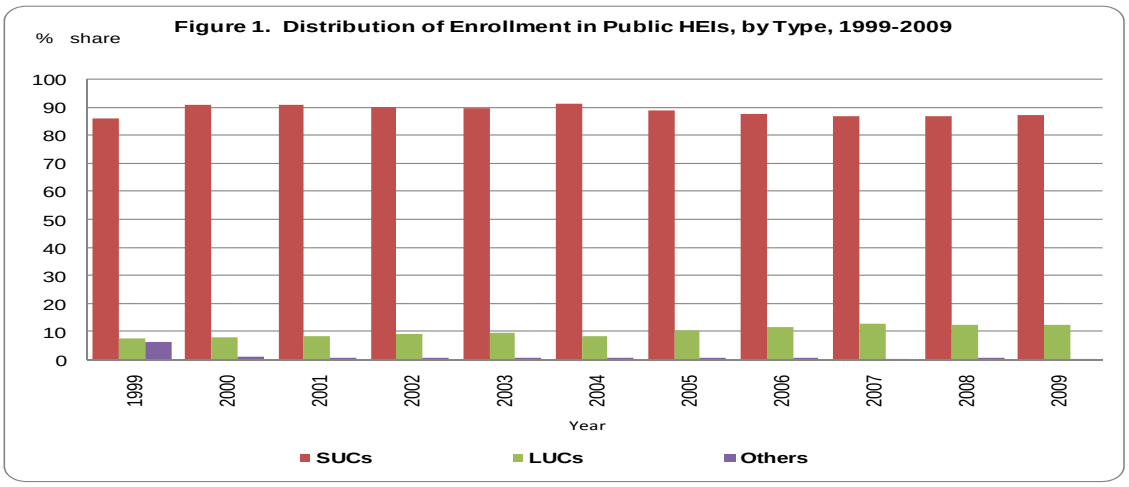


Table 2. Distribution of Higher Education Institutions, by Sector and Type of Institution: 1999-2009

Number of HEIs	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
PHILIPPINES	**1,404**	**1,380**	**1,428**	**1,489**	**1,540**	**1,619**	**1,683**	**1,710**	**1,701**	**1,741**	**1,791**
PUBLIC	**232**	**166**	**170**	**173**	**175**	**176**	**191**	**196**	**201**	**205**	**218**
State Universities/Colleges (SUCs)	107	107	111	111	111	111	111	110	110	110	109
Local Universities/Colleges (LUCs)	37	40	42	44	46	50	65	70	75	79	93
Others (include OGS, CSI, Special HEI)	88	19	17	18	18	15	15	16	16	16	16
PRIVATE	**1,172**	**1,214**	**1,258**	**1,316**	**1,365**	**1,443**	**1,492**	**1,514**	**1,500**	**1,536**	**1,573**
Non-Sectarian	866	902	938	991	1,034	1,103	1,134	1,215	1,200	1,234	1,251
Sectarian	306	312	320	325	331	340	358	299	300	302	322

Percent Distribution (%)	1999-2000	2000-2001	2001-2002	2002-2003	2003-2004	2004-2005	2005-2006	2006-2007	2007-2008	2008-2009	2009-2010
PHILIPPINES	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**	**100.0**
PUBLIC	**16.5**	**12.0**	**11.9**	**11.6**	**11.4**	**10.9**	**11.3**	**11.5**	**11.8**	**11.8**	**12.2**
State Universities/Colleges (SUCs)	7.6	7.8	7.8	7.5	7.2	6.9	6.6	6.4	6.5	6.3	6.1
Local Universities/Colleges (LUCs)	2.6	2.9	2.9	3.0	3.0	3.1	3.9	4.1	4.4	4.5	5.2
Others (include OGS, CSI, Special HEI)	6.3	1.4	1.2	1.2	1.2	0.9	0.9	0.9	0.9	0.9	0.9
PRIVATE	**83.5**	**88.0**	**88.1**	**88.4**	**88.6**	**89.1**	**88.7**	**88.5**	**88.2**	**88.2**	**87.8**
Non-Sectarian	61.7	65.4	65.7	66.6	67.1	68.1	67.4	71.1	70.5	70.9	69.8
Sectarian	21.8	22.6	22.4	21.8	21.5	21.0	21.3	17.5	17.6	17.3	18.0

Source: CHED MIS

2.2. Enrollment/ Graduates by Discipline

Sometime in 2004, the national government identified the various disciplines as low, medium or high priority in terms of their relevance in promoting national development objectives. Under this scheme, business administration and related disciplines, law and jurisprudence and medical and allied sciences are classified as low priority disciplines while natural sciences, mathematics, engineering, agriculture, fisheries and forestry IT-related disciplines are categorized as high priority disciplines.

In toto, the share of the high priority disciplines in total HEI enrollment increased by 3 percentage points between 2000 and 2009. In contrast, share of the medium priority courses contracted by 12 percentage points while that of the low priority courses in total HEI enrollment expanded by 10 percentage points.

Business administration and related disciplines continue to be the most popular course in terms of both enrollment and graduates in 2000-2009. While business administration and related disciplines lost some ground as their share in total HEI enrollment went down from 27% in 2000 to 21% in 2005, they quickly recovered thereafter such that by 2009 they again accounted for 26% of total HEI enrollment (**Table 3**). However, changes in the distribution of enrollment and graduates across disciplines are also evident.

On the other hand, the share of medical and allied sciences (courses that have been given low priority under the normative financing formula) in total HEI enrollment posted the biggest expansion during the period, from 6% in 2000 to 23% in 2006 before contracting to 16% in 2009 (**Table 3**). On a positive note, the share of IT-related disciplines and engineering (2 of the 5 high priority courses that have been previously identified by government) increased by 3 and 1 percentage points, respectively during the period.

In contrast, education and teacher training (a medium priority discipline) exhibited the biggest loss in enrollment share, from 19% in 2000 to 13% in 2009. Agriculture, forestry and fisheries, natural sciences and mathematics (all high priority disciplines) likewise contracted in terms of enrollment share.

Meanwhile, business administration and related disciplines lost its number one ranking in terms of share in total HEI graduates to medical and allied sciences between 1999 and 2008 (**Table 4**). On the other hand, education and teacher training was the second biggest loser in graduate share during the period, next to business administration and related disciplines. In contrast, engineering was the second biggest gainer in graduate share, next to medical and allied sciences.

In sum, the share of the high priority courses in total number of HEI graduates increased by 1 percentage point between 1999 and 2008. In contrast, share of the medium priority courses contracted by 13 percentage points while that of the low priority courses in total HEI enrollment expanded by 12 percentage points.

2.3. Geographic Concentration and Access

Total HEI enrollment tends to be relatively concentrated in NCR, CAR, Region VI and Region VII. The share of these regions in total HEI enrollment is larger than these regions' share in the total population aged 16-21. For instance, the share of NCR in total HEI enrollment is 25% in 2009, compared to the region's 14% share in total aged 16-21 population (**Table 5**).

In contrast, the share of Region IV-A, Region III and ARMM in total HEI enrollment is smaller than these regions' share in total population aged 16-21. In particular, the share of ARMM in total HEI enrollment in 2009 is less than 2% compared to the said region's 5% share in the total population aged 16-21.

Table 3. Distribution of Enrollment in Public and Private HEIs, by Discipline, 2000-2009 (in %)

Discipline Group	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09	2009/10
GENERAL	2.8	1.8	1.5	1.6	1.4	0.9	0.8	1.3	0.5	0.5
EDUCATION SCIENCE AND TEACHER TRAINING	19.3	17.8	17.2	16.7	15.3	14.6	12.7	14.0	12.4	12.7
FINE AND APPLIED ARTS	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5	0.6
HUMANITIES	0.9	1.2	1.2	1.2	1.1	1.0	1.0	1.1	1.1	1.0
RELIGION AND THEOLOGY	0.4	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3	0.3
SOCIAL AND BEHAVIORAL SCIENCES	2.6	3.2	3.0	3.1	2.8	2.6	2.6	2.8	2.7	2.8
BUSINESS ADMINISTRATION AND RELATED DISCIPLINES a/	26.6	26.0	25.4	23.0	21.5	21.4	22.0	23.1	24.7	26.1
LAW AND JURISPRUDENCE a/	0.8	0.8	0.8	0.8	0.8	0.8	0.7	0.7	0.7	0.7
NATURAL SCIENCE b/	1.2	1.2	1.2	1.1	1.0	0.9	0.9	0.9	0.9	0.9
MATHEMATICS b/	0.6	0.5	0.6	0.5	0.5	0.4	0.6	0.5	0.6	0.4
MEDICAL AND ALLIED SCIENCES a/	5.8	6.7	9.1	13.2	18.6	22.1	23.4	20.6	19.7	15.9
TRADE, CRAFT AND INDUSTRIAL	0.0	0.2	0.1	0.1	0.6	0.0	0.4	0.2	0.2	0.1
ENGINEERING b/	11.0	11.5	11.2	11.3	10.3	12.5	12.1	11.7	12.2	12.4
ARCHITECTURAL AND TOWN-PLANNING	1.0	1.0	1.1	0.9	1.0	0.8	0.7	0.7	0.7	0.7
AGRICULTURAL, FORESTRY, AND FISHERIES b/	3.6	3.8	3.5	3.2	2.9	2.6	2.3	2.2	2.4	2.2
HOME ECONOMICS	0.4	0.3	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
SERVICE TRADES	0.6	0.6	0.7	0.7	0.6	0.5	0.8	0.9	1.0	1.3
MASS COMMUNICATION AND DOCUMENTATION	0.9	1.2	1.4	1.1	1.1	1.0	1.2	1.1	1.1	1.1
OTHER DISCIPLINES	7.6	7.5	7.1	7.0	6.9	4.2	5.2	4.0	4.1	4.2
IT-RELATED DISCIPLINES b/	9.3	10.1	10.6	10.3	9.5	9.8	9.7	10.6	11.5	12.6
MARITIME	4.1	3.8	3.5	3.3	3.0	3.0	2.1	2.6	2.5	3.2
HIGH PRIORITY DISCIPLINES	25.7	27.2	27.0	26.3	24.3	26.2	25.5	25.9	27.5	28.5
MEDIUM PRIORITY DISCIPLINES	41.0	39.4	37.7	36.6	34.9	29.6	28.5	29.7	27.3	28.8
LOW-PRIORITY DISCIPLINES	33.2	33.4	35.3	37.0	40.9	44.3	46.0	44.4	45.2	42.8
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a/ low-priority disciplines

b/ high-priority disciplines

Source of basic data: CHED MIS

It is notable, however, that the distribution of total HEI enrollment across regions has become less skewed over time. For instance, the share of NCR in total HEI enrollment went down from 28.0% in 2000 to 27.2% in 2004 and 25.4% in 2009. In like manner, the share of Region IV increased from 9.2% in 2000 to 10.6% in 2004 and 12.3% in 2009.

Sectoral share in HEI enrollment by region. **Table 6** presents the respective shares of the public and private sectors in HEI enrollment by region. It shows that the share of the private sector in total HEI enrollment is higher than the national average in Region XI, Region VII, CAR, NCR and Region X while the share of the public sector is higher than the national average in the rest of the regions. In particular, the share of SUCs in total HEI enrollment is significantly higher than the national average in Region IV-B, ARMM, Region VIII, Region II, Region IX, Region V and Region III.

Multivariate analysis done for this study reveals that poverty incidence is a good explanatory variable of the share of the public sector (as well as that of SUCs) in total HEI enrollment. To a lesser extent, the number of public HEIs including number of satellite campuses also helps determine the share of public HEIs in total HEI enrollment. However, while the coefficient of poverty incidence is significant at the 5% level of significance, the coefficient of the number of

pubic HEIs including satellite campuses is significant at the 10% level only. Moreover, it is notable that when the number of public HEIs excludes the number of satellite campuses, the coefficient of said variable is not found to be statistically significant.

