

# INTERNATIONAL MIGRATION, ECONOMIC DEVELOPMENT & POLICY

Editors

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**A copublication of the World Bank  
and Palgrave Macmillan**

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1 2 3 4 10 09 08 07

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ISBN-10: 0-8213-6935-0 (Soft cover)

ISBN-10: 0-8213-7028-6 (Hard cover)

eISBN-10: 0-8213-6936-9

eISBN-13: 978-0-8213-6935-7

DOI: 10.1596/978-0-8213-6935-7

#### **Library of Congress Cataloging-in-Publication Data**

International migration, economic development, and policy : overview / edited by Çağlar Özden and Maurice Schiff.  
p. cm.

Includes bibliographical references and index.

ISBN-13: 978-0-8213-6935-7

ISBN-10: 0-8213-6935-0

ISBN-10: 0-8213-6936-9 (electronic)

1. Emigration and immigration. 2. Emigrant remittances. 3. Emigration and immigration—Economic aspects. I. Özden, Çağlar. II. Schiff, Maurice W. III. World Bank.

JV6035.G57 2007

304.8—dc22

2007011294

Cover photo: Corbis

Cover designer: Tomoko Hirata

# FOREIGN-BORN MIGRATION TO AND FROM NORWAY

*Bernt Bratsberg, Oddbjørn Raaum,  
and Kjetil Sørlie*

Not all immigrants settle in their host country for life. A growing body of empirical evidence from a number of destination countries shows that large numbers of international migrants either return to their source country or migrate to a third country; see, for example, Warren and Peck (1980) and Van Hook et al. (2006) for evidence from the United States; Dustmann (2003) and Constant and Massey (2003) for Germany; Edin, LaLonde, and Åslund (2000) and Nekby (2006) for Sweden; Jensen and Pedersen (2005) for Denmark; and Tysse and Keilmann (1998) for a prior study from Norway.<sup>1</sup> These studies find that out-migration typically takes place within a few years of immigrants' arrival in the host country, and the evidence points to considerable variation in out-migration behavior across immigrant groups.

The fact that many immigrants leave their host country has important implications. First, out-migration will have direct consequences for immigration policy. For example, in response to the aging of the native population, immigrant-receiving nations generally have political willingness to relax current restrictions on labor immigration from the developing world. If policy is to be designed with a certain target for a stable size of the foreign-born workforce, it needs to account for subsequent out-migration. Put differently, immigration policy may control gross immigrant flows but not net immigration, which also depends on outflows of the foreign born. Second, knowledge about which groups are more likely to stay and which are more likely to leave is crucial for shaping effective policy. For

example, recruitment strategies to attract desirable foreign labor migrants, such as particular occupational groups, will typically involve significant costs of language training and occupational qualification and certification. Such investments might have low returns if they are targeted at groups with high propensities to out-migrate. Third, any nonrandom characteristic of the out-migration decision may lead to biased assessment of the economic and social integration of immigrants in the host country. To illustrate, the observation that employment rates within immigrant groups improve over time may be interpreted as evidence of effective labor market integration. However, the observed pattern would also arise if those immigrants with the worst employment prospects systematically leave the country. In such a case, selective out-migration behavior would create the impression of overall economic integration, even when there is no actual improvement in the economic status of the individual immigrant over time.

A confounding shortcoming of many empirical studies of return and repeat migration decisions in the immigrant population is that of inadequate data. In fact, many studies do not directly observe out-migration behavior. Instead, a common strategy is to infer that immigrants have left the country when they “disappear” from the data. In studies based on longitudinal micro data, such as Borjas (1989), out-migration behavior cannot be distinguished from other sources of data attrition. A similar concern applies to studies, such as Van Hook et al. (2006), that take advantage of the household panel dimension of matched current population surveys. Other studies seek to quantify out-migration through “residual methods.” For example, one approach compares administrative records of immigrant arrivals with survey data of the stock of immigrants in the host country (Jasso and Rosenzweig 1982; Borjas and Bratsberg 1996). Clearly, such studies are sensitive to mortality and surveys’ inclusion of nonimmigrants and illegal immigrants. Another residual approach is to gauge out-migration by comparing the relative changes in the size of immigrant groups by observable characteristics, such as age and educational attainment, in consecutive surveys or censuses (that is, synthetic panels) (Warren and Peck 1980; Lam 1994). Finally, in studies where out-migration is actually recorded, panels are typically relatively short (Edin, LaLonde, and Åslund 2000; Jensen and Pedersen 2005) or consist of small samples of particular populations (Reagan and Olsen 2000).

The present study examines trends in immigration and out-migration behavior on the basis of unique longitudinal migration data that cover almost four decades. The data include all immigrant arrivals in Norway between 1967 and 2003. A recent study drawing on similar administrative data from Sweden is that of Nekby (2006). In the United States, the governmental program that tracked the emigration of the foreign-born population was terminated in 1957 (U.S. Bureau of the Census 1960). The Norwegian migration records give the dates of immigration and subsequent out-migration, permitting a careful study of the timing of out-migration events.

The present research characterizes such out-migration patterns for male and female immigrants and for different immigrant groups on the basis of the country of origin. For a subset of the sample period, the data records provide information on class of admission, allowing for analyses of links between admission class and out-migration behavior. The longitudinal records also provide information on destination country as well as reimmigration events to Norway. Thus, the data allow study of both onward migration behavior and reimmigration flows—two forms of migration that, because of lack of data, typically are excluded from empirical studies of international migration flows and, therefore, remain poorly understood.

## Data

The present study draws on comprehensive individual records of migrations taken from the Norwegian population register. The broad database contains a record for every move across the border of a Norwegian municipality since 1964. These records have been linked together to form individual migration histories for residents of Norway (Sørli 1998). This study merges the migration records with individual demographic characteristics, such as date of birth, gender, and country of birth, taken from the population register. From these data, the migration histories of individuals born abroad with two foreign-born parents (that is, immigrants) are extracted.

