International Labor Mobility: A Review of Trends, Fundamentals and Impacts

by

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Introduction

It is well known that today's economy is going through globalization and economic integration. An important aspect of this global knowledge economy is the emergence of increased migration. International mobility of labor extends the international mobility of goods and financial funds. The United Nations estimates that over 60 million people, or 1.2 percent of the world's population, are counted as worldwide immigrants (United Nations, 1989).

Since migration has been an important phenomenon in the world, many previous studies have investigated the economic impacts of migration. For instance, Borjas (1994) indicates that an assessment of the economic impact of immigration requires an understanding of the factors motivating persons in the source countries to emigrate and of the economic consequences of pursuing particular immigration policies. As a result, the economic impact of immigration will vary in time and in place, and can be either beneficial or harmful. Many studies have made great contributions to migration research, whereas most of them discuss from the viewpoint of the destination country. Indeed, the movement of labor is from one country to another. Both the receiving and originating sides have experienced many changes in trends, fundamentals driving migration and impacts of immigration.

In this paper, my discussion focuses on the international mobility of labor, including both originating and receiving sides. For this purpose, I first review the trends of migration, because there are historical evidences for the developing process

of international mobility of labor. Then I discuss the fundamentals driving migration, since those factors arouse different patterns and directions of international migration. Finally, I analyze the impacts of migration, since migrants have important economic and budgetary effects in both destination and source country.

The remainder of this paper is organized as follows. A brief introduction in category and definition of immigrants is presented in Section 1. Section 2 first reviews the trends of immigration in destination countries using different types of data, and then describes the trends of emigration over time in source countries. Section 3 discusses three different perspectives about fundamentals driving migration: "Push" and "Pull" theory, historical forces and prospective factors. Section 4 analyzes the impacts of migration in the destination and source country by focusing on the labor market. In Section 5, a brief conclusion is given.

I. Category and Definition of Immigrants

We start with category and definition of immigrants which is the basis for further discussion. Since migration policies are based on domestic considerations of receiving countries, the category and definition of immigrants vary across countries. Among all the receiving countries, the OECD countries[1] are those receiving most immigrants from all over the world. In this paper, the discussion about destination countries is mainly focus on the OECD countries.

1. Category of immigrants

Although the categories of immigrants are different among regions and periods, we can easily find five common categories of migration in OECD countries that is useful to distinguish: (1) family reunion, which allow spouse and close relatives of citizens to enter the country on a permanent basis; (2) visitor acceptance, which allow foreigners to stay temporarily for business and tourism purposes; (3) asylum seekers, which allow individuals who claim social and political persecution in their home country to apply for asylum; (4) skilled workers, which allow individuals to enter largely for the purpose of business and employment; (5) naturalization rules, which enable foreign citizens to get national citizenship.[2]

[1] OECD is the Organization for Economic Co-operation and Development which includes: United States, United Kingdom, European Union, Japan, Canada, Australia and New Zealand etc.

[2] The definitions were inspired from OECD (2001)

2. Definition of immigrants

Similar to categories, it is important to give an overall definition to immigrants for all receiving countries since the calculations of immigrants are based on different systems and sometimes inaccurate data collection.

Firstly, immigrants have different definition under different immigration systems. There are two main different immigration systems among destination countries: one system delivers mostly "temporary" permit whereas the other encourages "permanent" residency or settlement.[3] The "temporary" systems define the immigrant population as those with foreign nationality. This means that a native born is considered as an immigrant if he/she holds a nationality from another country, but a foreign born with the nationality of the country is not considered as an immigrant under the "temporary" permit systems.[4] "Temporary" systems are common in European countries, Japan and Korea. The "permanent" systems count the foreign-born as immigrants. Under the "permanent" resident or settlement system, a foreign born with permanent residency is considered as an immigrant whether he/she get citizenship after several years of arrival, but his/her child who is born within the borders is accounted as a citizen in the date of the birth and is never considered as an immigrant. "Permanent" systems prevail in the United States, Canada, Australia and New Zealand.

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[3] For a more detailed classification, see OECD, 1994 edition of *Trends in International Migration*.

[4] Although European countries are often characterized as "temporary" migration systems, immigrants often stay in the destination countries indefinitely or for long periods of time.

Secondly, it is difficult to collect accurate data on immigrants based on a common approach. Several reasons explain the difficulty: First, the data across countries are highly incomparable because of the existence of two different migration systems across countries. For instance, in the "temporary" permit immigration systems, the stocks of immigrants in the overall population tend to be lower because naturalized citizens are not considered to be immigrants. Second, the available data cannot represent the entire flows of immigrants. The main sources of migration data come from official information, such as population registers, censuses, residence or work permits, which are based on legal entry and do not capture illegal migration flows which occupy a significant proportion of total migration flows. Third, the actual timing of migrant arrivals or departures is hard to define. For example, illegal immigrants and asylum seekers may already be in the country, but they are counted as immigrants only when their status changes.[5]

To summarize, with the given diversity of sources, lack of common definitions and the different compilation methods, caution is highly required when interpreting stocks and flows of immigrants across countries later.

II. Trends

International mobility of labor has become a hot issue in the world economy. From the data compiled by the United Nations[6], the number of people around the

[5] In the United States, for instance, at least half of immigrants issued with a permanent residence permit in 1986 and 1995 were already in the country when their status was adjusted following amnesty programs.

[6] United Nations (2001)

world who are foreign-born in the country where they live rose from 75 million in 1965 to 120 million in 1990. This increase represents an average annual rate of growth that equals to 1.9 percent over this 25-year period. The immigration trends in both destination and source countries have experienced significant changes in the past century.

Here, we discuss the migration trends to destination countries first. In the next part, we interpret the trends from source countries.

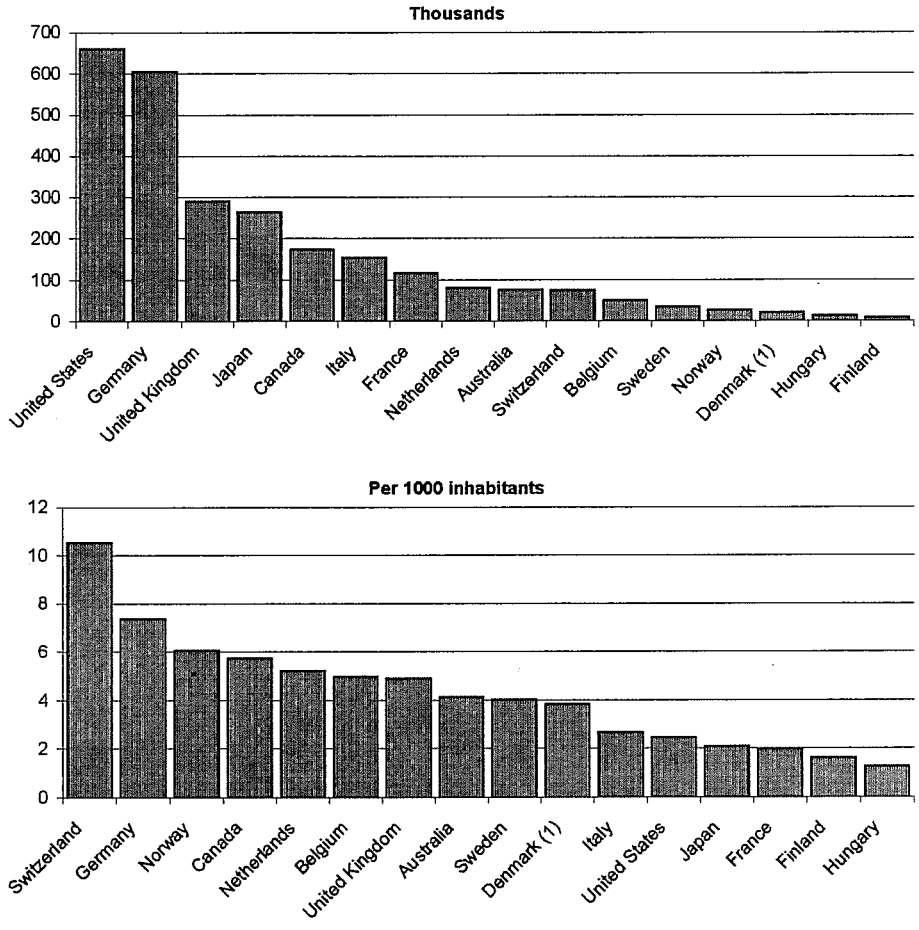
1. Migration Trends in Destination countries

In the past century, the pattern and amount of immigration have changed strikingly among all the OECD countries. The changes vary widely from one country to another. Three types of data are useful in discussion of immigration trends: flow, net flow and stock of immigrants. The flow of immigrant is the periodical arrivals of foreigners in receiving countries; the net flow of immigrant illustrates the notable changes in flows of immigrants over the long-run; and the stock of immigrant is defined as the total immigrant population in the receiving countries.

