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Are Higher Education Institutions Responsive to Changes in the Labor Market?

Aniceto C. Orbeta Jr., Kathrina G. Gonzales, and Sol Francesca S. Cortes

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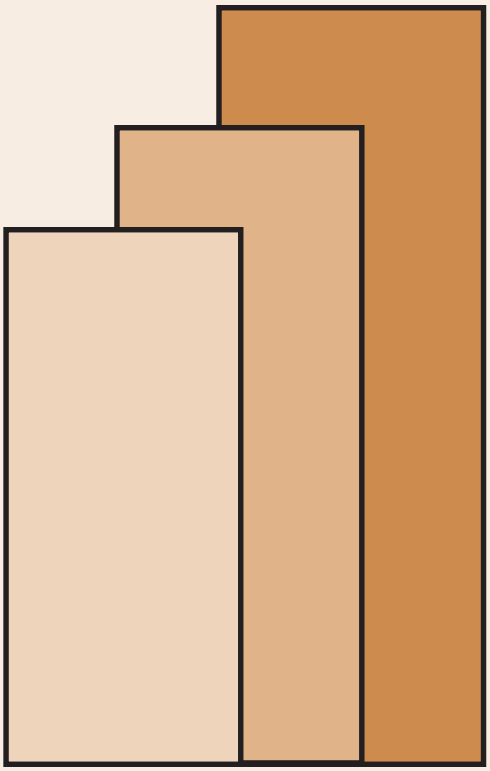

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Abstract

Higher education is a key driver of the economic growth of countries. It is then the hope of any country that her universities, including state colleges and universities (SUCs) and private higher education institutions (PHEIs), produce the manpower needed to propel the country into high, sustained and equitable development. This can be achieved if her universities respond well to changes in the labor market.

This study seeks to review and asses how well the SUCs and PHEIs respond to regional market demands through wage premium analysis and their experience in introducing new program offerings, changing curriculums and closing programs. To achieve this, this study analyzes the developments in labor market outcomes such as wage premiums at the discipline level derived using data from the Labor Force Survey. It also uses focus group discussions with both SUCs and PHEIs to document and understand the relatives ease of introducing changes into their academic programs in response to labor market changes.

The wage premium analysis show that the sector indicating shortages in college graduates are the fast growing services sectors. The wage premium analysis also showed that only agriculture and humanities and theology are showing indication of oversupply while most other disciplines particularly medical, engineering and architecture; social science, business and law; sciences; and services disciplines are showing indications of being in short supply. The FGDs were able to show that labor market information and enrollment are the main considerations in changing academic programs and that administrative bottlenecks and scarcity of resources often prevent speedy implementation of changes in academic programs.

Keywords: Higher Education, Programs, Curriculum, Labor Market, Wage differentials

JEL Codes: I21, I25, J21, J23, J31

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Acronyms and Abbreviations

AC	Academic Council
ASEAN	Association of Southeast Asian Nation
BORs	Board of Regents
BOT	Board of Trustees
CC	Curriculum Committee
CHED	Commission on Higher Education
CMO	CHED Memorandum Orders
DBM	Department of Budget and Management
DOLE	Department of Labor and Employment
FGDs	Focus Group Discussions
GTS	Graduate Tracer Studies
HEIs	Higher Education Institutions
HEP	Higher Education and Productivity
LFS	Labor Force Survey
LUCs	Local Universities College
MRPHEIs	Manual of Regulations for Private Higher Education Institutions
NEDA	National Economic Development Authority
NLE	Nursing Licensure Examination
OFW	Overseas Filipino Workers
PBEd	Philippine Business for Education
PEPM	Philippines Employment Projections Model
PHEIs	Private Higher Education Institutions
PIDS	Philippine Institute for Development Studies
POS	Program of Study

PSA	Philippine Statistics Authority
PSGs	Policies, Standards and Guidelines
SUCs	State Universities and Colleges
USAID	United States Agency for International Development
VPAA	Vice President for Academic Affairs

Are Higher Education Institutions Responsive to Changes in the Labor Market?

Aniceto C. Orbeta Jr., Kathrina G. Gonzales and Sol Francesca S. Cortes[1]

I. Introduction

The Department of Budget and Management (DBM) has commissioned the Philippine Institute for Development Studies (PIDS) to conduct a review and assessment of programs offered by various state universities and colleges (SUCs) and private higher education institutions (PHEIs). Specifically, this study aims to find out if higher education institutions (HEIs) are able to provide the necessary manpower and specific skills requirements at the regional level.

This study is part of a series of studies commissioned by the DBM to assess different aspects of the higher education sector. Manasan and Parel (2014) and Manasan (2013) reviewed the programs offered by SUCs through the review of their mandates. Manasan (2012) reviewed the sources and uses of funds of SUCs. This particular study focuses on the overall responsiveness of the sector to the demands of the labor market.

This study is intended to review and asses how well the SUCs and PHEIs have performed their mandated function of providing the necessary manpower as well as skills and, or training requirements within the regional level. While the objective is clear – that HEIs to produce graduates that matches the demand of the labor market - establishing that the objective have been achieved is replete methodological issues. First, there is no one-to one mapping between course offerings and jobs. A number of programs have been general enough to offer its graduates a wide range of possible employment opportunities in the near future. Likewise, certain jobs or firms do not require a specific course since skills will be taught on the job.

Second, unemployment is a very crude measure of matching. Unemployment can merely be frictional – when people spend their time looking for a better job. Third, there are rapid technological advances which affect both skill production and requirements. There is simply no mechanism that will predict the exact set of skills needed in the next four years to prepare those future employees.

There are two measures of mismatch better that unemployment. One is the worker self-assessment, i.e. asking the graduate whether his college/university training is relevant to the job he is currently occupying. This will require a graduate tracer[2] study (GTS). Another is the labor market test using the wage premium of college graduates - the difference in wage of college graduates against the next lower level, i.e. high school. An increasing wage

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[2] There is an on-going tracer study conducted by CHED with technical assistance from the PIDS.

premium indicates shortage while and declining wage premium indicates the converse. The latter is the method that will be used by this study.

The wage premium analysis will be complemented by a focus group discussion on the issue of the relative ease or difficulty of changing academic programs participated in by the relevant officers of the HEIs. The general objective is to study how the HEIs respond to changes in labor market demands by looking at their experience in, 1) offering new programs, 2) changing curriculum of existing programs, and 3) closing programs.

The paper is organized as follows. Section II presents a review of the literature; Section III provides a description of the interaction between education sector and the labor market; Section IV discusses the HEIs experience in changing academic programs; Section V and Section VI provides the concluding comments and the policy recommendations, respectively.

II. Review of Related Literature

A. Higher Education System

According to the East Asia Pacific Regional Report of the World Bank (2012), higher education can be considered as a key driver of growth in low- and middle-income earning countries like the Philippines. With the rise of other countries in the East Asia Pacific Region, the way for low and middle income earners to catch up and climb the ladder, is to invest on its productivity. Higher education is a critical point in these countries, this can add up to the skill of individuals that will lead to an increase in their productivity. Individuals having higher years of education tend to have higher scores in a skill competency test compared to those who have fewer years in education.