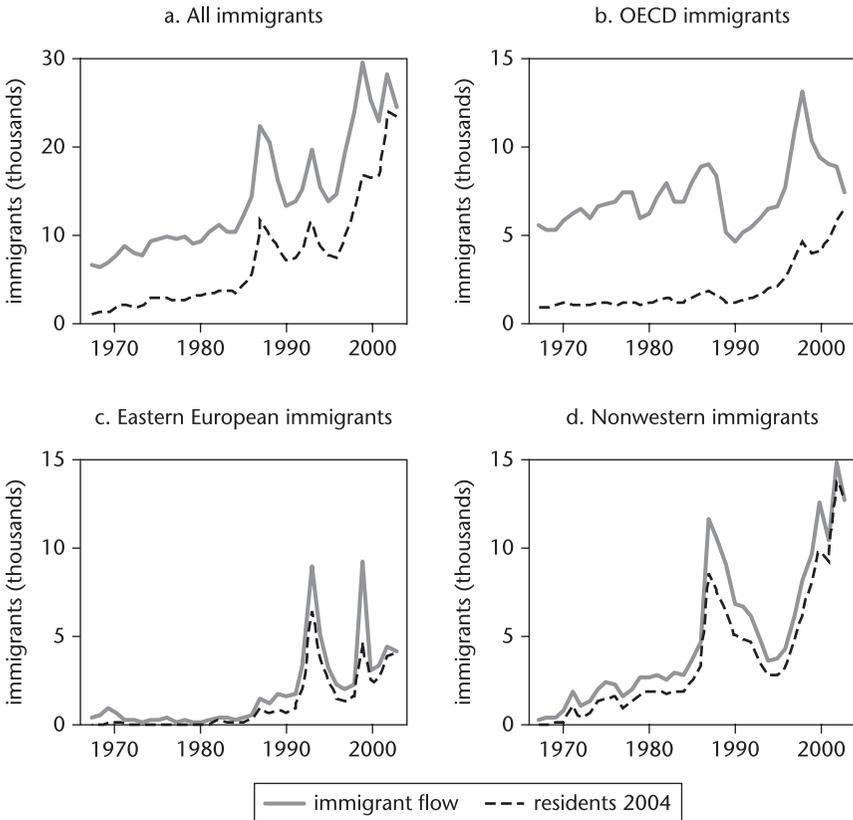
By rule, immigrants must file a migration form whenever their intended stay in Norway exceeds six months. Likewise, residents are required to file a migration form when they intend to stay abroad for at least six months. Because the migration form is a prerequisite for issuance of a personal identification number (which in turn is required to open a bank account and, in most cases, to receive a paycheck, to enroll a child in school, or to receive public transfers such as the comprehensive child allowance) immigrants have a strong incentive to file the immigration form. The study data are likely to include most immigrant arrivals in Norway.

The data may, however, fail to capture certain moves out of the country. Assessments of out-migration behavior may therefore contain a bias in the direction of understating out-migration propensities. When authorities, based on other sources, discover that individuals have left the country, they file an administrative out-migration form. Because such registry necessarily takes place after the actual date of the move, the present study runs the risk of overstating the duration of stays in Norway. It is difficult to assess the magnitude of such bias, but the number of out-migration records with a missing destination country provides an upper bound. In the data, 7.7 percent of out-migration records lack this information. Further, the immigrant class of admission is available only for those who arrived between 1988 and the summer of 1994. Therefore, the analyses of out-migration patterns by admission class are based on smaller subsets of the underlying data.

### Immigrant and Out-migrant Flows, 1967–2003

The empirical analysis begins with a description of trends in immigration to Norway. Figure 9.1 illustrates immigrant flows over a 36-year period. Immigrants are defined as foreign-born persons of foreign-born parents. Panel A displays the trends for all immigrants; the solid line measures annual immigrant arrivals, and the dotted line measures the numbers from the original immigrant cohort

**Figure 9.1. Immigration to Norway, 1967–2003**



Source: Authors.

Note: “Residents 2004” include those from the original immigrant cohort who remained (alive) in Norway as of January 1, 2004. “OECD Immigrants” cover immigration flows from Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Portugal, Spain, Sweden, Switzerland, the United Kingdom, and the United States; “Eastern Europe” covers flows from Albania, Belarus, Bosnia and Herzegovina, Bulgaria, Croatia, Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Moldova, Romania, Russian Federation, Serbia and Montenegro, Slovakia, Slovenia, former Yugoslav Republic of Macedonia, and Ukraine.

resident in Norway at the start of 2004. As the figure shows, immigration to Norway has fluctuated over time but has grown over the whole time period. The immigrant flow in 2003 consisted of 26,000 persons, compared with about 7,000 in 1967. Up until the mid-1980s, Norway experienced a steady, but moderate, increase in immigration from about 7,000 to slightly above 10,000 per year. The plot shows marked spikes in immigration in the late 1980s, in 1993, 1999–2000, and 2002. A closer inspection of the underlying data shows that the peaks are closely related to admissions of asylum seekers and refugees from places of political and military unrest elsewhere in the world, such as the Islamic Republic of Iran, Chile, and Sri Lanka (1987/88); Bosnia (1993); Kosovo (1998/99); Iraq (2000, 2002); and Somalia (2002).

Panels B, C, and D of figure 9.1 show the immigrant sample split by major region of origin: “OECD” (Organisation for Economic Co-operation and Development), which includes rich Western European countries plus Australia, Canada, Japan, New Zealand, and the United States (that is, pre-1990 OECD member states minus Turkey); Eastern Europe; and other “nonwestern” countries. The panels show that the rise in immigration since the mid-1980s primarily has been driven by increased flows of residents from Eastern Europe and other nonwestern countries. Thus, OECD countries were increasingly less represented in the country-of-origin mix over the sample period. The spikes in the inflow curves for Eastern European and other nonwestern immigrants further demonstrate the growing importance of asylee and refugee admissions in Norwegian immigration policy. For example, the two peaks in the Eastern European chart correspond with refugee arrivals during conflicts in the former Yugoslavia, Bosnia and Herzegovina in 1993–94 and Kosovo in 1998–99. The peaks in the OECD series during the 1980s and 1990s reflect particularly large movements from the neighboring countries of Denmark (1980s) and Sweden (late 1990s) and coincide with periods of strong economic growth in Norway and sluggish growth in the neighboring countries. Although nonwestern immigration patterns appear partly driven by conflict in the source country, Norwegian business cycles appear to have a strong influence on flows from OECD countries.

In figure 9.1, out-migration behavior is illustrated by the difference between the solid and dotted lines; the latter show the number from the original immigrant cohort remaining in Norway at the onset of 2004. (That is, the residual between the solid and dotted lines consists of out-migrants, plus those who died while in Norway, minus those among the out-migrants who later reimmigrated and stayed in Norway until 2004.) A small minority of the early immigrants remained in Norway in 2004, but the two lines converge over time for two reasons. One is that more immigrants move out as time passes. The second reason is the decreasing fraction of OECD immigrants in country-of-origin mix; these immigrants have

the highest out-migration propensities and thus contribute to a higher proportion of out-migrants among the early-entry cohorts.

Table 9.1 provides further background on migration patterns by region of origin and gender. More than 500,000 immigrants arrived in Norway during the 36-year period, and 51 percent of them were residents by the end of 2003. A minor