1.1 Immigrant Flows

The immigrant flows represent the trends of immigration for a given period of time which can be presented in absolute number or percentage relative to population. Figure 1 gives us the annual immigrant flows of major OECD countries for the year 1998.

Figure 1. **Arrivals of foreigners into OECD countries in 1998**



1. Data for Denmark refer to 1997.

Source: OECD International Migration Database; ISTAT (1998), *Rapporto Annuale*.

In the top panel, immigrant flows are presented in absolute number of arrivals. The United States has the most arrivals of foreigners, which is closely followed by Germany. United Kingdom, Japan and Canada are all in top five.

In the lower panel, immigrant flows are presented in percentage relative to the population. Switzerland, Germany, Norway, Canada and Netherlands are the top 5 countries. This means that relative to the population, Western European countries and Canada received much higher immigration flows than the United States. Although the

United States has the most absolute arrivals of immigrants, its percentage flows relative to population are small. Japan has a similar situation.

1.2 Net Immigrant Flows

The net immigrant flows represent the net of immigrants and emigrants. The changes vary widely from one country to another. A positive net flow implies that over a given period, the number of immigrants exceeds the number of emigrants. In opposition, a negative net flow implies that the number of emigrants exceeds the number of immigrants. Figure 2 reports the net immigrant flows of major OECD countries over about four decades.

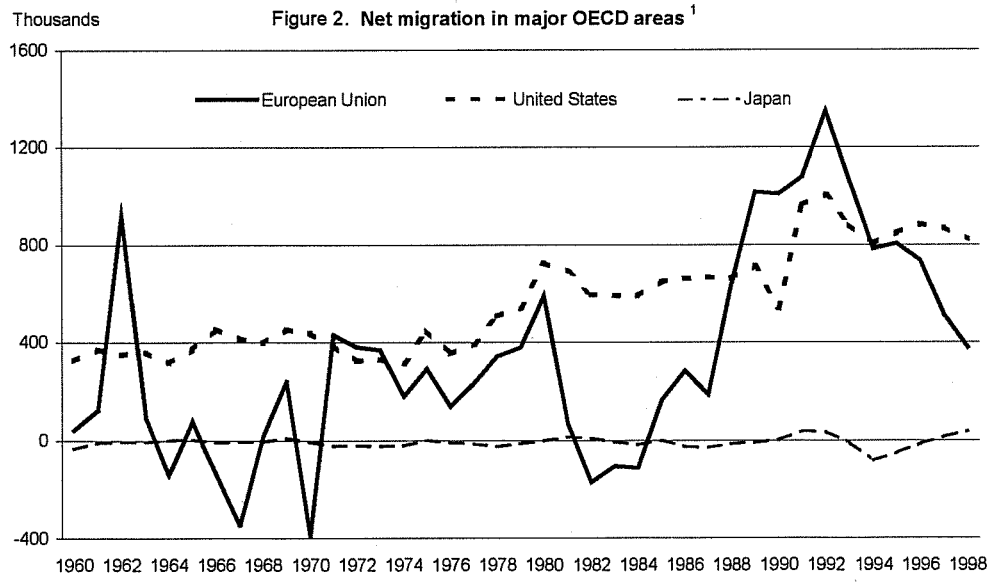


Figure 2. Net migration in major OECD areas [1]

1. Net migration is measured as the difference between the total population on 1 January and 31 December for a given calendar year, minus the difference between births and deaths.
Source: OECD Labour Force Statistics; Eurostat (1999), Demographic Statistics.

Although the European Union, the United States and Japan all had an increase in immigration flows in the year of 1980, their long-run immigrant trends are totally

different from each other. First of all, the United States net immigrant flows increased steadily in the last four decades of the 20th century. It always was and continues to be the largest destination country for immigrants. Secondly, in European countries, net flows of immigration increased through 1980s and finally declined after a peak in 1992-1993, because of the falling of the "iron curtain", erupting of wars and upgrading of ethnic conflicts. European Union countries were large source countries in the mid 1960's and early 1970's, but switched to be large destination countries after late 1980's. Finally, in Japan, net immigration was negligible because the high restrictions on migration policy. In 1998, this restrictions was eased which caused approximate 270,000 (Figure 1) arrivals of immigrants, but immigrants flows relative to its population still remain low. Japan has never been a major source or destination country in history, but the net migration change above or below zero from year to year.

1.3 Stocks of Immigrants

The stock of immigrants shows the results of long-run immigration trends, as it is the accumulation of migration flows. The total stock of immigrants with respect to population has increased significantly in North America, European Union and Australia from 4.9 per cent in 1965 to 7.6 per cent in 1990[7].

Table 1 reports the stocks of immigrants in most OECD countries for 1998. It gives not only the absolute number of immigrants at a specific point in time, but also

[7] United Nations (2001)

the percentage of the stock of immigrants relative to total population.

Table 1. **Foreign or foreign born population in selected OECD countries**

	Thousands		Per cent of total population	
	1988[a]	1998[c]	1988[b]	1998[c]
Australia	3753	3908	22.3	21.1
Austria	344	737	4.5	9.1
Belgium	869	892	8.8	8.7
Canada	4343	4971	16.1	17.4
Denmark	142	256	2.8	4.8
Finland	19	85	0.4	1.6
France	3714	3597	6.8	6.3
Germany	4489	7320	7.3	8.9
Ireland	82	111	2.4	3.0
Italy	645	1250	1.1	2.1
Japan	941	1512	0.8	1.2
Netherlands	624	662	4.2	4.4
Norway	136	165	3.2	3.7
Portugal	95	178	1.0	1.8
Spain	360	720	0.9	1.5
Sweden	421	500	5.0	5.6
Switzerland	1007	1348	15.2	19.0
United Kingdom	1821	2207	3.2	3.8
United States	19767	26300	7.9	9.8
Total [d]	43571	56719	5.7	6.9

a) Data for the United States, Canada and Australia refer to foreign-born population. See Table I.5 in OECD (1999a) for details on sources and methods.

b) 1990 for the United States; 1991 for Canada and Australia; 1982 for France.

c) 1990 for France; 1996 for Canada and Australia.

d) For those countries shown in the table, and, where applicable, for the dates noted in the above footnotes.

Source: OECD International Migration Database; OECD Labor Force Statistics.

Column 2 and 3 in Table 1 represent the stock of immigrants in absolute number. We can find that the size and the change of the stocks of immigrants are different across countries. First, in 1998, the foreign or foreign born population reached nearly 57 million persons. The United States has the largest stock of immigrants among all the countries with 26.3 million, followed by Germany (7.32

million) and Canada (4.971 million) in 1998. Furthermore, we can find that in most countries except for France, the stock of immigrants increases from 1988 to 1998. The total stock of immigrants rose by over 13 million between 1988 and 1998, while the stock of immigrants declines by 117,000 in France. The United States, Germany and Canada are still the top three countries with the most rapid increase in the number of immigrants. The increase in stock of immigrants is 6,533,000 in the United States, 2,831,000 in Germany and 628,000 in Canada from 1988 to 1998.

The last two columns of figures in the Table represent the stock of immigrants relative to total population. Australia has the largest stock of immigrant which was 22.3 per cent in 1988 and 21.1 per cent in 1998, whereas Switzerland (15.2 per cent and 19.0 per cent) followed behind and then Canada (16.1 per cent and 17.4 per cent). The number of immigrants with respect to total population in the United States was just above the average.

1.4 Summary of Immigration Trends

Since the immigration trends vary across countries and periods, we summarize by region.

The United States had historically been and continues to be the destination of the largest immigrants flows in both short-run and long-run. But relative to its population, the size of immigrants flow and stock is not outstanding among all the destination countries.

Canada and Australia have a similar situation as the United States. The two

countries used to and continue to be the destination of large immigrant flows. Figures 1&2 and Table 1 show that not only their immigrant inflows are numerous in both short and long run, but also their stocks of immigrants are significant relative to total population.

European countries went through much more changes over time than the above countries. Most Western European countries switched from source to destination country after the 1980's, although some Eastern European countries remain source countries. In absolute number and in percentage relative to total population, the flow and stock of immigrants in European countries are numerous.

In Japan, the flow and stock of immigrants are negligible. Although there is a potential increasing trend recently, both the flow and stock of immigrants are much smaller in Japan than in other OECD countries. Next we discuss the trends in source countries.

2. Migration Trends in Source countries

The migration flows from source countries have changed a lot in the past two centuries and those changes have been different in time and space across countries. Here, we first review the trends of migration from an historical perspective, then we discuss the recent trends of migration in source countries.

