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MAPPING REPORT ON THE CONDITIONS AND DETERMINANTS OF GRADUATES' EMPLOYABILITY

PHILIPPINES

Integrating Talent Development into Innovation Ecosystems in Higher Education

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INNOTAL

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The report analyses the social and economic conditions that are likely to provide opportunities or impact negatively on Philippino universities' efforts to develop a comprehensive and effective approach to the promotion of graduates' employability. It looks at the context and conditions both inside the higher education system and in the broader social and economic environment.

This report hopes to show a glimpse of the situation of higher education in the Philippines, the current quality level and resulting employability of graduates along with recent trends, issues and reform initiatives aimed to addressing chronic problems on quality and challenges confronting employability of graduates in the country.

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Higher Education and the Employability of Graduates in the Philippines

GOVERNMENT STRATEGY AND POLICY ON HIGHER EDUCATION

Reform in the education sector of the Philippines was aggressively pursued following the famous EDCOM (joint congressional Committee on Education) Report from 1991, which described in clear and succinct manner the sad, dysfunctional and unresponsive state of Philippine education and proposed corresponding actionable recommendations. Soon thereafter, the unitary education system was changed into a **trifocalized education and training system**. Under this setup, the administration of the education system is shared by three agencies, each responsible for a different education level: the Department of Education (DepED) for basic education; the Technical Education and Skills Development Authority (TESDA) for technical-vocational education and training; and the Commission on Higher Education (CHED) for Higher Education.[1]

Higher Education Acts

Philippine Higher Education is regulated and developed by the Commission on Higher Education (CHED) which was established in 1994 by Republic Act (RA) 7722 or the so-called "Higher Education Act of 1994". It is mandated to:

- promote the relevance and quality of higher education
- ensure that quality higher education is accessible to all citizens, including those without the necessary financial capacity
- guarantee and protect academic freedom for continuing intellectual growth, contribute to advancing learning and research, promote the development of responsible and effective leadership and the training of high-level professionals, and support the enrichment of historical and cultural heritage
- Promote moral governance, eradicate corrupt practices, institutionalize transparency and accountability and encourage participatory governance in the Commission and the sub-sector.[2]

Public Higher Education Institutions were strengthened with the passage of RA 9282 or the so-called "Higher Education Modernization Act" of 1997. This Act seeks to:

- coordinate and integrate the system of higher education
- promote the effective formulation and implementation of policies on higher education by university governing boards
- improve the governance of universities

[1]http://www.officialgazette.gov.ph/downloads/2018/01jan/20180116-RA-10968-RRD.pdf

[2]http://ched.gov.ph/ched/

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- guarantee academic freedom as envisaged by the Constitution.[3]

The above reforms brought about a clear profile of the Philippine Higher Education as shown by Figures 1-5.

Figure 1. Distribution of Higher Education Institutions by Institution Type: AY 2017-2018

Institution Type	Excluding SUC Satellite Campuses	Including SUC Satellite Campuses
State Universities and Colleges (SUCs) - Public	111	558
Local Colleges and Universities (LCUs) - Public	108	108
Other Government Schools (OGS, CSI, Special HEIs)	14	14
Private Higher Education Institution - Private	1,673	1,673
Grand Total	**1,906**	**2,353**

Figure 2. Distribution of Higher Education Programs by Program Level and Type: AY 2017-2018

Program Level	SUCs	LCUs	OGs	Private	Grand Total
Pre-Baccalaureate	1,624	89	9	1,316	3,038
Baccalaureate	8,004	1,009	40	17,190	26,243
Post Baccalaureate	289	16	-	145	450
Masters	2,592	100	8	3,742	6,442
Doctorate	558	20	1	697	1,276
Grand Total	**13,067**	**1,234**	**58**	**23,090**	**37,449**

Figure 3. Distribution of Higher Education Enrolment and Graduates by Discipline: AY 2017-2018

	Enrolment	Graduates
All Disciplines	**2,981,803**	**708,445**

[3]http://ched.gov.ph/wp-content/uploads/2017/05/Republic-Act-No.-8292-The-Higher-Education-Modernization-Act-of-1997.pdf

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Public	1,385,458	358,486
Private	1,596,345	349,959
Priority Disciplines	**1,759,686**	**429,216**
Sciences	29,307	7,827
Maritime	82,205	25,996
Medicine and Health Related	176,532	43,188
Engineering and Technology	370,710	86,934
Agriculture, Agri., Eng'g, Forestry, Vet. Med.	100,922	25,421
Teacher education	639,063	145,421
IT Related	315,694	86,933
Mathematics	11,814	3,104
Agricultural and Town Planning	33,439	4,392

Figure 4. Distribution of Higher Education Performance (% Passing) in Licensure Examination by Discipline: AY 2017-2018

Across All Disciplines	**36.82**
Priority Disciplines	
Sciences	43.01
Maritime	43.59
Medicine and Health Related	62.28
Engineering and Technology	50.98
Agriculture, Agricultural Engineering, Forestry, Veterinary Medicine	38.03
Teacher education	31.38

Figure 5. Distribution of Higher Education Faculty Qualification by Program Level and Type: AY 2017-2018

% with MA/MS	40.39
% with PhD	14.07

**Data as compiled by OPRKM-Knowledge Management Division Based on the*

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submission on higher education institutions

The data presented in Figures 1-5 shows several challenges in the higher education sector of the Philippines that contribute to graduates' insufficient skills and unsatisfactory employability. First, 1,906 Higher Education Institutions (HEIs) is just too many for a country with a relatively small territory, though with a relatively large population of 100 million. The unwarranted increase in the number of HEIs shows lack of regulation and control and has led to poor quality of graduates. Second, students are flocking to study areas in which there are already too many graduates, while few enrol to study science, mathematics and technology – the areas identified as priority in view of the country's needs. The resulting oversupply of graduates in programs where employment is already saturated and the undersupply of graduates in courses where employment is still in demand contribute to unemployment problems and economic stagnation. Third, the low passing rate (average across all programs of 36.82%) means that many graduates fail to master all the competences required of them in their profession to be able to perform well on the job. In the Philippines, only those who have passed the licensure examinations are given the license to perform their profession such as engineer, teacher, architect, etc. Thus, those who fail, which is quite a substantial number of graduates, do not have the license required of them by employers and hence experience difficulty in finding employment. Most of those graduates have to accept jobs lower than the professional preparation they aspired and worked for. Finally, the low level of faculty qualification (only 14.07% have Ph.D. degrees) imposes limitations in the quality of teaching. This may have contributed to the low passing rate in licensure examinations and the low employability rates.

For the above reasons, the Government introduced various reforms in the last decade showing a clear, albeit slow, strategy in addressing challenges in higher education. Specifically, these aim to a) increase the number of students pursuing higher education, b) encourage enrolment in priority programs needed by the country and the economy, c) compel HEIs to perform well or else perish, and d) encourage research and innovation by professionals.