**Table 9.1. Immigration to Norway, 1967–2003**

	All countries	OECD	Eastern Europe	Nonwestern countries
<b>All immigrants</b>	525,272	267,352	71,410	186,510
Residency status in 2004:				
In Norway (%)	51.0	28.5	66.5	77.2
Dead (%)	1.6	1.8	1.5	1.3
Abroad (%)	47.5	69.7	32.0	21.5
At least one out-migration (%)	52.0	74.5	35.8	25.9
Among out-migrants:				
Moved to home country (%)	78.3	84.0	72.4	58.1
Moved to third country (%)	14.0	11.3	15.0	24.4
Unknown destination (%)	7.7	4.7	12.6	17.4
Reimmigrated to Norway (%)	14.6	13.2	14.7	20.7
<b>Male immigrants</b>	269,542	136,955	32,985	99,602
Residency status in 2004:				
In Norway (%)	49.6	29.3	61.6	73.7
Dead (%)	1.9	2.2	1.8	1.6
Abroad (%)	48.5	68.6	36.7	24.7
At least one out-migration (%)	53.0	73.6	40.7	28.9
Among out-migrants:				
Moved to home country (%)	76.3	82.4	71.5	53.4
Moved to third country (%)	14.5	12.0	14.7	23.2
Unknown destination (%)	9.1	5.6	13.7	19.4
Reimmigrated to Norway (%)	15.0	14.0	14.4	18.5
<b>Female immigrants</b>	255,730	130,397	38,425	86,908
Residency status in 2004:				
In Norway (%)	52.3	27.7	70.7	81.1
Dead (%)	1.3	1.5	1.3	1.0
Abroad (%)	46.4	70.8	28.1	17.9
At least one out-migration (%)	50.9	75.5	31.6	22.4
Among out-migrants:				
Moved to home country (%)	80.6	85.6	73.4	59.3
Moved to third country (%)	13.3	10.5	15.2	26.2
Unknown destination (%)	6.1	3.8	11.4	14.5
Reimmigrated to Norway (%)	14.3	12.3	15.0	23.9

Source: Authors.

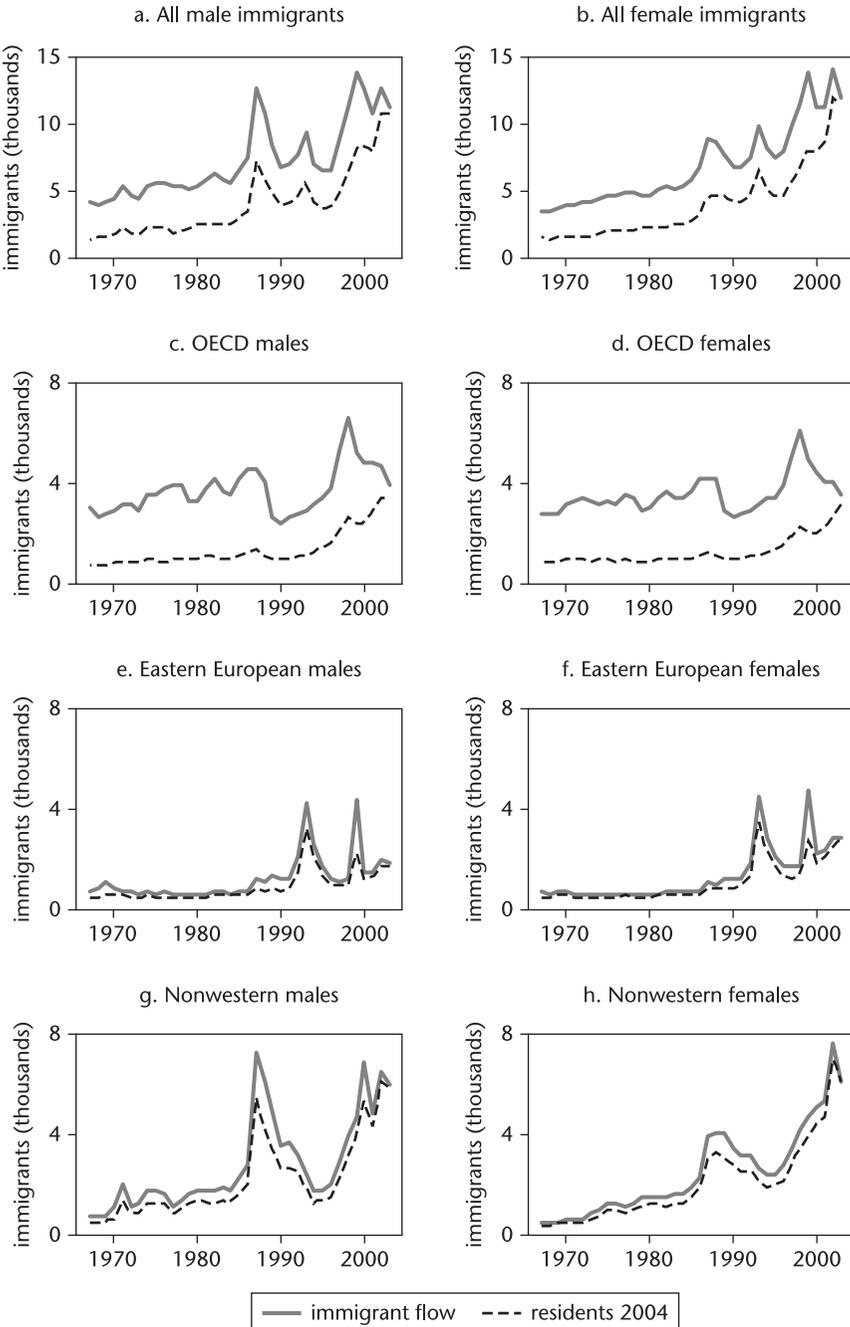
Note: Mortality rates are conditional on residency in Norway at the time of death. Reimmigration to Norway is conditional on at least one registered out-migration event.

fraction died (while in Norway) during the sample period, and 47.5 percent resided abroad. Because some of the immigrants who left Norway later reimmigrated, the percentage with at least one out-migration spell is somewhat higher (52.0 percent) than the fraction residing abroad. Three of four OECD immigrants had moved out of Norway, and only 28.5 percent were residents in 2004. The table suggests that out-migration is less prevalent among Eastern European (66.5 percent residents in 2004) and other nonwestern immigrants (77.2 percent residents). The majority of the immigrants who left Norway returned to their home country (that is, country of birth). OECD immigrants were much more likely to return home than Eastern European and other nonwestern immigrants. About 15 percent of the out-migrating immigrants later returned to Norway; the nonwestern immigrant group was more likely than the OECD group to come back to Norway.

The gender mix of immigrants over the 36-year period is fairly balanced, with slightly more men than women. As depicted in figure 9.2, the peaks and troughs of male and female immigration flows follow remarkably similar patterns. The largest differences in male and female immigration arise in the bottom panels of figure; for nonwestern immigrants, the marked spike in refugee admissions during the 1980s is much more pronounced for males. At the same time, the overall positive trend in immigration is strongest for females: although males dominated the immigrant flow every year up until 1992, female flows have exceeded male flows in 9 of the last 11 years of the sample period. Females constitute the majority of Eastern European immigrants, whereas males are overrepresented in the other two country-of-origin groups. Women are more likely to be residents in 2004, a pattern driven foremost by substantial gender differences in residency rates among nonwestern immigrants. As shown below, this pattern is the result of gender differences in cohort composition and class of admission, as women are overrepresented in recent arrival cohorts and among immigrants admitted on the basis of family reunification.

Table 9.2 offers greater detail on the patterns of out-migration behavior for the 10 countries of origin making up the largest OECD and nonwestern national groups in the data. As the table shows, out-migration rates vary substantially across the sample of source countries, from 84 percent among immigrants from the United States to 9 percent among those from Vietnam. Some of the variation in out-migration rates can be attributed to differences in year of immigration, but the table suggests systematic differences in out-migration behavior by the home country's economic development and distance from Norway. The table also reveals important differences across immigrant groups in the propensity of out-migrants to move back to the source country. The great majority of out-migrants from the neighboring Nordic countries returned home, but at least 30 percent of the

**Figure 9.2. Immigrant Flows to Norway, by Gender**



Source: Authors.

