

INTERNATIONAL MIGRATION PAPERS

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**Skilled Labour Migration from
Developing Countries:
Study on the Philippines**

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INTERNATIONAL MIGRATION PROGRAMME

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Foreword

This report forms part of a series of studies conducted by the International Labour Office under the DFID-sponsored project on “*Skilled labour migration (the ‘brain drain’) from developing countries: Analysis of impact and policy issues.*”

International migration of skilled persons has assumed increased importance in recent years reflecting the impact of globalisation, revival of growth in the world economy and the explosive growth in the information and communications technology (ICT). A number of developed countries have liberalized their policies for the admission of highly skilled professionals.

The problem lies in that this demand is largely met by developing countries, triggering an exodus of their skilled personnel. While some amount of mobility is obviously necessary if developing countries are to integrate into the global economy, a large outflow of skilled persons poses the threat of a ‘brain drain’, which can adversely impact growth and development. The recent UK government (DFID) White Paper on International Development, “*Eliminating World Poverty: Making Globalisation Work for the Poor*” has rightly pointed out the need on the part of developed countries to be more sensitive to the impact on developing countries of the brain drain. It was in this context that the Department for International Development, United Kingdom, approached the ILO for carrying out research relevant to the above issues.

The Philippines has a long history of emigration of skilled persons, especially to the USA. The destinations have become diversified with opening of opportunities in the Middle East, Canada, Australia and New Zealand. The authors of this paper, Florian Albuero and Danilo Abella, trace the patterns of skilled migration outflows, and their changing composition since the 1970s, in relation to changing international demands. They show that the number of professional workers who went abroad *exceeded* the net addition to the professionals in the workforce in the decade of the 1990s. The supply conditions of the country’s professionals in the last decade seem to have displayed responsiveness and adjustment to the international demand patterns as reflected in the dramatic expansion in computer sciences in the latter part. The response of the domestic educational and training system to meet international demand has been quite impressive. The authors highlight that the global environment and new ICT technologies may be creating windows to address the brain drain more positively by providing options that reduce the attractiveness of migration temporarily or permanently.

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Mr. Piyasiri Wickramasekara, Senior Migration Specialist, International Migration Programme, acted as the ILO Project Coordinator and technically backstopped all the studies. ILO is most grateful to Professor Florian Albuero and Mr. Danilo Abella for their valuable contribution.

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1. Introduction

Since the early seventies the Philippines has been experiencing a “brain drain” phenomenon with the migration of highly skilled physicians, teachers, seamen, mechanics, engineers, and others from the country. In the eighties the exodus of those in the medical profession continued although mid-level professionals like nurses, medical technicians as well as paramedics increasingly dominated the flows. In the nineties, accelerated advances in information technology and the growth of the information-communication industry triggered new waves of skilled labour migration abroad consisting of electronic engineers, computer programmers, designers and allied skills workers.

It is important to set the context of the brain drain phenomenon in the Philippines. Before the seventies, the movement of highly skilled Filipino professionals, though significant, was principally a private initiative among the workers and their placement abroad. It was only during the mid-seventies, after the surge of demand for contract workers in the Middle East, that the Philippine government began an institutionalised management of temporary contract worker migration. With 36,035 workers leaving on contract work in 1975 rising to 214,590 workers in 1980, a need emerged for a mechanism to guarantee an orderly movement of workers and the process of recruiting them. Indeed the annual number of workers deployed (comprising the newly hired and those who are renewing their contracts) had risen to more than 791,000 by 1998 encompassing practically all skill categories.

There is no direct information on the actual magnitude of brain drain from the Philippines and how much this has changed over time. Occasional surveys may reveal the extent of location of Philippine professionals but there is no regular monitoring of movements. For example, one survey in the seventies indicated that the number of physicians in the United States amounted to half of the registered physicians in the Philippines¹. There has been no survey to date since then and this has likely changed to a better ratio.

The purpose of this report is to provide some benchmarks of the brain drain from the Philippines. Although the institutionalised processing of permanent and temporary migration may capture some of this movement it is not sufficient to indicate in finer details the migration involved. What we want to show is how the pattern of migration has evolved in the last decade and what is the place of the brain drain in this wider context. The next section paints a broad pattern of temporary labour migration. The third section zeroes in on the supply of highly skilled workers in the Philippines with particular attention to developments in the nineties with respect to growth in specific high-level skills or disciplines. We also look into the magnitude of employment and unemployment

¹ Association of Philippine Medical Colleges, *Physician and Nurse Manpower Survey Report* (Manila: APMC, 1971).

of tertiary graduates during the same period. By comparing the supply of graduates from the formal educational system with their outflow from the country, we are able to evaluate the extent of human capital loss.

The fourth section looks into the entry of selected professionals into the labour force and how many among them have migrated. We focus on teachers, engineers, nurses and computer and information and communications technology professionals. We assess how the outflow of these professionals compare with the number produced by the system between 1990 and 1998.

In the fifth section we examine the movement of Filipino skilled workers in terms of specific characteristics through a comparison with the characteristics of the country's labour force.

The final section lays out some policy issues that the country needs to consider in the context of the migration of skilled Filipino workers. Recent developments in technology, communications, and international cooperation suggest that more options are open that would mitigate if not reverse some of the negative consequences of the brain drain that were not apparent in the early years of the phenomenon.

2. Patterns of Temporary Labour Migration

The increasing number of Filipino workers sent abroad hides some subtle changes in their destination, which has seen shifts. From the mid-seventies until the early eighties there was a concentration of Middle East countries as prime destinations. Since the mid-eighties the countries in Southeast and East Asia have been the destinations of new workers. This also signalled some change of worker profile. For instance the initial exodus to the Middle East meant some dominance of construction workers among the deployed. Shifts to Hong Kong, Japan, Taiwan, and Singapore, among others, meant the appearance of entertainers, electrical and electronics workers, domestic workers, and professionals among the workers although one must also accept structural changes in the Middle East requiring more services of engineers, nurses and other professionals. Table 1 gives a picture of the number of workers to the top ten countries plus the United States in terms of destination between 1985 and 1998.

The table below shows that while the Kingdom of Saudi Arabia remains the top country of deployment among Filipino workers, the fast pace of inflows into East and Southeast Asian countries has put Taiwan, Hong Kong, and Singapore among the recent new destinations of workers. This has meant, *in part*, the inclusion of higher skilled workers among the migrants than in the early years of evolution of massive migration from the Philippines since migration flows to Hong Kong and Singapore remain dominated by women domestic helpers.

Table 1. Deployed workers to selected countries 1985-1998 (number)

Country	1985	1990	1995	1998
1. Kingdom of Saudi Arabia	185,837	168,886	168,604	158,148
2. Hong Kong	22,020	34,412	51,701	64,160
3. Japan	16,029	41,558	25,032	38,122
4. United Arab Emirates	15,093	17,189	26,235	26,737
5. Taiwan	9	54	50,538	79,664
6. Kuwait	21,167	5,007	9,852	15,359
7. Singapore	10,047	4,698	10,736	13,373
8. Qatar	3,751	7,138	9,691	8,282
9. Brunei	3,292	5,617	9,731	12,337
10. Italy	1,413	3,229	7,421	10,737
11. United States of America	3,135	6,003	7,035	2,668

Source: POEA.

