

European Migration: Push and Pull

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In recent decades Europe has experienced periods of push and pull migration. Whereas pull migration has been seen as economically beneficial, there is concern that push migration will accelerate the employment crisis. This article qualifies this view by arguing that migration may erode institutional constraints. The theoretical framework behind this idea accounts for heterogeneous labor, monopoly union behavior, and unemployment with regulated migration. A review of empirical studies for Europe concludes that migration was largely beneficial in the past. New econometric investigations suggest that immigration from countries that are targeted for recruitment was strongly driven by business cycle effects (demand-pull) and chain migration (supply-push), but that the processes changed with the halt in recruitment in 1973. Contrary to general expectations, flows of asylum seekers and refugees (supply-push) are also affected by relative economic conditions in the receiving countries.

The interest that European migration has recently attracted is due to increased public tensions about foreigners in several countries of the European Union (EU). Following years of experience with immigration since World War II, these current tensions have more to do with large inflows of asylum seekers and persistently high and increasing unemployment rates all over Europe than with migration as such. During some decades, especially the 1960s, demand-pull migration was seen as beneficial to the economy. In the 1970s immigration policies became more restrictive. The unemployment crisis in Europe in the past fifteen years has stirred fears of a jobless society, with current and expected migration induced by conditions in sending countries adding to mass unemployment. Both optimistic and pessimistic views on migration have an accepted place in standard economic reasoning. This article elaborates and qualifies these views. It defines push and pull from the economic perspective of the receiving country.

Migration can be defined in various ways. In the public debate, "immigration" often refers to permanent labor in-migration, and "immigration policy" is often

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used synonymously with active labor recruitment. European governments traditionally deny following such a policy even if they apply measures to control the inflow of nonnatives. This article does not distinguish between permanent and temporary migration or between migration for economic and noneconomic reasons. Where necessary, the context is explained more deeply.

Examination of ethnic and structural patterns of migration shows that the numbers of migrants and their ethnic composition differ considerably among countries. Migration policies also differ. And several European countries that once actively recruited labor migrants turned to restrictive policies in the 1970s. Policy instruments successfully organized pull migration but largely failed to avoid push migration or to enforce out-migration.

This article develops a simple theoretical framework to study the implications of immigration with heterogeneous labor in the face of unemployment caused by institutional constraints like trade unions. If migrants form a competitive fringe to labor markets and if skilled and unskilled workers in the economy are complements, native unemployment may decline. A review of the empirical literature suggests that in Europe's experience migration was not harmful.

New econometric evidence is presented on two aspects of pull and push migration. A review of the cyclical sensitivity of migration to Germany from the key recruitment countries before and after the halt in recruiting shows that, contrary to expectations, cyclical variability did not decline for countries with the tightest restrictions on mobility. New data show that relative economic conditions in the receiving countries have affected the flow of asylum seekers and refugees in Europe.

Defining Push and Pull Migration

Each of the member countries of the European Union regulates migration. An inflow of workers is possible only in accordance with the policy goals of the governments. I will define demand-pull migration and supply-push migration in terms of classic textbook analysis of aggregate supply and demand in the receiving economy. Assume a standard price-output diagram like figure 1, panel A, with an upward-sloping supply curve, such as characterized the 1950s and 1960s. If aggregate demand increases, output and prices rise. Rising wages make it beneficial to allow for immigration to curb inflation and to obtain a further increase in output. Hence the supply curve shifts downward, and AB in panel A represents the effects of pull migration—immigration drawn in by a strong economy and sometimes by active governmental encouragement. Conversely, an inflow of migrants without a change in demand shifts the supply curve downward and prices fall while output rises. Hence AC in panel A represents the effects of push migration—migration spurred by conditions in the home, or sending, country. In short, push-supply migration affects the aggregate supply curve alone while pull-demand migration deals with migration (and hence a shift of the supply curve) that responds to a shift in the demand curve. All internal factors affecting aggregate demand that cause migration are considered to be pull migration, while all internal or external factors

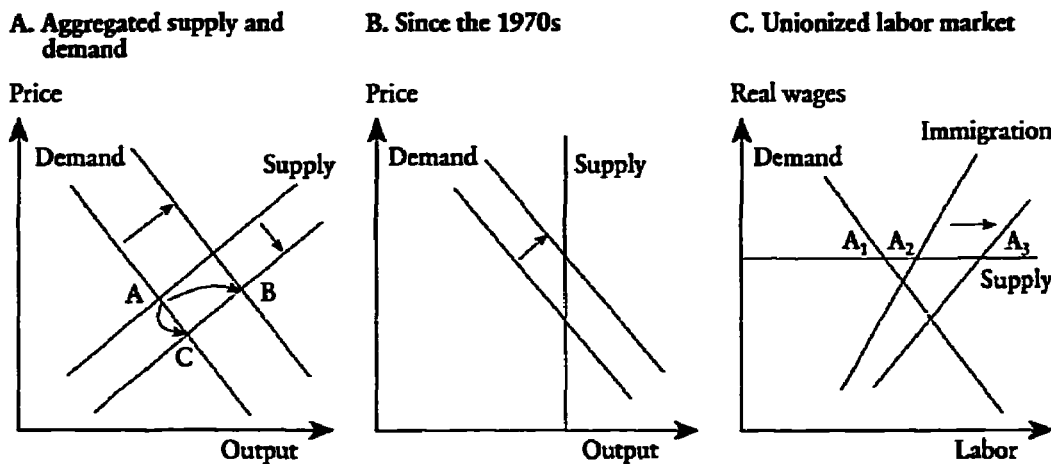
that affect the aggregate supply and that are associated with migration are defined as push migration. This definition of push and pull stresses the economic context of the inflow of workers.

The framework has changed somewhat since the 1970s. The aggregate supply curve of the economy is considered to be vertical, since the supply and demand curves of labor are now affected only by real wages (figure 1, panel B). If the trade unions (or other institutional constraints) fix real wages above the equilibrium level, say, at A_1 (panel C), unemployment of about A_1A_2 results. Immigration (or push migration) shifts the labor supply curve and increases unemployment and thus government deficits through payments of unemployment compensation. This development affects demand and increases prices while leaving output constant. Hence push migration causes stagflation.

In practice various factors may impel push migration. Among them are better economic conditions in the receiving than in the sending countries as measured by unemployment, wages, working conditions, social security benefits, the structure of the economy, and the like; demographic characteristics of the labor force; the wishes of the families of migrants to reunite; and conditions that foster the migration of asylum seekers and refugees. Family migration may also be affected by family reunification policies in destination countries. Though in a certain sense this is pull migration, I consider it push-supply migration because it affects the supply curve of the receiving economy alone.

How useful are these definitions in an empirical context? First, as always, definitions help to organize thinking even if their empirical implementation is difficult. Here I agree with Paul Krugman: "Those who can, do, and those who can't, worry about definitions." Aggregate supply and demand in macroeconomics is an example. For instance, taxes affect both the supply and demand side of the economy, with

Figure 1. *Push and Pull Migration and the Economy*



AB: Pull migration AC: Push migration

implications that are often ignored (Zimmermann 1987). Or, if technical progress is endogenous (as the new growth literature suggests and as was well known from the industrial organization literature long ago), any supply-side policy is a demand-side policy by affecting output, and vice versa. Second, implementation problems can arise. In an empirical context one may need further a priori assumptions to allow identification of push or pull migration, a need that will become clear when the concept is applied later.

Push and Pull Migration after World War II

Migration across Europe after World War II was complex, and no accepted and detailed statistics document it. Furthermore, in most countries the only criterion for differentiating between migrants and natives is citizenship (in the United States the crucial variable is whether a person is foreign born or native born). The problem is compounded in countries that have received many naturalized migrants like France and the United Kingdom, or that, like Germany, have taken many people with the same ethnic origin, who have the right to become citizens immediately. I therefore concentrate on general trends instead of detailed analysis. Further evidence is given in Maillat (1987), Salt (1989), Heisbourg (1991), Fassmann and Münz (1992), and Tapinos (1993).

I distinguish four periods: war adjustment and decolonization (1945–early 1960s), labor migration (1955–73), restrained migration (1974–88), and the dissolution of socialism and its aftermath (from 1988 on). Heisbourg (1991) estimates that 20 million people displaced by the war migrated. According to Schmidt and Zimmermann (1992) 12 million Germans had left Eastern Europe by 1950, and about 8 million went to the Federal Republic of Germany. Between 1950 and the construction of the Berlin Wall in 1961, some 2.6 million Germans moved from East to West Germany. Belgium, France, the Netherlands, and the United Kingdom were affected by return migration of their colonists and by inflows of native workers from their former overseas territories. More than 1 million French residents of Algeria resettled in France during and after the Algerian war of independence, 1954–62 (Fassmann and Münz 1992).

Labor migration characterized the second period, 1955–1973. In the 1950s labor shortages in some countries had already induced openness to labor immigration and even active recruitment. For instance, Germany established a “guest worker” system through recruitment treaties with Italy (1955), Spain and Greece (1960), Turkey (1961), Morocco (1963), Portugal (1964), Tunisia (1965), and Yugoslavia (1968). About 400 recruitment offices of the German Federal Labor Office operated in these countries on behalf of German firms. Similarly, Italians from the south moved to Switzerland, and Portuguese and Spaniards to France. On balance, 5 million people migrated to the north from the Mediterranean countries. France received most of the African migration, while the transoceanic migration from India, Pakistan, and the West Indies went to the United Kingdom. The Netherlands received immigrants from Indonesia, Latin America, Morocco, and Turkey. Especially in the cases of France and Germany, immigration was procyclical.

