Youth Migration from the Philippines:

Brain Drain AND Brain Waste

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ACRONYMS

ADB	Asian Development Bank
BLES	Bureau of Labor and Employment Statistics
CFO	Commission on Filipinos Overseas
CGAP	Career Guidance Advocacy Program
CHED	Commission on Higher Education
DOLE	Department of Labor and Employment
DOST-SEI	Department of Science and Technology – Science Education Institute
GPB	Government Placement Branch
ICT	Information and Communications Technology
ILO	International Labour Organization
IOM	International Organization for Migration
ISCO	International Standard Classification of Occupations
IT	Information Technology
JPEPA	Japan-Philippines Economic Partnership Agreement
MDG-F	Millennium Development Goals Achievement Fund
MOA	Memorandum of Agreement
NCR	National Capital Region

NCRO	National Reintegration Center for OFWs
NSO	National Statistics Office
OECD	Organisation for Economic Co-operation and Development
OFW	Overseas Filipino Worker
OWWA	Overseas Workers Welfare Administration
BGN	Brain Gain Network
PESO	Public Employment Services Office
POEA	Philippine Overseas Employment Administration
POLO	Philippine Overseas Labor Office
PRC	Professional Regulation Commission
S&T	Science and Technology
SOF	Survey on Overseas Filipinos
TESDA	Technical Education and Skills Development Authority
TOKTEN	Transfer of Knowledge through Expatriate Nationals
UNDESA	United Nations Department of Economic and Social Affairs
UNDP	United Nations Development Programme
UNESCO	United Nations Educational, Scientific and Cultural Organization
UNICEF	United Nations Children's Fund
UNITAR	United Nations Institute for Training and Research
YEM	Youth Employment and Migration

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EXECUTIVE SUMMARY

The study on brain drain and brain waste among young Filipino migrants was triggered by some conclusions reached in a previous study on youth employment and migration in the Philippines (Asis and Battistella, 2013). Among those conclusions, two were particularly notable: the fact that there were slightly more young migrants employed as professionals compared to all migrants (a possible case of brain drain), and that the highest occupation among young migrants was domestic work (hinting of a possible case of brain waste). Unfortunately, it is not possible to analyze brain drain and brain waste systematically because of the lack of appropriate data. The availability of the e-registration database from the Philippine Overseas Employment Administration (POEA), which collects data on those applying for overseas employment online through the Government Placement Branch (GPB), provides the possibility to explore aspects of brain drain and brain waste, which this study aimed to undertake. Though the database has limitations, data on the education and desired occupation of applicants with the GPB provided useful starting points to look into the issues of brain drain and brain waste among aspiring youth migrants.

The study started with a review of the literature on brain drain, brain gain, brain circulation and brain waste, in both international and Philippine contexts. The next phase of the study involved analyzing results from the e-registration database for the population of applicants in general and specifically for young Filipinos. Some observations on policies and final recommendations concluded the project.

The review of the literature shows that across the years, research and policy attention has mainly focused on brain drain, which has emphasized the adverse consequences of international skilled migration, and on brain gain, the alternative approach that takes into account the return benefits and development potential of migration. In recent years, however, there has been increasing interest concerning brain waste, a problem not just for migrants but for the sending country as well. In relation to brain gain, the concept of brain circulation proposes an alternative approach that looks at the benefits of temporary returns of migration, implying that one does not have to permanently return to the homeland in order to contribute to its development.

In general, the youth dimension and its intersections with gender, educational attainment, occupation prior and upon migration, among other factors are not given sufficient attention in the literature on brain drain, brain gain, brain waste and brain circulation. Most of the studies have examined migrants in general, and thus youth-specific studies are lacking.

Available literature on brain drain in reference to international labor migration from the Philippines indicate that the brain drain of skilled professionals had already become a concern for the Philippines since the 1970s and even until today, as seen in the available literature and media reports. Fewer studies have explored the issue of brain waste, suggesting a degree of skills mismatch in which many overseas Filipino workers (OFWs) who are skilled and tertiary-educated end up in jobs that are less-skilled or unskilled, or occupations that do not require their qualifications. Studies on brain gain and brain circulation were also briefly mentioned. In analyzing recent data to illustrate the current context, it was observed that a substantial share of OFWs (whether contract workers, emigrants or other Filipinos overseas) work in professional, technical and related fields. For the emigrants, data show that many are college educated. Collectively,

the available data and literature show the significant extent of skilled migration from the Philippines over the years.

Additional observations are worth mentioning. There are few and limited data and research studies which can be analyzed to understand brain waste, which is an equally important issue to explore as it has critical implications. Among government agencies in the Philippines, the POEA provides substantial data on OFWs, but little is known about their educational attainment and skills set, and how these relate to their occupations abroad. Furthermore, how these relate to young Filipino migrants also needs to be explored. These limitations underscore the need for additional data and information on OFWs to further understand key trends and issues.

The database of the GPB contains information on more than 80,000 applicants who look for a job in countries with which the Philippines has a bilateral agreement or for occupations in public facilities of countries of destination, which require government direct mediation. Applicants register to the database online and must therefore be computer literate and have access to Internet connection. Because of these specificities, the database comprises people between 20 and 40 years of age residing particularly in three regions of Luzon (the Northern part of the Philippines) and who intend to work mostly in Korea (45 percent), a country that only handles migration through government-to-government agreements. Factory work is the highest position applied for, followed by nursing and caregiving. Nurses intend to go particularly to Japan (because of the Japan-Philippines Economic Partnership Agreement) or to Saudi Arabia (because of the agreement to supply personnel to some hospitals) or to Canada (where the agreement is with the various provinces). College graduates are the majority of applicants (58 percent), but this is largely due to the number of nurses who are seeking employment. Next to hospitals and health care facilities, manufacturing of different kinds of products is the second most popular industry to which aspiring migrants apply.

Focusing on specific occupations, interesting is the high number of applicants with college degrees who seek for a position as factory workers (32 percent). This hints at the possibility of brain waste, generated by the lack of confidence in finding a job according to their qualifications or the available and high paying-

jobs abroad which are not consonant. Brain waste can particularly occur in an occupation considered as low-skilled, such as domestic work. This analysis is called for particularly by the fact that the previous study on youth employment and migration (Asis and Battistella, 2013) had established that domestic work was also the number one occupation among young OFWs. Unfortunately, the GPB database does not allow for strong conclusions because of the low number of applicants as domestic workers. Nevertheless, it is interesting to observe that among them, almost 34.8 percent had a college degree, confirming the brain waste trend occurring in migration.

When the analysis is focused on young Filipino migrants, in particular the young applicants within the GPB database, some considerations can be put forward: the propensity of Filipinos to seek work overseas is higher than the actual opportunities available; highly skilled Filipinos seek opportunities abroad, particularly in the health sector; the education system seems excessively fragmented, allowing schools to institute a variety of courses, for which it is not clear whether they meet quality standards; and the mismatch between educational level and the application for a job overseas is particularly evident in the high number of college graduates applying for jobs as factory workers as well as by the number of nurses who are applying for positions in industries not related to the health sector. Whether applicants for domestic work constitutes a specific case of brain waste could not be established through the analysis of the GPB database due to the small number of such applicants.

At the policy level, the attention dedicated to the overseas labor by the government is generally oriented to include all OFWs, without crafting or considering age-specific measures. An exception to that is the minimum age requirement for female domestic workers (they must be 23 years old). In some respects, specific attention to young migrants in some policies is not even possible. For instance, policies dedicated to increasing brain gain by facilitating the return and reinsertion of OFWs in the national context leave young migrants automatically out, as they have not acquired the desired experience and skills for which brain gain policies are designed.

Something could be done for brain waste, specifically in helping young migrants find the proper employment opportunities. Currently, the mediating role is

exercised by recruiting agents, who might not always consider it in their interest to discourage young migrants from getting into less skilled occupations.

The intervention should address structural imbalances which drive migration. Such imbalances concern the education system, which seems too fragmented and too dependent on the demands of the international labor market rather than the national one, and the kind of economy the government wishes to develop and which must be more responsive to the aspirations of young Filipinos.

Concluding the report, the final recommendations offered are as follows: 1) Standardize and streamline the curricular offerings of educational institutions; 2) Ensure the recognition and equivalence of Philippine-earned degrees; 3) Address the excessive enrollment in courses for occupations such as nursing and seafaring; 4) Improve apprenticeship opportunities and benefits; 5) Offer incentives to employers who hire youth; 6) Offer adequate and accessible information services to applicants for work overseas; 7) Utilize fully the pre-employment seminars; 8) Consider age in government policies and procedures concerning migration; 9) Provide appropriate data; 10) Investigate further brain waste.

INTRODUCTION

International migration involves the transfer of population for a short period or for a long time from one country to another. In the vast majority of cases, migrants are usually in their productive ages, healthy, and inclined to find employment in foreign labor markets. As such, migration often constitutes a net transfer of human resources from the country of origin to the country of destination. Consequently, it can be considered a net loss for the country of origin, but can later be compensated in the form of higher productivity, remittances, and the acquisition of skills, experiences and competence. Because of the immediate loss to the country of origin, particularly when migrants are already in the labor market and have had some qualifications acquired through formal training or experience, migration has been considered as a drain of resources, a case of brain drain in general terms.

In more recent times, the mobility of skilled workers has increased, fueled by job expectations from a better educated population in countries of origin and fanned by globalization, advances in communication and technology and the international integration of market systems. Of increasing concern in migration are the movements of young migrants, especially those who are educated, equipped with skills and of prime age for insertion into the labor force.

The intersection between youth, employment and migration has garnered increasing attention in the discussion on development. The Youth, Employment and Migration (YEM) Project specifically takes up this issue. Elaborated within the Millennium Development Goals Achievement Fund (MDG-F), with support from the government of Spain, YEM consists of 14 Joint Programmes currently being implemented by United Nations Country Teams. These initiatives span countries in Africa (Sudan and Tunisia), Asia (China and the Philippines), South-East Europe (Albania, Bosnia and Herzegovina, Serbia and Turkey) and Latin America (Costa Rica, Ecuador, Honduras, Nicaragua, Paraguay and Peru), and involve partnerships between international organizations and national actors.

In the Philippines, a recent YEM study (Asis and Battistella, 2013) finds that a slightly higher proportion of young Filipino migrants are employed in professional or skilled occupations than adult migrants. It also finds that in other respects the youth replicate the general scenario of overseas Filipino workers (OFWs) in terms of occupations and destinations. In particular, domestic work is also the number one occupation for young Filipino migrants. These findings have prompted some questions for further research. What is the educational background of young Filipino migrants? Are brain drain and brain waste occurring in Filipino youth migration? What initiatives could be implemented to improve the employability of the Filipino youth, either locally or abroad?

This report attempts to provide some answers to those questions by situating the discussion in international and national contexts, and by examining an official government database on migration which, although limited in many respects, contains data on education - a significant variable rarely included in other databases.

In the first part, the study provides a review of the literature on brain drain and related aspects (brain gain, brain circulation and brain waste). The second part focuses on the discussion in the Philippines about brain drain and brain waste, interspersed with available data on OFWs. The third part illustrates results concerning Filipinos who registered online to apply for jobs abroad, based on the database of the POEA. The fourth part surveys available data on Filipino youth and subsequently focuses on data concerning young OFWs. The fifth section discusses policies in the Philippines concerning young migrants and those

relevant to the discussion of brain drain and brain waste. The report concludes with some recommendations for a better understanding of the impact of brain drain and brain waste on young Filipinos and for the development of a more updated policy approach towards young migrants.

he discussion on brain drain emerged from the broad context of concern for development, particularly in regard to developing countries. As educated, experienced and skilled professionals were leaving developing countries to

PART I:
BRAIN DRAIN AND RELATED TERMS

find more rewarding opportunities, both in professional and monetary terms, in developed countries attention was called at the level of the United Nations (UN) on the negative impact of this outflow on countries of origin, which were deprived of human capital necessary to pursue economic development.

In the late 1960s, the United Nations Institute for Training and Research (UNITAR) had already prepared a study used by the UN Secretary General for his report on the "Outflow of Trained Personnel from Developing to Developed Countries."[1] A follow-up study of UNITAR examined the situation in five countries: Cameroon, Colombia, Lebanon, the Philippines, and Trinidad and Tobago.[2] The first estimates of the impact of brain drain indicated that developing countries had spent $326.3 million on educated professionals who had migrated to the United States in 1984, and this had resulted in $835.5 million worth of savings for the US (Mubanga-Chipoya, 1988:432-433).

[1] UN Doc. A/7294, 5 November 1968.
[2] UN Doc. UNITAR RR/5, 1971.

Skilled migration continues to generate debate in terms of its positive and negative impacts, especially on countries of origin, particularly the question of whether it is detrimental due to its brain drain effect or if it can be harnessed for development (Guerrero and Bolay, 2005). The outflow of professional and skilled migrants has further intensified since the 1990s, when globalization, international and regional integration and advances in information and communications technology (ICT) led to an increased demand for foreign professionals or talents from other countries (International Labour Organization, 2004, cited in Guerrero and Bolay, 2005).

Skilled migrants are defined and distinguished from other labor migrants as those who have completed tertiary education or have a university degree, and may have additional academic qualifications or extensive work experience in a particular occupational field (Docquier and Marfouk, 2004; Faini, 2007; Iredale, 2001; McDonald and Valenzuela, 2009).[3] If originally the concern for brain drain was focused on the developing world, it is now widespread, as movements of skilled migrants between developed countries have also increased. These recent flows include "temporary flows of undergraduate and postgraduate students, researchers, managers and specialists in Information and Communication Technologies (ICT)" (United Nations Educational, Scientific and Cultural Organization, 2007:4).

The discussion on brain drain has expanded and the components of the phenomenon are now identified as: 1) brain drain, 2) brain waste, 3) brain gain, and 4) brain circulation.

[3] According to the International Organization for Migration (2008) there is no clear-cut, unified definition of the highly skilled migrant, though the common indicator is educational level or occupation. The most basic definition of highly skilled migrants usually refers to "persons with tertiary education, typically adults who have completed a formal two-year college education or more." This is also the most readily available international statistic and, by default, the most widely studied measure of highly skilled mobility. When possible, additional information regarding an academic or professional degree would be desirable (IOM, 2008). The ILO also provides a categorical list of highly skilled or professional occupations in the International Standard Classification of Occupations (ISCO).

1. Brain Drain

Brain drain refers to the large outflows of educated and skilled labor migrants, especially those originating from developing countries and moving towards developed or highly industrialized countries. In more specific terms, it refers to the "international transfer of resources in the form of human capital, i.e., the migration of relatively highly educated individuals from developing to developed countries" (Beine, Docquier and Rapoport, 2003). The term[4] suggests that the outflow of skilled or professional migrants or foreign talent leads to adverse consequences for the sending country, mainly a loss of human capital, manpower and skills, which in turn leads to decreased resources for national development and economic growth (Adams, 2003; Özden, 2006; UNESCO, 2007).

While brain drain occurs in all directions, the size of migration flows to the Organisation of Economic Co-operation and Development (OECD) countries in particular has invited more studies on the brain drain component. In a study on emigration rates based on 1990 US census and OECD data, Carrington and Detragiache (1998) found significant rates and substantial 'brain drain' flows to the US and OECD countries. Highest brain drain rates were found among countries in the Caribbean and Central America, as well as in some African and Asian countries. Estimates of migrant stocks in OECD countries according to educational level and country of origin showed that migrants were generally more educated than most of the origin country's population and that people with less or no education have lesser chances for international migration (Carrington and Detragiache, 1998).

Adams (2003) found similar evidence in a study on brain drain from labor-exporting countries. According to 2000 data, majority of migrants who moved to the US and other OECD countries attained at least secondary education or higher. For five Latin American countries, which were labor-exporting countries to the US, international migration at the time accounted for a significant share of the best college-educated individuals.

[4] Some propose "skill flow" as a more neutral term compared to "brain drain," considered negative and pejorative (Clemens, 2009).

In examining migration patterns of the highly skilled from Latin American countries, Özden (2006) also found that a sizable share of flows (around two-thirds) was directed towards the US. Large migration flows were found from smaller and poorer countries, indicating brain drain due to a loss of skilled human capital.

The literature suggests that direct impacts of brain drain include: lowered economic growth and productivity; fiscal loss; reduction of wages for the unskilled population and the increase of wages for the remaining skilled persons, thus exacerbating inequality; decreased opportunities and weakened competitiveness for attracting and gaining foreign direct investment; loss of opportunities for research and development activities (Lowell, 2001; Docquier and Rapoport, 2007, cited in Zosa and Orbeta, 2009).

Indirect impact consists in the loss of accumulated and invested education and training, which are important for building a workforce to promote development (United Nations Department of Economic and Social Affairs, 2005:41). Thus, brain drain is even more felt among less developed or poor countries with a small skilled workforce and a weak education system. In addition, source countries also suffer from the loss of tax contributions and grow dependent on remittances (IOM, 2006).

Dumont, Martin and Spielvogel (2007) argue for serious research attention on gender, a critical aspect of brain drain which tends to be overlooked. In a study using OECD data circa 2000, they found increased female migration to OECD, resulting in more 'gender-balanced' migration stocks. However, despite limited access to education for women, especially in developing countries, women were found to be "over-represented in the brain drain," and the poorer the country of origin, the higher the outflow of highly skilled female migrants (Dumont, Martin and Spielvogel, 2007). The study also identified negative impacts on three indicators: infant mortality, under-five mortality and secondary school enrollment rate (by gender) (Dumont, Martin and Spielvogel, 2007). Among countries of origin of skilled migrants in the OECD, the Philippines had the highest number of highly skilled female migrant workers (562,215), followed by the United Kingdom

(509,887), the former USSR (506,999), Germany, (440,991), India (429,547) and China (400,495)[5] (Dumont, Martin and Spielvogel, 2007).

Debates have surrounded the manner in which governments should address the brain drain. Some suggestions include: tax and welfare incentives for migrants to return and for mitigating large outflows of skilled workers, lowering or restricting intake quotas for countries with low rates of return migration and scarce manpower,[6] and initiatives for maintaining contacts with migrants and encouraging knowledge transfer. One example cited is the Transfer of Knowledge through Expatriate Nationals (TOKTEN) program of the UN (UN DESA, 2005).

Measuring the extent of brain drain, however, has been a challenge to researchers. Lowell (2001) critiques the literature on brain drain, arguing that most depend on theoretical models. Little has been done to thoroughly examine empirical evidence and statistical data. Moreover, despite some available data, there is a generally acknowledged lack of a consistent and comprehensive data system that monitors international skilled migration (Adams, 2003; Carrington and Detragiache, 1998; Özden, 2006). Most sending countries do not record data to measure the outflow of talent and professionals (Lowell and Findlay, 2002, cited in Wickramasekara, 2003). While some countries, especially developed ones, monitor the outflow of skilled workers, researchers still note limitations (Carrington and Detragiache, 1998, Findlay, 2002, cited in Wickramasekara, 2003). For instance, only a few countries of origin and destination document return migration – some only do so if returns are affiliated with special overseas programs. Data on inflows and outflows also "do not reflect the extent of loss or the quality of manpower lost" (Wickramasekara, 2003:4).

Moreover, defining "skilled workers" remains a major issue. Most studies consider the tertiary-educated migrants as skilled workers, while others take into account past or present occupations of migrants. The difference between highly skilled and skilled workers has also been raised as an important distinction. Student

[5] Numbers were determined using OECD census data and the authors' calculations (Dumont, Martin and Spielvogel, 2007).

[6] However, such restrictions have also been contested due to implications on human freedom and rights infringement (UNESCO, 2007).

migration, for many researchers (such as the OECD), is considered a significant aspect of skilled migration (Wickramasekara, 2003).