Table 1 indicates the movement of Filipinos abroad predominantly on temporary migration as recorded in the country's institution that manages temporary migration - the Philippine Overseas Employment Administration (POEA). It does not include those recorded as permanently migrating abroad who are registered and recorded by a different government agency - the Commission on Filipino Overseas. Table 1 shows the number of temporary migrants registered with the POEA, not those who have emigrated to settle permanently abroad.

Of Filipino temporary migrants abroad the share of the U.S. appears small. However if permanent as well as temporary workers are taken into account the U.S. share out of the estimated total stock of Filipinos abroad in 1998 is more than a third. Table 2 gives a breakdown of the stock of Filipinos abroad in 1998. It can be seen that Asia accounts for another 22 percent while the Middle East accounts for 15.3 percent of the total stock with most of them on temporary status.

Table 2. Estimated stock of Filipinos abroad 1998 (in thousands)

Area	Permanent	Temporary	Irregular	Total
Africa	0.067	33.2	7.1	40.3
Asia	52.6	953.9	589.9	1,596.4
Middle East	0.9	1,038.8	107.6	1,147.2
Canada	313.9	8.0	75.0	396.9
United States	1,716.4	58.7	844.1	2,616.1
Oceania	200.7	38.9	18.0	257.6
World, Total	2,333.8	2,296.13	1,913.9	7,209.0

Source: Commission on Filipino Overseas "The Impact of the Asian Crisis on Filipino Employment Prospects Abroad" in W.R. Bohning, South-East Asia and the Pacific Multidisciplinary Advisory Team SEAPAT Working Paper 1, International Labour Office, Manila, 1998.

When the total stock of Filipinos abroad is looked at, several observations stand out. There is an almost equal share between those on permanent migration and those

temporarily migrating. But between these two important categories are differences in their location. Permanent migration is dominant in North America (U.S. and Canada) and Oceania (Australia) while temporary migration is mainly in the Middle East and Asia. Asia as a destination for temporary migrants is only a recent development yet the stock is almost equal to the stock in the Middle East. In addition, Asia has also accepted permanent migration albeit not that significant.

If the larger bulk of migrant workers are temporary and has historically been in the lower skill category, it can be argued that social losses arising from their placement abroad are likewise temporary since cyclically these workers eventually return home. On the other hand there may even be social gains as these workers acquire additional skills, are exposed to new productivity tools, and appreciate broader perspectives. It is the larger bulk of permanent migration that has been apparently characterized as consisting of higher skill professionals which entail larger social losses to the country given that training them has been costly, and that they are unlikely to return during their productive years. This is effectively permanent 'brain drain'.

There is another dimension to the migration, permanent or temporary, that is implied from these data. To the extent that the country suffers from high unemployment rates, these migration outflows provide alternative employment opportunities that would otherwise be real social losses. Indeed in more recent times this unemployment rate has been increasing, and in 2000, stood at 10.1 percent of the labour force with an underemployment rate at 19.9 percent during the same period. The unemployment rate of the Philippines is often twice higher than the rates experienced in neighbouring Asian countries. To conclude however that the country suffers no brain drain or that all migration would otherwise have been unemployed does not necessarily follow. In particular one must not only examine the skill categories that have left the country or those that constitute the migrants, but also how the national labour force changes over time. There are variations in the employment structure according to skills category. While on average the annual growth rate of labour migration (permanent and temporary) is 13 percent (between 1975 and 1998) while the annual increase in the labour force has been 2.6 percent per year (between 1980 and 1999) we need to consider the annual rate of return of migrants in order to draw some implications. In addition we need to consider the pattern of employment, at home and in the overseas labour market, and changes in the labour supply according to skills and compare them with unemployment rates to be able to suggest the degree of actual brain drain from the country. This is treated in the next section.

3. Supply of High Level Manpower in the Labour Force

The country's pool of high-level manpower is the product of an educational system that has ten years of basic education and a tertiary level which has three strata. First of this is the baccalaureate level which is basically of four-year duration. Bachelor's programs in engineering run for five years while some stretch out to six years. Second-degree

bachelor's programs such as Bachelor of Laws and Doctor of Medicine are considered master programs. Further up are doctoral programs.

First-degree bachelor's programs in general have two major components: the General Education Curriculum (GEC) and discipline-specific courses. In most colleges and universities, GEC subjects are essentially refresher courses or determiners of suitability for enrolment in higher-level subjects. The predominant GEC curriculum set consists of sixty-three units of academic load. There is an option to adopt a fifty nine unit version and this is often chosen by engineering and technology-oriented institutions. The GEC takes up most of the first two years of a four-year bachelor's program and leaves only just over two years for discipline-specific subjects essential for technical competence.

In the tertiary level, instruction is in English. However, there have been initiatives in the past of changing to Filipino. Some institutions, particularly the University of the Philippines encourage the use of Filipino but there is concern about its use because the government board examinations for the certification of professionals are all in English.

Higher education institutions (HEIs) are guaranteed academic freedom, including the freedom to choose whom to admit to degree programs. Most HEIs administer admission examinations and some add on other admission criteria for specific programs, usually the professional programs. Professional programs are those for which public practice requires the possession of professional licenses issued by the Professional Regulation Commission (PRC).

Higher education enrolment has been rising significantly over the past two decades. A study reported a growth in enrolment of 1.2 percent from 1981 to 1985 which rate had accelerated to 6.92 percent from 1992 to 1997. Enrolment in 1997-1998 stood at 2.824 million 70 percent of which were in private institutions.

Recent supply trends: The country's HEIs produced nearly 3.2 million graduates in various disciplines during the 1990s. As shown in table 3, graduates of business administration courses were the most numerous exceeding a fourth of all graduates. Those who completed agriculture, forestry, fisheries and veterinary medicine on the other hand, numbered less than 124,000 representing a mere 4 percent of the entire graduates from 1990 to 1999. Three fields of study - medicine sciences, education and teacher training, and engineering, each had roughly the same number of graduates during the period. The output of mathematics and computer science courses which numbered less than 6,000 at the start of the decade constituted a high 6 percent of the total number of those who completed college during the 10-year period.

Table 3. Number, percentage distribution, and annual growth of college graduates (by discipline) 1990-1999

	Total	Percent	Growth
Business administration	859,501	27	5.9
Engineering	429,315	14	-1.7
Medical and allied Fields	468,440	15	-4.2
Education and teacher training	437,948	14	-1.5
Mathematics & computer science	188,725	6	32.0
General	160,931	5	-4.0
Agric, forestry, fisheries, vet med	123,739	4	11.9
Others	369,705	12	15.7
Arts and sciences	131,949	4	15.5
Total	3,170,253	100	

Source: Commission on Higher Education.

On the whole the number of students earning a college degree had been on the rise; on the average it rose at the rate of 2.9 percent a year. This trend, however, was not exhibited in some major and vital disciplines. In the last column of table 3, there was a downtrend in the number of medicine sciences graduates (negative 4.2 percent) and engineering graduates (negative 1.7 percent). Likewise, graduates of education and teacher training as well as of the general disciplines show negative growth rates. In contrast, the growth in the number of mathematics and computer science graduates at 32 percent per annum is striking even among those with positive growth rates. This fact is further underscored in table 4, which compares the magnitude of change in the number of graduates between the base and end years of two 5-year periods. During the first period mathematics and computer science graduates increased almost three folds - from 5,421 to 21,338. A jump of the same magnitude did not occur in the latter period but the increase in this field continued to be unmatched by any of the other disciplines.