The most recent, aggressive and promising reform is the so called "Universal Access to Quality Tertiary Education", introduced under Republic Act 10931 signed into law by President Rodrigo R. Duterte in August 3, 2017. The law compels the state to (i) provide adequate funding and introduce other mechanisms to increase the tertiary education participation rate among all socioeconomic classes; (ii) guarantee equal opportunity for all Filipinos to receive quality tertiary education in both private and public educational institutions; (iii) give priority to students who are academically able but do not have the financial resources to pursue tertiary education; (iv) optimize government spending in the education sector; (v) provide career adequate guidance and incentives for young Filipinos in view of promoting adequate development and utilization of the country's human

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NATIONAL PRIORITIES FOR RESEARCH, INNOVATION AND EDUCATION

resources; and (vi) recognize the complementary roles of public and private institutions in the tertiary educational system. Universal access to quality tertiary education also strengthens the "Unified Student Financial Assistance System (UniFAST)"[4] ensured by RA 10687. [5]

Philippine Research & Development Agenda 2017-2022

The current national priorities for research, innovation and education are embodied in the "Harmonized National R&D Agenda (HNRDA) 2017-2022 ", prepared through the joint efforts of government agencies led by the Department of Science and Technology (DOST). This agenda seeks to ensure that results of Science and Technology research are utilized to address social and economic challenges. The HNRDA is focused on 5 sectors: (1) Basic Research; (2) Agriculture Aquatic and Natural Resources; (3) Health; (4) Industry, Energy and Emerging Technology; and (5) Disaster Risk Reduction and Climate Change Adaptation. The Agenda was formulated by the National Research Council of the Philippines (NRCP), Philippine Council for Agriculture, Aquatic and Natural Resources Research and Development (PCAARRD), Philippine Council for Health Research and Development (PCHRD), Philippine Council for Industry, Energy and Emerging Technology Research and Development (PCIEERD), Philippine Institute of Volcanology and Seismology (PHIVOLCS), and Philippine Atmospheric, Geophysical and Astronomical Services Administration (PAGASA) in cooperation with stakeholders in the respective sectors.[6]

Innovation Council of the Philippines

The Philippine Council for Industry, Energy, and Emerging Technology Research and Development (PCIEERD), as the Innovation Council of the Philippines, has expanded its sectoral coverage into the following areas: (1) Electronic and Semiconductor; (2) Mining and Minerals; (3) Metals and Engineering; (4) Food Processing; (5) Process; (6) Energy Efficiency; (7) Transportation; (8) Nanotechnology/Materials Science; (9) Biotechnology; (10) Genomics; (11) Information and Communications Technology; (12) Photonics; (13) Space Technology Applications; (14) Climate Change Adaptation; (15) Disaster Risk Reduction and Management; (15) Environment; (16) Artificial Intelligence; (17) Data Science; (18) Creative Industries; (19) Human Security.

[4] According to 2017 legislation, UniFAST reconciles, improves, strengthens, expands, and puts under one body all government-funded Student Financial Assistance Programs (StuFAPs) for tertiary education and special purpose education, in both public and private institutions. Financial support includes scholarships, grants-in-aid, student loans and other specialized forms of StuFAPs (https://ched.gov.ph/unified-student-financial-assistance-system-tertiary-education-unifast/)

[5] http://www.officialgazette.gov.ph/downloads/2017/08aug/20170803-RA-10931-RRD.pdf

[6] http://dost.gov.ph/phocadownload/Downloads/Journals/Approved%20Harmonized%20National%20RD%20Agenda%20%202017-2022.pdf

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The Innovation Council introduced the following new programs in 2017:

- SME Support Program focused on Small and Medium-sized Enterprises (SMEs) through the provision of one-on-one consultations and trainings, among others
- E-Governance System to improve access to government services and allow record management across sub-offices and departments throughout the country
- Gabay Probinsya Program focused on supporting regional consortia and on assessing the needs and relative advantages of the regions.

In addition, the Innovation Council provides grants for Startup Research proposals and funding to graduate students and faculty members who conduct research projects.[7]

The Philippine Innovation Act

Unfortunately, the Philippine Innovation Act, a bill that seeks to make innovation a major driver of economic growth, is facing continuous delay at the House of Representatives and is in danger of not being passed into a law.

PARTICIPATION IN HIGHER EDUCATION

Higher education participation rate

In terms of tertiary enrolment, the Philippines ranks 2nd highest in ASEAN. As a matter of comparison, the country has 2,981,800 enrolled students, while Indonesia (as top) has 6,463,300 enrolled students.

Figure 6. Tertiary Enrollment in ASEAN

Country	Tertiary Enrollment in ASEAN (in thousands)
Indonesia	6,463.30
Philippines	2,981.80
Vietnam	2,692.12
Thailand	2,433.14
Malaysia	860.14
Myanmar	634.31
Singapore	255.25
Cambodia	223.22
Lao PDR	132.44

[7] http://pcieerd.dost.gov.ph/news/latest-news/285-7th-year-pcieerd-the-innovation-council

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Brunei	11.29

**Data taken from Education Statistics - All Indicators World Databank -Office of Planning, Research, Knowledge Management, AY 2017-2018*

As shown in Figure 7, the largest number of higher education institutions is found in the National Capital Region, and Regions CALABARZON, III, V, and VII, while the lowest numbers are in Regions CAR, II, and XVI.

Figure 7. Distribution of Higher Education Institutions by Region and Sector: AY 2017-2018

	State Universities and Colleges (SUCs)		Other Gov't HEIs				Gov't Total (Excluding Satellite Campus)	Gov't Total (Including Satellite Campus)	Private		Private Total	Total (Excluding Satellite Campus)	Total (Including Satellite Campus)
Region	**Main**	**Satellite**	**LUCs**	**CSI**	**OGS**	**Special HEIs**			**Sectarian**	**Non-Sectarian**			
01 - Ilocos Region	6	21	4	-	-	-	10	31	13	69	82	92	113
02 - Cagayan Valley	5	20	-	-	-	-	5	25	11	37	48	53	73
03 - Central Luzon	12	39	15	-	-	-	27	66	25	144	169	196	235
04 - CALABARZON	5	56	15	-	-	1	21	77	53	196	249	270	326
05 - Bicol Region	9	23	19	-	-	-	28	51	14	98	112	140	163
06 - Western Visayas	11	54	10	-	1	-	22	76	28	50	78	100	154
07 - Central Visayas	5	23	10	-	-	-	15	38	29	98	127	142	165
08 - Eastern Visayas	10	26	3	-	-	-	13	39	16	34	50	63	89
09 - Zamboanga Peninsula	6	45	1	-	-	-	7	52	14	40	54	61	106
10 - Northern	5	26	7	-	-	-	12	38	18	46	64	76	102

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Mindanao													
11 - Davao Region	5	10	4	-	-	-	9	19	21	55	76	85	95
12 - SOCCSKSARGEN	4	14	1	-	-	-	5	19	15	77	92	97	111
13 - NCR	8	8	16	-	-	4	28	36	63	244	307	335	343
14 - CAR	6	14	-	-	-	1	7	21	6	28	34	41	55
15 -ARMM	4	14	-	6	1	-	11	25	5	50	55	66	80
16 - CARAGA	4	11	1	-	-	-	5	16	10	28	38	43	54
17 - MIMAROPA	6	43	2	-	-	-	8	51	9	29	38	46	89
Total	**111**	**447**	**108**	**6**	**2**	**6**	**233**	**680**	**350**	**1323**	**1673**	**1906**	**2353**