The period of restrained migration, which lasted until 1988, began throughout most of Western Europe at the end of 1973, when labor recruiting halted abruptly in the face of increasing social tensions and fear of recession following the first oil price shock. Inducing return migration turned out to be difficult. To the contrary, the foreign population increased because of higher fertility rates, continued immigration of family members, and the admission of refugees and asylum seekers. The number of illegal immigrants is also believed to have risen significantly. After a drop in 1974–75, particularly in France and Germany, immigration began rising again in 1976. Family immigration and political immigration dominated this period.

The period of dissolution of socialism and its aftermath (from 1988 on) was dominated by east-west migration and a heavy inflow of asylum seekers and refugees. According to the United Nations High Commissioner for Refugees the number of asylum seekers and refugees in Europe soared from 189,550 in 1987 to 700,850 in 1992. The other large part of the east-west migrants were ethnic Germans moving directly to Germany, particularly in 1989, the year the Berlin Wall fell. In 1992 Germany received 1.49 million new immigrants; net immigration was 0.79 million and the number of new asylum seekers and refugees was 0.44 million. The dimension of the inflow is most visible in terms of its relation to population. In 1950–61 immigration per year into Germany represented 1.09 percent of its beginning-of-period population. This figure rose to 1.42 percent for 1962–73, fell to 0.93 percent for 1974–88, and jumped to 2.47 percent for 1989 and after. By comparison the number for the United States in 1901–10, when immigration into that country was at its heaviest, was 1.16 percent. (Note that the numbers for Germany count ethnic Germans as immigrants, which is not the standard approach in official statistics.)

An interesting issue is the extent to which the European Union and its predecessors fostered internal migration—and continue to do so. Since World War II the European nations have forged increasingly strong economic ties. By 1995, when Austria, Finland, and Sweden will join, the European Union will have fifteen members. Yet, as Straubhaar (1988) has pointed out, the formation of the Common Market did not significantly stimulate labor migration among its member countries.

As this analysis suggests, European migration after World War II was largely controlled migration, with a major switch in policy in 1973. This change can be explained in terms of the push-pull concept. The periods of war adjustment and decolonization, restrained migration, and the dissolution of socialism and since are periods of predominantly push migration. Only the period of labor migration was a time of pull migration. Nevertheless, push migration did not harm receiving countries despite high unemployment rates. What permits immigration to be beneficial under such conditions? This issue is taken up in the section on labor migration and the economy. The next section studies the ethnic, geographical, and sectoral distribution of foreigners today and draws conclusions for future migration flows.

Ethnic Patterns and Migration Potentials

Six demographic challenges face the world in the coming decades if current trends prevail. First, 80 million to 100 million people are predicted to migrate from less-

developed regions. Second, the potential for east-west migration is estimated at between 5 million and 50 million people in the next decade. Third, Western European populations will decline, including a 2 percent drop for the countries of the European Union by 2025, following growth of 17.4 percent between 1960 and 1990. Fourth, excluding migration, the total European population is predicted to grow by about 3 percent by 2025, led by a 19 percent increase in Eastern Europe (Poland will increase by 17 percent, the Commonwealth of Independent States by 22 percent, and Albania by 56 percent). Fifth, the countries in the south are expected to grow even faster: Morocco and Turkey by about 60 percent, and Algeria by about 100 percent. Finally, the Western European labor force will age considerably. In the EU labor force the twenty- to thirty-nine-year-old age group was 25 percent larger than the forty- to fifty-nine-year-old group in 1990; by 2020, the younger group will be 17 percent smaller.

This picture suggests that demographics will be a driving force in the coming era of push migration, reinforcing underdevelopment, political instability, and the rising number of asylum seekers and refugees. If push migration is unavoidable, to which countries are migrants likely to be attracted? Because the answer lies largely in ethnic networks, I provide a breakdown of migrants in European countries according to nationality and compare the sectoral participation of foreign workers in Germany and Switzerland with that in the United States.

Only 3 percent of the total EU population in 1991 came from outside the union (table 1). Countries in the European Union harbored about 5 million people from other member states, 3.2 million from "other Europe," and 2.7 million from Africa. Most migrants from within the European Union are in France, Germany, or the United Kingdom. People from other European areas go mainly to Germany. Africans concentrate in France, Germany attracts Turks and people from the former Yugoslavia, and the United Kingdom harbors mainly migrants from EU member states. This picture would likely be different if migrants were defined as "foreign-born"; the United Kingdom, which has a large number of naturalizations, would then have the most Asians. Among the other states, the Benelux countries also have a pronounced ethnic structure of foreigners.

Germany has by far the largest number of foreign workers—almost as many as France and the United Kingdom combined (table 2). Leaving Luxembourg aside, Belgium, France, and Germany have the largest shares of foreign workers in the total labor force. The number for Germany is much smaller than it was for the Federal Republic of Germany before unification because the People's Democratic Republic of Germany had virtually no foreign workers. There are specific established networks. Most immigrants in Germany are from Turkey or the former Yugoslavia. French immigrants came mainly from the south of the European Union (Greece, Italy, Portugal, and Spain) and from developing countries. Most U.K. workers are from developing countries and from Ireland. The ratio of foreigners to foreign workers shows the extent to which foreigners do not work (table 2). Italy places first with 13.7 foreigners for each foreign worker, and Luxembourg last with 1.5. De facto labor immigration countries like France, Germany, and the United Kingdom have low

numbers—about three foreigners for each foreign worker—possibly the result of guest worker programs, of regulations for family migrants, or of the smaller families of the ethnic groups these countries receive. Nevertheless, one can conjecture that there is relatively less labor migration in Greece, Italy, and Spain than elsewhere.

In which industries do foreigners work? In 1982 the share of foreign labor was about 25 percent in Switzerland and 9 percent in the Federal Republic of Germany, while in the United States the share was about 8 percent (table 3). The statistics for Germany and Switzerland do not count naturalizations, which is especially a prob-

Table 1. *Residents in Countries of the European Union by Region of Origin, January 1, 1991* (percent except as noted)

Host country	Total population (thousands)	Natives	Other EU	Other EEA ^a	Central and Eastern Europe			
					Other Europe ^b	Africa	Asia	
European Union	343,881.1	97.0	n.a.	0.1	0.2	0.9	0.8	0.5
Belgium	9,987.0	90.9	5.5 (11.1)	0.1 (1.5)	0.1 (1.1)	1.0 (2.9)	1.9 (6.8)	0.2 (1.5)
Denmark	5,146.5	96.9	0.5 (0.6)	0.5 (7.0)	0.1 (1.1)	0.8 (1.3)	0.1 (0.3)	0.8 (2.5)
France	56,652.1	93.7	2.3 (26.5)	0.0 (3.5)	0.1 (10.2)	0.5 (8.7)	3.0 (60.5)	0.4 (14.9)
Germany	79,753.2	93.1	1.8 (27.0)	0.3 (63.0)	0.5 (65.9)	3.2 (75.6)	0.3 (7.3)	0.7 (33.7)
Greece	10,120.0	97.7	0.5 (1.1)	0.1 (1.7)	0.3 (4.2)	0.1 (0.3)	0.2 (0.7)	0.4 (2.4)
Ireland	3,524.0	97.6	1.9 (1.3)	0.0 (0.1)	0.0 (0.0)	—	—	—
Italy	57,746.2	98.6	0.3 (3.0)	0.0 (4.5)	0.1 (6.6)	0.1 (1.9)	0.4 (8.8)	0.2 (9.2)
Luxembourg	384.4	70.1	26.6 (2.1)	0.4 (0.4)	0.2 (0.1)	0.8 (0.1)	0.5 (0.1)	0.4 (0.1)
Netherlands	15,010.4	95.4	1.1 (3.4)	0.0 (2.1)	0.1 (1.3)	1.5 (6.9)	1.3 (6.9)	0.4 (3.5)
Portugal	9,858.5	98.9	0.3 (0.6)	0.0 (0.4)	0.0 (0.1)	0.0 (0.0)	0.5 (1.7)	0.0 (0.3)
Spain	38,993.8	98.8	0.7 (5.5)	0.1 (6.2)	0.0 (0.5)	0.0 (0.3)	0.1 (1.5)	0.1 (2.4)
United Kingdom	56,705.0	95.7	1.4 (15.8)	0.1 (9.5)	0.1 (8.9)	0.1 (2.0)	0.3 (5.5)	0.8 (29.7)
Total foreigners (thousands)	n.a.	n.a.	4,957	337	619	3,169	2,699	1,525

— Not available.

n.a. Not applicable.

Note: Figures in parentheses are shares (percent) of nationalities across the European Union.

a. European Economic Area. Includes Austria, Finland, Iceland, Liechtenstein, Norway, and Sweden.

b. Includes Switzerland, Turkey, and Yugoslavia.

Source: Eurostat, Schnellberichte 1993/6.

lem for the German data since, according to German law, immigrating ethnic Germans are immediately eligible for a German passport.