Table 4. Percentage changes in the number of graduates (by discipline) (1990-1994 and 1995-1999)

	1990-1994	1995-1999
Business administration	(%)	(%)
Engineering	4	-5
Medical and allied fields	-5	-25
Education and teacher training	-4	-10
Mathematics & computer science	291	78
General	-28	-13
Agric, forestry, fisheries, vet med	56	6
Others	43	64
Arts and sciences	1	60
All disciplines	13	11

Source: Commission on Higher Education.

Table 4 also shows a significant decline in the number of graduates in four fields. During the first period the number of medicine science graduates dropped by 5 percent and by 25 percent during the second. Education and teacher training graduates went down by 4 percent in the first period and by 10 percent during the second. Graduates of the general discipline contracted by as much as 28 percent from 1990 to 1994 and by 13 percent in the next period. On the other hand, engineering fell by 5 percent only in the latter period.

Labour force participation and wastage: We now show the extent by which these degree holders and those who graduated before them have fit in into the highly limited Philippine job market. Did they find employment? How many of them went on temporary migration, and how many left as emigrants?

Employment of degree holders grew from 1.7 million in 1990 to 2.3 million in 1999. The National Statistics Office (NSO) reported that out of the country's population of 48 million in 1980 some 1.7 million persons (3.5 percent) are college graduates. The proportion rose slightly to 5 percent in 1990, and further increased to 6.4 percent in 1995. In 1999 the proportion was even higher at 7.4 percent.

A similar trend appears when employment data from the same source was matched with the number of those who completed tertiary level education. According to table 5 the proportion of degree holders in the working population increased slightly from about 10 percent in 1980 to 12 percent in 1998. Column 5 on the same table shows that there were 10 employed persons for every employed degree holder in 1980. Eighteen years later the ratio slipped down to just 8. This means that while there were more Filipinos who found employment than those who obtained a college degree during the period. The latter, or the supply of highly educated manpower grew at a faster rate.

Table 5. Employment of college graduates 1980,1990, and 1995-1999 (in thousands)

Year	Employed population	College graduates in employed population	Persons with college degree (as percent of total employed)	Ratio of employed graduates to total employed
1980	16,443	1,621	10	1:10
1990	22,532	n.a.	-	-
1995	25,698	3,449	13	1:7
1996	27,442	3,266	12	1:8
1997	27,888	3,128	11	1:9
1998	28,262	3,347	12	1:8
1999	27,762	n.a.	-	-

Source: National Statistics Office for column 2. Yearbook of Labour Statistics for column 3 except for 1980. The 1980 figure in column 3 was estimated from a 1983 ILS survey.

Available NSO statistics allow us to place the employment rate of the country's college graduates only for 1980 and 1995. Clearly a trend could not be established with just these as a basis. However, when the annual number of college graduates for 1996 to 1998 was

cumulated and factored in into the most recent actual count of degree holders, an estimate of its theoretical population for years when data was unavailable, was made possible. This exercise allowed an estimate for employment rates for the years 1996 to 1998.

Our employment rate estimates can be seen in column 5 of table 6 beginning 1996. They point towards a declining trend. From a high of 92 percent in 1980 it went down to 79 percent in 1995 and continued to slide down further through the late '90s. In 1998 only a bit more than 60 percent of all Filipinos with a college degree was employed. Two separate studies made 3 years apart serve to validate the implied unemployment among the degree holders. The first, a survey conducted by the DECS in 1994 reported an unemployment rate of 24.01 percent among the college graduates of 1991. The second, done in 1997 concluded that the unemployment rate for 1995 graduates was higher - 30.34 percent. There is a significant degree of unemployment among degree holders.

Table 6. Employment rate estimates for college graduates 1996-1998 (in thousands)

Year	Graduates produced	Persons with college degree	Employed population	Employed college graduates	% of college graduates employed
1980		1,770	16,443	1,621	92
1990		3,121	22,532	n.a.	-
1995		4,380	25,698	3,449	79
1996	335	4,715	27,442	3,266	69
1997	343	5,058	27,888	3,128	62
1998	353	5,411	28,262	3,347	62

Source: Commission on Higher Education.

Between 1990 and 1998 a total of 7,420,000 workers joined the labour force of the Philippines. During the same period a little over 6,400,000 workers were recorded to have left the country either for temporary work overseas or permanent emigration; the number of migrants of the first variety exceeded the other by a ratio of about 55:1. As a result of this outflow, there were fewer workers left in the country to compete in the job market and, more importantly, to perform the tasks required by a developing economy.

Official statistics available are at best patchy but they nevertheless provide a basis for estimating parameters on the magnitude and kinds of manpower the economy forfeited as a result of the last decade's migration flow. Column 6 of table 7 shows that close to 2,500,000 or 39 percent of those who left the country either as migrant workers or permanent emigrants from 1990 to 1998 were college graduates. About 20 percent of them fell under the classification known as "professionals, technical, managerial and administrative workers." In absolute terms the number of professionals among the OCWs was much larger than that of the emigrants. This is shown in table 8. However, relative to their numbers, permanent emigrant workers were dominated by professionals (64 percent) while only 28 percent of temporary migrant workers were in that category. By and large, this relationship persisted throughout the 1990's but there is evidence that the proportion of professionals among migrating workers is declining.

Table 7. Migration flow of employed graduates: 1990-1998 (in thousands)

Year	College graduates in employed population	Increase of graduates in employed population	Working registered emigrants with college degree	Documented OFWs with college degree	(4) + (5)	(2) – (6)
1990	2,704	-	16.4	222	238.4	-
1991	2,757	53	15.8	260	275.8	2,481
1992	2,870	113	15.7	268	283.7	2,586
1993	2,933	63	16.1	273	289.1	2,644
1994	3,020	87	15.8	278	293.8	2,726
1995	3,449	429	13.4	245	258.4	3,191
1996	3,266	(183)	13.8	247	260.8	3,005
1997	3,128	(138)	12.8	279	291.8	2,836
1998	3,347	219	9.2	274	283.2	3,064
	Total	643	129	2,346	2,475	

Sources: Column 2: 1995-98, Table 6; 1990-94, assumes 12% of employed population. Column 4: Commission on Filipinos Overseas. Column 5: Assumes 37% of OCWs are graduates based on POEA survey data.

In relating these figures with the changes in the total number of working professionals in the country it is noted that the outward flow of Filipino professionals exceeded their net increase by almost 46 percent during the period 1992 to 1998. Table 8 shows that while 445,000 professional workers went on migration the net addition to the country's professional workforce amounted only to 305,000. Throughout the period, it was only in 1995 and 1996 when the difference between the outflow and the increase in professionals was positive. The growth of the Philippine professional population through the years had been less than the number of Filipino professionals registered as leaving the country. The OFW component in the professionals' outflow is clearly very large but it must be borne in mind that temporary migrants do return. On the other hand while the number of professionals permanently emigrating is relatively small, it represents a more permanent diminution of the country's high-level manpower.