Table 4. Distribution of Graduates in Public and Private HEIs, by Discipline, 2000-2009

Discipline Group	1999/00	2000/01	2001/02	2002/03	2003/04	2004/05	2005/06	2006/07	2007/08	2008/09
GENERAL	1.7	1.4	0.9	0.8	0.9	0.9	0.7	0.8	0.4	0.3
EDUCATION SCIENCE AND TEACHER TRAINING	17.2	19.6	20.2	20.1	18.6	17.3	15.7	15.9	14.3	12.1
FINE AND APPLIED ARTS	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5
HUMANITIES	1.1	1.2	1.3	1.3	1.2	1.3	1.1	1.0	1.0	1.0
RELIGION AND THEOLOGY	0.4	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.2
SOCIAL AND BEHAVIORAL SCIENCES	3.5	3.7	3.7	3.8	3.4	3.3	2.9	2.7	2.6	2.7
BUSINESS ADMINISTRATION AND RELATED DISCIPLINES a/	29.8	29.3	28.5	27.6	26.1	25.1	22.5	21.5	21.0	22.7
LAW AND JURISPRUDENCE a/	0.6	0.6	0.6	0.7	0.7	1.0	0.7	0.6	0.7	0.6
NATURAL SCIENCE b/	1.2	1.3	1.3	1.2	1.1	1.0	0.9	0.8	0.8	0.9
MATHEMATICS b/	0.9	0.4	0.6	0.5	0.5	0.5	0.5	0.4	0.5	0.4
MEDICAL AND ALLIED SCIENCES a/	8.6	7.5	6.9	8.3	10.8	15.1	20.5	24.8	27.3	27.3
TRADE, CRAFT AND INDUSTRIAL	0.1	0.2	0.2	0.1	0.9	0.0	0.7	0.3	0.3	0.2
ENGINEERING b/	7.9	8.3	9.2	10.1	9.9	12.0	11.6	11.2	10.9	10.3
ARCHITECTURAL AND TOWN-PLANNING	0.6	0.7	0.8	0.7	0.9	0.7	0.6	0.5	0.5	0.5
AGRICULTURAL, FORESTRY, AND FISHERIES b/	3.5	3.6	3.5	3.7	3.4	3.1	3.1	2.8	2.5	2.1
HOME ECONOMICS	0.2	0.3	0.3	0.3	0.3	0.3	0.3	0.2	0.2	0.2
SERVICE TRADES	0.7	0.6	0.7	0.6	0.6	0.5	0.5	0.5	0.5	0.7
MASS COMMUNICATION AND DOCUMENTATION	1.4	1.4	1.5	1.3	1.2	1.1	1.1	1.0	1.0	1.2
OTHER DISCIPLINES	6.5	6.4	6.5	6.5	6.8	3.8	4.7	3.5	3.6	3.8
IT-RELATED DISCIPLINES b/	8.8	8.7	9.1	8.5	8.7	9.4	9.1	8.1	8.7	9.8
MARITIME	4.8	4.0	3.5	3.2	3.2	2.9	2.1	2.5	2.3	2.5
HIGH PRIORITY DISCIPLINES	22.3	22.4	23.7	24.0	23.5	26.1	25.3	23.3	23.4	23.5
MEDIUM PRIORITY DISCIPLINES	38.7	40.2	40.2	39.5	38.9	32.7	31.1	29.7	27.6	25.9
LOW-PRIORITY DISCIPLINES	39.0	37.4	36.1	36.5	37.6	41.1	43.6	47.0	49.0	50.6
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

a/ low-priority disciplines

b/ high-priority disciplines

Source of basic data: CHED MIS

Gross enrollment rate across regions. There are large disparities as well in the gross enrollment rate in higher education (reckoned relative to the number of young adults aged 16-21) across regions. NCR and CAR have consistently registered gross enrollment rates (GER) that are higher than the national average. Specifically, the GER of CAR and NCR are 92% and 90% higher than the national average in 2009 (**Table 5**). In contrast, ARMM, CARAGA and Region IV-B are the cellar dwellers in terms of the gross enrollment rate in higher education. To wit, the GER of ARMM, CARAGA and Region IV-B are 69%, 32% and 26% lower than the national average in 2009.

Table 5. Gross enrollment rate by region and regional distribution of total HEI enrollment and total population aged 16-20 and gross enrollment rate

Region	2000			2004			2009			GER		
	HEI enr	Popn	Diff	HEI enr	Popn	Diff	HEI enr	Popn	Diff	2000	2004	2009
I	5.4	5.6	-0.2	5.3	5.2	0.1	4.8	4.8	-0.1	25.3	24.6	23.5
II	3.4	3.7	-0.3	3.6	3.5	0.1	4.0	3.3	0.8	24.1	24.6	29.4
III	6.5	10.9	-4.4	7.2	10.7	-3.5	8.1	10.9	-2.7	15.7	16.0	17.8
IV/ IV A	9.2	12.4	-3.2	8.8	12.6	-3.7	10.4	13.2	-2.8	19.7	16.8	18.7
IV B				1.8	2.7	-1.0	1.9	2.6	-0.7		15.4	17.7
V	4.4	6.0	-1.5	4.7	5.5	-0.8	4.5	5.2	-0.7	19.7	20.3	20.7
VI	9.2	8.3	0.8	8.4	8.0	0.4	7.7	7.7	0.0	29.1	25.2	23.7
VII	8.9	7.6	1.3	7.7	7.3	0.4	7.8	7.2	0.6	30.8	25.1	25.8
VIII	3.4	4.4	-1.0	3.7	4.2	-0.5	3.7	4.0	-0.3	20.5	20.9	22.0
IX	3.4	3.8	-0.4	2.5	3.7	-1.3	3.1	3.8	-0.6	23.7	15.7	19.7
X	3.4	4.8	-1.4	4.3	4.7	-0.3	4.4	4.6	-0.3	18.6	22.2	22.3
XI	5.4	5.1	0.3	4.2	5.0	-0.8	4.2	5.1	-0.9	28.1	20.2	19.5
XII	3.7	4.2	-0.5	3.2	4.4	-1.2	3.1	4.8	-1.7	23.4	17.4	15.3
NCR	28.0	13.9	14.1	27.2	13.4	13.8	25.4	13.4	12.0	53.3	48.5	45.3
CAR	3.7	2.0	1.7	3.9	1.9	2.0	3.7	1.9	1.8	49.4	48.4	45.8
ARMM	0.3	4.6	-4.2	1.8	4.6	-2.8	1.6	4.9	-3.4	1.8	9.3	7.5
CARAGA	1.7	2.7	-1.1	1.8	2.7	-0.9	1.8	2.7	-0.9	16.3	15.8	16.2
Total	2,430,842	9,191,731		2,402,315	10,057,542		2,770,965	11,632,275		26.4	23.9	23.8

Source of basic data: CHED MIS

Table 6. Sectoral share in HEI enrollment, by region, 2000-2009

Region	Total of no. of students			Private (%)			Public (%)			SUCs (%)		
	2000	2004	2009	2000	2004	2009	2000	2004	2009	2000	2004	2009
I	130,528	127,632	131,949	62.4	62.8	58.8	37.6	37.2	41.2	34.4	32.3	36.9
II	82,467	85,523	111,689	63.7	60.1	48.4	36.3	39.9	51.6	34.7	39.0	50.8
III	157,547	172,883	224,695	60.0	55.3	49.9	40.0	44.7	50.1	38.3	43.6	47.2
IV/ IV A	224,554	212,603	288,671	59.7	63.9	58.1	40.3	36.1	41.9	39.1	31.8	36.7
IV B		42,370	52,915	0.0	29.6	26.9	0.0	70.4	73.1	0.0	70.4	73.1
V	107,868	112,452	124,653	57.5	51.0	45.5	42.5	49.0	54.5	40.5	42.6	47.6
VI	223,174	201,663	213,074	65.1	63.8	58.7	34.9	36.2	41.3	31.6	32.6	36.6
VII	215,139	184,262	214,786	81.4	78.3	74.9	18.6	21.7	25.1	17.7	21.5	24.4
VIII	83,770	88,203	103,083	38.8	37.1	31.7	61.2	62.9	68.3	60.7	61.9	65.6
IX	83,233	59,096	86,420	63.0	58.1	51.1	37.0	41.9	48.9	37.0	41.7	48.9
X	82,212	103,989	120,789	76.9	70.1	60.6	23.1	29.9	39.4	17.7	28.0	35.9
XI	131,143	101,965	115,001	78.7	87.1	81.8	21.3	12.9	18.2	20.9	12.9	17.2
XII	89,735	76,461	84,983	51.3	67.2	67.5	48.7	32.8	32.5	48.7	31.6	31.6
NCR	681,840	654,130	703,296	75.6	74.6	71.6	24.4	25.4	28.4	18.4	20.1	17.0
CAR	89,394	93,238	101,663	76.1	75.8	73.3	23.9	24.2	26.7	23.9	24.2	26.7
ARMM	7,417	43,360	43,145	39.3	26.2	26.0	60.7	73.8	74.0	33.2	66.7	66.8
CARAGA	40,821	42,485	50,153	75.6	64.4	58.0	24.4	35.6	42.0	24.4	35.6	41.5
Total	2,430,842	2,402,315	2,770,965	68.3	65.9	60.9	31.7	34.1	39.1	28.8	31.0	34.0

Source of basic data: CHED MIS

ARMM and Region II made the most progress in terms of improvements in the GER in higher education. Their GER rose by 5.7 and 5.3 percentage points, respectively, between 2000 and 2009. It is also notable that while the gross enrollment rates in Regions X and III have consistently been below the national average in 2000-2009, said regions have registered significant gains in their GERs during the period. In contrast, the deterioration in the GER of Region XI, XII and NCR was quite steep during the period at 8.5, 8.2 and 8.0 percentage points, respectively. The gross enrollment rates of Region VI and CAR (regions whose gross enrollment rates are higher than the national average in 2000-2004) have also declined substantially.

Correlates of overall GER. Multivariate analysis reveal a negative and statistically significant relationship between the GER at the regional level, on the one hand, and poverty incidence, on the other. However, the total number of higher education institutions in the region (measured either in terms of number of main campuses or number of main plus satellite campuses) was not found to have a statistically significant relationship with GER. Neither was the number of public nor the number of private HEIs (considered separately) found to have a statistically significant relationship with GER.

2.4. Quality of Education

Quality of education in higher education may be measured by the passing rate in the professional licensure examinations that are given by the Professional Regulatory Commission (PRC) for a variety of fields of study. It should be emphasized, however, that not all fields are covered by these examinations. In particular, most of the courses included under business administration and related disciplines are not the subject of a licensure exam with the exception of accounting (Johanson 1999). **Table 7** below shows the results of the licensure exam for selected fields of study. While the passing rate in some fields of study has shown some improvement in 2004-2009 (e.g., medicine, civil engineering, mechanical engineering, accountancy, and agriculture), the passing rate for others have either declined (e.g., elementary teaching and nursing) or have stagnated (e.g., midwifery, electrical and electronic engineering and secondary teaching). Moreover, the passing rate has not exceeded 50% for many of the fields of study.

Table 7. National Passing Rate in Selected Licensure Examinations

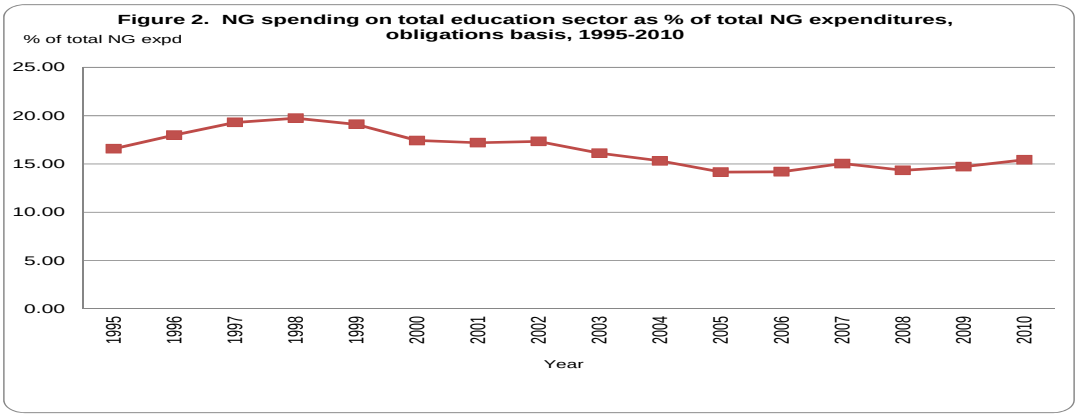
	2004	2005	2006	2007	2008	2009
LET elementary a/	27.0	27.6	29.3	27.6	29.5	23.9
LET secondary a/	27.2	25.9	32.5	29.1	33.1	26.8
Accountancy	20.3	24.6	24.1	34.1	32.8	36.3
Midwifery	49.7	52.3	53.9	53.2	52.9	52.6
Nursing	49.9	52.2	46.0	45.8	43.9	40.7
Medicine	51.7	53.9	54.9	59.9	58.2	68.9
Civil engineering	35.2	34.7	40.9	37.5	35.4	45.4
Mechanical engineering	45.3	45.5	47.8	51.8	56.4	56.1
Electrical engineering	35.2	32.5	35.3	32.0	35.8	25.2
Agriculture	25.4	29.8	29.9	34.0	30.7	38.3

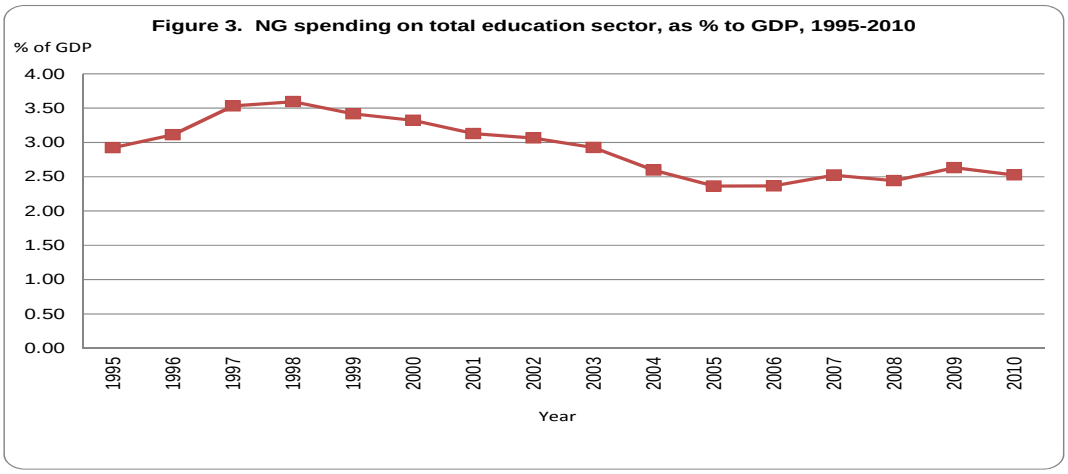
LET - licensure examination in teaching
Source: CHED MIS

3. NATIONAL GOVERNMENT SPENDING ON HIGHER EDUCATION

The education sector receives the biggest expenditure allocation (16.6% of total NG expenditures on the average) next to debt service (22.9% on the average) in 1995-2009 (**Figure 2**). However, the expenditure share of the education sector contracted from a peak of 19.7% in 1998 to a low of 14.2% in 2005-2006 largely because of the expansion in debt service between 1998 and 2006 following the large fiscal deficits registered by the national government in earlier years.