In the United States the sectoral distributions of foreign-born and native workers were similar. In Switzerland and Germany foreigners were heavily represented in construction and manufacturing and lightly represented in trade and other services. Some of the differences between the European countries and the United States may reflect the more temporary nature of immigration in Europe and its concentration in industries with less attractive jobs. Institutional factors were probably at work too, since immigration to Switzerland and Germany was partial, selective according to labor market needs.

The future of European migration is difficult to assess. It depends largely on long-term economic developments and on political stability in potential sending regions and migration policies in potential receiving countries. Although the basic demographic framework I have outlined suggests that the more important immigration scenario in the next decades will be south to north migration, most speculations are about east to west migration. Here the migration potential is estimated in the range of 5 million to 50 million, mostly over a period of ten to fifteen years. Layard and others (1992) suggest a potential flow of 3 percent of the current size of the population in Eastern Europe for the next fifteen years, implying a migration inflow of about 3 million ethnic Germans and 10 million others. Is this a problem? Not really, if considered in isolation and in terms of pure quantities. The average annual inflow would represent 0.4 percent of the current EU population, which is very low compared with Germany's postwar experience. If all 3.7 million ethnic Germans in Eastern Europe moved to Germany in ten years, the relative inflow would be less than 0.5 percent per

Table 2. *Foreign Workers in Countries of the European Union by Sending Region or Country* (percentage of foreign workers in receiving countries except as noted)

<i>Host country/year^a</i>	<i>Total foreign workers (thousands)</i>	<i>North EU^b</i>	<i>South EU^c</i>	<i>Yugoslavia</i>
Belgium (1989)	196.4	29.7	42.0	1.0
Denmark (1990)	46.8	23.9	3.4	7.7
France (1988)	1,172.5	3.5	46.7	2.6
Germany (1991)	1,898.5	6.5	20.2	17.1
Greece (1990)	23.2	32.8	6.0	0.9
Ireland (1988)	19.9	77.4	3.5	0.0
Italy (1983)	57.0	15.8	8.8	—
Luxembourg (1990)	78.4	55.4	39.0	1.3
Netherlands (1990)	200.0	35.5	11.0	3.0
Portugal (1985)	30.5	13.8	8.5	0.0
Spain (1983)	57.0	35.1	3.5	—
United Kingdom (1985)	820.9	38.7	9.8	0.4

— Not available.

a. Data are the latest available.

b. Belgium, Denmark, France, Germany, Ireland, Luxembourg, the Netherlands, and the United Kingdom.

c. Greece, Italy, Portugal, and Spain.

year. Even if all 13 million predicted above moved, the proportion would be only 1.6 percent, though, of course, the ethnic composition and language proficiency would be substantially different and adjustment costs would be larger.

Migration Policies in Western Europe

This section surveys experience with migration policies in Europe. Evidence is examined for the European Union and for countries covering different models of immigration policy: the rotation principle (Germany, Switzerland) and the policy of permanent residence (France, the United Kingdom). (Useful literature references are Hammar 1985, Kubat 1993, OECD 1992, and Zimmermann 1994a.)

EU Policy on Mobility

The European Union has no explicit collective immigration policy. However, the elementary relationship between migration and welfare was part of the motivation for the Common Market. The Treaty of Rome of 1957, which established the European Economic Community, provides for the free movement of labor. It stipulates that "freedom of movement for workers" entails the "abolition of any discrimination based on nationality between workers of the member states with respect to employment, remuneration, and other conditions of work and employment." As amended by the Single European Market Act, the treaty requires that after January 1, 1993, the "four freedoms"—the free movement of people, capital, goods, and services—be observed. This requirement implies the abolition of any restrictions on

<i>Turkey</i>	<i>Morocco</i>	<i>Others</i>	<i>Foreign workers as a percentage of labor force</i>	<i>Ratio of foreign population (1991) to foreign workers</i>
5.8	10.7	10.7	5.3	4.6
14.3	1.3	49.4	1.8	3.4
2.0	11.2	33.9	5.5	3.1
33.3	1.0	21.8	5.1	2.9
4.7	0.0	55.6	0.6	9.9
0.0	—	19.1	1.8	4.3
0.0	1.8	73.7	0.3	13.7
0.1	0.1	4.1	45.6	1.5
20.5	13.5	16.5	3.1	3.5
0.0	0.0	77.7	0.7	3.5
—	—	61.4	0.5	8.5
0.8	0.4	49.8	3.3	3.0

Source: Statistisches Bundesamt, Vierteljahreshefte zur Auslandsstatistik 4/1992. Labor force data: *ILO Yearbook of Labor Statistics* 1992. Population data: Statistisches Bundesamt, Statistisches Jahrbuch für das Ausland, various issues, and OECD 1992. Eurostat, Schnellberichte 1993/6.

Table 3. Distribution of Foreign and Native Employees by Sector, Switzerland, Federal Republic of Germany, and the United States, 1982 (percent)

Sector	Switzerland			United States			Federal Republic of Germany		
	Foreigners ^a	Natives	Share of foreign workers (percent)	Foreigners ^a	Natives	Share of foreign workers (percent)	Foreigners ^a	Natives	Share of foreign workers (percent)
Agriculture	1.0	8.8	3.1	3.6	3.4	8.4	1.0	1.1	7.9
Mining	0.4	1.1	8.0	0.7	1.0	5.7	2.0	2.4	7.3
Construction	11.5	5.0	38.2	4.7	6.0	6.4	9.9	7.6	11.3
Manufacturing	45.9	27.3	31.3	25.3	19.2	10.2	56.1	38.4	12.4
Transportation and public utilities	2.9	7.1	10.0	4.2	7.2	4.8	3.9	5.0	7.0
Trade	9.7	14.8	15.1	20.4	20.7	15.2	6.5	14.6	8.7
Wholesale	—	—	—	3.9	4.4	7.1	3.3	5.8	5.2
Retail	—	—	—	16.5	16.3	8.1	3.2	8.8	3.5
Finance, insurance, real estate	2.8	5.6	11.8	6.6	6.2	8.4	0.7	4.1	1.7
Other services	15.3	14.0	20.3	32.3	31.5	19.5	17.4	19.9	11.8
Private household	1.4	—	—	1.8	1.2	11.5	0.7	1.9	3.6
Miscellaneous	13.9	—	—	30.5	30.3	8.0	16.7	18.0	8.2
Public administration	10.6 ^b	16.3 ^b	17.1 ^b	2.4	4.9	4.1	2.6	7.0	3.4

— Not available.

a. United States: foreign born. Germany and Switzerland: foreigners.

b. Includes education and health services.

Source: Sehgal 1985; Statistisches Bundesamt, Statistisches Jahrbuch 1990. Statistisches Bundesamt der Schweiz, Statistisches Jahrbuch der Schweiz 1984 and 1993, Bundesamt für Ausländerfragen in "Die Volkswirtschaft," 1983 and 5/1992.

internal labor mobility, including border controls. It attempts to overcome obstacles to movement like language differences, disparate education systems, insufficient recognition of academic degrees and other qualifications, and cultural differences.

However, the Single European Market also requires more consistent and probably stricter control mechanisms at outside borders. Another important issue is whether free movement inside the European Union applies to foreigners who have been allowed to enter one EU country. Economic logic suggests allowing free movement for all residents, but doing so requires a common visa policy, which does not exist. So far, most common measures aim at better control mechanisms and broader harmonization of asylum laws. Immigration policies tend to be left to the national governments.

The Schengen Accords of 1985 (Schengen I) and 1990 (Schengen II) were directed at eliminating internal border checks, establishing consistent and tighter external border controls, developing a more unified visa policy, and coordinating asylum policies. The Schengen initiative is not a community activity, however, since Denmark, Ireland, and the United Kingdom refused to participate. The initiative will be put into effect on March 26, 1995 between most member states of the accords. Under the terms of the accords foreigners from outside the European Union are allowed to work only in the country that they enter, and they have only three months in which they can visit other EU countries. Even workers from an EU country must leave their EU host country within three months of losing their job.

In the Dublin Convention of 1990 all twelve member states agreed on a joint procedure for asylum seekers. It basically confirms asylum policies of the Schengen Accords and addresses the difficult issue of multiple asylum claims. The Maastricht Treaty of 1992 gives the European Commission co-initiative power with the EU member states on immigration policy. A working group preparing the Maastricht Treaty had defined more-active common policy elements, including labor immigration, the harmonization of visa policies, and common measures against illegals. Other internal EU committee proposals include more detailed suggestions about a quota system and stepwise labor immigration, first on a temporary basis. However, there is by no means any clear indication that the European Union officially considered an immigration law.

Specific Country Policies and Effects in Europe

Immigration policies of individual European countries are of two main types, rotational and permanent residence.

Germany. The German government does not accept the view that Germany attracts immigrants for permanent or temporary settlement. It is true that there was never any intention after World War II to attract non-Germans permanently. Nevertheless, there was always a migration policy whose basic elements were ethnicity, rejection of permanent non-German immigration, integration into the European Union, and adjustment of migration measures to labor market conditions.

The policy was expressed by giving ethnic Germans priority in citizenship as required by the German Basic Law, actively recruiting foreign workers in the 1950s and 1960s but not after the early 1970s, and then attempting to stimulate return migration.