Table 8. Professionals in working population 1992 to 1998 (in thousands)

	Professionals in working population	Change in working population	Professionals among land based OFWs	Professionals among working emigrants	Total outflow of professionals
1992	1,392		72	8	80
1993	1,398	6	65	8	73
1994	1,366	(32)	74	7	81
1995	1,428	62	44	6	50
1996	1,640	212	36	7	43
1997	1,654	14	52	6	58
1998	1,697	43	56	4	60
	Total	305	399	46	445

Source: Commission on Filipinos Overseas.

4. Absorption of Selected Professionals in the Economy and Abroad

The shifting occupation categories among Filipinos abroad may be gleaned from a comparison of the professionals among the total number of Filipino temporary workers abroad and among those expected to be permanent residents abroad. The number of professionals had only minimal increases in the early nineties (1991-1994) but expanded dramatically in the second half of the decade so that, on average, professionals increased by 44 percent annually between 1991 and 1999. On the other hand the number of professionals among Filipino permanent emigrants slowly declined in the early nineties and by 1998 had fallen to half the 1990 size in 1998.

It was seen earlier that not all the supply of college degree holders ended up as part of the country's working population. Most of those who did, it was assumed, eventually became a part of the nation's professional manpower among which a considerable number joined other Filipinos working outside the Philippines. What we have seen so far is just the overall picture of the graduates' participation in the labour force. Of equal, if not greater importance to policy makers would be to know the absorption of these degree holders in their respective professions. Unfortunately relevant and up-to-date information is not consistently available for most disciplines. In the following we discuss the employment situation of only four types of highly educated manpower, namely, (1) teachers; (2) engineers; (3) nurses; and, (4) computer and ICT (information and communications technology) professionals.

In 1990 the country's manpower stock in these four professions stood at around 672,000 individuals. This number represented 64 percent of all working professionals counted in the country at that time and a fourth of all the employed degree holders. The number of teachers was the biggest in the group, computer and ICT professionals the least.

By 1998 it is placed that the size of the same group of professionals had grown to more than 900,000. This was after adding to the 1990 stock the number of examinees who successfully passed the 1991 to 1998 professional qualifying exams of the Philippine Regulatory Commission (PRC) and after allowing a 7 percent attrition rate (for deaths and retirements). Because of its relatively younger composition, a lower (3.5 percent) attrition rate was used for the group of computer and ICT professionals.

According to POEA close to 15,000 land-based workers classified under these four professions were deployed overseas in 1998. This outflow represents less than 2 percent of the stock of professionals in 1998 but 6 percent of the cumulative manpower additions since 1990. Table 9 shows that the biggest manpower depletion due to migration occurred among the engineers and the least, among the teachers.

The below table illustrates the case of four types of professionals and their deployment rate. The actual rates however are no doubt even larger since there clearly was deployment of these three professionals every year of the nineties and not just in 1998.

The point of the exercise is the increasing importance of lower-skill medical professions and engineering and computer/ICT professionals.

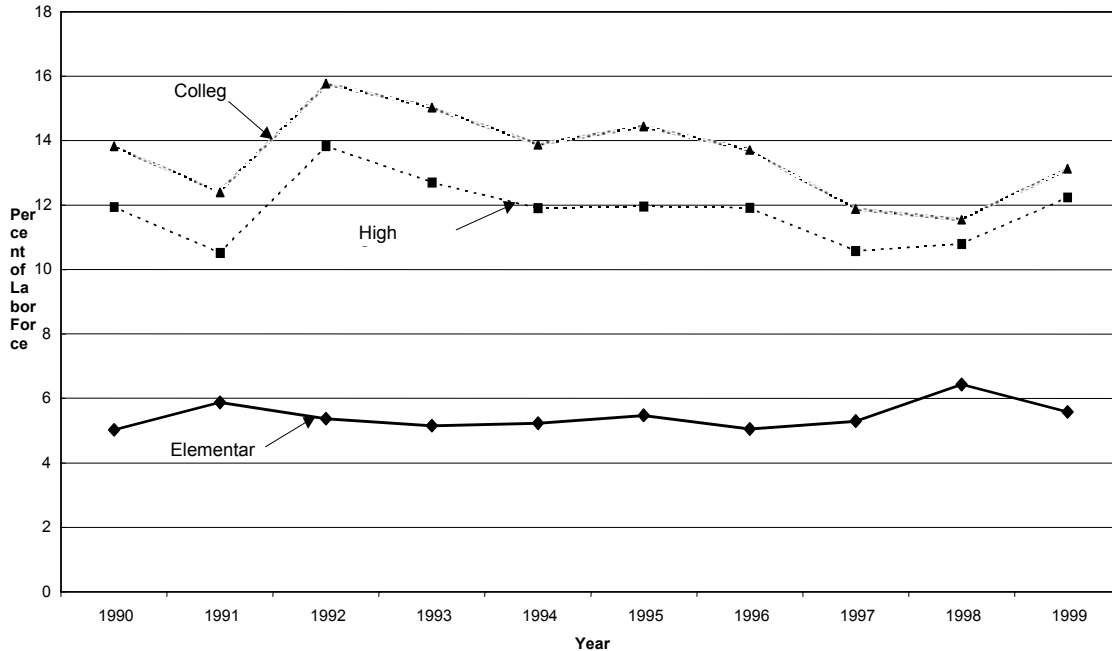
Table 9. Supply and migration of selected professionals

	Teacher	Engineer	Nurse	Computer /ICT professionals	Total
No. reported by NSO, 1990	443,000	117,000	96,000	15,515	671,515
Successful board examinees 1991-98	119,000	40,000	139,000	9,916	307,916
Manpower before attrition: 1998	562,000	157,000	235,000	25,431	979,431
less: Deaths & retirements	39,000	11,000	16,000	890	66,890
Manpower in 1998	523,000	146,000	219,000	24,541	912,541
Manpower increase 1990- 98	80,000	29,000	123,000	9,026	241,026
POEA deployment, 1998	98	8,363	5,399	1,066	14,926
Deployed as percent of 1998 manpower	0.02	5.73	2.47	0.34	1.64
Deployed as percent of Increase in Manpower 1990 to 1998	0.12	28.84	4.39	11.81	6.19

Source: Commission on Higher Education.

The shifts in the pattern of occupation among permanent and temporary workers reflect not only market forces but also the inherent constraints imposed by destination countries. Workers face a wide range of wages for similar professions but are ultimately influenced by availability. But wherever they eventually end up, the question is what implications this will have on the overall economy of the Philippines. This will require us to look into the profile of professional workers among the migrant populations and among the larger employed population in the country. Moreover instead of quantitatively estimating the effects of brain drain on the national economy we focus on the character of the migrant worker and act out the possible damage to the country. Some case studies of possible movement of Filipino skilled professional would suggest the extent to which the brain drain is significant to the country.

Given the poor overall employment generation in the Philippines, it is not surprising that what could not be absorbed in the country were absorbed elsewhere. An indirect way of measuring this is through the unemployment rate by the highest grade completed. There are various estimates of this depending on the samples used and the year taken. We have used a common source (NSO) to track the unemployment rate by the highest grade completed as shown below.