**Data as compiled by OPRKM-Knowledge Management Division as of June 2018*

STUDENT MOBILITY

Outbound Student Mobility

The number of Filipinos participating in outbound student mobility has been increasing over the years. Data shows that the number of students studying abroad has almost doubled in 2017 compared to 9 years ago (2017 = 16,308; 2008 = 8,443). Population growth and the continuing economic prosperity will lead to a further rapid increase in tertiary education with the Philippines expected to be among the world's top 20 countries in terms of tertiary enrolment by 2035 (Macha, Mackie, Magaziner, 2018). Top out-bound country destinations for Filipino students are Australia with 5,075; US with 3,037; New Zealand with 1,105; UK with 763 and Saudi Arabia with 747. With the recent adoption of the K-12 education reform, Filipino students are now with better English Language abilities and are thus better suited for international mobility.[8]

[8]https://wenr.wes.org/2018/03/education-in-the-philippines

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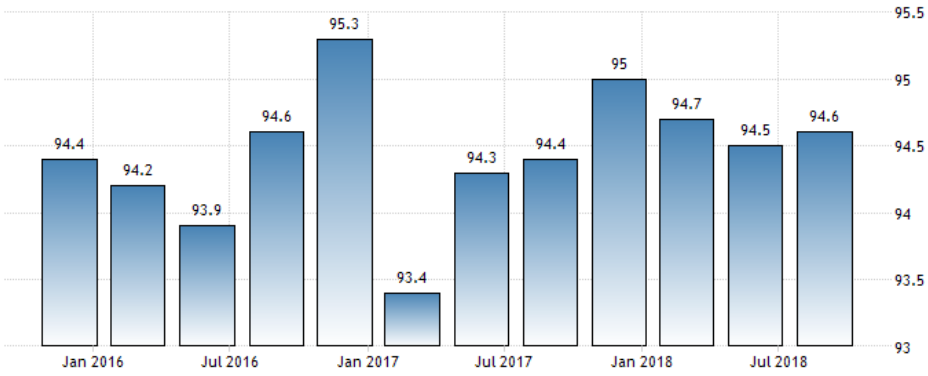
Employment and unemployment in the Philippines

The employment rate in the Philippines in 2018 has been 94.60% as shown in Figure 8.

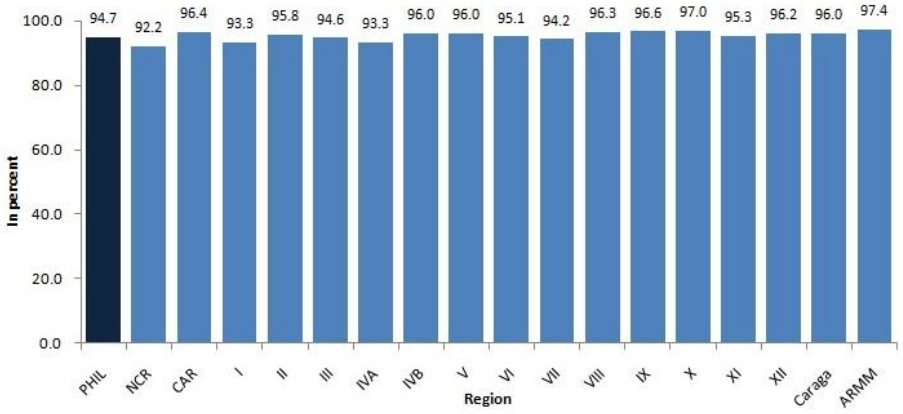
Figure 8. Philippines Employment Rate from January 2016 - July 2018



**Data taken from the National Statistics Office*

The distribution of employed persons is almost at the same level across regions with the Autonomous Region of Muslim Mindanao (ARMM) having the highest and the National Capital Region (Manila) having the lowest as shown in Figure 9.

Figure 9. Rate of Employment in the Philippines per Region



Source: Philippine Statistics Authority, *January 2018 Labor Force Survey*

Broken down per major occupation group, data in Figure 10 shows that the highest percentage of employed persons are in elementary occupations (27.6%), followed by managerial positions (16.2%), and positions of service and sales worker (14.7%) with the lowest number in the armed forces and special occupations (0.2%).

Figure 10. Percent Distribution of Employed Persons by Major Occupation Group

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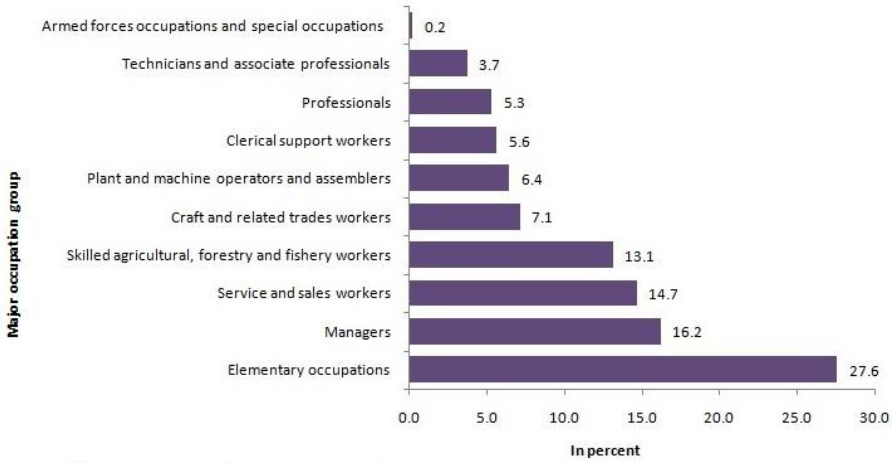

Source: Philippine Statistics Authority, *January 2018 Labor Force Survey*

Job-readiness of the youth in the Philippines

The Aspiring Minds Philippines National Employability Report – 2017 revealed the most complete picture of the job-readiness of the youth in the Philippines. It was developed after an in-depth analysis of the job-readiness of the youth across various industry sectors. Its findings are based on the study of 60,000 students from over 80 tertiary institutions throughout the country. The key findings of the report are:

- 65% of the candidates are unemployable in the positions/sectors of their choice
- Only 14.15% of the graduates are employable for outbound sales and 21.90% for inbound customer service roles in the Business process outsourcing industry
- Lack of adequate domain skills is the key reason for low employability in the Banking, Financial Services and Insurance (BFSI) sector
- 64% of the employable graduates come from other than the top 50 tertiary institutions in the Philippines
- There is no gender-wise disparity in employability results
- Tertiary institutions in metro cities produce more employable students due to better exposure and education opportunities
- 70.44% of the graduates have insufficient skills in communication in the English language
- 58.27% of the graduates have insufficient comprehension skills.[9]

Statistical data on the employment of graduates

The employment rate of graduates in the Philippines remains below 85%, calling for immediate appropriate action to be taken to increase it. Highest employment (84.9%) is found among tertiary education graduates. No wonder it is even parents' dream to be able to send their

[9] https://www.aspiringminds.com/philippines-national-employability-report

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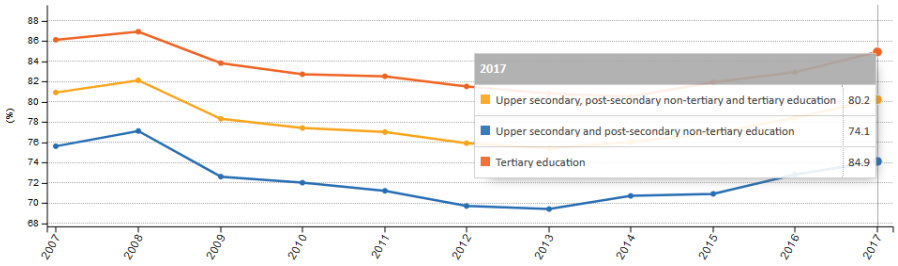
children to tertiary courses.