2. Brain Gain

The notion of "brain gain" has challenged the concerns over brain drain, emphasizing the benefits and development potential of international migration. Brain gain refers to migrants who return home with accumulated knowledge, expertise and skills, advanced technology and economic and social capital, all of which are deemed potential contributions to the development and growth of the country of origin (Wickramasekara, 2003).

With accumulated financial capital, migrants are able to start businesses or projects, or to share their learned skills through conducting training seminars. Return migrants are assumed to be more productive and can boost growth and productivity through the transfer of new ideas, investments and technology to the country of origin. Return migrants can weaken the impact of brain drain and can also offset and reduce net brain drain (IOM, 2006; Meyer et al., 1997, cited in Wescott and Brinkerhoff, 2006).

Some studies have suggested that the migration of educated individuals may also encourage those in the source country to invest in higher education which would raise educational levels, human capital and skill prices (Adams, Jr., 2003; Chand and Clemens, 2008; Lowell, 2001; Wescott and Brinkerhoff, 2006).

Considering the potential of return migration, some countries and international agencies have attempted to create programs and policies that promote the return of migrants. An often-cited example is the United Nations Development Programme's (UNDP) TOKTEN program and the IOM's talent programs in Africa and Latin America. Countries such as the Republic of Korea, Taiwan and Turkey have also implemented programs aiming to encourage skilled migrants to return (Wickramasekara, 2003).

A different way by which brain gain can occur is through a process of substitution. Stark and Fan (2007, cited in Zosa and Orbeta, 2009) argue that the educated unemployed will be advantageous to the economy eventually, since a worker's

long job search could lead to better skills matching. International demand for specific skills could encourage developing countries to improve educational and training programs (Stark and Fan, 2007, cited in Zosa and Orbeta, 2009).

Research has also suggested that skilled migrants can contribute to their countries of origin without returning permanently. Diaspora contributions in recent years have been viewed as a means through which migrants can give back to their home countries. These activities are backed by mobilization and social capital or networks, opportunity structures and motivations (Wescott and Brinkerhoff, 2006). Some skilled migrants give back to their home countries through knowledge transfer, sharing their expertise by serving as consultants, investors, lecturers and short-term trainers, among others (Meyer and Brown, 1999, cited in Opiniano and Castro, 2006).

Economic loss due to brain drain must be measured against remittances sent home, viewed as significant and more visible contributions to the source country's economic growth (Lowell, 2001). Remittances from the highly skilled still lack thorough empirical research, especially since the available literature has implied that skilled migrants tend to remit less compared to those who are lesser skilled or unskilled (Lowell, 2001; Faini, 2007, Niimi, Özden and Schiff, 2008, cited in Siar, 2011).

According to others, remittances may not be sufficient to alleviate the impact of brain drain (Lowell, 2001) as the role of highly skilled and professional workers in institution building should also be considered (Kapur 2001, cited in Opiniano and Castro, 2006).

3. Brain Circulation

Return migration is not always a one-way movement that ends in permanent return and settlement. Forms of return migration vary, depending on key factors, such as the nature of return, the timing of return, and the duration of return – there are, for instance, occasional returns, seasonal returns, temporary returns and permanent returns (King, 2000, cited in Wickramasekara, 2003). The intake of highly skilled migrants among developed countries, accompanied by high

rates of return, has opened up the possibility of "brain circulation" (OECD, 2002, cited in UN DESA 2005:41).

"Brain circulation" understood as the mobility of skilled migrants involving intermittent departure from and returns to the country of origin, can also contribute to a circulation and eventual return flow of expertise, knowledge, skills and manpower. The development potential of migration is emphasized. Aside from remittances, knowledge and skills are circulated through the regular movements of migrants between home and destination countries and through diaspora, professional or other social networks and ties (UNESCO, 2007). Guerrero and Bolay (2005), for instance, explored how highly skilled Mexican migrants can become agents of development through the use of their accumulated knowledge, learned skills, social networks and other resources aside from remittances (Guerrero and Bolay, 2005).

Potential brain circulation is associated in particular with temporary migration and circular migration. These types of movements address seasonal and sectoral demands in labor markets, and yield return benefits ranging from knowledge transfer, remittances and to the creation of business networks. Migrants develop social connections, which could be useful in conducting activities and ventures in the future. Increased personal and professional development also lessens the costs of long-term migration (IOM, 2006).

Some general examples of brain circulation strategies include: knowledge and skills transfer via diaspora networks, transnational entrepreneurs, academic and scientific networks and service providers; university programs promoting skills training or exchange programs; and projects by international organizations like the UN which promote expatriate teacher training by migrant professors (UNESCO, 2007).

There have been some discussions on policy gaps and recommendations for brain circulation or the movement of knowledge, skills and talent through circular migration (Agunias, 2006; Wickramasekara, 2003). Wickramasekara (2003) argues that shifting the approach from brain drain to brain circulation or exchange has positive implications and minimizes losses, as countries of origin can gain much from a continuous inflow and circulation of knowledge and skills. Countries

of destination also benefit since skilled migrants do not have to permanently leave. However, Agunias (2006) also notes that more research is needed in areas such as the dynamics of return migration and development and the impact of temporary work schemes. More importantly, there is a need for concrete and effective circular migration policies. Some countries have been considering programs that aim to manage temporary migration, though measuring the actual impact of such movements is difficult (IOM, 2006).

4. Brain Waste

Brain waste refers to situations in which migrants take on jobs that do not correspond to their skills sets (Mattoo, Neagu and Özden, 2008, cited in Docquier and Rapoport, 2011). Other terms associated with brain waste are skill waste, skill underutilization and waste of human capital (Batalova and Fix, 2008). Brain waste occurs for different reasons, such as lack of access to job opportunities, lack of information about vacancies, the imperfect transferability of human capital, or resorting to a job requiring lesser skills in order to increase chances for migration (Docquier and Rapoport, 2011).

In a study on highly skilled migration from Latin American countries to the US, Özden (2006) found that apart from large flows from poorer, developing countries, there was also evidence of brain waste – large numbers of migrants who obtained education from the home country were not able to obtain jobs in the destination country parallel to their educational level. This is partly due to the lower quality of education obtained, according to the study. Majority of the well-educated migrants from the Latin American countries actually completed their college education in the US, suggesting that they might not be able to attain the same quality of education if they stayed in the home country (Özden, 2006).

Brain waste affects both countries of origin and destination. For host or destination countries, the underemployment of skilled immigrants translates to underutilized talent and can also lead to failure to maximize worker productivity. In the US, more than 1.3 million college-educated migrants are estimated to be working in unskilled jobs or are unemployed, though some eventually advance in the career ladder. Occupational mobility outcomes for skilled migrants depend

on several factors, including the migrants' origin, whether the migrant was educated in the US or elsewhere, immigration status, the visa category, English proficiency, length of stay in the US and regional origins (Batalova and Fix, 2008). For home or origin countries, brain waste can severely limit the potential for migrants to maximize remittances and the capacity to circulate expertise, knowledge, technology and skills, among other forms of capital (Batalova and Fix, 2008).

Batalova and Fix (2008) argue that the worst scenario is the confluence of brain drain and brain waste especially for developing, migrant-sending countries. A "double brain loss" occurs when the sending country not only suffers from a loss of skilled workers, but also from "unrealized returns" of migration. The possible gains in the form of remittances, knowledge and networks are also not maximized, which in turn affects the development potential of these forms of brain gain.

Brain waste is linked to education and skills mismatch. Education is considered an important determinant of migration, since acquired skills, knowledge and qualifications, among others, can raise competitiveness and chances of gaining employment internationally (Zosa and Orbeta, 2009). However, problems arise when the educational qualifications and skills set possessed by the migrant do not correspond to the actual occupation abroad, thus leading to skills mismatch.

McDonald and Valenzuela (2009) identify two types of skills mismatch: 1) over-education and 2) under-education. Over-education occurs when the individual is overqualified for the job, possessing a higher level of qualifications. Under-education points to cases in which the individual does not have the necessary qualifications required for the job. Skills mismatch relates to labor mismatch, in that an employee is overeducated or has higher educational qualifications than those needed for the job, or is underqualified or has lower educational qualifications than the job requires (Piracha and Vadean, 2012).

The mismatch between education and occupation adversely affects remittance behavior – skilled migrants would earn less and remit less than what can be potentially gained (McDonald and Valenzuela, 2009). Socio-psychological im-

pacts on the migrant such as lowered job satisfaction and self-confidence are also possible consequences (McDonald and Valenzuela, 2009). In the local labor market, the outflow of skilled workers undoubtedly can aggravate skills gaps and mismatches (Di Gropello, 2010).

Measuring education-skills mismatch is done in different ways. Hartog (2000, cited in McDonald and Valenzuela, 2009) for instance, describes three approaches to determining whether a mismatch exists, though he has suggested that results are not necessarily sensitive to the selection of the approach. The first is job analysis, in which the educational qualifications required for a job are evaluated. The second is worker self-assessment, through which an individual identifies the educational qualifications required for the job. The third is realized matches, which means necessary educational qualifications are identified based on the common educational qualifications of workers employed in specific jobs (Hartog, 2000, cited in McDonald and Valenzuela, 2009). Economics literature related to education mismatch among labor migrants in the past two decades largely focused on the comparison of educational levels between local workers and migrant workers. Some have also discussed different ways educational mismatch has been defined and measured (Piracha and Vadean, 2012). The common finding is that migrants tend to have a higher share of tertiary-educated or well-educated individuals compared to the local population (Piracha and Vadean, 2012).

Educational mismatch in the labor market has been explained in different ways. Among these explanations are the notion of imperfect transferability and educational and work experience qualifications. Chiswick and Miller (2009, cited in Piracha and Vadean, 2012:6) argue that education and occupation mismatch among migrants occurs due to "imperfect transferability of capital across borders," which hinges on factors such as the differences between the labor market systems of the host and origin countries, license and overseas work requirements especially for professional workers, the language barrier and the lack of familiarity with labor regulations. A migrant's accumulated work experience in the country of origin may also increase the level of mismatch, especially when the migrant lands a job significantly below his or her educational qualifications. Piracha et al. (2011, cited in Piracha and Vadean, 2012:7) add that work experience is also an important factor.

Part of the labor mismatch is overeducation, which occurs when there is an "overinvestment in higher education, fuelled by the expectation of a higher return in foreign jobs…regardless of the job situation in the domestic economy" (Zosa and Orbeta, 2009:3). The result can be overseas or domestic unemployment, either because those who move abroad cannot find jobs or because they choose to resign from their jobs to look for work abroad, and spend some time being temporarily unemployed (King, 1987, cited in Zosa and Orbeta, 2009).

5. Summary

The review of the literature shows that across the years, research and policy attention have mainly focused on brain drain, which has emphasized the adverse consequences of international skilled migration, and on brain gain, the alternative approach that takes into account the return benefits and development potential of migration. In recent years, however, there has been increasing attention on brain waste, a problem not just for migrants but for the sending country in general. In relation to brain gain, the concept of brain circulation is an alternative view that looks at the benefits of temporary returns of migration, implying that a migrant does not have to permanently return to the homeland in order to contribute to its development.

In general, the youth dimension and its intersections with gender, educational attainment, occupation prior and upon migration, among other factors, are not given sufficient attention in the literature on brain drain, brain gain, brain waste and brain circulation. Most of the studies have examined migrants in general, and thus youth-specific studies are lacking. As for the gender dimension, studies such as the research done by Dumont, Martin and Spielvogel (2007) have begun to emphasize the importance of examining youth migration.

PART II:
BRAIN DRAIN AND BRAIN WASTE: THE DISCUSSION IN THE PHILIPPINES

Following the theoretical discussions on international migration and major debates concerning brain drain, brain waste, brain gain and brain circulation, this section situates these concepts in the context of the Philippines by presenting an overview of available and relevant country-specific data and literature.

The section begins with general studies that have been done concerning the brain drain phenomenon observed from the deployment of skilled Filipino workers abroad, followed by available research on brain waste and skills mismatch that confront Filipino migrant workers. A brief subsection on brain gain and brain circulation is provided to show alternative perspectives. This is followed by a discussion of Science and Technology (S&T) professionals as a case study of brain drain from the Philippines. Concluding the section is a summary of what has been found in the literature as well as areas of research that need further exploration.

1. The discussion on brain drain from the Philippines over the years

Brain drain had been a concern in the Philippines since the 1970s (or earlier, from the late 1960s), with the onset of skilled migration involving the departure of Filipino college-educated and professional workers of different categories, such as physicians, teachers, engineers, scientists and mechanical workers (Alburo and Abella, 2002). The dominant movement was the permanent emigration of medical workers to the US, though the trend decreased after the host country imposed restrictions. Temporary labor migration programs later sustained skilled migration flows to host countries (Go, 2003).

The institutionalized management of labor migration through a government system that regularized recruitment and deployment processes reinforced the outflow. The phenomenon gained even more attention in the 1980s with the outflow of medical workers, including doctors and nurses – which raised some concern regarding the health and medical sector in the Philippines. In the 1990s, during which ICT developed and became widespread, many Filipino professionals in the computer sciences and engineering went abroad (Alburo and Abella, 2002). In the same study, the authors found that Filipino emigrants tend to belong to the age group of 25 to 44, are well-educated and were employed before migration. In the 1990s, outflows of skilled migrants, especially health workers and ICT professionals were constant, to the extent that sometimes the number of deployed professionals would exceed the number of net additions to the local workforce (Alburo and Abella, 2002, cited in Zosa and Orbeta, 2009). Only the 1995-1996 period showed that there were more professionals added in the local labor force than deployed professionals. Overall, the more prominent trend was that more professional migrants left the Philippines than professionals who joined the country's workforce (Alburo and Abella, 2002).

In assessing 1995 data, Alburo and Abella (2002) compared education distribution between the general population and OFWs. Generally, OFWs had a higher share of those who have attained tertiary education and those within the 25-44 age range, considered the productive age group.

In a study on brain drain to the US, Carrington and Detragiache (1998) found that in 1990, the Philippines registered the highest number of migrant workers who had attained tertiary-level education.

In 2000, the Philippines had the second highest stock of highly skilled emigrants aged 25 and above in OECD countries (in absolute terms, at 1.11 million), after the UK (1.479 million) and followed by India (1.035 million), Mexico (949,476), Germany (944,579) and China (783,881) (Docquier and Rapoport, 2011). Of the total number of OFWs, 53 percent were college-educated. However, only 14.5 percent were employed as managers and professionals. Around 26.6 percent were hired as clerks and technicians. The rest of the 60 percent were working in agriculture, crafts, sales and services, among others. The figures suggest that many OFWs in OECD countries are overqualified for their jobs and are deskilled. Given their tertiary education, evidence points to occupation and skills mismatching (Docquier and Marfouk, 2006, cited in Zosa and Orbeta, 2009).

More recently available data suggest that the Philippines may be experiencing some degree of brain drain. Based on the 2000 census data, in absolute numbers, the Philippines was one of the top sending countries of doctors and nurses to OECD countries (OECD, 2007, cited in Department of Science and Technology – Science Education Institute (DOST-SEI), 2011:1). Nurse migration from the Philippines has become so common that some doctors have undergone training in nursing just so they can have a chance at being employed abroad (Kuptsch, 2006); this trend has subsided in recent years. The government has also supported the deployment of Filipino nurses to address the large oversupply of nursing graduates and also for remittances (Kuptsch, 2006). Approximately 14,000 Filipino nurses were said to be deployed each year to destination countries like Saudi Arabia, the US and the UK (Kuptsch, 2006:229). More recently, nurse migration to the US and the UK has declined; Saudi Arabia has emerged as a major destination country for nurses.

Aside from female nurses, male engineers also comprise one of the largest groups of Filipino highly skilled migrants regularly deployed abroad. Most of these engineers work in the Middle East (Go, 2003).

Between 2003 and 2005, Philippine Airlines (PAL), the country's flag carrier lost more than 80 of its pilots, around 20 percent of the total number. Despite higher salary offers and additional benefits, many pilots have left the country for foreign carriers such as those in Hong Kong, South Korea and countries in the Middle East (Llorito, 2006).

A 2009 news report cites the Public Service Labor Independent Confederation (PS-LINK), which said that in less than ten years, over 4,000 Filipino teachers and school principals have left the country for teaching jobs in the US and in countries in Asia and the Middle East. Higher salaries and opportunities for career growth, scholarships and study grants have pushed experienced teachers to work abroad, raising the possibility of a shortage of thousands of teachers needed for local schools (Ubalde, 2009).

In 2011, the DOST-SEI (2011) published a report concerning the international migration of Science and Technology (S&T) professionals. Below is a summary of the profile of these S&T professionals, as well as policy recommendations put forward by DOST-SEI in light of the results of the study. The report suggests not only continued and increasing outflows of professional S&T migrants from the Philippines over the years, but also possible education and occupation mismatch. Moreover, an important finding in the study is that across a 12-year period, there were more female S&T professionals compared to male ones, suggesting some degree of feminized professional migration. The study noted that about half of the S&T professionals were those in the nursing and midwifery sectors.

2. Brain waste and skills mismatch among Filipino migrant workers

Available data and existing literature suggest that brain waste and skills mismatch occur among Filipino migrants, both those overqualified and those not qualified for their jobs, though there seems to be more evidence of the former. Overqualification or underqualification for a job can be rooted in several factors, such as few job opportunities, limited information about the labor market, insufficient education and training (Department of Labor and Employment, 2011).

A 1999 survey by the National Statistics Office (NSO) reported that during the year, over half of OFWs were college graduates (54.7 percent). About a third or 31.8 percent were able to complete their college degree or a higher degree level. Go (2003) notes, however, that skills mismatch was evident based on the mismatch between their educational attainment and the actual jobs they occupied in respective destination countries.

In a study using the Labor Force Survey and the Survey on Overseas Filipinos (SOF), Quinto and Perez (2004, cited in Zosa and Orbeta, 2009) showed the rise in the number of college-educated OFWs from 519,000 in 1990 to 1.08 million in 2002. During this period, the deskilling of the OFWs was evident in the comparison of data on OFWs' education and their jobs abroad. While a large proportion of OFWs were college-educated, many of them were employed in jobs that were below their qualifications. In 2002, for example, 64 percent of the OFWs graduated from college. However, only 22 percent were employed in professional, technical and other related jobs (Quinto and Perez, 2004, cited in Zosa and Orbeta, 2009). During the period, more than half of the OFWs each year were college degree holders, but only 22 percent or below were professional and technical workers (Table 1).

Analysis of the 2003 SOF shows evident educational skills and occupation mismatch. Data as of 2003 show that more OFWs have more years of education than the local population, and a significant number work in professional, technical or skilled occupations, usually before migration. Around 65 percent of OFWs had at least postsecondary education, and more than 60 percent had some tertiary education. On the other hand, out of the total employed persons in the Philippines, only 27.3 percent had some tertiary education (Di Gropello, 2010:115). Considering gender, data show that around 67 percent of male OFWs have some tertiary education, higher compared to female OFWs (53 percent) (Di Gropello, 2010:115).