**Table 9.2. Out-migration Patterns for Immigrants from Selected Source Countries, 1967–2003**

	Immigrant count	Mean year of immigration	At least one out-migration (%)	Among Out-migrants			
				Moved to home country (%)	Moved to third country (%)	Unknown destination (%)	Remigrated to Norway (%)
<b>Denmark</b>							
All	53,599	1985	80.2	93.1	5.5	1.4	14.1
Males	23,729	1986	75.2	91.2	7.3	1.5	16.6
Females	29,870	1984	84.2	94.4	4.3	1.3	12.4
<b>Sweden</b>							
All	49,900	1991	65.3	93.0	6.2	0.8	14.1
Males	24,880	1991	65.8	93.1	6.1	0.9	14.4
Females	25,020	1991	64.8	92.9	6.4	0.8	13.9
<b>United Kingdom</b>							
All	36,590	1983	79.7	76.9	12.8	10.3	13.6
Males	22,358	1984	78.4	76.2	12.1	11.7	15.6
Females	14,232	1982	82.7	78.0	13.9	8.1	10.5
<b>United States</b>							
All	34,692	1982	84.2	79.2	13.9	6.9	8.8
Males	17,910	1982	84.4	78.7	14.0	7.3	8.9
Females	16,782	1982	83.9	79.7	13.9	6.5	8.8
<b>Pakistan</b>							
All	18,106	1985	28.9	73.6	12.0	14.4	51.9
Males	9,863	1984	29.5	68.9	13.3	17.8	45.3
Females	8,243	1987	28.2	79.5	10.4	10.1	60.2

*(Table continues on the following page.)*

Table 9.2. (Continued)

	Immigrant count	Mean year of immigration	At least one out-migration (%)	Among Out-migrants			
				Moved to home country (%)	Moved to third country (%)	Unknown destination (%)	Remigrated to Norway (%)
<b>Iraq</b>							
All	16,509	1998	10.9	55.9	18.4	25.8	9.2
Males	10,372	1998	14.1	58.8	14.3	26.9	6.6
Females	6,137	1998	5.3	42.6	36.5	20.9	20.6
<b>Iran</b>							
All	13,173	1992	16.5	38.9	39.9	21.2	17.8
Males	7,610	1992	17.8	36.1	42.2	21.7	18.2
Females	5,564	1993	14.8	43.6	36.1	20.3	17.1
<b>Somalia</b>							
All	13,435	1997	13.4	35.4	29.8	34.9	14.2
Males	7,581	1997	14.9	35.2	28.8	36.1	13.4
Females	5,854	1997	11.4	35.7	31.5	32.8	15.5
<b>Vietnam</b>							
All	13,000	1987	9.4	20.9	66.6	12.5	19.0
Males	6,493	1986	9.3	20.4	65.3	14.3	18.6
Females	6,507	1989	9.6	21.3	67.9	10.8	19.4
<b>Turkey</b>							
All	11,453	1988	28.9	64.8	21.7	13.5	27.8
Males	6,964	1987	33.3	63.0	21.4	15.7	25.0
Females	4,489	1989	22.0	69.0	22.5	8.5	34.5

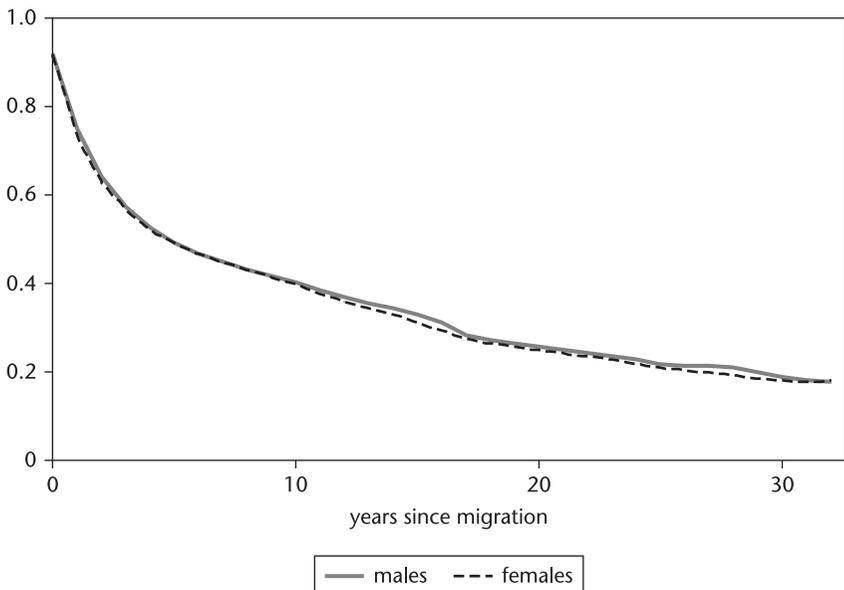
Source: Authors.

immigrants from Somalia who left Norway, 40 percent of those from Iran, and two-thirds from Vietnam migrated to a third country. Among Somali onward migrants, nearly one-half listed Sweden or the United Kingdom as the destination country; among Iranians, Sweden (30 percent), the United States (20 percent), and the United Kingdom (10 percent) were the most frequent destination countries; and among the Vietnamese onward migrants, almost 40 percent moved to the United States. Finally, table 9.2 shows significant variation in the propensity of out-migrants to reimmigrate to Norway. For example, more than one-half of the Pakistani natives who left Norway later reimmigrated during the sample period. Differences in migration patterns by country of origin are addressed in an examination of the determinants of the size of migration flows presented near the end of this chapter.

**Time of Out-migration**

Figure 9.3 focuses on migration spells and on residency from the point of arrival by relating continued residency and (implied) out-migration to years since arrival in Norway. The figure traces the fraction of immigrants remaining in Norway,

**Figure 9.3. Fraction of Immigrants Remaining in Norway, by Gender**



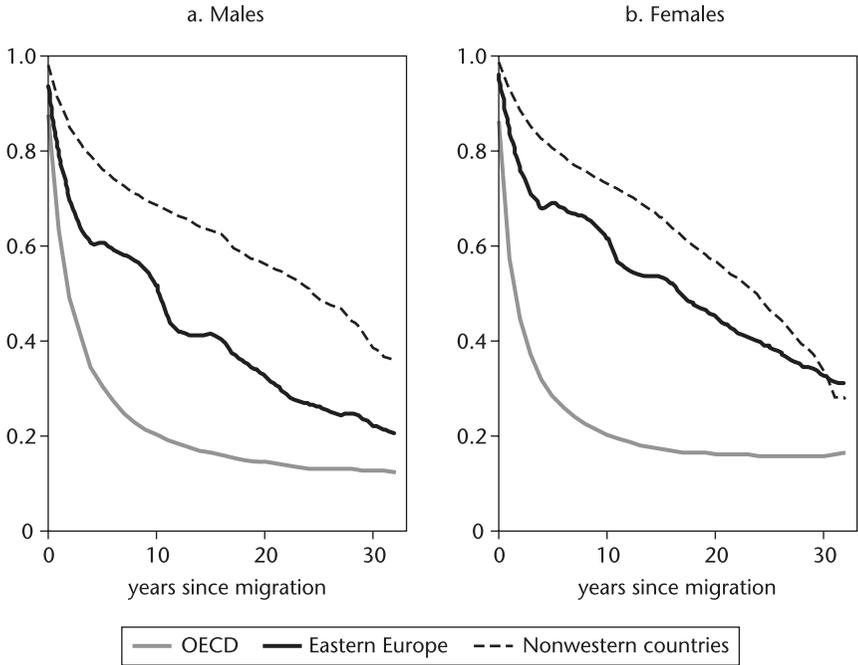
Source: Authors.