It is said that developing and deploying people with the right amount of skills to compete in the global economy is a point of vulnerability for low- and middle-income countries. A way of defeating this vulnerability is by attaining higher education. Higher education provides the skills enough for an increase in productivity and to be able compete in the global scheme. Moreover, quality is more important than quantity. The idea of producing these individuals with skills is a good jumpstart but having just too many is bad (Gropello, Tandon, & Yusuf, 2012)

This is the case in the Philippines, according to the Philippine Statistics Authority (PSA), the unemployment rate as of October 2014 is at 6%. At the average, the unemployment rate of the country is at 8.90% from 1994 to 2014 with an all-time high of 13.90% in the 1st quarter of 2000 and a record low of 6% in the 4th quarter of 2014. By educational attainment, 21.6% of the unemployed were college graduates, 13.5% were college undergraduates and 33.3% were high school graduates.

Last April 2014, there were 700,000 graduates including those coming from technical and vocational institutions where unemployment prospects for those under 29 years old are particularly poor. Moreover, almost 50% of the population aged 15 to 23 is unemployed (PSA, 2014). There are several reasons why fresh college graduates end up lining the unemployment line that have already been cited in different studies. One of this is that there are barriers to employment of fresh graduates. Among those barriers are the following:

- A mismatch between graduate skills and those in demand among employers (Department of Labor and Employment (DOLE), 2014).
- An oversupply of graduates in several fields and/or a shortage of employment opportunities in their field of specialization
- Entry-level position may pay low wages lower than what the graduates are expecting
- Lack of communication skills and competencies of an average college graduate
- Simply being not aware of the job opportunities available

In fact, the Commission on Higher Education (CHED) Chairman Dr. Patricia Licuanan also acknowledges the problem of the unemployment of college graduates. She said that there are over 500,000 college graduates every year and only 40% will land a job a year after graduation (Flores, 2013).

B. The Mismatch Situation

Skills mismatch is not just an issue for developing countries; the mismatch situation can be traced back with its first existence in early 1970s with Canada and United States as its first victim (Rahona-López & Pérez-Esparrells, 2013).

Skills and job mismatch is one of the key point problems of the government when it comes to the employment sector. Skills mismatch is defined as when skills supply does not correspond to skills demand in an industry or in the economy as a whole. Skills mismatch does not only tell the story of unemployment, it also tells the story of underemployment. (El Achkar Hilal, Sparreboom, & Meade, 2013). Specifically, skills mismatch also deals with the people whose skills are underutilized in their jobs (overqualified workers) and with workers whose work require skills that they do not have (under qualified workers).

In the Philippines Employment Projections Model (PEPM) study conducted by the International Labour Organization, reflected the projected situation of the labor sector in the Philippines based on the historical comparison of the statistics from 2001 to 2010. The PEPM sought after the problem of skills mismatch and the breakdown of actual skills mismatch and unemployment rate. The study found out **that the unemployment rate increases with the level of educational attainment. This means that as an individual**

climbs up the ladder of education – learning more skills – it tends to prefer to remain unemployed rather than taking up any kind of employment.

C. Addressing the Mismatch Situation

In the Philippines, education departments and national including international research agencies help one another in order to address the mismatch situation which hinders the economy to achieve full employment.

The Higher Education and Productivity (HEP) Project is a 3-year activity by the Philippine Business for Education (PBEd) in partnership with the United States Agency for International Development (USAID) that aims to align industry needs with education outcomes and increase industry-academe partnerships (USAID, 2014). One of the highlights of this project was the various industry-academe summits in various parts of the country. This aims to strengthen industry and academe linkages by addressing policy hurdles that make it difficult for academe and industry to link-up, and to develop a national roadmap for Philippine competitiveness built on a competitive human resource base.

Another highlight of the HEP Project is the collaboration of PBEd and CHED in reforming the curricula of the four major courses in the country to help address the problem of jobs mismatch (Flores, 2013). This reform was conducted when the two parties did a parallel review of the Policies, Standards and Guidelines (PSGs) for Business Management, Information Technology, Hotel and Restaurant Management, and Electronics Engineering. In the media advisory released by PBEd, they said that the ultimate goal of their effort is for industry to define relevant competencies which will be presented to the CHED. CHED in response has consistently encouraged incoming freshmen to enroll in what they regarded were "in-demand" courses. For academic years 2014-2015 to 2017-2018, these are agriculture, engineering, science and math, information technology, teacher education and health sciences.

The DOLE also made a step to address the jobs mismatch situation. This step is called the Project JobsFit: The DOLE 2020 vision. Project JobsFit is a labor market study conducted by DOLE that reflects the in-demand and hard-to-fill jobs in various industries.

The industries considered in this study are those projected to be the main source of employment growth in the country for the next ten years. The results of the study shows that **country's education curriculum is no longer responsive to the needs of industries and businesses operating in the current global environment which results to Filipino graduates not being able to land jobs and occupations in line with their courses.** The key policy recommendations of the study are, first, a review of the education curriculum is to be addressed, and second, intensification of career guidance which involved environmental scanning, information gathering, networking, consultation, and 'signaling' activities should also be given consideration.

D. Curriculum Restructuring

Various institutions try to address to mismatch problem by taking a strike towards curriculum. According to Hagos and Dejarme (2008) curriculum is considered as the complete course path that will enable students to attain the goals and general objectives of education and it should be enhanced and re-structured because of the spread of new information media, technological advancement and the predominance of software and hardware devices. The study pointed out the three most important sectors of society that give direct input to the improvement of the curriculum are the academe (institutions), government and the industry (both public and private companies). In our country, CHED and the DepEd are directly involved in upgrading the curricular programs of learning institutions.

Moreover, in restructuring the curriculum Hagos and Dejarme stated that (2008) several colleges and universities has envisioned the following to be part of the future curriculum to address the competition and challenges being brought forth by the 21st century: It should be 1) computer-based; 2) environment-focused; 3) research-oriented; 4) technology-enriched; 5) value-laden; 6) community-involved and 7) industry-linked.

Restructuring a curriculum is no easy task. You cannot focus on the small part without passing through the entirety of the thing (Cruz, 2010). Changing curriculum, takes time and effort and it should be dealt seriously. Moreover, according to the article of Cruz (2010), curriculum design is holistic and comprehensive and that it has to be rational and deliberate.

III. Education and the Labor Market

This section will discuss the interaction between education supply and the labor market. The objective is to provide clear indicator whether the education sector is providing the needed man power by the economy. We first discuss the drivers of the demand for skills. Then this followed by a discussion of the supply of college graduates. Then the analysis of the developments in wage premium is provided.