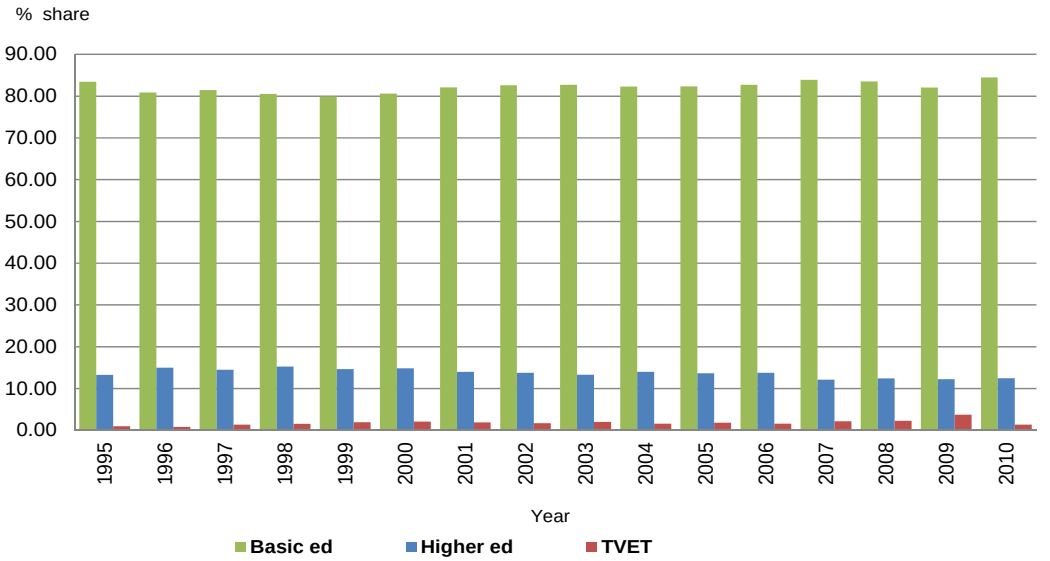
Moreover, the national government spending pie also became smaller from 19.1% of GDP in 1998 to 16.5%% of GDP in 2005 and 2006 as the national government cut back on non-mandatory expenditures as part of its efforts to achieve fiscal consolidation. Thus, NG expenditures on education exhibited a well-defined downward trend between 1998 and 2005/6, going down from 3.6% of GDP in 1998 to 2.4% in 2005 and 2006 (**Figure 3**). However, NG spending on education recovered somewhat to an average of 2.5% of GDP in 2007-2010 and 2.8% in 2009 following some improvement in the revenue effort of the NG in 2006-2007 and as debt service started to taper off in 2006 as a result of the lower fiscal deficit levels in 2005-2008.





On the average, more than four-fifths of total NG spending on education accrues to basic education in 1995-2010. On the other hand, around 14% of total NG education spending is allocated to higher education while less than 2% goes to technical/ vocational education and training (TVET). Some slight reallocation within the education spending pie is evident over time. In particular, the share of basic education in total NG education spending increased from 80% in 1999 to an average of 83% in 2001-2010 (**Figure 4**). Likewise, the spending share of TVET rose from 1.5% 1998 to an average of 2% in 1999-2009. Conversely, the share of higher education in total NG education spending contracted from a high of 15.3% in 1998 to a low of 12.1% in 2007 before rising somewhat to 12.5% in 2010.

Figure 4. Composition of NG spending on education sector, 1995-2010



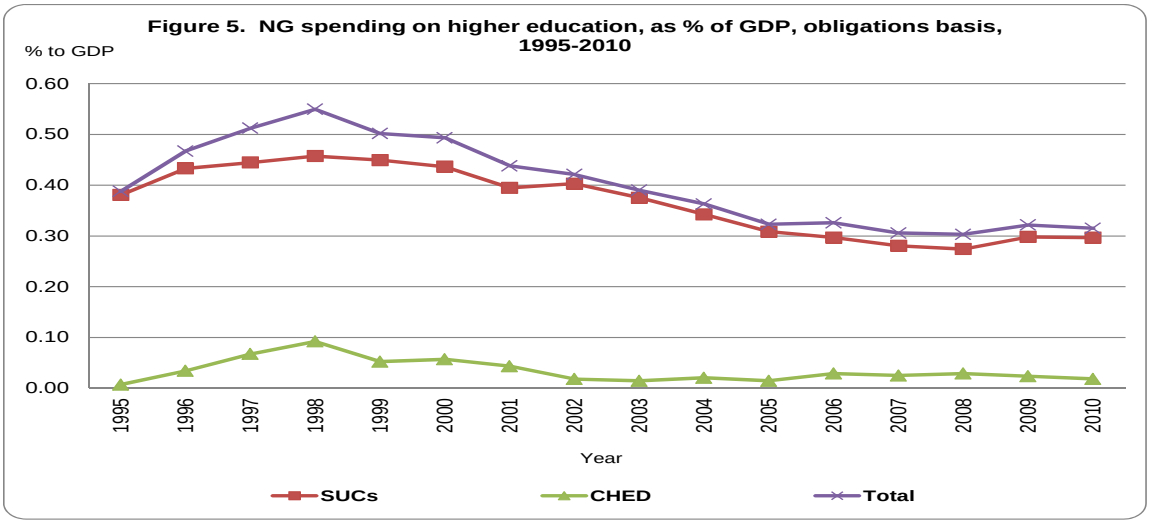
Thus, NG spending on higher education shrank from 0.6% of GDP in 1998 to 0.3% of GDP in 2005-2009 before recovering to 0.4% of GDP in 2010 (**Figure 5**). About 93% of NG spending on higher education in 1995-2009 accrues to SUCs and the remaining 7% to the Commission on Higher Education (CHED). NG spending on SUCs as well as that on CHED dipped during the period. To wit, NG spending on SUCs contracted from 0.5% of GDP in 1998 to an average of 0.3% in 2005-2010 while NG allocation for the CHED went down from 0.10% of GDP in 1998 to 0.02% in 2002-2010.

As a result, per student NG spending on SUCs (in 2000 prices) decreased from PhP 32,620 in 1997 to PhP 16,416 in 2009 (**Figure 6**). While SUCs supplemented the NG subsidy with their own internally generated income by some PhP 7,834 per student in 2006-2009, the trajectory of total SUC spending per student is still downward during the period.

4. ANALYSIS OF SOURCES AND USES OF FUNDS OF SUCs

4.1. Sources of Funds

Total SUCs receipts grew by 9% yearly on the average from PhP 21.8 billion in 2003 to PhP 36.1 billion in 2009 (**Table 8**). The subsidy from the national government continues to account for the bulk of total receipts of SUCs in 2003-2009. However, a shift in the composition of SUCs' receipts is evident during the period. It suggests that SUCs in the aggregate are becoming more self-reliant in terms of funding. The share of NG subsidy in total SUCs' receipts contracted from 82% in 2003 to 70% in 2008-2009. Conversely, the share of internally generated income expanded from 18% in 2003 to 30% in 2008-2009. This came about as SUCs' receipts from internally generated income grew more than thrice as fast as NG subsidy between 2003 and 2009. To wit, SUCS' internally generated income increased by an average of 18% per year in 2003-2009 while NG subsidy to SUCs rose by an average of 6% per year.



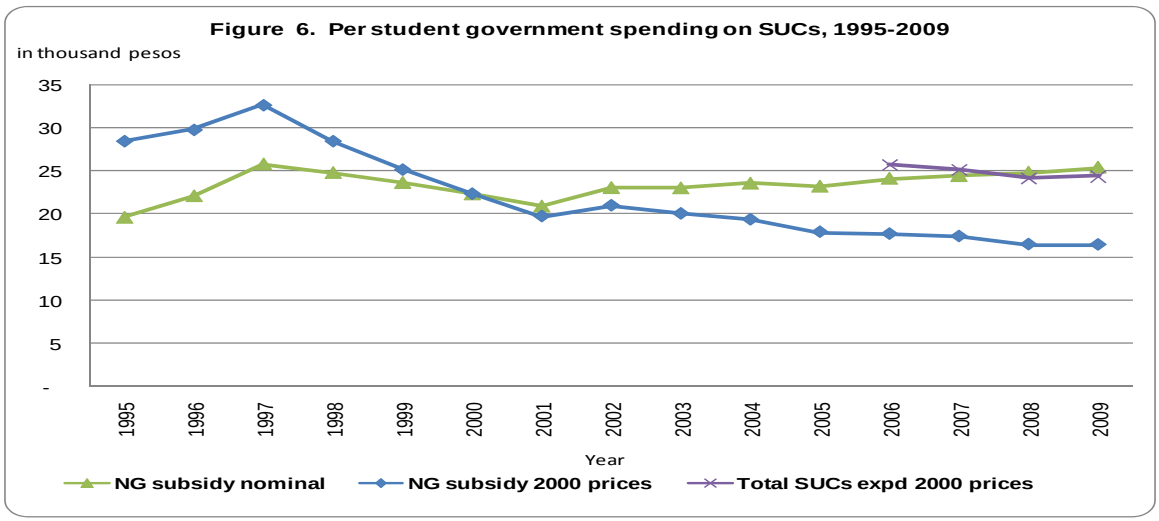


Table 8. Total SUCs receipts, by major source, 2003-2009

	NG subsidy	Internally generated income	Total receipts	NG subsidy	Internally generated income	Total receipts
Levels (in million pesos)				**Distribution (%)**		
2003	17,906	3,903	21,809	82.1	17.9	100.0
2005	17,993	5,668	23,661	76.0	24.0	100.0
2006	18,857	6,625	25,482	74.0	26.0	100.0
2007	20,372	7,995	28,367	71.8	28.2	100.0
2008	22,769	9,650	32,419	70.2	29.8	100.0
2009	25,363	10,771	36,135	70.2	29.8	100.0
Growth rate (%)						
2003-2006	1.7	19.3	5.3			
2006-2009	10.4	17.6	12.3			
average	6.0	18.4	8.8			

Source of basic data: DBM

However, the creditable increase in the internally generated income of SUCs in 2006-2009 has not been enough to compensate for the combined effects of (i) the rapid increase in enrollment in 2007-2009, (ii) the reduction in NG subsidy per student, and (iii) inflation. After an initial surge in 2003-2007, the growth in SUCs internally generated income per student started to decelerate between 2007 and 2009 as SUCs enrollment surged by an average of 9% per year in the latter period (**Table 9**). After adjusting for inflation, the growth in SUCs' internally generated income per student was less than 1% in 2007-2009. Thus, SUCs' internally generated income per student (in 2000 prices) was PhP 7,875 in 2009 while NG subsidy per student stood at PhP 18,542.[1] The level of total SUCs receipts per student (PhP 26,417 in 2000 prices) in 2009 is lower than the 2006-2007 level.

Internally generated income. Under the Higher Education Modernization Act of 1997, SUCs are authorized to retain and utilize their income generated from tuition fees and other charges. In more specific terms, SUCs Boards have the power to fix the tuition fees and other school charges and at the same time adopt and implement a socialized scheme of tuition and school fees for greater access to poor but deserving students. On the other hand, because of the protests coming from students every time a tuition fee increase is proposed, many SUCs have increasingly looked at other income generating projects as a source of financing.

Some 45% of total internally generated SUCs income of SUCs came from tuition fees while another 20% is from other income collected from students in 2003-2009 (**Table 10**). In other words, close to 65% of total internally generated SUCs income were collected from students during the period. On the other hand, 24% of total internally generated SUCs income was contributed by income generating projects (i.e., income accruing their revolving fund and other SUCs income.

[1] The estimates of per student SUCs' receipts in this sub-section (which were estimated from the data from individual SUCs) are slightly different from that in the Section 3 (which were estimated from national level data).

SUCs income from students

The growth in receipts from tuition fees and other income from students were fairly significant at a yearly average of 22% and 15%, respectively, in 2003-2006 (**Table 11**). However, while receipts from other income from students registered better growth in 2006-2009 relative to the earlier period, the opposite is true of receipts from tuition fees. Consequently, there has been a reduction in the share of tuition fees in total internally generated SUCs income (from 47% in 2005 to 41% in 2009) and a concomitant increase in the share of other income collected from students from 18% in 2006 to 22% in 2009 (**Table 10**). These opposing movements combined have resulted in a fairly stable share of total SUCs income from students (64%) in total internally generated SUCs income during the period.

