Securing Medical Personnel: Case Studies of Two Source Countries and Two Destination Countries

INSTITUTE OF DEVELOPING ECONOMIES

Discussion Papers are preliminary materials circulated
to stimulate discussions and critical comments

DISCUSSION PAPER No. 105

Securing Medical Personnel: Case Studies of Two Source Countries and Two Destination Countries

Tatsufumi Yamagata

May 2007

Abstract

A shortage of medical personnel has become a critical problem for developing countries attempting to expand the provision of medical services for the poor. In order to highlight the driving forces determining the international allocation of medical personnel, the cases of four countries, namely the Philippines and South Africa as source countries and Saudi Arabia and the United Kingdom as destination countries, are examined. The paper concludes that changes in demand generated in major destination countries determine the international allocation of medical personnel at least in the short run. Major destination countries often alter their policies on how many medical staff they can accept, and from where, while source countries are required to make appropriate responses to the changes in demand.

Keywords: Medical personnel, brain drain, the Philippines, South Africa, Saudi Arabia, the United Kingdom

JEL classification: F22, I19, J61, O52, O53, O55

The Institute of Developing Economies (IDE) is a semigovernmental, nonpartisan, nonprofit research institute, founded in 1958. The Institute merged with the Japan External Trade Organization (JETRO) on July 1, 1998. The Institute conducts basic and comprehensive studies on economic and related affairs in all developing countries and regions, including Asia, the Middle East, Africa, Latin America, Oceania, and Eastern Europe.

INSTITUTE OF DEVELOPING ECONOMIES (IDE), JETRO
3-2-2, WAKABA, MIHAMA-KU, CHIBA-SHI
CHIBA 261-8545, JAPAN

Securing Medical Personnel:

Case Studies of Two Source Countries and Two Destination Countries*

Tatsufumi Yamagata†
Institute of Developing Economies

May 2007

Abstract

A shortage of medical personnel has become a critical problem for developing countries attempting to expand the provision of medical services for the poor. In order to highlight the driving forces determining the international allocation of medical personnel, the cases of four countries, namely the Philippines and South Africa as source countries and Saudi Arabia and the United Kingdom as destination countries, are examined. The paper concludes that changes in demand generated in major destination countries determine the international allocation of medical personnel at least in the short run. Major destination countries often alter their policies on how many medical staff they can accept, and from where, while source countries are required to make appropriate responses to the changes in demand.

Keywords: Medical personnel, brain drain, the Philippines, South Africa, Saudi Arabia, the United Kingdom

JEL classification: F22, I19, J61, O52, O53, O55

* This is a revised version of Yamagata [2007]. The author gratefully acknowledges Natalija Dombrovskaja, Katsumi Hirano, David Kaplan, Kumiko Makino, Akio Nishiura and Hiroko Uchimura for intellectual inputs which have been incorporated in this paper.
† E-mail: tatsufumi_yamagata@ide.go.jp. URL: http://www.ide.go.jp/en/tatsufumi_yamagata.html.

Introduction

A shortage of medical personnel has become a critical problem for developing countries, and hinders them from providing medical services to the poor. Two aspects of the issue are of critical importance, one related to the demand and the other to the supply of medical personnel.

The demand for medical personnel has risen in developing countries because of the persistently widespread occurrence of serious infectious diseases such as HIV/AIDS, tuberculosis and malaria, and also because of the intensification of efforts by the international community to combat such diseases. The growing concern of the international community is symbolized by the Millennium Development Goals (MDGs, for short) that were agreed at the United Nations Millennium Summit in 2000, and the establishment of the Global Fund to Fight AIDS, Tuberculosis and Malaria (GFATM) in 2002. MDGs include an improvement in the health of the poor. In association with these efforts, a substantial amount of funding has been raised and necessary medicines have been made available. However, the supply of medical personnel willing to serve in developing countries has not kept up with the increasing availability of funds and medicines for the control of infectious diseases[1].

The shortage of medical personnel in developing countries is being made worse, which is the main topic of this paper. There is a long-run trend towards ever-more frequent international labor migration in response to reductions in transportation costs and massive information flows throughout the world. On the one hand, the trend was interrupted by the September 11 terrorist attacks that gave rise to a series of conservative reactions against foreigners. On the other hand, the increase in the number of member countries of the European Union and the maintenance by the EU of the principle of free movement of people within the EU's territory, have contributed to outflows of population from low income countries to high income countries, a trend that reflects a flow of people in search of higher earnings. Medical personnel are among those who have left low income countries for high

[1] It is well known that the supply of medical personnel is critically insufficient to take care of people living with HIV/AIDS, now that antiretroviral medicines have become more widely available in developing countries thanks to GFATM and other initiatives (WHO [2006], p. 144; Dräger, Gedik and Dal Poz [2006]).

income countries.

The shortage of medical personnel in developing countries is driven by another inexorable factor, namely the aging of the population in high income countries. Because of a fall in fertility, the share of elderly people is steadily increasing in the developed countries, and the aging boosts the demand for medical services. Moreover, the aging results in a shortage of young medical personnel as well. There are, in short, many good reasons why medical personnel move out of low income countries towards high income countries.

This paper describes the growth in the international migration of medical personnel in terms of trends in countries of origin and destination, and examines how governments have attempted to maximize national welfare in the context of these developments. As regards the origin countries, the outflow of medical personnel has brought both benefits and costs. For example, the remittances supplied by medical personnel based overseas have contributed to national income by way of an increase in foreign currency, while labor shortages at medical facilities in the origin countries have led to deterioration in health service standards for the populations of those countries.

Two major origin countries and two major destination countries have been investigated as case studies to illustrate the momentum driving the international migration of medical personnel, and to explain its causes. The first two countries are the Philippines and South Africa, and the latter two are Saudi Arabia and the United Kingdom. As will be explained shortly, these countries can be considered as typical either as origin or as destination countries.

The rest of this paper is organized as follows. Section 1 gives a general overview of the problems caused by the international migration of medical personnel throughout the world. The following four sections describe the problems being encountered by each of the above mentioned countries, and examine the policies which the governments have adopted and implemented to mitigate the problems. The final section summarizes the findings of the research and offers some concluding remarks.

1. Unequal Allocation of Medical Personnel in the World

It is widely known that low income countries suffer a poor quality of health, a state of affairs that is characterized amongst other things by low life expectancy. Health problems have been deep-seated and have long been challenged by people in low income countries and in the international community (Ahmad [2005], Bach [2004], Mejia [1978]). However, the situation may well be being made even worse by outflows of medical personnel from low income countries towards high income countries[2].

Table 1 indicates the resources for medical services available throughout the world by region. It is clear that resources in terms of human and physical capital are more abundant in the CIS, Europe and North America[3]. In these regions more than two physicians are available for every thousand people, and more than 90% of births are supervised by skilled health staff. In addition, more than three hospital beds are available for every thousand people.

By contrast, sub-Saharan Africa is the worst region in terms of all three indicators. In rounded figures, only one physician is available for every fifteen thousand people while only one hospital bed is available for every thousand people. Only half of all births are attended by skilled health staff. East and South Asia is the second worst region, followed by Oceania, the Middle East and North Africa. However, the inferiority of sub-Saharan Africa is striking.

It is believed that the shortage of human capital for medical services in sub-Saharan Africa has been caused partly by an outflow of medical personnel to developed countries. The World Health Organization (WHO) [2006: 100] cites OECD [2005] and demonstrates that a high proportion of medical doctors trained in sub-Saharan Africa work in developed countries. The source shows the number of doctors in ten sub-Sahara African countries and those working in eight OECD countries in Europe and North America[4]. The number of doctors trained in the ten sub-Sahara African countries[5] and who are staying in the country in which they received their training amounts to

[2] See among others Kapur and McHale [2005: 25-29].
[3] Note that Mexico is included under “Latin America and Caribbean”.
[4] They are Australia, Canada, Finland, France, Germany, Portugal, United Kingdom, and the United States.
[5] The countries are Angola, Cameroon, Ethiopia, Ghana, Mozambique, Nigeria, South Africa, Uganda, United

82,417, while the number of doctors trained in sub-Saharan Africa and working in the OECD countries is 18,556, a figure equivalent to about 23% of the number of doctors remaining in Africa. WHO [2006: 100] has also compiled data on nurses and midwives trained in nineteen sub-Sahara African countries[6]. The data show that there are 616,204 nurses and midwives trained in sub-Saharan Africa and remaining there, while 29,597 nurses and midwives trained in Africa were working in seven OECD countries[7]. The ratio of the latter to the former is around 5%. Though this proportion is lower than that for medical doctors, there are some countries where the ratio is higher. The proportion of Zimbabwean nurses and midwives working in seven OECD countries is 34% of the same number of nurses and midwives working in Zimbabwe. The equivalent ratios are 18% for Lesotho and Mauritius, and 13% for Ghana. Thus, it is apparent that for some sub-Sahara African countries, the outflow of medical personnel is substantial, and that potentially it may have a highly harmful effect on health services in the countries from which a massive outflow of medical personnel is occurring.

In theory, emigration of the educated may work to the benefit of the educated labor force remaining in the origin country, and may actually cause it to increase. The opportunity to emigrate increases the returns to education and leads more people to invest in education with the expectation of emigration. However, only a part of the educated population will succeed in emigrating. This being the case, the amount of human capital in the whole economy increases if the loss in human capital due to the emigration is smaller than the gain in human capital due to the rise in expected returns to education. This effect is called “brain gain” by contrast with brain drain (Beine, Docquier and Rapoport [2001], Mountford [1997], World Bank [2006a: 68]). However, there is not enough evidence to suggest that in reality, the brain gain effect outweighs the brain drain effect, and it is still generally believed that the outflow of medical personnel from developing countries is detrimental to the availability of medical personnel in source countries (WHO [2006]).

Republic of Tanzania, and Zimbabwe.

[6] The countries are Angola, Botswana, Cameroon, Ethiopia, Ghana, Guinea-Bissau, Kenya, Lesotho, Malawi, Mauritius, Mozambique, Namibia, Nigeria, South Africa, Swaziland, Uganda, United Republic of Tanzania, Zambia and Zimbabwe.

[7] The countries are Canada, Denmark, Finland, Ireland, Portugal, United Kingdom, and the United States.

2. The Philippines: An Ambitious Supplier of Medical Personnel to the World

The following four sections are case studies highlighting four particular countries that are deeply involved in the international migration of medical personnel: the Philippines, South Africa, Saudi Arabia and the United Kingdom. The former two are known as source countries, while the latter two are host countries for medical personnel. The circumstances, mechanisms, environments and policies affecting the migration of medical personnel are described in turn below.