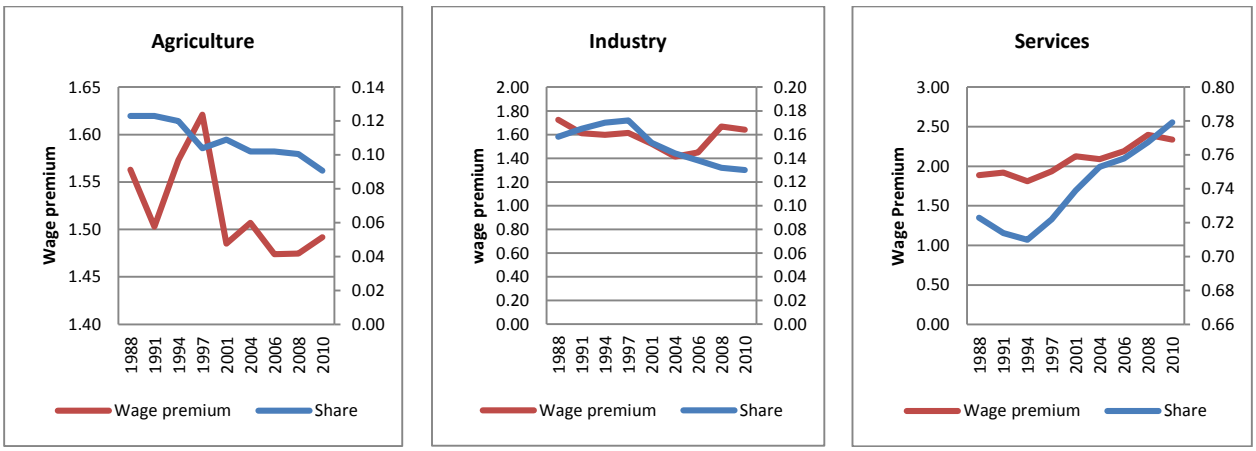
A. Drivers of Demand for Skills

Di Gropello (et al., 2010) identifies three main drivers of demand for skills in the country, namely: (a) changes in the economic structure, (b) openness to new technology, and (c) pressure from international migration.

Consistent with the hypothesis that demand for skills is a derived demand, the faster growing sectors, such as services, are the one driving the demand for skilled workers. Figure 1 shows the share and wage premium of those with some tertiary education. It shows that the services sector has an increasing share while agriculture and industry have decreasing shares. In addition, it also shows that services has increasing wage premium for skilled workers while for the two other sectors the wage premium of skilled workers is

declining. In addition, di Gropello et al. (2010) identified five services sub-sectors exhibiting increasing trends in share and wage premium of skilled workers, namely: tourism; transport and communication, finance, insurance and real estate; wholesale and retail trade; and business services. Again these are the faster growing sub-sectors in the services sector. Only government, community and private household services are showing declining demand for skilled workers.

Figure 1. Share and wage premiums of with some tertiary education and above, by sector, 1988-2010



Source of basic data: NSO LFS various years

The export sector is also another sector driving the demand for skills. The common hypothesis is that export firms have higher skill requirements than non-exporters. This hypothesis is borne for both the manufacturing and services firms in the 2008 Philippine Skill Survey of 300 firms (di Gropello et al., 2010). In addition, it was pointed out manufacturing tended to focus on technical and college education while services hire more university graduates.

Finally, the international labor market is another driver for demand for skills. Comparing the educational qualification of migrants workers and domestic labor market shows that the international labor market demand more educated workers (Table 1). It is also true that in terms of occupation, there are more professionals demanded by the foreign labor market (Table 2). It should not be surprising then if tertiary level students and the domestic education and training systems are responding not only to domestic labor market but also to international labor market as well.

Table 1. Distribution of OFW, Domestic labor force by education

	1988	1996	2006/1
OFWs			
No Grade Completed	0.3	0.2	0.2
Primary	10.9	7.2	4.4
Secondary	34.2	32.8	32.3
Tertiary	54.6	59.8	63.1
Total	100.0	100.0	100.0
Domestic labor force			
No Grade	4.0	3.2	2.0
Elementary	47.3	41.2	33.7
Secondary	29.6	32.7	37.7
Tertiary	19.1	22.9	26.6
Total	100.0	100.0	100.0

1/ 2006 figures include migrant workers other than contract workers, i.e. other Filipino workers abroad with valid working visas or work permits, such as pilots, stewards, Filipinos working in the US, Taiwan, Saipan, etc. with a working visa

Table 2. Distribution of OFW, Domestic labor force by occupation

	1980	1995	2000	2009
OFWs				
Professional, technical and related workers	15.5	20.4	31.1	14.4
Managerial, Executive and Administrative Workers	0.5	0.2	0.1	0.4
Clerical workers	3.4	1.6	0.9	4.6
Sales workers	0.3	0.9	0.8	2.5
Service workers	14.9	37.8	36.0	41.7
Agricultural, animal husbandry, forestry, fishermen	1.0	0.5	0.2	0.4
Production process workers, transport and laborers	64.4	38.6	30.8	35.9
Total land-based	100.0	100.0	100.0	100.0
Domestic labor market				
Professional, technical and related workers	6.4	5.6	5.8	7.4
Managerial, Executive and Administrative Workers	1.0	1.6	2.3	13.5
Clerical workers	4.5	4.3	4.6	5.5
Sales workers	10.2	14.0	15.5	5.4
Service workers	7.6	9.0	10.8	5.2
Agricultural, animal husbandry, forestry, fishermen	52.2	43.7	37.0	16.4
Production process workers, transport and laborers	19.3	21.8	23.8	46.2
Others	-	-	-	0.5
Total	100.0	100.0	100.0	100

B. Supply of College Graduates

The supply of college graduates can be gleaned from the pattern of enrollment and graduation by discipline group (Table 3). The shows that the biggest groups are social sciences, business and law; and medical, engineering and architecture consisting of about 30% each. A far third is education and fine arts consisting of 13 to 15 percent of enrollees and up to 17% among graduates. This is followed by the sciences with share rising from 6 to 14% in enrollees and 7 to 12 percent in graduates. Communication and others constitutes another 5 to 7 percent of enrollees and from 5 to 9 percent of graduates. The composition has not changed much or does not show a clear pattern in compositional changes except for science which show a consistently rising proportion of enrollees and graduates.

Table 3. Enrollment and graduate by discipline[3] group

Discipline Group	Enrollment						Graduates					
	1994-95		2004-05		2009-10		1994-1995		2004-05		2009-10	
	No. (000)	%	No. (000)	%	No. (000)	%	No. (000)	%	No. (000)	%	No. (000)	%
General	113,286	6.1	34,234	1.4	14,198	0.5	13,370	4.3	3,817	0.9	3,226	0.8
Education, Fine Arts	244,730	13.1	379,209	15.8	368,728	13.3	44,329	14.2	72,540	17.7	72,104	17.0
Humanities & Theology	13,818	0.7	34,854	1.5	35,032	1.3	1,595	0.5	6,512	1.6	6,094	1.4
Social Sciences, Business and Law	588,090	31.4	676,216	28.1	909,355	32.8	90,595	29.0	132,225	32.3	130,797	30.8
Sciences	116,328	6.2	263,636	11.0	384,743	13.9	23,472	7.5	44,876	11.0	49,617	11.7
Medical, Engineering and Architecture	584,622	31.2	788,964	32.8	809,271	29.2	97,853	31.3	113,948	27.8	123,178	29.0
Agriculture	61,977	3.3	76,166	3.2	64,841	2.3	12,540	4.0	14,009	3.4	13,690	3.2
Services	7,134	0.4	13,878	0.6	36,355	1.3	626	0.2	1,881	0.5	2,762	0.6
Communications and others	141,662	7.6	135,158	5.6	148,442	5.4	28,287	9.0	19,820	4.8	23,703	5.6
Total	1,871,647	100.0	2,402,315	100.0	2,770,965	100.0	312,667	100.0	409,628	100.0	425,171	100.0