Most immigrants to the Federal Republic of Germany since the end of World War II were ethnic Germans—*Übersiedler* from the German Democratic Republic and *Aussiedler* from the countries in Eastern Europe. Because ethnic Germans immediately receive a German passport, this stream of permanent immigrants is easy to overlook. They accounted for 12 million immigrants before 1950 and 4.8 million between 1950 and 1988 (3.2 million *Übersiedler* and 1.6 million *Aussiedler*). In 1989–90, 774,000 more came. Altogether, about 26 million ethnic Germans and other migrants moved to the Federal Republic of Germany between 1950 and 1989.

Responding to excess demand for labor in the 1950s and especially in the 1960s, Germany signed recruitment treaties with Greece, Italy, Morocco, Portugal, Spain, Tunisia, Turkey, and Yugoslavia. Under state recruitment German firms filed offers for contracts with the labor authorities, who forwarded the offers to recruitment officers in the individual countries. These officers then selected workers on the basis of qualifications, health, and employment records. By law offers had to be identical to those for equally qualified Germans.

The elements of immigration control are visas, residence permits, and work permits. EU nationals can move freely; other labor migration is at the administrative discretion of the authorities. After the recruitment policy ended with the economic crisis in 1973, family migration became more and more important. Policies were liberalized in several steps, and the government concentrated more on active integration programs.

At the same time attention turned to whether return migration should be fostered by financial measures. Such a program was not promulgated until 1983, however, after a new conservative government came into power. Foreigners from countries with which Germany had a recruitment treaty were eligible if they were unemployed or performed short-term work. Financial support was 10,500 deutsch marks plus 1,500 deutsch marks for each child leaving the country with the worker. Interested individuals had to apply within eight months of the program's introduction. About 17,000 applications were received (19,000 were expected), and about 14,000 were accepted, most of them from Turkish guest workers. Though the government considered the program successful, it was not continued.

The Foreigners Act of 1991 eased the requirements for naturalization, especially for people born or raised in Germany, and provided for the return to Germany of those who had grown up in Germany but had gone back to their country of origin. In the face of exploding numbers of asylum seekers and low acceptance rates, the law was changed in 1993 so that unfounded applications would be easier to reject. Readmission treaties like those signed with Poland and other Central European countries are expected to further help control abuse of the asylum right. There are also new employment treaties with countries in Central and Eastern Europe that allow German firms to subcontract with firms in those countries and to employ a

certain number of their workers, mostly in construction. In 1992 employment of this type had reached about 116,000.

Switzerland. Switzerland has a clear preference for temporary and selective labor immigration according to the rotation principle. Regulation and control of immigration derive from the Federal Law of Abode and Settlement of Foreigners of 1931 and later (slight) amendments. The government decided on annual entry quotas based only on national interests. The law requires that these decisions take into account Swiss cultural and economic interests, especially labor market conditions and the degree of foreign infiltration.

The law recognizes three categories of foreigners: seasonal workers, people with a permit of abode and a yearly work and residence permit, and permanent residents. In practice commuters form another category—people who live close to the Swiss border and receive a work permit but no residence permit; they must renew their permits every year. The dual nature of the permit of abode is a distinguishing characteristic of the Swiss system. For the first five years the permit must be renewed every year; thereafter it is good for two years at a time. Family members can follow after fifteen months. Permanent residence can be obtained after five to ten years, depending on the source country. Seasonal workers may remain for no more than nine months. A special police force supervises the foreign population and has great discretionary powers.

As these provisions suggest, Switzerland resists permanent immigration. Since 1970 the government has set quotas for yearly and seasonal work permits. In 1989–90 the quotas were 10,000 abode permits and 156,725 seasonal visas. Decisions are based on whether a Swiss native could take the job. Foreigners must be paid according to local labor market conditions. Migrants are accepted only from the European Union, the European Free Trade Area, and the former Yugoslavia. The government was prepared to join the European Economic Area, which would have required substantial changes in its migration policy, but the population voted against participation in 1992. The Swiss migration policy is generally considered effective and successful. Since the rotation principle has worked well, fostering return migration has not been an issue.

France. Though it has a long tradition of permanent immigration, France has become more restrictive recently. Traditionally, policy aimed at the assimilation of permanent migrants and their families, who often had roots in the former French colonies. Naturalization was easy. Yet France is neither prepared nor willing to become a multicultural society. In the 1950s an active immigration policy sought to meet the needs of the labor market. In the 1960s and early 1970s the government followed a laissez-faire policy. In 1974 immigration was halted, and in 1977 measures were introduced to induce return migration. Family migration was restricted, and measures were taken to protect the national labor market. In the 1980s special attempts, including stricter border controls, were made to stop illegal immigration and work in the shadow economy. On the other hand, family migration was liberalized again, and efforts were made to integrate and assimilate migrants.

Two programs were introduced to induce return migration. The first, in 1977, offered all unemployed migrants who were eligible for unemployment compensation 10,000 francs (F) if they agreed to return home, F 5,000 to the spouse if he or she was also unemployed (F 10,000 if employed), and F 5,000 for each dependent child who had a work permit. The program was largely a failure. In the first three months only about 10 percent of the potential returnees took advantage of the program, and in total about 100,000 migrants, 60 percent of them workers, returned. In 1991 a voluntary repatriation scheme for unsuccessful asylum seekers was launched on an experimental basis. People were offered travel expenses and F 1,000 per adult and F 300 per child, but response was low. A similar program for foreigners required to leave the country was created in late 1991. In 1993 the new conservative French government announced a restrictive program to halt immigration.

United Kingdom. The United Kingdom has traditionally been a country of emigration. In recent decades, however, significant immigration has taken place, mostly from the British Commonwealth and Ireland. The Nationality Act of 1948 allowed anyone from the New Commonwealth to move to the United Kingdom. The Commonwealth Immigration Acts of 1962 and 1968 and the Immigration Act and Nationality Act of 1971 were enacted to control the ethnic inflow. Concerned with keeping strict control over its population, the United Kingdom aims its policy at controlling immigration, not attracting it.

The Immigration Act of 1971 gives patrials—people with close connections to the United Kingdom by birth, descent, or marriage—free entry with an unrestricted work permit. Others (except those from other EU countries) have to apply for a permit, which is approved, initially for one year, on the basis of skill level, age, and language proficiency. After four years permit holders can apply to have the time limit lifted. Applicants for work permits in high-skill occupations are investigated more speedily than others. Labor migration has been increasing steadily in recent years, with work permits now totaling 34,627; more than half are long-term permits, about 80 percent of them held by professional and managerial workers.

Common Results

Immigrants contributed significantly to economic growth after World War II, and immigration policy largely reflected economic motives. Many Western European countries had active labor recruitment policies, which came to a halt everywhere in 1973, the time of the first oil crisis, a development that can be explained in push-pull terminology. Assimilation policies either were not followed or achieved little success. (See Tapinos 1993 and Zimmermann 1994a for elaborations.) A policy of temporary migration seems to work only when it is based on a strict rotation system, as in Switzerland. Germany, with its guest worker system, actually ended up with permanent migrants. Even the French model, with its planned settlements, ignored the dynamic of migration. Family (chain) migration has counteracted policy

objectives. Measures to induce return migration were not successful or achieved only limited success because they were not rigorously pursued.

Labor Migration and the Economy

Economic theory suggests that the market will eliminate regional disparities in prosperity over time if they are other than "compensating differentials." Compensating differentials are differences in industrial structure, public goods, the environment, individual preferences, and so on. For instance, if a region is a relatively unattractive place to work but an attractive place to live, it must pay higher wages and will exhibit higher unemployment rates in equilibrium. People who prefer living there are less mobile and less willing to accept jobs. If unemployment is increasing, wages will tend to decline. On the one hand, this decline will stimulate labor demand; on the other, it will spur some workers to move to other regions or to quit and become voluntarily unemployed. Unemployment and wages may then rise. To summarize: it is not necessary for differences in economic conditions to disappear in the long run to rule out migration. Regions with above-average wages may also have above-average unemployment rates.

Of further importance is how quickly labor markets adjust. Some European studies demonstrate that this process is typically slow within countries (see Pissarides and McMaster 1990, for instance, for the United Kingdom). Despite large economic differences among countries, migration within the European Union has never been large, even after barriers have been lowered. It is often concluded that a regional policy could considerably reduce adjustment costs. It can also be argued that migration from non-EU countries can help speed up adjustment and avoid adjustment costs for natives.

In general the higher the substitutability of foreign for domestic workers, the more likely it is that increased immigration will depress the wages of the domestic labor force or, if wages are inflexible, that unemployment will rise. However, immigrants are often complements to native workers, in which case rising immigration would be expected to lead to higher native productivity (and wages). Furthermore, immigration creates demand for the goods and services natives produce and therefore has a multiplier effect. (Most empirical studies suggest that immigration is not too harmful or is even beneficial to the labor markets of receiving countries. Greenwood and McDowell 1986, Simon 1989, Borjas 1990, and Straubhaar and Zimmermann 1994a review the empirical literature. Stark 1991 provides the best and most up-to-date theoretical treatment.)

Most of these studies are for the United States, however, and their findings are not necessarily transferable to Europe. Europe differs from the United States and Canada in at least three distinct ways (Zimmermann 1994b). The European labor market is less flexible and adjusts slowly to economic differences; labor inflows can compensate for these characteristics. Unemployment and labor market imperfections are more persistent in Europe, which makes the effects of immigration less predictable. And views on cultural variety and social networks in Europe stress cultural

assimilation much more than in the United States. The analysis here concentrates on the theoretical framework of push and pull migration and on a review of central empirical findings in the European context. It neglects demand for public goods by migrants. Since evidence suggests that migrants benefit the public coffer (Simon 1989), this does not alter the basic conclusions.