The Philippines has been a leading source country of labor in Southeast Asia for decades (Catholic Institute for International Relations [1987: 13-19], Sagalla [1988]). It is one of the best organized developing countries in terms of the establishment of recruiting agencies and the provision of care for its citizens working abroad through diplomatic missions in foreign countries. It follows that it is also a leading country in the dispatch of medical personnel overseas (Yamada [2004, 2006])[8]. By contrast with women from Muslim societies, Filipino women experience few cultural restrictions on working overseas, and large numbers of female nurses and midwives leave the Philippines to work abroad.

Figure 1 shows that in 2005, the outflow of Filipino workers amounted to as much as one million persons. A rising trend is apparent in the number of both land-based and sea-based migrants. The government of the Philippines operates an agency – the Philippine Overseas Employment Administration (POEA) - whose task is to secure overseas employment for Filipinos. POEA advertises job openings abroad, supervises recruitment agencies, and checks the contracts between overseas employers and Filipino workers before the workers leave the country (Achacoso [1987]). More than other countries in Southeast Asia, the Philippines emphasizes the role of overseas employment in its economic development.. It follows that the government of the Philippines, in general, has taken better care of its workers than most other labor-exporting countries (Abella [1997:

[8] Emigration of medical personnel dates back to the year 1965 when the US Immigration Act abolished the national origin quota system. Filipino doctors, nurses, dental technicians and dietitians took advantage of this to emigrate to the United States (Catholic Institute for International Relations [1987: 17]).

32], ILO [1988], UNESCAP [1987: 156-202]).

Medical personnel working in high income countries form an important element of overseas employment. Their potential role is particularly promising in countries whose population pyramids are skewed as a result of a contraction in numbers in the younger age groups, and whose incomes are high enough for physically demanding jobs such as nursing and caregiving to have become unattractive occupations. For their part, Filipino workers have shown a suitability for engaging in occupations that involve taking care of people, such as housemaids and entertainers, in addition to nurses, midwives and caregivers. Thus, the increasing demand for medical personnel in high income countries is opening up a favorable prospect for new employment opportunities for Filipino workers.

Figure 2 shows the scale of migration of Filipino nurses, by destination country, for 1992-2001[9]. The overall trend in the number of Filipino nurses going abroad is upward-sloping except for a drop in 1996. The drop was the result of a change of policy by the United States, which in 1996 suddenly stopped admitting Filipino nurses. The annual outflow of Filipino nurses departing for the United States had increased and by 1995 amounted to around 3,000 persons. The movement was, however, almost terminated in 1996, and the outflow of nurses from the Philippines decreased almost as much as the drop in nurses heading for the United States. On the other hand, the demand for Filipino nurses in the United Kingdom has grown since 1999. The outflow to the United Kingdom was a little greater than 6,000 persons, and the United Kingdom has become the most important destination for Filipino nurses. While the emergence of the United Kingdom as a destination has been a recent development, Saudi Arabia has been a steady absorber of Filipino nurses for some time, and continuously receives 4,000-5,000 nurses per annum with little fluctuation from year to year. Saudi Arabia provides a steady and reliable demand for Filipino nurses working abroad, while demand in other destination countries tends to be more unpredictable.

Figure 3 confirms the significance of Saudi Arabia as a destination for medical personnel.

[9] Data for the period since 2001 are not available, probably for reasons described in a later part of this section. The Department of Labor and Employment of the Philippines reported on December 16, 2004 that 4,119 Filipino nurses departed for abroad during the first half of 2004 (http://www.dole.gov.ph/news/print.asp?id=N000001160). This is the latest information available to this author concerning the number of Filipino nurses leaving for abroad.

The figure is derived from an annual sample survey of overseas Filipinos conducted by the National Statistics Office (NSO) of the Philippines. The survey reflects the stock of overseas Filipino workers rather than the flow that appears on Figure 2. It reveals that in 2002, Filipinos living in Saudi Arabia made up a quarter of the total number Filipinos resident overseas. The share of Saudi Arabia as the country in which to work is greater for "professionals". Furthermore, Saudi Arabia is a particularly attractive destination for medical personnel defined as "life science and health professionals". Out of the 52,000 Filipino medical personnel working abroad, some 20,000 work in Saudi Arabia. The share of Filipino medical personnel living in Saudi Arabia to total overseas Filipino medical personnel is as high as 38.5%. This figure appears very impressive in comparison with the 11.5% share of the Unites States (Figure 3).

Meanwhile, there has been a deep-seated concern in the Philippines that the tendency of Filipino nurses to seek employment opportunities abroad has resulted a shortage of medical personnel in Filipino hospitals and is putting at risk the health of the Filipino people. In a country such as the Philippines, which is experiencing a massive outflow of medical personnel, these concerns are understandable, and are shared by many other source countries of medical personnel throughout the world. There are many signs of serious concern over the problem, and an impressive warning was delivered in September 2006 by Jean Marc Olive, the head of the World Health Organization (WHO) Country Office in the Philippines[10], who expressed his anxiety over the acceleration of the trend and advised the Philippines to devise "a wide-ranging solution" for eradicating the gap in benefits between work in the Philippines and employment in the destination countries.

The shortage of medical personnel in the Philippines has become a controversial issue. There was, for an example, a telling exchange of views in November 2003 between the Philippine Nurses Association (PNA) and the Department of Labor and Employment (DOLE) of the Philippines government. The PNA stated that "the country faces a shortage of nurses in two years", to which the

[10] His statement was taken up by media such as *Balita* in the Philippines (http://ofw.balita.ph/html/article.php/20050921004055668) and *Mainichi Shimbun* in Japan on September 21-22, 2005.

Acting Secretary of DOLE immediately responded that "We have enough nurses for the health sector".[11] Such exchanges of opinions and views have become more frequent. With the intensification of the debate, data on the outflow of Filipino nurses became less widely available, and in the absence of precise figures on the migration of Filipino nurses – information that was available in former years – it has become harder to discuss the issue dispassionately. This reflects how touchy this issue has become in the Philippines.

3. South Africa: A Supplier Receiving Compensation

As was pointed out in section 1, the shortage of medical personnel is most serious in sub-Saharan Africa and there have been many attempts to find solutions to the problem (Physicians for Human Rights [2004], WHO [2004]). In sub-Saharan Africa, the country that sends the most medical doctors, nurses and midwives is South Africa (WHO [2006: 100]). Accordingly, the case of South Africa will be reviewed in this section.

South Africa is known as a highly diversified society. The country is one of the world's most advanced countries in science and technology, while poverty remains a serious problem throughout South Africa, as does the spread of HIV/AIDS. South African workers trained in the use of high technology participate in international labor markets where their skills can be most effectively utilized and highly rewarded (*Economist* [2005], Kahn et al. [2004]). This tendency applies to medical personnel, too. As a result, high percentages of medical doctors, nurses and midwives trained in South Africa go abroad to work and earn a larger income, a trend that has already been touched upon. As a result, skilled medical personnel are in short supply throughout the country, an issue that has become particularly serious in rural areas (Padarath, Ntuli and Berthiaume [2004], Paton [2006]). The shortage of skilled workers has been recognized by the government of South Africa as a critical problem likely to impede the country's further development. In 2006, the government launched the Joint Initiative for Priority Skills Acquisition (JIPSA), and has requested

[11] See a news article by the DOLE on November 12, 2003 (http://www.dole.gov.ph/news/print.asp?id=N000001030).

all stakeholders to participate in this initiative. However, the first priority is placed on the employment of engineers and artisans for infrastructure development, and it is intended to include "high-level planning and management skills in the public health and education" in the second phase of JIPSA (Mantashe [2006]).

A feature which distinguishes South Africa from other source countries of medical personnel is that the country is richer than neighboring countries, and the shortage in medical personnel is partly filled by an inflow of recruits into South Africa from low income countries in the same region (*Economist* [2005]). Aware that this compensating inflow may aggravate the shortage of medical personnel in neighboring countries, the South African government has followed a policy of orderly recruitment. South Africa is a signatory of the Commonwealth Code of Practice for the International Recruitment of Health Workers (Padarath, Ntuli and Berthiaume [2004: 302], WHO [2006: 104-105]). Moreover, the country has published a "Policy on Recruitment and Employment of Foreign Health Professionals in the Republic of South Africa" (National Department of Health [2006]). In short, disorderly recruitment of foreign health workers is strongly discouraged by the government, though whether this policy penetrates to South Africa's rural areas is not altogether clear. The government maintains bilateral agreements with Cuba, Iran and Tunisia for the orderly recruitment of health workers[12]. The agreement with Cuba has been maintained since 1996 (Mine [1996: 220]). In addition, in 2003 a bilateral agreement was concluded with the United Kingdom on both the outflow and inflow of medical personnel. A favorable evaluation of this agreement was made in April 2006[13].

The data for emigration from, and immigration to South Africa are collected by the Department of Home Affairs[14]. Figure 4 shows that immigration and emigration are negatively associated and there has been an upward trend in emigration and a downward trend in immigration since the 1990s. It is noticeable that there has been a sustained increase in the share of "professionals and semi-professionals" in total emigration over the same period (Figure 5).

[12] This information was given by Ms. T. R. Mdlalose (Director, Human Resource Stakeholder Relations and Management, Department of Health) and Mrs. Gcinile Buthelezi (Director, Human Resource Policy Research and Planning, Department of Health) on December 12, 2006 at the Department of Health, Republic of South Africa.
[13] The source is the same as the previous footnote.
[14] It is believed that the data are seriously underestimated. See Brown, Kaplan and Meyer [2002].

As will become clear below, data for the outflow of "professional and semi-professional and technical occupations" by destinations are published, but information for finer occupational categories is not available. It follows that any study the structure of the emigrant population must be done in terms of in the sub-categories of "professional and semi-professional and technical occupations". As is apparent in Figure 6, although there has been an increase in the number of professionals emigrating, the structure of the sub-categories had been stable throughout the period 1997-2003[15]. Figure 7 shows that the number of emigrating medical doctors and nurses increased between 1997-2003.

Figures 8 and 9 display the number of emigrating and immigrating "professional and semi-professional and technical occupations", by region, in 2003[16]. Those going to and returning from Europe form the majority among "professional and semi-professional and technical" migrants. Though quite a few skilled workers head for North America, only a moderate number of skilled workers come from North America. Meanwhile, South Africa receives as many African professionals and technical workers as those from Europe (Figure 9). Africa's share of immigrating professionals and technical workers is disproportionately higher than Africa's share of emigrating professionals and technical workers. This feature accords with the casual observation that South Africa compensates emigrating medical personnel with incoming doctors and nurses from neighboring African countries.