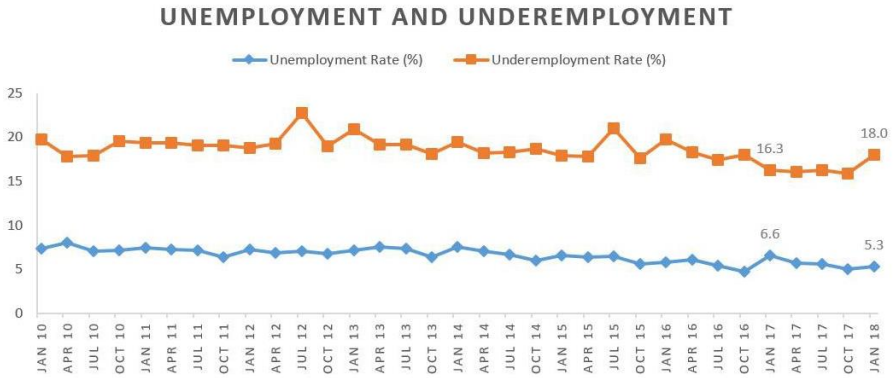
Figure 11. Employment Rates of Graduates (Aged 20-34) not in Education and Training, by Educational Attainment Level, EU-28, 2007-2017



Unemployment and Underemployment

Unemployed persons are defined as individuals who do not have a job but are actively seeking one. The unemployment rate in the Philippines has now dropped to 5.3% from 6.6% in 2017. On the other hand, the Philippine Statistical Authority or (PSA) defined underemployed persons as employed persons who have the desire to have additional hours of work in their present job, or to have additional job, or to have a new job with longer working hours. The rate of underemployment in the Philippines rose to 18% from 16.3$ in 2017.[10]

Figure 12. Philippines Unemployment and Underemployment Rate from January 2010 - January 2018



**Data taken from ABS-CBN Data Analytics*

Ilocos Region and Calabarzon hold the highest unemployment rates at 6.7% and 6.6%, respectively. Among the unemployed persons, 63.6% were males. Of the total unemployed, the 15-to-24 age group comprised 44.6%, while the 25-to-34 age group made up 30.3%. This shows some disparities in the rate of unemployment and underemployment across regions, gender and age-groups. [11]

Figure 12. Rate of Unemployment and Underemployment per Region as of October 2018

[10] https://news.abs-cbn.com/business/03/07/18/employment-underemployment-both-rise-in-january

[11] https://www.rappler.com/business/218244-unemployment-rate-philippines-october-2018

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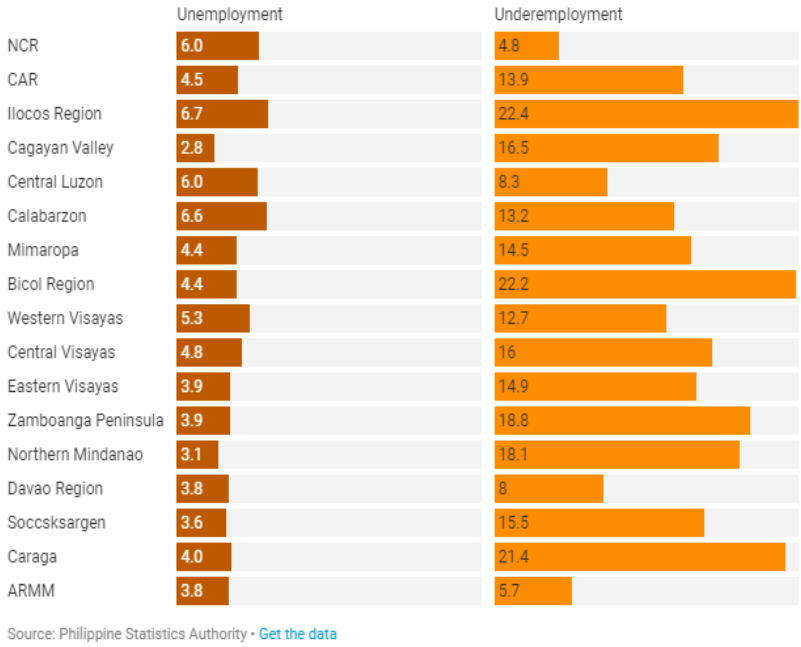

MONITORING AND ASSESSMENT OF THE EMPLOYABILITY OF GRADUATES AND THE RELEVANCE OF THEIR SKILLS

The Department of Labor and Employment (DOLE) is the primary policymaking, coordinating and administrative body of the Executive Branch of the government in the field of labor and employment. It has responsibilities to promote employment and to optimize the development and utilization of the country's human resources; to promote workers' welfare by providing for just and humane working conditions and terms of employment; and to maintain industrial peace by guaranteeing equitable, and stable employment relations and equal protection for the rights of all concerned parties.[12] The Commission on Higher Education (CHED) on the other hand is the government agency that is tasked to monitoring the employability of graduates from tertiary (baccalaureate) level degrees. Employability is regarded as a key assessment indicator of the performance of higher education institutions (HEI) and funding consideration for government funded HEIs.

The Bureau of Local Employment (BLE) under DOLE seeks to improve the local labor and employment situation in the Philippines. Its mission is to promote full employment by facilitating access of Filipino jobseekers to local employment opportunities through policy researches, standards setting, strategy development, labor market analysis and provision of technical assistance to regional implementers in support of employment service operations.

- The Career Guidance Program produces educational career guidance and employment coaching materials in response to the high unemployment rates among the youth. Example of such materials are the Guiding Youth Careers - a handbook for those

[12]https://www.dole.gov.ph/pages/view/7

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who help young jobseeker and Minute Guide for Young Jobseekers

- The Public Employment Service Office (PESO) facilitates and profiles the available skills in every locality across the Philippines. It also provides other services, such as labor market information, career guidance and employment coaching, livelihood and entrepreneurship assistance, job referral and placement, etc.
- PhilJobNet (PJN) is an online employment facilitation engine where listings of job vacancies and manpower recruitment agencies, career advice and labor-related news are being posted.