Figure 1. Unemployment Rates by Highest Grade Completed

Notice the higher unemployment rates for those who completed high school and college throughout the decade of the nineties – rising in the early part of the decade and falling from 1995 before slightly rising again in 1999. This is consistent with the earlier fall in the growth of graduates between 1990-1994 and 1995-1999 which presumably was an adjustment to the growth of “educated unemployed” early in the decade. This means that many of the graduates during this period could not be absorbed in the domestic economy with some finding their way into the overseas market either as temporary or permanent migrants. The striking part of this high unemployment rate among the college graduates is that the professionals among them were still lower in number between 1992 and 1998 than the number who left the country. To the extent that this is true then the professionals who left must have included those with longer and mature experience and constituted a real loss to the economy. Even if there remained high unemployment rate among college graduates it stands to reason that those who left for abroad included those already working and in the labour force or those who had sufficiently gained experience in the discipline.

This is evident in the statement of the Philippine Software Association (PSA), which had complained about the loss of Filipino computer programmers to aggressive foreign recruiters from U.S. and Singapore-based companies. Not only have losses been felt among IT professionals with two years experience (the time it takes local software companies to prepare trainees) for commercial requirements but even “key” people (supervisors and project managers with a lot of experience and several projects under their guidance). With an increasing approved-employer petitions in the U.S. for

computer-related occupations and the prospects of sending as much as 50,000 IT workers to the U.S. over the next several years the absorption of these professionals is likely to expand further. The PSA places the brain drain rate at about 30-50 percent per year of the IT professionals whereas the rate for physicians is placed up to 60 percent going to foreign countries.

What is also interesting from the context of absorption among professionals (and apparent in figure 1) is that a decline in the unemployment rate of high school and college graduates is associated with increases in the unemployment rate of those with elementary education. Whether there is substitution of the less by the more educated workers is not clear. On the other hand, the completion of college education covers a wide range of disciplines not all of which may have responded to changes in the labour markets effectively. For example, shortages of teachers in the U.S. have led to active recruitment of Filipino teachers for U.S. School Districts.

In the case of engineers, the 28.8 percent incremental deployment rate as a reflection of absorption abroad could predominantly be a movement in the direction of Asian countries and some Middle East recruitment. Between 1992 and 1997 there was a drastic decline in approved-employer petitions for the engineering occupation category in the U.S. (a 61 percent decline) – this would have made it difficult for Filipinos to access considering the greater costs involved relative to the Middle East and Asian countries despite the wide disparity in monthly wages. In fact as has been shown earlier (table 4 above) there was a decline in engineering graduates in the period 1995-1999 relative to the earlier part of the decade.

In sum, the patchy information that we have used to look into labour absorption in the economy and in the rest of the world seems to show two mutually reinforcing but related behavioural patterns at least for some selected professionals. The first is that the incremental deployment of professionals seems to be a measured response to global labour conditions. Note in particular the case of computer ICT professionals, which have seen significant exodus of workers abroad. The second is the adjustments in the supply side of the market wherein both the annual output of graduates by disciplines has moved in association with the absorptive capacities domestically and globally. Compare the percentage changes in the number of graduates by discipline and the conditions painted by global migration opportunities. The seeming high unemployment rates among college graduates mask the responses and adjustments taking place within them including the so-called “brain response” i.e. the pursuit of specific disciplines in expectation of placement abroad notwithstanding domestic conditions. How much this translates into actual brain drain is addressed next.

5. Movement of Filipino Skilled Workers

The ability of both workers and the economy as a whole to respond and adjust to the global labour conditions indicate how intertwined the Philippines is with the rest of the

world. As one of the major labour exporting countries it would seem that its labour market (or at least specific segments of it) is equally globalised. The country sends over half a million workers every year on temporary migration and in the light of high unemployment rate it is clear that this provides a safety valve to what would otherwise be even higher unemployment. The question is whether the movement of Filipino skilled workers as component is really a 'brain drain'. While it is not possible to answer this systematically, we can give some indications of the extent and magnitude of potential drain on the country.

Among the number of overseas Filipino workers by occupation, the professionals category have seen a dramatic rise especially in the latter half of the nineties. Although the other categories (sales workers, service workers, and production and related workers, among others) also saw large increases, it is the professionals category that matter given the cost of supply in private and public terms. Moreover evidence from the destination countries also seem to show that this category has significantly filled badly needed capacities. Indeed in a study on how extensive is the brain drain; the majority of Filipino migrants to the U.S. have tertiary education. Notwithstanding the higher unemployment rate among workers with tertiary education, we have shown in the previous section that the recruitment process may have affected those already in the labour force, have substantial experience, and may include key managerial professionals.

Aside from the highest grade completed among the professionals abroad, these apparently belong to the age group, which is most productive in a worker life cycle. In fact if we look at the unemployment rate by age we would find that the most productive years are also the category where unemployment is lowest. Figure 2 breaks down the unemployment rate by age groups. Notice the hierarchy of the unemployment rates – lowest among those aged 35 years and above and highest among those aged 15-19. Those with ages above 25 appear to have less instability or smoother labour force participation rates. On the other hand those aged 15-19 have wider swings in their unemployment rates over the years.

Since the unemployment rates of those above 35 years old are below the average (which is also true in some years for those aged 25-34 years old) this must mean that not only are they probably more productive they least account for the country's unemployment problems. This should not be surprising since it is this age group that has acquired on average substantial work experience and thus also expectations of higher wage-earnings profile. After this age group follows those in the 25-34 age bracket where the unemployment rates throughout the period 1990-1999 hardly reached 10 percent. This is the age group, which has started to take on significant job responsibility after graduation with some years of on-the-job training and other re-tooling from the industry. This age group eventually moves up in both the experience and the earnings profile.

Figure 2



Figure 3 now compares the age profile of employment in the Philippines in 1999 with the age profile of Overseas Filipino Workers in 1995. In general 69 percent of Filipinos working abroad are of ages 25-44 compared to 47.9 percent of those in the country's labour force, more than 20 percentage points higher. There is a sharp fall however after age 45 when 31 percent of the country's employed workers belong to this category relative to the OFW's share of 14.5 percent. In part this is a function of the temporary migration.

If we now look at those employed in the labour force (still 1999) and Filipinos working abroad (still 1995) in terms of highest grade completed, the comparison is equally sharper. Whereas the proportion of the employed who completed high school is comparable to the proportion of overseas Filipinos with the same education (34 percent and 31.2 percent, respectively), those who completed college undergraduate among the employed is only 11.3 percent. Contrast this with 43.8 percent, which is the share of Filipinos working abroad with college degrees. Figure 4 shows this.