In sum, South Africa can be classified as a moderately high income country, and one that can be ranked between extremely high income countries and low income countries. Though many of South Africa's medical personnel are taken by higher income countries, the country compensates by admitting personnel from lower income countries. What is clear from this example is that unilateral flows in medical personnel from lower income countries to higher income countries are driven by market forces, but can be mitigated through bilateral agreements and by codes of conduct.

[15] The data were not collected between 2003 and 2006 because of an institutional change, which was revoked in 2006. See Statistics South Africa [2004, 2006].
[16] Features described below are generally applicable to the data for different years.

4. Saudi Arabia: A Constant but Reluctant Absorber

Saudi Arabia has been a favorite destination for Asian workers ever since oil was discovered in the country in the 1930s. As a spacious, resource-rich, but labor-poor country, except for the period of the Gulf War in 1991, Saudi Arabia has continuously attracted a large number of contract workers. Because of the small size of the Saudi population and the low labor participation ratio particularly for women, Saudi Arabia has generated a steady demand for the labor of foreign workers[17]. Medical services is one of several sectors that demonstrate Saudi Arabia's dependence on foreign manpower.

The data for medical personnel in Saudi Arabia are examined in detail below, but it is first necessary to take into account the structure of health institutions in Saudi Arabia. The main elements of this structure are displayed in Figure 10.

Health services in the Kingdom of Saudi Arabia are supplied by both the government and the private sector. In addition, the Saudi Red Crescent Society provides medical services for pilgrims going to Mecca. The scale of the private sector is fairly small. In the field of medicine in Saudi Arabia, the private sector plays only a small part and the main institution responsible for the provision of health services for Saudis is the government, in the form of the Ministry of Health. The Ministry supervises hospitals and health centers.

Figure 11 shows that there were gently rising trends in the total number of medical personnel working for the Kingdom throughout the 1990s. The trends reflect a steady but moderate growth in demand for medical personnel. By contrast, the growth in foreign physicians, nurses and other health personnel has been far more moderate, as is shown in Figure 12. We can therefore conclude that there has been an increase in the Saudi share of the medical personnel working in the Kingdom.. This is a result of policies that have placed a high priority on employment of Saudis over non-Saudis, known as "Saudization."

[17] A counteracting factor is the high fertility rate. The fertility rate defined as the number of infants per woman is 6.2 in Saudi Arabia, while the same figures are 4.1 for all Arab countries and 3.1 for all developing countries for 1995-2000 (Ramady [2005: 354]).

The Saudization policies date back to 1970 (Ramady [2005: 355]). However, so far as medical personnel were concerned, they had little effect until the mid-1980s. Even though considerable progress was made toward Saudization in the late 1990s, the Saudi share of medical personnel is still not very high. The ratio was 21.3 percent for physicians working in the kingdom in 2000-01[18], while the ratios for nurses and allied health personnel were 19.3 percent and 45.9 percent respectively. Data series covering longer periods are available, but only for "medical personnel" working for the Ministry of Health (see Figure 10). Since the ministry is the central body for the provision of health services in the Kingdom and since medical personnel working for the ministry account for roughly a half of the total medical personnel working in the Kingdom irrespective of year and occupation, investigation of the data for the Ministry's medical personnel can be taken as providing an accurate picture of overall trends.

The available time series for the number of medical personnel employed by the Ministry of Health runs from the year 1959/60 (Figures 13-15). The number of physicians increased geometrically until the mid-1980s, after which the growth rate declined to almost zero by the beginning of the new millennium (Figure 13). Numbers of medical personnel employed by nationality became available only in 1970/71. To begin with, most physicians were foreigners, and non-Saudi physicians replaced Saudis only gradually, a trend that ran contrary to the Saudization policy. The Saudi share of physicians employed by the ministry amounted to only 20.7 percent in 2000/01.

The overall features of the trends in the number of nurses employed over time by the Ministry are qualitatively the same as those with respect to physicians (Figure 14). The rapid increase in the number of nurses came to the end in the mid-1980s, and the growth rate diminished towards zero by 2000/01. Between 1970/71 and 1983/84, most of the increment in the number of nurses reflected the employment of non-Saudis, again contrary to the Saudization policy. After the mid-1980s, the share of Saudi nurses employed by the Ministry of Health increased, and reached

[18] All the statistics for Saudi Arabia in this paper are based on the Hegira calendar. The hegira calendar starts on the day that the Prophet Mohammed migrated from Mecca to Medina. The Hegira year has 354 days divided into 12 lunar months (Kingdom of Saudi Arabia [2004: 15]).

28.3 percent in 2000/01.

The numbers of allied health personnel have grown more steadily throughout the sample period than those of physicians and nurses (Figure 15). Allied health personnel comprise medical personnel other than physicians and nurses. New occupational categories in medical services such as therapists and psychiatrists seem to have been added, perhaps explaining the faster growth in the number of allied health personnel. Saudization seems to have succeeded so far as this category of health worker is concerned, and the number of non-Saudi allied health personnel has been stable since the end of the 1980s at about 10,000. Meanwhile, the number of Saudi allied health personnel has steadily grown, although in the late 1990s, the share of Saudis in allied health personnel barely exceeded 50 percent[19].

Viewed in historical terms, the share of Saudis in the number of medical personnel employed in Saudi Arabia has followed a long-term pattern (Figure 16). In terms of the Saudi ratio for physicians, there has been a shallow U-shaped trend that bottomed out in 1979/80. In 1970/71 only 12.8 percent of the physicians working in the Kingdom were Saudi. The percentage thereafter declined further, probably reflecting the accumulation of abundant financial resources following hikes in the oil price. Since then, the Saudization ratio has increased steadily and by 2000/01, amounted to 20.7 percent. Even so, approximately four out of five doctors working for the Kingdom of Saudi Arabia were foreigners in 2000/01. The Saudization ratios for nurses and for allied health personnel show initial medium-run decreases and subsequent medium-run increases, though the two ratios are distinct from each other.

Another kind of structural change is apparent in the long-run trend in the Saudization ratio of nurses. The number of female nurses increased in the 1970s and a majority of them came from abroad.

According to the *Statistical Yearbook* published by the Central Department of Statistics, in the early 1960s, there were as many males as females working as nurses for the Ministry of Health. In the late 1960s the number of male nurses was double that of female nurses.

[19] Note that it was easier to impose Saudization on the government sector than on the private sector (Ramady [2005: 358]). In general, the share of Saudi workers is lower in the private sector.

As is shown in Figure 17, a structural change in the composition of nurses occurred in the 1970s. The Figure shows the number of nurses by sex and origin between 1970/71 and 1980/81[20]. In 1970/71 there were only 60 female nurses in Saudi Arabia and the number of non-Saudi female nurses was smaller than that of non-Saudi male nurses. Throughout the 1970s the number of male nurses, irrespective of origin, remained stable at around a thousand persons, while the number of Saudi female nurses increased slightly. By contrast, the number of non-Saudi female nurses increased dramatically. The number of non-Saudi female nurses grew by more than 800 percent between 1970/71 and 1980/81. In other words, the development of medical services in Saudi Arabia during the 1970s involved a wholesale recruitment of female nurses, leading to feminization of the profession.

To sum up, the oil price hike in 1973 enabled Saudi Arabia to hire more workers from abroad than hitherto. Medical doctors and female nurses were introduced on a substantial scale and foreigners came to assume a virtually dominant position in the medical personnel of the country in the 1980s. Since then, Saudization has gradually come into effect, and the share of Saudi medical personnel has increased, though a great majority of the physicians and nurses are still non-Saudi. In any event, Saudi Arabia had its own reasons for manipulating the number of medical personnel it employed, and requested source countries to adjust to its policy changes.

5. United Kingdom: An Ethical and Deliberate Employer

The United Kingdom finds it difficult to secure a sufficient number of medical personnel irrespective of job category. The problem is structural in the sense that it stems from the British population pyramid, which is skewed towards older people. The rise of the nuclear family is another trend that is generating a greater demand for hospital medical services. These factors have facilitated the international recruitment of medical personnel by the state-run National Health Service. A substantial wage gap between the United Kingdom and low income countries has caused a massive

[20] The data of the number of nurses by sex and origin is available only for 1970/71-1980/81 in the *Statistical Yearbook*. Precisely speaking, “female nurses” include midwives and their assistants, too.

flow of medical personnel from developing countries to Britain (Bach [2003: 21-24], Yamada [2004]).

In 1997, Nelson Mandela criticized the United Kingdom for recruiting nurses from South Africa, and argued that British policy was threatening to cause a shortage of nursing staff which would put at risk the health of South African nationals. Since then, the British government's Department of Health has taken two approaches to address the criticism. One of these approaches has been to preserve ethical standards by establishing codes of conduct for employers and agents, and the other has been to sign bilateral agreements with the governments of the source countries (Bach [2003]).

In response to various criticisms including that of Mandela, in 1999 the Department of Health issued guidelines to employers in the public sector, advising them to refrain from "actively" recruiting nurses from developing countries that are suffering from shortages of nursing staff. South Africa and the Caribbean were listed as territories from which recruitment should be avoided. In the terminology employed by the government, "actively" also rules out the employment of unsolicited applicants (Bach [2003: 22]). As long as employers did not actively solicit immigration and did not recruit nurses from unlisted countries, they were held not to blame. It should be noted that the private sector lay outside the scope of these guidelines.

In 2001, a new code of practice was issued by the Department. The new code suggests that employers should not target developing countries for the recruitment of medical personnel. A difference between the guidelines issued in 1999 and 2001 is that in the 2001 guidelines, employers in the private sector were also strongly encouraged to sign the code.

In July 2006 the United Kingdom issued a policy that resembled the code of practice of 2001, but with a different goal. The government has decided not to issue work permits to newly qualified foreign nurses unless they are employed for some specific jobs that are not easily filled by nurses trained in the European Economic Area or in the United Kingdom. The main purpose of this policy change is not to address a shortage in medical personnel in developing countries, but to help homegrown nurses to get a job. In this regard, it should be noted that only 20 percent of newly

graduating nurses in the United Kingdom found jobs in summer of 2006 (Hall [2006]).