The 2003 SOF data suggest evidence of skills mismatching considering education profiles and occupations before and after migration. Many OFWs tend to take on employment that does not correspond to their educational attainment, field of concentration and skills set. While a significant number of OFWs are tertiary-

TABLE 1

OFWs by Educational Attainment and Occupation, 1990-2002

Year	Educational Attainment *				Occupation **			
	Elementary (%)	High School (%)	College (%)	Total (in 1,000) (%)	Professional Technical	Service (%)	Production (%)	Total (in 1,000)
1990	12	36	50	519				
1991	10	36	53	709				
1992	8	35	55	785				
1993	10	35	54	918	14	39	47	942
1994	8	38	53	913	13	43	44	939
1995	8	32	57	869	12	45	42	798
1996	7	32	58	954	13	45	41	902
1997	7	34	56	1,003	12	46	42	1,015
1998	7	34	56	1,029	12	48	40	905
1999	6	34	57	1,013	16	44	40	1,015
2000	5	33	59	1,021	15	44	41	980
2001	6	32	62	1,085	19	42	39	1,031
2002	5	31	64	1,081	22	41	37	1,056

Sources: Labor Force Survey* and Survey on Overseas Filipinos** in Quinto and Perez (2004); "Trend Analysis of Overseas Filipino Workers Using Regression," cited in Zosa and Orbeta (2009)

educated and had worked in professional occupations prior to emigration, most of the available jobs for them abroad are less-skilled or unskilled. Some of these jobs include household services, crafts, machine operations and so on. Over 75 percent of jobs taken up by OFWs were 'elementary occupations' indicating a significant 'occupational downgrade' (Di Gropello, 2010:117). The mismatch between education and occupation is more evident among female OFWs. According to Di Gropello (2010:117), "This skills mismatching is particularly pronounced for female emigrants, who are overrepresented in the professional category prior to emigration but also overrepresented in elementary occupations once abroad." It was also found that while migrants with more educational qualifications have more access to matching opportunities, many tend to take on occupations even though they are academically overqualified (Di Gropello, 2010:117).

In a study on skills mismatch and remittance behavior, skills mismatch was found among OFWs on temporary contracts – a significant number of them were working in low-skilled jobs. In terms of destination country and gender, skills mismatch was more common among OFW women in East Asia, Western Europe, Canada and Australia, as well as among men in the US (McDonald and Valenzuela, 2009).

Among several findings, McDonald and Valenzuela (2009) observed that negative skills mismatch, in which the education level is higher than what is required for the job, leads to a higher incidence of remittances for both men and women. In addition, "For women, lower income from skill mismatch means markedly lower remittances back to the Philippines. For men, low income from skill mismatch appears to result in compensating changes in terms of hours of work, consumption or both, in order to preserve the value of remittances back to the Philippines" (McDonald and Valenzuela, 2009:31).

3. Brain gain and brain circulation

Studies commissioned by the Asian Development Bank (ADB) covered cases of diaspora knowledge exchange and transfer in the People's Republic of China, Afghanistan and the Philippines. In the Philippine study, Opiniano and Castro (2006) surveyed local programs that involved some form of knowledge transfer, particularly those sponsored by the government, the UNDP and professional diaspora organizations. The cases of diaspora knowledge transfer in the Philippines were generally found to "demonstrate high enthusiasm and great potential, but to date, are small-scale and of limited impact" (Wescott and Brinkerhoff, 2006:3).

However, the notion of brain drain has been challenged by the emphasis of "brain gain" on the benefits of labor migration, such as the support brought in through remittances, employment opportunities, participation in the global market as well as knowledge and technology transfer, which in turn can create employment opportunities. As studies such as Bagasao (2003, cited in Opiniano and Castro, 2006) have indicated, migration has a development potential that

should be given consideration alongside observations concerning the adverse or detrimental consequences.

Some migrants engage in some form of knowledge transfer when they temporarily return to the Philippines or while maintaining transnational ties (Meyer and Brown, 1999, cited in Opiniano and Castro, 2006).

Examples of brain gain from Filipino migrants include activities involving knowledge transfer, investment and support for business ventures, and diaspora philanthropy in the form of contributions in cash, in kind or in sharing expertise (Opiniano and Castro, 2006).

4. The current context

The Philippines is one of the largest migrant labor exporters in the world, and a substantial share of regular outflows consist of educated, skilled Filipino migrants. However, a more precise estimate of that share cannot be accurately presented for lack of appropriate data. Some reflections can be compiled from a variety of sources, as data on educational attainment, job qualification and experience and current occupation of Filipinos overseas are scattered in different datasets. We will make reference to three main sources of information: occupations of OFWs according to POEA data; occupations of overseas Filipinos according to the Survey on Overseas Filipinos (SOF) provided by the NSO; and data on educational attainment and occupation of registered Filipino emigrants prior to migration from the Commission on Filipinos Overseas (CFO).

a. Occupations of OFWs according to POEA data

The annual outflow of Filipino workers has constantly been on the rise since the beginning of the overseas labor program, initiated in 1974. Migrants processed yearly for work overseas increased from 12,501 in 1975 to 380,263 in 1983. Migrants deployed for jobs abroad increased from 300,378 in 1984 to 489,260 in 1991, 662,648 in 2001 and 1,318,727 in 2011, according to POEA data.[7] Minor

[7] POEA, various years.

declines in deployments were experienced in 1989-1990, due in part to the Gulf crisis, in 1995-1996, the crisis with Singapore and the introduction of the Migrant Workers Act of 1995, and in 2003, due to the outbreak of the Severe Acute Respiratory Syndrome (SARS), the US-Iraq war and overseas labor market competition from other countries (POEA, 2003:11).

The distribution of OFWs by occupational category (Table 2) indicates that most migrants were always employed in three occupational groups: 1) professional and technical, 2) services, and 3) production.

At first glance, data seem to indicate that professional and technical migrants have decreased in recent years. However, the actual situation is the opposite. For many years, the professional category was dominated by workers qualified as

TABLE 2
Percentage Distribution by Occupational Group of OFWs (New Hires), Selected Years

Major Occupational Group	1992	1995	2000	2005	2010
Total	100.0	100.0	100.0	100.0	100.0
Professional and Technical	28.0	20.5	31.1	22.5	12.3
Professional and Technical, excluding Dancers and Singers	9.7	10.0	7.6	8.6	11.7
Dancers	16.9	9.5	14.0	5.4	0.2
Singers	1.4	1.0	9.5	8.4	0.4
Nurses	2.2	3.5	3.0	2.5	3.6
Administrative and Managerial	0.1	0.2	0.1	0.2	0.4
Clerical Workers	2.1	1.6	0.9	1.9	3.1
Sales Workers	1.0	0.9	0.8	1.5	2.1
Service Workers	31.6	37.8	36.0	47.1	45.4
Service Workers minus Domestic Workers	9.3	8.2	9.1	18.1	17.0
Domestic Workers	22.2	29.6	27.0	29.0	28.4
Agricultural Workers	0.8	0.5	0.2	0.1	0.3
Production Workers	36.5	38.5	22.8	26.3	35.5
Others	0.0	0.0	7.9	0.4	0.8

Source: Statistical data from the POEA (various years)

performing artists, a category that included choreographers, dancers, composers and singers. Most performing artists were deployed to Japan. In 2004, Japan introduced a policy reform intended to discontinue hiring dancers, who were employed almost exclusively in the nightclub industry. The drastic reduction of performing artists shows that in recent years the number of professional and technical workers has increased. Among them, majority are health workers (nurses, doctors, veterinarians and physiotherapists), various kinds of engineers and teachers.

b. Occupations of OFWs according to the SOF

The 2010 and 2011 SOF provide data on the stock of Filipinos overseas, derived from interviews with 51,000 households in the Philippines. Questions concern household members who are abroad or have been abroad in the previous six months. According to the SOF, from April to September 2011, there were an estimated 2.2 million OFWs, higher compared to 2.0 million recorded in the same period in 2010 (NSO, 2012a). Of the total, 95.3 percent were overseas contract workers, or persons with existing contracts abroad (Table 3).

TABLE 3
Number and Percentage Distribution of OFWs by Selected Characteristics, 2010 and 2011

Selected Characteristics	2011	2010
Philippines (In Thousands)	2,158	2,043
Type (%)	100.0	100.0
Overseas contract workers	95.3	94.9
Other overseas Filipino workers	4.7	5.1
Sex (%)	100.0	100.0
Male	52.2	52.3
Female	47.8	47.7

Notes: Data are based on rounded figures. Details may not add up to totals.
Estimates refer to overseas Filipinos "whose departure occurred within the last five years and who are working or had worked abroad during the past six months (April to September) of the survey year." Sources were the 2010 and 2011 Survey on Overseas Filipinos, National Statistics Office.
Sources: NSO (2011a, 2012a)

The top destination country was Saudi Arabia, with about 22.6 percent of all OFWs. Other top destinations included: Hong Kong SAR, Qatar, Singapore and the United Arab Emirates (NSO, 2012a). There were more male OFWs (52.2 percent) than female OFWs (47.8 percent), and male OFWs were generally older compared to the female OFWs. In terms of age, OFWs in the age group 25-29 years old had the largest share in the total number of OFWs (23.6 percent), followed by those in the age group 30-34 years old (22.6 percent).

The youth OFWs (15 to 24 years of age) accounted for 9.3 percent of the total number of OFWs in 2011, slightly higher compared to 9.0 percent in 2010 (Table 4). Contrary to data for the whole sample, majority of the young OFWs were female. But this was true also for the modal age bracket (25-34), in which there were more women (51.4 percent) than men (41.4 percent) (NSO, 2011a). Evidently, because of occupation and family reasons, the so-called feminization of migration is limited to migrant women below 34 years of age.

TABLE 4
Number and Percentage Distribution of OFWs by Age Group and Sex, 2010 and 2011

Age Group	2011			2010		
	Both Sexes	Male	Female	Both Sexes	Male	Female
Total ('000)	2,158	1,126	1,032	2,043	1,068	975
(%)	100.0	52.2	47.8	100.0	52.3	47.7
Total (%)	100.0	100.0	100.0	100.0	100.0	100.0
15-24	9.3	7.1	11.7	9.0	6.6	11.6
25-29	23.6	20.8	26.6	25.0	20.9	29.5
30-34	22.6	20.6	24.8	22.9	22.5	23.4
35-39	15.9	15.9	15.9	15.2	15.6	14.8
40-44	11.8	12.7	10.8	11.4	12.7	9.8
45 and over	16.8	22.9	10.1	16.6	21.8	10.9

Notes: Data are based on rounded figures. Details may not add up to totals.
Estimates refer to overseas Filipinos "whose departure occurred within the last five years and who are working or had worked abroad during the past six months (April to September) of the survey year." Sources used include the 2010 and 2011 Survey on Overseas Filipinos.
Source: NSO (2011a)

The occupational profile of Filipino migrants based on SOF data is rather different from the one derived from flow data gathered by the POEA (Table 5). In particular, in the SOF the percentage of professional and technical workers is higher (16.6 percent vs. 12.3 percent), while that of service workers is much lower. Note that SOF data are based on responses by family members of overseas-based Filipinos who may not be knowledgeable of overseas Filipinos' occupation or who may upgrade the actual occupation of family members working abroad. Also, NSO uses a different system of classifying occupations which makes comparisons a little difficult.

TABLE 5
Number and Percentage Distribution of OFWs by Major Occupation Group, 2011 and 2010

Major Occupation Group	2011	2010
Total ('000)	2,158	2,043
Total (%)	100.0	100.0
Officials of government and special-interest organizations corporate executives, managers, managing proprietors and supervisors	2.9	2.5
Professionals	10.6	9.9
Technicians and associate professionals	6.0	5.6
Clerks	5.5	5.4
Service workers and shop and market sales workers	15.5	15.1
Farmers, forestry workers and fishermen	0.4	0.3
Trade and related workers	12.8	14.9
Plant and machine operators and assemblers	13.6	14.3
Laborers and unskilled workers	32.7	32.0
Special occupations	-	*

Notes: Data are based on rounded figures. Details may not add up to totals.
* Less than 500
Estimates refer to overseas Filipinos "whose departure occurred within the last five years and who are working or had worked abroad during the past six months (April to September) of the survey year."
The Survey on Overseas Filipinos classifies domestic workers under the category "laborers and unskilled workers."
Source: NSO (2011a)

When accounting for gender, disparities clearly exist in terms of occupations taken up by Filipino men and women who work abroad. As seen in Table 6, male OFWs tend to work in jobs classified under the following categories: trade and related workers, plant and machine operators and assemblers, and technicians and associate professionals. Many of them are also professional workers, though the difference compared with OFW women in this regard is relatively smaller. Female OFWs dominate in the categories of: laborers and unskilled workers (especially since many of them are in domestic work) and service, sales, shop and market workers.

c. Education and occupation of permanent migrants

In addition to overseas workers, typically hired on short-term contracts, the Philippines is an origin country with an important flow of emigrants who settle in traditional countries of immigration (US, Canada, Australia and New Zealand). Data from the destination countries reveal that in 2011, 57,011 Filipinos obtained residence status in the US, 34,991 in Canada and 11,075 in Australia.

In the Philippines, CFO oversees the outflow of registered emigrants. Because of different administrative procedures, data from origin and destination countries do not match. Nevertheless, an increasing number of Filipinos settle abroad every year, with more female migrants than male migrants (Table 7).

Because of admission for family reunification, children are a sizable portion among emigrants (Table 8) and those in the age group of 15-24 accounted for 20.04 percent of the total number of emigrants in 2011.

Notable in the data is the consistently high share of tertiary-educated emigrants over the years. In 2011 alone, more than 30 percent of the total number of registered Filipino emigrants were college graduates or were at the post-graduate levels, and that percentage is increasing (Table 9). Specifically, college graduates had the highest share out of the total number of registered emigrants from 2007 to 2011.

TABLE 6

Number and Percent Distribution of Overseas Filipino Men and Women Who Are Working or Had Worked Abroad During the Past Six Months by Major Occupation Group, Philippines: (April – September) 2006-2010
(In Thousands except Percent)

Major Occupation Group	2007		2008		2009		2010	
	Male	Female	Male	Female	Male	Female	Male	Female
All Occupations ('000)	890	857	1,034	968	1,010	901	1,068	975
Officials of Government and Special Interest-Organization, Corporate Executives, Managers, Managing Proprietors and Supervisors	4.3	0.8	3.9	1.3	3.6	1.3	3.3	1.6
Professionals	8.8	8.4	9.9	9.4	9.7	10.5	9.5	10.2
Technicians and Associate Professionals	7.8	4.8	7.5	4.9	8.5	3.8	7.6	3.5
Clerks	3.6	7.6	4.4	6.9	3.2	6.8	3.9	7.2
Service Workers and Shop and Market Sales Workers	13.0	15.8	10.3	18.5	11.8	18.1	13.1	17.3
Farmers, Forestry Workers and Fishermen	0.6	0.1	0.9	0.2	0.6	0.1	0.5	-
Trade and Related Workers	24.9	2.2	28.3	2.1	26.7	1.8	27.1	1.6
Plant and Machine Operators and Assemblers	24.4	2.1	23.2	2.1	24.9	1.5	24.5	3.0
Laborers and Unskilled Workers	12.6	58.3	11.6	54.7	11.1	56.1	10.4	55.6
Special Occupations	-	-	**	**	0.1	-	**	-

Notes: Details may not add up to totals due to rounding.
** Less than 0.05 percent
Source of data is the Survey on Overseas Filipinos, NSO

Source: Tables 10.5a and 105b in *Bureau of Labor and Employment Statistics* (2011b)

TABLE 7
Number of Registered Filipino Emigrants by Sex, 2007-2011

Year	Male	Female	Total	Sex Ratio
2007	30,877	49,722	80,599	62M/100F
2008	27,839	42,961	70,800	65M/100F
2009	31,793	47,925	79,718	66M/100F
2010	36,287	49,788	86,075	73M/100F
2011	34,563	48,847	83,410	71M/100F

Note: Sex ratio refers to the number of male Filipino emigrants for every 100 female Filipino emigrants
Source: CFO (2012a)

TABLE 8
Number of Registered Filipino Emigrants by Age Group, 2007-2011

Age Group	2007	2008	2009	2010	2011
14-below	17,011	15,420	17,706	20,864	19,891
15-19	8,036	7,516	8,246	8,683	8,346
20-24	8,484	7,443	7,907	8,388	8,365
25-29	9,404	8,019	8,423	8,218	8,629
30-34	8,233	7,084	8,022	9,179	8,952
35-39	6,669	5,826	6,544	7,682	7,352
40-44	4,792	4,337	4,938	5,754	5,657
45-49	3,443	3,266	3,666	4,337	4,015
50-54	2,844	2,718	3,128	3,433	3,136
55-59	3,013	2,615	3,273	3,005	2,785
60-64	3,163	2,708	3,163	2,803	2,711
65-69	2,699	1,918	2,304	1,803	1,843
70-above	2,808	1,861	2,340	1,822	1,713
Not reported/ no response		69	58	104	15
Total	80,599	70,800	79,718	86,075	83,410
Average age	32	31	31	29	29

Source: CFO (2012b)

TABLE 9

Number of Registered Filipino Emigrants by Educational Attainment Prior to Migration, 2007-2011

Educational Attainment	2007	%	2008	%	2009	%	2010	%	2011	%
Not of schooling age	5,445	6.8	4,842	6.8	5,813	7.3	7,061	8.2	6,658	8.0
No formal education	157	0.2	105	0.2	92	0.1	83	0.1	64	0.8
Elementary level	10,372	12.9	8,907	12.6	9,986	12.5	10,969	12.7	10,359	12.4
Elementary graduate	2,698	3.4	2,314	3.3	2,395	3.0	2,194	2.6	2,152	2.6
High school level	9,493	11.8	8,216	11.6	9,218	11.6	9,428	11.0	9,260	11.1
High school graduate	9,361	11.6	8,251	11.7	8,702	10.9	8,299	9.6	8,401	10.1
Vocational level	1,157	1.4	970	1.4	1,273	1.6	1,421	1.7	1,363	1.6
Vocational graduate	3,774	4.7	3,368	4.8	4,092	5.1	4,534	5.3	4,531	5.4
College level	13,328	16.5	11,852	16.7	13,668	17.2	14,365	16.7	13,809	16.6
College graduate	21,759	27.0	19,264	27.2	21,794	27.3	24,834	28.9	24,193	29.0
Post graduate level	1,215	1.5	1,100	1.6	1,071	1.3	1,188	1.4	1,010	1.2
Post graduate	1,534	1.9	1,564	2.2	1,476	1.9	1,586	1.8	1,484	1.8
Non-formal education	297	0.4	31	0.0	46	0.1	17	0.0	13	0.0
Not reported/no response	9	0.0	16	0.0	92	0.1	96	0.1	113	0.1
Total	80,599	100.0	70,800	100.0	79,718	100.0	86,075	100.0	83,410	100.0

Note: Percentages may not add up as they are rounded figures.
Source: CFO (2012c)

As for occupation, a large portion of emigrants were not in the labor force prior to migration. Of those in the labor force, many were in the professional field before migration. As seen in Table 10, in 2011, around 9.8 percent (8,181) of registered emigrants were employed in the professional, technical and related workers field prior to migration. The figure increased from 9.2 percent in 2010 and 8.6 percent in 2009. Out of all the occupation groups listed in Table 9, professional workers had the highest share of employed Filipino emigrants (prior to migration) across the years from 2007 to 2011.

In summary, the data in Table 10 show that a substantial share of OFs (whether contract workers, emigrants or other Filipinos overseas) work in the professional, technical and related fields. For the emigrants, for which data on educational attainment are available, it is also evident that a significant portion tend to be college-educated. Though statistical data reported above are limited and do not allow for crosstabulation, it is possible to appreciate that migration constitutes a transfer of educated and professionally-trained personnel abroad. To be able to say a little more, we have to examine the specific situation of Science and Technology professionals.