Figure 3

OFWS AND EMPLOYMENT BY AGE

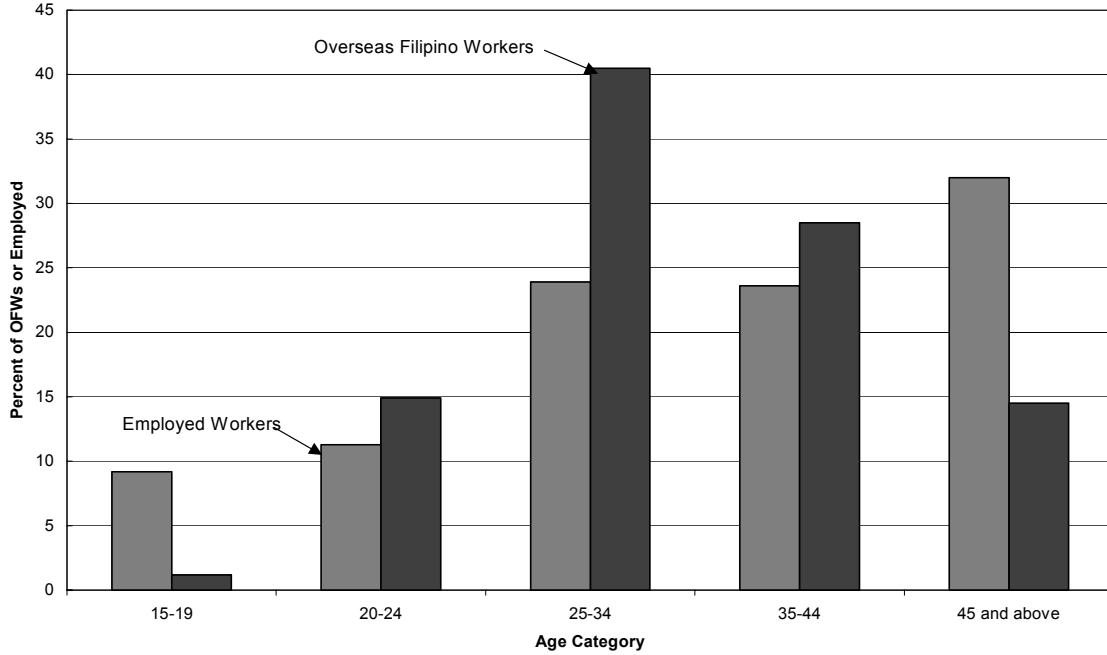
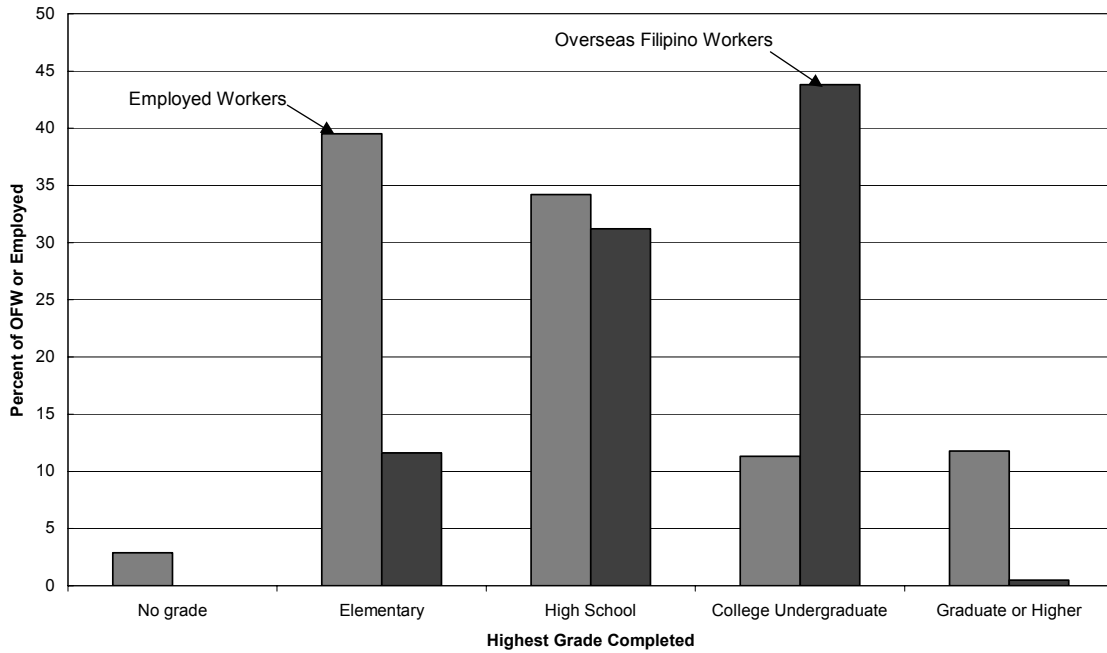


Figure 4

FILIPINOS EMPLOYED AT HOME AND ABROAD BY EDUCATIONAL ATTAINMENT



The profile of Filipino overseas workers in terms of educational attainment is validated by findings in the destination countries which also tend to show that majority of Filipino migrants have completed tertiary education. This was found in a recent study on the magnitude of the brain drain in the U.S. and the OECD countries².

In fact comparisons in the distribution by high-skill occupation of U.S. natives and U.S. immigrants reveal that there is a higher proportion of immigrants with high-skills across almost all occupational categories. There is no profile of Filipino workers abroad by this occupational distribution but given figure 4 above it is likely that such profile would be comparable to the U.S. immigrants' profile. On the other hand the profile of high-skills occupation in the Philippines will be comparable to the U.S. natives' profile in some sense. Table 10 tries to give a distribution of Philippine supply of high-skill graduates. Notice the comparability in Management and Finance, Computer Sciences, Mathematical and Natural Sciences, Health and Medicine, and Social Sciences.

Table 10. Distribution by field of study of U.S. natives, U.S. immigrants and Philippine graduates (U.S., 1990 males 22-64 years; Philippines 1990-1999, %)

Skill category	U.S. natives (1990)	U.S. immigrants (1990)	Philippines (1990-1999)
Management/finance	24.5	18.7	27.0
Architecture	2.4	3.0	n.a.
Engineering	32.5	34.8	14.0
Computer sciences	5.6	9.1	6.0 ^a
Mathematical/Nat sc	6.5	6.9	6.0 ^a
Health and medicine	15.8	21.7	15.0
Social sciences	3.4	2.6	4.0
Law	10.9	3.2	n.a.

(a) Mathematics and computer sciences are combined.

Source: Magnus Lofstrom, "Self-Employment and Earnings among High-Skilled Immigrants in the United States" Working Paper No. 13 Centre for Comparative Immigration Studies, University of California-San Diego (July 2000), table 1.

The extent of the incidence of higher education among overseas Filipino workers is even more prominent when compared to the distribution of the country's population by education. The proportion of the overseas Filipino workers who completed high school is about the same proportion as that of the population at large. Those who completed college education however is a completely different ratio, with those overseas Filipino workers constituting five times more college graduates than the country's population.