2.1 Historical Trends

Historically speaking, European countries, Africa and Eastern Asia have been the origin of migrants for a long time until the 1970's. European countries have been the major source countries with the discovery of North America. Hatton and Williamson (2002) reported that more than 50 million migrants departed Europe between 1820 and 1913. The main destination countries were North America, South America, Australia and Southern Africa. In the first half of the 19th century, the United Kingdom was the dominant source country. After the mid 19th century, Germany, Scandinavia and other northwestern European countries became new source of migrants. In the late 19th century, emigration rates varied widely across Europe. Ireland had the highest figure, averaging 13 per thousand annually. On the one hand, the emigration surged from Southern and Eastern European countries, including Italy, the Austro-Hungarian Empire, Poland, Russia, Spain and Portugal. On the other hand, emigration declined in the Northern and Western European countries. Norway and Sweden had about 5 per thousand, while Germany was under 2 per thousand and France was almost zero. Massey (1988) and Hatton and Williamson (1998) note that the typical European country went through an emigration cycle that followed an inverted 'U' shape.

Besides European countries, Africa and Eastern Asia countries were traditional source countries too. The migration flows from Africa mainly arrived in North

America as labors in agriculture sector from the mid 15th century to the late 19th century.[8] Abundant migrant flows rose during World War I & II from Asia, because that region was among the central battle areas.

2.2 Recent Trends

The recent migration flows go mainly from developing countries to developed countries. Several factors drive such direction of migration: the gap of per capita income, distance, language and war. The gap of per capita income between the source country and destination country may be the principal factor behind the direction of the migration flows. Second, the migrants from developing countries seem to choose a developed country that is close to their home country, as the moving expenses are positively related to the distance of migration. For instance, the large groups of foreigners arrived in Germany are of Turkish and East European origin. Third, the migrants also consider non-economic factors, such as language, culture and war. Table 2 reports the major sources of migration to OECD countries in 1997-1998.

[8] Borjas (1994).

Table 2. **Main original emigrant countries to selected OECD countries in 1997-1998**

	Inflows of emigrants as % of total in receiving countries [a]	Stocks of emigrants as % of Total in receiving countries [b]
China		
Japan	21.0	17.0
Canada	11.3	4.6
Australia [c]	7.3	2.8
United States	5.6	2.7
France	4.9	0.3
India		
Canada	8.8	4.7
United States	5.5	2.3
Philippines		
Japan	17.9	6.3
United States	5.2	4.6
Canada	4.7	3.7
Australia	3.9	2.4
Turkey		
Germany	8.0	28.6
Netherlands	6.3	16.9
France	5.8	5.2
Iraq		
Sweden	15.1	4.5
Denmark	6.3	3.4
Finland	3.2	3.0

a) Data refer to 1998, except for Australia (1999) and Denmark (1996).

b) Data refer to 1997. For Australia, Canada and Denmark data refer to 1996.

c) Stocks of foreign-born population for Australia, Canada and the United States.

Source: Data from OECD.

Table 2 gives evidences to support the above factors driving migration direction. Firstly, Table 2 indicates five among the main source countries: China, India, Philippines, Turkey and Iraq. China is the main source of migration to many developed countries. As the country with the largest size of the population in the world, China can supply a large number of workers to other countries facing labor shortages. From Table 2, Chinese emigrants represent 21 percent in Japan, 11.3 percent in Canada, 7.3 percent in Australia, 5.6 percent in the United States and 4.9

percent in France with respect to total migration flows. The number of Chinese emigrants represents 17.0 percent of total stock of immigrants in Japan. In Canada, Australia, the United States and France, those percentages are 4.6, 2.8, 2.7 and 0.3 respectively. The number of Chinese is less for the stock than for the flow of emigrants. This suggests that the large flow of Chinese emigrants is recent and hence their representation with respect to the stock of immigrants in destination countries is likely to increase.

India, the Philippines, Turkey and Iraq are other major source countries. Similarly to China, India is a country with a large population. Indian migrants mainly go to North America. They represent 8.8 percent in Canada and 5.5 percent of the United States in the flow of migration in 1997-1998. In terms of the stock, they represent 4.7 percent in Canada and 2.3 percent in the United States. Philippines have a similar selection of destination countries as Chinese. They represent 17.9, 5.2, 4.7 and 3.9 percent of the flow of immigrants in Japan, the United Sates, Canada and Australia respectively. The Turks represent 28.6 and 16.9 percent of the stock of immigrants in Germany and Netherlands respectively.

Secondly, the evidence shown in Table 2 also supports the view that the gap of per capita income, distance, language, culture and war are factors driving the migration direction. Emigrants from China and the Philippines seem to be motivated by the gap in per capita income as they move to Japan, North America and Australia where the average labor incomes are relatively higher. Emigrants from Turkey and

other typical Eastern European countries, mainly choose to migrate to the Western European countries. This shows that migrants from developing countries are likely to choose the closest developed country as destination. Indian emigrants mainly choose North America as destination, which is a good example of the role played by language factors in migration selection. Canada, the United States and India use English as official language. A lot of migration flows and stocks from the Philippines and Iraq were caused by the war. For instance, many Filipinos migrated during the World War II and a lot of Iraqis left their country after the gulf war.

In this section, we have described the historical and recent trends in both destination and source countries. Why do the trends of migration have such phenomena? It is determined by the fundamentals driving migration, which will be discussed in the next section.

III. Fundamentals Driving Migration

Since migration has been an important phenomenon in the world, the question "Why do people migrate?" is important to respond to. The common sense suggests that migrants face a lot of difficulties when leaving their home country to start a new life in the receiving country. Those difficulties take the form of language and culture difference, the possibility of unemployment and the cost of moving and settlement. Although those obstacles are real, a lot of immigrants still choose to migrate. So what are the main fundamentals that drive migration? The literatures give us several avenues to respond to this important question. "Push" and "Pull" theory focus on the

supply and demand side in source and destination countries; an historical approach looks at long-run factors and prospective factors that permit us to identify prospective trends.

1. "Push" and "Pull" Theory

Fundamentals driving migration can be introduced through the "Push" and "Pull" theory, first pointed out by Hicks (1932). "Push" refers to supply side factors which can affect the will to emigrate in a source country; "Pull" refers to the demand side factors that are determined in destination countries.

1.1 Push Factors

On the supply side, the developed "Push" Theory is based on the assumption that migration is an attempt by individuals to increase their utility over their remaining lifetime. As Sinn (2001) pointed out, the factors that influence migration decision include private and public consumption as well as language, culture and environment condition. All such factors can be divided into economic and non-economic factors. Both economic and non-economic factors have influence on the migration decision of individuals.

1.1.1 Economic Factors

Economic Factors include the wage differentials between source and destination countries, the expected costs and benefits of moving. As first suggested by Hicks (1932), the most important factor to affect utility seems to be the labor income, in that wage differentials can be considered as an important influence on the

flows of migrants. One simple indicator that pushes people to migrate is the gap of expected incomes between source and destination countries. Since the direct data of wage differentials is very difficult to obtain, studies prefer to use the relative expected income instead. Relative expected income differentials can be approximated by the ratio of per capita income in source countries relative to destination countries. The difference between the source and destination countries can be huge and create a quite sharp incentive to move. [9] Table 3 reports per capita income for the year 1997, after Purchasing Power Parity corrections.

Table3. **Per capita income in source relative to host countries in current ppp$, 1997**[a]

Host country	Average number of immigrants[a] (thousands)	Per cent of total Immigrants included In calculation	Weighted source country GDP per capita in 1997, PPP$	Ratio of source country GDP per capita to host country GDP per capita in 1997
Australia	87.4	66.6	12265	60.7
Belgium	51.2	74.1	17688	77.7
Canada	207.3	48.6	9900	44.0
Denmark [b]	26.1	33.4	16679	70.4
Finland	7.8	61.2	8744	43.4
France	77.5	55.3	6231	28.3
Germany	679.3	49.9	10016	47.1
Italy [c]	111.0	67.4	8279	40.8
Japan	243.9	67.3	10387	43.2
Netherlands	75.6	43.2	15497	73.4
Norway	18.0	61.7	17565	71.8
Sweden	33.6	32.6	17835	90.1
Switzerland	77.5	50.4	19262	76.3
United Kingdom [b]	219.8	89.4	14832	71.5
United States	773.8	77.8	6371	22.0
Average	179.32	58.6	12703.4	57.4

a) Based on immigration flows between1995-98.

[9] If we just use average statistics and ignore the disparities in income distribution.

b) Immigration data refer to average 1995-97.
c) Immigration data refer to 1998 only.
Sources: OECD international Migration Database; World Bank Development Indicators, 1999.

Table 3 reveals the relationship between the flows and stocks of immigrants and gap of per capita income between source and destination countries. The flows and stocks in destination countries are presented in the first two columns and the ratios of average annual per capita income in the source countries to destination countries are represented in the last column.