5. Brain drain?: The case of Science and Technology (S&T) professionals

The DOST-SEI did a two-part study on the international migration of Science and Technology (S&T) human resources. Analyzing on data for the period 1998-2006, the first study looked into the S&T educated Filipinos who left the country as permanent migrants. This second study focuses on overseas Filipino S&T workers (also contract workers) who left the country as temporary migrants from 1998 to 2009. S&T jobs are also associated with Human Resources in Science and Technology (HRST), defined as those "who fulfill one or other of the following conditions: a) successfully completed education at the third level in an S&T field of study; b) not formally qualified as above, but employed in an S&T occupation where above qualifications are normally required (OECD, 1995)" (DOST-SEI, 2011:2). For this second study, the main source of data was the POEA, and the classification of S&T occupations was patterned after the Canberra Manual, which

TABLE 10

Number of Registered Filipino Emigrants by Major Occupational Group Prior to Migration, 2007-2011

Major Occupation Group	2007	%	2008	%	2009	%	2010	%	2011	%
A. Employed										
Professional, Technical & Related Workers	7,816	9.7	7,072	10.0	6,849	8.6	7,932	9.2	8,181	9.8
Managerial, Executive and Administrative Workers	1,708	2.1	1,553	2.2	2,001	2.5	2,603	3.0	2,176	2.6
Clerical Workers	2,153	2.7	1,979	2.8	2,451	3.1	2,596	3.0	2,207	2.7
Sales Workers	3,576	4.4	3,037	4.3	3,227	4.1	2,950	3.4	2,880	3.5
Service Workers	1,035	1.3	1,188	1.7	1,600	2.0	1,688	2.0	1,899	2.3
Agricultural, Animal Husbandry, Forestry Workers & Fishermen	1,201	1.5	948	1.3	1,217	1.5	1,311	1.5	1,138	1.4
Production Process, Transport Equipment Operators, & Laborers	2,374	3.0	2,188	3.1	2,801	3.5	2,889	3.4	2,936	3.5
Members of the Armed Forces	289	0.0	226	0.0	247	0.0	389	0.0	327	0.0
B. Not in Labor Force										
Housewives	17,677	21.9	14,396	20.3	15,283	19.2	14,036	16.3	13,918	16.7
Retirees	4,310	5.4	3,322	4.7	3,821	4.8	3,315	3.9	3,020	3.6
Students	21,151	26.2	18,885	26.7	20,897	26.2	23,145	26.9	21,796	26.1
Minors (Below 7 years old)	5,820	7.2	4,954	7.0	5,831	7.3	7,162	8.3	6,770	8.1
Out of School Youth	307	0.0	299	.004	380	0.0	457	0.0	573	0.0
Refugees										
No Occupation Reported	11,182	13.9	10,753	15.2	13,113	16.5	15,602	18.1	15,589	18.7
Total	80,599	100.0	70,800	100.0	79,718	100.0	86,075	100.0	83,410	100.0

Note : Percentages may not add up as they are rounded figures.
Source: CFO (2012d)

uses the International Standard Classification of Occupations (ISCO), refined by the OECD, UNESCO and the ILO (DOST-SEI, 2011). S&T occupations include: chemists, physicists and related professionals; mathematicians, statisticians and related professionals; health, nursing and midwifery professionals.

Focusing on the S&T professionals who migrated between 1998 and 2009, the study found that their share in the total number of OFWs is six percent on average during the 12-year period. This means annually, about 16,000 S&T OFWs left the country for work abroad. In 2009, the country deployed the highest percentage of S&T workers at seven percent, and the lowest in 1999 at only two percent.

In absolute numbers, overseas Filipino S&T workers totaled 9,877 in 1998 and grew by 148 percent to 24,502 in 2009. Most of the S&T workers were midwives and nurses, followed by engineers (as well as related professionals) and health professionals. Over the years, the volume of engineers has increased more compared to health professionals, whose numbers had not significantly changed (DOST-SEI, 2011).

Notable in the study is that there were more female S&T migrant workers compared to male ones during the 12-year period. From 1998 to 2009, the female-male OFW ratio was highest from 2000 to 2005, at 2:1. In addition to nurses and midwives, other common occupations include engineers and health professionals.

Five of the top ten destination countries for S&T migrant workers were in the Middle East. The highest out of these was Saudi Arabia, which was consistently the top host country during the 12-year period. Other top destination countries included Singapore, the UAE and the US.

Available data regarding income suggests S&T migrant workers abroad are highly paid, mostly receiving six-digit salaries. Physical scientists receive the highest levels of income (monthly income at an average of Php655,191 or $13,964), while dieticians or public health nutritionists receive the lowest (monthly income at an average of Php 37,594 or $789)[8], although the amount is relatively

[8] 2009 Average Peso-Dollar Rate: $1.00 = Php 47.637 (Source: NSCB, cited in DOST-SEI, 2011).

higher compared to what is earned in the Philippines (DOST-SEI, 2011). If wage differentials is always a component in the determinants of migration, perhaps this is more evident for highly skilled workers, although other factors such as career opportunities and working conditions play an important role.

Based on the research findings, the DOST-SEI stated several policy recommendations in the report, some of which are:

- To improve the system of monitoring and tracking OFWs, and to analyze other data sources aside from data collected from the POEA, such as IOM data and NSO's Labor Force Survey. The report also suggested more in-depth qualitative studies on migrants' motivations and subjective views about working abroad.

- To examine whether current migration legislation and policies in the Philippines take S&T issues into account.

- The report also identified education and occupation mismatch as one of the main issues confronting S&T workers, recommending a review of course curricula and joint projects between academic institutions and industries for better school-to-work transition for graduates.

- Developing and improving the quality of S&T education and creating a better occupational environment for S&T workers are also recommended.

Notable in the list of recommendations is the emphasis on education and occupation mismatch as a main problem, and whether S&T workers are represented in the national migration policy agenda.

Unfortunately, the DOST-SEI study did not take into account age groups and education, which makes it difficult to assess the youth dimension of S&T professional migration. The study reflects the scale of migration of S&T personnel; it does not indicate whether the migration of S&T professions has resulted in a shortage of such human resources in the Philippines.

6. Summary

This section surveyed the available literature on international labor migration from the Philippines. The brain drain of skilled professionals had already become a concern for the Philippines since the 1970s (and even earlier), and continues to be an issue today as seen in the available literature and media reports. Fewer studies have explored the issue of brain waste, in which many OFWs who are skilled and tertiary-educated end up in jobs that are less-skilled or unskilled, or in occupations that do not require their qualifications. Studies on brain gain and brain circulation were also briefly mentioned. In analyzing recent data to illustrate the current context, it was observed that a substantial share of OFs (whether contract workers, emigrants or other Filipinos overseas) work in professional, technical and related fields. For the emigrants, data show that many are college educated. Collectively, the available data and literature show the significant extent of skilled migration from the Philippines over the years.

However, some observations are worth mentioning. There are few and limited studies on brain waste, which is an equally important issue to explore, as it has critical implications as suggested in the previous section. Government agencies in the Philippines, such as the CFO and POEA, provide data on OFs, but little is known about their educational attainment and skills set, and how these relate to their actual occupations abroad. Furthermore, how these relate to young Filipino migrants also needs to be explored. These limitations underscore the need for additional data and information on OFWs to further understand key trends and issues.

PART III:

ANALYSIS OF THE POEA E-REGISTRATION DATABASE

To further explore brain drain and brain waste among young Filipino migrants, this section makes use of the results based on the e-registration database of the Philippine Overseas Employment Administration (POEA), which collects online applications from Filipinos aspiring to work abroad. Though limited in some respects, the database nevertheless contains data on the educational attainment of Filipino overseas employment applicants, which may reveal key issues and trends. This part is divided into three subsections: 1) the discussion of the e-Registration database, 2) an analysis of registered applicants with the Government Placement Bond (GPB) and 3) a summary of key points.

1. The POEA e-Registration Database

Most migrant workers succeed in obtaining a job overseas through the services of recruitment agencies. Of the 341,966 new hires in 2010 (30 percent of the total deployment of landbased workers), 94.2 percent were deployed by recruitment agencies. The rest were hired either directly by the employers under the name hiring process (3.9 percent) or through the GPB (1.9 percent).

The GPB hires workers for public entities or companies of the host countries, which have an agreement with the Philippine government for such a hiring procedure. For instance, the King Fahad Medical City, which operates under the Ministry of Health of Saudi Arabia, hires nurses through the GPB. Similarly, caregivers and nurses hired in Japan under the JPEPA are handled by the GPB. The same goes for workers hired under Korea's Employment Permit System, which functions on the basis of government-to-government Memoranda of Agreement (MOA).

To apply for a job to be handled by the GPB, a prospective migrant has to register with the POEA website.[9] Consequently, POEA has a database of e-registered workers who have applied for a job overseas. Since it is a job to be handled by the GPB, which only deploys workers to countries and public entities or companies with which there is an agreement, the database is very skewed in terms of the occupation applied for and the preferred country of destination. In this regard, it does not reflect the full gamut of occupations and destinations of OFWs deployed annually. Also, the database contains data of applicants for overseas employment, not of workers who have actually been deployed abroad.

If the limitations of the database are well understood and data are interpreted within such limitations, it is still possible to use the database for the purpose of the study because it contains variables that are otherwise not available in other databases. It should just be remembered that the data refer to job applicants handled by the GPB, not deployed OFWs.

2. Registered applicants with the GPB

In 2011, registered applicants numbered 86,657, with an age range of 18 to 61. The median age was 29 years. Ninety percent of applicants were between 20 to 39 years of age, while the modal age cohort was 25 to 29 years. Those between 15 and 24 years of age were about 18 percent (Table 11).

[9] More information is available at:http://www.overseas-filipinos.com/overseas-filipino-workers-gpb.html#.UJDdKIaCzWg

TABLE 11
Registered Applicants by Age Group, 2011

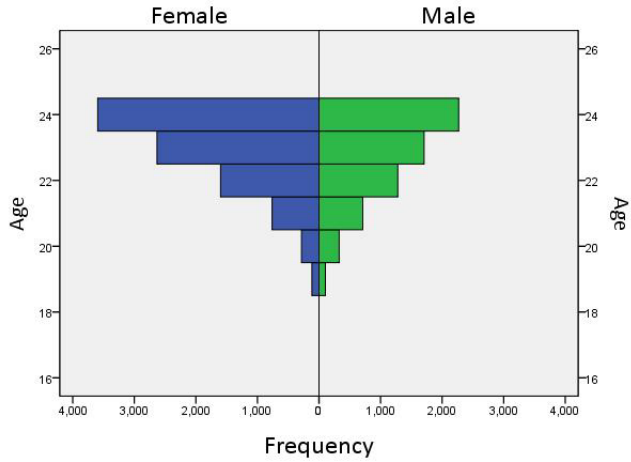
Age Group (Years)	Number	%
15 to 19	220	.3
20 to 24	15,241	17.6
25 to 29	31,737	36.6
30 to 34	21,783	25.1
35 to 39	12,692	14.6
40 to 44	3,469	4.0
45 to 49	1,041	1.2
50 to 54	351	.4
55 to 59	117	.1
60 to 64	6	0
Total	86,657	100.0

Source: POEA e-Registration Database, 2011

In regard to gender, 51 percent were female and 49 percent were male. About 60 percent of women were below 30 years of age, while the majority of men (51.7) were 30 years and above (Figure 1). Therefore, young applicants from the Philippines tend to be mostly female (56 percent of those below 30 years old) rather than male.

As for marital status, 66.5 percent of all applicants were single and 32.3 were married. Among female applicants, 73 percent were single. Of all married applicants, 62 percent were male; of all single applicants, 57 percent were female.

FIGURE 1
Age-Sex Profile of Applicants



The residence of applicants was clustered in regions including and surrounding the NCR. This reproduces in general terms the scenario for all OFWs. However, in the discussion concerning the origin of OFWs, the doubt always remains whether the place indicated refers to the place of birth or the place of residence of the OFW. This doubt is not solved in the data concerning applicants with the GPB, as the form does not specify place of birth, but simply requires filling out the current residence. Nevertheless, considering that e-registration can be accomplished from anywhere in the Philippines unlike procedures for deployment abroad,which are mostly fulfilled at the central office of POEA based in Metro Manila, it is possible to conclude that the address provided by e-registrants is closer to their place of birth. NCR, Region III and Region IV-A are by far the three main regions of origin. Together they account for 66 percent of all applicants (Table 12).

TABLE 12
Residence of Applicants by Region

Region	Frequency	%
National Capital Region	18,790	21.7
Cordillera Administrative Region	3,168	3.7
Region I - Ilocos	4,807	5.6
Region II - Cagayan Valley	2,496	2.9
Region III - Central Luzon	18,885	21.8
Region IV-A - CALABARZON	19,825	22.9
Region IV-B - MIMAROPA	781	0.9
Region V- Bicol	1,783	2.1
Region VI- Western Visayas	2,908	3.4
Region VII - Central Visayas	3,881	4.5
Region VIII- Eastern Visayas	957	1.1
Region IX- Zamboanga Peninsula	1,296	1.5
Region X - Northern Mindanao	2,044	2.4
Region XI - Davao Region	2,555	3.0
Region XII - SOCCSKARGEN	1,111	1.3
Region XIII - Caraga	691	0.8
Autonomous Region of Muslim Mindanao	615	0.7
Total	86,593	100.0

Source: POEA e-Registration Database, 2011

In the distribution of origin by gender, there are no major differences between male and female applicants, except for Region III, which is the number one region of origin for male applicants, and only the number three for female applicants.

The distribution by province indicates that almost 67.7 percent of all applicants are in just 10 provinces. NCR is the number one, while almost all other provinces are within the vicinity of NCR, except for Cebu and Benguet (Table 13).

TABLE 13
Distribution of Applicants by Top Ten Provinces

Province	Frequency	%
National Capital Region	18,790	21.7
Pampanga	7,765	9.0
Cavite	6,379	7.4
Bulacan Province	5,421	6.3
Laguna	5,189	6.0
Batangas	3,905	4.5
Cebu	3,083	3.6
Rizal	2,938	3.4
Pangasinan	2,627	3.0
Benguet	2,535	2.9
Subtotal	58,632	67.8
Total	86,593	100.0

Source: POEA e-Registration Database, 2011

The NCR is composed of 16 cities and one municipality (Pateros) of different territorial and population sizes. This is also reflected in the percentage distribution of applicants in each of the municipalities. Quezon City, Manila and Caloocan City registered the largest number of applicants (Table 14).

The applicants' level of education is high, higher than the national average. In fact, 58 percent have a college degree (Table 15). Of the rest, 17.5 percent have some college education; the others either completed high school or some vocational course. Women who have completed college registered a higher percentage than men. Considering that most applicants are young, it follows that most have completed their education in recent years. In fact, over three quarters graduated after 2000 and 52 percent after 2005. Therefore, over 50 percent of applicants were seeking a job overseas within six years of completing their education. This percentage is higher for college graduates (64 percent), which leads to the impression that the propensity to seek a job abroad soon after completing education is higher for those with higher education. But this conclusion has to be tempered with the usual consideration concerning the particular nature of the database, which includes only those seeking deployment through the GPB.

TABLE 14
Distribution of Applicants by City/Municipality in the National Capital Region

Municipality (NCR)	Number	% Total Applicants	% NCR Applicants
Quezon City	4,125	4.8	22.0
Manila	2,828	3.3	15.1
Caloocan City	1,954	2.3	10.4
Taguig	1,403	1.6	7.5
Makati	1,129	1.3	6.0
Pasig City	1,128	1.3	6.0
Parañaque	938	1.1	5.0
Las Piñas	886	1.0	4.7
Valenzuela	857	1.0	4.6
Muntinlupa	738	0.9	3.9
Pasay City	705	0.8	3.8
Marikina	672	0.8	3.6
Mandaluyong	575	0.7	3.1
Malabon	401	0.5	2.1
Navotas	215	0.2	1.1
San Juan	157	0.2	0.8
Pateros	79	0.1	0.4
Subtotal	18,790	21.9	100.0

Source: POEA e-Registration Database, 2011

TABLE 15
Applicants' Level of Education by Sex

Level of Education	Frequency	%	Male	Female
College Graduate	50,366	58.1	47.7	68.1
College Undergraduate	15,146	17.5	20.4	14.6
High School Graduate	10,747	12.4	15.4	9.6
Vocational Graduate	10,398	12.0	16.5	7.7
Total	86,657	100.0	100.0	100.0

Source: POEA e-Registration Database, 2011

Education is mostly in the major disciplines: business administration and accountancy; information and computer technology; education; engineering, particularly in the electric and electronic areas; hotel and restaurant management; and health and related services. However, the single most common program of study is nursing. About 25 percent of applicants had a bachelor of science in nursing degree. Considering that nursing is a preponderantly female occupation, this also explains the higher percentage of females among college graduates.

Applicants indicated their preference of the country of destination (Table 16). The Republic of Korea was by far the number one country of preferred destination. Again, this is to be explained by the nature of the database, which consists of applicants to be deployed through GPB. Korea has adopted since 2003 a labor migration program (Employment Permit System), which relies on bilateral agreements with countries of origin. Based on the agreement, the country of origin is to maintain a database of applicants from which Korean firms will select the candidates. Deployment through the government to public firms in other countries also requires registration. Therefore, it is not difficult to explain the reasons for the ten countries of preferred deployment. Together, they account for over 90 percent of all registrants.

TABLE 16
First Ten Countries of Intended Deployment

Country	Number	%
Korea, South	31,512	45.1
Japan	7,809	11.2
Saudi Arabia	6,225	8.9
Canada	5,452	7.8
Taiwan	3,455	4.9
Singapore	3,026	4.3
United Arab Emirates	2,707	3.9
Australia	1,948	2.8
Qatar	1,224	1.8
United States	868	1.2
Total	64,226	91.8
Grand Total	69,921	100.0

Source: POEA e-Registration Database

While the educational attainment of those applying for Korea includes a variety of fields, and considering that almost half of the database is made up of migrants intending to go to Korea, other countries are chosen by applicants with a specific educational background. Japan is chosen mostly by nurses (70.9 percent have a Bachelor of Science degree in Nursing and others have related degrees) because of the JPEPA agreements. The same goes for Saudi Arabia, chosen mostly by nurses (74.7 percent have a degree in BS Nursing). Of those choosing Canada, nurses have a much lower percentage (30.8 percent) but still remain the number one occupation. Much smaller but nevertheless significant numbers are those in the fields of accountancy and business administration. The other top ten countries do not have a significant clustering of migrants in particular areas of educational background, although a number of ICT graduates chose Taiwan as preferred destination.

Since the major professional education is nursing, it is interesting to post the top ten countries of preferred destination for this category, which comprise more than three quarters of all countries (Table 17).

TABLE 17
Top Ten Countries of Destination of Nurses

Country	Number	%
Japan	5,537	25.9
Saudi Arabia	4,647	21.8
Canada	1,677	7.9
Korea, South	1,204	5.6
United Arab Emirates	1,085	5.1
Singapore	715	3.4
Australia	440	2.1
Qatar	440	2.1
United States	338	1.6
Kuwait	322	1.5
Subtotal	16,405	76.9
Total nurses	21,343	100.0

Source: POEA e-Registration Database

In addition to the preferred country of destination, applicants also indicated the job position they were applying for. This allows for some indications concerning the match between education and intended occupation. Using the occupational groups utilized by the POEA, the positions indicated by applicants are summarized in Table 18.

Compared to Table 18, the distribution by specific occupational category in Table 19 is rather different, but this is again due to the particular nature of the database, which explains the high number of nurses and the low number of domestic workers.

If the categories of intended occupations were considered in detail, 'factory workers' becomes the number one category, followed by 'nurses professional' and 'caregivers and caretakers.' This indicates that migrants apply for a position in line with their education only to a certain extent, though this needs to be further examined in detail.