Theoretical Framework

If labor is homogeneous, the standard competition framework predicts that immigrants will increase total welfare at the expense of labor because the wage rate will decline. However, wages may not be downwardly flexible, perhaps because of unions (Schmidt, Stilz, and Zimmermann 1994). If union behavior remains unaffected by immigration, unemployment may rise, perhaps substantially. On the other hand, unions may be swayed in their choice between maintaining wages and employment by the pressures of rising unemployment or by the possibility of giving more weight to the interests of one group of workers over another.

If labor is heterogeneous, the key issue in evaluating the wage effects of immigrant labor is whether foreigners are substitutes for or complements to native workers. To simplify the analysis, assume that there are only two types of labor, qualified or educated workers (the skilled) and less-qualified or less-educated workers (the unskilled). One reasonable simplification is that skilled and unskilled workers are complements and that immigrants tend to be substitutes for unskilled natives and complements to skilled natives. In that case increases in immigration may depress wages and (possibly) increase the unemployment of unskilled workers and may induce the opposite effects for skilled workers. Based on a theoretical model outlined in the appendix, the immigration of both skilled and unskilled workers can be shown to be beneficial even in the face of unemployment.

While a formal treatment is left to the appendix, I will briefly outline the framework and provide the intuition. The model assumes that the economy produces a single output according to a constant-returns-to-scale production function with capital, skilled labor, and unskilled labor. Output prices are predetermined, and both types of labor are q -complements (the standard case). Natives supply input factors at fixed levels. Immigrants are perfect substitutes for unskilled natives, they bring no capital with them, and they have no effect on the demand side of the economy. The level of immigration is fixed by governmental rules. A monopoly union sets the wage w^L on the market for unskilled labor, and employers then choose the level of employment in this market. Though the wage of skilled labor is determined by competitive forces, the union cares about these wages as well, which are affected by the employment level in the market of unskilled workers.

The consequences of skilled and unskilled labor immigration in such a model are shown in figure 2. The monopoly union sets wages above the equilibrium for unskilled labor (B_0 in panel B). This action causes unemployment at level $\bar{L}-L$ for unskilled labor. Because the union is concerned about the earnings of both skilled and unskilled workers, it accepts a lower wage for unskilled workers (B_1) following

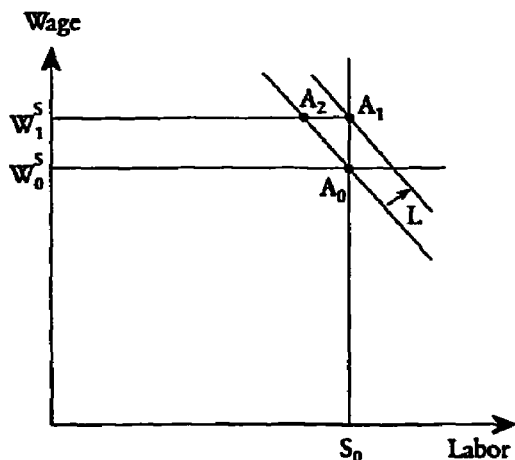
immigration by unskilled workers (see the shift of the labor supply curve in panel B) because the increase in the employment of the unskilled (L_1) shifts the demand curve for skilled workers upward (panel A). Since the two types of labor are complements, the wage rate of skilled workers increases (from A_0 to A_1 in panel A). As a further result, the union wage for unskilled labor falls and drives the economy toward the equilibrium point of a competitive labor market. Native unemployment may rise or fall. It may fall if the degree of complementarity or the weight assigned to skilled workers in the union's objective function is sufficiently strong (B_1 in panel B, for example).

The case of immigration of skilled labor is even more obvious. As the supply of skilled labor increases, the equilibrium point shifts down from C_0 to C_1 (panel C).

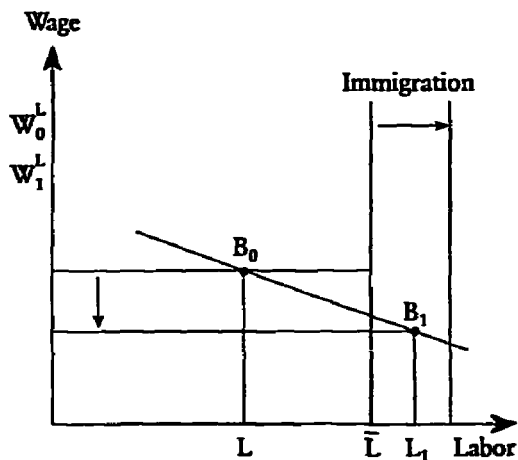
Figure 2. Immigration and the Labor Market

Immigration of unskilled labor

A. Skilled

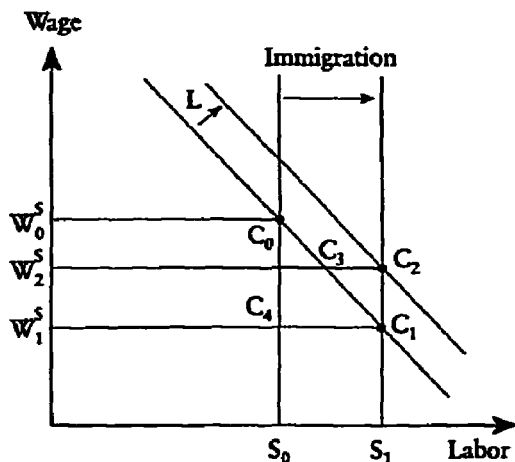


B. Unskilled

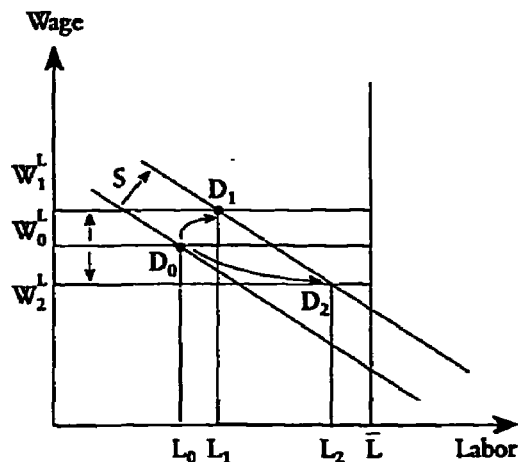


Immigration of skilled labor

C. Skilled



D. Unskilled



The demand for unskilled labor increases because of complementarity (the shift in the demand curve in panel D) and more unskilled workers will be employed whether the union decreases the unskilled wage (D_2) or increases it (D_1). The increase in the level of unskilled employment again shifts the demand curve for skilled labor upward (C_2 in panel C). Hence immigration of skilled workers may or may not cause an increase in the wages of the unskilled. The larger the weight of the skilled wage and the smaller the weight of native unemployment in the union's objective function, the more likely a decrease. Native unemployment falls no matter what happens to the unskilled wage.

The conclusion from this analysis is that high unemployment is not in itself an argument against immigration. Migration may even be beneficial in such a situation. In practice this is an empirical matter, crucially dependent on whether skilled and unskilled labor are q-complements. The rest of this section will address empirical issues in a European context.

Empirical Evidence

The dominant microeconomic topics on the integration of foreign labor are how do the migrants assimilate, how do they perform, and what are the consequences for native labor? Studies on earnings assimilation of permanent migrants in Australia, Canada, and the United States have shown that an initial earnings gap between immigrants and native labor narrows considerably over time, indicating the willingness of foreign labor to invest in human capital (see Greenwood and McDowell 1986 for a review of the evidence). Dustmann's studies (1993) of the earnings adjustments of guest workers in Germany did not confirm this selectivity. His empirical results indicated that foreign workers in the German labor market receive lower wages than natives throughout their work career, even after adjusting for individual differences. The reason, he concluded, is the temporary nature of migration to Germany.

This finding was contradicted by Schmidt (1992b). Using the same data set, he found that after about seventeen years of residence the average immigrant to Germany achieves earnings parity with the equivalent native. Pischke (1992) confirms that finding. The solution to this puzzling difference in findings seems to be that Germany tends to attract immigrants with relatively low skills, who are and stay blue-collar workers. Whether immigrants are found to adjust is therefore a consequence of the choice of the group to study. Since Dustmann (1993) included all natives in the analysis, whether blue- or white-collar workers, his nonconvergence result is understandable. However, the sample contains few recent immigrants, so it is difficult to study earnings dynamics. Pischke (1992) and Schmidt (1992a) also studied the relation of country of origin to convergence of native and immigrant earnings. One conclusion of these studies was that ethnic groups with the largest initial earnings disadvantage realized the highest wage growth. Dustmann (1994), who also investigated the issue of language, showed that proficiency, especially in writing, considerably improves the earnings of migrants.