Source of basic data: CHED

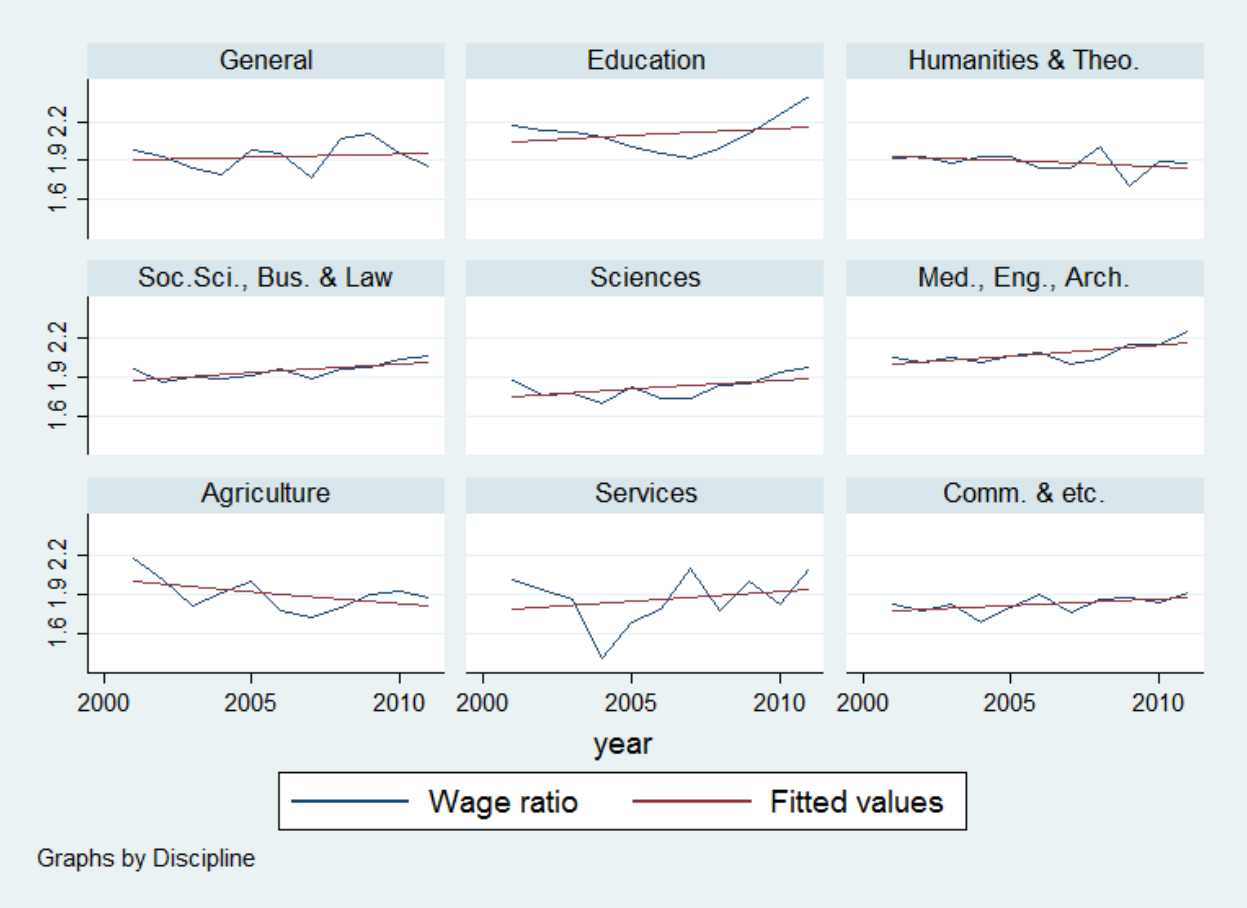
C. Developments in Wage Premiums of College Graduates

Wage premium of college graduates over high school graduates is used as an indicator of whether the country is producing enough college graduates for a specific discipline or not. Rising wage premiums mean there is more demand for the discipline than there is supply pushing the wage premium upwards. Conversely, a declining wage premium indicates the opposite.

[3] The discipline groups used follows the grouping in the labor force because this is the grouping used in the wage premium analysis. This details of the classification is given in Annex A.

Following Di Gropello (2010) wages were computed as average wage per hour using the October series of the Labor Force Survey (LFS). Wage per hour was computed using the daily basic pay from primary occupation for wage and salary workers and the usual number of hours work per day. Only workers who are 25 years and above are included because presumably these have completed their education. Additionally, only we only considered in the computation the class of workers where basic pay are reported in the LFS, namely, wage and salary workers.

Figure 2. Wage premiums of college graduates by discipline groups, 2001-2011



Source of basic data: LFS October series, various years

From the preceding graphs, two disciplines – agriculture and humanities & theology – have clearly declining wage premiums. Medical, engineering and architecture; social sciences, business and law; services and general education have clearly rising wage premiums throughout the decade. Education and sciences showed a decline in wage premiums at the beginning of the decade before rising in the later part of the decade.

The relative positions of the wage premium lines indicate that graduates of medical, engineering and architecture are generally paid better than science or communications and

other disciplines. It may be surprising to find that social sciences, business and law graduates are paid better than science graduates. But this may provide some reason why small numbers are taking sciences courses and many take social sciences, business and law (Figure 2).

IV. Opening Programs, Changing Curriculums and Closing Programs

This section describes the relative ease of opening programs, changing curriculums and closing programs. This is an important component of ascertaining whether HEIs are able to implement changes in program offerings in response to labor market changes. It starts with a discussion of the CHED guidelines on the three methods of introducing changes to their programs and is followed by a discussion of the results of the focused group discussions (FGDs) with HEIs on their experience in this area.

i. CHED Guidelines[4]

The CHED has imposes guidelines in opening, changing and closing programs for SUCs and PHEIs. Program offerings of SUCs and Local Universities and Colleges (LUCs) will be assessed using the following considerations.

i. Program Offerings (Figure 3)

1) Implementation of the typology of HEIs.

The implementation of the typology of HEIS is designed to: (a) minimize duplication of program; (b) to promote specialization and complementation; and (c) to provide a basis for identifying SUCs with the greatest potential for development to international standards

2) Review and evaluation of SUCs/LUCs mandates and their program offerings.

The program offering will be assessed in relation to the SUC/LUC mandates and which programs could or should be phased out and which programs are to be closed.

3) Evaluation of program efficiency.