TABLE 18
Positions Applied for by Occupational Group

Skill by Category	Frequency	%
Administrative and Managerial Workers	369	0.6
Agricultural Animal Husbandry and Forestry Workers Fishermen and Hunters	238	0.4
Clerical and Related Workers	5,638	8.7
Production and Related Workers Transport Equipment Operators and Laborers	29,414	45.6
Professional Technical and Related Workers	20,161	31.3
Sales Workers	1,119	1.7
Service Workers	7,517	11.7
Total	64,456	100.0

Source: POEA e-Registration Database

TABLE 19
Top Twenty Skill Categories

Skill Category	Number	%
Factory Worker	21,127	32.8
Nurses Professional	13,808	21.4
Caregivers and Caretakers	4,455	6.9
Machine Operators Automatic / Electronic Data Processing	1,769	2.7
Clerical and Related Workers	1,564	2.4
Computer Programmers and Related Workers	1,406	2.2
Production and Related Workers (N E C)	952	1.5
Electrical and Electronics Equipment Assemblers	779	1.2
Machine-Tool Operators	735	1.1
Housekeeping and Related Service Workers	728	1.1
Welders and Flame-Cutters	593	0.9
Nursing Personnel (N E C)	536	0.8
Clerks and Related Workers (N E C)	533	0.8
Electrical Fitters & Related Electrical and Electronics Workers (N E C)	533	0.8
Domestic Helpers and Related Household Workers	528	0.8
Waiters, Bartenders and Related Workers	489	0.8
Cooks, Waiters, Bartenders and Related Workers (N E C)	460	0.7
Engineering Technicians, Electrical and Electronics	434	0.7
Accountants	414	0.6
Drivers Motor-Vehicle	405	0.6
Subtotal	52,248	80.8

Source: POEA e-Registration Database

Information from the e-registration database on job applications by industry is presented for the top 15 industries, or those with at least 1,000 applicants. According to Table 20, the topmost industry is Hospitals, Nursing and Residential Care Facility, which accounts for 31.3 percent. Manufacturing is divided into several sub-sectors, of which food, products and beverage attracts the most number of applicants.

TABLE 20
e-Registrants by Industry of Intended Occupation

Industry	Frequency	%
Hospitals, Nursing and Residential Care Facilities	19,238	31.3
Manufacturing of Food, Products and Beverage	7,055	11.5
Manufacturing of Miscellaneous Industrial Products	5,003	8.1
Restaurants, Hotels and Other Short-Stay Accommodation	2,884	4.7
Manufacturing of Radio, TV & Communication Equip/Apparatus	2,317	3.8
Manufacturing of Machinery & Equipment, Including Other Domestic Appliances	1,856	3.0
Manufacturing of Office, Accounting & Computer Equipment	1,811	2.9
Manufacturing of Plastic Products	1,798	2.9
Manufacturing of Electrical Machinery & Apparatus	1,642	2.7
Manufacturing of Textile Mill Products	1,503	2.4
Manufacturing of Wearing Apparel Garments	1,502	2.4
Manufacturing of Fabricated Metal Products	1,251	2.0
Computer and Related Activities	1,241	2.0
Private Household With Employed Persons	1,186	1.9
Construction	1,002	1.6
Total	51289	83.2

Source: POEA e-Registration Database

The analysis of matching the education and intended position can begin with major occupational categories. Almost all the nurse applicants and almost 80 percent of the caregivers completed college (Table 21). Among factory workers, almost 35 percent completed college. The fact that they are listed as factory workers cannot be taken as an indication of deskilling, since the category can also comprise highly skilled positions. Perhaps a more detailed analysis is needed to clarify this point.

TABLE 21
Selected Occupations by Level of Education

Level of Education	Factory Workers		Nurses				Caregivers and Caretakers	
	No.	%	Professional	%	Personnel	%	No.	%
College Graduate	7350	34.8	13736	99.5	506	94.4	3541	79.5
College Undergraduate	5397	25.5	35	0.3	13	2.4	377	8.5
High School Graduate	4896	23.2	15	0.1	2	0.4	76	1.7
Vocational Graduate	3484	16.5	22	0.2	15	2.8	461	10.3
Total	21127	100.0	13808	100.0	536	100.0	4455	100.0

Source: POEA e-Registration Database

Where some level of mismatch between education and intended position can be ascertained is among those who are applying to work abroad as domestic workers. The following table (Table 22) is revealing. Almost 40 percent of domestic workers have completed college, but are applying for a job abroad that does not require their level of education.

3. Summary

The database of the GPB contains information on more than 80,000 applicants for jobs in countries with which the Philippines has a bilateral agreement or for occupations in public facilities in countries of destination, which require government mediation. Applicants register to the database online and therefore must be computer literate and have access to Internet connection. Because of these specificities, the database comprises people between 20 and 40 years of age, residing particularly in three regions of Luzon (the Northern part of the Philippines) and who intend to work in Korea (45 percent), a country that handles recruitment of foreign workers through government-to-government agreements. Factory work is the most popular position applied for, followed by nursing and caregiving. Nurses intend to go particularly to Japan (because of the JPEPA agreement) or to Saudi Arabia (because of the agreement to supply health personnel to some hospitals) and to Canada (where the agreement is with the various provinces). College graduates are the majority of applicants (58 percent), but this is due in particular to the large number of nurses, who must have graduated from college to practice their profession. Other than hospitals and health care facilities, manufacturing attracts most of the applicants.

Focusing on specific occupations, the interesting data pertain to the high number of applicants with a college degree seeking for a position as a factory worker (32 percent). This hints of the possibility of brain waste, generated by the lack of confidence in finding a job according to qualification or by the preference for a job abroad not consonant with qualification but yielding a higher salary. Brain waste can particularly occur in an occupation that is considered low skilled, such as domestic work. This analysis is called for as indicated by the previous study on youth employment and migration (Asis and Battistella, 2013) which established that domestic work was the number one occupation among young OFWs.

TABLE 22
Domestic Workers and Housekeepers by Level of Education

Level of Education	Domestic workers	Housekeepers	Total
College Graduate	184	304	488
%	34.8	41.8	38.9
College Undergraduate	161	221	382
%	30.5	30.4	30.4
High School Graduate	118	102	220
%	22.3	`4.0	17.5
Vocational Graduate	65	101	166
%	12.3	13.9	13.2
Total	528	728	1,256
%	100.0	100.0	100.0

Source: POEA e-Registration Database

Unfortunately, the GPB database does not allow for definite conclusions because of the small number of domestic worker applicants. Nevertheless, it is interesting to observe that among them, almost 34.8 percent had a college degree, alluding to brain waste in labor migration.

PART IV:
YOUTH MIGRANTS FROM THE PHILIPPINES

Demographically, the Philippines is a young country, with people from 15-24 years old making up 20 percent of the population (Asis and Battistella, 2013). Economic and governance challenges, among others, severely limit the nation's capacity to create and sustain an enabling environment for its people, prompting young Filipinos to consider overseas employment. Nevertheless, the limited opportunities for quality work abroad and the high demand for less skilled workers orient aspiring young migrants toward the lower occupations in the international labor market. In 2010, 46 percent of young migrants were employed in services and 25 percent in production. Women were more likely to be employed as professionals because of the availability of jobs in the health sector, but in general the number one occupation for young migrants was domestic work (Asis and Battistella, 2013).

While research on the outflow of skilled workers has been prominent, little is known about 1) the youth dimension of skilled migration, 2) the mismatch that occurs between the migrant's occupation in the destination country and acquired educational and skills qualifications and 3) policy and program initiatives that can improve not just the local or international employability of Filipino youth,

but also enable more effective job and skills matching. These issues need to be further examined.

Prior to examining these issues, however, there is a need to situate these questions within the national context, against a backdrop of statistical data illustrating the current status of young people in the Philippines and young Filipino migrants. To set the context for discussion of these issues, the first subsection presents a brief overview of the youth in the Philippines, surveying key characteristics of this sector (a more in-depth and general discussion of the profile of Filipino youth can be found in Asis and Battistella, 2013). This is followed by the second subsection, which examines data on young OFWs and analyzes the link between youth migration from the Philippines and brain drain and brain waste.

1. Profiling the Filipino youth

This study follows the UN age definition of youth at 15-24 years old. This is a relatively smaller age range compared to that commonly used in the Philippines, wherein youth refers to persons aged 15-30 years old (R.A. No. 8044, or the Youth in Nation-Building Act of 1995). Given the 15-24 age definition, the Filipino youth sector has accounted for almost 20 percent of the Filipino Population. Projections (Table 23) suggest the youth's share will decline over the years, as life expectancy increases in the Philippines and the 65 and above age cohort increases.

TABLE 23
Projected Population, Total and Selected Age Cohorts by Five-Year Interval, Philippines: 2000-2040 (Medium Assumption)

Year	Total Population	15-19	20-24	%15-24
2000	76,946,500	8,010,600	7,115,000	19.7
2005	85,261000	8,915,700	7,952,200	19.8
2010	94,013,200	9,603.300	8,857,500	19.6
2015	102,965,300	9,757,800	9,544,900	18.8
2020	111,784,600	10,296,700	9,697,800	17.9
2025	120,224,500	10,872,200	10,234,900	17.6
2030	128,110,000	11,279,700	10,805,700	17.2
2035	135,301,100	11,441,200	11,208,700	16.7
2040	141,669,900	11,406,200	11,367,100	16.1

Note: Percentages are rounded figures.
Source: NSO (2006, cited in National Statistical Coordination Board, n.d.)

As of 2010, the Philippine population was at 92.34 million, higher by 15.83 million compared to the population count in 2000 at 76.51 million (Table 24). Between 2000 and 2010, the annual average population growth rate was 1.9 percent (NSO, 2012b).[10] Age and sex distribution also show that in 2010, there were slightly more men (51.0 percent) than women in the population of 0 to 54 years old. However, in the age group 55 years and older, there were more women (54.1 percent) than men (45.9 percent) (NSO, 2012c).

[10] Uneven population distribution can be observed regionally and in urban areas. A significant portion of the population was concentrated in three out of 17 regions, namely CALABARZON or Region IV-A (12.61 million), the National Capital Region or NCR (11.86 million) and Central Luzon or Region III (10.14 million). Four highly urbanized areas (HUCs) registered population numbers of over a million, namely: Quezon City (2.76 million), City of Manila (1.65 million), Caloocan City (1.49 million) and Davao City (1.45 million). Quezon City, the City of Manila and Caloocan City are within the NCR (National Statistics Office, 2012a).

TABLE 24
Philippine Population in Recent Censuses, 2010, 2000 and 1990

Census Year	Reference Date	Philippine population (In Millions)
2010	May 1, 2010	92.34
2000	May 1, 2000	76.51
1990	May 1, 1990	60.70

Source: NSO (2012b)

The relatively young population of the Philippines is further illustrated by the large portion (33.4 percent in 2010, or 30.7 million) which is under 15 years old. Figure 2 also shows the large share of young people to the total population in the country.

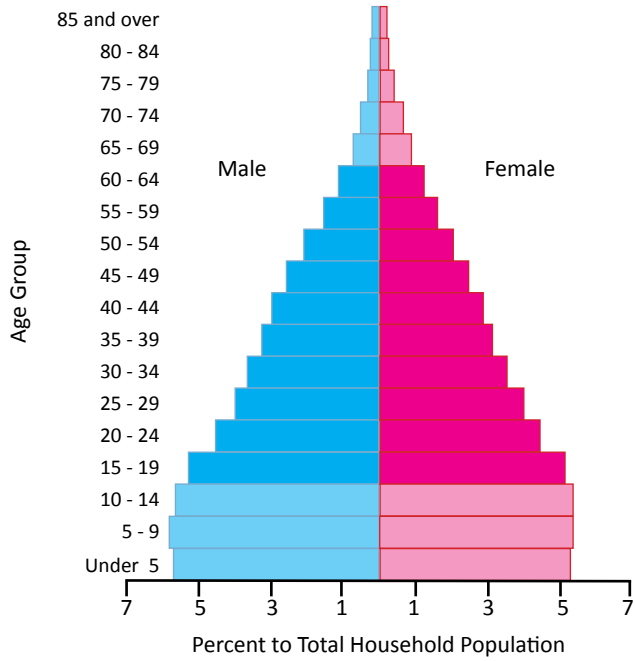
In 2010, the median age of the population was 23.4 years – which means "half of the household population was younger than 23.4 years" (NSO, 2010c).[11] The overall dependency ratio in 2010 was 61, lower compared to 69 in 2000. This means for every 100 members of the working-age population, there were 61 dependents (54 young and seven old dependents) (NSO, 2012c). In the Philippines, the school-age population is defined as five to 24 years old. In 2010, this population accounted for a significant 41.8 percent of the total population (NSO, 2012c).

Correspondent to the total population distribution, the youth are also mainly found in the National Capital Region (NCR), Region IV-A or CALABARZON, followed by Regions III (Central Luzon), Region VI (Western Visayas), and Region VII (Central Visayas) (Table 25).

[11] Regionally, the highest median age was recorded in NCR (25.5 years – 24.9 years for men and 26.0 years for women), while the lowest was in the Autonomous Region of Muslim Mindanao (18.1 years – 17.8 years for men and 18.3 years for women) (NSO, 2012c).

FIGURE 2

Age-Sex Profile of Household Population, Philippines, 2010



Source: NSO-NCR (2012)

TABLE 25

Youth Household Population (15-24 Years Old) by Region, Philippines: 2006-2010 (In Thousands)

Region	2006	2007	2008	2009	2010
Philippines	16,967	17,275	17,594	17,910	18,220
National Capital Region	2,239	2,245	2,268	2,272	2,282
Cordillera Administrative Region	333	344	351	349	357
Region I – Ilocos	900	922	937	968	978
Region II - Cagayan Valley	572	590	605	610	626
Region III - Central Luzon	1,879	1,899	1,932	1,949	1,957
Region IV-A – CALABARZON	2,183	2,200	2,248	2,274	2,313
Region IV-B – MIMAROPA	485	488	515	533	543
Region V- Bicol	946	966	976	1,013	1,047
Region VI- Western Visayas	1,338	1,376	1,438	1,448	1,476
Region VII - Central Visayas	1,295	1,321	1,320	1,371	1,391
Region VIII- Eastern Visayas	726	765	780	798	832
Region IX- Zamboanga Peninsula	615	615	634	651	666
Region X - Northern Mindanao	789	833	836	852	865
Region XI - Davao Region	832	831	839	851	872
Region XII – SOCCSKARGEN	757	777	777	808	827
Region XIII – Caraga	456	466	483	493	498
Autonomous Region of Muslim Mindanao	621	640	656	674	690

Note: Figures may not add up as the data are averages of four rounds of the Labor Force Survey. Based on data from the National Statistics Office, the Labor Force Survey and Public Use Files.

Source: Table 7B.1, in BLES (2011a)

a. Youth employment

Of the employment indicators, perhaps the most relevant (and striking) is the much higher unemployment rate among the youth (Table 26). Compared with the general population 15 years old and over, youth unemployment is two times higher (Table 26). In terms of gender, more young men are employed than young women (Table 27). This is in line with the situation in most countries and also in the developed world, and it points to the difficulty of the youth to find

employment after finishing school for many reasons. Among them, the trend of the economy to absorb highly educated workers and the requirement of work experience, which the youth mostly do not have. The result is an increase of precarious, temporary jobs for the youth, and an increase of underemployment (although data of youth underemployment are not reported).

The regional distribution of labor force participation rate (Table 28) shows that it is declining among the youth in NCR, probably because of an increase in school attendance, while it is particularly high in Northern Mindanao.

TABLE 26
Employment Indicators, July 2011 and 2012

Philippines	July 2012*	July 2011
Population 15 years and over (in thousands) **	63,119	62,053
Population 15-24 (in thousands)	18,955	18,614
Labor Force	40,427	39,928
Labor Force 15-24 (in thousands)	8,561	8,388
Labor Force Participation Rate (%)	64.0	64.3
Labor Force Participation Rate, 15-24 (%)	45.2	45.1
Employment Rate (%)	93.0	92.9
Employment Rate, 15-24 (%)	83.0	82.1
Unemployment Rate (%)	7.0	7.1
Unemployment Rate, 15-24 (%)	17.0	17.9
Underemployment Rate (%)	22.7	19.1

Notes: * Estimates for July 2012 are preliminary and may change.
** Population 15 years and over (July 2011 and 2012) is from the 2000 Census-based population projections.

Source: Tables 4 and 4a, in BLES (2012a), NSO (2012d)

TABLE 27
Youth (15-24) Household Population, Employment Status and Rates by Sex, Philippines: 2010-July 2012 (In Thousands except Rates)

Indicator (15-24 Years Old)	2010	2011	2012*		
			January	April	July
Household Population	18,220	18,576	18,806	18,887	18,955
Men	9,280	9,459	9,573	9,615	9,650
Women	8,940	9,118	9,234	9,272	9,305
Employed	6,816	7,258	7,184	7,611	7,105
Men	4,285	4,580	4,540	4,822	4,457
Women	2,531	2,677	2,644	2,789	2,648
Unemployed	1,460	1,417	1,430	1,450	1,455
Men	846	819	824	829	833
Women	613	599	606	621	622
Employment Rate (%)	82.4	83.7	83.4	84	83
Men	83.5	84.8	84.6	85.3	84.3
Women	80.5	81.7	81.4	81.8	81
Unemployment Rate (%)	17.6	16.3	16.6	16.0	17.0
Men	16.5	15.2	15.4	14.7	15.7
Women	19.5	18.3	18.6	18.2	19.0

Notes: Totals are based on rounded figures and may not add up. 2012 totals are only preliminary (*). Sources of basic data include the National Statistics Office, Labor Force Survey and Public Use Files.

Source: Table 11, BLES (2012b)

TABLE 28
Labor Force Participation Rates (LFPR) by Region, Total & Youth, 2006-2010
(Based on Past Week Reference Period; In Thousands except Rates)

Region	Total			Youth (15-24)		
	2008	2009	2010	2008	2009	2010
Philippines	63.6	64.0	64.1	45.3	45.6	45.4
National Capital Region	61.3	61.5	62.4	42.2	42.2	42.7
Cordillera Administrative Region	66.5	66.6	67.4	44.2	44.7	44.8
Region I - Ilocos	60.8	61.5	61.8	43.8	44.3	44.1
Region II - Cagayan Valley	66.3	67.2	66.2	46.1	47.0	45.3
Region III - Central Luzon	60.3	60.6	61.0	44.7	45.2	44.6
Region IV-A - CALABARZON	62.3	63.2	63.6	45.6	46.0	45.7
Region IV-B - MIMAROPA	69.2	70.1	69.2	49.5	50.8	47.5
Region V - Bicol	65.2	64.5	64.4	46.2	45.1	45.5
Region VI - Western Visayas	63.9	64.4	64.8	45.6	45.5	46.1
Region VII - Central Visayas	64.4	64.1	65.8	44.9	45.1	47.7
Region VIII - Eastern Visayas	64.8	66.1	64.1	44.0	47.7	44.4
Region IX - Zamboanga Peninsula	65.7	66.8	65.9	45.1	46.9	45.2
Region X - Northern Mindanao	70.4	70.4	69.8	53.5	52.7	53.4
Region XI - Davao Region	66.2	65.7	65.0	48.3	48.2	47.2
Region XII - SOCCSKARGEN	66.1	66.7	65.9	48.3	47.9	46.2
Region XIII - Caraga	65.7	65.9	65.4	47.0	48.1	47.9
Autonomous Region of Muslim Mindanao	57.2	57.2	57.1	37.7	36.1	36.8

Notes: Figures are based on averages from the Labor Force Survey (four survey rounds), except for 2005. The 2005 data average could not be computed due to the new definition of unemployment beginning April of 2005 (NSCB Resolution No. 15, October 2004).
Sources include the National Statistics Office and the Labor Force Survey.