POLICY CONTEXT

Policies and reforms seeking to improve employability

The various reforms introduced in the entire education sector of the country are geared towards producing employable graduates at all levels and professionals who could contribute to national development. The K+12 education reform passed in 2013, which mandated kindergarten and grades 11 and 12 in the basic education level, is a crucial reform towards quality improvement of graduates. The Philippine Qualifications Framework that followed suit was again geared towards preparing the graduates of Grade 11, 12 and Vocational and Tertiary level courses to be employed based on the level of education they attained. CHED Memorandum Order (CMO) CMO No. 46, series 2012, Policy-Standard to Enhance Quality Assurance (QA) in Philippine Higher Education through an Outcomes- Based and Typology-Based QA mandates that HEIs have to pursue quality assurance and design their curricula considering outcomes that employment and employers need. Government funding for education has been significantly increased in the last 6 years. Government support for HEIs, especially public HEIs or State Universities and Colleges (SUCs), however, is now based on performance judged through quality indicators. Employability of graduates is one of the key quality criteria that are used. The Normative Financing Scheme (NFS) and the SUC Levelling (levelling of SUCs to 1-5) give high points to institutions boasting high graduates' employability. SUCs with low graduates' employability are given less budget. In addition, government funding is skewed to support priority courses – i.e. programs that are very much needed by the economy, such as engineering, mathematics and sciences, but for which few students currently enroll. In addition, renewed efforts are focused on strictly monitoring, regulating, and controlling HEIs (including SUCs) by the Government.

Government's support to Business Process Outsourcing companies, Small to Medium Enterprises (SMEs) and commitment to build more government-funded infrastructure under the "build-build-build" Government program are all geared towards enhancing the employment of Filipinos.

Reforms under the Duterte's administration

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TRAIN law

This 2018 law is the first of five tax reform regulations for a simpler, fair, and efficient tax system. The TRAIN law brings the following benefits: higher take-home pay, fairer tax system, higher tax exemption cap for 13th month pay, simpler tax filing and payment, higher VAT threshold and new exemptions. The reform package lowers personal income tax, simplifies the estate and donor's tax, and expands the value-added tax (VAT) range. On the other hand, it increases excise taxes on fuel, mineral products, vehicles, and cigarettes and imposes new taxes on sugar-sweetened beverages and cosmetic procedures. Revenues collected from TRAIN are expected to provide the funding necessary for the government's infrastructure and socio-economic programs.[13]

Contractualization or endo (end of contract)

Endo is defined as the illegal practice of hiring employees for a fixed term and continuously renewing their contracts in an attempt to circumvent the requirement to give benefits to long-term employees. Ending this labor practice was among the key campaign promises of President Duterte. In 2018, he signed an executive order introducing more stringent regulation on fixed-term employment.[14]

[13] https://www.moneymax.ph/blog/tax-reform-law

[14]https://www.rappler.com/newsbreak/iq/201468-duterte-endo-contractualization-promise-2016-to-2018

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Structural factors impacting graduates' employment and employability

STRUCTURAL FACTORS RESPONSIBLE FOR GRADUATE UNEMPLOYMENT

Based on employment statistics, the Philippine labor market is still in a very fragile state of development. There is still a lot of "surplus" labor without employment opportunities. The falling unemployment rate is a mirage. The real problem of employment in the Philippines is the prevalence of underemployment. While there might be great competition for employment in high quality jobs and positions. However, those positions are not filled easily if there is lack of labor force with the necessary skills.[15]

The following are the identified reasons of the high unemployment rate in the Philippines: (a) job – skill mismatch among graduates, (b) lack of quality graduates, (c) lack of matching skills and education, (d) lack of skills and experience, (e) lack of understanding on job application, (f) discrimination and unreasonable job requirements, (g) rapid population growth.[16]

CURRENT CHANGES IN THE NATIONAL OR REGIONAL ECONOMY EFFECTING ON GRADUATE EMPLOYMENT

While the country continues its robust economic growth (which is one of the fastest in the Asia-Pacific and inspires hopes for increased employment opportunities), this is tempered down by some challenges in other areas of economic development:

- The country's gross domestic product (GDP) stood at 6.8% for the first quarter of 2018, which is one of the fastest growth rates in the Asia-Pacific
- The public sector's construction activities increased by 25% while private sector construction also increased by 7%
- Despite the high revenue earning brought about by the new tax reform law (TRAIN Law) it also gave rise to a high inflation rate, particularly in 2018
- The amount of foreign direct investments (FDIs) flowing into the country also surged to $8.7 billion during the first 11 months of 2017, surpassing the full-year target of $8 billion set by the Central Bank of the Philippines (Bangko Sentral ng Pilipinas) and is the highest recorded so far
- The total foreign investment pledges approved by the 7 investment promotion agencies stood at P14.2 billion. However, foreign investment commitments plummeted by 51.8 percent to P105.6 billion in 2017 from P219 billion in 2016
- The peso took a hard hit in 2018 and fell to a 12-year low. Some firms have even forecasted it to sink further to P54 to a dollar. Moreover, the weakness of the peso has led overseas investors to pull out $1.22 billion of equities so far this year, exceeding the combined inflows in 2016 and 2017

[15] https://www.philstar.com/business/2018/04/25/1809025/labor-market-tightening

[16] https://www.pinoy-ofw.com/news/224-reasons-why-philippine-unemployment-rate-is-high.html#Job_skill_mismatch_among_graduates

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- The country's entangled red tape continues to annoy foreign investors.[17]

The improving economy is creating more employment opportunities for graduates. However, the continuing mismatch between the profession, knowledge and skill that graduates have with those needed by employers will continue to pose employment challenges.

In particular, there are 6 positions that have the most vacancies but fewer graduates or available applicants with the required skills: a) BPO, b) Information Technology (IT), c) Data Analytics and Technology, d) Legal and Public Relations, e) Technical Vocational, Retail and Manufacturing, and f) Operational and Backbone Positions.[18] Matching these jobs vacancies with the specializations of available graduates reveals a stark mismatch.

The continuing lack of information and support systems for graduates in their effort to find the best job for them compounds the problem. While the DOLE, Local Government Units and other government agencies have put in place support mechanisms and information sharing, a lot still needs to be done to improve them. Universities must also rethink their traditional role of producing the graduates and releasing them on their own to find their destiny. The HEI's role must go beyond supporting graduates to attain a degree and extend to providing support for finding a suitable and gainful employment.

It is necessary to use labor forecasts and craft curricula that would help develop skills that employers need. While HEIs are expected to decide their programs and craft their curricula after consultation with business and industry practitioners, this remains a concept not yet fully embraced by faculty, curriculum developers and policymakers in universities.

Overall support to entrepreneurs for conceptualization, clarification and funding of their business ideas remain scant and wanting.

NATIONAL AGENCIES THAT MONITOR SKILLS SOUGHT BY BUSINESS

The Technical Education Skills Development Authority and the Department of Education (DepEd) are responsible for the availability of skilled workforce (with NC Qualifications).

Technical Education and Skills Development Authority (TESDA)

TESDA oversees both public and private Technical and Vocational Education and Training (TVET) providers, setting quality standards for teaching and training, curricula and testing requirements for vocational programs.