The second approach to address criticisms of British recruitment policy is reflected in the bilateral agreements that Britain has signed with the developing countries from which a medical personnel have emigrated to the United Kingdom. In this connection, Britain has concluded agreements with several countries including Egypt, India, the Philippines, Spain, and South Africa (Bach [2003: 23], WHO [2006: 104]). The agreement with the Philippines was concluded between the British Department of Health and the Philippine Overseas Employment Administration (POEA) in 2002. The agreement amongst other things sets out the standard rates of various fees, such as the cost of the initial application for registration as a nurse in the United Kingdom, the entry visa application cost, the processing fee for employers to pay the POEA, and the contribution to the Workers' Welfare Fund. This means that unscrupulous charges are less likely to be imposed on immigrant Filipino workers entering the UK (Bach [2003: 23-24]).

The UK's bilateral agreement with South Africa, signed in 2003, recognizes an unusual feature of the South African situation in that in the case of South Africa, not only outflow but also inflow of medical personnel is substantial. Thus, the agreement stresses the necessity of mutual exchange of information and expertise, and covers UK's health professionals emigrating to South Africa, even though the scale of such emigration is far less than the flow in the opposite direction. The agreement also covers the training and study needed for a health professional of one country to undertake work in the other country. Behind this scheme lies the notion that after the exchange period, the professional returns to her/his home country, and her/his post is kept open for her/him to reoccupy without difficulty (WHO [2006: 104]). As mentioned in the section on South Africa, the effectiveness of this agreement was evaluated by the two countries in April 2006, and both countries' evaluations were favorable to a continued implementation of the agreement.

As a result of changes in British policy, the composition of medical personnel by source country has changed substantially. Figure 18 shows the number of nurses coming into Britain by origin. It is apparent that since South Africa and the West Indies were included in the list of source areas from which active recruitment of medical personnel should be avoided, inflow from the

Philippines and India has grown as a result. After the conclusion of the bilateral agreement between the kingdom and the Philippines in 2002, the number of nurses coming from the Philippines seems to have been strictly controlled and has decreased up to the time of writing.

Concluding Remarks

All four countries presented here as case studies are ambivalent about the international migration of medical personnel. Source countries such as the Philippines and South Africa welcome the substantial amount of earnings raised and returned as foreign currency remittances by overseas medical professionals. At the same time, both countries worry about the damaging effects of the outflow on their own national health systems. Meanwhile, the host countries are not entirely happy at the prospect of foreign professionals becoming dominant in domestic health sectors which are of crucial importance for the welfare of their nationals. However, they desperately need help from abroad to sustain medical employment and to make their health sectors work.

This intrinsic ambivalence makes both source and destination countries lurch from one policy to another. At present, however, source countries seem to be more vulnerable to policy changes by their counterparts, partly because their average per capita incomes are lower than those of the destination countries. On the one hand there are only a few high income countries which actively recruit medical personnel from abroad; on the other there are potentially many developing countries whose doctors and nurses are willing to work abroad even if their qualifications are not applicable in the destination country.

As described in the main text, the destination countries change their policies from time to time. Lenient and open policies may be quickly followed by restrictive policies according to changing economic and political circumstances in the destination countries. The United Kingdom, discussed above, is a typical example. Saudi Arabia follows an eclectic immigration policy on health professionals because of its high dependence on foreign medical professionals and its nationalization policy which aims to correct the dependence but which is taking effect very slowly. In most cases the

bargaining power of source countries is so weak that they find themselves obliged to adjust to changes in demand for medical personnel generated in destination countries. As a result even the Philippines, one of the most important suppliers of medical personnel in the world, faces large and unpredictable variations in demand over time. Few ordinary source countries can behave as boldly towards destination countries as South Africa has done. The general tendency is for demands generated in major destination countries to determine the international allocation of medical personnel at least in the short run, and source countries have had no alternative but to respond accordingly.

References

Abella, Manolo I.; and Maria Alcestis Abrera-Mangahas [1997], *Sending Workers Abroad: A Manual for Low- and Middle-Income Countries*, Geneva: International Labour Office.

Achacoso, Tomas D. [1987], "Market Development and Organizational Change in the Field of Overseas Employment Administration: The Philippine Experience," mimeographed.

Ahmad, Omar B. [2005], "Managing Medical Migration from Poor Countries," *British Medical Journal*, Vol. 331, July 2, pp. 43-45.

Bach, Stephen [2004], "Migration Patterns of Physicians and Nurses: Still the Same Story?" *Bulletin of the World Health Organization*, Vol. 82, No. 8, August, pp. 624-625.

Beine, Michel; Frederic Docquier; and Hillel Rapoport [2001], "Brain Drain and Economic Growth: Theory and Evidence," *Journal of Development Economics*, Vol. 64, No. 1, February, pp. 275-289.

Brown, Mercy; David Kaplan; and Jean-Baptiste Meyer [2002], "The Brain Drain: An Outline of Skilled Emigration from South Africa," in David A. McDonald and Jonathan Crush eds., *Destinations Unknown: Perspectives on the Brain Drain in Southern Africa*, Pretoria: Africa Institute of South Africa, pp. 99-112.

Catholic Institute for International Relations [1987], *The Labour Trade: Filipino Migrant Workers Around the World*, Manila: Friends of Filipino Migrant Workers, Inc. (KAIBIGAN) and National Secretariat for Social Action (NASSA).

Chalamwong, Yongyuth [2005], "The Migration of Highly Skilled Asian Workers to OECD Member Countries and Its Effects on Economic Development in East Asia," in Kiichiro Fukasaku, Masahiro Kawai, Michael G. Plummer, and Alexandra Trzeciak-Duval eds., *Policy Coherence Towards East Asia: Development Challenges for OECD Countries*, Paris: Organisation for Economic Cooperation and Development (OECD).

Dräger, Sigrid; Gulin Gedik; and Mario R. Dal Poz [2006], "Health Workforce Issues and the Global Fund to Fight AIDS, Tuberculosis and Malaria: An Analytical Review," *Human Resources for*

Health, Vol. 4, Issue 23 (http://www.human-resources-health.com/content/4/1/23).

Economist [2005], "African Migration: Home, Sweet Home - For Some," August 13, p. 37-38.

International Labour Organisation (ILO) [1988], *Agenda for Policy: Asian Migration Project*, Bangkok: ILO.

Kahn, Michael; William Blankley; Resigan Maharajh; Thomas E. Pogue; Vijay Reddy; Gabriel Cele; and Marissa du Toit [2004], *Flight of the Flamingos: A Study on the Mobility of R&D Workers*, Cape Town: Human Sciences Research Council Publishers.

Kapur, Davesh; and John McHale [2005], *Give Us Your Best and Brightest: The Global Hunt for Talent and Its Impact on the Developing World*, Washington, D.C.: Center for Global Development.

Kingdom of Saudi Arabia, Ministry of Economy and Planning, Central Department of Statistics [2004], *Statistical Yearbook, 2003*, Issue 39, Kingdom of Saudi Arabia.

Mantashe, Gwede [2006], "Comment: Universities Drawn into Skills Development Scheme," *Mail and Guardian* (South Africa), November 10-16, p. 2.

Mejia, Alfonso [1978], "Migration of Physicians and Nurses: A World Wide Picture," *International Journal of Epidemiology*, Vol. 7, No. 3, pp. 207-215.

Mine, Yoichi [1996], Minami Afurika: *Niji no Kunie no Ayumi* (in Japanese: South Africa: Towards the Rainbow Nation), Tokyo: Iwanami-Shoten.

Mountford, A. [1997], "Can a Brain Drain be Good for Growth in the Source Economy?" *Journal of Development Economics*, Vol. 53, No. 2, pp. 287-303.

National Department of Health, Republic of South Africa [2006], "Policy: Recruitment and Employment of Foreign Health Professionals in the Republic of South Africa," April 1, Pretoria: National Department of Health.

Padarath, Ashnie; Antoinette Ntuli; and Lee Berthiaume [2004], "Human Resources," in Petrida Ijumba; Candy Day; and Antoinette Ntuli eds., *South African Health Review 2003/04*, Durban: Health Systems Trust, Chapter 22, pp. 299-315.

Paton, Carol [2006], "Terminally Ill: Public Hospitals are Missing a Third of the Doctors They

Need," *Financial Mail* (South Africa), April 14, pp. 16-19.

Physicians for Human Rights [2004], *An Action Plan to Prevent Brain Drain: Building Equitable Health Systems in Africa*, Boston: Physicians for Human Rights.

Ramady, Mohamed A. [2005], *The Saudi Arabian Economy: Policies, Achievements and Challenges*, New York: Springer.

Sagalla, Lambert B. [1988], "Study on Overseas Contract Workers (Part 1)," *CB Review* (the Central Bank of the Philippines), Vol. 40, No. 7, July, pp. 20-26.

Simelane, Sandile E. [1999], "Trend in International Migration: Migration among Professionals, Semi-professionals and Miners in South Africa, 1970-1997," Paper presented at the Annual Conference of the Demographic Association of Southern Africa (DEMSA) held at Saldanha Bay, Western Cape, 5-7 July 1999.

Statistics South Africa [2004], *Statistical Release: Tourism and Migration*, Pretoria: Statistics South Africa, April.

Statistics South Africa [2006], *Statistical Release: Tourism and Migration*, Pretoria: Statistics South Africa, August.

United Nations Economic and Social Commission for Asia and the Pacific (UNESCAP) [1987], *International Labour Migration and Remittances between the Developing EACAP Countries and the Middle East: Trends, Issues and Policies*, Development Papers No. 6, Bangkok: UNESCAP.

World Bank [2006a], *Global Economic Prospects: Economic Implications of Remittances and Migration*, Washington, D.C.: World Bank.

World Bank [2006b], *2006 World Development Indicators*, CD-ROM, Washington, D.C.: World Bank.

World Health Organization (WHO) [2004], *Addressing Africa's Health Workforce Crisis: An Avenue for Action*, Abuja, Nigeria: WHO.

World Health Organization (WHO) [2006], *The World Health Report 2006: Working Together for Health*, Geneva, WHO.

Yamada, Ryoichi [2004], "Gurobarizeshon to Kango-Roudouryoku-Ido (in Japanese: Globalization

and international migration of nurses),” *Nagoya-Tanki-Daigaku-Kenkyukiyo*, Vol. 42, pp. 159-176.

Yamada, Ryoichi [2006], “Filipin Kango-Roudouryoku no Gurobaruna Ido to Sono Kadai (in Japanese: Global Movement of Filipino Nurses and Challenges to It),” *Business Labor Trend* (Japan), No. 373, April, pp. 16-21.