Table 9. Per student SUCs receipts (in current and 2000 prices)

	in current prices			in 2000 prices		
	NG subsidy	Internally generated income	Total	NG subsidy	Internally generated income	Total
Levels (in pesos)						
2003	24,317	5,300	29,617	21,163	4,613	25,775
2006	27,252	9,574	36,827	19,973	7,017	26,989
2007	27,739	10,886	38,625	19,749	7,750	27,499
2008	28,179	11,942	40,121	18,674	7,914	26,588
2009	28,687	12,183	40,871	18,542	7,875	26,417
average	27,235	9,977	37,212	19,620	7,034	26,654
Growth rate (%)						
2003-2007	3.3	19.7	6.9	-1.7	13.9	1.6
2007-2009	1.7	5.8	2.9	-3.1	0.8	-2.0
average	2.8	14.9	5.5	-2.2	9.3	0.4

Source of basic data: DBM and CHED MIS

Table 10. Composition of Internally generated income of SUCs (in percent)

	Tuition Fees	Other Income Collected from Students	Income from Other Sources	Income from Revolving Fund	Grants and Donations	Others	Total
2003	43.3	19.8	11.7	12.4	3.2	9.5	100.0
2005	47.3	19.0	10.2	11.8	1.3	10.4	100.0
2006	46.0	17.8	12.6	11.4	2.9	9.3	100.0
2007	47.2	17.8	13.0	12.9	2.4	6.6	100.0
2008	43.5	20.5	13.1	10.5	3.0	9.5	100.0
2009	41.4	22.0	13.8	10.5	3.0	9.2	100.0
average	44.8	19.5	12.4	11.6	2.6	9.1	100.0

Source of basic data: DBM

Table 11. Internally generated income of SUCs, by type

	Tuition Fees	Other Income Collected from Students	Income from Other Sources	Income from Revolving Fund	Grants and Donations	Others	Total
Levels (in million pesos)							
2003	1,692	774	455	485	125	373	3,903
2005	2,683	1,079	576	669	73	589	5,668
2006	3,048	1,178	837	756	190	616	6,625
2007	3,770	1,426	1,042	1,034	194	529	7,995
2008	4,199	1,980	1,263	1,010	286	912	9,650
2009	4,461	2,371	1,488	1,131	327	992	10,771
Growth rate (%)							
2003-2006	21.7	15.0	22.5	16.0	14.9	18.3	19.3
2006-2009	13.5	26.3	21.2	14.4	19.8	17.2	17.6
average	17.5	20.5	21.8	15.2	17.3	17.7	18.4

Source of basic data: DBM

Although the nominal growth in receipts from tuition fees and other SUCs income from students in 2006-2009 was substantial, it was whittled away by inflation and the growth in enrollment. Thus, per student receipts from tuition fees in 2000 prices stood at PhP 3,261 in 2009, lower than the 2007-2008 level (**Table 12**). While per student receipts from other income from students increased by 11% in real per student terms, said increase was not enough compensate for the decline in per student receipts from tuitions fees in 2007-2009. Consequently, per student total income from students in 2000 prices declined marginally from PhP 5,037 in 2007 to PhP 4,995 in 2009.

School fees in state universities and colleges are generally low when compared with those of private HEIs. Per student total SUCs receipts from students (i.e., sum of tuition fees and other income from students) in current prices is estimated to be PhP 7,728 in 2009 or less than PhP 4,000 per student per semester (**Table 12**).

This is not surprising given that the modal average tuition fee per unit in the undergraduate program in SUCs is PhP 100 in 2009 (**Table 13**). The Polytechnic University of the Philippines (PUP) charges the lowest tuition fee per unit (PhP 12) among all SUCs in 2009. In contrast, the University of the Philippines (UP) has the highest tuition fee per unit (PhP 1,000) among all SUCs in 2009.

Table 12. Per student internally generated income of SUCs

	in current prices							in 2000 prices						
	Tuition Fees	Other Income Collected from Students	Income from Other Sources	Income from Revolving Fund	Grants and Donations	Others	Total	Tuition Fees	Other Income Collected from Students	Income from Other Sources	Income from Revolving Fund	Grants and Donations	Others	Total
Levels (in pesos)								**Levels (in pesos)**						
2003	2,297	1,051	618	658	170	506	5,300	1,999	915	538	573	148	440	4,613
2006	4,405	1,702	1,210	1,092	275	890	9,574	3,228	1,247	886	800	201	653	7,017
2007	5,134	1,942	1,419	1,408	264	720	10,886	3,655	1,382	1,010	1,002	188	513	7,750
2008	5,196	2,450	1,563	1,250	354	1,129	11,942	3,444	1,624	1,036	829	234	748	7,914
2009	5,046	2,682	1,684	1,280	370	1,122	12,183	3,261	1,733	1,088	827	239	725	7,875
average	4,416	1,965	1,298	1,138	287	873	9,977	2,598	1,150	760	672	169	513	7,034
Growth rate (%)														
2003-2007	22.3	16.6	23.1	20.9	11.6	9.2	19.7	16.3	10.9	17.1	15.0	6.1	3.9	13.9
2007-2009	-0.9	17.5	8.9	-4.7	18.4	24.9	5.8	-5.5	12.0	3.8	-9.2	12.8	19.0	0.8
average	14.0	16.9	18.2	11.7	13.8	14.2	14.9	8.5	11.2	12.5	6.3	8.3	8.7	9.3

Source of basic data: DBM and CHED MIS

Table 13. Tuition fee per unit, 2007-2009

	1ST SEM 2007/08			1ST SEM 2008/09			1ST SEM 2009/10		
	BS/AB	MS/MA	PHD	BS/AB	MS/MA	PHD	BS/AB	MS/MA	PHD
Mean	122	278	337	121	273	357	126	293	380.13
Mode	100	200	300	100	300	300	100	200	300.00
Max	1,000	1,050	600	1,000	600	800	1,000	1,500	800.00
Min	12	39	100	12	39	100	12	60	150

Source: CHED MIS

However, there is a wide variation in per student SUCs receipts from school fees. For instance, per student SUCs receipts from tuition fees in Region I (Ilocos) is 40% lower than the national average while that in Region X (Northern Mindanao) is 30% higher than the national average in 2009. In like manner, per student SUCs receipts from other income from students in Region II (Cagayan Valley) is 55% below the national average while that of Region IVA (CALABARZON) is 104% above the national average. In sum, per student total SUCs receipts from students in Region I is 40% lower than the national average while that in Region IVA is 51% higher than the national average (**Table 14**).

Table 14. Per student internally generated income, by region, 2009

	Tuition Fees	Income Collected from Students	Income from Other Sources	Income from Revolving Fund	Grants and Donations	Others	TOTAL	Total Income from Students
(in pesos)								
National Capital Region	4,812	2,502	3,731	2,764	390	2,983	84,522	7,314
Region I - Ilocos	3,036	1,633	44	1,258	-	3,054	17,756	4,669
Cordillera Administrative Region	3,702	2,517	667	4,681	104	153	17,007	6,218
Region II - Cagayan Valley	4,021	1,200	618	99	441	272	9,249	5,221
Region III - Central Luzon	6,108	2,293	1,469	764	726	39	16,986	8,402
Region IV-A - CALABARZON	6,244	5,458	1,374	890	-	584	22,745	11,702
Region IV-B - MIMAROPA	4,744	3,540	614	307	259	51	16,895	8,284
Region V - Bicol	4,989	1,557	582	253	-	-	14,564	6,547
Region VI - Western Visayas	3,536	2,875	4,156	529	673	902	18,671	6,411
Region VII - Central Visayas	6,047	2,576	172	284	4	2,101	23,704	8,623
Region VIII - Eastern Visayas	6,224	3,049	1,471	1,306	1,358	1,119	24,084	9,273
Region IX - Zamboanga Peninsula	3,468	4,024	351	458	29	1,044	14,575	7,493
Region X - Northern Mindanao	6,541	3,156	2,137	2,117	299	328	25,697	9,697
Region XI - Davao Region	5,200	4,183	436	289	1,010	-	17,535	9,382
Region XII - Soccsksargen	9,015	1,008	531	2,753	-	-	16,390	10,024
Region XIII - CARAGA	3,738	1,500	521	724	605	-	12,999	5,238
ARMM	4,233	1,677	609	1,017	18	572	12,071	5,910
Philippines	5,046	2,682	1,684	1,280	370	1,122	30,544	7,728
Per student internally generated income; national average = 100								
National Capital Region	95.4	93.3	221.6	216.0	105.4	265.8	276.7	94.6
Region I - Ilocos	60.2	60.9	2.6	98.3	-	272.1	58.1	60.4
Cordillera Administrative Region	73.4	93.8	39.6	365.9	28.0	13.6	55.7	80.5
Region II - Cagayan Valley	79.7	44.7	36.7	7.7	119.0	24.3	30.3	67.6
Region III - Central Luzon	121.1	85.5	87.2	59.7	196.0	3.5	55.6	108.7
Region IV-A - CALABARZON	123.7	203.5	81.6	69.5	-	52.1	74.5	151.4
Region IV-B - MIMAROPA	94.0	132.0	36.5	24.0	69.8	4.5	55.3	107.2
Region V - Bicol	98.9	58.1	34.6	19.7	-	-	47.7	84.7
Region VI - Western Visayas	70.1	107.2	246.9	41.3	181.7	80.4	61.1	83.0
Region VII - Central Visayas	119.8	96.0	10.2	22.2	1.1	187.2	77.6	111.6
Region VIII - Eastern Visayas	123.3	113.7	87.4	102.1	366.8	99.7	78.8	120.0
Region IX - Zamboanga Peninsula	68.7	150.1	20.8	35.8	7.8	93.0	47.7	97.0
Region X - Northern Mindanao	129.6	117.7	126.9	165.4	80.7	29.2	84.1	125.5
Region XI - Davao Region	103.0	156.0	25.9	22.6	272.6	-	57.4	121.4
Region XII - Soccsksargen	178.7	37.6	31.5	215.2	-	-	53.7	129.7
Region XIII - CARAGA	74.1	55.9	31.0	56.6	163.3	-	42.6	67.8
ARMM	83.9	62.5	36.2	79.4	4.8	51.0	39.5	76.5
Philippines	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source of basic data: DBM and CHED MIS

Income from Income Generating Projects (IGPs)

SUCs income from income generating projects may be broken down into: (i) SUCs income accruing to their revolving funds and (ii) SUCs income from other sources. SUCs income accruing to their revolving fund and their income from other sources grew by 15% and 22% yearly on the average, respectively, in 2003-2009 (**Table 11**). Thus, the share of their income from other sources rose from 10% in 2005 to 14% in 2009. However, the contribution of income accruing to their revolving fund to their total internally generated income declined from an average of 12% in 2003 to 10% in 2009 (**Table 10**). As a result, the total share of income generating projects in total SUCs income remained fairly stable at 24%.

As is the case with respect to per student SUCs receipts from schools fees, there is also wide variation in per student SUCs income from IGPs. For instance, the per student SUCs income accruing to their revolving fund of Region II is 92% lower than the national average while that of NCR is 116% higher than the national average in 2009 (**Table 14**). Also, the per student SUCs income from other sources of Region I is 97% below the national average while that of Region VI (Western Visayas) is 147% above the national average.

4.2. Uses of Funds

Total expenditures of all SUCs in the aggregate grew from PhP 20.6 billion in 2003 to PhP 33.3 billion in 2009 (**Table 15**). Spending on personal services (PS) captured the lion's share in total SUCs spending during the period. However, the share of PS in total SUCs expenditure declined from 76% in 2003 to 65% in 2009 while that of maintenance and other operating expenditures (MOOE) and capital outlay (CO) went up, respectively, from 19% to 24% and from5% to 12%. This came about as the growth in MOOE and CO outpaced that of PS spending during the period. Capital outlays of all SUCs combined expanded by 25% while MOOE grew by 12% on the average in 2003-2009. In comparison, the growth in PS spending was a modest 6%.

Table 15. Total SUCs expenditures, by economic category of spending

	PS	MOOE	CO	Total	PS	MOOE	CO	Total
Levels (in million pesos)					**Distribution (%)**			
2003	15,603	3,939	1,013	20,555	75.9	19.2	4.9	100.0
2006	16,945	5,503	1,794	24,241	69.9	22.7	7.4	100.0
2007	17,772	6,175	1,928	25,875	68.7	23.9	7.5	100.0
2008	19,593	7,317	2,518	29,428	66.6	24.9	8.6	100.0
2009	21,599	7,879	3,825	33,303	64.9	23.7	11.5	100.0
average					69.2	22.8	8.0	100.0
Growth rate (%)								
2003-2006	2.8	11.8	21.0	5.7				
2006-2009	8.4	12.7	28.7	11.2				
average	5.6	12.2	24.8	8.4				

Source: DBM

On the average, 90% of total PS spending of all SUCs in the aggregate was funded from the NG subsidy in 2003-2009 (**Table 16**). In contrast, SUCs tended to rely less on the NG subsidy in

funding their MOOEs and COs. In particular, only 44% of their COs and only 41% of their MOOEs were funded from the NG subsidy during the period.

Moreover, the share of SUCs spending funded from the NG subsidy contracted between 2003 and 2009 for all economic spending categories. Specifically, the decline in the share of NG subsidy in total SUCs spending is most pronounced for MOOE (**Table 16**). Up to 2007, the decline in the share of NG subsidy to total SUCs spending is slightly larger for CO than for PS spending.

Table 16. Proportion of SUCs expenditures funded by NG subsidy (in percent)

	PS	MOOE	CO	TOTAL
2003	93.2	53.8	40.3	83.1
2006	91.2	44.3	40.7	76.8
2007	90.9	41.2	33.4	74.8
2008	89.0	38.0	38.2	72.0
2009	88.4	34.6	54.7	71.8
average	90.4	40.9	43.7	75.1

Source: DBM

These movements may be explained by the fact that the growth in SUCs spending on the MOOE (for the entire period 2003-2009) and CO (up to 2007) that is funded from their internally generated income is higher than that which is funded from the NG subsidy (**Table 17** and **Table 18**). In contrast, the disparity in these two growth rates is not as marked in the case of PS spending.

Although the growth in total SUCs spending in the aggregate is thrice as fast in 2006-2009 compared to 2003-2009 (**Table 15**), the difference in the growth of per student SUCs spending between the two sub-periods pronounced in nominal terms was more pronounced (**Table 19**). This movement may be attributed to the relatively faster growth in SUCs enrollment in 2006-2009 relative to 2003-2006. **Table 19** also shows that per student SUCs spending in 2000 prices posted some contraction in 2006-2009.