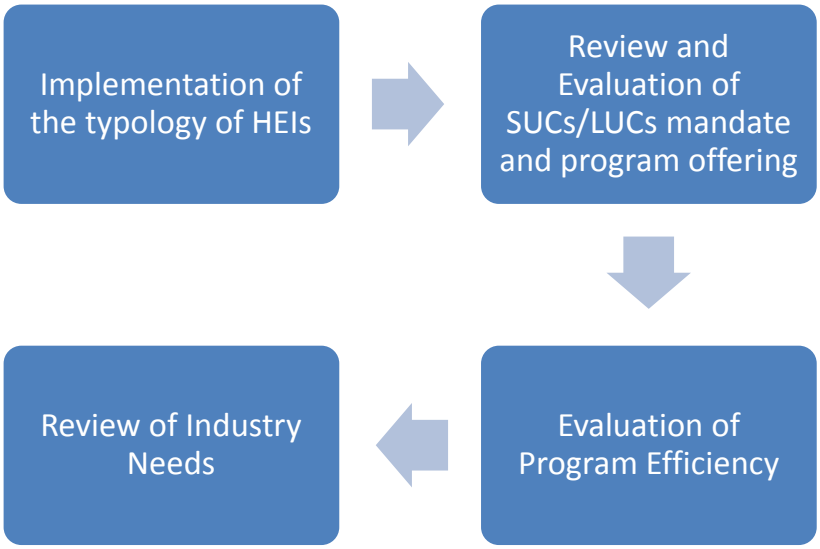
The efficiency and duplication of programs particularly those that tend to crowd out private provision are important consideration in the assessment of program offering, phase out or closure of programs.

[4] Discussions under this section were lifted from the CHED's Roadmap Public Higher Education Reform and CHED's Manual of Regulations for Private Higher Education Institutions.

4) Review of industry needs.

Program offering are also assessed for their responsiveness to industry needs in the government's five priority areas for job generation and economic development, i.e. in recent years, semiconductor and electronics, business process outsourcing, tourism, agriculture and fisheries, and general infrastructure.

Figure 3. Procedures in Opening Programs



Source: Summarized, from CHED, 2014

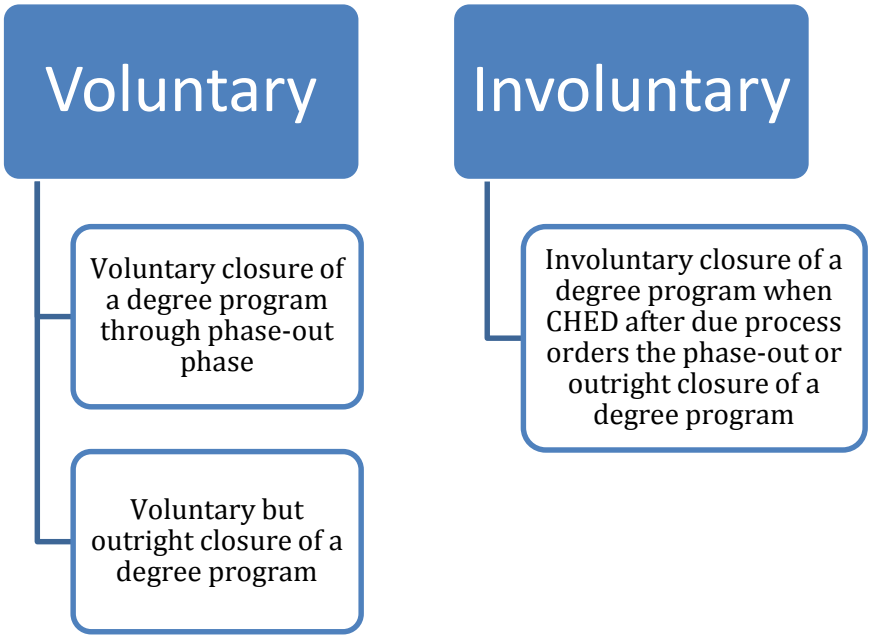
ii. Changing Curriculum

In terms of changing curriculum, CHED states that any acknowledged revised curriculum for a degree program shall be entered as a new curriculum. The old curriculum shall be retained in the system's database until such time that the last student covered by the old curriculum is able to graduate.

iii. Closing Programs (Figure 4)

According to the CHED's Manual of Regulations for Private Higher Education Institutions (MRPHEIs), the closure of any degree program may either be voluntary or involuntary. One model of voluntary closure is via a phase-out. Here the HEI phases out a program by not admitting freshman students at the beginning the school term and letting the students in the upper level finish their studies.

Figure 4. Regulations in Closing of Programs



Source: Summarized, from CHED, 2014

Another form of voluntary closure is by outright closure. Here HEIs chooses to outright stop offering program but the HEIs shall assist and facilitate the immediate transfer of the students affected. In both forms of voluntary closure, the CHED shall be informed before the closure takes effect.

There are also involuntary closures of programs. Involuntary closure of a degree program happens when CHED, after due process, orders the phase-out or outright closure of a degree program. For example, in May 2014, CHED closed down the BS Nursing program of eight HEIs in Northern Mindanao in its failure to comply with CHED's Memorandum Order (CMO) 30, series of 2001, and 14, series of 2009 that states, schools offering the program must have instructors with at least a master's degree, abide by the laboratory and library requirements, and their poor performance in the Nursing Licensure Examination (NLE).

ii. Experience of HEIs: Key findings from FGDs

1. Methodology

Focus group discussions were conducted with select HEIs from different parts of the country to document and understand how they respond to changes in regional labor demand. To facilitate the conduct of the FGDs, four regional clusters were formed as follows (Table 4):

Table 4. Regions included per cluster

Cluster	Regions Included
1	Region 1,2,3, CAR
2	Region 4,5, NCR
3	Region 6,7,8
4	Region 9, 10, 11, 12, CARAGA, ARMM

i. School Selection

To select the schools, HEIs in each region were ranked according to the enrollment size from the CHED's enrollment data from 2005 to 2012. In each region, schools representing both public and private sectors with the highest enrollment size were chosen to participate. Ten schools were initially contacted for each region, with the aim of having a total of 15 schools attendees for each cluster. In instances where schools were unable to send a representative to the FGDs, the school with the next highest enrollment was invited. However, as schools after school have declined the invitation, the team resorted to substituting the schools with HEIs near the FGD venue given the time constraint of the study.

ii. FGD Guide Questions

Questions asked during the FGD revolved around the three modes of changing programs, namely, offering new programs, changing curriculums, and closing programs. The guide questions were structured to capture the process of implementing the changes in programs well. The questions covered: (a) primary considerations or motivations, (b) sources of information, (c) steps, (d) difficulties and main issues, (e) time it takes, and (f) post-change assessment. To help the participants prepare for the FGDs, the guide questions were sent to schools prior to the FGD in an online form for them to fill-up. Form sent is given in Appendix B. For each cluster, two FGDs were conducted: one for the SUCs, the other for the PHEIs. The Vice Presidents for Academic Affairs (VPAA) or his representative were invited to attend the FGD.

2. FGD Key Findings

A total of 34 respondents participated in the FGDs. Appendix B provides list of HEI participants. Table 5 shows the distribution of school participants by cluster. The biggest percent of the respondents came from cluster 1 with 32%, while cluster 2 had the least with 15%. Among the participants, 62% came from SUCs and 38% came from PHEIs (Table 6).

Table 5. Distribution of participants by cluster

Cluster	No. of Participants	Percent
1	11	32.3
2	5	14.7
3	9	26.5
4	9	26.5
TOTAL	34	100

Table 6. Distribution of participants by type of schools

Type of School	No. of Participants	Percent
SUCs	21	61.7
PHEIs	13	38.3
TOTAL	34	100

The key findings of the FGD are summarized below.