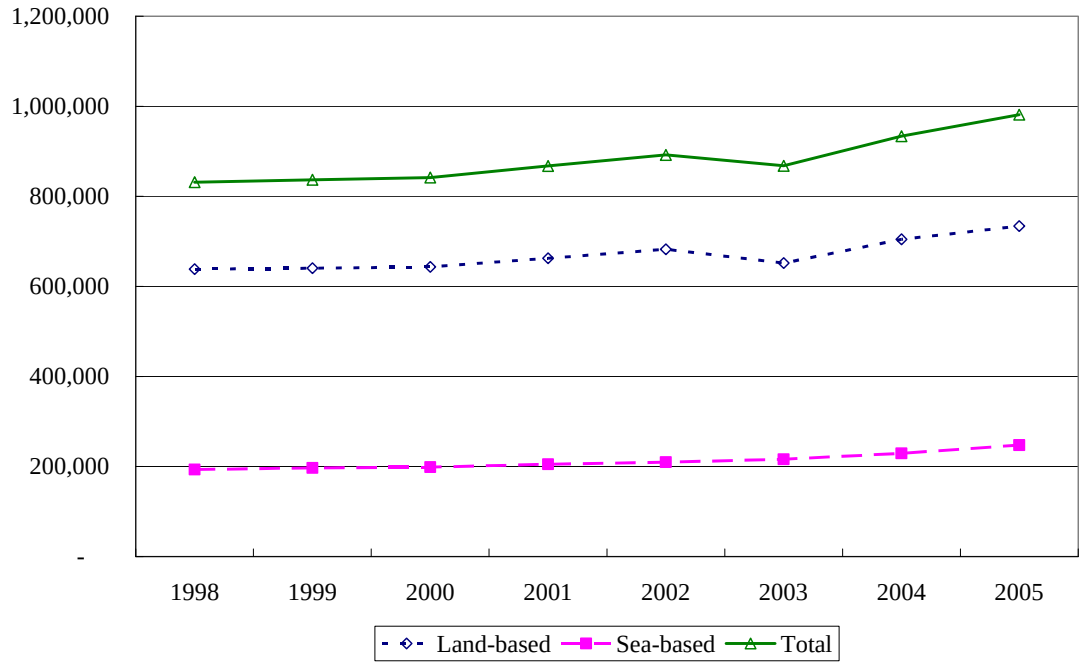
Yamagata, Tatsufumi [2007], “Securing Medical Personnel: Cases of Two Source Countries and Two Destination Countries,” in Hiroko Uchimura ed., *Health Service and Poverty: Making Health Services More Accessible to the Poor*, Joint Research Program Series No. 142, Chiba, Japan: Institute of Developing Economies, pp. 113-142.

Table 1. Indicators on Resources for Medical Services by Region

	Physicians per 1000 people		Hospital beds per 1000 people		Births attended by skilled health staff (%)	
East and South Asia	0.895	(23)	2.710	(15)	57.4	(22)
Commonwealth of Independent States	3.366	(11)	7.164	(11)	93.6	(9)
Europe	3.010	(35)	5.792	(34)	99.2	(17)
Middle East and North Africa	1.479	(20)	2.379	(19)	80.1	(11)
Sub-Saharan Africa	0.204	(46)	0.907	(3)	52.0	(43)
Canada and USA	2.200	(2)	3.500	(2)	98.0	(1)
Latin America and Caribbean	1.550	(20)	2.410	(31)	85.3	(27)
Oceania	1.123	(7)	4.014	(7)	82.2	(5)

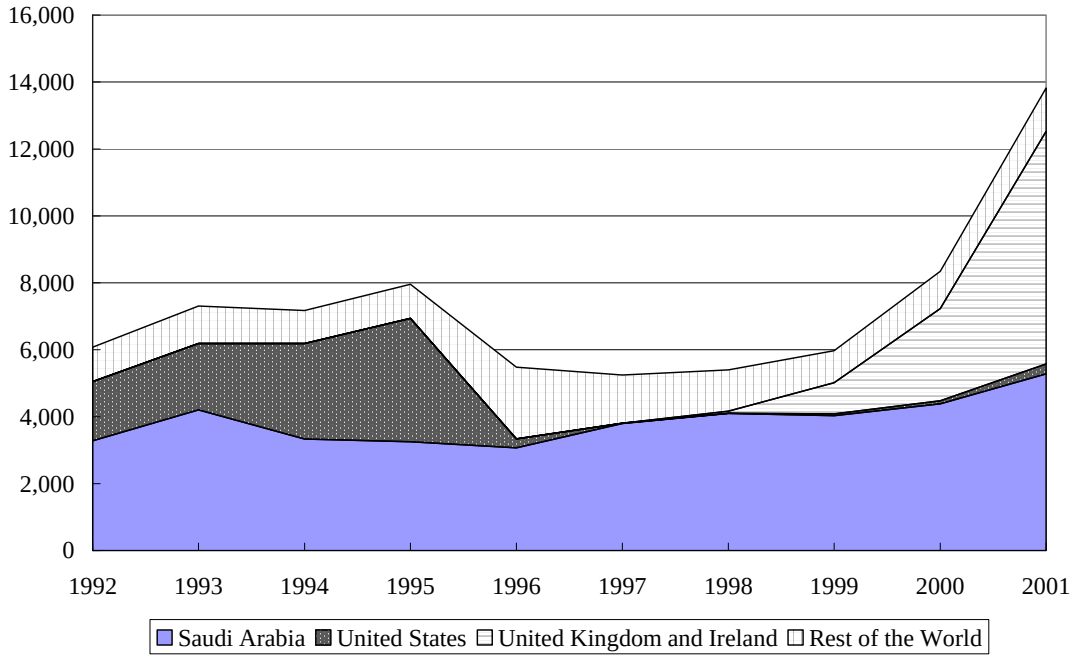
Note: The figures are regional averages of variables in the latest year when the value is available in the range of years between 2000 and 2004. The numbers in parentheses indicate the sample size for each average.
Source: World Bank [2006b].

Figure 1. Annual outflow of Filipino workers



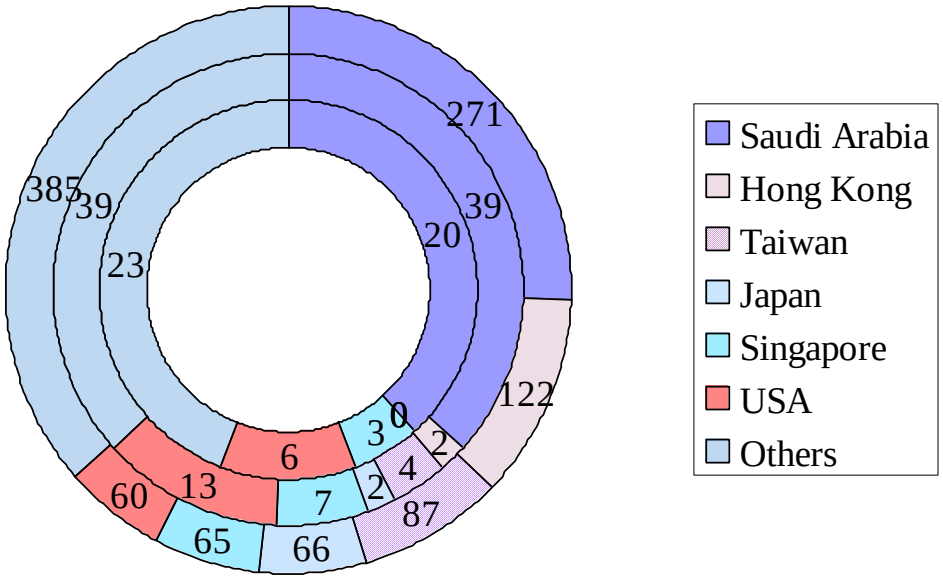
Source: Website of the Philippine Overseas Employment Administration (POEA): (http://www.poea.gov.ph/stats/2005deployment.xls).

Figure 2. Outflow of temporarily migrating Filipino nurses (Unit: Person)



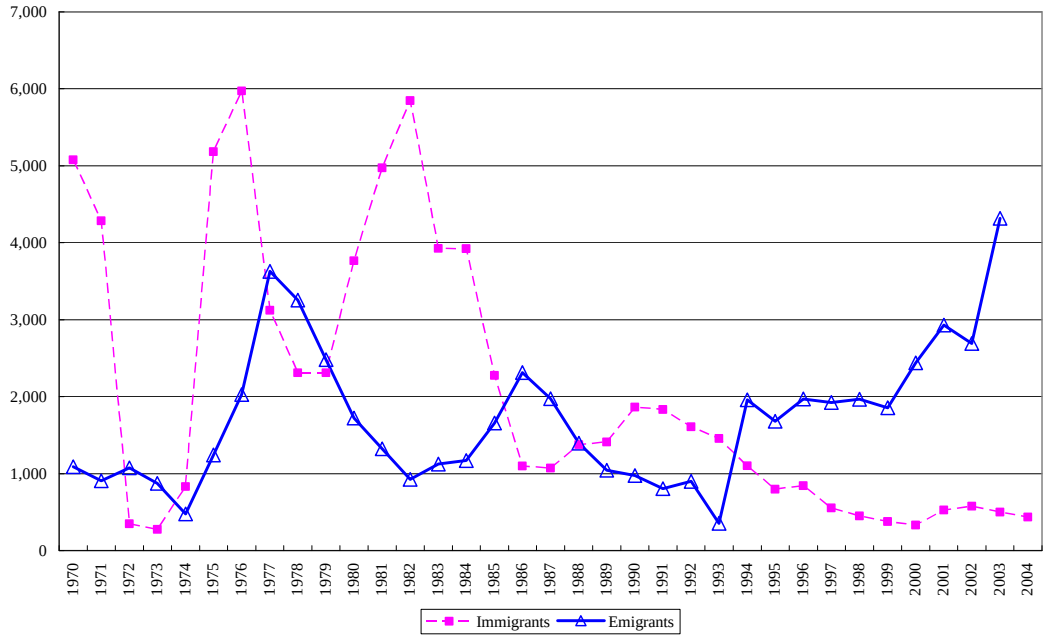
Original Data: Bureau of Labor and Employment Statistics, the Philippines.
Source: Chalamwong [2005], Table 12.16.