Table 17. Uses of NG Subsidy

	PS	MOOE	CO	Total	PS	MOOE	CO	Total
Levels (in million pesos)					**Distribution (%)**			
2003	14,547	2,120	408	17,074	85.2	12.4	2.4	100.0
2006	15,447	2,440	730	18,617	83.0	13.1	3.9	100.0
2007	16,155	2,545	645	19,344	83.5	13.2	3.3	100.0
2008	17,430	2,784	963	21,176	82.3	13.1	4.5	100.0
2009	19,104	2,729	2,093	23,926	79.8	11.4	8.7	100.0
average					82.6	12.6	4.8	100.0
Growth rate (%)								
2003-2006	2.0	4.8	21.4	2.9				
2006-2009	7.3	3.8	42.0	8.7				
average	4.6	4.3	31.3	5.8				

Source: DBM

Table 18. Uses of Internally Generated SUCs Income

	PS	MOOE	CO	Total	PS	MOOE	CO	Total
Levels (in million pesos)					**Distribution (%)**			
2003	1,057	1,819	605	3,481	30.4	52.3	17.4	100.0
2006	1,498	3,062	1,063	5,624	26.6	54.5	18.9	100.0
2007	1,617	3,630	1,284	6,531	24.8	55.6	19.7	100.0
2008	2,163	4,533	1,555	8,252	26.2	54.9	18.8	100.0
2009	2,496	5,150	1,732	9,377	26.6	54.9	18.5	100.0
average					26.9	54.4	18.7	100.0
Growth rate (%)								
2003-2006	12.3	19.0	20.7	17.3				
2006-2009	18.5	18.9	17.7	18.6				
average	15.4	18.9	19.2	18.0				

Source: DBM

On the other hand, **Table 20** presents the breakdown of SUCs' spending by function in 2009.[2] It indicates that SUCs in the aggregate allocated the bulk (62%) of their spending on instruction. However, the share of general administrative services appears to be on the high side at 30%. It is also surprising that the budget share of auxiliary services (including management of IGPs) is about thrice that of research and extension combined.

Table 19. Per student SUCs expenditures, by economic category of spending

	in nominal prices				in 2000 prices			
	PS	MOOE	CO	Total	PS	MOOE	CO	Total
Levels (in pesos)					**Distribution (%)**			
2003	21,190	5,349	1,376	27,914	18,441	4,655	1,197	24,293
2006	24,488	7,952	2,592	35,033	17,947	5,828	1,900	25,675
2007	24,213	8,413	2,628	35,254	17,239	5,990	1,871	25,100
2008	24,248	9,055	3,116	36,420	16,069	6,001	2,065	24,135
2009	24,430	8,912	4,326	37,668	15,791	5,760	2,796	24,347
average					17,097	5,647	1,966	24,710
Growth rate (%)								
2003-2006	4.9	14.1	23.5	7.9	-0.9	7.8	16.6	1.9
2006-2009	-0.1	3.9	18.6	2.4	-4.2	-0.4	13.8	-1.8
average	2.4	8.9	21.0	5.1	-2.6	3.6	15.2	0.0

Source of basic data: DBM and CHED

Table 20. Distribution of SUCs expenditures, by function, 2009

	Percent share
GAS	30.2
Auxiliary	6.0
Education	61.5
Research	1.3
Extension	1.0
Total	100.0

Note: based on data from 70 SUCs
Source of basic data: CHED MIS

[2] This table makes use of data for 70 SUCs which have complete data based on their submission to CHED.

4.3. Fiscal Surplus in SUCs

Contrary to conventional wisdom that SUCs are cash strapped, closer scrutiny of the data indicates that the SUCs sector posted substantial fiscal surpluses in 2006-2009. During that period, total internally generated income of all SUCs in the aggregate exceeded their total expenditures that are funded from said source by PhP 1.3 billion per year on the average (**Table 21**). In like manner, total expenditures funded by NG subsidies of all SUCs in the aggregate exceeded their total receipts from this source by PhP 1.1 billion per year on the average. On the other hand, **Table 22** shows that the average fiscal surplus of small-sized SUCs from their internally generated income in 2009 was PhP 3 million, while that of medium-sized SUCs was PhP 8 million and that of large-sized SUCs was PhP 27 million.

Table 21. Overall fiscal surplus of all SUCs in aggregate, (in million pesos) a/

	NG subsidy	Internally generated income	Total
2003	832	422	1,254
2006	240	1,001	1,241
2007	1,028	1,464	2,492
2008	1,593	1,398	2,991
2009	1,437	1,394	2,831
as percent of total receipts			
2003	4.6	10.8	5.7
2006	1.3	15.1	4.9
2007	5.0	18.3	8.8
2008	7.0	14.5	9.2
2009	5.7	12.9	7.8

a/ overall fiscal surplus = current year's receipts less current year's total expenditures

Source of basic data: DBM

Table 22. Average SUCs surplus by funding source, by size of SUCs

	2009			2003		
	Total receipts	Internally generated income	NG subsidy	Total receipts	Internally generated income	NG subsidy
Levels (in million pesos)						
Small	7	3	4	11	1	10
Medium	10	8	1	6	3	3
Large	61	27	34	18	7	11
All	26	13	13	12	4	8

Note: small SUCs are those with enrollment of 4,500 or less; medium size SUCs are those with enrollment equal to or greater than 4,500 but less than 8,000 and large SUCs are those with enrollment equal to or greater than 8,000

Source: DBM

5. REVIEW OF NORMATIVE FUNDING FORMULA

With the issuance of DBM-CHED Joint Circular No. 2, s. 2004, the Department of Budget and Management (DBM) and the Commission on Higher Education (CHED) applied the normative funding formula in allocating funds for the Maintenance and Other Operating Expenditures (MOOE) of individual SUCs from the General Appropriations Act (GAA) starting with the 2005 budget. Normative funding refers to the application of a set of prescribed objective criteria and norms that are designed to promote and reward quality instruction, research and extension services as well as financial prudence and fiscal responsibility. In particular, the adoption of normative funding was meant to harmonize the course offerings of SUCs with national thrusts and priorities and to encourage SUCs to adopt cost recovery measures, practice fiscal prudence and maximize resources (DBM-CHED Joint Circular No. 2, s. 2004). The criteria used in the normative financing formula includes (i) the full-time equivalent enrollment in each program level and discipline, (ii) the number of graduates in each program level and discipline, (iii) measures of the SUCs' capability to undertake research, (iv) measures of SUCs' research outputs, (v) measures of SUCs' inputs to extension services, (vi) measures of SUCs' extension services outputs, (vii) measures of quality of teaching personnel, (viii) measures of quality of SUCs' graduates as proxied by their performance in licensure examinations, and (ix) number of the SUCs' colleges/ departments which are recognized as Centers of Excellence (COEs) or Centers of Developments (CODs).

This study evaluates the impact of the existing normative funding formula by assessing its success in achieving its avowed objectives as set out in the DBM-CHED Joint Circular No. 2, s. 2004. At this point, the assessment will focus on three major indicators: (i) shift in the distribution of SUCs enrollment and graduates across disciplines, (ii) improvement in the quality of instruction as proxied in the passing rate in the Licensure Examination for Teachers (LET), and (iii) increase in SUCs internally generated income.

The analysis below suggests that the impact of the implementation of the normative funding formula to date has been very limited. This may be attributed to a number of factors. First, as planned, the application of the normative funding formula (NFF) is gradual. In particular, the NFF was applied to 25% of the aggregate MOOE allocation in 2005, 50% in 2006 and 2007, 75% in 2008 and 100% from 2009 onwards. Second, the CHED decided to put a cap on the year-on-year changes in the MOOE allocation of individual SUCs that resulted from straight application of the NFF in order to soften the NFF-induced adjustments that SUCs have to deal in any one year. For instance, the caps were set in 2005-2008 such that the final MOOE allocation to individual SUCs in any given year will not decrease by more than 10% or increase by more than 20% relative to the previous year's level (**Table 23**). In other words, the reward on desirable behavior (and conversely, the penalty on undesirable behavior) arising from the NFF was diminished as a result of the caps. As a corollary, the caps effectively reduced the proportion of the aggregate SUCs MOOE that was subjected to the NFF. Third, the personal services component of NG subsidy to SUCs, which accounts for 83% of total NG subsidy as against MOOE's 13% share in 2003-2009) has yet to be subjected to NFF.

Table 23. Proportion of SUCs MOOE and total budget subjected to normative funding formula (NFF)

Particular	2005	2006	2007	2008	2009	2010
(in million pesos)						
Total SUC Budget	15,712	16,667	17,815	19,638	22,829	22,402
Total MOOE	2,242	2,242	2,247	2,855	3,619	3,904
Less: SUCs exempted from the application of NFF: UP System & PMMA	642	642	647	648	658	1,396
NET MOOE	1,600	1,600	1,600	2,207	2,961	2,508
MOOE subjected to NF	400	800	800	1,655	2,961	2,508
Percentage of MOOE subjected to NF	25%	50%	50%	75%	100%	1000%
Percentage of Total SUC budget subjected to NF	2.6%	4.8%	4.5%	8.4%	13.0%	11.2%
Capping	no > 10% decrease no > 20% increase	no > 10% decrease no > 20% increase	no > 10% decrease no > 20% increase	no > 10% decrease no > 20% increase	no > 10% decrease no > 10% increase	no > 10% increase

Source: CHED

5.1. Changes in Distribution of SUCs Enrollment and Graduates Across Disciplines

In allocating MOOE funds to SUCs, the CHED normative funding formula applies priority weights for each program level and discipline to full-time equivalent enrollment in addition to cost weights. The cost weight is basically an index that indicates how much more expensive it is to offer each program/ discipline relative to the BS Education program. For instance, if a specific program has a cost weight of 1.5, it means that said program is 50% more costly to provide than the BS Education program.

On the other hand, priority weights reflect the relative importance of various programs/ disciplines in promoting national development objectives. Under the formula, undergraduate enrollment in the following disciplines is assigned a priority weight of 1.25: natural science mathematics, engineering, IT-related disciplines, and agriculture. These disciplines are considered high-priority disciplines because they are assigned the highest priority weights. In contrast, undergraduate enrollment in the following disciplines is assigned a priority weight of 0.75: business administration and related disciplines, law and jurisprudence, and medical and allied sciences. These disciplines may be considered low-priority disciplines because they are assigned the lowest priority weights. On the other hand, undergraduate enrollment in the remaining disciplines is assigned a priority weight of 1. Thus, these disciplines may be considered as medium priority disciplines. In addition, enrollment in MS and PhD programs generally assigned weights that are higher than the corresponding undergraduate priority weights by 0.25 and 0.5, respectively.

Table 24 and **Table 25** present the evolution of the distribution of SUCs enrollment and graduates across disciplines. They document how SUCs enrollment and graduates in high and medium priority disciplines have been losing ground in relative terms even after the implementation of the normative funding formula in relative terms.

Table 24 shows that the proportion of high priority disciplines in total SUCs enrollment in the aggregate contracted from 27% in 2003 to 16% in 2010. The only field of study among the high priority disciplines that succeeded in bucking this trend is the IT-related disciplines. In like

manner, the share of medium priority disciplines in total SUCs enrollment dropped from 41% to 36% during the period.

In contrast, the share of low priority disciplines to total SUCs enrollment increased from 20% to 25%, largely on account of the increasing share in total SUCs enrollment of business administration and related disciplines. The shift in the composition of SUCs graduates across disciplines in 2002-2009 tells basically the same story (**Table 25**).

Table 24. Distribution of SUCs Enrollment, by Discipline, 2000-2009

Discipline Group	2003/04	2006/07	2007/08	2008/09	2009/10	2010/11
GENERAL	2.2	1.8	1.2	0.3	0.8	0.4
EDUCATION SCIENCE AND TEACHER TRAINI	25.0	21.2	20.7	19.5	19.3	20.0
FINE AND APPLIED ARTS	0.7	0.6	0.6	0.5	0.5	0.5
HUMANITIES	1.3	1.2	1.3	1.3	1.3	1.3
RELIGION AND THEOLOGY	0.0	0.0	0.0	0.0	0.0	0.0
SOCIAL AND BEHAVIORAL SCIENCES	3.5	2.9	3.3	3.2	2.9	3.0
BUSINESS ADMINISTRATION AND RELATED DISCIPLINES a/	15.0	18.3	19.7	20.2	21.3	21.4
LAW AND JURISPRUDENCE a/	0.9	0.3	0.3	0.4	0.3	0.3
NATURAL SCIENCE b/	2.0	2.0	1.9	1.8	1.7	1.6
MATHEMATICS b/	1.7	1.2	1.5	1.3	1.0	1.0
MEDICAL AND ALLIED SCIENCES a/	3.6	5.1	5.4	5.5	4.8	3.7
TRADE, CRAFT AND INDUSTRIAL	1.3	1.0	0.8	0.5	0.4	0.4
ENGINEERING b/	20.6	21.0	20.4	21.2	20.4	19.6
ARCHITECTURAL AND TOWN-PLANNING	1.6	1.0	0.9	0.8	0.8	0.9
AGRICULTURAL, FORESTRY, AND FISHERIES	8.6	6.8	5.8	6.0	5.5	5.3
HOME ECONOMICS	0.7	0.7	0.6	0.5	0.5	0.4
SERVICE TRADES	0.6	0.7	0.7	0.8	0.8	0.8
MASS COMMUNICATION AND DOCUMENTAT	1.1	1.1	1.1	1.2	1.1	1.1
OTHER DISCIPLINES	2.1	2.7	2.9	3.6	3.6	5.3
IT-RELATED b/	6.3	9.4	9.7	10.5	12.0	11.6
MARITIME	1.1	1.0	1.0	0.9	1.0	1.4
HIGH PRIORITY DISCIPLINES	26.6	21.6	19.9	19.8	16.8	15.9
MEDIUM PRIORITY DISCIPLINES	41.2	36.0	35.2	33.1	32.9	35.5
LOW-PRIORITY DISCIPLINES	19.5	23.7	25.4	26.1	26.5	25.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

a/ low-priority discipline
b/ high-priority discipline
Source of basic data: CHED MIS