² W. J. Carrington and E. Detragiache, "How Extensive is the Brain Drain?" *Finance and Development* (June 1999), <http://www.imf.org/external/pubs/ft/fandd/1999/06/carringt.htm>

Figure 5

OFWS AND POPULATION BY EDUCATION

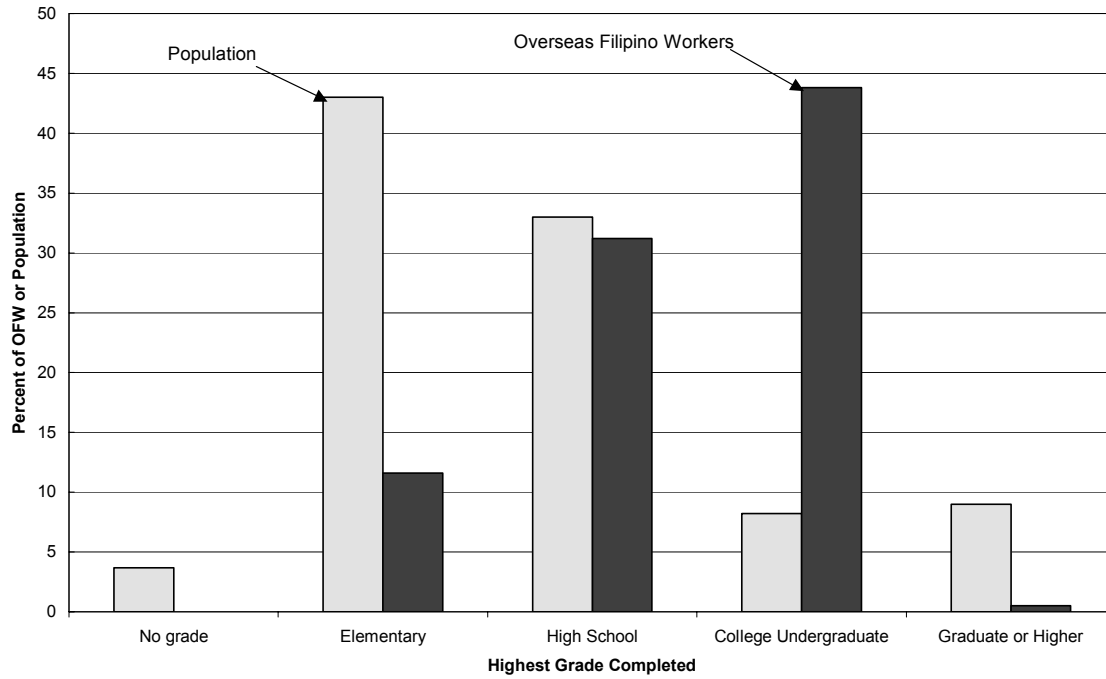


Figure 5 above compares the 1995 population distribution by education with the 1995 education distribution of overseas Filipino workers.

Combining all this information, it is clear that the movement of Filipino workers abroad is characterized by (a) a higher share of the most productive age group (25-44) in the labour force which suggests loss, even for temporary periods, of those with the most experience, on-the-job training, and likely supervisory positions, and (b) a higher share in number of years of education especially those having completed college or higher degrees. When examined in the context of the employment situation in the country, it is obvious that a large part of these Filipino workers abroad may have been gainfully employed domestically before venturing overseas. Without specific skills classification we cannot gauge the extent of brain drain from the Philippines. On the other hand, there is no doubt that the movement of Filipino workers abroad bites into the existing employment and reduces what would otherwise have been value added. Yet employment overseas also gives even higher (private) returns, more so since these workers are still in the rising portion of their age-earnings curve peaking in fact for the average wage/salary immigrant at age 44. Although the supply response seems to adjust to the varying global labour market conditions, the matter of substituting the recruited overseas Filipino workers with workers fresh from the school system actually implies additional drain which is some kind of a “deadweight loss” given that it takes time for training, and

exposure yields the experience and capacity that have been outright withdrawn from the domestic labour market by foreign recruitment.

One of the important benefits of the institutionalised system of managing international migration has been the inflow of worker remittances arising from worker deployment. The sheer volume of workers implied substantial remittances in aggregate values, in per capita terms, and in comparison with the expansion of goods exports over a long period of time. Table 11 shows that worker remittances increased from a yearly average of U.S.\$ 206.5 million in 1975-1979 when systematic outflow of workers began to the annual average of U.S.\$ 5.4 billion in 1995-1998.

Table 11. Worker remittances and goods exports (f.o.b) (in million U.S. dollars)

Period	Remittances	Goods exports
1975-1979	206.5	3,209.0
1980-1984	676.2	5,384.9
1985-1989	814.8	6,017.2
1990-1994	2,059.7	10,341.5
1995-1998	5,444.8	23,178.3

Source: POEA, BSP.

With a rising number of workers going out of the country, remittances per worker have also been growing from U.S. \$2,858,000 in 1975 to U.S. \$7,679,000 in 1997 or an annual growth rate of about 4 percent per year. On the other hand, the Philippines has been increasing its exports of goods from an average of U.S. \$3.2 billion in the period 1975-1979 to U.S. \$23.2 billion in the period 1995-1998. By aggregate comparison however the annual growth rate of remittances has been faster at 17.5 percent per year between 1975 and 1998 than the growth rate of exports, which was 10.7 percent per year during the same period.

It is difficult to sift through these remittance figures in order to attribute how much came from temporary migrants and how much came from permanent emigrants. Even if it were possible, one cannot easily determine how much of these flows compensate for the cost of the training and education of these workers. The first problem is there is no strong correspondence between the remittances by country and the actual flows from the workers in terms of their locations. To the extent that the remittances have been sent through the banking system these may have been transmitted via varying networks, branches, and correspondent banks and recorded in the Philippines in terms of the banking centres. Thus even remittances from the Middle East could be mediated through New York offices and the figures overstate the U.S. source. For example in 1998 more than 80 percent of remittances came from the U.S. The second problem is in measuring the investments in education among these migrant workers as a reflection of the social costs. One would have to determine whether it is the direct costs of training that must be measured or alternative costs. Then there is the problem of comparing the benefit-cost nexus between temporary and permanent migrant workers.

If we go by the amounts of remittances from permanent migration countries compared to the location of temporary migrants, it would appear that the large amounts of remittances from the Americas indicate a benefit stream that seems greater than the costs of education and training. Yet the more appropriate way may be to measure the counterfactual event had these professionals remained in the country and raised its overall output. One way of going around this may be to experiment with specific skills and destination countries and a more accurate indication of remittances.

6. Conclusion and Policy Issues

In this report, we have attempted to provide some benchmarks on the brain drain phenomenon in the Philippines using more recent information. Although there is no direct evidence of the magnitude and extent of the brain drain except common knowledge, several clues give a pattern in the country. We have shown that in the last decade the number of professional workers who went abroad *exceeded* the net additions to the professionals in the workforce. This implies that many of those who migrated were already in the labour force and had come from the stock of professionals of the previous decade. Looking into the broad profile of OFWs, we showed that they have higher educational attainment than those employed. Indeed when compared to the population as a whole, the proportion of OFWs with tertiary education is far greater than the proportion in terms of secondary education. In addition there is evidence that a large portion of the Filipino workers abroad belong to the most productive age groups when compared to those employed in the country.

When we examined the profile of labour in a destination country like the U.S., these results are validated. U.S. immigrant profile shows higher brain content in such fields as health and medicine and computer sciences compared to native Americans. These are two fields that Filipino migrant workers are known for. Conversely the pattern of labour force profile of native Americans and the Philippine labour force is similar.

The supply conditions of the country's professionals in the last decade seem to have displayed responsiveness and adjustment to the demand patterns. Some shifts in graduates of particular disciplines took place during this period – dramatic expansion in computer sciences in the latter part and declines in medical and allied fields, and some slight fall in engineering graduates. These are not inconsistent with what we have seen to be the behaviour of demand and the profile of Filipino overseas workers. The market for professional workers in the Philippines seems to be globalised.