Figure 3. Number of Overseas Filipinos by Destination, 2002 (Unit: thousand)
(Outer band: Total; Middle band: Professionals; Inner band: Life Science and Health Professionals)



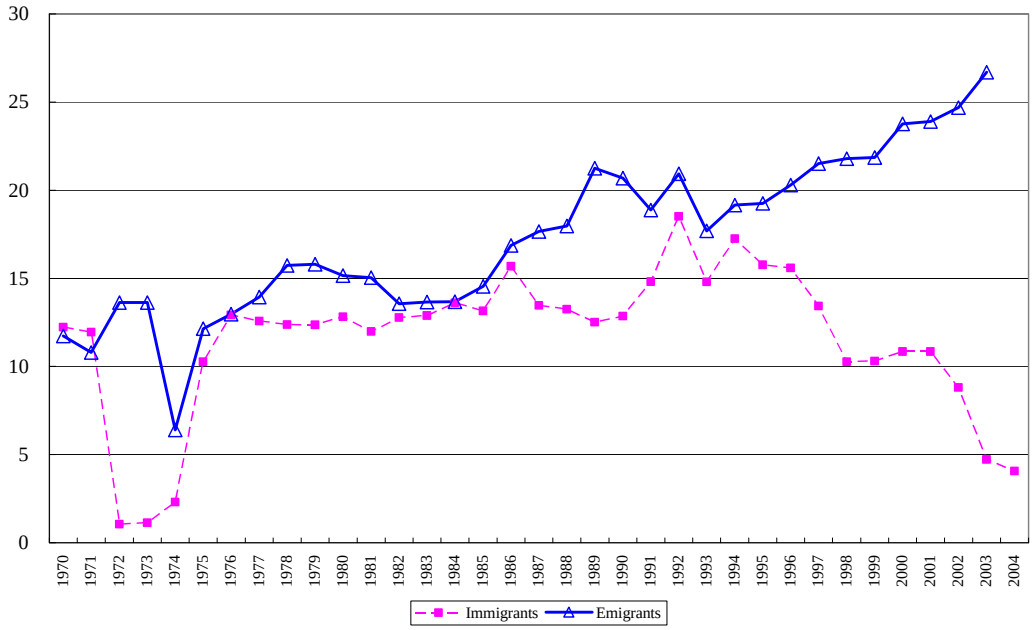
Source: National Statistics Office (NSO), *2002 Survey on Overseas Filipinos*, Manila: NSO, 2003.

Figure 4. South Africa: trends in immigration and emigration (Unit: person)



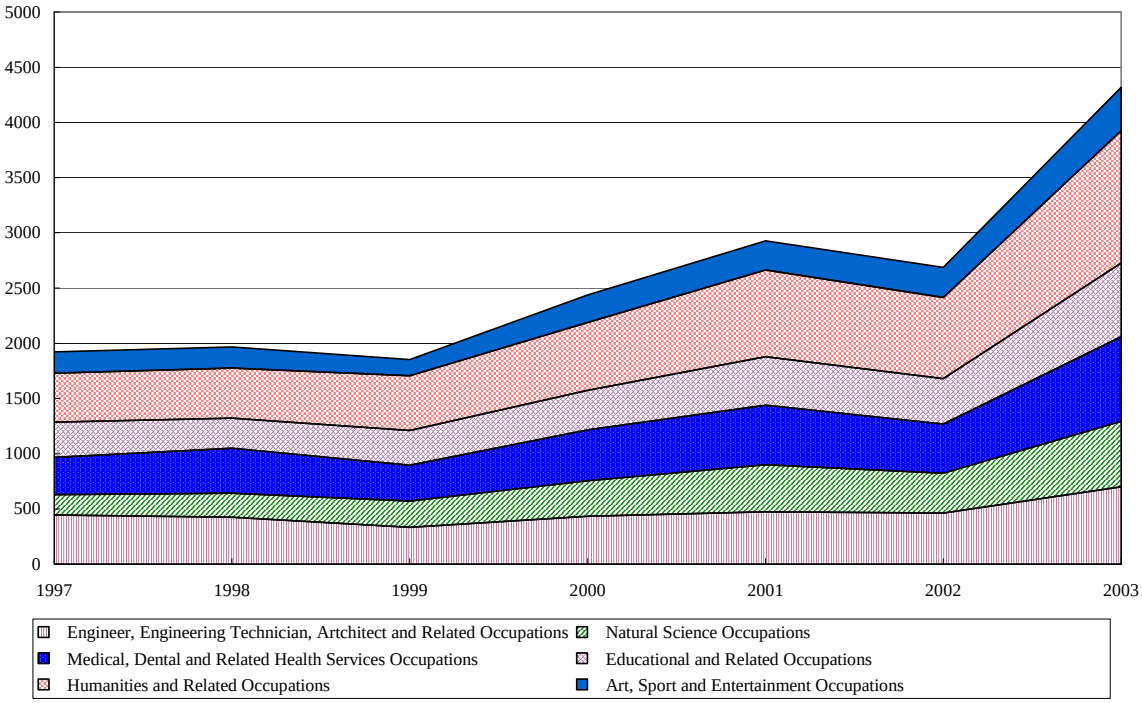
Source: Simelane [1999]; Statistics South Africa (SSA), *Documented Migration*, Pretoria: SSA, various issues; SSA, *Bulletin of Statistics*, Vol. 39, No. 4, December 2005.

Figure 5. Trends in ratio of professionals and semi-professionals to total migration (Unit: %)



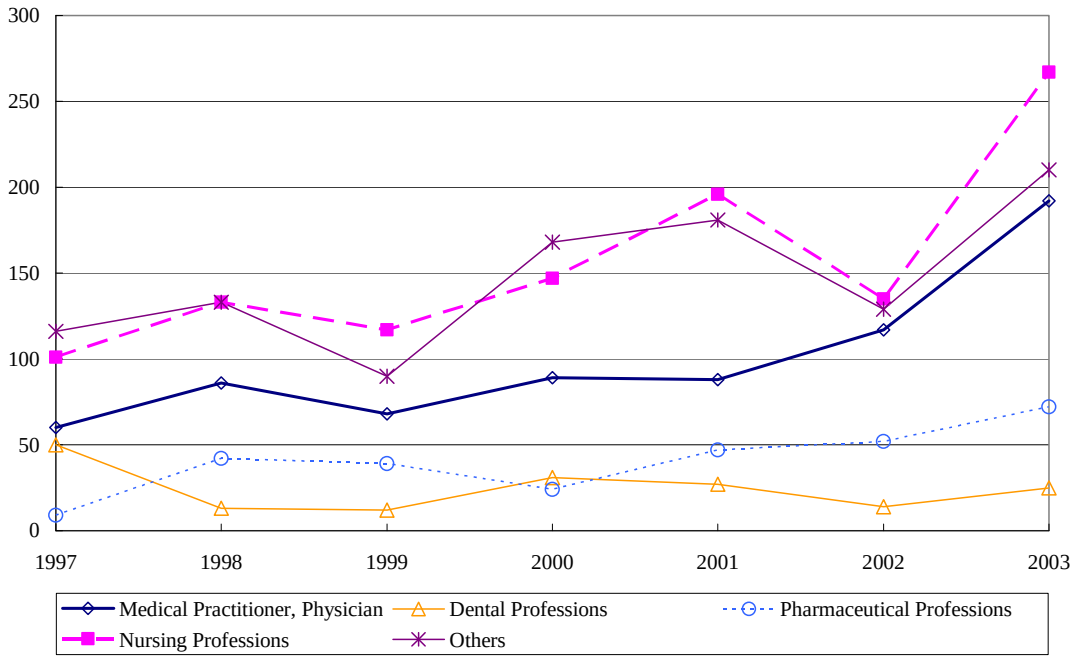
Source: Statistics South Africa (SSA), *Documented Migration*, Pretoria: SSA, various issues.

Figure 6. Structure of Emigrating "Professional and Semi-professional and Technical" Occupations



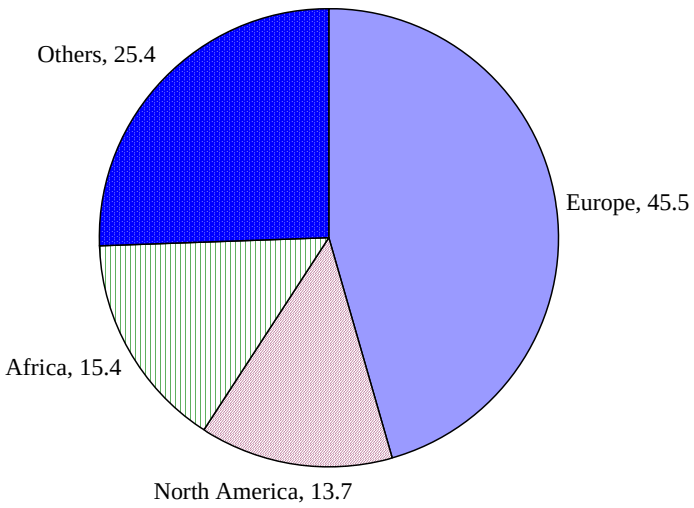
Source: The same as Figure 5.

Figure 7. Outflow of Medical Personnel from South Africa (Unit: person)



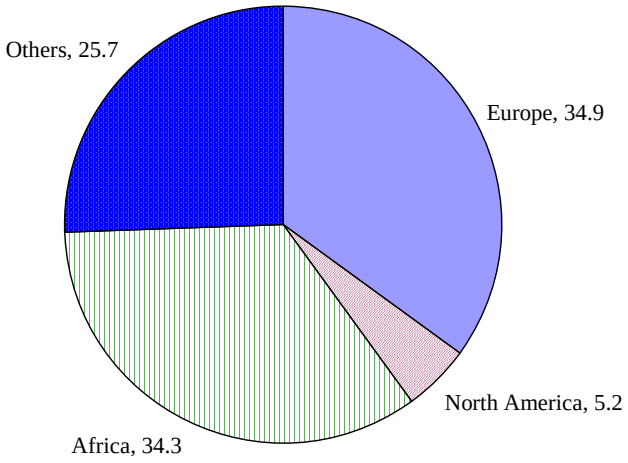
Source: The same as Figure 5.