Above all, the simple average of the ratios shown is close to two thirds and none is higher than 1, which means that the average labor incomes in source countries are all lower than those in destination countries. Furthermore, the ratios of relative labor income in source countries to destination countries are less than 50 percent in seven countries: the United States (22.0), France (28.3), Italy (40.8), Japan (43.2), Finland (43.4), Canada (44.0) and Germany (47.1). Among those countries, five of them have the largest stock of immigrants: the United States (773.8 thousand), Germany (679.3 thousand), Japan (243.9 thousand), Canada (207.3 thousand) and Italy (111.0 thousand). This indicates that the gap of labor incomes between source and destination countries may be the principal push factor that drives migration.

Besides relative income differentials, the expected costs and benefits of moving are economic factors. Vishwananth (1991) and Burda (1995) pointed out that when assessing the incentive to migrate, the expected costs and benefits of migration should be considered as well. Such is the reason because the gap in relative incomes

for a given year can not capture the net gain or loss over the whole life.

1.1.2 Non-economic Factors

Non-economic factors include: psychological stress, networks, language, culture and family. The psychological stress is associated with the challenge of living in another country. Worries about unemployment in destination country, being away from family and home country and hardly being used to new environment all possibly induce the psychological stress on migrants.

Migrants are partially motivated by the presence of existing networks in the destination countries. Carrington, Detragiache and Vishwanath (1996) indicate that the migrants, via family reunion programs, are influenced by the past immigrants in the choice of destination country.

The difficulty of language and difference in culture may affect migration decision because those factors possibly affect the future earning in the destination country. This will be discussed more in the next section.

Family is another factor affecting the migration selection. That is why migration selection is a household decision rather than an individual decision. Mincer (1978) and Stark (1991) support that migration is often a family or even a community decision and migrants often quote "a better future for my children" as a reason for moving.

1.2 "Pull" Factors

"Pull" factors are controlled demand for immigrants in the destination countries. Borjas (1994) notes that most countries have strict policies describing the demographic characteristics of persons who are allowed to enter the country. Such factors have experienced notable changes in the past century.

One century ago, the migration was 'free' and without restriction for people from selected source countries. The flows of immigrants were without control by destination countries. The ideal destination countries for migrants were those with spacious lands, plentiful job opportunities and booming economy. In the second section, we have found that the United States has historically been the largest gross recipient of immigrants. Other developed countries, such as Canada, Australia and some western European countries began to activate their immigration promotion program from the mid 1950s to the early 1970s because of the large shortage of labor supplies in domestic market.

The recent immigration policy of the host countries squints towards attracting high-skilled workers much more than before. Although the overall demand of foreign labor is decreasing, the demand for high-skilled workers[10], especially in the Information Technology (IT) industry, has increased a lot in the developed countries since 1970's. Attracting and keeping the high-skilled immigrants has become one of

[10] OECD's Canberra manual (OECD, 2001) defines high-skilled people on a mixed base of profession and education. For example, skilled human resources in science and technology (HRST) are defined as personnel with a tertiary education level in science and technology study or currently employed in a science and technology occupation.

the most important challenges for all destination countries. Harris (2004) suggests that the international market for some segments of the high skilled population is becoming more competitive as industrialized countries compete strategically for these talents.

In order to increase their attraction to the high quality immigrants, most destination countries have modified their immigration policy. The H-1 B temporary visa program for highly-qualified individuals and the Canadian point system for immigrants which emphasizes the skills of immigrants are examples of these reformulated immigration policies.[11] The 1990 Immigration Act (effective 1992) in the United States introduced a new system of preferences that allocated a larger share of available visas by occupational attributes rather than by family reunification. The major policy changes in 1962 and 1967 in Canada repealed the national origin restrictions and shifted the emphasis towards skills requirements (Wright and Maxim, 1993). The Canadian 'point system' has the advantage to attract and maintain the highly-demanded workers. The 'point system' works like a filter by retaining the workers in high-demand sectors but keeping the workers in overstocked sectors out.

Next we introduce historical factors that seem to be fundamentals driving migration.

2. Historical Forces

Sjaastad (1962) and Borjas (1987) make early important contribution in

[11] Gera, S. and T. Songsakul (2005)

historical approach which provide a useful guide to the factors that might be expected to influence migration. Hatton and Williamson (2002) mostly develop the historical approach. They argue that the existing theories of migration have three shortcomings: "First, most of the theories of migration which all of us find useful deal with a world without immigration controls. This serious shortcoming can be repaired only if we can figure out how to integrate policy into migration models, and then to estimate what difference it would make to our predictions."[12] What make immigration theory difficult is that immigration policy is endogenous as can be influenced by the same forces that drive world migration pressure. "Second, the recent empirical literatures have focused extensively on the effects of migration selectivity on immigrant outcomes."[13] "Third, it is often observed that emigration from poor countries increases as economic development takes place in the source country."[14] Hatton and Williamson (1998) indicate that recently the immigration statistic shows that the poorest countries typically generate fewer emigrants than those that are further up the per capita income ladder, which is in contradiction with the notion that migration is driven by the income gap between home and receiving countries. Massey (1988), Hatton and Williamson (1998) and Stalker (2000) show a hump shaped relationship between economic development at home and emigration. Compared to middle poor countries, the emigration rates out of really poor countries are much lower. Hatton and Williamson (2004) give two possible explanation to this

[12] Hatton and Williamson (2002) p4
[13] Hatton and Williamson (2002) p5
[14] Hatton and Williamson (2002) p5

paradox: first, the structural and demographic changes coincident with industrialization generate more migration in its early stages than later on; second, it is more difficult for the very poor to invest in a long-distance movement to get higher wage than the moderate poor.

Hatton and Williamson (2002) identify four economic and demographic fundamentals that drive migrations in the past 150 years: first, the gap between rich high-wage countries and poor low-wage countries; second, the poverty constraints which blocks the emigration from very poor countries; third, the proportion of the young adult of whole population in resource and host countries; last, the foreign born migrant stock from the home countries currently residing in the host countries. Beside the four above economic factors, migration policies play an important, maybe decisive role too.

3. Prospective Factors

The future trends are easier to identify when we look at the demand side or 'Pull' factors.

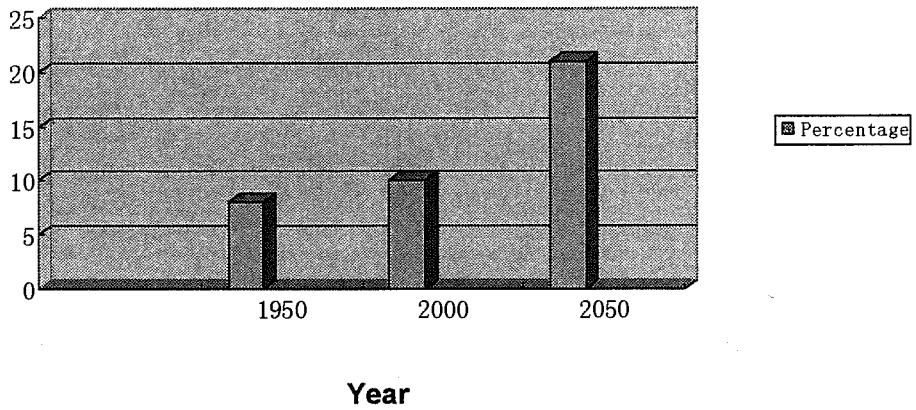
3.1 Ageing Population

Let's discuss the ageing challenge first. The ageing problem is generated by the joint effects of increasing average age, declining fertility rate and decreasing Potential Support Ratio (PSR). On the one hand, the average age of the total population is increasing. By 2050, the proportion of old people who is over 65 years old in the

world population will exceed the proportion of young people who is younger than 15 years old for the first time in history (IMF, 2004). On the other hand, the birth rates continue to remain low. United Nations (2005) reports that fertility declines has been the primary determinant of population ageing. Over the last century, the total fertility rate decreased worldwide by almost half, from 5.0 to 2.7 children per woman. Over the next half century, it is expected that such rate will drop to 2.1 children per woman. The most developed regions face a significant drop in fertility rate. The average total fertility rate has dropped from an already low level of 2.8 children per woman in 1950-1955 to an extremely low level of 1.5 in 2000-2005.