There are also studies about the performance of wages of immigrants for other European countries. Kee (1993) studied the relative income performance of immigrants in the Dutch labor market (see also Hartog and Vriend 1990). Niesing, van Praag, and Veenman (1994) found severe unemployment for ethnic minorities in the Netherlands compared with native Dutch, which they trace to employer discrimination. In their investigation for Sweden, Aguilar and Gustafsson (1991) found that earnings converge for the 1969 cohort of immigrants but not for the 1974 cohort. Chiswick (1980) found little difference in the earnings of native-born and foreign-born white men in the United Kingdom. Granier and Marciano (1975) studied wages for immigrants in France, Grossman (1984) studied the occupational attainment of immigrant women in Sweden, and Moulaert and Deryckere (1984) have investigated the employment of migrants in West Germany and Belgium.

Winkelmann and Zimmermann (1993) studied the frequency of direct job changes and of unemployment spells for natives and foreigners in the Federal Republic of Germany during 1974–84 using a count data estimation technique. The empirical evidence shows that foreign workers change jobs more readily on average and are also more frequently unemployed, especially later in life. Robust Poisson estimates indicate that there is a U-shaped relationship between age and frequency of unemployment for both German and foreign workers but that foreigners face lower unemployment risks than natives in early career stages and higher risks in later stages. Natives change jobs less frequently as they grow older, and foreigners less frequently the longer they are in Germany. The share of foreign labor affects the frequency of unemployment significantly but has no effect on job mobility. Hence the larger is the share of foreign workers the greater is native unemployment. Simulations with the predicted age structures for Germany and the European Union from 1995 to 2020 show that job changes and unemployment will first decrease and then increase, while general development in the European Union is less marked.

The unemployment effects of immigration were also small or statistically insignificant in other European studies. Using a micro-data set of unemployment histories in the 1980s for a German panel and controlling for various individual and industrial characteristics and unobserved heterogeneity using a simulated estimation probit technique, Mühleisen and Zimmermann (1994) found no evidence that foreign labor induces unemployment, perhaps because wages were adjusting flexibly in this period (De New and Zimmermann 1994a,b). Hunt (1992) found that the impact of the 900,000 repatriates to France from Algeria in 1962 on the 1968 unemployment rate of nonrepatriates was at most 0.3 percentage point. Her cross-section regression controlled for education, age, and industrial and regional differences.

Are natives and foreigners substitutes or complements in production? Gang and Rivera-Batiz (1994) found the results from the U.S. literature to be inconclusive. Using European data to estimate a translog production function, they found that education is complementary with unskilled labor and experienced labor in production. A 1 percent increase in the endowment of unskilled labor would raise the returns to education by close to 0.75 percent and the returns to experience by 2.5 percent. Similarly, a 1 percent increase in the endowment of education augments the

returns to unskilled labor by 0.62 percent and raises the rate of return on experience by approximately 1.8 percent. Finally, an increase in the supply of experienced labor raises the remuneration of unskilled labor by about 0.31 percent and that of education by 0.25 percent. Drawing useful conclusions from these findings, however, requires evaluating the net impact of immigrants, which depends on the quality structure of the immigrant and native work force as well as the size of immigration, which is difficult to simulate.

Using German micro-data, De New and Zimmermann (1994a,b) studied the impact of the share of foreign labor on wages for native blue- and white-collar workers. A higher share should affect wages positively if foreigners are complements and negatively if they are substitutes. The econometric evidence implies that an increase of 1 percentage point in the overall share of foreign labor results in a 4.1 percent reduction in the average hourly wage of all workers. The wages of blue-collar workers decline by about 5.9 percent, but those of white-collar workers increase by about 3.5 percent. Since most immigrant workers are blue-collar workers, this is evidence of complementarity between white-collar and blue-collar workers. The findings of Hunt (1992) for the impact of the 1962 repatriates to France from Algeria are also modest. She estimates that their arrival lowered average annual salaries in 1967 by at most 1.3 percent.

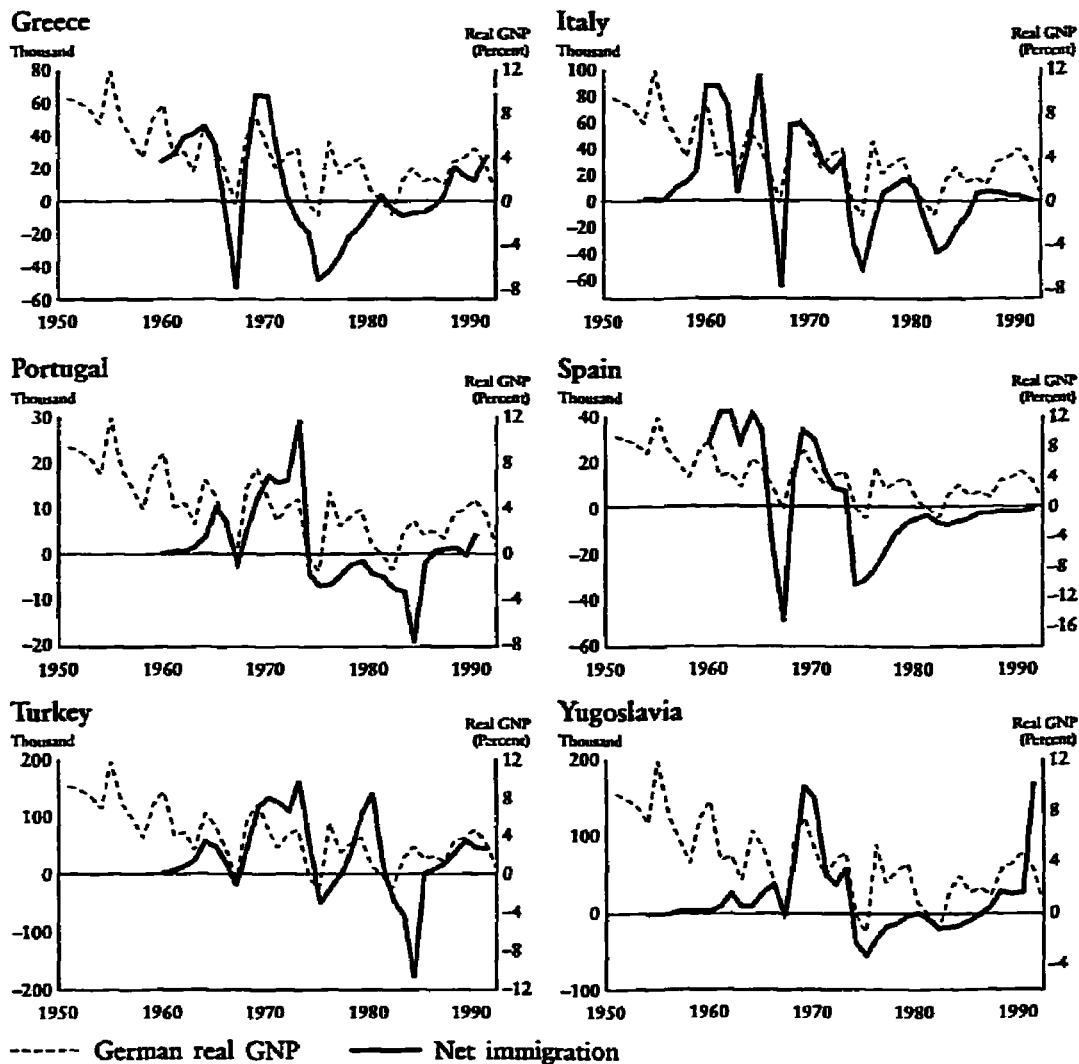
Immigration and the Business Cycle: The German Case

Earlier sections have reviewed the history of postwar labor migration in Western Europe: the heavy migration in 1955–73, the restrained migration of 1974–88, and the effective policy measures that attracted migrants in the first period and the perhaps less successful attempts to control or even prevent labor immigration in the second. According to our analysis so far, Germany was a country of substantial immigration in which pull migration should have dominated until 1973 and push migration thereafter. This suggests an exploration of the cyclical sensitivity of immigration from the recruitment countries. Of countries that had recruitment treaties with Germany until 1973, Greece, Italy, Portugal, Spain, Turkey, and Yugoslavia offer reliable time-series data beginning around 1960. All but Turkey and Yugoslavia are members of the European Union today, but workers from countries that joined the European Union at a later stage (Greece in 1981 and Portugal and Spain in 1986) were not allowed free mobility for seven years. Therefore, only Italians belonged to a common international labor market with Germany throughout the period under study. The analysis concentrates on net immigration from all sources. The time series display a strong correspondence with the business cycle in Germany (proxied by real GNP growth rates) until 1973 (figure 3). After 1973 the cyclical variability continues for most countries, but at different levels and with different lags. In Italy and Spain the cycles seem to converge.

From the previous analysis immigration seems driven largely by policy measures that reflect the economic motives of the receiving country. In such a framework migration flows should be determined by labor demand and not by labor supply fac-

tors. Determinants of individual migration decisions, like relative wages and relative unemployment rates, should not matter. Since goods demand is the dominant factor of labor demand and labor migration was basically a response to recruitment until 1973, the analysis is simple. Net immigration is assumed to be a linear function of the business cycle, with a regime switch around 1973 to allow for the drastic change in migration policy. The business cycle is proxied by real growth. Since labor is recruited, suggesting that labor is planned, migration is expected to respond simultaneously to demand. Real growth, however, can also be affected by supply factors in the receiving economy such as productivity. It is assumed here that productivity change is exogenous and may potentially change with the regime switch in 1973. This will consequently be captured by a constant under both regimes.