Figure 8. Outflow of Members of Professional and Semi-professional and Technical Occupations by Destination in 2003 (Unit: %)



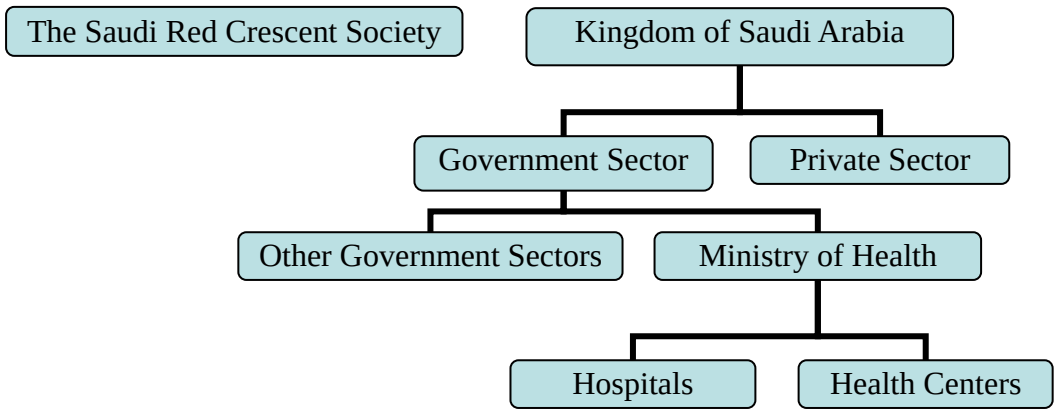
Source: Statistics South Africa (SSA), *Documented Migration, 2003*, Pretoria: SSA, 2005.

Figure 9. Distribution in Inflow of Professional and Semi-professional and Technical Occupations by Origin in 2003 (Unit: %)



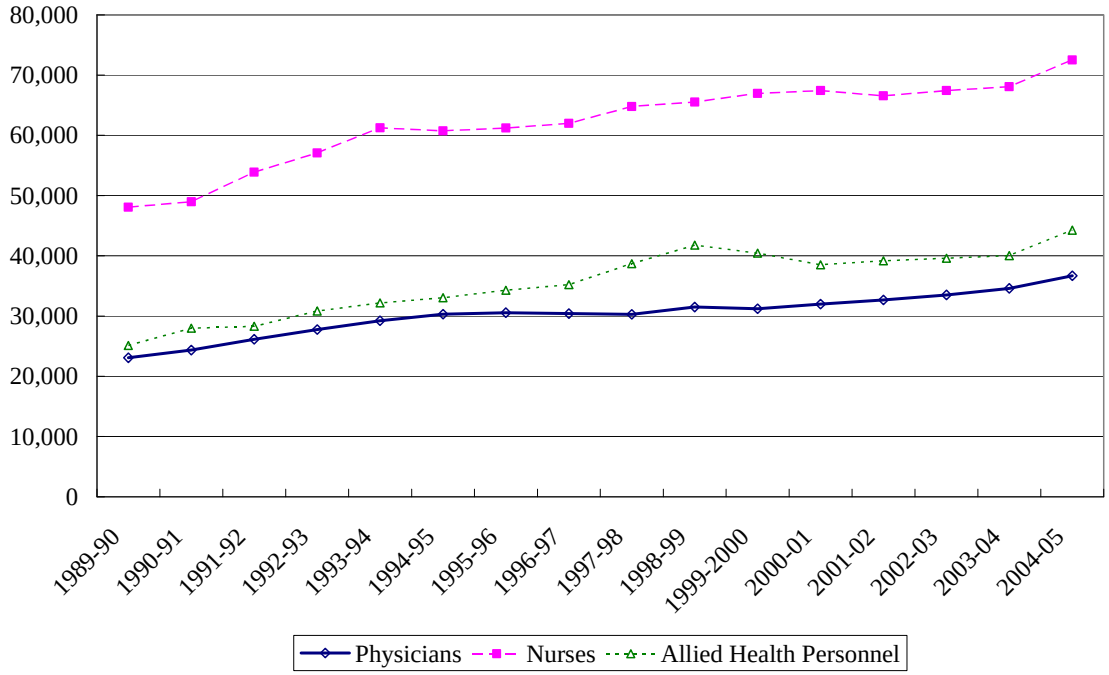
Source: The same as Figure 8.

Figure 10. Structure of Health Related Institutions in Saudi Arabia



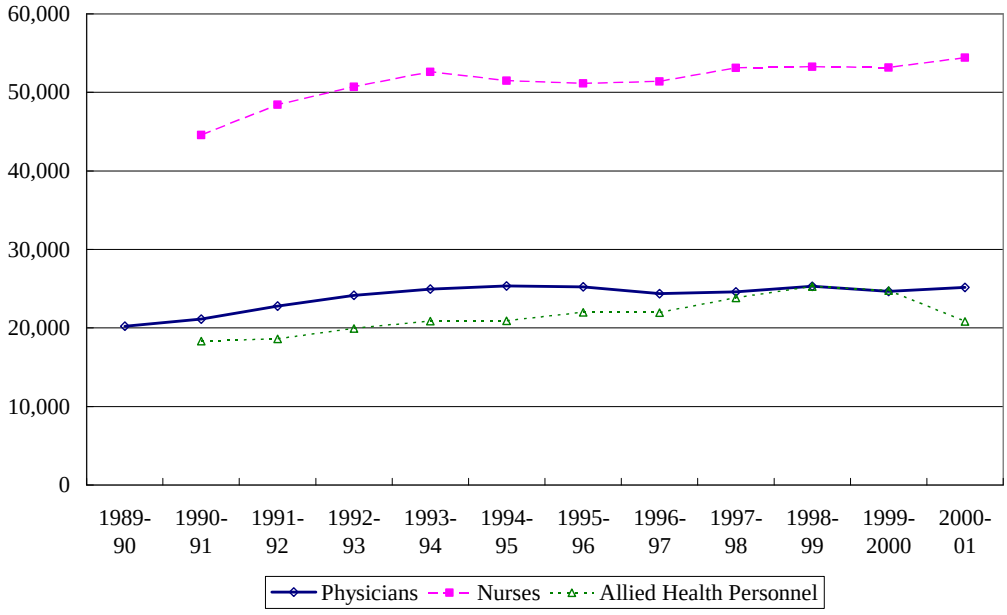
Note: This figure is drawn according to the description of the system of health related institutions in Chapter 4 of Kingdom of Saudi Arabia [2004].

Figure 11. Trends in the Number of Medical Personnel Working for the Kingdom of Saudi Arabia (Unit: person)



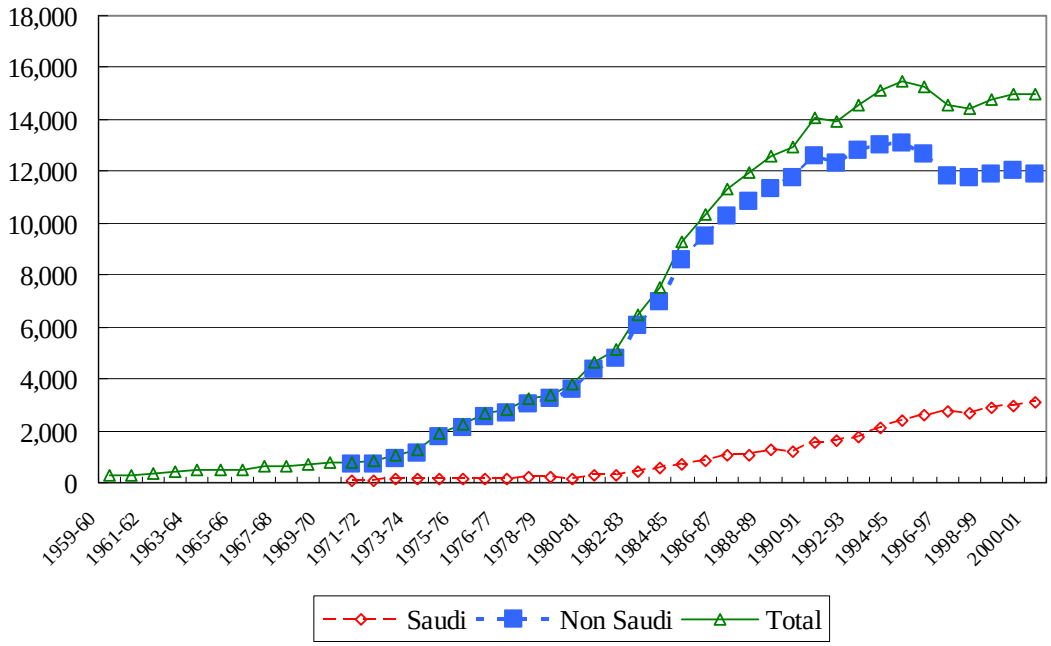
Source: (1989/90-2000/01) Kingdom of Saudi Arabia, Ministry of Economy and Planning, Central Department of Statistics, *Statistical Yearbook*, Various years; (2001/02-2004/05) SAMA [2005].

Figure 12. Trends in the Number of Non-Saudi Medical Personnel Working for the Kingdom of Saudi Arabia (Unit: person)



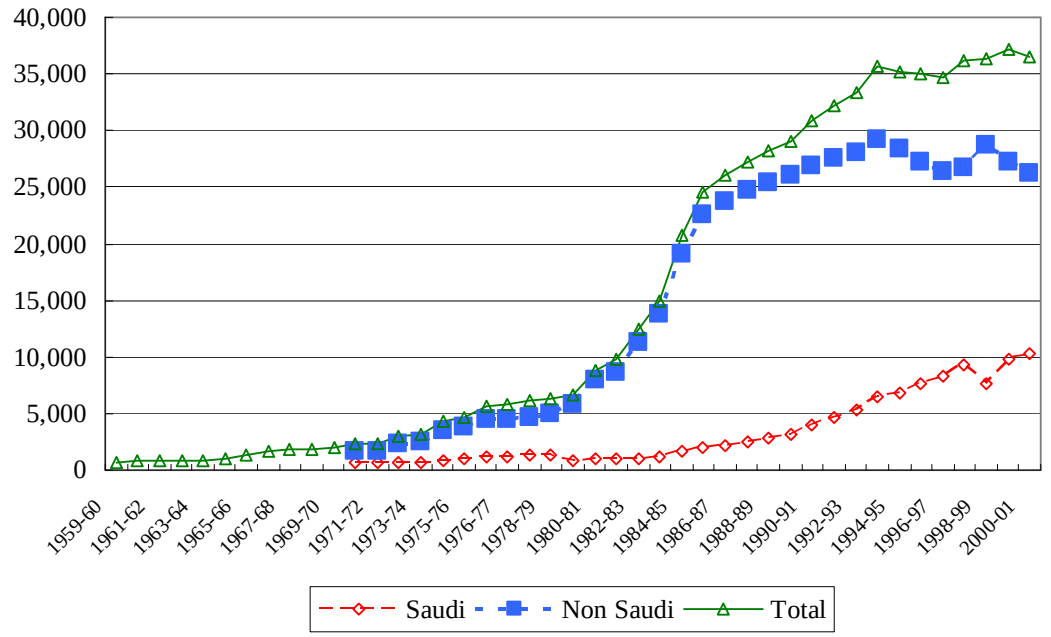
Source: Kingdom of Saudi Arabia, Ministry of Economy and Planning, Central Department of Statistics, *Statistical Yearbook*, Various years