Table 25. Distribution of SUCs Graduates, by Discipline, 2000-2009

Discipline Group	2002/03	2005/06	2006/07	2007/08	2008/09	2009/10
GENERAL	0.8	0.9	1.0	0.4	0.5	0.3
EDUCATION SCIENCE AND TEACHER TRAINI	27.8	24.2	23.9	22.5	20.1	18.2
FINE AND APPLIED ARTS	0.5	0.7	0.7	0.6	0.5	0.6
HUMANITIES	1.2	1.5	1.3	1.0	1.6	1.2
RELIGION AND THEOLOGY	0.0	0.0	0.0	0.0	0.0	0.0
SOCIAL AND BEHAVIORAL SCIENCES	3.7	3.1	2.9	3.1	3.3	3.0
BUSINESS ADMINISTRATION AND RELATED DISCIPLINES a/	14.7	16.0	17.9	17.9	20.1	21.6
LAW AND JURISPRUDENCE a/	0.7	0.3	0.3	0.2	0.2	0.2
NATURAL SCIENCE b/	1.8	1.8	1.7	1.7	1.8	1.6
MATHEMATICS b/	1.2	1.1	1.4	1.2	1.1	1.1
MEDICAL AND ALLIED SCIENCES a/	4.0	5.8	6.6	7.5	7.2	6.6
TRADE, CRAFT AND INDUSTRIAL	1.8	1.1	0.9	0.6	0.4	0.5
ENGINEERING b/	21.3	21.5	20.2	21.2	20.5	20.2
ARCHITECTURAL AND TOWN-PLANNING	1.1	0.8	0.7	0.6	0.6	0.6
AGRICULTURAL, FORESTRY, AND FISHERIES	8.8	9.0	8.1	6.4	6.3	5.6
HOME ECONOMICS	0.8	0.8	0.6	0.6	0.5	0.6
SERVICE TRADES	0.5	0.4	0.4	0.5	0.4	0.6
MASS COMMUNICATION AND DOCUMENTAT	1.2	1.0	1.1	1.1	1.1	1.1
OTHER DISCIPLINES	2.4	1.8	2.1	2.6	2.7	4.7
IT-RELATED b/	4.6	7.4	7.4	9.3	10.4	10.7
MARITIME	1.0	0.8	0.8	0.9	0.8	1.0
HIGH PRIORITY DISCIPLINES	28.5	26.1	24.0	21.3	19.2	17.8
MEDIUM PRIORITY DISCIPLINES	42.9	37.1	36.5	34.6	32.5	32.4
LOW-PRIORITY DISCIPLINES	19.5	22.1	24.8	25.6	27.5	28.4
Total	100.0	100.0	100.0	100.0	100.0	100.0

a/ low-priority discipline
b/ high-priority discipline
Source of basic data: CHED MIS

5.2. Quality of Instruction

The passing rate (or the ratio of the number of passers to the number of individuals taking a given licensure examination) is generally considered a good indicator of the quality of instruction provided by HEIs. At present, the Professional Regulatory Commission (PRC) administers written licensure examinations in 42 fields of study (Tan 2011).

In this study, we tracked the passing rate of examinees coming from SUCs in the Licensure Examinations for Teachers (LET) for the elementary and secondary level. The data shows that the advantage of the SUCs over other HEIs in the elementary LET appears to have been eroded over time as indicated by the declining SUCs passing rate-to-national passing rate ratio. On the other hand, SUCs have persistently underperformed other HEIs in 2004-2009 in the secondary LET. Although the movement in the passing rate in the LET for both the elementary and secondary levels of all SUCs combined is erratic in 2004-2009, the decline in the passing rate for both examinations in 2009 is quite significant: from 36% in 2008 to 29% in 2009 for elementary LET and from 32% to 27% in secondary LET (**Table 26**).

Table 26. LET Passing Rate for All SUCs in the Aggregate

	2004		2005		2006	
	Pass %	Nat'l Pass %	Pass %	Nat'l Pass %	Pass %	Nat'l Pass %
Elementary	35.62	26.95	35.34	27.55	37.21	29.28
Secondary	26.40	27.15	25.22	25.93	32.00	32.46
	2007		2008		2009	
	Pass %	Nat'l Pass %	Pass %	Nat'l Pass %	Pass %	Nat'l Pass %
Elementary	35.08	27.55	36.22	29.52	29.17	23.92
Secondary	28.23	29.12	32.31	33.12	26.83	26.84

Ratio of SUCs' passing rate to National Passing rate

	2004	2005	2006	2007	2008	2009
Elementary	1.32	1.28	1.27	1.27	1.23	1.01
Secondary	0.97	0.97	0.99	0.97	0.98	1.00

Source of basic data: CHED MIS

The national averages mask disparities across SUCs and closer scrutiny of the data indicates some bright spots. **Table 27** shows that the number of SUCs with zero passing rates in the LET has been reduced between 2004 and 2009. It also shows that 42% of SUCs posted some improvement in their elementary LET passing rate between 2004 and 2009. The comparative figure for the secondary LET is 67%. In like manner, some 64% of all SUCs registered some improvement in their overall passing rate (i.e., passing rate taking all licensure examinations combined).

Table 27. Additional metrics for LET passing rate

	2009		2004	
	Elem	Sec	Elem	Sec
Mean	29.1	26.8	35.6	26.4
St. dev.	17.7	15.2	22.6	15.0
Coef. of var.	0.6	0.6	0.6	0.6
Max	100.0	95.5	100.0	97.7
Min	0	0	0	0
# of SUCs with zero pass rate	5	2	11	3
SUCs showing improvement in 2009 over 2004				
Number	42	72		
% of total	42.0	66.7		

Source of basic data: CHED MIS

5.3. Increasing Reliance on Internally Generated Income

The application of the normative funding formula and the policy allowing SUCs to retain and use their income has clearly resulted in the SUCs' greater reliance on internally generated income. This point has already been discussed at some length in **Sub-section 4.1** and summarized once again with a slightly different perspective in **Table 28** below.

While SUCs of all sizes increasingly became less dependent on NG subsidies after the implementation of the NFF, the smaller-sized SUCs (i.e., SUCs with relatively smaller enrollment) have shown a greater propensity to increase internally generated income on a per student basis as indicated by the growth in their internally generated income between 2003 and 2009. To wit, the internally generated income per student of small-sized and medium-sized SUCs grew by 21% and 20% yearly on the average during the period while that of large-sized SUCs increased by 12% (**Table 28**).

Nonetheless, large-sized SUCs continue to be less dependent on the support of the national government than the smaller-sized SUCs. Thus, the share of internally generated income in total SUCs receipts of large-sized SUCs expanded from 20% in 2003 to 31% in 2009 while that of small-sized SUCs increased from 11% to 24% and that of medium-sized SUCs went up from 15% 5o 28%. Consequently, the gap in per student internally generated income of SUCs of different sizes has narrowed. In specific terms, the per student internally generated income of large-sized SUCs was 87% higher than their small-sized counterparts in 2003. In comparison, the per student internally generated income of large-sized SUCs was only 20% higher than that of small-sized SUCs in 2009.

Put another way, large-sized SUCs continue to have a slight advantage in generating income on their own on a per student basis than smaller-sized SUCs. In contrast, smaller-sized SUCs get significantly larger support from the national government relative to their large-sized counterparts. In particular, the per student NG subsidy that the average small-sized SUC receives is 20% higher than that of the average large-sized SUC in 2009.

Table 28. Per student SUCs receipts by funding source, by size of SUCs

	2009			2003		
	Total receipts	Internally generated income	NG subsidy	Total receipts	Internally generated income	NG subsidy
Levels (in pesos)						
Small	43,843	10,677	33,166	30,393	3,373	27,020
Medium	39,931	11,293	28,638	25,326	3,767	21,559
Large	40,895	12,781	28,114	31,383	6,324	25,059
All	40,974	12,211	28,764	29,647	5,285	24,362
Percent distribution						
Small	100.0	24.4	75.6	100.0	11.1	88.9
Medium	100.0	28.3	71.7	100.0	14.9	85.1
Large	100.0	31.3	68.7	100.0	20.2	79.8
All	100.0	29.8	70.2	100.0	17.8	82.2
Growth rate						
Small	6.3	21.2	3.5			
Medium	7.9	20.1	4.8			
Large	4.5	12.4	1.9			
All	5.5	15.0	2.8			

Note: small SUCs are those with enrollment of 4,500 or less; medium size SUCs are those with enrollment equal to or greater than 4,500 but less than 8,000 and large SUCs are those with enrollment equal to or greater than 8,000

Understanding the drivers of SUCs' internally generated income. In order to better understand what drives SUCs' internally generated income we looked at its different components and regressed them against plausible explanatory variables like poverty incidence (as a proxy for ability to pay of households in SUCs' catchment area), size of SUCs, and enrollment size.

SUCs income from students

While per student SUCs receipts from tuition fees is found to be negatively associated with poverty incidence in the SUCs' geographical catchment area (as a proxy for ability to pay), said relationship is not statistically significant (**Table 29**). The same is true of the relationship between per student receipts from other income from students and per student total income from students, on the one hand, and poverty incidence, on the other. These results suggest that per student SUCs receipts from school fees is not related with ability to pay of households. Together with the low overall level of schools fees, this finding tends to indicate some scope for SUCs to increase tuition and other school fees.

It is interesting to note that size of SUCs appear to have a statistically significant impact on per student income from tuition. Specifically, the coefficients of the dummy variable for large-sized and medium-sized SUCs are positive and statistically significant. However, no relationship between size of SUCs and per student other income from students is apparent from the analysis.

SUCs income from IGPs

The explanatory variables for per student SUCs income from IGPs that were considered for this study include: poverty incidence (as a proxy of ability to pay of the households in the geographical catchment area of the SUC), the size of the SUC landholdings (as a measure of income creating asset base that is available to many SUCs) and size of SUC in terms of enrollment. Contrary to initial expectations, per student total SUCs income from IGPs (as well as both of its components) does not exhibit a not statistically significant relationship with the size of their landholdings (**Table 30**). This finding suggests that ownership of assets is not a sufficient condition for the SUCs' success in mobilizing income from IGPs takes more than ownership of assets. It also indicates the need to build capacity in business planning and management in the SUCs leadership.

Table 29. Coefficients of alternative explanatory variables for per student SUCs income from students

	poverty incidence	Dummy var D2 =1; Large SUCs	Dummy var D1=1; Medium SUCs	enrollment	constant
Per student income from tuition	-15.72	1,251.90	959.57		4,152.12
	-0.90	2.47 **	1.95 *		7.46 **
Per student income from tuition		1,380.55	916.11		3,746.98
		2.85 **	1.87 *		11.40 **
Per student income from tuition	-23.66				5,036.74
	-1.43				11.22 **
Per student income from tuition	-17.03			0.03	4,661.15
	-0.96			1.02	8.04 **
Per student other inc from students	1.79	732.27	29.17		2277.10
	0.11	1.53	0.06		4.33 **
Per student other inc from students		717.64	34.12		2323.20
		1.57	0.07		7.51 **
Per student other inc from students	-7.66				2745.84
	-0.50				6.61 **
Per student other inc from students	-5.33			0.01	2613.72
	-0.32			0.39	4.85 **
Per student total income from students	-13.93	1984.17	988.75		6429.22
	-0.54	2.66 **	1.37		7.85 **
Per student total income from students		2098.18	950.23		6070.18
		2.95 **	1.32		12.57 **
Per student total income from students	-31.32				7782.58
	-1.28				11.78 **
Per student total income from students	-22.36			0.04	7274.87
	-0.85			0.94	8.52 **

Note: first number refers to coefficient, number below it refers to t-statistic; ** indicates 1% level of significance.; * indicates 5% level of significance

In like manner, the size of SUC enrollment is not found to be a good explanatory variable for per student SUC income from IGPs (and its components). This is in sharp contrast to the case of per student SUC income from students.

On the other hand, per student total SUCs income from IGPs and per student SUCs income from other sources (but not per student SUCs income accruing to the revolving fund) were found to have a negative and statistically significant relationship with poverty incidence (Table 30). These results suggest that SUCs income from IGPs is largely dependent on the domestic demand or size of the domestic market (as proxied in a negative fashion by poverty incidence).

Table 30. Coefficients of alternative explanatory variables for per student SUCs income from IGPs

	poverty incidence	size of landholdings	Dummy var D2 =1; Large SUCs	Dummy var D1=1; Medium SUCs	enrollment	constant
per student inc accruing to revolving fund	-16.276					1,429.683
	-0.924					3.001 **
per student inc accruing to revolving fund	-17.397	-0.001				1,467.152
	-0.975	-0.451				3.023 **
per student inc accruing to revolving fund	-12.911	-0.001			0.019	1,211.614
	-0.674	-0.469			0.656	1.944 *
per student inc accruing to revolving fund	-27.309	-0.001	-336.838	634.595		1,614.008
	-1.437	-0.337	-0.609	1.187		2.661
per student SUC income from other sources	-56.379					2,765.556
	-2.008 *					3.642 **
per student SUC income from other sources	-59.035	-0.002				2,854.236
	-2.077 *	-0.671				3.693 **
per student SUC income from other sources	-58.738	-0.002			0.001	2,837.353
	-1.921 *	-0.668			0.027	2.853 **
per student SUC income from other sources	-64.559	-0.002	-626.357	-277.285		3,268.906
	-2.110 *	-0.592	-0.704	-0.322		3.347 **
per student total SUC f income from IGPs	-72.655					4,195.238
	-2.111 *					4.507 **
per student total SUC f income from IGPs	-76.432	-0.004				4,321.377
	-2.195 *	-0.779				4.565 **
per student total SUC f income from IGPs	-71.649	-0.004			0.020	4,048.967
	-1.914 *	-0.786			0.358	3.326
per student total SUC f income from IGPs	-91.867	-0.003	-963.195	357.310		4,882.915
	-2.462 **	-0.657	-0.887	0.340		4.099 **

Note: first number refers to coefficient, number below it refers to t-statistic; ** indicates 1% level of significance.; * indicates 5% level of significance

6. EFFICIENCY AND QUALITY ISSUES

In this section, we explore some efficiency and quality issues in order to further inform the discussion on future reforms in the SUCs sector.