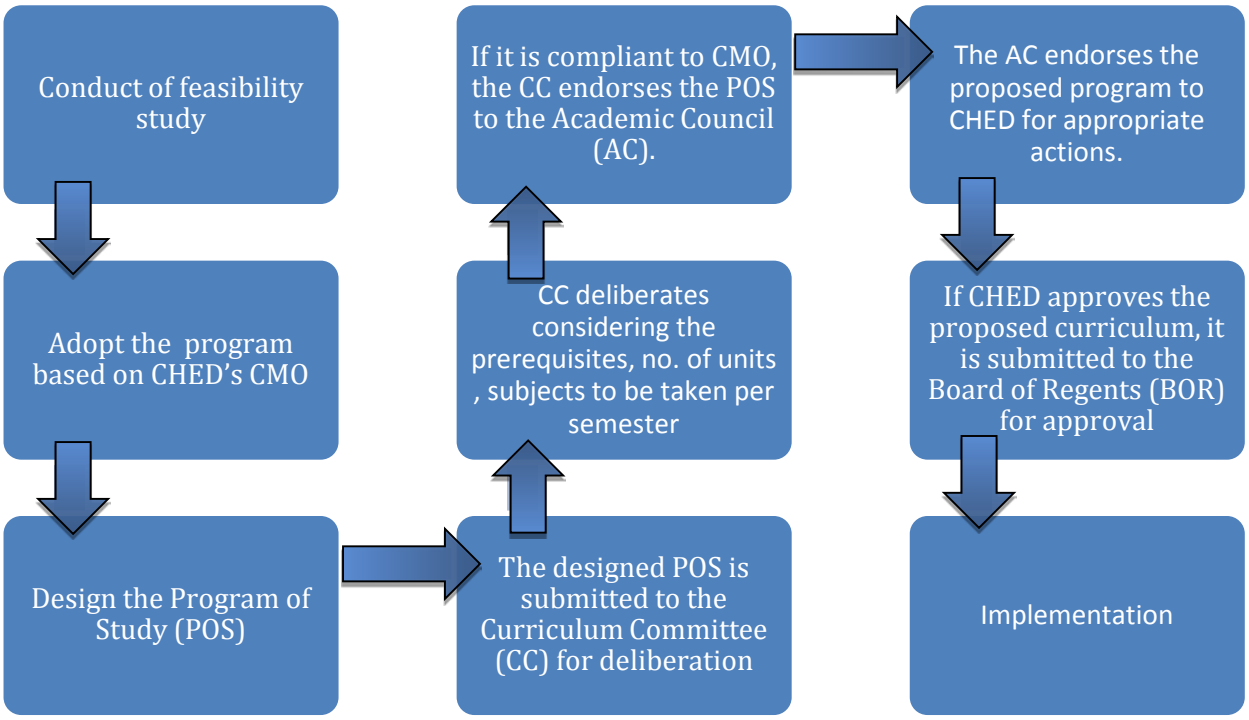
i. Program Offerings. **Primary considerations in offering a new program are industry needs and market trends.** These also include national interest as well as local and regional demands – sometimes as requested by students, parents and the community. Some HEIs basically supplied what other HEIs in the area cannot provide, while others offer new programs based on their strategic development plan. For schools with education courses, offering new programs was in response to the imperatives of the new K to 12 Basic Education Curriculum and CHED's advocacy for paradigm shift from inputs to outcomes based quality assurance reflected in CMO 46. For others, offering new programs were a result of alignment with the internationalization of education.

HEIs have based these program offerings first and foremost on feasibility studies– perceived enrollment and employability of students, available resources, including faculty and financing. They also rely on primary surveys given to the community through parents, alumnae and prospective students of the HEIs. Program offerings are also based on the school's strategic development plan and existence, or lack of thereof, of related offerings in the university and community. CHED's priority courses and PSGs serve as sources of information for the HEIs. Sometimes, support of the National Economic Development Authority (NEDA), the local government and the academic council bolster the offering of a new program.

Offering a new program can be summarized into seven steps (Figure 5). First, a feasibility study will be conducted. If program is feasible, the HEI will adopt the program based on CHED's CMO, and design the Program of Study (POS). This POS will then be submitted to the Curriculum Committee (CC) of the school for deliberation. The CC deliberates the

submitted POS based on its prerequisites, number of units, and subjects to be taken per semester. If the POS is compliant to the CMO, the CC endorses the POS to the school's academic council (AC). The AC then endorses the proposed program to CHED for appropriate action. If not compliant to program standards, it will be returned to the school proponent for inclusion of CHED recommendations. However, if CHED approves of the proposed program, it is submitted to the school's Board of Regents (BOR) for approval. Once approved by the BOR, program is implemented.

Figure 5. Steps in offering program



There are several other issues mentioned in offering new programs. These include the readiness of physical facilities, and availability of faculty – permanent, part time and creation of *plantilla* position for public schools. Other issues include branding of the course, materials development, and the requirement of additional course subjects. Attracting potential enrollees is sometimes problematic as some students already have a mindset before entering college and do not consider new options. Unfortunately, **CHED's delayed response and long process of approval often hinder the timely implementation of the program.**

Most HEIs considered their decisions to offer a new programs good. The reasons provided include: 1) the increase in their students; 2) the ability to answer the need of their community or region; 3) the ability to answer the call of national government to provide quality education to qualified but underprivileged; and 4) the provision of a flagship for other schools to follow.

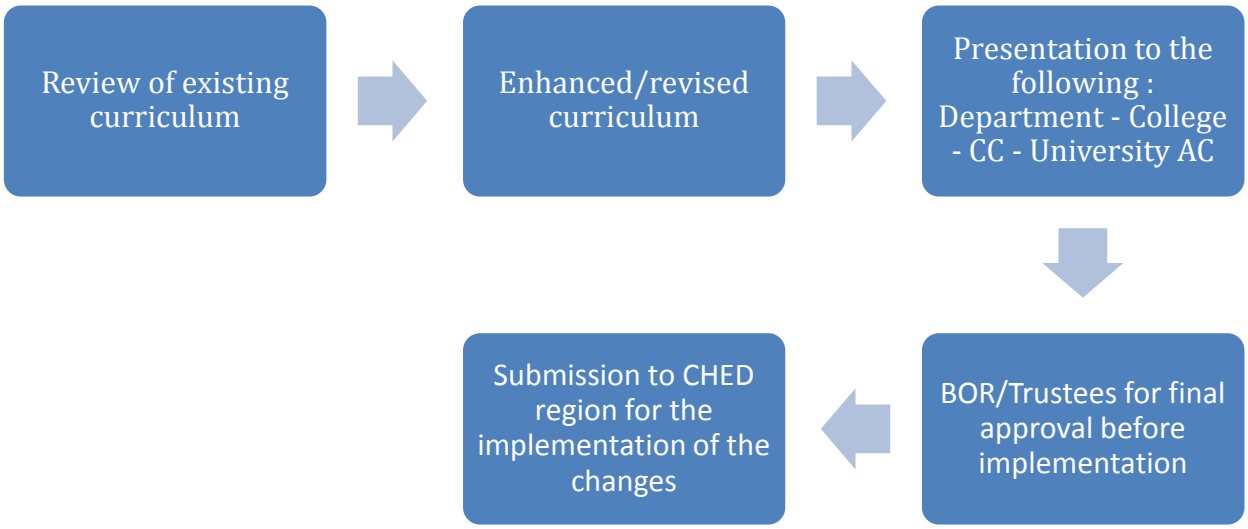
On average, HEIs were able to offer at least one new program in the last 5 years. The time it took for an HEI to open a new program ranged from 7 months to 5 years. On average, that amounts to 18 months, or a year and a half.

ii. Curriculum Changes. **The primary consideration for changing the curriculum was to respond trends in the market which required new knowledge and competencies.** The new K to 12 Basic Education Curriculum, and the expected internationalization of education in the region with the ASEAN Economic Community (AEC) 2015 are just a few of the trends mentioned. Moreover, curriculum changes are commonly made to comply with changes in the PSG for specific courses. Also, changes are also made in response to the request of students, mostly from Master's and PhD level. Low passing rates in board exams, also trigger curriculum change as they usually lead to a decline in enrollment.