Department of Education

The Department of Education manages elementary, secondary and informal education. It supervises all public and private elementary and

[17] https://www.rappler.com/newsbreak/in-depth/207742-health-philippine-economy-under-duterte-administration

[18] https://news.abs-cbn.com/business/06/05/18/these-6-industries-have-the-most-job-openings

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secondary schools. The Department has a central office in Manila and various field offices – 17 regional offices and 221 provincial and city schools divisions.[19]

STRENGTH OF THE INNOVATION SYSTEM

Only a limited number of universities in the Philippines have their own or cooperate with incubators, accelerators, technology and science parks, technology transfer offices and regional development agencies. Recently, the Department of Trade and Industry (DTI) has announced the creation of Regional Inclusive Innovation Centers (RIICs). They are intended to promote economic transformation and facilitate productive collaborations among industries, universities, government agencies, local government units, start-ups, micro enterprises and SMEs, R&D laboratories, (science and technology parks, incubators, FabLabs (fabrication laboratories), investors, and other agents in the ecosystem. RIICs are also expected to link various DTI and Department of Science and Technology (DOST) projects such as shared services facilities, FabLabs, R&D centers, food innovation centers, Negosyo Centers, technology business incubators and technology transfer offices. RIICs will provide additional support services such as incubators, accelerators, co-working spaces, logistics, accounting, e-services, etc. These new structures will be set on pilot basis in the regions of Cebu, Cagayan de Oro, Davao and Legaspi.[20]

REGULATIONS FOR VALIDATION OF KNOWLEDGE, SKILLS AND COMPETENCES,

The Non-formal Education Accreditation and Equivalency (NFE A&E) developed by the Bureau of Non-formal Education (BNFE) under the Asian Development bank-assisted Philippines Non-formal Education Project (PNFEP) provides an alternative means of certification of learning to Filipinos and foreigners aged 15 years and above, who are basically literate, who are unable to avail of the formal school system, or who have dropped out of formal elementary or secondary school. This aims to (a) provide a system for assessing levels of literacy and non-formal learning achievement based on a National NFE A&E Curriculum covering basic and functional education skills and competencies comparable to the formal school system; (b) offer an alternative pathway by which out-of-school youth and adults can earn an educational qualification comparable to the formal elementary and secondary school system; and (c) enable out-of-school youth and adults to gain reading, writing and numeracy skills, to meet their learning goals as they define them, and to gain the skills they need to improve their economic status and function more effectively in society.[21] The Technical Education Skills Development Agency also provides short to medium term training programs aimed at developing the needed skills of a potential employee. Thereafter, it assesses and issues National

[19]https://wenr.wes.org/2018/03/education-in-the-philippines

[20] https://www.sunstar.com.ph/article/1768037

[21] http://www.academia.edu/36664117/Difference_between_Formal_Education_and_Non-Formal_Education

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Certificates (NC I, II, III) certifying the level of skills and suitable employment that a person can pursue and be considered.

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Factors in the higher education system impacting graduates' employment and employability

REGIONAL DISPARITIES IN ACCESS TO HIGHER EDUCATION

Overall access to education in the Philippines is biased toward learners in the National Capital Region (NCR) and in relatively developed regions in Luzon, Visayas, and Mindanao. It is also biased toward relatively urbanized and affluent communities within each region. Middle and upper-class children have greater access to education than children from poor families. Disparities in access between developed and less developed regions, urban and rural communities, and rich and poor, have been further exacerbated by certain policies and practices within the education system:

- Insufficient primary and/or elementary schools in depressed and geographically isolated communities;
- Predominance of underqualified teachers and personnel in depressed communities;
- Concentration of post-secondary education programs in the National Capital Region and urban communities;
- Concentration of tertiary institutions and access to tertiary level programs in Luzon, especially in the National Capital Region;
- Inequitable and uneven access to non-formal education programs across the country;
- Limited access to education opportunities for minorities;
- Special education programs for gifted children, and for physically and mentally handicapped children, concentrated in the National Capital Region and scarcely available in other regions;
- Limited and unequal access to early childhood programs for children in rural and depressed communities.22

PUBLIC FUNDING FOR UNIVERSITIES

In the last 7 years, and particularly in the 2013-2018 period, public funding for education was significantly increased and the education sector usually got the highest budget. The Education sector accounts for P672.4 billion in the 2018 National Budget, which amounts to a 7% year-on-year increase. The Department of Education, which ranks first among all departments, was allocated P553.3 billion for the provision of quality and affordable basic education. Meanwhile, State Universities and Colleges received a total of P62.1 billion for the operation and improvements of public higher education. The Commission on Higher Education received P49.4 billion, a remarkable 164% increase, to finance scholarships, grants, and subsidies for higher education. In the area of technical and vocational education, the Technical Education and Skills Development Authority receives P7.6 billion to train readily employable, competitive and technically-proficient students.[23]

The allocation of public money for education is now tied to performance

[22] Philippines 1997, 185-6.

[23]http://pia.gov.ph/news/articles/1003334

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at all levels and spheres. Thus, a HEI must perform well if it is to receive significant government funds and outperform its counterparts if it is to receive more money than them. For State Universities and Colleges, the Government - through the Commission on Higher Education - uses the following measures in allocating funding:

Normative Financing Scheme (NFS) - by the Commission of Higher Education (CHED)	Agency Performance Review (APR) - by the Department of Budget and Management (DBM)	Performance Based Bonus (PBB) - for EO25 by Inter-Agency Task Force (IATF).

The Normative Funding/Financing Scheme has been the budget allocation scheme for the State Colleges and Universities in the Philippines since 2004. It refers to the application of a set of prescribed criteria and norms designed to promote and reward quality instruction, research and extension services, as well as financial prudence and responsibility. Its purpose is: a) to further rationalize the allocation of funds in State Colleges and Universities; b) to improve the delivery of service in the field of instruction, research and extension; c) to harmonize the programs and course offerings of State Colleges and Universities to the national priorities; d) to reward or encourage quality teaching, research and extension services; e) to encourage State Colleges and Universities to improve cost recovery measures, practice fiscal prudence and maximize resources.

The criteria include the institutional needs based on existing higher level programs (e.g. PhD level over masters, masters over baccalaureate, etc.), programs in priority disciplines (e.g. IT, natural sciences and math, education major in English, etc.), and more costly programs based on normative costs (i.e. how much programs ought to cost per student per year as determined from Normative Cost Per Student formula). Maintenance and Other Operating Expenses for Research will be allocated based on both inputs (the capacity or potential to do research) and outputs from research programs (e.g. publications and patents). Initially, equal weights will be given to inputs and outputs but in the future, more and more weight will be shifted to research outputs. Maintenance and Other Operating Expenses for Extension will be allocated based on extension inputs and outputs. Maintenance and Other Operating Expenses for Quality Teaching Support will be based on evidences that teaching in the State Colleges and Universities is excellent or above average[24]

[24] https://www.dbm.gov.ph/wp-content/uploads/2012/03/jc_2004-2_001.pdf

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Decision making at universities

State Universities and Colleges (SUCs)

SUCs are defined as public institutions "with independent governing boards and individual charters established by and financed and maintained by the national government". In order to be classified as a university (as opposed to a college), institutions have to offer graduate programs in addition to a minimum number of bachelor programs in a range of disciplines. They enjoy full autonomy in decision making and governance.

Local Universities and Colleges (LUCs)

LUCs are public institutions established and funded by local governments. Decisions are made through governing boards and according to the local ordinance that created them. While they also enjoy autonomy, the local chief executive (Mayor) who chairs the Governing Board exercises some control, too.