6.1. Cost Efficiency

An analysis of the major cost drivers of SUCs provision of higher education indicates that there are economies of scale in the SUC sector that can be harnessed. Also, the multiplicity of program offerings amongst SUCs is found to push SUCs' per student cost upwards. The number or the proportion of faculty members who are MS/ PhD degree holders are likewise found to have a significant influence on per student costs. In contrast, the analysis also reveals that the number of satellite campuses and the size of SUCs enrollment in MS/ PhD programs are not good determinants of per student costs.

In this study, the following possible determinants of per student cost (or per student SUC expenditure) were considered: total enrollment (or alternatively, BS/ AB enrollment and MS/ PhD enrollment), total number of faculty (or alternatively, number of faculty with BS/ AB degree and number of faculty with MS/ PhD degree), number of program offerings, number of satellite campuses, and dummies to represent size of the SUC.[3] The descriptive statistics of these variables are presented in **Table 31**.

Table 31. Descriptive statistics for per student cost and explanatory variables

	Mean	Standard deviation	minimum value	maximum value
per student cost	36,007	28,084	11,884	218,282
total enrollment	8,150	8,463	369	56,673
BS/ AB enrollment	7,718	7,853	369	54,284
MS/ PhD enrollment	432	935	0	8,462
student-faculty ratio	23	12	8	102
total no. of faculty	372	425	18	3,495
faculty with BS/ AB	193	210	7	1,403
Faculty with MS/PhD	180	235	0	2,092
ratio of faculty with MS/PhD	0.49	0.17	0.00	0.93
no. of programs	77	63	8	489
no. of satellite campuses	3	4	0	20

The analysis reveals a negative and statistically significant relationship between per student cost, on the one hand, and total number of higher education students (or alternatively, enrollment in undergraduate programs[4]), on the other, suggesting economies of scale (**Table 32**).

[3] For purposes of this exercise, SUCs are classified as small (those with enrollment of 4,500 or less), medium (those with enrollment with enrollment between 4,500 and 8,000) and large (those with enrollment greater than 8,000).

[4] Enrollment in MS/ PhD programs is not found to have a statistically significant relationship with per student cost, perhaps because of the relatively small number of enrollment in graduate programs (**Table 32**).

Dummy variables that represent the size of SUCs were considered as possible explanatory variables of per student cost in lieu of the absolute enrollment size. Again, the analysis confirms the existence of economies of scale as indicated by the negative and statistically significant coefficients for the two dummy variables representing medium-sized and large-sized SUCs.

Table 32. Coefficients of alternative explanatory variables for SUC per student cost function

	(1)	(2)	(3)	(4)	(5)	(6)	(7)
total no. of students	-2.41	-2.69			-2.63	-2.36	
	-3.81 **	-4.60 **			-4.57 **	-4.10 **	
BS/ AB enrollment			-2.37	-2.36			
			-3.82 **	-4.06 **			
MS/ PhD enrollment			-1.95	-1.99			
			-0.32	-0.34			
total no. of faculty	43.15	44.92			46.74		
	3.22 **	3.37 **			3.56 **		
BS/ AB faculty			-10.75	-10.48		-10.69	-22.11
			-0.43	-0.44		-0.45	-1.00
MS/ PhD faculty			93.36	93.18		94.64	43.34
			2.89 **	2.93 **		4.34 **	1.95 *
Student-faculty ratio							
MS/ PHD faculty ratio			93.36		29318.61		
			-0.32		2.07 **		
No. of programs	168.74	170.47	119.76	120.08	150.66	120.47	209.18
	2.67 **	2.70 **	1.84 *	1.87 *	2.39 **	1.89 *	3.00 **
No. of satellite campuses	-808.39		29.55				
	-1.14		0.04				
Dummy 1; medium SUC=1							-12793.50
							-2.12 *
Dummy 2; large SUC=1							-33621.96
							-4.20 **
constant	29370.89	28058.15	31092.27	31110.71	14004.72	31040.52	31347.46
	7.22 **	7.18 **	7.50 **	7.60 **	1.79 *	7.92 **	7.21 **
R-squared	0.28	0.27	0.33	0.33	0.30	0.33	0.34

Note: first number refers to coefficient, number below it refers to t-statistic; ** indicates 1% level of significance.; * indicates 5% level of significance

Contrary to initial expectations, the number of satellite campuses is not found to be a good explanatory variable for per student cost. In combination with the results with respect to enrollment and SUC size, this finding supports calls for the consolidation/ merger of some SUCs. The analysis also confirms *a priori* expectations that too many program offerings tend to increase the cost of SUC operations on a per student basis. Note the positive coefficient and the statistically significant coefficient for this variable (**Table 32**).

Finally, given their higher pay, it is not surprising that the number of faculty with MS/ PhD degrees have a positive impact on per student cost. However, the results of the drivers of the quality of education that is discussed in the following sub-section suggest that this is money that is well spent.

6.2. Quality of Education

An analysis of the determinants of the quality of education provided by SUCs (as proxied by the LET passing rate) reveals that the number of faculty with MS/ PhD degrees and the number of Centers of Developments (CODs) both have positive and statistically significant relationship with the LET passing rate (**Table 33**). Surprisingly, per student cost is not found to have statistically significant influence on the LET passing rate. This result suggests that there is some scope for reducing per student cost without necessarily affecting the quality of education provided by SUCs. Related to this, recall the fairly high share of SUCs spending on general administrative services that is documented in **Table 20.**

Table 33. Coefficients of alternative explanatory variables for LET passing rate

	(1)	(2)	(3)	(4)
faculty with BS/ AB	0.008	0.005		
	0.761	0.440		
faculty with MS/ PhD	0.007	0.018	0.015	0.016
	0.503	1.661 *	1.755	1.789 *
no. of COD	4.220	5.418	4.110	3.993
	2.035 *	2.958 **	1.991 *	1.947 *
no. of COE	1.369		1.075	1.313
	1.093		0.904	1.160
per student cost	0.000		0.000	
	0.594		0.667	
constant	20.587	20.809	20.696	22.090
	7.532 **	12.875 **	7.599 **	12.690 **
R squared	0.376	0.362	0.372	0.369

Note: first number refers to coefficient, number below it refers to t-statistic; ** indicates 1% level of significance.; * indicates 5% level of significance

7. UTILIZATION OF THE HIGHER EDUCATION DEVELOPMENT FUND

The HEDF is a fund earmarked exclusively for the strengthening of higher education in the country. It consists of a seed capital of PhP 500 million from the national government upon its creation, the equivalent of 40% annual share in the total gross collections of the travel tax, the equivalent 30% annual share of the collections from the Professional Registration Fee, and the equivalent 1% of the gross sales of the lotto operation of the Philippine Charity Sweepstakes Office (PCSO). In turn, the HEDF is used for student financial assistance/ scholarships, research development, institutional development (including faculty development), and support of COEs and CODs in both the public and private sectors.

HEDF spending rose from an average of PhP 220 million a year in 1995-2001 to PhP 430 million per year in 2002-2005 and PhP 742 million in 2006-2010 (**Table 34**). Various student assistance and scholarship programs capture the biggest share in the HEDF. Their share in total HEDF spending increased from 35% in 1995-2001 to 70% in 2002-2005 before settling at 65%

in 2006-2010. In 2006-2010, faculty development has the second biggest share in the HEDF (14%). In contrast, allocation to Centers of Excellence and Centers of Development (COEs/ CODs) was the second most important spending item in the HEDF in 1995-2005. However, spending on COEs/ CODs practically dried up to nil in 2006-2010. This is unfortunate considering that the COE/ COD program is envisioned to support identified COEs/ CODs which are supposed to serve as models of excellence and resource centers for other HEIs.

Table 34. Utilization of the HEDF (in million pesos)

	1995-2010	1995-2001	2002-2005	2006-2010	2006	2007	2008	2009	2010
Levels (in million pesos)									
Scholarship	3,863	500	1,207	2,156	815	492	252	472	126
COE/COD	832	650	163	20	5	-	-	-	15
Faculty Dev.	631	102	51	477	135	130	143	70	-
Research	404	52	93	260	74	55	19	86	26
Other Prog.	58	50	7	-					
Rationalization of Programs, Standards, and Guidelines	701	77	200	424	127	99	63	101	33
Total	6,490	1,431	1,722	3,337	1,156	776	477	729	200
Percent distribution									
Scholarship	59.5	35.0	70.1	64.6	70.5	63.4	52.7	64.8	62.9
COE/COD	12.8	45.4	9.5	0.6	0.4	0.0	0.0	0.0	7.7
Faculty Dev.	9.7	7.2	3.0	14.3	11.7	16.7	29.9	9.6	0.0
Research	6.2	3.6	5.4	7.8	6.4	7.1	4.1	11.7	13.0
Other Prog.	0.9	3.5	0.4	0.0	0.0	0.0	0.0	0.0	0.0
Rationalization of Programs, Standards, and Guidelines	10.8	5.4	11.6	12.7	11.0	12.8	13.3	13.9	16.4
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Source of basic data: CHED

On the other hand, spending on rationalization of programs, standards and guidelines accounted for 13% of total HEDF spending in 2006-2010. The share of this spending item rose from 5% in 1995-2001 to 12% in 2002-2005. In comparison, the share of research in the HEDF is fairly stable and low – 4% in 1995-2001, 5% in 2002-2005 and 8% in 2006-2010.

Because of time and resource constraints, this study is not able to analyze in greater detail the effectiveness of HEDF spending on various activities. This is an area that should be further studied in the future. However, the discussion above regarding the determinants of the passing rate in licensure examinations suggests that the use of the HEDF for faculty development is money well spent.

Low utilization rate. The utilization rate of HEDF is lackluster. It deteriorated from 89% in 2007 to 31% in 2008. It then improved somewhat to 57% in 2009 before falling to 16% in 2010. CHED officials aver that said problem arise because many grantees/ awardees (e.g., COEs and

CODs) are not able to liquidate the financial support that they receive from the HEDF in a timely manner. In the future, efforts to streamline the actual release of financial assistance to grantees and awardees should be undertaken, perhaps in the context of strengthening the processes leading to the selection and awarding of grants so as to possibly do away with the liquidation process. Alternatively, the financial assistance may be viewed as grants that are awarded on the basis of well-defined criteria or conditions that they have already complied with prior to the award rather than conditional on the awardees carrying out specific activities after the award.

Table 35. Actual earmarked income accruing to vs actual utilization of HEDF

	2007	2008	2009	2010	2007-2010
(in millions)					
Collections a/	871	1,565	1,290	1,290	5,016
Utilization b/	776	477	729	200	2,182
Balance	95	1,088	561	1,090	2,834
Utilization rate (%)	89.1	30.5	56.5	15.5	43.5

a/ from BESF
b/ from CHED

Public-private subdivision. Some sectors have raised the concern that HEDF spending is skewed in favor of private HEIs. However, closer scrutiny of the data reveals that HEDF spending (outside of the portion spent on scholarship and student assistance) is almost evenly divided between the public and private sectors, with the former have a slight edge (**Table 36**). While about 59% of faculty development disbursements were on account of the private sector, 72% of HEDF spending on research went to the public sector in 2006-2010.

HEDF support for private HEIs is not a bad idea *per se*. The downward trend in the HEI enrollment in private HEIs that is evident in **Table 1** is a cause of concern. It highlights the need for national government support to private HEIs. However, the effectiveness of current HEDF activities in providing the support needed by private HEIs is another matter.

Scholarships and student financial assistance. The CHED administers three types of student financial assistance programs (STUFAPs) for poor but deserving students: scholarships, grants-in-aid and student loan program (the Study Now Pay Later Plan). The scholarship program is composed of the Full Scholarship Program and the Half Scholarship Program. In turn, the Full Scholarship Program includes the State Scholarship Program (SSP), the National Scholarship Program and the Bright Mindanaoan Muslims Program.[5] Meanwhile, the Half Scholarship Program includes the Private Education Student Financial Assistance Program (PESFA),[6] Scholarship for Persons with Disability (PWD), and the Regional Scholarship Program.

[5] The Bright Mindanaoan Muslims Program is available to the cream of Filipino Muslim students of Mindanao who intend to pursue college education in the fields of Agriculture, Social Sciences, Agribusiness, Science and Technology, Engineering and Teacher Education major in Mathematics, Science or Languages.

[6] The PESFA was established under Republic Act 6728 (GASTPE Law) and is intended for poor but academically bright students.