Figure 3. *Net Immigration from Recruitment Countries to Federal Republic of Germany and German Business Cycle*



I explored the relationship between 1960 and 1991 using an ordinary least squares regression of immigration from each recruitment-targeted country (table 4). Real growth is assumed to capture the pull factors; lagged net immigration (a measure of persistence and network migration) and the time trend (as a proxy of unobserved variables operating in the sending and receiving countries) are assumed to capture the push factors. (Remember that lagged immigration is not seen as pull migration since it is not caused directly by the economic conditions in the receiving country.) Since regression results are likely to change with the switch in policy regime in 1973, the approach chosen allows for different parameters before and after that year. All time series were examined for stationarity using the augmented Dickey-Fuller test for both subperiods in all countries (not reported here). It was not possible to reject a unit root in all cases, although the respective coefficients were

Table 4. *Migration from Major Recruitment-Targeted Countries*

Variable ^a	Italy (1960-91)	Greece (1961-91)	Spain (1961-91)	Portugal (1961-88)	Yugoslavia (1960-90)	Turkey (1961-91)
Constant	-44,624 (-3.0)	-25,586 (-2.1)	-19,168 (-2.1)	-8,905.3 (-2.3)	-56,716 (-2.6)	-42,179 (-1.1)
Real GNP growth	16,013 (6.4)	12,319 (6.2)	10,227 (7.4)	2,305.4 (3.2)	10,849 (3.4)	14,071 (1.9)
Growth * D74	-9,098.8 (-2.6)	-11,644 (-3.8)	-10,259 (-5.3)	-1,962.8 (-2.0)	-7,657.8 (-1.6)	-1,940.2 (-0.2)
Lagged migration ^b	0.274 (2.1)	0.447 (3.6)	0.371 (3.4)	1.159 (5.5)	0.467 (2.8)	0.876 (3.2)
Lagged migration ^b * D74	0.265 (0.8)	0.040 (0.1)	-0.278 (-1.0)	-1.054 (-4.3)	-0.278 (-0.9)	-0.336 (-1.1)
D74 ^c	22,917 (1.4)	-23,969 (-0.7)	-26,652 (-1.5)	4,114.9 (1.0)	-29,478 (-0.8)	16,360 (0.4)
Trend		-2,025.4 (-2.0)	-1,855.7 (-2.5)		4,352.3 (2.1)	
Trend * D74		3,951.7 (2.3)	3,431.7 (3.6)		-1,203.1 (-0.5)	
\bar{R}^2	0.77	0.80	0.84	0.76	0.72	0.51
DW	2.26	1.71	1.21	1.97	1.19	2.03
Godfrey LM ^d	1.0	0.9	6.7	0.0	6.9	0.0
Box-Pierce ^d	0.7	0.6	4.3	0.0	4.2	0.0
Box-Ljung ^d	0.8	0.7	4.7	0.0	4.6	0.0
SC-LRT ^e	9.6	22.6	28.2	22.0	11.5	1.5

Note: Numbers in parentheses are t-statistics.

a. The dependent variable is net immigration.

b. Lag of net immigration.

c. Dummy variable: 1 after 1973, 0 otherwise.

d. χ^2 -distributed test statistic with 1 degree of freedom. The critical 5 percent value is 3.84 and the 1 percent value is 6.63.

e. Structural change-likelihood ratio test. χ^2 -distributed test statistic with critical 5 percent value of $\chi^2_3 = 7.81$ and $\chi^2_4 = 9.49$ and 1 percent value of $\chi^2_3 = 11.34$ and $\chi^2_4 = 13.28$.

Source: Statistisches Bundesamt, *Statistisches Jahrbuch*, various issues; Sachverständigenratsgutachten 1992/93.

about -1 . Since this is probably the consequence of the small sample sizes, I proceeded using the migration flow variable.

In most cases the estimates indicate that behavior changed significantly after 1973. This conclusion is confirmed by the structural change-likelihood ratio test (SC-LRT). It strongly rejects constancy in behavior for Greece, Portugal, and Spain (the countries that joined the European Union in the 1980s but had not yet reached the status of free labor mobility). The rejection is less strong but nevertheless significant at the standard 5 percent level for Italy and Yugoslavia, but insignificant for Turkey. Despite the fact that Italians were unrestricted, their behavior seems to have changed, whereas Turks, to whom such mobility restrictions largely applied, obviously did not change their behavior. These results suggest the need for a more detailed breakdown and explanation of the underlying factors.

According to the respective coefficients, immigration from Italy responds strongest to the business cycle followed by immigration from Turkey, Greece, Yugoslavia, Spain, and Portugal. The response coefficients are significantly lower after 1973 for Greece, Italy, Portugal, and Spain, but not for Turkey and Yugoslavia. The persistence coefficients (of lagged migration) are large for Portugal and Turkey and small for Italy and Spain. With the exception of Portugal, for which the parameter changes to zero, the coefficients remained stable after 1973. The constant did not change after 1973 for any country, indicating that the switch in the policy regime was either neutralized by other factors or operated only through changes in the other coefficients. Time trends played a role only in Greece, Spain, and Yugoslavia, and the trend factor remained unchanged in the case of Yugoslavia. For Greece and Spain the time trend affected immigration negatively until 1973, but switched soon afterward.

An analysis of residuals with various χ^2 -distributed test statistics (DW, Godfrey LM, Box-Pierce, Box-Ljung) suggests that only the residuals for Spain and Yugoslavia depart from white noise. (Table 4 reports only tests with one lag. Tests with higher lags gave no different results.) Residual analysis of explicit estimates for the two subperiods clearly demonstrates that the process in Spain and Yugoslavia is quite different after 1973 and that the departure from white noise originates in this period. Results of maximum-likelihood estimates for the second period, which explicitly model the autoregressive residual process, reveal no effects on the qualitative findings for the variables in the equations. Similarly, I investigated whether the large estimate for lagged migration in Portugal in the first period is causing econometric problems. The equation was reestimated for 1961–73 in first differences for the endogenous variable with no relevant changes for the parameter estimates of the remaining variables.

As should be expected, there are elements of push and pull migration in both subperiods. Nevertheless, the distinction between the two is confirmed through this investigation by the fact that the cyclical variability of immigration largely decreased after 1973 in most countries. It is practically zero in Greece, Portugal, and Spain and (though still positive) substantially lower in Italy, despite the Italians' free mobility. This is not the case in Turkey and Yugoslavia, where the persistence coefficients dominate the immigration process; in Yugoslavia, moreover, a deterministic time

trend operates. For Turkey the statistical significance of the coefficient of the real growth variable is low anyway. One may conclude that push migration was always more important for these countries. An explanation for the drop in cyclical variability for Italy is the abandonment of the active recruitment policy, which implied a substantial increase in mobility costs.

EU Asylum Seekers and Refugees

The large inflows of asylum seekers and refugees are at the heart of the public debate about migration in Europe and are the major reason for serious political tensions. In France only 25 percent of asylum seekers are currently accepted; the rate in Germany is only 6 percent. How many of these immigrants act from economic motives? It is sometimes argued that many asylum seekers are actually labor migrants who have no other way to enter the European Union legally. Moreover, even true asylum seekers and refugees might choose a country within the European Union for economic reasons. A main difference between a true asylum seeker or refugee and a labor migrant is that only the labor migrant will care about economic factors in the country of origin. In this section I will assume that economic conditions in the country of origin do not matter and that the political migrant is attracted by countries in the European Union that are performing relatively well. Ethnic networks should also matter, since they reduce information and adjustment costs.

The inflow of asylum seekers and refugees can be considered the standard case of push migration: someone will decide to migrate solely to escape politically motivated persecution or war. Even here economic motives may enter; a migrant may choose a country whose economic performance is best among possible destinations. This section explores whether asylum seekers and refugees to the European Union exhibit such economic motives. The statistical significance of such determinants does not, however, contradict that asylum seekers and refugees are push migrants, as long as they react only to economic differences in the equilibrium levels between potential host countries and not to changes in aggregate demand in the country of choice.

Using recent unpublished data from the United Nations High Commissioner for Refugees on asylum seekers and refugees and newly published Eurostat data on the stock of migrants in Europe, I compare the explanatory power of network migration with that of pure economic determinants. This data base allows substantial additional insights. The data on asylum seekers differentiate between sending and receiving regions and identify the ethnic networks. The total number of asylum seekers in Europe was 159,000 in 1980, 170,000 in 1985, and 701,000 in 1992. Throughout this period Germany attracted by far the largest share of these migrants: the low was 29 percent in 1983, and the high was 69 percent in 1980. France, Sweden, and Switzerland had the next highest shares, but in any given year these never approached half of Germany's share.

The empirical analysis is restricted to the ten EU countries and the period (1983–92) for which data on asylum seekers and refugees were available (Ireland and Luxembourg are excluded). A further split was made according to the ethnic

networks or regions of origin—Eastern European, African (excluding North Africa), Arabic (the Middle East, primarily North Africa), and Asia. Regions of origin with only marginal flows were excluded. The potential sample size was 400; missing data restricted the sample used to 355. The data were analyzed in logged form to capture nonlinear relationships. Among the regressors are economic variables and measures of ethnic networks (as listed and defined in table 5). The dependent variable (number of asylum seekers and refugees varying with receiving and sending countries) varies over time, country, and ethnic group, whereas relative unemployment, real relative wages, and the relative size of the labor market are identical across ethnic groups since they reflect the conditions in the receiving countries. The only reliable data on the number of ethnic residents (based on passports) are from Eurostat for 1991, but these data vary across ethnic groups and countries.