Note: Immigration period 1967–2003.

by years since immigration, separately for females and males; however, the gender-specific curves are for practical purposes identical. Immigrants with censored spells (that is, residents by the end of 2003) are included, but they do not contribute to the statistics for years since immigration that exceed their maximum possible value. As the figure shows, only about 40 percent of immigrants remained residents after 10 years, and less than 20 percent were still living in Norway (without an out-migration event) after 30 years. As indicated by the convexity of the curves, the out-migration rate—that is, the probability that an individual leaves Norway during a calendar year, given residency at the beginning of the year—declines sharply over the first 10 years. This finding may reflect causal duration dependence, but heterogeneity with respect to immigration motives, intentions, and plans is also likely to generate a pattern of declining out-migration rates. As time goes by, immigrants with a short perspective on their stay in Norway will have left the country, and those who planned to stay for a longer period will dominate the remaining stock of immigrants. Such heterogeneity shows up even more clearly in figure 9.4 and in table 9.3, where out-migration patterns are split by region of origin and class of admission.

The overview in tables 9.1 and 9.2 suggested that out-migration patterns differ by country of origin, a point made in prior studies. Figure 9.4 splits continued residency rates by the three major regions of origin; panel A depicts the region-specific patterns for male immigrants and panel B, the patterns for females. The three regions differ with respect to geographical and cultural distance to Norway, level of economic development, and admission regulations for potential immigrants to Norway. As the figure shows, the profiles vary considerably by region of origin. Only 20 percent of the OECD immigrants remained in Norway after 10 years, but about half of Eastern European and more than 70 percent of other nonwestern immigrants stayed at least 10 years. With respect to Eastern European and other nonwestern immigrants groups, the panels indicate a lower out-migration propensity for females than for males. Thus, the very small gender differences in the aggregated curves in figure 9.3 mask some gender variation in out-migration behavior within country-of-origin groups.

The region-of-origin differences in out-migration behavior implied by the profiles in figure 9.4 presumably reflect heterogeneity in motives and plans for the stay in Norway. Such factors are highly correlated with the type of admission that forms the juridical basis for entry to Norway. Data for the present study include information about grounds for admission for cohorts arriving between 1988 and 1994, and table 9.3 lists key migration statistics by admission class for these entry cohorts. Note that class of admission is not applicable to the majority of immigrants from the OECD area, as these immigrants legally qualify for stay in the Nordic countries without restriction (for example, because of the common

**Figure 9.4. Fraction of Immigrants Remaining in Norway, by Gender and Region of Origin**

Source: Authors.

Note: Immigration period 1967–2002.

Nordic labor market). The group of non-OECD immigrants is dominated by refugees and asylum seekers, as well as by persons admitted on the basis of family reunification. Labor migrants with work permits and students constitute fairly small admission classes among nonwestern immigrant groups.

Table 9.3 shows that out-migration behavior differs substantially by admission class. Fully 85 percent of people reunited with a primary refugee remained in Norway by the end of the sample period. (Because the table considers a few specific immigrant cohorts, mean year of arrival is about the same—1990 or 1991—for all the admission classes listed.) Among the primary refugees and individuals given political asylum, about two-thirds remained in Norway, perhaps reflecting relatively weak family ties or other personal characteristics that make some group members more mobile. Immigrants admitted with a work permit and students are more likely to leave than individuals given political asylum. By the end of the sample period, less than one-half of the non-OECD immigrants who entered with a work permit remained residents. The large majority of students in

**Table 9.3. Out-migration Patterns by Class of Admission, Non-OECD Immigrants**

Class of admission	Immigrant count	At least one out-migration (%)	Among Out-migrants			
			Moved to home country (%)	Moved to third country (%)	Unknown destination (%)	Remigrated to Norway (%)
<b>Total</b>						
All	69,870	31.1	62.2	18.7	19.2	15.2
Males	36,734	34.6	62.3	16.1	21.6	13.2
Females	33,136	27.3	62.1	22.2	15.7	17.9
<b>Refugee/ political asylee</b>						
All	34,239	31.9	61.7	14.9	23.3	13.3
Males	22,211	34.0	61.5	13.6	24.9	12.5
Females	12,028	27.9	62.2	18.0	19.8	15.0
<b>Refugee family reunification</b>						
All	13,771	15.0	58.6	30.6	10.8	24.8
Males	4,903	15.0	58.0	29.2	12.8	26.7
Females	8,868	15.1	58.9	31.4	9.7	23.8
<b>Work permit</b>						
All	2,108	55.1	53.4	26.9	19.7	11.1
Males	1,650	57.8	53.0	26.5	20.5	10.2
Females	458	45.6	55.5	28.2	16.3	15.3
<b>Student visa</b>						
All	3,734	75.0	75.8	7.8	16.4	7.9
Males	2,041	79.4	78.3	6.4	15.4	5.2
Females	1,693	69.6	72.4	9.8	17.8	11.5
<b>Family reunification</b>						
All	12,474	24.8	61.3	24.9	13.8	22.5
Males	4,296	23.1	60.5	22.6	16.9	22.6
Females	8,178	25.7	61.7	25.9	12.4	22.5
<b>Other</b>						
All	841	37.5	60.0	18.4	21.6	20.6
Males	341	43.7	57.0	17.4	25.5	22.1
Females	500	33.2	62.7	19.3	18.1	19.3
<b>N/A</b>						
All	2,703	51.8	53.5	31.3	15.2	16.1
Males	1,292	54.8	54.0	28.5	17.5	14.0
Females	1,411	49.0	53.1	34.2	12.7	18.2

Source: Authors.

Note: N/A = Not available. Sample consists of immigrants from outside the OECD area who arrived in Norway between 1988 and 1994; 1994 data exclude arrivals during the second half of the year because of missing admission codes. Out-migration figures refer to out-migration by the end of 2003.

the immigrant cohort had left the country, but 25 percent remained residents as of 2004, despite strict immigration legislation making it difficult to stay in Norway on graduation. A final pattern to emerge from the table is that variation in migration patterns across admission classes is stronger than variation by gender. The gender differences in out-migration rates for the non-OECD groups implied by figure 9.3 thus appear to be largely caused by gender patterns in admission criteria. In particular, females are more likely than males to be admitted on the basis of family reunification. As table 9.3 reveals, reunified family members have lower out-migration propensities than other immigrant groups. In summary, figure 9.4 and table 9.3 illustrate the considerable heterogeneity that exists in out-migration behavior; this heterogeneity presumably is present even within groups that are observationally identical.