As a result, the proportion of old people in the whole population is increasing slowly every year. Figure 3 shows that the global proportion of old people in total population was around 8 per cent in 1950, increased to 10 per cent in 2000 and is projected to reach over 20 per cent in 2050.[15]

Figure 3. Proportion of population 60 years or older (percentage): world, 1950-2050



Source: "World Population Ageing 1950-2050", United Nation (2005)

[15] United Nations (2005)

In addition, the Potential Support Ratio (PSR) has fallen and continues to fall. PSR which indicates the dependency burden on potential workers is defined as the number of persons aged 15-64 years per one older person aged 65 years or older. In 1950, PSR was worldwide around 12 people in working ages per each person 65 years old or over. PSR fell to 9 people in 2000 and is projected to fall to 4 people in 2050.[16] This indicates that the proportion of working-age population in total population is facing a sharp decline. Among the working-age population, only active population part is available for employment. The non-working population includes all kinds of unavailable workers in their working age. The reasons for not working are various: education, disability or unwilling to work. The average years spent on education are increasing with the increasing demand of high technology recently, which cause the proportion of active population in working-age population to decrease.

All of above put pressure in the labor market of developed countries. The ageing population problem may generate a shortage of workers in the near future. Many developed countries may thus try to attract more immigrants, especially with high skills, to increase the number of workers. For instance, Japan uses the temporary work visa program to relax the labor shortage in short-run and Canada uses the 'Primary Residence' policy to insure amply labor supply in long-run.

3.2 Skilled-Labor Shortages

Besides the ageing population, skilled-labor shortage is another prospective

[16] United Nations (2005)

factor driving migration. Migration driven by this factor may be considered as a two-side benefit to both destination and source countries. After the boom of high technology industry, the demand for high-skilled labor is increasing sharply all over the world, especially in more developed countries. In order to meet the enhancive demand for high-skilled labor in short and long run, most developed countries would like to attract more high-skilled immigrants by implementing immigration policy that helps to solve the need of high skilled labor in destination countries. Borjas (1994) concludes that: "Immigration policy matters, so that host countries which filter applicants in terms of observable skills attract immigrants who are more skilled, have higher earnings and are less likely to participate in public assistance programs."

Besides meeting the scarcity of labor in destination country, such immigration policy may also strength the competitive ability of source countries, as it is believed that they can benefit from the knowledge and experience earned in the destination countries. For instance, around one-third of immigrants in the United States finally return to their home countries (Warren and Peck, 1980). In this way, the migration is thought as a 'win-win' way to both receiving and source countries.

IV. Impact of Migration

The economic impacts of migration are multidimensional in both the source and destination countries. We next discuss the impacts of migration on the source and destination countries respectively.

1. Impacts on Destination Country

Immigration has impacts on the economy of the destination country, including on public expenditure, international trade, labor market and tax revenue. For instance, the immigrants will increase the tax revenue in the destination country if they earn money soon after they move to the destination country, but will be a burden on social assistance programs if they are unemployed during a period. Moscarola (2001) shows that 50,000 immigrants per year reduce tax burden by 3-4 per cent of GDP in Italy.

The immigrants also affect international trade. Head and Ries (1998) demonstrate that the immigrants may possibly increase the imports in the destination country from the source country since they prefer the goods and services in their home country and also have a potential to increase the exports from the destination country to the source country since they can use their knowledge and experience learned from both sides.

In this part, we concentrate our discussion of the impacts of migration on the labor market. The discussion will focus on two questions: First, what is the labor market performance of immigrants? Second, what is the impact of migration on the labor market?

1.1 Performance of Immigrants

The overall performance of immigrants depends on not only their skills, education, age and other characteristics, but also the conditions of the labor market in

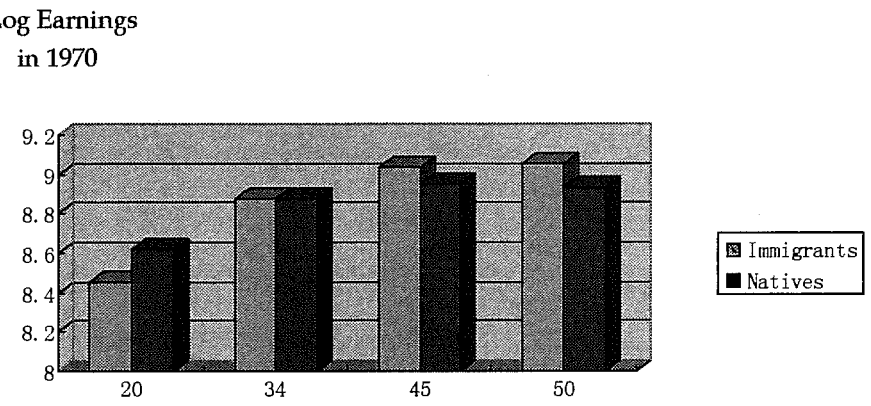
the destination countries. Despite those various factors, it is possible to distinguish the performances of immigrants in two common criteria across destination countries: labor earnings and unemployment relative to natives.

1.1.1 Relative Wage to Natives

What is the labor income of immigrants relative to native workers? This depends on many different factors, such as how immigrants' skills adapt to the destination country's labor market and for how long immigrants have been in the destination country. Previous studies have different findings across countries. Beggs and Chapman (1991) report that immigrants in Australia have higher relative wages than natives, since Australia has a point system to attract high-skilled immigrants. In contrast, Pischke (1993) finds that immigrants in Germany have lower wages than native workers. Here we discuss that the wage of immigrants compared to natives are affected by the entry effects, assimilative effects and cohort effects.

The entry and assimilative effects on wage rate of immigrants compared to the native workers were analyzed by Chiswick (1978). He estimates a cross-section regression model to analyze the wage rate of immigrants compared to native workers in different age and period. The essence of his results is summarized in Figure 3, which illustrates the predicted immigrant and native age-earnings profiles implied by Chiswick's analysis of the 1970 Census in the United States.

Figure 3. **The Cross-Section Age-Earnings Profiles of Immigrants and Natives in the United States, 1970**



Source: Chiswick (1978, Table2, Column 3). All the variables in the regression are evaluated at the means of the immigrant sample, and immigrants are assumed to enter the United States at age 20.

In Figure 3, immigrants are assumed to move into the United States at age twenty. At the time of arrival, immigrants earn about 17 per cent less than natives. But immigrant earnings "overtake" native earnings within 15 years after arrival, because immigrants experience faster wage growth. After 30 years in the United States, the typical immigrant earns about 11 percent more than a comparable native worker. This finding is supported by Carliner (1980).

The explanation of the results is that immigrants earn less than native at the time of arrival, because they lack the specific skills required in the destination country's labor market. After they acquire these skills, immigrants experience faster wage growth than native, since immigrants are "more able and more highly motivated" than natives (Chiswick, 1978) and immigrants "choose to work longer and harder than non-migrants" (Carliner 1980).

Borjas (1985) detects the existence of cohort effect, which is a challenge to Chiswick and Carliner's studies. Furthermore, Borjas (1994) shows that the cross-section regression can yield erroneous insights about the adaptation process experienced by immigrants if there are intrinsic differences in productivity across immigrant cohorts. Such difference in productivity is called cohorts effects. "Because of these cohort effects, the cross-section relationship between the relative wage of immigrants and years-since-migration overestimates the wage growth actually experienced by a particular cohort."[17] In other words, immigrant wage growth is more sluggish than mentioned in the early studies.

These findings have generated a great deal of debates. Many of these studies point out that there has been an overall decline in the relative skills of successive immigrant cohorts. For example, LaLonde and Topel (1992) report in the U.S a 22 percentage point drop in the relative wage of immigrants cohorts between the late 1960's and the late 1970's and conclude that at least two-thirds of the decline can be attributed to changes in the educational attainment of immigrants relative to natives. Bloom, Grenier and Gunderson (1995) note that there is a large negative cohort effect for the most recent (post-1981) immigrants in Canada.

As a conclusion, the labor income of immigrants compared to natives may be determined by the age, period and cohort effects. Schoeni, McCarthy and Vernez (1996) find that immigrants may experience a wage disadvantage for most of their

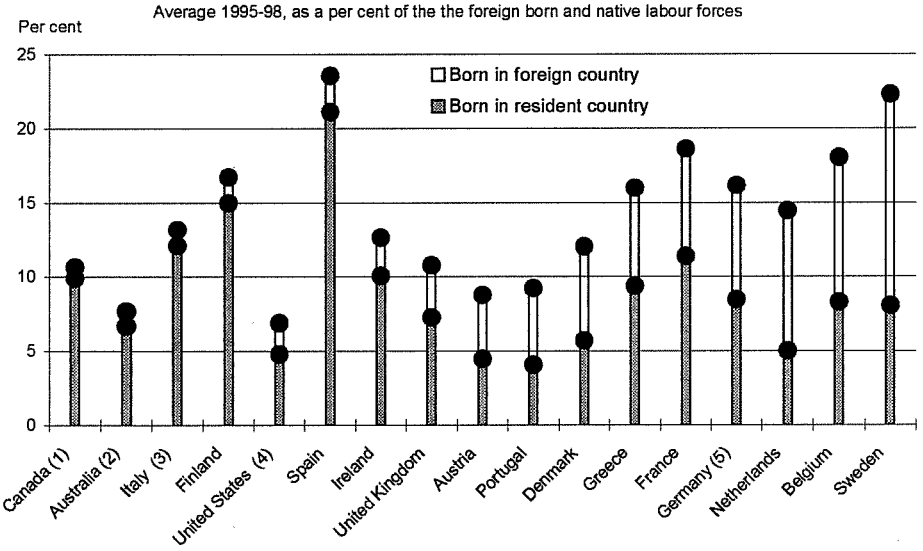
[17] Borjas (1994), p1674

working life, since the rate of wage convergence is typically low, and given the size of the wage gap at the time of entry.