Table 5. *Analysis of the Log of Asylum Seekers, 1983–92*

Variable	Pooled ordinary least squares			Random-effects panel model		
	Ia	IIa	IIIa	Ib	IIb	IIIb
Constant	6.66 (18.2)	6.54 (18.2)	7.06 (17.3)	7.19 (11.4)	6.65 (16.8)	7.27 (15.9)
Relative unemployment ^a	-0.89 (-4.2)	-0.81 (-4.0)	-0.82 (-4.1)	-0.99 (-3.8)	-0.77 (-3.3)	-0.79 (-3.3)
Real relative wages ^b	1.53 (4.9)	1.55 (5.2)	1.57 (5.3)	1.08 (4.6)	1.43 (4.8)	1.39 (4.7)
Relative size of the labor market ^c	0.38 (4.4)	0.37 (4.4)	0.29 (3.2)	0.83 (2.9)	0.48 (4.6)	0.42 (3.7)
Ethnic network ^d	0.26 (4.1)	0.19 (2.8)	0.38 (3.8)	-0.05 (-0.9)	0.11 (1.5)	0.28 (2.8)
European ethnic network ^e		0.19 (4.0)	-0.07 (-0.6)		0.18 (3.8)	-0.10 (-0.9)
African ethnic network ^e		0.15 (2.8)	0.18 (3.3)		0.15 (2.8)	0.18 (3.3)
Arabic ethnic network ^e		-0.06 (-1.2)	-0.32 (-2.8)		-0.06 (-1.2)	-0.34 (-3.0)
Distance ^f			-1.25 (-2.6)			-1.33 (-2.7)
\bar{R}^2	0.27	0.33	0.34	0.19	0.34	0.35

Note: The sample size is 355; t-statistics in parentheses. The dependent variable is the log of the number of asylum seekers and refugees of the respective receiving and sending countries. The Asian ethnic network is the reference group in columns II and III.

a. The unemployment rate (as a percentage of total labor force) for a country divided by the unemployment rate of OECD-Europe.

b. The log of real hourly earnings for a country minus the log of real hourly earnings for OECD-Europe; real hourly earnings are hourly earnings in manufacturing corrected by purchasing power parity.

c. The number of employees divided by the average number of employees in European countries (employees in manufacturing).

d. The log of size of ethnic group.

e. Ethnic network times a dummy variable for the sending region.

f. One if the sending region is Asia or Africa; zero otherwise.

Source: OECD, *Main Economic Indicators*, various issues; ILO, *Yearbook of Labor Statistics* 1992; UNHCR 1993; Eurostat 1993.

An individual asylum seeker or refugee should be more likely to move to an EU country with a healthy economic environment and with a rich ethnic network that reduces adjustment costs. Hence real relative wages, the relative size of the labor market, and the ethnic network should exhibit a positive effect, whereas relative unemployment and distance (which measures transportation costs) should have a negative effect. The regression analysis tests for these implications. Two methods—ordinary least squares and random-effects panel models with country-specific random effects—and three behavioral specifications (I, II, III) were employed. Though the estimates of the economic variables do not differ substantially between the two methods, the Breusch-Pagan Lagrange multiplier test statistics all reject the ordinary least squares estimates; I therefore rely on the random-effects panel models.

All results are consistent with expectations and have the following interpretation: the larger is the unemployment problem in a potential EU host country, the less likely it is that it will receive asylum seekers and refugees. The larger is the size of the labor market and the real relative wages, the larger will be the migration inflow. Distance has a negative impact on immigration. The ethnic network variable is less stable and indicates that the coefficient differs between ethnic groups. Model IIIb suggests that the African network effect is stronger than the European and Asian effects (note that the Asian network is the reference group), whereas there is no Arabic network effect. Since ethnicity is measured here on a highly aggregated level, one must interpret cautiously. A much finer breakdown of the data or the use of micro-data would be necessary to have more confidence in these results. One can conclude from the results presented here that asylum seekers and refugees are highly sensitive to differences in the economic conditions of potential host countries in the European Union. This does not, however, make them (illegal) economic migrants. It merely suggests that economic considerations play an important role in their choices.

Conclusion

This article has surveyed major trends in migrations in postwar Europe and in immigration policies. With the exception of the 1960s most labor migration periods were dominated by push migration. The statistical analysis has revealed the importance of ethnic migration networks, whether made up of families or chains. These migration dynamics can counteract policy measures to induce return migration. A general concern now is that a substantial increase in push migration will aggravate the unemployment problem. A review of empirical studies reveals that experiences with labor migration in Europe were beneficial, or at worst not harmful. From a theoretical point of view immigration can break up institutional constraints and reduce unemployment.

New econometric evidence was presented that explored the inflow of migrants to the Federal Republic of Germany, a major receiving country in Europe in the 1960s, 1970s, and 1980s, and the inflow of asylum seekers and migrants to the European Union in the 1980s. For most sending countries immigration to Germany responded substantially less to the business cycle after 1973, and this development was supported by economic policy measures. Hence pull migration lost its importance and

was replaced largely by push migration. Immigration from Turkey and Yugoslavia, however, continued to be dominated by elements of network migration and was affected hardly at all by economically motivated immigration policy.

The inflow of asylum seekers and refugees is often considered to be entirely push migration. This view does not imply that economic factors are unimportant in general. My study reveals that such flows to the countries of the European Union are affected largely by economic differences among receiving regions. According to the push-pull concept presented here, these flows remain push migration for the receiving country as long as immigration is not fostered by increases in demand for goods.

Appendix

This analysis develops a model suggested by Schmidt, Stütz, and Zimmermann (1994). The economy is assumed to produce a single output according to a constant-returns-to-scale production function with capital, skilled labor S , and unskilled labor L . Output prices are considered to be predetermined, and both types of labor are q -complements (the standard case). Natives supply input factors at fixed levels. Immigrants M , which are fixed by government rules, are perfect substitutes for unskilled natives N , do not carry any capital, and have no effect on the demand side of the economy. A monopoly union sets the wage w^L on the market for unskilled labor, and employers then choose the level of employment in this market; the wage of skilled labor is determined by competitive forces.

Employed unskilled natives are $N = \alpha L$, where $\alpha = \bar{N}/(\bar{N} = \bar{M})$, \bar{N} being the fixed level of unskilled natives and \bar{M} being the fixed level of immigrants. The union's objective is considered to be

$$(A.1) \quad \max_{w^L} \Omega = \delta w^S \bar{S} + (w^L - \eta) \alpha L + \eta \bar{N} - \phi/2 (\bar{N} - \alpha L)^2$$

where \bar{S} is the fixed level of skilled natives, $NU = \bar{N} - \alpha L$ is native unemployment, η is fixed unemployment insurance benefits, and δ and ϕ are weights for the income of skilled workers and unskilled unemployed workers. The union cares about both skilled and unskilled native workers.

Profit maximization of the firm implies that wages are equal to marginal productivity. In linearized form, one obtains

$$(A.2) \quad \bar{w}^L = a^L - b^L L + c \bar{S}$$

$$(A.3) \quad w^S = a^S - b^S \bar{S} + c L$$

where $a^S, a^L, b^S, b^L, c > 0$, and \bar{w}^L are predetermined by the union. Hence, from the first-order condition it follows that

$$(A.4) \quad \frac{\delta c}{\alpha b^L} \bar{S} = L - \frac{1}{b^L} [w^L - \eta + \phi(\bar{N} - \alpha L)].$$

Additional immigration of unskilled workers affects the union's choice of w^L . For simplicity, the effect of α is investigated instead of \bar{M} since both effects have the opposite sign: $\text{sign } dw^L/d\bar{M} = -\text{sign } dw^L/d\alpha$. Of further interest is the resulting native unemployment NU . Straightforward calculations imply:

$$(A.5) \quad \frac{dw^L}{d\alpha} = \frac{\frac{\delta}{\alpha} c \bar{S} + \phi L}{2 + \phi \frac{1}{b^L}} > 0$$

$$(A.6) \quad \frac{dNU}{d\alpha} = \frac{\delta c \bar{S} - 2Lb^L}{2b^L} \begin{matrix} > \\ < \end{matrix} 0.$$

Result 1: Immigration of unskilled workers reduces the union wage w^L and drives the economy in the direction of the competitive labor market model. Native unemployment may rise or fall. If the degree of complementarity c or the weight δ is sufficiently strong, native unemployment may even fall.

Immigration of skilled workers (SM), which are substitutes for skilled natives (S), implies:

$$(A.7) \quad \frac{dw^L}{dSM} = \frac{c \left(\alpha + \phi \frac{\alpha^2}{b^L} - \delta \right)}{2\alpha + \frac{d}{b^L}} \begin{matrix} > \\ < \end{matrix} 0$$

$$(A.8) \quad \frac{dNU}{dSM} = -\frac{\alpha c}{b^L} \left[\alpha + \frac{\phi}{b^L} (1 - \alpha^2) + \delta \right] < 0.$$

Result 2: Immigration of skilled workers may or may not cause a drop in the wages of unskilled labor. A drop is more likely the larger is the weight of skilled income and the smaller is the weight of native unemployment in the union's objective function. Native unemployment falls no matter what happens to the unskilled wage.

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