Figure 13. Trends in the Number of Physicians Working for the Ministry of Health (Unit: person)



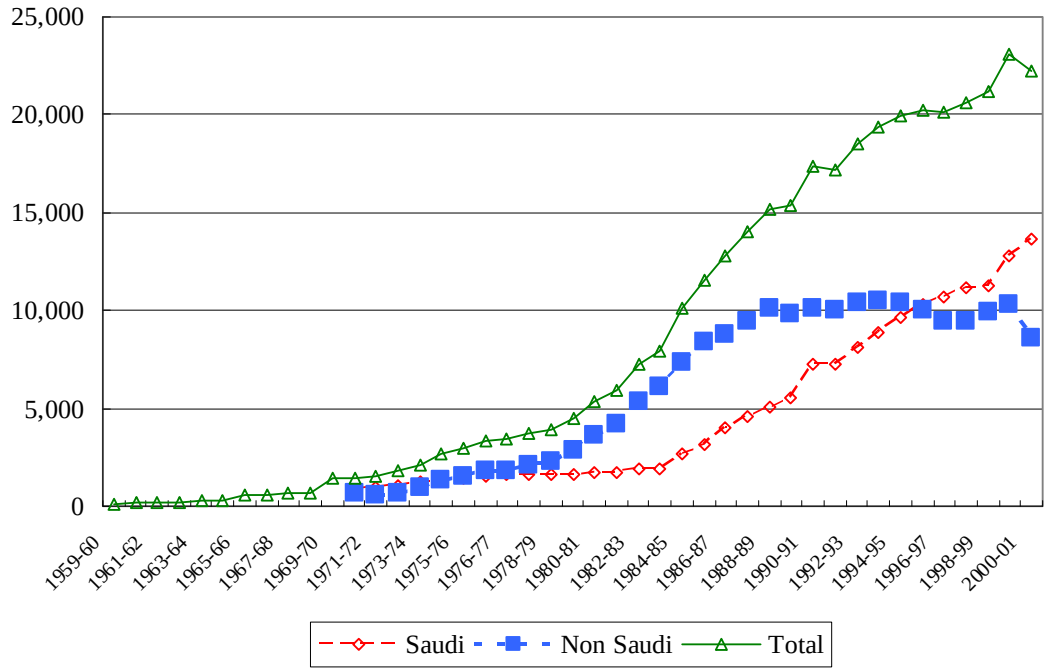
Source: The same as Figure 12.

Figure 14. Trends in the Number of Nurses Working for the Ministry of Health (Unit: person)



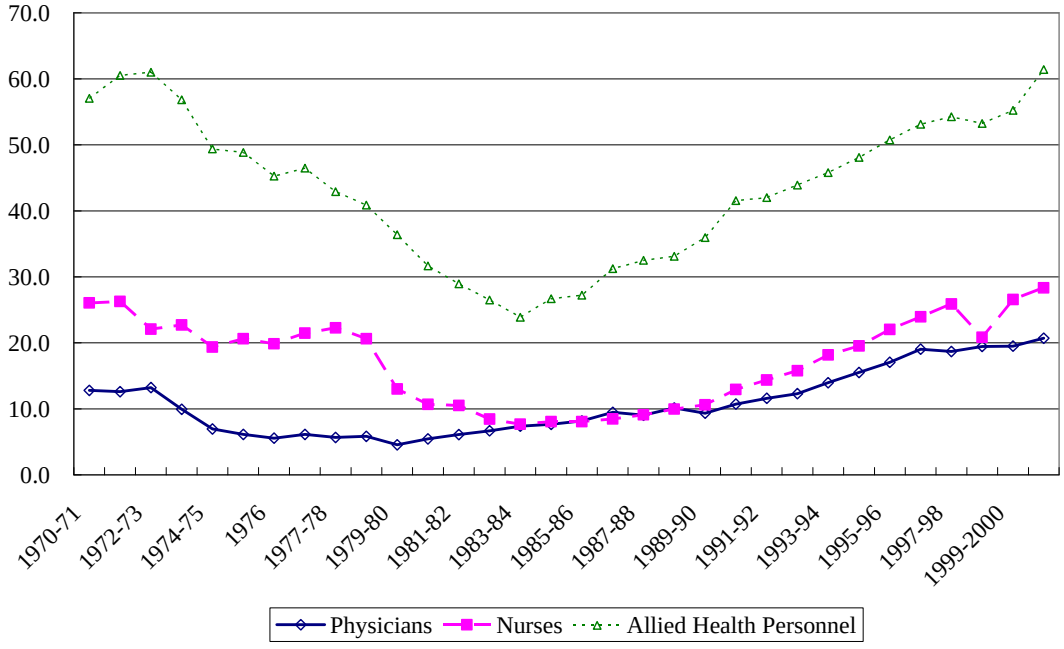
Source: The same as Figure 12.

Figure 15. Trends in the Number of Allied Health Personnel Working for the Ministry of Health (Unit: person)



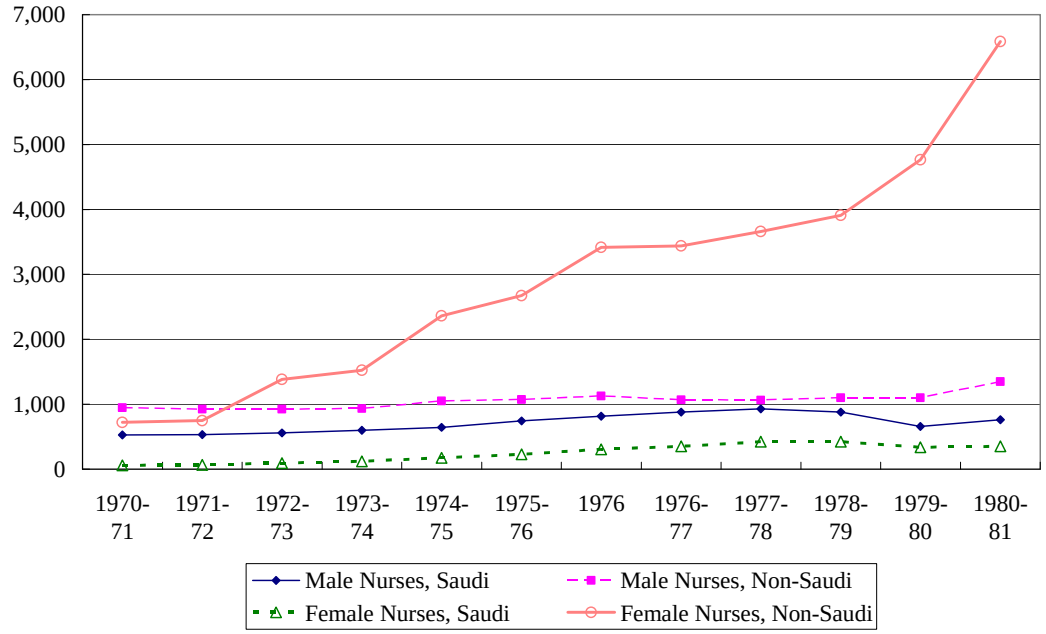
Source: The same as Figure 12.

Figure 16. Ratios of Saudi Personnel Working for the Ministry of Health (Unit: %)



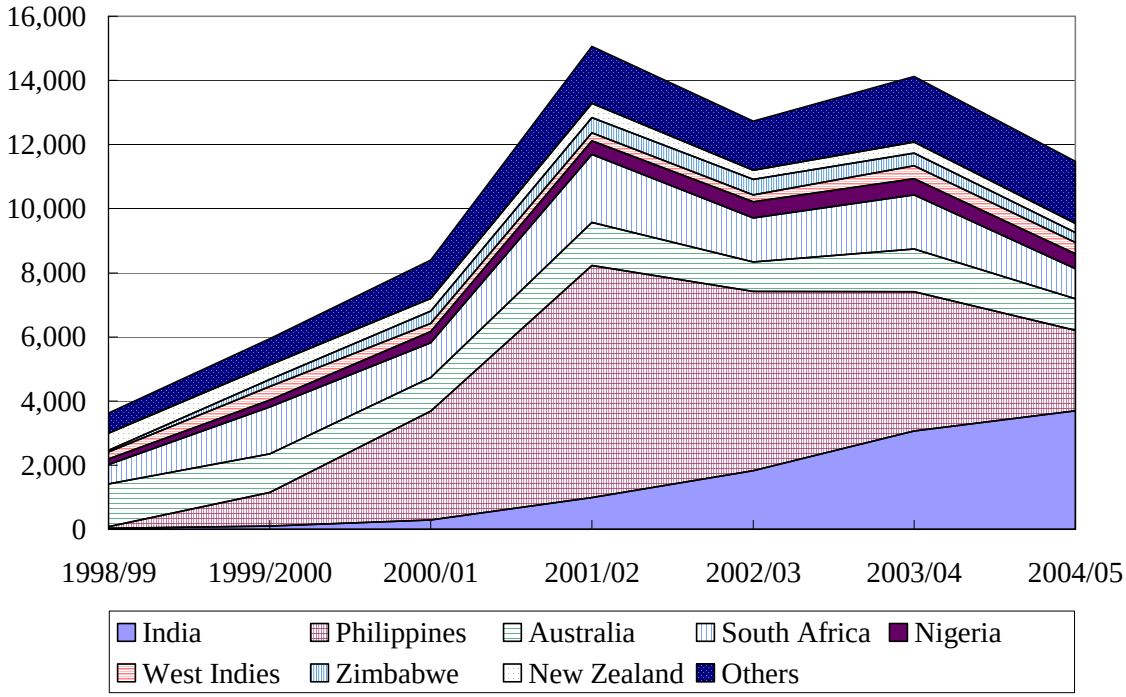
Source: The same as Figure 12.

Figure 17. Number of Nurses Working for the Ministry of Health by Sex and Nationality (Unit: person)



Source: The same as Figure 12.

Figure 18. Inflow of Nurses into the United Kingdom by Origin (Unit: person)



Source: The Nursing and Midwifery Council (NMC), *Statistical Analysis of the Register*, 1 April 2004 to 31 March 2005, London: NMC, August 2005.