There are two major sources of information for curriculum changes. First is the decline in passing rates of the board exam. This is indicative that the content of the curriculum is very far from that of the board exam. Another indication is the decline of enrollment for a particular course. On the other hand, HEIs also conduct tracer studies to gather information on necessary change their graduates want for a program.

Changing the curriculum can be summarized into five steps as shown in Figure 6. First is the review of existing curriculum. Next is enhancing and, or revising the curriculum using the PSGs based on legal issuances. This is accompanied by a series of meetings and consultations with the faculty and stakeholders. Third, is the presentation to the following councils for review, approval and endorsements: Department – College – CC – University AC. Fourth is the final approval of the BOR or Board of Trustees (BOT). Finally, the new curriculum is submitted to CHED regional office for implementation of the changes. It is important to note, however, that for some schools, change of curriculum only needs approval until the VPAA level.

Figure 6. Steps in changing curriculum



The main issue encountered in changing the curriculum is economic**.** Curriculum changes require financial support. New teaching materials are required and teachers need to be provided with in-service trainings. Furthermore, some teacher reluctant to accept changes made.

All of the HEIs who changed curriculums were convinced their decision was good one because they have made a more relevant curriculum for the benefit of the students. They have met the needs of the industry and complied with CHED requirements at the same time. Moreover, some have maintained their top rank in a particular program offering because of the change.

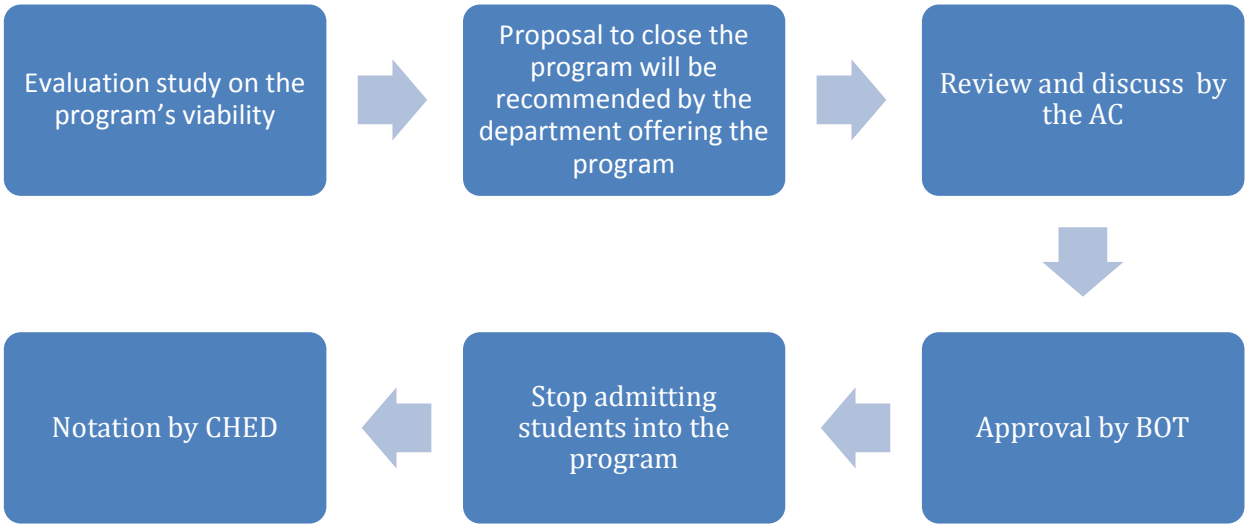
It took HEIs 2 to 48 months (about 3 years) to change their program. On average, it took HEI 13 months.

iii. Program Closing. **The primary consideration for closing programs is declining enrollments making the program too costly to continue and maintain.** Declining enrollment is the most commonly mentioned source of information that triggers moves to close a program. Other considerations include: 1) fusing into another programs for cost-efficiency; 2) lack of funding; and 3) the program has no PSG from CHED.

Majority of the respondents use the term freeze instead of close so they can easily revive the program if it will be in demand again or if students show interest again to enroll in that program.

The steps in closing a program is shown in Figure 7 and can be summarized as follows: 1) conduct of an evaluative study in terms of the program's viability considering the student intake in the previous years; 2) the proposal to close the program will be recommended by the department offering the program; 3) then it will be reviewed and discussed by the AC; 4) approval by BOT; 5) stop admitting students into the program, encourage current enrollees to shift or finish within a time period; and 6) notation by CHED.

Figure 7. Steps in closing program



There are several issues mentioned in closing a program. First, there is a resistance among the faculties who will be affected by the closure because they will be reassigned/displaced with fewer teaching load. Second, since the number of programs offered is a factor in normative financing, CHED are penalizing the universities because they are including the shelve programs in the university budget computation. Third, many takers of the program, especially those who needed masters' degrees, were not ready for a full thesis with comprehensive exam. Lastly, program closure also involves adjustment in advertisement materials and other marketing documents.

On the average, the HEIs took 21 months or almost 2 years to close a program. While a number of participants took longer to close a program because they have to wait for all the students to graduate.

V. Concluding Comments

The wage premium analysis at the sectoral level showed that fast growing sectors such as the service sector is sucking up college graduates and still showing rising wage premiums indicating that higher education sectors is still not producing enough graduates to fill what the sector demands.

The wage premium analysis at the discipline level showed that the higher education sector is showing mixed results in supplying the manpower needs of the economy. Two of the disciplines – agriculture, and humanities and theology are showing indication of an oversupply. The case of agriculture is a cause for concern because this discipline is still considered high priority and continues to receiving support to attract students to enroll in the discipline. Wage analysis, however, show that this particular discipline is already in surplus. The rising wage premium in the case of social sciences, business and law is indicating that we are still not producing enough graduates for these disciplines despite the observed large number of enrollees and graduates. The rising wage premium in the case of medical, engineering and architecture is not that surprising as there are obvious reason for the increasing demand both here and abroad. It is unfortunate that the LFS coding does not allow segregation of the case of nursing and the case of IT where supply have rapidly increased in recent years. The wage premium for teachers show a rebound in the later years of the decade after declining in the early part of the decade. This perhaps indicate the increase in pay of government teachers (the dominant group in the profession) in recent years.