1.1.2 Relative Unemployment to Natives

What is the unemployment rate of immigrants compared to natives? Figure 4 reports the unemployment rates of foreign-born and native workers in most destination countries during the period 1995-1998.

Figure 4. Foreign-born and native unemployment rates
Average 1995-98, as a per cent of the the foreign born and native labour forces



1. Data refer to 1996.
2. Data refer to 1998.
3. Data refer to 1995-97.
4. Data refer to 1997.
5. Data refer to foreigners and nationals, instead of foreign-born and native.

Source: OECD Labour Force Statistics; OECD International Migration Database.

Figure 4 suggests that the unemployment rates for both immigrants and natives vary across countries. First, the unemployment rates of immigrants are all higher than those of natives. Those in Canada, Australia and Italy are close to those of natives, but they are higher in most Western European countries. Second, two special cases are

Spain and Sweden. The unemployment rates of foreign-born and native workers are both extremely high in Spain (the unemployment rates are 24 and 21 percent respectively). Sweden has the largest gap of unemployment rates between the foreign-born and natives around 14 percent.

The unemployment rate of immigrants is affected by internal and external factors. First of all, internal factors include the skills level, adapting speed and language of immigrants. Borjas (1994) reports that the gap of employment rate between immigrants and natives may be caused in large part by skill, adaptability and language of immigrants. So the difference between the unemployment rates of foreign-born and native workers should decline over time and approaches that of natives, as immigrants acquire language skills, adapt to new working conditions and improve required skills.

Secondly, settlement pattern may be an external factor that affects the unemployment of immigrants. The relative unemployment rate of immigrants may also be the result that immigrants tend to live in disadvantaged areas with above average unemployment rates. OECD (1998c) suggests that those disadvantaged areas usually have a larger proportion of lone parent families, but a higher proportion of rental housing compared with the average level. Table 4 gives for some indicators the ratios between disadvantaged area and urban average in unemployment, immigrant, single parent and rental. A ratio above 1 means that the number is greater for the disadvantage area than for the urban average.

Table 4. **Disparities between disadvantaged areas and the urban average in selected OECD**[a]

	Ratio of rates of unemployment	Non-national Population	Lone parent Families	Rental housing
Canada	1.9	1.40	1.72	1.10
Finland	1.4	1.67	1.23	2.20
France	1.9	2.11	2.35	3.8b
Sweden	1.4	2.71	1.55	1.80
United States	1.6	1.57	2.44	1.30

a) Data are expressed as a ratio of disadvantaged areas to the urban average.

b) For France, rental housing includes only HLM (habitation loyer modere) units.

Source: OECD (1998c).

In the first column, the figures show that the unemployment rate is higher in disadvantaged areas than urban average. It is easy to find characteristics of disadvantaged areas in second, third and last columns. Figure in the column 2 show that more immigrants live in disadvantaged areas than urban average, since all ratios are higher than 1. Canada, Finland and the United States are 1.40, 1.67 and 1.57 times of average level respectively. In France and Sweden, the proportion of immigrants living in disadvantaged area excesses two times that of urban average. Ratios in third column indicate that more lone parent families live in disadvantaged areas, since all the ratios are over 1. In the United States and France, the proportion of lone parent families is more than double the urban average. Numbers in the last column report that rental housing is higher in disadvantaged area than urban average, since all ratios are higher than 1.

1.2 Impacts on Labor Market

In this part, we investigate the impacts of immigration on the labor market in

destination country. We analyze the impact of immigration on the age composition, on the skill composition, on native workers, on overall productivity and unemployment.

1.2.1 Change the Age Composition of Population

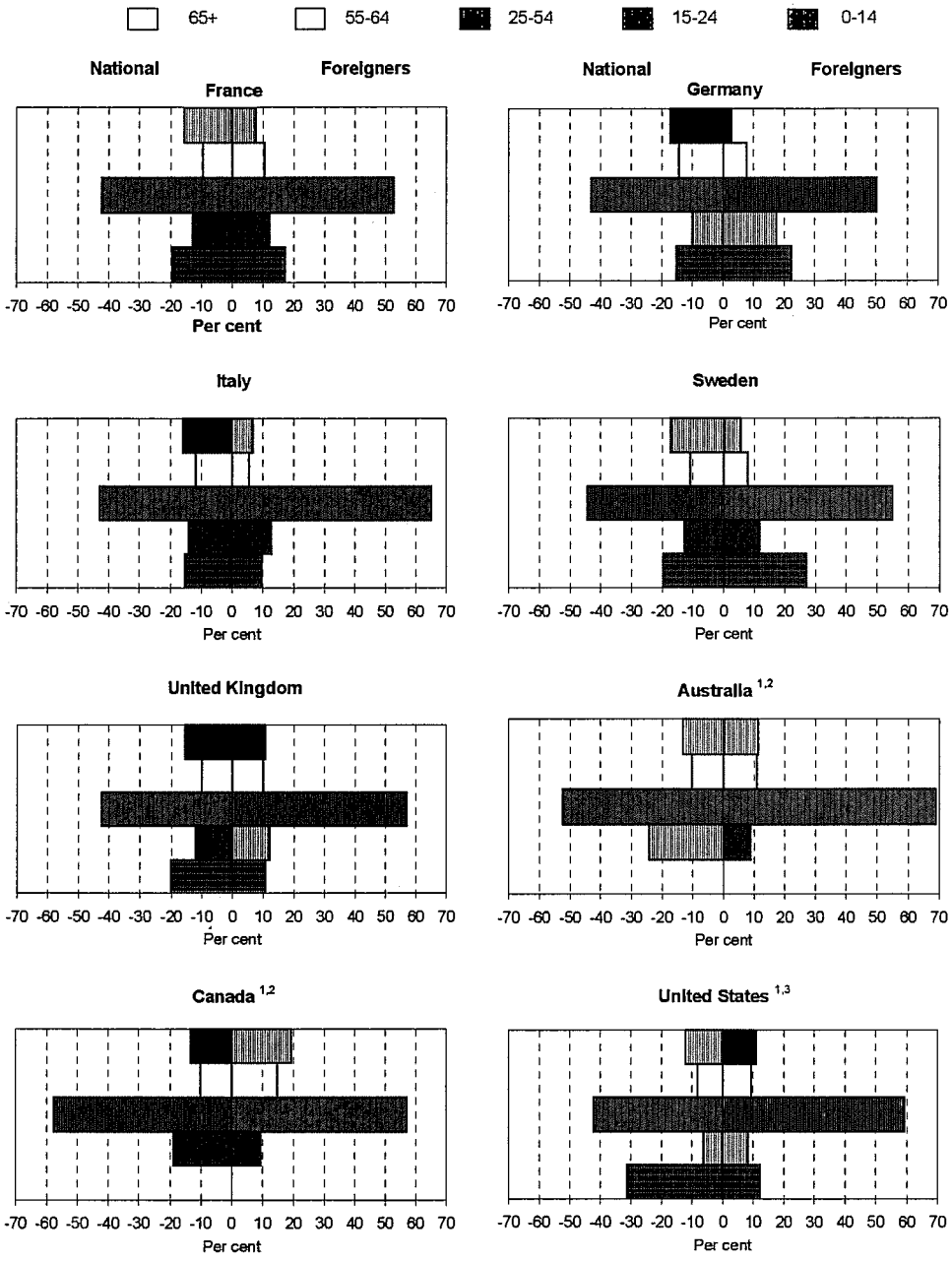
The immigrants can change the average age and composition of population, if their ages are different from those of natives. Immigrants can increase the relative size of the active population, if the proportion of active workers in population is higher in immigrants than natives. A recent report by the United Nations (United Nations, 2000) shows that European countries succeeded in keeping high levels of the working-age population through migration flows in the past decade.

In addition to immediately changing the age composition of population, immigrants may also indirectly change the age composition of population in the future. The children of immigrants whether move with their parents during their childhood or are born in destination country are considered as the next generation that can change the age composition of population in the future.

Figure 5 reports the population of immigrants relative to natives by age groups in most destination countries of 1995-1998.