Sources: Tables 2.3A and 7.3A in BLES (2011a)

The unemployment rate among youth is particularly high in the regions which are the main origin of youth seeking employment overseas, such as NCR, Region IV-A, Region III and Region II (Table 29). This is an important aspect, as it reveals that migration provides additional employment possibilities for the youth, not just better employment of youth already working in the country. Of course, employment and unemployment data must always be examined against the still large employment rate in the agricultural sector of the Filipino population. Thus, a low unemployment rate in the less industrialized regions points to youth employment mostly in the agricultural sector, i.e., as self-employed within family subsistence agricultural activities. This is confirmed by the higher unemployment rate among female youth in the less industrialized regions, as they are not absorbed like young men in agricultural work (Table 30).

b. Education

Education is a critical factor in employment. The following are some collected data on enrollment and educational attainment which provide a limited but nevertheless useful illustration of the education status of young Filipinos. Filipino youth aged 15-24 are typically enrolled in secondary (high school) or tertiary (college) levels, based on the country's educational system.

Data on secondary education show a rising trend in enrollment and completion rates through academic years from 2005 to 2010, except a slight decrease in the completion rates during the period 2009-2010. Tertiary education enrollment also increased from 2005 to 2010, except for a decline in 2008-2009, which was linked to the global economic crisis (Asis and Battistella, 2013).

Records from the Commission on Higher Education (CHED) show that during the ten-year period from academic year 2001-2002 to 2011-2012, tertiary education enrollment and graduate numbers have increased (enrollment figures include all year levels) (Table 31). Notable are the higher numbers of public school enrollees and graduates which might indicate that with the growing population and demand for tertiary education, the majority avail of the public school system. Population and education trends are putting pressure on administrations to respond to increasing needs for education.

TABLE 29
Unemployment Rates by Region, Total and Youth, 2006-2010 (Based on Past Week Reference Period)

Region	Total			Youth (15-24)		
	2008	2009	2010	2008	2009	2010
Philippines	7.4	7.5	7.4	17.4	17.6	17.6
National Capital Region	13.0	12.8	11.5	29.2	30.0	27.8
Cordillera Administrative Region	4.6	4.6	5.1	9.7	9.0	10.6
Region I - Ilocos	8.1	8.2	8.5	21.0	20.5	21.1
Region II - Cagayan Valley	3.4	2.8	3.7	9.0	8.0	9.9
Region III - Central Luzon	9.2	9.2	8.8	21.2	20.8	21.3
Region IV-A - CALABARZON	10.0	10.4	9.5	23.7	24.5	23.4
Region IV-B - MIMAROPA	4.2	4.4	4.4	11.4	11.1	12.8
Region V- Bicol	5.6	5.8	5.9	14.6	15.1	14.7
Region VI- Western Visayas	7.0	7.0	7.1	16.3	17.1	17.2
Region VII - Central Visayas	7.0	7.5	7.6	17.2	17.0	17.3
Region VIII- Eastern Visayas	4.5	5.4	5.5	11.4	12.6	13.0
Region IX- Zamboanga Peninsula	3.5	3.6	3.7	9.4	9.2	9.0
Region X - Northern Mindanao	4.7	4.9	5.0	10.9	10.9	11.0
Region XI - Davao Region	5.8	5.9	6.0	14.1	14.9	15.3
Region XII - SOCCSKARGEN	4.5	4.1	4.4	11.0	9.8	10.2
Region XIII - Caraga	5.7	5.8	6.5	11.5	13.1	14.3
Autonomous Region of Muslim Mindanao	2.7	2.3	3.9	7.4	6.6	9.8

Note: Data are based on averages from the Labor Force Survey (four rounds). Details may not add up since the totals were rounded off. Sources of basic data include the National Statistics Office, Labor Force Survey and Public Use Files.

Sources: Tables 5.2 and 7B.8, BLES (2011a).

TABLE 30
Unemployment Rates of Male and Female Youth (15-24 Years Old) by Region, Philippines, 2010 (In Thousands)

Region	Unemployment Rate	
	Male Youth (15-24)	Female Youth (15-24)
Philippines	16.5	19.5
National Capital Region	31.3	24.0
Cordillera Administrative Region	8.2	14.5
Region I - Ilocos	19.1	24.8
Region II - Cagayan Valley	8.5	12.9
Region III - Central Luzon	20.2	23.0
Region IV-A - CALABARZON	23.6	22.8
Region IV-B - MIMAROPA	11.4	17.1
Region V- Bicol	12.1	19.9
Region VI- Western Visayas	16.5	18.4
Region VII - Central Visayas	17.8	16.8
Region VIII- Eastern Visayas	10.5	18.6
Region IX- Zamboanga Peninsula	8.3	11.5
Region X - Northern Mindanao	10.6	11.7
Region XI - Davao Region	13.8	18.2
Region XII - SOCCSKARGEN	8.5	13.6
Region XIII - Caraga	13.8	15.4
Autonomous Region of Muslim Mindanao	7.0	17.4

Note: Figures may not add up, as the data are averages of the four rounds of the Labor Force Survey based on rounded figures.
The population projection benchmark was based on the 2000 Census.
Sources of basic data are: National Statistics Office, Labor Force Survey and Public Use Files.

Source: Tables 13.14a and 13.14b in BLES (2011b)

TABLE 31

Higher Education Enrollment and Graduates by Academic Year and by Priority Discipline Groups, 2001/02 – 2011/12

Higher Education Indicators	2001/02	2010/11	% Increase
Enrollment			
All Disciplines	2,466,056	2,937,847	19.1
Public	808,321	1,193,851	47.7
Private	1,657,735	1,743,996	5.2
Priority Disciplines	1,466,781	1,728,397	17.8
Sciences	30,451	25,425	-16.5
Maritime	94,713	109,256	15.4
Medicine and Health Related	164,000	363,147	121.4
Engineering and Technology	355,829	354,218	-0.5
Agriculture, Agri. Eng'g., Forestry, Vet. Med.	94,900	63,679	-32.9
Teacher Education	439,549	400,912	-8.8
IT Related	249,937	376,046	50.5
Mathematics	12,197	12,611	3.4
Architectural and Town Planning	25,205	23,103	-8.3
Graduates			
All Disciplines	383,839	498,418	29.9
Public	131,491	207,722	58.0
Private	252,348	290,696	15.2
Priority Disciplines	222,092	310,017	39.6
Sciences	4,950	3,927	-20.7
Maritime	13,387	13,937	4.1
Medicine and Health Related	26,474	102,782	288.2
Engineering and Technology	45,950	58,637	27.6
Agriculture, Agri. Eng'g., Forestry, Vet. Med.	13,335	9,650	-27.6
Teacher Education	77,555	62,834	-19.0
IT Related	35,103	54,113	54.2
Mathematics	2,251	1,874	-16.7
Architectural and Town Planning	3,087	2,263	-26.7

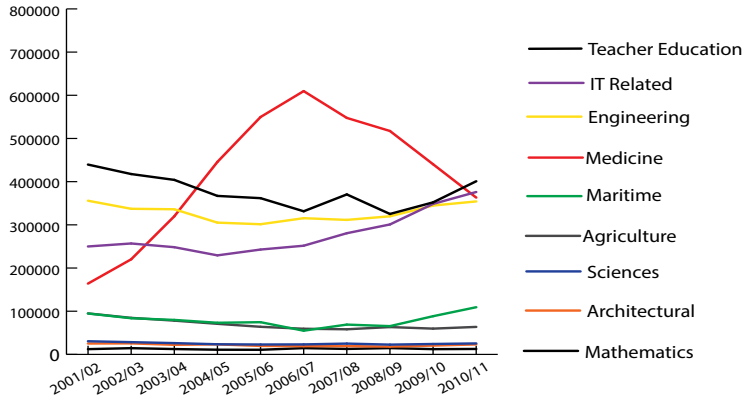
Source: CHED (2012), "Higher Education Indicators as of July 24, 2012"

Further analyzing the data according to distribution by priority discipline groups, it is evident that between 2001-2002 and 2011-2012, enrollment had significantly increased for certain categories, especially 'Medical and Health Related' (71.4 percent), 'IT related' (56.4) and 'Maritime' (24.1 percent). 'Agriculture, Agricultural Engineering, Forestry, Veterinary Medicine' suffered a significant decline of -28.2 percent, followed by the 'Sciences' at -10.3 percent. The trend implies changing priorities in the choices of disciplines in higher education in preparation for employment. Considering that graduates from those disciplines have a higher propensity to seek employment abroad in response to the demand for nurses, IT specialists and seafarers, it is clear how the "culture of migration" is influencing and distorting in some respects the education system. In particular, the declining enrollment in the sciences and agriculture does not augur well for development in the Philippines, as it dampens the potential benefits from basic research and research applied to the agricultural sector, which has not yet developed its full potential.

While enrollment has followed a general upward trend, the number of graduates has remained more constant, or even declined in some traditional disciplines. The relation between enrollment and number of graduates is not possible with available data, as enrollment is not broken down by school years. Additional research is needed in that regard, as well as the proper understanding of the anomalous trend concerning graduate in medicine and health related disciplines.

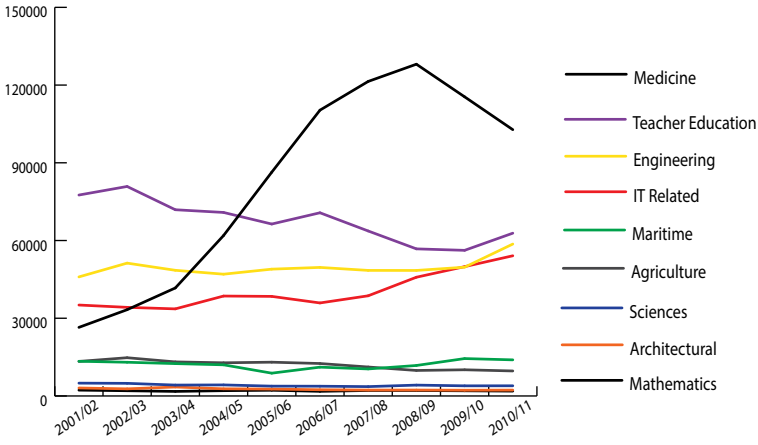
Figures 3 and 4 show the spectacular growth as well as decline of enrollment in the "Medicine and Health Related" category. This is easily understood as a reaction to the decline of demand for nurses and other medical personnel in foreign countries. The annual number of graduates follows the same pattern, with a two-year lag.

FIGURE 3
Higher Education Enrollment by Academic Year and Priority Discipline Group, AY 2001/02 – 2010/11



Source: CHED (2012), "Higher Education Indicators as of July 24, 2012"

FIGURE 4
Higher Education Graduates by Academic Year and Priority Discipline Group, AY 2001/02 – 2010/11



Source: CHED (2012), "Higher Education Indicators as of July 24, 2012"

Recent education and employment data also show that earning a college degree may not necessarily lead to employment. Youth data from 2009 until October 2011 (BLES, 2012b) suggest that while employment numbers were higher (at least six million per year) compared to unemployment figures, there is still a significant number of unemployed youth at over one million per year.

Analyzing the data in terms of percentages, it is clear that while many of the employed were able to reach secondary or tertiary education, not many actually finished secondary or tertiary levels (Table 32). Such trends in educational attainment suggest that employment prospects for many Filipino youth may be limited to less skilled work, or jobs that do not require tertiary education qualifications. However, there are also substantial shares of unemployed youth among those who have reached college level, at around 38 percent per year (including both undergraduates and graduates or higher). College undergraduates alone account for 21 percent of the total unemployed every year. College graduates (and those with higher degrees) rose from 16.8 percent in 2009 to 17.6 percent in October 2010 and to 17.9 percent in October 2011.

Industry data (Table 33) show that large numbers of Filipino youth are employed in the following industries: agriculture, hunting and forestry (30.3 percent); trade and repair (19.4 percent); private households (9.1 percent); and manufacturing (9.5 percent).

Labor market trends among the youth are generally similar to that of the total employed population, as seen in the comparison of data in Table 33. (Caution should be exerted in over-interpreting the comparison, since the figures of the total employed population also include the employed youth).

Though most of the common industries with labor market for the youth are the same as that of the total employed, considerable differences between the employed youth and the total employed can be observed in the following: hotel and restaurants (4.9 vs. 2.9 percent); transport, storage and communications (5.3 and 7.6 percent); public administration and defense, compulsory social security (1.9 vs. 5.1 percent); education (1.7 vs. 3.3 percent); and private households with employed persons (9.1 vs. 5.3 percent).

TABLE 32
Employed and Unemployed Youth (15-24) by Highest Grade Completed, Philippines: 2009 – October 2011 (In Percent)

Indicator 15-24 Years Old	2009 %	Oct. 2010 %	Oct. 2011 %
Employed	100.0	100.0	100.0
No Grade Completed	1.0	0.9	0.8
Elementary	25.0	24.1	23.7
Undergraduate	13.0	12.8	12.6
Graduate	11.9	11.3	11.1
High School	51.4	51.1	51.5
Undergraduate	20.5	19.6	20.3
Graduate	30.9	31.5	31.1
College	22.6	23.9	24.1
Undergraduate	13.6	14.2	14.1
Graduate and Higher	9.0	9.7	10.0
Unemployed	100.0	100.0	100.0
No Grade Completed	0.3	0.3	0.2
Elementary	10.9	10.8	10.2
Undergraduate	4.7	5.1	4.8
Graduate	6.1	5.7	5.4
High School	50.7	50.3	50.7
Undergraduate	14.1	14.5	13.2
Graduate	36.6	35.8	37.5
College	38.3	38.6	38.9
Undergraduate	21.5	21.0	21.0
Graduate and Higher	16.8	17.6	17.9

Notes: Figures are percentages based on BLES data from 2010 and 2011,which refer to averages recorded in January, April, July and October. Sources of basic data include the National Statistics Office, Labor Force Survey and Public Use Files.

Source: Table 12, in BLES (2012b).

TABLE 33
Employed Youth (15-24) and Total Employed Persons by Industry Group, Philippines: 2010 (Based on Past Week Reference Period; In Thousands and Percent)

Industry Group	Employed Youth (15-24)		Employed Persons	
	Total	%	Total	%
ALL INDUSTRIES	6,816	100.0	36,035	100.0
Agriculture, Hunting and Forestry	2,063	30.3	10,488	29.1
Fishing	331	4.9	1,468	4.1
Mining and Quarrying	53	0.8	199	0.6
Manufacturing	650	9.5	3,033	8.4
Electricity, Gas and Water Supply	18	0.3	150	0.4
Construction	306	4.5	2,017	5.6
Wholesale and Retail Trade, Repair of Motor Vehicles, Motorcycles and Personal and Household Goods	1,324	19.4	7,034	19.5
Hotels and Restaurants	332	4.9	1,063	2.9
Transport, Storage and Communications	363	5.3	2,723	7.6
Financial Intermediation	71	1.0	400	1.1
Real Estate, Renting and Business Activities	215	3.2	1,146	3.2
Public Administration and Defense, Compulsory Social Security	131	1.9	1,847	5.1
Education	118	1.7	1,176	3.3
Health and Social Work	92	1.3	451	1.3
Other Community, Social and Personal Service Activities	131	1.9	914	2.5
Private Households with Employed Persons	619	9.1	1,926	5.3
Extra-Territorial Organizations and Bodies	*	0.0	2	0.0

Notes: Data are based on averages from the Labor Force Survey (four rounds). Some figures may not add up due to rounding.
* Less than 500. Sources of data include the National Statistics Office, Labor Force Survey and Public Use Files. Industry categories are based on the 1994 Philippine Standard Industrial Classification (PSIC).

Source: Tables 3.5 and 7B.5, in BLES (2011a)

Some of the differences can find a simple explanation in the fact that the youth have just finished their curriculum and did not have time yet to acquire work experience, which instead is needed in some occupations (e.g., public administration and education). In other areas, such as hotels and restaurants, the youth have an advantage, since those industries tend to hire young workers.

2. Focus on young Filipino migrants

Centering the discussion on the youth dimension of labor migration, this subsection provides first an overview of data concerning young Filipino migrants, largely based on the 2011 study, *The Filipino Youth and the Employment-Migration Nexus* (Asis and Battistella, 2013), a report that aimed to fill the knowledge gap in understanding youth employment and migration and in turn, to contribute to the research base to inform policies and programs on youth development.

The 2011 study, which examined data from the 2009 Survey of Overseas Filipinos, unpublished POEA data and other statistical resources, observed the following regarding youth migration trends from the Philippines:

- Migrant youth comprise 10 percent of OFWs.
- Young women OFWs outnumber men.
- Young OFWs go mostly to the Gulf countries and to East and Southeast Asia.
- The top occupation for young OFWs is domestic work.
- Youth are more involved in permanent migration (as seen in data from the CFO). Student migration is also viewed as an emerging trend especially among the youth

While the earlier study found that the youth generally account for 10 percent of the total number of OFWs, POEA data suggest youth migrants comprise 13 to 17 percent of new hires annually. The above mentioned report also illustrated that the number of migrants increases as age increases, and that women (66 percent) outnumber men.

In terms of occupation and destination country, data suggest that young OFWs reflect patterns similar to those observed among the general OFW population. Saudi Arabia and the UAE remain the major destination countries, followed by selected Asian and Gulf countries, with Canada as an exception. Only two differences can be observed – there were more young Filipinos employed in the UAE and in Taiwan (Asis and Battistella, 2013).

Young migrants tend to be employed in occupations categorized under the sectors of services and production. In 2010 alone, 46 percent of them were working in services, which include "caregivers and caretakers; cleaners; domestic workers and persons involved in housekeeping; cooks, waiters and bartenders; hairdressers, barbers and beauticians; and persons involved in protective services" (Asis and Battistella, 2013). Around 25 percent were employed in production, which includes "occupations related to construction work; persons working at ports; persons involved in electric works; machine operators; workers in the metal industry and others" (Asis and Battistella, 2013). However, among the new hires, a slightly higher percentage of young migrants were employed in professional work compared to other migrants (15.2 vs. 12.3), hinting at the possibility of brain drain among the youth.

When accounting for gender, men dominate in the production sector (58 percent), while there were significantly more women in services (59.9 percent). In the professional sector, there were more young female migrants compared to young male migrants (17.1 percent vs. 11.5 percent), which to a certain extent can be explained by the deployment of many female nurses and of male migrants working in engineering and in other sectors.

Among young OFWs, the top occupation is household service work (13,372), followed by nursing (5,326). These are also the top two occupations among the general OFW population. However, the high percentage of young migrants in the service sector, particularly in domestic work, begs the question on the extent of brain waste among the young who are just starting their employment experience.

3. The young Filipino applicants in the POEA e-Registration database

a. General characteristics of the youth applicants

The young Filipinos (age 15 to 24) who have applied for a job overseas with the GPB were 15,461 in 2011, comprising 20 percent of all applicants. The number increases progressively with age (Figure 5) as expected, since those in younger years are still mostly in school. The gender distribution was in favor of women (58 percent) over men (Figure 6), while for the group of adult applicants (aged 25 and above) it was almost even.