Other Government School (OGS)

The category "other government schools" includes specialized HEIs that provide training related to public services, such as the Philippine National Police Academy or the Philippine Military Academy. Since these are also created by law, they enjoy full government support and autonomy. Unlike the SUCs and LUCs, they do not collect tuition and other fees.

Private Institutions

Private HEIs are usually owned by private individuals, foundations or religious groups. The Philippine Commission on Higher Education (CHED) has far-reaching regulatory authority over HEIs, including private institutions. It can authorize the establishment or closure of private universities, and determine their tuition fees and degree programs. Private HEIs have to have their degree programs approved in order to be able to provide degrees in these programs. Private HEIs that have received this approval are authorized to display a "Special Order Number" (SON) on their academic records. The SON pertains to a specific credential awarded on a certain date and needs to be requested on a continual basis for batches of graduates.

However, CHED can exempt some HEIs from the requirement to obtain SONs by declaring them "autonomous" or "deregulated" institutions. This designation is granted for five-year periods to reputable high quality institutions. Autonomous HEIs have the freedom to establish new degree programs and design their own curricula, whereas deregulated institutions still need to request permission for new degree programs, but are exempt from the special order requirements. CHED publishes lists of autonomous and deregulated universities on its website.

There is an additional voluntary accreditation process that allows HEIs to apply for study program accreditation by private accrediting bodies, such as the "Philippines Accrediting Association of Schools, Colleges

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and Universities" and the "Philippines Association of Colleges and Universities Commission on Accreditation". The CHED encourages such voluntary accreditations and has created incentives for HEIs to engage in it by granting such HEIs with a number of self-regulation powers, such as financial and administrative autonomy, and freedom to autonomously establish new graduate programs.[25]

HEI performance with regard to collaboration with of external stakeholders is one of the areas evaluated and assessed in quality assurance. Employers can influence curriculum design and delivery.

ENTREPRENEURSHIP EDUCATION IN THE PHILIPPINES

Currently, 288 Philippine HEIs offer baccalaureate and graduate programs in entrepreneurship. Most of them are located in Metro Manila. Enrolment has increased steadily over the past five years, reaching 31,034 enrolled students in the 2016-2017 academic year and 5,095 graduates. Aside from dedicated entrepreneurship programs, there are programs that have started incorporating entrepreneurship courses in the main study - Business Administration, Engineering, Information Technology, Computer Science, Agribusiness and Science. The trend is reinforced by existing organizations in the country, such as the Young Entrepreneurs Society.

A strong Philippine Innovation and Entrepreneurship Ecosystem can promote collaborative agreements between industry, government and academic institutions to encourage partnerships in support of advanced manufacturing and services. Such an ecosystem is the platform that can help achieve the objectives set out in the President's Zero+10-Point socioeconomic agenda. With the objective of boosting innovation-led growth, the Department of Trade and Industry (DTI), the Department of Science and Technology (DOST), the CHED, and the Philippine Association of State Universities and Colleges (PASUC) are undertaking assessment of models that support the creation of more innovation-driven micro enterprises and SMEs that can produce high value products and services. The innovation-promotion activities include engagements with founders and innovators from the startup ecosystem of Silicon Valley, as well as the change innovators at University of California-Berkeley.[26]

The Philippine government is taking the lead with innovation and entrepreneurship as the central pillar of the government's Inclusive Innovation Industrial Strategy (i3S) with the launch of the Inclusive Filipinnovation and Entrepreneurship Roadmap. It covers six key elements: (1) strong government-academe-industry collaboration; (2) human capital development; (3) access to funding and finance; (4) innovation policy and commercialization of research; (5) entrepreneurial culture and support for startups, MSMEs, and large enterprises to

[25] https://wenr.wes.org/2018/03/education-in-the-philippines

[26] https://www.philstar.com/other-sections/education-and-home/2017/10/25/1752459/more-filipinos-take-entrepreneurship-courses

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become more innovative; and (6) development of industry clusters to position innovative industries for rapid growth. These will be implemented through the regional inclusive innovation centers (RIICs), which will be established initially in Cebu, Cagayan de Oro, Davao, and Legaspi.[27]

Furthermore, the Youth Entrepreneurship Act or Republic Act No. 10679 encourages young would-be entrepreneurs to establish their own business by providing them with access to capital and other support. It also creates financial literacy modules in all levels of Philippine education, to inculcate a culture of enterprise development among the Filipino youth. [28]

However, the process of embedding entrepreneurship courses in academic programs unrelated to business and in research endeavors is still rare or totally non-existent in the Philippines. Thus, while graduates in courses non-related to business have plenty of opportunity to engage in entrepreneurial activities, their lack of knowledge and skills in business and entrepreneurship constrain them and doom those who try anyway. With the Philippine economy shifting more and more to industries and putting its best hopes on small to medium start-up companies, these will surely open up vast employment opportunity for graduates up for grabs. The task of the higher education system is to prepare those graduates for these employment opportunities.

INTERNSHIPS, TRAINEESHIPS AND ON-THE-JOB (OJT) PLACEMENTS OF STUDENTS

Work placements (internships, traineeships, or OJTs) are compulsory in Philippines Universities if they are part of the curriculum as a prerequisite for graduation. The following are the minimum qualifications of a student trainee applicant: he or she must (a) be 18 years old; (b) be enrolled in a practicum or equivalent subject; (c) have good academic standing and have completed all pre-requisite subjects; (d) have completed at least 90% of his/her academic requirements or passed all his/her major (professional) subjects; (e) have consent from parents/guardians; etc.. It is usually the role of the university to find partners for the above endeavors and help arrange for the fielding of students in them. Regular monitoring and evaluation is done by the faculty coordinator in coordination with the industry/ agency based counterpart. Unfortunately, not all companies offer paid internships, especially those based in the Philippines. The following are just some of the possible incentives a company may offer to the student trainee: free meals during duty, travel allowance, uniform.[29]

Tertiary students enrolled in HEIs may undergo internships, traineeships and OJTs in other countries or in the Philippines. Overseas placements offer opportunities for students to acquire practical knowledge, skills and

[27] https://www.dti.gov.ph/media/latest-news/12319-dti-advances-inclusive-innovation-and-entrepreneurship-at-iic-2018

[28] http://www.senate.gov.ph/press_release/2017/0514_aquino2.asp

[29] http://www.accralaw.com/publications/labor-aspect-student-internship

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attitudes in recognized Foreign Host Establishments or Organizations in foreign countries. This is done in order to enhance students' competencies to work in a multicultural environment.[30] On the other hand, domestic placements also offer opportunity to acquire practical knowledge, skills, and desirable attitudes and values in reputable establishments or industries in the Philippines. This is done in order to a) enhance the students' professional and transversal competencies, as well as discipline in the workplace, b) promote the competitiveness and employability of students, c) strengthen and enrich degree programs in HEIs, d) provide students and HEIs with opportunities to learn from and network with experienced professionals, e) prepare students to handle new challenges and complex tasks or problems, f) help students identify future career directions and grow into competitive candidates for future job opening.[31]

Through the CHED the Government regulates and controls internships, traineeships and OJTs. Two norms are issued to this effect, namely: a) CHED Memorandum Order No. 22, series of 2013: Revised Policies, Standards and Guidelines on Student Internship Abroad Program, and CHED Memorandum Order No. 23, series of 2009: Guidelines for Student Internship Program in the Philippines.