### **Repatriation of Refugees: The Diverging Experiences of Refugees from Bosnia and Kosovo**

The global number of refugees from war and armed conflict rose dramatically from about 2 million in the early 1970s to almost 18 million in 1992, after which it declined to an estimated 8.4 million in 2005 (UNHCR 2006). Following the trends in the global refugee population, the number of political asylum seekers in industrialized countries also increased dramatically until 1992. Since that time, the number temporarily declined in the mid-1990s and grew toward the end of decade, particularly in Europe (Hatton and Williamson 2004). In Norway, the annual number of asylum seekers has fluctuated between 1,500 and 5,400 over the past two decades, but with a marked spike of 13,000 applicants in 1993 and annual volumes between 10,000 and 18,000 in the years 1999 to 2003 (UDI 2006).

In conjunction with the United Nations High Commissioner for Refugees (UNHCR), Norway has set annual quotas for resettled refugees. During the 1990s, collective protection of refugee groups was granted on two occasions: during the crises in Bosnia and Herzegovina in 1993 and Kosovo in 1999. Approximately 13,000 Bosnians and 8,000 Kosovars were given collective protection under those policy regimes (SOPEMI 2001). In principle, collective protection is temporary and is granted with the expectation that refugees return to their home country when conditions are deemed safe for return. But the prolonged crisis in Bosnia led to low return rates. Like many other refugee-receiving countries, Norway faced the dilemma of temporary protection; by late 1996, it made an important policy adjustment whereby it promised permanent residence permits to most Bosnians in Norway (Brekke 2001). With the experience of the Bosnian refugees in mind, the Norwegian government quickly invoked several measures to ensure repatriation of refugees from Kosovo when their protection was lifted.

**Table 9.4. Out-migration Patterns among Refugees from Bosnia and Kosovo**

	Immigrant count	Mean year of immigration	At least one out-migration (%)	Among Out-migrants			
				Moved to home country (%)	Moved to third country (%)	Unknown destination (%)	Remigrated to Norway (%)
<b>Bosnia</b>							
All	13,864	1993	23.7	71.4	16.6	12.0	18.7
Males	6,987	1993	24.2	71.2	15.7	13.1	18.7
Females	6,877	1993	23.0	71.6	17.5	10.9	18.6
<b>Kosovo</b>							
All	6,468	1998	62.9	85.2	1.4	13.4	11.1
Males	3,334	1998	62.9	83.3	1.3	15.4	11.6
Females	3,134	1998	62.9	87.2	1.4	11.4	10.5

Source: Authors.

Note: Refugees from the Bosnia conflict are defined as those born in Bosnia or the former Yugoslavia and who arrived in Norway between 1993 and 1995; refugees from the Kosovo conflict are defined as those born in the former Yugoslavia and who arrived in 1998 or 1999. Out-migration figures refer to out-migration by the end of 2003.

Among the measures were cash benefits of NOK 15,000 (approximately US \$2,200) to each voluntary returnee.

This section examines and contrasts the return propensities of the two refugee cohorts from Bosnia and Kosovo. Table 9.4 depicts the out-migration patterns for the two refugee cohorts. The figures refer to individuals born in Bosnia or the former Yugoslavia who arrived in Norway between 1993 and 1995 (“Bosnia”) and those born in the former Yugoslavia who arrived in 1998 or 1999 (“Kosovo”). In total, the samples consist of 13,864 Bosnians and 6,468 Kosovars. The table shows large differences in the return behavior of the two groups. Less than 24 percent of the refugees from Bosnia had left Norway by 2004, more than 10 years after arrival. In comparison, 63 percent of the Kosovars left Norway within four years of arrival. Interestingly, differences in employment experiences in Norway cannot explain the widely divergent out-migration patterns of the two refugee cohorts. In fact, the Bosnian refugees happened to arrive in Norway in the middle of one of the strongest economic downturns since World War II (the unemployment rate peaked at 6.1 percent in 1993), whereas the Kosovar refugees arrived at the peak of an economic expansion. Instead, changes in refugee policy and differences in economic and political conditions at home appear to be more plausible explanations of the out-migration patterns of the two cohorts. Despite the fact that the Dayton Peace Accord was signed in December 1995, the collective protection of Bosnian refugees was not lifted until the end of 1998. Meanwhile, Norwegian authorities

had granted permanent residence permits to Bosnians who had resided at least four years in Norway. In comparison, the Kosovo crisis was relatively short lived; the collective protection of Kosovars was lifted in August 1999, only four months after its implementation.

### Economic Fundamentals and Migration Flows

Economic theory holds that migration decisions involve a comparison of wage levels at the source and the destination, as well as migration costs which may be of both monetary and psychic nature (Sjaastad 1962; Borjas 1987, 1989). High wages at the destination stimulate migration, whereas high wages at the source and migration costs discourage moves. In the empirical literature, wage levels in source and destination countries are typically proxied by the (natural logarithm of) per capita GDP in the respective countries, and migration costs by the distance between the two countries. Many empirical studies report evidence that the size of international flows of—legal as well as illegal—immigrants increases with the difference between the per capita GDP of the destination country and that of the source country and decreases with the increasing distance between these countries (Bratsberg 1995; Greenwood and McDowell 1991; Clark, Hatton, and Williamson 2004). Moreover, studies typically find that international migrants avoid areas of political unrest and war (Hatton and Williamson 2004).

This section analyzes the empirical relations between the various migrant flows of the foreign born to and from Norway on the one hand and the economic fundamentals of the migration decision on the other hand. For this purpose, the analysis aggregates each flow by source country and year and examines how the likelihood that persons from country  $j$  migrate in year  $t$  is influenced by, for example, the level of economic development in the source country. The baseline empirical model is given by

$$p_{jt} = \Phi(\beta_0 + \beta_1 \ln GDP_{jt} + \beta_2 \ln DIST_j + \beta_3 \ln GDP_{jt} \cdot \ln DIST_j + \beta_4 \ln GDP_{NOR,t} + \beta_5 CONFLICT_{jt} + \beta_6 WAR_{jt} + u_{jt}), \quad (1)$$

where  $p_{jt}$  denotes the fraction of the population at risk that moves in year  $t$ . Below, the analysis alternatively estimates models in which  $p$  measures (1) the emigration rate from the source country to Norway (that is, the fraction of the source-country population that moves to Norway in a given year), (2) the out-migration rate from Norway (that is, the fraction of the immigrant stock from the source country that resides in Norway at the beginning of the year but leaves Norway during the year), (3) the proportion of individuals who leave Norway to move to a third country rather than to their source country, and (4) the ratio of those reimmigrating to Norway relative to the flow of immigrants who left Norway

over the last four years. The analysis estimates the model for all migrants, and, to examine whether there are gender differences in the migration decision related to economic fundamentals, estimates the model separately for male and female migrants.