FIGURE 5
Age Profile of Young Applicants

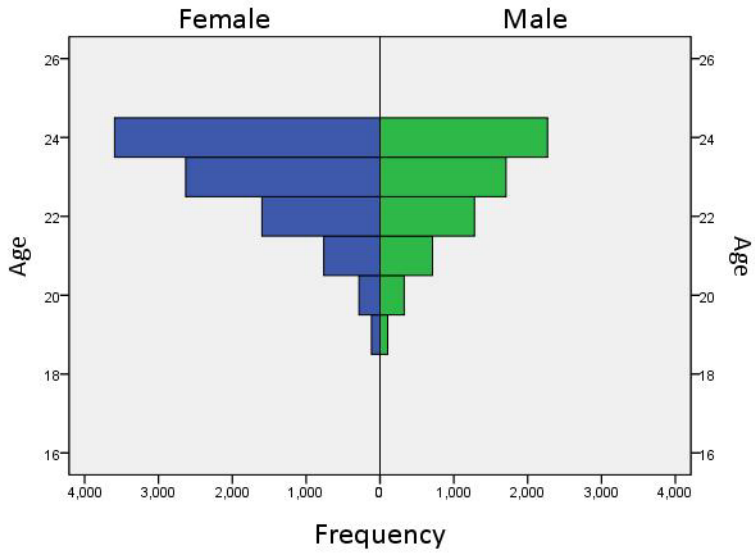
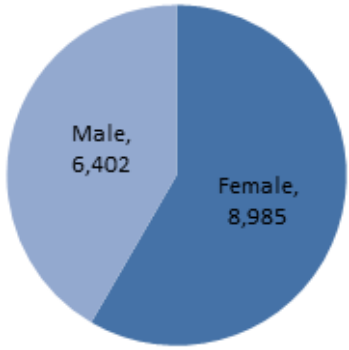


FIGURE 6
Young Applicants by Sex



As expected, most of the young applicants were single (95 percent), originating from the three most populated regions, as well as the main regions of origin of all applicants (Region III, Region IV-A and NCR) (Table 34). The most significant difference between young and adult applicants is that Central Luzon (28 percent) is the main region of origin for the youth, while for adults, it is Region IV-A and NCR. As for the distribution of origin by province, NCR is first, followed by Pampanga, which is even more prominently in second place. All the first 10 provinces for the young applicants are in Luzon, the Northern part of the Philippines. Within the NCR, there is no significant variation between the two groups.

The level of education of young applicants is about the same as that of adults, with the percentage of college graduates among women (67.9 percent) much higher than that of men (46.3), However, this is due to the nature of the database, which comprises people who apply for a job through the GPB and, as explained previously, by the preponderance of applicants applying for a job in the health sector, which requires college education. In fact, the percentage of young applicants with a bachelor of science in nursing degree is even higher (28 percent) than that of adults (20 percent) (Table 35). This means that almost one out of three young applicants looking for a job abroad through the GPB is a nurse.

TABLE 34

Young and Adult Applicants with GPB by Ten Highest Provinces of Origin

Young Applicants			Adult Applicants		
Province of Origin	Frequency	Valid Percent	Province of Origin	Frequency	Valid Percent
NCR	2,897	18.7	NCR	15,893	22.3
Pampanga	2,038	13.2	Pampanga	5,727	8.1
Bulacan	1,155	7.5	Cavite	5,441	7.6
Cavite	938	6.1	Laguna	4,441	6.2
Batangas	777	5.0	Bulacan	4,266	6.0
Laguna	748	4.8	Batangas	3,128	4.4
Benguet	504	3.3	Cebu	2,679	3.8
Tarlac	454	2.9	Rizal	2,522	3.5
Nueva Ecija	420	2.7	Pangasinan	2,220	3.1
Rizal	416	2.7	Benguet	2,031	2.9

TABLE 35

Top Preferred Occupations for Young and Adult Applicants

Young Applicants			Adult Applicants		
Preferred Occupations	Frequency	Valid Percent	Preferred Occupations	Frequency	Valid Percent
Factory worker	3,876	34.8	Factory worker	17,251	32.4
Nurses Professional	3,105	27.9	Nurses Professional	10,703	20.1
Caregivers and caretakers	869	7.8	Caregivers and caretakers	3,586	6.7
Computer programmers	260	2.3	Electronic data processing	1,642	3.1
Clerical and related workers	189	1.7	Clerical and related workers	1,375	2.6
Production and related	146	1.3	Computer programmers	1,146	2.1
Housekeeping and related	131	1.2	Production and related	806	1.5
Electronic data processing	127	1.1	Machine tool operator	670	1.3
Nurses Professional (NEC)	126	1.1	Electrical and electronic equipment assemblers	668	1.3
Cooks, waiters, bartenders	115	1.0	Welders and flame cutters	550	1.0
Housekeeping and related	597	1.1	Electrical fitters and related electrical equipment assembler and electronic work (N E C)	474	0.9
Electrical and electronic	111	1.0			
Clercs and related	108	1.0			
Waiters, bartenders and related	108	1.0	Domestic workers and related household workers	452	0.8

The higher proportion of nurses among young applicants is reflected in the distribution of occupations by skill categories, where the young seeking an occupation in the professional and technical field are proportionally more than adults (35.4 to 30.4 percent) (Table 36).

TABLE 36
Distribution of Young and Adult Applicants by Occupational Group

Skill Category	Young Applicants		Adult Applicants	
	Frequency	Valid Percent	Frequency	Valid Percent
Administrative and Managerial Workers	38	0.3	331	0.6
Agricultural, Animal Husbandry and Forestry Workers, Fishermen and Hunters	35	0.3	203	0.4
Clerical and Related Workers	737	6.6	4,901	9.2
Production and Related Workers, Transport Equipment Operators and Laborers	4,785	43.0	24,629	46.2
Professional, Technical and Related Workers	3,947	35.4	16,214	30.4
Sales Workers	165	1.5	954	1.8
Service Workers	1,427	12.8	6,090	11.4
Sub Total	11,134	100.0	53,322	100.0

There is no great variation in preferred destinations (the top ten countries are about the same for all applicants, except for the US, which is included in the top destinations for young applicants instead of Qatar), and about the same proportions are observed, South Korea accounting for almost half of all destinations, again because of the nature of the database.

There are some variations in the distribution of the two groups according to industry (Table 37). Because the largest number of applicants are nurses among the youth, hospitals and residential care facilities figure more prominently as the top industry indicated by young applicants. Manufacturing in a variety of sectors and work in restaurants and hotels are the other major industries in both groups.

Among the young, work in computer and related activities is also included in the top industries.

TABLE 37
Top Ten Industries of Young and Adult Applicants with GPB

Young Applicants			Adult Applicants		
Industry	N	%	Industry	N	%
Hospitals, nursing and residential care facilities	4,001	37.8	Hospitals, nursing and residential care facilities	15,237	29.9
Manufacturing of food, products and beverage	1,667	15.7	Manufacturing of food, products and beverage	5,388	10.6
Manufacturing of miscellaneous industrial products	629	5.9	Manufacturing of miscellaneous industrial products	4,374	8.6
Restaurants, hotels and other short-stay accommodation	610	5.8	Restaurants, hotels and other short-stay accommodation	2,274	4.5
Manufacturing of radio, TV & communication equip/apparatus	315	3.0	Manufacturing of radio, TV & communication equip/apparatus	2,002	3.9
Manufacturing of wearing apparel garments	282	2.7	Manufacturing of plastic products	1,607	3.2
Manufacturing of machinery & equipment including other domestic appliances	275	2.6	Manufacturing of machinery & equipment including other domestic appliances	1,581	3.1
Manufacturing of electrical machinery & apparatus	238	2.2	Manufacturing of office, accounting & computer equipment	1,574	3.1
Manufacturing of office, accounting & computer equipment	237	2.2	Manufacturing of electrical machinery & apparatus	1,404	2.8
Computer and related activities	211	2.0	Manufacturing of textile mill products	1,296	2.5
Manufacturing of textile mill products	207	2.0	Manufacturing of wearing apparel garments	1,220	2.4

b. Brain drain among youth applicants with the GPB

Despite the caveats repeatedly mentioned on the specific nature of the POEA e-registration database, it is still possible to make some considerations on the patterns and trends of potential overseas employment of qualified young Filipinos.

b.1. Many young college graduates seek employment abroad

Almost 60 percent of the young Filipinos seeking employment through the GPB are college graduates. We cautioned repeatedly that deployment through the GPB is limited to agreements between the government of the Philippines and foreign governments either in specified skills (nurses and caregivers in the case of Japan) or in public establishments (often public hospitals). This explains the high number of nurses and caregivers among the applicants because the job openings require a college degree. However, applications for nursing only account for 29 percent of all applications while other applicants with a college degree are 58.9 percent, practically twice as many. This is somehow validated by examining the case of South Korea, a country with which the Philippines has a bilateral agreement for a variety of occupations. Young applicants for jobs in South Korea were 5,712 in 2011, approximately one-third of all young applicants, and 32.7 of them were college graduates.

b.2. Young nursing graduates seek employment abroad

Nurses are the largest group among the applicants in the GPB database. Data previously commented in this report have shown that the demand for nurses in developed countries, in particular North America, Europe, the Gulf Countries, Japan and Australia, has generated an exponential increase in nursing enrollment up to the middle of the 2000s. The trend has reversed in recent years because of the decrease in the demand, but also because not all Filipino nurses can meet the requirements for employment abroad, which often consist of specific work experience in large hospitals. The Philippines has currently an oversupply of nurses, as the number of annual graduates remains high. At the same time, the database shows that young graduates are applying for employment overseas in numbers much higher than the actual probability of finding employment. It is a

reflection of the migration culture which is embedded in the country and which affects also young skilled workers. Some reflection should be dedicated to the impact that aspiration to work overseas generates in the educational system and the propensity of this particular category of highly skilled workers to find employment overseas.

c. Brain waste among youth applicants with the GPB

In addition to examining whether highly skilled young Filipinos are drawn to jobs overseas, calling attention to a possible brain drain, it is necessary to examine also the possibility that the need for employment overseas might force skilled Filipinos to apply for and accept jobs in occupations that are below their educational qualifications. To determine whether brain waste is occurring among young Filipino migrants, data should specify the exact position a worker has engaged in within a specific occupation and industry. In our case, since the database comprises of applicants for overseas jobs, the data should indicate the exact position the workers are applying for. Unfortunately, since the filling out of the electronic form leaves it up to applicants, instead of selecting from pre-prepared choices, and without even controlling for spelling errors, the data do not allow for detailed analysis. Nevertheless, it is possible to cross-tabulate selected variables within the file and to come to some interesting observations.

c.1. Young college graduates are the bulk of applicants across occupational groups

It is not surprising to see that 94 percent of applicants for a professional and technical occupation are college graduates (this category includes nurses); it is more interesting to observe that 31.3 percent of production workers have a college degree (Table 38).

TABLE 38

Selected Occupational Groups by Education of Young Applicants with GPB

Education	Clerical and Related Workers	Production and Related Workers Transport Equipment Operators and Laborers	Professional Technical and Related Workers	Service Workers
College graduate	59.4	31.3	94.0	69.4
College undergraduate	18.7	25.6	2.4	13.0
High school graduate	9.6	24.9	0.4	3.9
Vocational graduate	12.2	18.2	3.2	13.8
Total	737	4,785	3,947	1,427

c.2. Young college graduates apply for various occupations

Although it is possible to identify nursing as the major occupational cluster college graduates apply for, it is evident that they apply for a variety of occupations. Table 39 presents the occupations indicated by 41.6 percent of applicants who have completed a college education. It illustrates not only the different positions indicated by male and female applicants, but also the high percentage of college graduates applying for a job as factory workers.

TABLE 39

Top Positions Applied For by Young College Graduates, by Sex

Position Applied For	Female	Male	Total	N
Professional nurses	26.5	11.1	20.1	3,105
Factory Workers	10.7	19.7	13.6	1,239
Caregivers and Caretakers	8.4	7.0	7.9	723
Total	6,105	2,965	41.6	9,110

c.3. Industries attract young college graduates from various educational backgrounds

Examining the top industries to which the young Filipinos have applied, it is evident that only a portion of them have completed educational courses that are directly relevant to the industry. It is true that in each industry there is also a need for specialists in a variety of sectors (for instance, every industry needs IT specialists). Nevertheless, the direct matching between educational courses and industry seems too weak. For instance, applicants for jobs in the manufacturing of food, products and beverages are widely spread out in terms of their educational background. The same can be said for applicants in the manufacturing of miscellaneous industrial products and the other top industries. The matching is higher in the case of restaurants, hotels and short-stay accommodation, where more than 30 percent of applicants have a degree in restaurant and hotel management. And it is highest in occupations within hospitals, nursing and residential care facilities. It is apparent, from this observation, that the education system in the Philippines is excessively fragmented in terms of courses being offered, or at least in terms of the title that such courses carry. It is also apparent that an excessive number of students take up courses for which there are few openings, which compel them to seek employment in sectors for which they did not receive specific training.

c.4. Mismatch between a nursing degree and occupation applied for

This is perhaps the most striking evidence surfacing from the analysis of the GPB database. Although we have repeated several times that nursing is the highest occupation applied for next to factory work, it is also evident that many nurses have given up the possibility to find employment as nurses or have decided not to pursue the occupation for which they studied and were trained, and have applied for other occupations. The following table illustrates the case (Table 40).

Most industries have at least one-third of applicants with a college degree. Among college graduates, a number are nurses applying for occupations for which they did not receive any training. Seen from a different perspective, of those applicants with a BS in Nursing degree, 5.5 percent have applied for a job as factory worker.

TABLE 40
Application to Industries by BS in Nursing and by College Graduates

Industry	Total	BS Nursing	%	% College Graduates
Manufacturing of food, products and beverage	1667	113	6.8	33.8
Manufacturing of miscellaneous industrial products	629	46	7.3	34.3
Restaurants, hotels and other short-stay accommodation	610	16	2.6	55.9
Manufacturing of radio, TV & communication equip/apparatus	315	14	4.4	35.2
Manufacturing of wearing apparel garments	282	28	9.9	33.3

c.5. Young college graduates are applying as factory workers

Factory work is the number one position applied for. It is induced by the opportunity to find employment particularly in South Korea, with which the government of the Philippines has a bilateral agreement. Of all applicants to a job in Korea, more than 70 percent have applied for a position as factory worker. The educational background of applicants for factory work indicates that 32 percent have a college degree. Of all college graduates who applied for work in Korea, more than 60 percent applied for factory worker jobs. It is not clear what particular work will be done by factory workers, but it is possible that not all occupations available will be as highly skilled or according to the educational background. Once again, the mismatch between education and occupation is surfacing and the possibility of brain waste experienced by young Filipino migrants.

c.6. It is not possible to determine the educational qualification of applicants for domestic work

Some twenty years ago, it was customary to say that a high number of Filipina domestic workers had a college degree. The study on youth employment and migration had established that domestic work was the highest occupation for young migrants. In this respect, young migrants were not different from all OFWs. Unfortunately, the GPB database does not allow us to examine the

level of education of domestic workers, since the number of applicants for that occupation with GPB is too small. Nevertheless, it remains significant that some college graduates, mostly nurses, would consider domestic work as a possible occupation overseas. Housekeeping refers to occupation in hotels and similar establishments. In fact, most of those with a college degree who are applying for housekeeping jobs had completed a course in hotel and restaurant management (Table 41).

TABLE 41
Young Applicants for Domestic Work and Housekeeping by Educational Attainment

Educational Attainment	Domestic work	%	Housekeeping	%
College graduate	26	34.2	72	55.0
College undergraduate	25	32.9	32	24.4
High school graduate	14	18.4	8	6.1
Vocational graduate	11	14.5	19	14.5
Total	76	100.0	131	100.0

4. Summary

In concluding this section, it appears that, even with the limitations of the database concerning applicants for a job overseas with the GPB, some observations can be put forward.

- The propensity of Filipinos to seek work overseas is higher than the actual opportunities available. For instance, in 2010 the number of Filipinos deployed to Korea was 11,697. However, the number of applicants to Korea in the GPB database for 2011 was 31,512, almost three times more. Young Filipinos share the propensity of the general Filipino population to seek overseas employment.

- Highly skilled Filipinos seek opportunities abroad, particularly in the health sector. At least one-third of applicants have a college degree, which, if confirmed by data for all OFWs, would indicate a serious brain drain trend. For lack of data, it is not possible to make such an extrapolation, nor to establish that specific occupations are experiencing scarcity of workers due to perceptions of job opportunities in demand overseas.

- The education system seems excessively fragmented, allowing schools to institute a variety of courses, for which it is not clear whether they meet quality standards. This gives the impression that qualifications cannot find easy matching in the job market.

- The mismatch between educational level and the application for a job overseas is particularly evident in the high number of college graduates applying for a job as factory workers as well as by the number of nurses who are applying for positions in industries not related to the health sector.

- Whether domestic work constitutes a specific case of brain waste could not be established through the analysis of the GPB database because of the small number of applicants for domestic work. The lack of appropriate data is regrettable particularly because domestic work constitutes the number one occupation of young Filipinos going to work overseas.

PART V:
PHILIPPINE POLICIES ON INTERNATIONAL MIGRATION

Labor migration policies in the Philippines have generally focused on the deployment of overseas Filipino workers and in recent years on ensuring protection for migrants, as well as promoting return migration and reintegration (*see* Asis and Battistella, 2013 for a comprehensive analysis of the Philippine policy framework for labor migration). However, policies have been criticized for lack of attention to addressing brain drain, at least in terms of maximizing the benefits and minimizing the costs of international migration (Opiniano and Castro, 2006). Though in recent years attention has increasingly considered brain gain initiatives both by government and civil society or migrant groups, there is still the question of whether these activities merely tend to maximize returns but not mitigate brain drain itself.

The policy framework for OFWs recognizes their potential brain gain contributions through hometown initiatives and knowledge and skills transfer via training, which could help state efforts respond to the demand for skills in the labor market not acquired locally. At the same time, some doubt persists on whether the overseas labor program is generating brain gain, considering that many OFWs are employed in unskilled occupations and many are in skilled occupations

for which there is no demand in the Philippines (e.g., the work in oil production in the Gulf countries).

A clear policy on brain drain has yet to be formulated. Interestingly, the Migrant Workers and Overseas Filipinos Act of 1995 (RA8042 as amended by RA10022) placed emphasis on deploying skilled workers, who are considered less problematic and less in need for protection. Even the recent policy reforming the domestic work sector was aimed at reducing unskilled employment and favor employment of skilled workers.

While the overemployment of OFWs in unskilled jobs is acknowledged and some initiatives were taken particularly in regard to domestic work, less attention is devoted to brain waste, ensuring that OFWs are not employed in occupations which require lower skills than they possess. Initiatives concerning training are a move in the right direction, but are limited to specific occupations or those required by bilateral agreements (such as the one with South Korea).

This section reviews the policies and programs related to Philippine labor migration which shed light on the country's response to the issues of brain drain and brain waste that confront OFWs. It begins with an overview of Republic Act 10022 and general policy approaches to skilled labor migration, followed by a brief discussion of key government agencies tasked to manage the deployment and welfare of OFWs. The discussion subsequently shifts attention to policy and program responses to brain drain, followed by initiatives to address brain waste or skills mismatch.

1. Philippine policies on labor migration

The educational qualifications and skills of Filipino migrants are undoubtedly emphasized in Philippine policy. Skilled Filipino workers are defined in legislation as: "those who have obtained an academic degree, qualification, or experience, or those who are in possession of an appropriate level of competence, training and certification, for the job they are applying, as may be determined by the appropriate government agency" (RA No. 10022, Rule 2, Section 1 - Definitions).