However, the lack of emphasis on entrepreneurship education across non-business programs is highlighted by the fact that only business-related courses such as Bachelor of Science in business, management, finance, hotel and restaurant management, tourism and agriculture usually require students to undergo actual hands-on internships, traineeships or OJTs in business related ventures or industries before graduation. Other courses strictly confine their students only to internships, traineeships and OJTs in their field of specialization such as criminology student being exposed to police work.

ENGAGEMENT OF RESEARCHES AND RESEARCH ORGANIZATIONS (INCLUDING UNIVERSITIES) IN INTERNATIONAL LINKAGES AND COLLABORATION

In view of the underdevelopment of research in Philippine HEIs, the CHED has developed policies and introduced measures to improve research productivity. The HEIs in the country, especially State Universities and Colleges, are asked to link internationally for R&D if they are to be recognized and given high respect and funding support from government. Examples of international scientific organizations that are sought after as partners for research projects are the International Council for Science, the Pacific Science Association and the National Research Foundation of Korea.

[30] https://ched.gov.ph/wp-content/uploads/2017/10/CMO-No.-22-s2013.pdf

[31] https://ched.gov.ph/cmo-23-s-2009/

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INDUSTRY FUNDING TO UNIVERSITIES

Universities in the Philippines enter into agreements with various independent entities that may result in an ongoing business or academic relationship. Most often, the relationship is governed by the agreement underlying the partnership.

HEIs in the Philippines have been involved in formal, mostly continuing and long-term academia-industry partnership (AIP) in the fields of business, ICT, education and medical/health science. However, it is the HEIs that provide most of the funding necessary for such partnerships to thrive. The benefits of AIP is limited to creating opportunities for internships or the on-the-job training of students that lead to job placements of graduates. The challenges HEIs face in AIP engagement primarily center on the organizational, administrative and management aspects of AIP.[32]

The government encourages industries to provide funds to universities via tax incentive schemes. The Philippines government has introduced different tax incentive programs depending on the nature of the business enterprise. Different incentive schemes are available depending on the location and registration of the business activity. The main fiscal benefits for investors are: (1) Income Tax Holiday, (2) Reduction of the Rates of duty on capital equipment, spare parts and accessories, (3) Exemption from wharf dues and export tax, duty, impost and fees, (4) Exemption from taxes and duties on imported spare parts, (5) Additional Deductions from Taxable Income, and (6) VAT zero-rating.[33]

CAREER GUIDANCE IN HIGHER EDUCATION

The Department of Education, in coordination with the DOLE, TESDA, CHED, PRC, NYC, industry associations, professional associations, and other relevant stakeholders, is mandated to pursue Career Guidance and Counselling programs that expose students to the world of work, and develop the capability of career counsellors and advocates to guide the students and equip them with the necessary life skills and values.

Employer engagement in career guidance helps students to develop their knowledge and skills and to thrive in their future career. Universities invite and collaborate with employers in activities like Career Talks, Job Fairs, CV workshops and mock interviews, apprenticeship and others.

However, career guidance is usually provided only when the students have to decide on what courses to pursue after their enrolment at the university, what possible career opportunities are there upon graduation and how to increase the chances of being employed. After graduation, alumni lose contact with the university and are left on their own to find their employment. This is an area that still needs a lot of improvement if they are to ensure better employment rate of their graduates.

[32]https://www.academia.edu/9402907/Academe_Industry_Partnership_in_the_Philippines_Nature_Benefits_and_Problems?auto=download

[33]https://www.tripleiconsulting.com/tax-incentive-programs/

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CONDITIONS FOR THE MOBILITY OF EXPERTS & SCIENTISTS – INTERNATIONAL & ACROSS THE BUSINESS-INDUSTRY DIVIDE

Conditions for the mobility of experts & scientists – international & across the business-industry divide - are not encouraging. Faculty members and scientists at universities are fully loaded with academic work and multi-faceted administrative commitments. University experts and scientist seem to see themselves as seated in a pedestal of academic ranks difficult to be reached by industries. This is an area needing a lot of improvement.

TRACKING THE EMPLOYABILITY OF GRADUATES

Graduate tracking surveys are being performed but are not sustained. The reality is that only few universities monitor the career path of their graduates. Reaching the huge number of graduates is a challenge, as they frequently change contact information such as address, mobile phone, or social media accounts after leaving the university and finding work or placement elsewhere. In addition, not all graduates are willing to participate in surveys conducted by their universities and do not see the relevance of such activities, especially if they are still not employed.

Due to an alarming rate of unemployment and underemployment in the Philippines, CHED has been implementing Graduate Tracer Studies (GTS) that aims to assess the employability of college graduates – the first study was carried out in 1999, the second one in 2004 and the latest one in 2012. The results are used to institute the necessary reforms and policies to ensure that higher education institutions and graduates are prepared to meet the challenges of a 21st century world.[34]

While HEIs are fully aware of the continuing unemployment debacle of their graduates, corrective action and needed curricular adjustment are either slow or lacking. The mismatch between the knowledge and skills that universities develop in their graduates and those that employers need remains unattended to. Universities continue to limit the participation of industry practitioners in curriculum development and revision and even in the teaching process as lecturers and speakers. The dogmatic notion that the university is an ivory tower discourages academics from involving industry partners and stakeholders in highly academic affairs. Some HEIs have been successful in bringing in industry minds and insights into their curriculum, and such initiatives have resulted in much better quality and employability but others continue to fail or grope in the dark either because they do not know how to do it or because they refuse to change.

On the other hand, extracurricular activities and voluntary work are very much encouraged in every university in the Philippines because they are vital and they shape the well-being and academic performance of students. In fact, universities give incentives, credits and rewards for extracurricular and voluntary activities. But again, students' extracurricular activities are mostly related to clubs, societies or

[34] tps://www.gmanetwork.com/news/cbb/content/267762/online-survey-to-assess-employability-of-phl-college-grads/story/

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fraternities and very few of them are related to entrepreneurship, business and innovation.

ANALYSIS OF THE CONSTRAINING OR EMPOWERING FACTORS AND DETERMINANTS ON CURRENT AND FUTURE UNIVERSITY STRATEGIES

The aforementioned factors, situations and trends happening in the country amidst rapid developments in the global world and the pervasive challenge of unemployment among fresh graduates impinge on how HEIs in the Philippines must adjust their development strategy if they are to remain relevant to the needs of society and the economy. The stark facts are: a) There remains a mismatch between what the graduates learn and what industry needs from them; b) While there are several education reforms embraced and being implemented by government, they have to be sustained in the long term with unwavering commitment if they are to increase the rate of employment and ultimately improve the economy and the quality life of the Filipino people; c) HEIs, particularly state universities and colleges that are fully funded by the government must commit themselves to pursuing these changes and reforms, and must adjust their development directions and strategies to embrace concrete steps to improve the quality of their academic programs and the employability of their graduates.

Ifugao State University and Benguet State University, being state-funded universities, must take the lead in showcasing practical and doable strategies to improve the quality and employability of their graduates by leveraging on the best practices that HEIs in the world have found to be working and to be genuinely transformative. Participating in the INNOTAL project is surely a big step in the right direction.

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