Needless to say a more globally responsive tertiary-education labour market in the Philippines ignores the fact that the migration of highly skilled and educated workers entails social costs (despite the fact that tertiary education in the Philippines is mostly private sector driven and therefore privatised education costs) since elementary and secondary education are predominantly publicly provided. The continued brain drain from the Philippines has always eluded policy solutions and remains a vexing problem.

The theoretical propositions in the past of imposing taxes on destination countries encountered practical problems of implementation and questions of enforcement. The extremes of ignoring the costs of the brain drain or completely regulating migration seem out of the practical question. In fact the increasing share of professionals among temporary migrants has increased rather than diminished the problem of the brain drain and the need for either reversing it or finding ways to mitigate its deleterious impact on the economy.

Changes in the global economy and technology however pose new challenges to the way the brain drain may be addressed in the Philippines. In particular the global environment may be creating windows to address the brain drain more positively. On the other hand new technologies are providing options that reduce the attractiveness of migration temporarily or permanently.

At the height of the recent U.S. economic boom was a high demand for ICT professionals in numbers the country could not adequately supply. For example, a major New York software company failed to recruit 500 computer programmers from the Philippines because of supply limitations. In 2000 a request for 3,000 programmers by another firm in New Jersey to its Manila subsidiary was not also met. Since the collapse of technology stocks, demands for large number of workers rapidly fell.

While it is true that technology-related businesses have fizzled out in the U.S. and elsewhere, they have just started in the Philippines and in the rest of the developing world creating opportunities for ICT professionals. Not a few took up the challenge and returned to their country of origin to break ground in the fields where their migration experience has mattered.

Integration of financial markets and financial liberalization has opened avenues by which some of the savings and financial resources from overseas Filipinos can be channelled for use in the country. This has been through flotation of bonds and other financial instruments geared for specific clients much like the non-resident Indian experiment. Without liberalization, convertibility and integration that characterize globalisation this would encounter severe hurdles.

Regional cooperation, as another trend in the global economy, also improves the prospect of brain drain reversal as the expanded reach of services reduces the migration incentive. The growth quadrangle, for example, in Mindanao, Philippines with Indonesia, Malaysia, and Brunei anticipates medical and educational services to expand beyond the Philippines.

The critical policy issue here is how this changing environment is enhanced in the country. Of course it need not be said that a more focused infrastructure program is an important enabler of initiatives that indirectly affect decisions on migration. But, more generally, capturing this environment simply means that the country achieves a higher economic growth plane, increases employment, raises real incomes, and narrows the

wage gaps between the Philippines and possible migration destinations (in terms of the low end of the wage gap). There are several studies of the experiences in some countries, which have successfully made the migration transition i.e., from being a net exporter of labour to a net importer. Outward migration has not been completely reversed but returning migration has been far greater. In more recent times there are experiences in several countries where skilled workers have returned to their countries of origin and taking on public or private initiatives that capitalize on extensive migration experience. Thus despite the continued numbers leaving, reverse migration brings with it the wealth of know-how that came with previous skilled migration.

The wide array of telecommunications instruments that form part of the larger technology revolution has also improved the prospects of reducing the magnitude of the brain drain. While the technology revolution seems to be set up for those skilled workers in the ICT field, its influence actually cuts across all areas of professional work. The outflow of ICT workers triggered by this revolution is actually also providing the mechanism for slowing this down.

The pervasive use of the Internet as real time communications media has effectively closed the gap between users and suppliers of high skill work without actual physical dislocation. In particular, programming and software services are being transacted through the Internet without the necessity of worker migration. This has had notable experiences in India and even in the Philippines. This has been enhanced by the ready availability of broadband services and communications backbone. Aside from this, the development of labour services in this area has had ripple effects on other related and ancillary services.

The same technology revolution has recently triggered shifts in backroom tasks and services to lower wage developing countries. These backroom tasks range from accounting to database storage. This has reduced the need to import skills and at the same time encouraged the development of related economic activities.

Even front office services have literally moved from the developed countries to developing countries including the Philippines. Technical support and customer services of manufacturing and service industries have relocated where the abundant skills are residing because of the wide access to cheap telecommunications modalities. This has given rise to worker queues in multinational companies in the countries where workers usually migrated.

The ICT field is not the only one benefiting from the technology revolution. The rest of the occupations where Filipino migrant workers are present have also been affected though in varying degrees. On-line computer imaging now allows medical institutions to cross-refer highly skilled diagnosis of patients without movement of either patients or physicians and medical specialists. The potential of the technology is far-reaching and would have long-term impacts on the cycle of both temporary and permanent migration from the Philippines.

Since the technology revolution is global and permeates across many sectors of the market its policy implications revolve around the scale of its diffusion in the country and how the associated infrastructure is provided. After all technology is embodied knowledge and necessitates accompanying inputs and peripherals and other hardware to be functioning smoothly. This must be equally and readily available in the country. The policy directions are therefore identifiable.

The Philippines may have to initially set up more telecommunications enclaves that draw in state-of-the-art technology that can attract service nodes of global industries and services into the country. This will provide options to those potential land-based migrants who would otherwise consider only outward migration. Although this will not immediately narrow wage gaps and in the interim create a “digital divide”, this will provide concrete alternatives and even induce reverse migration to the extent that the technology-led economic activities gain momentum.

Although the brain drain has been a problem the Philippines has faced in the last several decades the recent developments in the environment, shifts in the supply responses, and global integration combine to open potential avenues to minimize its social costs and losses.

References

Association of Philippine Medical Colleges. (1971). *Physician and Nurse Manpower Survey Report*. Manila: APMC.

Binod, K. (1999). *The Knowledge Workers: Second Generation Effects of India's Brain Drain*. New Delhi: Sage Publications.

Böhning, W.R. (1999). 'The Impact of the Asian Crisis on Filipino Employment Prospects Abroad' *SEAPAT Working Paper 1*, Manila: ILO.

Carrington, W.J. & Detragiache, E. (1999). 'How Extensive is the Brain Drain?' *Finance and Development* June 1999.
(<http://www.imf.org/external/pubs/ft/fandd/1999/06/carringt.htm>).

Commission on Filipino Overseas. (1998). 'The Impact of the Asian Crisis on Filipino Employment Prospects Abroad' in W.R. Bohning, *Southeast Asia and the Pacific Multidisciplinary Advisory Team SEAPAT Working Paper 1*. Manila: ILO.

Institute of Labour and Manpower Studies, Ministry of Labour and Employment (1983). *Socio-economic Consequences of Contract Labour in the Philippines*. Manila.

Loftstrom, M. (2000). *Self Employment and Earnings among High-Skilled Immigrants in the U.S.* Working Paper No. 13. Centre for Comparative Immigration Studies, University of California-San Diego.

Meyer, J & Brown, M. (1999). *Scientific Diaspora – A New Approach to the Brain Drain*. Paper prepared for the World Conference on Science UNESCO-ICSU Budapest.

Philippine IT Manpower Profile Survey (1999-2000). Manila.

Stalker, P. (2000). *Workers without Frontiers. The Impact of Globalisation on International Migration*. Geneva: ILO.

Waldinger, R. (1996). 'The Jobs Immigrants Take.' *New York Times*, Nov. 3.

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