According to RA No. 10022, which amended RA No. 8042, or "The Migrant Workers and Overseas Filipinos Act of 1995," (Rule I, Section 1 - Declaration of Policies): "(g) The State recognizes that the most effective tool for empowerment is the possession of skills by migrant workers. The government shall expand access of migrant workers to free skills development and enhancement programs through guidelines on scholarships, training subsidies/grants of the concerned agencies. Pursuant to this and as soon as practicable, the government shall deploy and/or allow the deployment only of skilled Filipino workers."

Clearly, the government is responsible for ensuring that only skilled overseas Filipino workers shall be deployed, and this means those who have at least an academic degree or qualification. This is again emphasized in Rule 3, Section 5 of the law: "As soon as adequate mechanisms for determination of skills are in place and consistent with national interest, the Secretary of Labor and Employment shall allow the deployment only of skilled Filipino workers" (RA No. 10022, Rule 3, Section 5 - Deployment of Skilled Workers). Many years have passed since 1995 and not much action has been taken to implement section 1g. Even more, it could be argued whether, by placing the emphasis on deployment of skilled workers, the policy of the country is to encourage brain drain.

The legislation identifies the government agencies responsible for ensuring that deployed OFWs are skilled and qualified for work abroad, outlining the functions of the Department of Labor and Employment (DOLE), Philippine Overseas Labor Offices (POLOs), the Philippine Overseas Employment Administration (POEA), the Overseas Workers Welfare Administration (OWWA) and the National Center for the Reintegration of OFWs (NCRO). Emphasized in this discussion are the POEA and OWWA.

The government through the POEA regularizes the recruitment of OFWs to protect them from illegal recruiters and from abuse and exploitation. The agency's role is to establish crucial employment criteria and standards to ensure the welfare of overseas workers, to guarantee proper work placement that does not disadvantage the employee and to only approve overseas employment contracts that meet at least the minimum standards set by the government agency (Ambito and Banzon, 2011).

Regulating the recruitment, hiring and placement of OFWs is done through a licensing and registration system, bilateral agreements and arrangements with other countries, and managing a system for promoting and monitoring overseas employment. These systems are to be managed in consideration of the needs and welfare of OFWs (including both sea-based and land-based workers) and what the best employment conditions and terms would suit them (RA 10022, Rule X – A. POEA, Section 4). Through the OWWA, benefits are also provided for migrants who are members of the agency, such as pre-deployment orientation and training, insurance, pensions, loans and assistance for their families (UN DESA, 2005).

It is clear that through the standard labor contract and the contract verification procedures, the government is ensuring that the migrants who are deployed have the qualifications necessary for the job. It is less clear how the government can intervene in the labor market to provide Filipinos with skilled occupations.

Other issues include problems regarding contracts and terms of reference, which could not just shortchange overqualified or underqualified migrant workers, but also render them vulnerable to abuse and exploitation at the hands of employers and recruitment agencies. For instance, provisions for setting employment contract standards do not always translate to implementation. Violations, such as contract substitution and failure to pay the migrant worker's wages, are rampant. Some OFWs complain of inefficient POLO authorities and the Philippine consulates themselves admit difficulties in implementing standards due to lack of resources and staff (Ambito and Banzon, 2011). Ambito and Banzon (2011) for instance, critique the JPEPA as having terms of reference that do not balance the interests of both countries, and furthermore does not correspond to the interests of Filipino migrant workers, particularly the caregivers and nurses.

2. From brain drain to brain gain: policy and program responses

Government policies and programs as well as initiatives by civil society and Filipino migrant groups have attempted to establish processes that somehow facilitate the return benefits of international migration. Some of these initiatives and responses regarded as forms of "brain gain" are discussed below.

Remittances regularly sent home by Filipinos overseas have benefited not only households but the national economy. To reinforce remittance flows to the Philippines, the government promotes the sending of remittances through official channels, provides investment programs for overseas Filipinos and has also created a secure remittance system under the OWWA (UN DESA, 2005).

Government support to OFWs includes loans for Filipino returnees and scholarships for OFWs and their family members, among others. The government also promotes overseas Filipino engagement with the home country through overseas voting during elections, supporting Filipino migrant organizations and services for migrants (e.g., counseling) (UN DESA, 2005).

NRCO was established for Filipino migrant returnees, to facilitate their reintegration into the Philippines, to help them find local employment and to harness their skills for development initiatives (RA 10022, Rule X – C. NRCO, Section 14). Attached to the Office of Administrator of OWWA, the NRCO has several functions, of which some notable ones are: to develop programs and projects for capacity building, livelihood, entrepreneurship, savings, investments and financial literacy for returnees and their families; to establish a database of migrant returnees for local employers and recruitment agencies; to provide a regular assessment of job opportunities for returnees; to develop and implement welfare programs; to create an online registration system for OFW returnees; and to conduct research for policy development (RA 10022, Rule X – C. NCRO, Section 15, a-i).

Go (2012) notes of a new policy thrust of the reintegration center referred to as the 'community reintegration component,' which consists of programs "designed to encourage workers to contribute to the development of their communities by sharing their skills, expertise and savings and thus convert the 'brain drain' into brain gain.'" However, these projects are still in the development phase.

The government has also launched programs in the past that encourage skilled OFWs to share their knowledge and skills upon return, but many of these have been stopped because of lack of resources and the lack of motivation from government officials. These programs include the Balik Scientist program and the UN's TOKTEN program (Opiniano and Castro, 2006).

In response to the 2008-2009 global economic crisis, the DOLE created a brain gain program in line with the *Philippine Labor and Employment Plan 2011-2016,* which would last five years and aims to encourage displaced workers to engage in entrepreneurship activities, in learning new skills and to return to the Philippines with gained expertise and technologies to share with the country (Torres, 2011).

The aim of the program is to address the brain drain phenomenon and to encourage the return of skilled migrants to the Philippines by offering service packages for investment, savings, training and entrepreneurship advice to returnees. Migrants will also be informed on available jobs, labor market opportunities and where to obtain accreditation or permits for reemployment (Torres, 2011).

Opiniano and Castro (2006) also note that there are only few knowledge transfer activities in the Philippines, though opportunities can be created and encouraged among migrant groups, hometown associations, community-based groups, alumni associations, non-profit organizations and charity groups. Many of these groups have engaged in diaspora philanthropy or in collecting remittances to support development projects in the Philippines, which raises the possibility of engagement in knowledge transfer activities as well.

Some professional groups have begun initiatives to mitigate the impact of brain drain. Some medical groups, for instance, decided to promote service to the country for at least three years before migrating, especially among new graduates. Some medical associations are reportedly engaged in advocacy work in cooperation with the Department of Health (Opiniano and Castro, 2006). Migrant networks such as the Philippine Brain Gain Network (BGN) are social networks connecting overseas professionals and can also potentially provide opportunities for establishing connections and initiating joint projects and investments (UN DESA, 2005).

Meanwhile, some policy proposals aim to respond to brain drain in the domestic sphere. For instance, in 2009, Akbayan Partylist representatives proposed a program that would train midwives and physical therapists in the professional skills of doctors and nurses. House Bill 6536 aims to create “Bibong BHW Education and Training Program” which would help train barangay volunteers in

medical work as a means of addressing the crisis in the country's health delivery system. The crisis is linked to the brain drain of Filipino medical professionals who seek jobs abroad, and the shortage of staff faced by hundreds of hospitals. The program, which reportedly does not have an age requirement, will follow a ladderized training program and will offer courses in community health care, midwifery, occupational therapy, pharmacology and so on. Participants would later be eligible to take the Nursing Licensure Board Examination. The program also provides benefits for volunteers, including allowances, scholarships, training subsidies and PhilHealth membership (Montenegro, 2009).

According to UN DESA (2005), however, education and training form only part of the solution to skills gap. These may increase qualifications for work, but what will keep highly skilled and professional migrant workers from remaining in the country instead of working abroad?

3. Addressing education and skills mismatch

Philippine policy has generally focused on responding to skills mismatch in the domestic labor market. The effort to address job and skills mismatch in the Philippines is deserving of attention, as unemployment is also exacerbated by a lack of job opportunities that correspond to the capacity of job-seekers, especially the youth. Unemployment, in turn, has become a driving force and motivational factor for migration, especially among young migrants (Asis and Battistella, 2013).

The OFW discussion in the *Philippine Labor and Employment Plan 2011-2016* centers on the following themes: 1) recognizing Filipino migrants as an important sector especially in the labor market, particularly their contribution to economic growth through remittances; 2) encouraging or harnessing the development potential of OFWs by converting brain drain into brain gain, through several initiatives; 3) providing support to OFWs through scholarship grants, skills training, investment and loans, benefits and other incentives, especially to encourage return and reintegration; and 4) promoting the protection of OFWs, rights awareness through information dissemination and the documentation of OFWs for efficient monitoring.

The *Philippine Labor & Employment Plan 2011-2016* recognizes OFWs as a key feature of the Philippine labor market, the feminization of labor migration and the impact of remittances on economic growth (DOLE, 2011). Several policy pronouncements regarding OFWs are outlined in the labor and employment agenda. Aside from plans to effectively implement legislation and existing programs, some brain gain-related programs are also included in the plan, such as encouraging OFW returnees to engage in knowledge and skills transfer, and to provide training through TESDA. The plan also mentions assistance for OFWs in managing their finances through investments and savings programs.

Some plans that aim to address skills mismatch are also outlined, though these are not youth-specific and focus on Filipino workers in general, not just OFWs. For instance, the plan mentions skills training, technical-vocational training, scholarship programs and work placement through Technical Education and Skills Development Authority (TESDA) especially for Filipino service workers. For employment facilitation, the plan mentions a PhilJobNet system for labor market information and job matching, an Integrated Human Resources Data Warehouse for supply-and-demand databases, and a National Skills Registry system that will profile the skills of OFWs. The system aims to identify the OFWs who can be asked to conduct seminars, training, technology transfer and to provide entrepreneurial assistance (Torres, 2011). The plan also states that Public Employment Services Offices (PESOs) are to be institutionalized, and that walk-in examinations for engineering, health and maritime professional licensure will be perpetuated. The plan that gives emphasis and priority to the youth is the provision of career advocacy, coaching and counseling.

In 2010, government agencies agreed to establish a Career Guidance Advocacy Program (CGAP) which aims to address job and skills mismatch through career counseling. The CHED, DOLE, DOST, Professional Regulation Commission (PRC) and TESDA signed a memorandum of agreement in May 2012 (Lopez, 2012). CGAP is one of four programs that aim to address skills mismatch in the local labor market, and depends on the role of career guidance. The program is expected to help jobseekers, especially the youth, in becoming aware of labor trends and how they can map out their career and employment plans (Lopez, 2012). The program is also one of the many proposed actions stated in the *Philippine*

Labor and Employment Plan 2011-2016, which lays out the government's policy framework to promote labor and employment and address unemployment.

4. Summary

As previously ascertained (Asis and Battistella, 2013), policies of the Philippines government concerning migration and overseas work address all OFWs in general and are not age specific. The only major difference is constituted by the provision concerning women domestic workers, who should be at least 23 years old to be able to work abroad. Ignoring the age factor cannot be immediately construed as insensitivity toward young migrants. As migration policies in general, and toward the youth in particular, might be guided mostly by the concern for protection, it is possible that the resulting excessive regulation might not be considered beneficial by young migrants. The above mentioned provision concerning age is very much discussed because of its arbitrariness (why 23?) and because discriminatory, as it concerns only women domestic workers and not men.

Policies concerning the protection of migrants in general (regulation of the recruitment industry, standard labor contract, contract verification, joint and solidary liability of recruiters, etc.) probably do not require an age-specific determination.

Policies addressing the issue of brain gain are not applicable to the young Filipino migrants, as they envision facilitating the return of a population which has gained knowledge and experience abroad, and therefore are no longer in the youth years.

Policies aimed at addressing the brain waste of young Filipinos is very crucial. As ascertained in the study of the GPB database, many youth with college degrees end up applying for positions that do not reflect their level of qualification or their type of qualification. While migration is demand driven and migrants apply for jobs that are available, not for jobs that are desirable, it should be possible for the government to institute a filter in the recruitment process, by which applicants are informed of all opportunities. In the past this was considered full

disclosure, the process by which recruitment agents would provide applicants all information available to them, to ensure that the migrants would make an informed choice. Full disclosure was never formally adopted as a policy and it is left to the recruiters to convey the information they consider appropriate. A labor market information service by the government could facilitate a better matching of skills and occupation.

Even more important would be a policy valid for the whole population, but of which young workers would benefit in particular, addressing the structural aspects behind the decision to migrate. Such structural aspects have to do with the national education system and the national labor market. It was previously indicated that the education system is more sensitive to the international labor market than the national one. The result is oversubscription to courses being offered for occupations perceived to be in high demand abroad, resulting in the excessive number of graduates in disciplines for which the international labor market is too volatile and the national one has no capacity to absorb. Some standardization of the courses provided and reducing the excessive fragmentation of courses titles, with perhaps no real difference in content, could be aspects to be considered. The second aspect at the structural level has to do with the orientation given to the national economy. Without entering into the discussion of the various sectors, it is critical that the economy should provide opportunities to the youth before they deem it necessary to look for opportunities abroad.

PART VI:
CONCLUSIONS AND RECOMMENDATIONS

Through labor migration, every year approximately 1.4 million Filpinos are able to find employment abroad (including both land-based and sea-based migrants). It is a substantial number of workers who contribute to the growth and development of other countries. By itself, this can be considered a net drainage of human capital from the Philippines, which is partly compensated by remittances and, in a much less ascertainable way, by enhancing skills and technology transfer. One perspective could conclude that migration is enriching countries of destination and impoverishing countries of origin, which lose a substantial share of the working age population. Another perspective concludes that migration is a resource also for the country of origin, since migrants could not find employment in the country. As such, there is no loss for the country of origin, but actually a gain, as migrants are employed in the international labor market in occupations with higher productivity, which is translated into remittances that help fuel economic growth. In this perspective, through migration, the country of origin is expanding its labor market beyond its territory.

It was not the purpose of this study to examine all the aspects of the discussion. Rather, it was triggered by the curiosity to examine whether the higher percentage of professionals among youth, established in the 2011 youth employment and migration study (Asis and Battistella, 2013) could be construed as a form of brain drain. The present study was also motivated to look into young Filipino professionals deciding to work abroad rather than in the country and by the interest to explore the background of young domestic workers, who constitute the highest occupation among young OFWs, to examine whether their choice amounted to brain waste.

Unfortunately, because of the limitations of data, it is not possible to draw firm conclusions. Nevertheless, some conclusions can be advanced based on the GPB database (although still limited in many respects). Among such conclusions is the high propensity of Filipinos to seek jobs overseas. This propensity explains why the number of deployed Filipino migrants keeps increasing every year and it is an indicator of the inadequacies of the Filipino economy, in spite of its high growth rate. Economists have commented that while the economy is growing, it is growth without jobs.

A second conclusion regards the high number of college graduates in all occupations. Further analysis should be dedicated to the domestic labor market and its absorption capacity of workers who have acquired higher learning. Is it simply a matter of mismatch between education and employment, or is it that the economy cannot give opportunities for all college graduates?

The education system shows some problems not only in its excessive sensitivity to the trends of the international labor market, but also in the excessive fragmentation of courses, for which it is not clear whether they meet quality standards. This in part explains the trend of college graduates seeking employment in occupations different from their preparation, as if aware that their degree cannot take them far because of lack of recognition abroad.

Brain waste was in some respect ascertained by the high number of college degree applicants looking for a job as factory workers. Similarly, one-third of those applying as domestic workers had a college degree, but their number was small.

Recommendations can be offered in different directions:

A. Recommendations concerning the education system

1. *Standardize and streamline the curricular offerings of educational institutions.* The liberalization of the economy has generated new occupations and has increased employment in services which demand a level of preparation which was not required before. New courses and programs have emerged, which promise to provide the level of preparation required in the labor market. However, it appears necessary to ensure that schools deliver what they promise and they develop skills and competencies that will adequately prepare their graduates in the national labor market. Between education for business and education as business, there are gray areas that need to be clarified.

2. *Ensure the recognition and equivalence of Philippine-earned degrees.* While the Philippines had an edge on education over some Asian countries in the past, today many of its higher education institutions have lagged behind. As a result, academic degrees acquired in some Philippine schools require additional training before graduates can work abroad and sometimes workers cannot be hired because their training is considered inadequate.

3. *Address the excessive enrollment in courses for occupations such as nursing and seafaring.* Paradoxically, some oversaturated educational programs generate both brain drain and brain waste. In the health sector, the number of patients per nurse in the country has increased (Lorenzo et al., 2007: 1411) while many nurses cannot find local employment. Thus, the country needs more nurses, but it appears that resource constraints, among other reasons, do not allow the hiring of nurses. In the absence of local employment prospects, the decline of demand for nurses overseas, as well as the inability of nurses to meet the requirements of foreign employers lead to a situation of unemployed nurses. In this situation, nurses apply for whatever jobs they can obtain. In fact, the clearest example of brain waste is evidenced by nurses who apply for jobs as factory workers or domestic workers. Seafarers who completed their education in maritime schools are also in excessive supply for the labor market. Before licensing schools that

offer programs in saturated or oversubscribed fields, CHED should be able to orient educational programs in the right direction.

B. Recommendations concerning the labor market

4. *Improve apprenticeship opportunities and benefits.* The labor market in the postindustrial economy has become more volatile and fragmented. The decline in job security should be counterbalanced with hiring opportunities which provide recognized qualification to enhance young workers' employability in the future. This should be formalized by all employers.

5. *Offer incentives to employers who hire youth.* The government should develop a package of incentives to encourage employers to hire young workers. Incentives, such as waiving of fees for administrative procedures or citations to companies that provide training, apprentice and/or employment to Filipino youth, could be offered.

C. Recommendations concerning youth migration

6. *Offer adequate and accessible information services to applicants for work overseas.* Apparently, the phase of applying for a job overseas is controlled by private agents. In some cases, recruitment agencies lament that they cannot fulfill the job orders because workers do not have the necessary level of qualification. In other cases, agents offer jobs that are not commensurate with the preparation and aspiration of applicants. Some form of information and education program seems necessary to ensure that workers receive all the information needed before they take the decision to go abroad.

7. *Utilize fully the pre-employment seminars.* Job opportunities are first sought at the local level, as young people seek to minimize transportation costs and costs related to jobs away from home. Also, migration decisions are taken at the local level, where pre-employment seminars are made available to aspiring migrants. Such seminars should provide information on opportunities available in the local labor market as alternative to work overseas. The seminars can be augmented by key messages that can be promoted through mass media and social media.

8. *Consider age in government policies and procedures concerning migration.* The high level of unemployment among young Filipinos is a cause for concern. Turning to overseas labor markets is one of the strategies young Filipinos consider to find employment. When it comes to young migrants, overseas jobs are largely in services and production, which raises concerns that they might end up in unprotected and risky occupations. Thus far, labor migration policies have been age-blind. It is time to consider an age lens in the formulation of policies and programs so that the needs as well as the contributions of youth migrants are given the appropriate attention.

D. Recommendations for further research

9. *Provide appropriate data.* The major limitations of this study derived from the difficulty to access data on OFWs which include the level of education before departure. Apparently, such data are not collected in administrative procedures by POEA. Of the various efforts to improve the collection, processing and reporting of data, education must be included if proper analysis both for the domestic as well as the international labor market can be conducted.

10. *Investigate further brain waste.* The two highest occupations for Filipinos working overseas are domestic work and production. There is evidence that many OFWs engaging in such occupations are overqualified. However, research needs to be conducted for a more adequate understanding of the phenomenon and consequent appropriate action. In addition, there is a need to conduct action research to identify ways and means to improve the employability of the economically inactive youth and to expand the employment opportunities, including the entrepreneurial potentials, of educated unemployed youth.

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