Table 36. Share of public and private HEIs in HEDF a/

	1995-2010	1995-2001	2002-2005	2006-2010	2006	2007	2008	2009	2010	1995-2010	1995-2001	2002-2005	2006-2010	2006	2007	2008	2009	2010
Levels (in million pesos)																		
PUBLIC HEIs										**Share of Public HEIs (%)**								
COE/COD	404.5	313.9	80.7	9.9	4.5	0.0	0.0	0.0	5.4	48.6	48.3	49.4	50.1	100.0				35.5
Faculty Dev.	280.9	95.2	15.3	170.4	27.1	75.1	39.1	29.1	0.0	49.9	92.9	31.0	41.4	31.7	59.1	30.3	41.8	
Research	130.0	0.0	14.5	115.5	40.9	30.0	8.0	24.6	12.0	74.1		100.0	71.8	83.9	77.7	62.4	61.3	58.2
Other Prog.	1.2	1.0	0.2	0.0						13.2	12.7	15.8						
Rationalization of Programs, Standards, and Guidelines	64.8	0.0	17.7	47.1	10.7	19.3	7.8	9.3	0.0	73.2		100.0	66.5	57.4	79.4	64.3	59.3	
Grand Total	881.4	410.2	128.4	342.9	83.2	124.4	54.8	63.0	17.5	52.8	54.0	52.2	51.8	52.9	65.5	35.6	50.2	48.5
PRIVATE HEIs										**Share of Private HEIs (%)**								
COE/COD	428.2	335.7	82.5	9.9	0.0	0.0	0.0	0.0	9.9	51.4	51.7	50.6	49.9	0.0				64.5
Faculty Dev.	282.0	7.3	34.0	240.7	58.2	51.9	90.1	40.6	0.0	50.1	7.1	69.0	58.6	68.3	40.9	69.7	58.2	
Research	45.3	0.0	0.0	45.3	7.8	8.6	4.8	15.5	8.6	25.9		0.0	28.2	16.1	22.3	37.6	38.7	41.8
Other Prog.	8.0	6.9	1.2	0.0						86.8	87.3	84.2						
Rationalization of Programs, Standards, and Guidelines	23.7	0.0	0.0	23.7	8.0	5.0	4.3	6.4	0.0	26.8		0.0	33.5	42.6	20.6	35.7	40.7	
Grand Total	787.3	349.9	117.8	319.6	74.0	65.5	99.2	62.5	18.5	47.2	46.0	47.8	48.2	47.1	34.5	64.4	49.8	51.5
ALL HEIs																		
COE/COD	832.7	649.7	163.2	19.8	4.5	0.0	0.0	0.0	15.3									
Faculty Dev.	562.9	102.5	49.3	411.1	85.3	127.0	129.2	69.6	0.0									
Research	175.3	0.0	14.5	160.8	48.7	38.6	12.7	40.1	20.7									
Other Prog.	9.3	7.9	1.4	0.0														
Rationalization of Programs, Standards, and Guidelines	88.5	0.0	17.7	70.7	18.7	24.3	12.1	15.7	0.0									
Grand Total	1668.7	760.0	246.2	662.5	157.2	189.9	154.0	125.5	36.0									

a/ No breakdown of the amount spent on scholarship is available.

On the other hand, the grants-in-aid (GIA) program includes the Tulong Dunong Program, DND-CHED-PASUC Scholarship Program, OPPAP-CHED Study Grant Program for Rebel Returnees, CHED Special Study Grant Program for Congressional Districts, and CHED Senate Study Grant Program. In turn, the Tulong Dunong Program has the following components: Study Grant for Indigenous and Ethnic Peoples (SGP-IEPs),[7] and Study Grant for Solo Parents and their Dependents.

To qualify for the scholarship, grants-in-aid and student loan programs, the applicant must satisfy the following requirement:

- Must be a Filipino of good moral character;
- Must be a high school graduate;
- Must be an entering freshman and/ or college student in any curriculum year level;
- Must not be more than 30 years of age at the time of the application except in the case of CHED-OPPAPP-SGPRR;
- Must have at least 80% general weighted average (GWA) based on the Form 138 and a general scholastic aptitude (GSA) of the National Career Assessment Examination (NCAE) as follows:
    - At least 90% - full merit scholarship;
    - 85%-89% - half merit scholarship
    - 80%-84% - grants-in-aid and student loan program
- Combined annual gross income of parents/ guardians not to exceed PhP 300,000;
- Must not have availed of any government scholarship or grant; and
- For student borrower:
    - Must enter into a loan agreement with the CHED Regional Office; and
    - Must have a co-borrower who is a member of SSS/GSIS in good standing (i.e. at least paying contribution for 6 months in the last 12 months).

Full scholars receive financial assistance equal to PhP 15,000 per semester while half scholars get PhP 7,500 per semester. On the other hand, students who qualify under the Study Now Pay Later are entitled to borrow PhP 7,500 per semester.

Creditably, the total number of beneficiaries of CHED-administered student financial assistance programs almost doubled between 2001 and 2009 (**Table 37**). However, the number of grantees tended to fluctuate erratically during the period. For instance, the number of STUFAPs beneficiaries fell by 27% in 2010 after increasing by 79% and 5% in 2008 and 2009, respectively.

The bulk of beneficiaries of CHED STUFAPs belong to the grants-in-aid program (**Table 38**). However, the percentage of STUFAP beneficiaries belonging to the grants-in-aid program declined from 81% in 2008 to 72% in 2009 and 64% in 2010. In contrast, the percentage of STUFAP beneficiaries granted merit scholarships rose from 17% in 2008 to 20% in 2009 and 27% in 2010.

[7] SGP-IEPs combined the former National Integration Study Grant and the former Selected Ethnic Group Education Assistance (SEGEAP).

Despite its rapid growth in 2008-2009, the total number of STUFAP beneficiaries remains small when reckoned relative to the total number of poor HEI students.[8] For instance, the total number of STUFAP grantees is equivalent to 25% of the total number of poor HEI students in 2008, 26% in 2009 and 18% in 2010. On the other hand, the total number of grants-in-aid beneficiaries is equivalent to 20% of total number of poor HEI students in 2008, 19% in 2009 and 12% in 2010.

Table 37. Total number of grantees of CHED scholarships and student financila assistance programs,

Academic Year	No. of grantees	Financial benefits (PhP million)
2001-2002	39,621	428
2002-2003	41,604	432
2003-2004	57,866	606
2004-2005	47,004	495
2005-2006	47,863	481
2006-2007	49,016	500
2007-2008	40,692	441
2008-2009	72,775	604
2009-2010	76,619	751
2010-2011	56,095	847
Total	**529,155**	**5,585**

Source: OSS, CHED

Table 38. Number of beneficiaries in CHED student financial assistance programs

	2008-2009	2009-2010	2010-2011
Scholarships	12,622	15,249	15,098
Grants-In-Aid	58,553	54,994	35,649
Student Loan	1,600	6,376	5,348
Total	**72,775**	**76,619**	**56,095**
Percent Distribution			
Scholarships	17.3	19.9	26.9
Grants-In-Aid	80.5	71.8	63.6
Student Loan	2.2	8.3	9.5
Total	100.0	100.0	100.0

Source: CHED

STUFAPs are funded from two sources: the HEDF and the General Appropriations Act (GAA). The HEDF contributed 42% and 63% of the total CHED spending on STUFAPs in 2008 and 2009, respectively (**Table 39**). However, funding of the STUFAPs is shifted to the GAA starting in 2010. Thus, the HEDF share in total STUFAP spending fell to 15% in 2010.

[8] The total number of poor HEI students is estimated by applying the percentage of poor students at the tertiary level based on 2007 Annual Poverty Indicator Survey.

Assessment. The STUFAPs are highly fragmented. The scholarship program and the grants-in-aid program consist of numerous programs, many of which have low coverage individually. However, there is current initiative to streamline these programs.

The grants-in-aid programs are badly targeted. First, the household income cut-off for the STUFAP grants-in-aid program at PhP 300,000 per year is high, roughly 3.5 times as high as the poverty income threshold for 2009. Although means tested, the GIA programs make use of the income tax returns of the parents/ guardians of the grantees. The income tax return may not be the best means of verifying the income status of beneficiaries, given the degree of tax compliance of non-wage earners. Because of the difficulties involved in verifying family, the STUFAP should consider the use of a proxy means test. In this regard, two examples it may wish to consider are the Socialized Tuition and Financial Assistance Program (STFAP) of the University of the Philippines and the National Household Targeting System for Poverty Reduction of the DSWD.

When the University of the Philippines first implemented the STFAP, it made use of a proxy means test based on electricity consumption. More recently, the proxy means test used by UP is based on the general vicinity of the student's residence, among other variables. Likewise, the National Household Targeting System for Poverty Reduction (NHTS-PR) makes the use of a proxy means test to identify poor families based on data on certain family characteristics (like size of family, age of children, employment status of household head, and basic amenities available in the household) that are collected in a household survey.

On the other hand, the benefit level provided to GIA grantees at PhP 7,500 per year is just about equal to the average school fee (tuition plus miscellaneous fee) in SUCs. Ideally, the benefit should also cover the cost of living.

Finally, there might a need to revisit initiatives to fund the STUFAPs from the GAA instead of the HEDF, especially the reliance on PDAF of legislators and Congressional initiative. This practice not only tends to make funding unpredictable but also tends to make the selection of beneficiaries vulnerable to political intervention.

Table 39. Source of funding of CHED spending on STUFAPs (in million pesos)

	2008	2009	2010
HEDF	252	472	126
GAA a/	352	278	721
Total spending	604	751	847
Percent distribution			
HEDF	41.6	62.9	14.8
GAA a/	58.4	37.1	85.2
Total spending	100.0	100.0	100.0

a/ derived as residual

Source: CHED

8. RECOMMENDATIONS

What is the role of government in financing higher education? Graduates of higher education institutions do internalize a significant portion of the benefits of higher education schooling in the form of higher income stream in the future. Given this, it is but proper that graduates of higher education should contribute to the cost of their degree (Barr 2009). Thus, it is often argued that large private benefits accruing to higher education graduates justify the collection of fees/ user charges and some form of cost recovery even in public HEIs. However, equity concerns dictate the expansion of financial aid programs to needy students as well as student loan programs to provide bridge financing to students and their families.

On the other hand, higher education has a public good element that creates benefits to society that go beyond the income and employment gains accruing to individual graduates. In particular, universities play an important role in driving innovation that is so essential for economic development in a knowledge-driven world. First, countries need a critical mass of high-quality higher education graduates to compete internationally (Barr 2009). Second, research done in universities contributes to the creation, dissemination and application of knowledge. Third, higher education is said "to promote nation building through its contributions to increased social cohesion, trust in social institutions, democratic participation and open debate, and appreciation of diversity in gender, ethnicity, religion, and social class" (World Bank 2002). For all these reasons, some national government subsidy to higher education is justified.

The following recommendations are drawn directly from the analysis in the foregoing sections and are guided by the financing framework described above. Most of these recommendations are not new, similar proposals have been made by other analysts as well.

1. In the near term, this study recommends that the application of the normative funding formula be expanded to include not just the allocation for MOOE but also the allocation for personal services of SUCs. The application of the normative funding formula to personal services may have to be gradual but its implementation may be promoted by the pooling of vacated permanent positions (as a result of natural attrition) and the reallocation of such positions to other SUCs. Also, the current practice of capping the implied changes in the allocation under the NFF should be stopped.

2. In the near term, this study recommends the updating of the parameters used in the normative funding formula. In doing so, the CHED should explore the possibility of being more selective in their choice of priority programs.

3. There is a need to improve the mechanisms for public financing of research in universities, an important public good produced in higher education institution. It is not quite clear that normative funding formula has been a good vehicle in this regard given the difficulties in measuring research outputs.

4. This study recommends that SUCs be encouraged to charge socialized tuition fees following the example of the University of the Philippines (UP) to further improve their

self reliance. UP has a six-tiered school fee structure. Bracket A students (i.e., those whose family income is more than PhP 1 million annually) are required to pay full-cost tuition fee (equal to PhP 1,500 per unit), and full miscellaneous and laboratory fees. Bracket B students (i.e., those whose family income is between PhP 500,000 and PhP 1 million per year) are required to pay base tuition fee (equal to PhP 1,000 per unit) and full miscellaneous and laboratory fees. On the other hand, Bracket C students (i.e., those whose families have annual income is between Php 250.000 and PhP 500,000) and Bracket D students (i.e., those whose annual family income is between PhP 135,000 and PhP 250,000) get 40% and 70% discount on base tuition fee, respectively, but are still required to pay full miscellaneous and laboratory fees. However, Bracket E1 students (i.e., those whose annual family income is between PhP 80,000 and PhP 135,000) are entitled to a 100% discount on tuition, miscellaneous and laboratory fees while Bracket E2 students (i.e., those annual family income is PhP 80,000 or less) are entitled to a stipend of PhP 12,000 per semester in addition to free tuition, miscellaneous and laboratory fees. In this regard, CHED should assist SUCs in developing a reliable proxy means test that will help them better identify needy students.

5. This study recommends that a program to assist SUCs in the management of their IGPs be developed so as limit their dependence on NG subsidies.

6. In the near term, this study recommends the reduction in the number of programs offered by SUCs. The analysis conducted as part of this study reveals that the number of programs is a major driver of per student SUC cost.

7. Given the diseconomies of scale that is evident among SUCs, this study support proposals for the amalgamation of SUCs through the establishment of regional university systems. Doing so might be made a little easier by the fact that the number of satellite campuses is not found to be an important determinant of per student SUC cost.

8. The analysis made in this study also supports the expansion of the CHED faculty development program. Note that the PRC passing rate in SUCs is correlated with the number of MS/ PhD faculty.

9. This study recommends the expansion of the STUFAPs. This will not only improve equity. It will also provide support to private HEIs, especially if the benefit level is increased to more realistic levels.

10. However, there is a need to improve the targeting system used in selecting beneficiaries of the STUFAPs. The CHED should explore the use of the NHTS-PR in targeting beneficiaries.

11. There is also a need to revisit the move to rely more on the GAA (especially PDAF of legislators and Congressional initiatives) rather than the HEDF in funding the STUFAPs. This practice not only tends to make funding uncertain and unstable but also tends to make the selection of beneficiaries vulnerable to political intervention.

12. In the medium term, there is a need to increase the benefit level of the STUFAPs to include cost of living. The low benefit level tends to discriminate against very poor students who cannot afford the indirect cost of attending college.

13. In the medium term (after some expansion of the STUFAPs is achieved), this study recommends shifting of NG funding for HEIs from subsidies to SUCs toward direct subsidies to students. This will help improve the viability of private HEIs, increase competition among HEIs (both public and private) and improve quality of HEIs all around.

14. This study support moves to harmonize the program offerings of public and private HEIs to level the playing field and minimize the migration of students to public HEIs.

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