Figure 5. **Foreign and national population by age group** [1]

1995-1998 average, as a percent of total population of each group



1. Foreign-born and native populations for Australia, Canada and the United States.
2. Population aged 15 and over, for the year 1996.
3. Data refer to 1998.

Source: Eurostat, Australian Bureau of Statistics, Statistics Canada, US Bureau of the Census.

Three obvious facts reveal how immigration changes the age composition of population in the destination countries: First, the proportion of age group 25-54

among immigrants is larger than among natives. This means that the share of working-age in total population could increase by inflows of immigrants. Second, except in Canada, the proportion of age group over 55 in immigrants is less than for natives. This indicates that the ageing population problem in the destination countries can be relaxed by immigration. Third, the proportion of age group 0-24 is more than the proportion of age group over 55 in immigrants. This implies the immigrants are composed of more young people than old people. To sum up, immigration changes the age composition in destination country by increasing the working age proportion and decreasing the senior proportion. Immigration also has the potential to change the composition of the population in the future.

1.2.2 Change the Skill Composition

The different education and skill levels of immigrants relative to natives may change the skill composition in the labor market. For instance, if the immigrants are mainly composed of high-skilled workers, the proportion of high-skilled workers in the total active population will increase. Conversely, inflows of abundant low-skilled immigrants will decrease the proportion of high-skilled workers in total active population. As mentioned in the first section, two immigration systems cause the diversity in education and skill levels of immigrants across countries. And the immigration flows driven by different fundamentals cause the education and skills level of immigrants to vary over time even in one country. So the skill composition of immigrants varies across countries and periods.

Here we discuss the skill composition of immigrants compared to natives in one country and different skill composition of immigrants across countries respectively. Table 5 reports different educational attainment of natives and immigrants in different periods in the United States.

Table 5. **Educational Attainment of Immigrants and Native Men, 1970-1990**

	1970		1980		1990	
Group	Percent High School Dropouts	Percent College Graduates	Percent High School Dropouts	Percent College Graduates	Percent High School Dropouts	Percent College Graduates
Natives	39.6	15.4	23.1	22.9	14.8	26.6
Immigrants	48.2	18.9	37.4	25.3	36.9	26.6

Source: Borjas (1994)

Author's tabulations from the 1970, 1980, and 1990 Public Samples of the U.S. Census. The statistics are calculated in the sub-sample of men aged 25-64 who work in the civilian sector, who are not self-employed, and who do not reside in group quarters.

In 1970, the proportion of high school dropouts in immigrants (48.2 percent) is higher than that of 1980 (37.4 percent) and 1990 (percent), and the proportion of college graduates in immigrants (18.9 percent) is lower than that of 1980 (25.3 percent) and 1990 (26.6 percent). This means, the proportion of skilled labors in immigrants increases over time in the Untied States.

The skill compositions of immigrants vary across countries. Table 6 reports the distribution of educational attainment of immigrants and natives in different regions of the world.

Table 6. **Educational attainment distribution of foreign-born and native-born population aged 15 or more, competitor countries, 2000/2001.**

	Native born (%)			Foreign born (%)		
	ISCED 0/1/2	ISCED 3/4	ISCED 5/6	ISCED 0/1/2	ISCED 3/4	ISCED 5/6
Australia	45.8	15.7	38.6	38.3	18.8	42.9
Canada	31.6	36.9	31.5	30.1	31.9	38.0
United Kingdom	51.2	28.7	20.1	40.6	24.5	34.8
United States	21.9	51.2	26.9	39.8	34.3	25.9
France	45.8	37.4	16.9	54.8	27.2	18.1
Germany	23.7	56.8	19.5	43.7	40.8	15.5

Notes: ISCED 0/1/2 corresponds to an education attainment of less than upper secondary level, ISCED 3/4 is for upper secondary and post-secondary non-tertiary education, ISCED 5/6 is tertiary education (colleges and university starting from Bachelor's degree).

Source: OECD (2004); taken from Gera and Songsakul (2005), p4

The data in last column confirms that Canada, Australia and the United Kingdom attract relatively more highly educated foreign-born than the United States, France and Germany (Gera and Songsakul, 2005).

The recent structural shifts in OECD countries have raised the demand of skilled workers. In some sectors, such as information technology (IT), the increase is sizable and rapid. Harris (2004) notes that the "brain drain" is now an industry country issue. A number of the destination countries have adapted their immigration policy to attract more skilled workers as a partial response to this labor shortage. For instance, Germany has launched a temporary immigration program in order to recruit high-skilled workers, especially in IT sector. Australia and Canada, which have a tradition to select that category of immigrants, have recently shifted their focus on skilled labors.

1.2.3. Impact on Native Workers

After immigrants swarm into the destination country, they need some time to adapt to the new condition and attain the required skills. The impact of immigrants on native workers depends on whether skills are substitutive or complementary. If the average skill level of immigrants is lower than natives, the natives will still retain the advantage in labor market. In opposite, if the average skill level of immigrants is higher than or close to natives, the natives will face a competition from immigrants.

First, we start with the impacts of immigration on the wage of natives. Theoretical predictions depend upon the model they used. Friedberg and Hunt (1995) discuss that the most important modeling decisions are whether the destination country is open or closed to international trade and the degree of substitutability between immigrants and natives. In a closed economy model, if the immigrants are unskilled workers, the wage of unskilled natives will fall, while the effect on the skilled wage is ambiguous. If the immigrants are skilled, they will lower the wage of skilled and cause an ambiguous effect on the wage of unskilled. Chiswick, Chiswick and Miller (1985) found a strong substitution relationship between immigrants and natives using the Censuses data in the United States, United Kingdom, Canada, Australia and Israel. In the most commonly employed open economy model, the results are quite different. The impacts of a labor influx depend on size of the population of immigrants: a large inflow of immigrants may lower the wage; a small inflow will not affect wages (Freidberg and Hunt, 1995).

Most previous studies pointed out that the current immigration on average has small negative effects on native wage levels. Freidberg and Hunt (1995) found that 10 percent increasing in the fraction of immigrations in the population will cause 1 percent decreasing in native wage level in the United States. Moreover, Jaeger (1996) reported that immigrants had a large negative effect on the wages of low-skilled native workers, but a positive effect on those of high-skilled native workers during the 1980s. For the European countries, De New and Zimmerman (1994) found that immigration reduced the wage of blue collar workers and increased the wage of white collar workers in 1980s in Germany. Garson *et al.* (1987) found similar results in France that immigration has a very tiny impact on labor income of the natives.

Second, the employment opportunity of natives may decline after the immigrants join the job searching. Pope and Withers (1993) find that immigration has a negative effect on employment in Australia. On the other hand, with the increasing population, immigration may increase the goods and services demands in the destination country which will stimulate the increasing of labor demand. More job opportunities will be created in the labor market. Altonji and Card (1991) indicate that immigrants have marginally significant positive effect on employment in the United States.

1.2.4 Impact on Overall Productivity

The immigrants may change the overall productivity on the labor market of the destination country. The impact depends on the skills level of immigrants relative to

native workers, adapting speed of immigrants to the new working conditions and the motivation to work compared with natives.

Several destination countries made an effort to attract the high-skilled workers. The trend of the increasing proportion of skilled labors is shown in Table 7, which reports the eligibility category of immigrants in 10 OECD countries.

Table 7. **Immigration by eligibility category in selected OECD countries** a

	Family		Skills		Refugee		Other b	
	1993	1998	1993	1998	1993	1998	1993	1998
Australia c	42	27	29	34	14	11	15	28
Canada	65	61	15	23	10	13	10	3
Denmark d	29	32	12	11	19	15	40	42
France e	60	69	28	21	12	10	-	-
New Zealand	20	42	73	49	5	9	2	1
Slovak Republic	30	30	43	48	1	2	26	20
Sweden	21	43	-	1	75	33	4	23
Switzerland	41	30	26	33	4	3	29	34
United Kingdom f	40	47	41	45	14	5	4	2
Untied States g	53	72	16	12	14	8	17	8

a) Refers to permanent settles or equivalent, unless otherwise noted.

b) The category "other" varies according to country. For Australia, this category includes New Zealanders, who may emigrate to Australia without a visa. In Denmark and Sweden "other" includes students, and for Switzerland it includes students, rentiers and spouses of Swiss nationals.

c) Fiscal year ending June 30.

d) Refers to residence permits.

e) Excluding visitors and persons who benefited from the 1997-1998 regularisation programme.

f) Passengers, excluding European Economic Area nationals, admitted to the United Kingdom. The data only include certain categories of migrants: work permit holders, spouses and refugees.

g) Fiscal year ending September 30.