The main FGD key findings showed that both SUCs and PHEIs are aware of their regional needs in terms of providing the necessary manpower and specific skills requirement. They respond to the demands of their regional labor market demands through opening programs and changing curriculums. In addressing these demands, SUCs and PHEIs are compliant in preparing all the necessary steps in opening a program and changing a curriculum fit to the market needs in their region. However, the delayed response of CHED and its long process of approval (average 1.5 year of processing) hinder the SUCs and PHEIs from officially opening programs and changing curriculum sooner to meet the industry needs. Autonomous schools, who have complete control of opening programs and changing curriculums, surprisingly also still comply with the PSGs of CHED. All of the HEIs who offered programs and changed curriculums were convinced their decision was good one because they have met the regional demands and made a more relevant curriculum for the benefit of the students.

Aside from responding to the needs of labor market, low passing rates in board exams, also trigger curriculum change as they lead to a decline in enrollment. Also, some participants reported that changing the curriculum is unbudgeted and costly. Cost for reproduction of materials is needed and resources, school's time and effort are put up in designing and processing the curriculum.

In terms of closing programs, a number of HEIs freeze programs instead of closing them so when that program (ex. nursing) becomes in demand again, they will not go through again the long procedure of opening a program.

In general, another problem that HEIs face is the lack of faculty, laboratories and other resources that prevents them from offering high quality education and to improve the education and quality of training in response to market needs.

VII. Policy Recommendations

The foregoing discussions highlight some of the following recommendations to improve the responsiveness of HEIs to changes in labor market demands:

For SUCs and PHEIs

- They should make the information and outreach on program offerings more accessible and available for students and potential students. HEIs can make their program offerings readily available in the internet since most of the students now are finding information over the internet.
- They should consider the industry needs in designing the curriculum. They should develop more relevant and updated curriculum that will align with what the industry needs. Undertaking effective and sustainable consultations and partnering with suitable industries is a way of answering that need of industry-aligned curriculum.
- They should promote their student's employability by providing trainings, OJTs/internships relevant to their field are an effective way to enhance their skills and expose them in the work culture and environment. This is a good way to address the "lack of experience" problem cited by the employers in hiring.

For CHED

- They need to reexamine their system of identifying priority courses as indicated by the continued classification of agriculture as a priority course when the market indication is that it is already in over supply
- Information of in-demand courses on the basis of the labor market indicators should be regularly prepared and disseminated to prospective students
- They should re-examine their existing procedures with the aim of facilitating changes in academic programs as the HEIs have often identified this as one single most often cited hindrance to faster introduction of program changes.
- There seems to be a chicken-and-egg problem in the introduction of new programs. On the one hand CHED requires schools to have hired the faculty and put in place facilities before approving applications for new programs. On the other hand, from the school's perspective it would not be wise to commit to hiring faculty and

deploying resources without the assurance of approval of the application for opening new programs.

- A clear guideline should be given in the case of programs that are shelved / frozen. They HEIs find freezing programs more advantageous to outright closing because it would be easier for them to reactivate the program when there is demand than go to the process of opening a new program.
- They should strictly enforce the PSGs for academic programs; strictly monitor compliance and phase-out/closure of non-compliant programs.

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IX. Appendix

Appendix A. Mapping of PSCED Discipline Codes and NSO LFS Codes

CODE	PSCED 1997 (Major Discipline)	NSO 1-digit PSCED	Label
00	General	0	General
08	Literacy		
14	Education Science And Teacher Training	1	Education and Fine Arts
18	Fine And Applied Arts		
22	Humanities	2	Humanities and Theology
26	Religion And Theology		
30	Social And Behavioral Sciences	3	Social Sciences, Business and Law
34	Business Administration And Related		
38	Law And Jurisprudence		
42	Natural Science	4	Sciences
46	Mathematics		
47	It-Related Disciplines		
50	Medical And Allied	5	Medical, Engineering and Architecture
52	Trade, Craft And Industrial		
54	Engineering And Tech		
58	Architecture And Town Planning		
62	Agriculture, Forestry, Fisheries	6	Agriculture
66	Home Economics		
78	Service Trades	7	Services
84	Mass Communication And Documentation	8	Communications and others
89	Other Disciplines		

Appendix B.

Guide Questions on the Experience in Offering, Changing Curriculum and Closing Programs

A. Experience in Offering a Program

Please describe your most recent experience in offering a new program by answering as comprehensively as possible the following questions:

What is the name of the new program offered?

When was the decision to offer the new program made?
(Indicate what month and year in MM/YYYY format)

What were your primary considerations for offering the new program? What pieces of information and source(s) were the specific bases for the primary considerations for offering the new program?

What were the steps taken to offer a new program?
(Add as much steps as needed)

What were the main issues encountered in offering the new program?

How long did it take you to open the program starting from the decision to open up to the time you enrolled the first batch of students?
(In xx months / xx years)

Are you still convinced that the decision was a good one? Why or Why not?

How many new programs were offered by the institution in the last five years?

B. Experience in Changing the Curriculum of an Existing Program

Please describe your most recent experience in changing the curriculum of an existing program.

What is the name of the existing program whose curriculum was changed?

When was the decision to change the curriculum made for this particular program?
(Indicate what month and year in MM/YYYY format)

What were the primary considerations for changing the curriculum? What pieces of information and source(s) were the specific bases for the primary considerations for changing the curriculum?

What were the steps taken to change the curriculum?
(Add as much steps as needed)

What were the main issues encountered in changing the curriculum?

How long did it take you to change the curriculum from the decision to change to the semester the new curriculum was implemented?
(In xx months / xx years)

Are you still convinced that the decision was a good one? Why or Why not?

How many curriculum changes have been implemented by the institution in the last five years?

C. Experience in Closing an Existing Program

Please describe your most recent experience in closing an existing program.

What is the name of existing program that was closed?

When was the decision to close an existing program made?
(Indicate what month and year in MM/YYYY format)

What were the primary considerations for closing the program? What pieces of information and source(s) were the specific bases for the primary considerations for closing the new program?

What were the steps taken to close the program?
(Add as much steps as needed)

What were the main issues encountered in closing the program?

How long did it take you to close the program starting from the decision to close?
(In xx months / xx years)

Are you still convinced that the decision was a good one? Why or Why not?

How many programs were closed by the institution in the last five years?

Appendix C. List of Participating HEIs

Agusan Institute of Technology
Aklan State University
Benguet State University
Bicol State University
Bulacan Agriculture State University
Cagayan State University
Camarines Sur Polytechnic Colleges
Carlos Hilado Memorial State College
Colegio San Agustin Bacolod
Davao del Norte State College
Don Mariano Marcos Memorial State University
Isabella State University
Liceo de Cagayan
Mindanao State University - Iligan Institute of Technology
Mindanao State University – Marawi
Naval State University
Notre Dame of Marbel
Partido State University
Philippine Normal University
Silliman University
University of Baguio
University of Makati
University of Northeastern Philippines
University of Northern Philippines
University of Northern Philippines
University of Southeastern Philippines
University of Southern Mindanao
University of the Cordilleras
University of Visayas
UP Visayas
Western Visayas College of Science and Technology
Western Visayas College of Science and Technology
Western Visayas State University
Zamboanga City State Polytechnic College