In the specification of the empirical model,  $GDP_{jt}$  and  $GDP_{NOR,t}$  denote the per capita GDPs of the source country and Norway, respectively; and  $DIST_j$  denotes the distance between the capitals of the two countries, measured in thousands of kilometers.<sup>2</sup> Given that the GDP measures proxy for wage levels in the two economies, a negative value for the coefficient of home GDP ( $\beta_1$ ) and a positive value for that of Norway's GDP ( $\beta_4$ ) would be expected in analyses of migration flows from the source country to Norway. Conversely, in analyses of return flows from Norway to the source country, the opposite coefficient pattern—a positive coefficient on home GDP and a negative coefficient on GDP of Norway—would be expected. If longer distances entail higher migration costs, the coefficient on the distance variable ( $\beta_2$ ) would be expected to be negative in analyses of both immigration and return migration flows. The specification includes an interaction term between GDP and distance. This interaction might capture fading of the negative effect of distance with the source country's level of economic development, perhaps because migration costs become a less important component of the migration decision as the wealth of the source country increases. Alternatively, an interaction effect might result if the migration incentive embodied in wage differentials lessens with distance, perhaps because of weaker signals or greater uncertainty regarding labor market outcomes at the destination.

The model includes two indicator variables for political conflict in the source country; these variables are collected from Gleditsch et al. (2002) and Strand et al. (2005). The variable  $CONFLICT_{jt}$  measures whether the source country is the location of an intermediate conflict in year  $t$ , and the variable  $WAR_{jt}$  is set to unity if the country is the location of a war. The two variables are mutually exclusive and differ in the intensity of the conflict; the former indicates that the number of battle-related deaths is between 25 and 1,000 per year, and the latter variable indicates that the death toll is at least 1,000 per year.

The empirical analyses estimate the model with two alternative specifications of the error term, one with and one without a source-country-fixed component. In models without fixed-country effects, estimation largely draws on cross-sectional variation in the data, that is, on variation in the dependent and explanatory variables across countries, whereas estimation in the fixed-effects model will rely only on longitudinal variation within countries. (For this reason, the coefficient of distance is not identified in the fixed-effects model.) In a simple gravity model of migration, such as equation (1), the specification would not be expected to fully capture all factors influencing the size of international migration

movements. Hence, the error term may contain important omitted variables. Such omitted variables may in turn be correlated with included regressors, rendering traditional least-squares estimators biased. The key advantage of panel data is that fixed-effects estimation allows the analysis to account for (time-invariant) unobserved factors. Differences in coefficient estimates based on models with and without fixed effects will typically reflect correlations between the included regressors and unobserved factors that influence migration between the source country and Norway. When such differences in estimates arise, results from the fixed-effects model are preferred. Finally, the empirical model is specified as a probit equation in which  $\Phi(\cdot)$  denotes the cumulative normal distribution function. With count data at hand, the appropriate estimation method is the grouped probit estimator (Maddala 1983).<sup>3</sup>

Table 9.5 lists descriptive statistics for the regression sample. The underlying data cover 33 years (the period 1970–2003) and migrant flows from up to 197 source countries. Because key variables are not always available for the whole period for each source country, and because the grouped probit estimator excludes data points where the observed migration rate is zero, the regression samples typically consist of fewer observations than the theoretical maximum.

### *Immigrant Flows*

The analyses begin with regressions of the annual flows of immigrants from the source country to Norway. Because such flows typically are very small relative to the size of the home population, the migration rate will in practice be an extremely small number (making the linear probability model an inappropriate estimator). Table 9.6 lists results.

As predicted by theory, wage levels in Norway and at home influence the size of the immigrant flow. An increase in Norway's per capita GDP attracts immigrants, whereas economic development at home reduces the emigrant flow. With a single exception, these fundamental empirical patterns are robust—whether estimation is based on variation in the full sample or on longitudinal variation within countries (as in the fixed-effects model in column 2) or whether the analysis distinguishes between male and female migrant flows (see columns 3–6). The negative effect of home-country GDP is strongest for nearby countries and fades with distance from Norway, as indicated by the positive coefficient of the interaction term between GDP and distance. According to coefficients estimates, the home GDP effect remains negative throughout the broad range of the data. For example, the ratio between the main effect of GDP and the coefficient of the interaction term in column (1) is  $0.1463/0.0745 = 1.96$ , which is well above the mean value of the log distance variable. According to the fixed-effects estimate in column (2), the

**Table 9.5. Descriptive Statistics, Annual Migration Flows Data**

	Mean	Standard deviation	Minimum	Maximum
Annual immigrant flow by source country	109.1	321.7	0	6,163
Male immigrant flow	55.8	171.9	0	3,519
Female immigrant flow	55.3	157.4	0	2,983
Annual out-migrant flow by source country	58.1	197.6	0	3,024
Male out-migrant flow	30.3	98.2	0	1,424
Female out-migrant flow	27.8	102.0	0	1,625
Annual migrant flow to third country	8.3	20.6	0	251
Male migrants to third country	4.4	11.2	0	121
Female migrants to third country	3.9	9.7	0	130
Annual flow of reimmigrants from source country	9.2	29.9	0	348
Male reimmigrants	4.9	15.9	0	196
Female reimmigrants	4.3	14.6	0	184
Population of source country (millions)	36.1	120.0	.01	1,280
Immigrant stock at beginning of year (by country)	934.9	2401.6	0	20,386
Male immigrant stock	462.9	1166.9	0	9,020
Female immigrant stock	471.9	1271.5	0	11,366
ln (per capita GDP) home	7.472	1.535	3.916	11.197
ln distance (in thousands of kilometers)	1.578	.795	-.879	2.871
ln (per capita GDP) Norway	10.185	.282	9.581	10.550
Intermediate armed conflict in source country	.072	.259	0	1
War in source country	.076	.113	0	1

Source: Authors. Conflict indicators are collected from Gleditsch et al. (2002) and Strand et al. (2005).

Note: The sample covers migrant flows from 197 source countries over the 1970–2003 period, making up a total sample with valid data of 4,592 observations. Population and GDP figures are collected from World Bank (2006). “Intermediate conflict” and “war” indicate that the source country is the location of an armed conflict with a total conflict history of more than 1,000 battle-related deaths. The two variables are mutually exclusive; “war” denotes the greater intensity of conflict (that is, at least 1,000 battle-related deaths per year).

home GDP effect falls to zero at a value of log distance of 1.63, which is only slightly greater than the mean value in the sample. (In fact, the turning value corresponds to the distance from Norway to Central Africa or Pakistan.) But for the vast majority of countries sending immigrants to Norway, even the fixed-effects estimate of home GDP is negative. (When log distance is weighted by the relative size of immigrant flows, the mean value is 0.74.)