Source: OECD (1999), Trends in International Migration, Australian Department of immigration and Multicultural Affairs (DIMA), Citizenship and Immigration Canada, New Zealand Immigration Services, U.S. Immigration and Naturalization Service, European Migration Centre (EMZ).

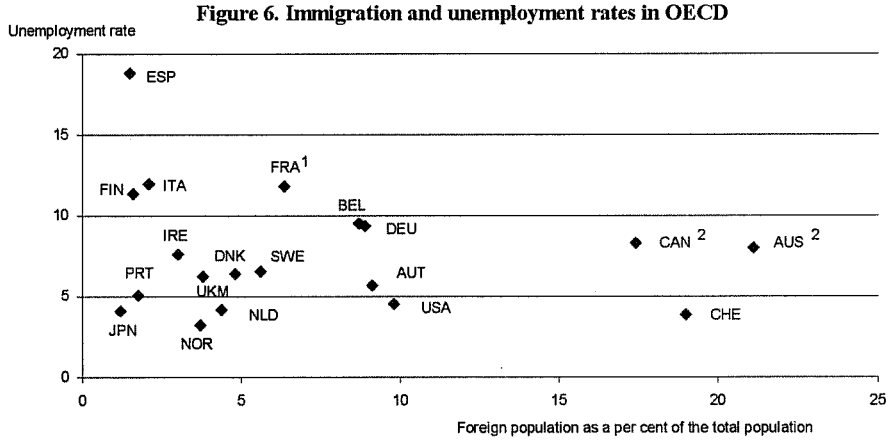
The largest proportion of immigrants is in the category of family reunion. However, the proportion of skilled workers in total immigrants has experienced an

increase from 1993 to 1998 in most destination countries.

1.2.5 Impact on Overall Unemployment

Here we discuss the impact of immigration on the overall unemployment of labor market. Previous studies report that there is no obvious relationship between the stocks of immigrants and the level of unemployment across countries. Simon (1989), Borjas (1990 and 1993) and Friedberg and Hunt (1995) fail to find that immigration has negative impact on the unemployment rate of the United States. Figure 6 supports this finding for other countries as well.

Figure 6. Immigration and unemployment rates in OECD [1]



1. Population data refer to 1990.
2. Population data refer to 1996.

Source: OECD Analytical Data Base; OECD International Migration Database.

In this Figure, it is hard to find obvious relationship between unemployment rate and stock of immigrants. Two examples are worthy to note. First, the

unemployment rate in Spain is around 18 percent, but the stock of immigrants with respect to total population is only about 2 percent. Second, the unemployment of Czech Republic is around 4 percent, whereas the proportion of immigrants in the population is around 18 percent.

Furthermore, if the labor market is largely competitive, immigration would likely increase unemployment for a short period of time only. If the labor market is less flexible, the impact on unemployment is likely to be larger and longer. Since the United States has more labor market flexibility than the European countries, Winkelman and Zimmerman (1993) report that immigration has a smaller negative short run impact on unemployment in the United States. Following Gross (1999), the unemployment rate in European countries is affected by immigration even in the long-run.

2. Impact on source country

Most previous studies emphasized particularly the impact of migration in destination countries. Here, we also discuss the impacts caused by emigrants in the source country. Given the scarcity of data and studies, the discussion will be limited to the impacts on overall productivity and competition ability.

2.1 Impact on Overall Productivity

Productivity level is determined by skill and education level. One potential

problem is that the productivity level be reduced by emigrants, because the source country is facing a loss in high-skilled labors. Bhagwati and Hamada (1974) point out that the "brain drain" can indeed be thought as a negative externality on the population left in the source country. More high skilled labors than low skilled labors move out of source country. Most skilled emigrants leave the source country after they complete secondary education. Under the current management of migration in source country, it is not easy for source country to control the outflows of their high skilled workers. Some policies are promoted to decrease the incentive of migration, such as increasing public provision in health and education, legal and regulatory institutions to support further development of the economy.

However the productivity level may increase in the long-run. First migration may increase the education level in the source country. Beine, Docquier and Rapoport (2001) suggest that in a poor economy with an inadequate growth potential, the return to human capital is likely to be low and would lead to limited incentive to acquire education, which is the engine of growth. Allowing migration to take place from this economy would increase the education fraction of its population. Because only a proportion of the educated residents would emigrate, the average level of education of the remaining population would increase. Second, high quality emigrants will finally return to source country. Since the language, culture and family factors, emigrants may move back to source country after they gain enough capital and experience from destination country. If their home country has developed a lot since they left, the emigrants will have more motivation to return because the wage difference between

host and home countries will have declined. Warren and Peck (1980) note that around one-third of immigrants in the United States eventually return to their countries of origin. If the emigrants are successful, they may increase job opportunities in the source country. Emigrants who return from destination countries always have acquired higher education, gained more work experience and known more advanced technology than before. Those useful experiences may be transferred to higher productivity on the labor market of the source country. OECD (1999c) notes that the return of emigrants may provide a channel for the transmission of technical knowledge.

2.2 Impact on Overall Competition Ability

Emigration may affect the overall competition ability in source country through remittance and international trade. First, the remittance from emigrants may increase the capital input in source country. Because of the wage difference, a lot of emigrants remit part of their earnings in destination country back to home country. Stark (1995) pointed out that under asymmetric information, high-skilled workers might have an obvious incentive to remit strategically in order to maintain low-skilled workers home. Moreover, remittances from emigrants are becoming an important source of capital input in source countries too. Table 7 reports the remittances from emigrants in some source countries in 1998.

Table 7. **Worker remittances in selected emigration countries, 1998**

	Worker remittances, million US$	Workers remittances as a per cent of exports of goods and services
Albania	452	153.5
Jordan	1543	42.5
Bangladesh	1600	27.3
Egypt	3370	26.9
Nicaragua	200	26.3
India	9453	20.7
Morocco	2011	20.2
Jamaica	659	19.5
Greece	2816	18.9
Dominican Republic	1326	17.7
Sri Lanka	999	17.7
Pakistan	1738	17.1
Ecuador	840	16.8
Nigeria	1574	16.0
Guatemala	457	13.1
Turkey	5356	9.8
Honduras	220	9.2
Tunisia	718	8.5
Peru	400	5.3
Mexico	5627	4.3
Total of above	41359	12.1

a) Data refer to 1997.

Source: IMF (1999), *Balance of Payments Statistics Yearbook*, Part 1.

From above Table, the remittances from destination countries to source countries through the emigrants have notable contribution to the economy of their origin countries. In Albania, remittances are one and half times the revenue of its exports of goods and services. In India, Morocco and Greece, remittances approximately equal to 20 percent of the value exports in goods and services. The total remittances in the twenty source countries added up to US$41 billion in 1998, which is closed to the net

level of official foreign aid from destination countries.

Second, emigrants have contributed in opening and expanding the international trade between destination and source country. Head and Ries (1998) argue that emigrants have positive impacts on international trade. After the opening of trade in the source country, job opportunity may increase significantly.

Conclusion

This paper briefly reviews the trends, fundamentals and impacts of migration at the international level. First, I introduce five common categories of immigrants and define immigrants under two systems. Then, I summarize the trends of immigrants in both destination and source country. Third, three approaches identify the fundamentals driving migration from source to destination country: "Push" and "Pull" theory, historical forces and prospective factors. Finally, I discuss the impacts of migration on the source and destination country respectively.

Some important issues are discussed in this paper. First of all, the categories of immigrants include family reunion, visitor acceptance, asylum seekers, skilled workers and naturalization rules. Individuals with foreign nationality and born in a foreign country are defined as immigrants under "temporary" and "permanent" systems respectively. Secondly, the United States, Canada, Australia and European countries are main destination countries. Among all the receiving countries, the United States has the largest flows and stocks of immigrants, while the flows and stocks of immigrants in Japan are negligible. European countries, Africa and Eastern Asian are traditional source countries. Recent flows of migrants mainly come from developing countries driven by several factors (gap of per capita income, distance, language and war). Thirdly, "Push" factors from the supply side generate motives for individuals to move out of source country and "Pull" factors on the demand side drain

emigrants into destination countries. Historical forces explain the long run factors determining migration. A prospective approach suggests that the demand for immigration may increase because of ageing populations and skilled-labor shortages. The relative wage of immigrants to natives is influenced by joint effects of entry, assimilative and cohort, while the unemployment rate of immigrants is usually higher than natives. Immigration may change the age composition and skill composition of the destination population. In source countries, emigration may cause a "brain drain", but remittances, returns of emigrants and the positive externality associated with the brain drain are increasing the competition ability of the source country.

The finding of this paper is that migration not only has beneficial and harmful impacts to the economy of destination countries, but also has good and bad effects to the economy of source countries Setting up a model to investigate how migration affects the economy of the destination and source country in an unique framework would be useful for further discussion.

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