**Table 9.6. Determinants of Immigration Flows, Grouped Probit Regressions**

	All immigrants		Males		Females	
	(1)	(2)	(3)	(4)	(5)	(6)
ln (per capita GDP) Home	-.1463*** (.0096)	-.2393*** (.0314)	-.1550*** (.0107)	-.1909*** (.0352)	-.1319*** (.0095)	-.1578*** (.0316)
ln (distance)	-.7229*** (.0433)		-.7532*** (.0489)		-.6764*** (.0424)	
ln (per capita GDP) Home*ln(distance)	.0745*** (.0051)	.1466*** (.0156)	.0771*** (.0057)	.1163*** (.0174)	.0701*** (.0050)	.1303*** (.0155)
ln (per capita GDP) Norway	.0467** (.0194)	.1231*** (.0117)	-.0115 (.0214)	.0531*** (.0133)	.0896*** (.0201)	.1151*** (.0122)
Armed conflict	.1340*** (.0142)	-.0015 (.0069)	.1488*** (.0155)	.0197*** (.0075)	.0984 (.0142)	-.0278*** (.0069)
War	.2022*** (.0144)	-.0269*** (.0077)	.2003*** (.0164)	-.0108 (.0085)	.1954*** (.0150)	-.0398*** (.0077)
Immigrant stock/ population (1,000s)	.8902*** (.0230)	.2382*** (.0431)	.9009*** (.0254)	.1737*** (.0484)	.8128*** (.0225)	.2486*** (.0451)
Constant	-3.5755*** (.2256)		-2.8685*** (.2493)		-4.1388*** (.2337)	
R <sup>2</sup>	.377	.889	.350	.878	.382	.902
Country-fixed effects	No	Yes	No	Yes	No	Yes
Observations	4,232	4,232	3,887	3,887	3,709	3,709

Source: Authors.

Note: The dependent variable is the count of immigrants out of the home country population. Standard errors are reported in parentheses. The regression sample covers immigrant flows from 195 countries over the 1970–2003 period. Zero-count flows are dropped from grouped probit regressions. For definitions of conflict variables, see the note to table 9.5.

\*Significant at 10% level. \*\*Significant at 5% level. \*\*\*Significant at 1% level.

The coefficient of log distance is negative, showing that international migrant flows decline with the distance between countries. Given the positive coefficient of the interaction term between distance and home GDP, the dampening effect of distance becomes less important the richer the source country becomes. But again, the coefficient of the interaction term is small relative to that of log distance, and the estimated effect of distance remains negative through the broad range of the data.

According to the estimates from models without country-fixed effects in columns (1), (3), and (5), emigrant flows to Norway increase when there is an armed conflict in the source country—and more so the greater the intensity of the conflict. These results fit with an economic understanding of international migration when economic conditions at home deteriorate and, they fit with a legal understanding, because the Norwegian immigration authority is more likely to admit asylum seekers and refugees during periods of armed conflict. Indeed, as the analysis in table 9.3 showed, admissions of refugees and their families have dominated recent immigration from the non-OECD area. But, surprisingly, the estimated effect of political unrest becomes much smaller and, for females, becomes negative in the fixed-effects model. Taking the estimates at face value, the evidence could be interpreted in one or both of two ways. First, people are more likely to leave war-prone areas than peaceful areas, but emigrant flows are larger just before the outbreak of war. Second, slowly evolving international refugee movements and processing time in the Norwegian refugee admission system combine to produce the timing effect that admissions increase in the aftermath of a conflict. To illustrate, arrivals of asylum seekers from Afghanistan peaked in 2003, two years after the fall of the Taliban regime and long after the UNHCR started repatriation of Afghans from refugee camps in Pakistan (UDI 2006).

Finally, to capture network effects, the empirical model includes a variable constructed as the immigrant stock at the end of the previous year divided by the source country population (in thousands). The presence of friends and relatives in Norway is expected to reduce migration costs, and the lagged immigrant stock variable might proxy for such migration networks. Inclusion of the lagged variable is not unproblematic, however, as it is likely to be correlated with the error term and therefore to be endogenous in the model. Such correlation may explain the pattern of estimates in table 9.6; the coefficient of the immigrant stock variable is highly sensitive to whether the empirical model includes country-fixed effects. Nonetheless, even in the fixed-effects model, the coefficient estimate is positive, consistent with the interpretation that networks reduce the cost of international migration.

The estimates in table 9.6 do not suggest important gender differences related to the economic fundamentals of the source country, but certain differences arise in

the coefficient estimates of GDP in Norway and the measures of political unrest. Perhaps surprisingly, female immigration flows appear more responsive than male flows to changes in economic conditions in Norway. Moreover, the nonintuitive timing effect of refugee arrivals in the fixed-effects model pertains to females; male admissions increase during periods of intermediate armed conflict, but female admissions decline. The finding may reflect the greater tendency of female refugees to be admitted on the grounds of family reunification, and the fact that males are more likely to be primary refugees with an earlier arrival date in Norway.

### *Out-migrant Flows*

The analysis now turns to the likelihood that immigrants in Norway out-migrate and leave the country. In the theoretical formulation of Borjas and Bratsberg (1996)—see also Dustmann (2000)—those most likely to out-migrate are those who were “marginal” immigrants. Whether out-migration is part of a planned two-step migration decision or motivated by failed expectations in the host country, out-migrants tend to be those individuals whose original migration decision was most marginal in favor of moving. As such, the decision to move again is influenced by factors similar to those motivating the original migration decision: theory predicts that the better the economic conditions in the host country, the less likely immigrants are to out-migrate, and the more economic conditions improve at home, the more likely immigrants are to move again. As in the case of the original migration decision, the more costly the move, the less likely out-migration is to take place.

Table 9.7 lists results from grouped probit regressions of the propensity of immigrants in Norway to out-migrate. As predicted by theory, the better the economic conditions in Norway, the less likely immigrants are to move again. This effect is particularly large for male immigrants—the likelihood that female immigrants leave the country appears less responsive to per capita GDP in Norway than the likelihood that male immigrants leave the country (see the estimates in column 3–6), although even in the female sample the coefficient estimate is significantly negative. Taken together, the greater responsiveness of male out-migration (table 9.7) and female immigration (table 9.6) to economic fluctuations in Norway can be understood in terms linked with family migration decisions: during economic upturns, male primary migrants are more likely than female migrants to settle in Norway and become reunited with their family. Tied migrant movements will thus be particularly sensitive to economic conditions in the destination country.

At first glance, the evidence with respect to home-country GDP appears a bit mixed. According to estimates from models without country-fixed effects, there is an unambiguous positive relation as improved conditions at home induce more

**Table 9.7. Determinants of Out-migration Flows, Grouped Probit Regressions**

	All out-migrants		Males		Females	
	(1)	(2)	(3)	(4)	(5)	(6)
ln (per capita GDP) Home	.0868*** (.0066)	.3525*** (.0363)	.1041*** (.0076)	.3203*** (.0388)	.0749*** (.0072)	.3402*** (.0435)
ln (distance)	-.1335*** (.0395)		-.0477 (.0454)		-.1771*** (.0433)	
ln (per capita GDP) Home*ln (distance)	.0161*** (.0041)	-.2806*** (.0180)	.0090* (.0047)	-.2183*** (.0201)	.0191*** (.0045)	-.3223*** (.0205)
ln (per capita GDP) Norway	-.1495*** (.0193)	-.2132*** (.0244)	-.2565*** (.0224)	-.3291*** (.0257)	-.0790*** (.0208)	-.0830*** (.0298)
Armed conflict	-.0934*** (.0145)	-.0591*** (.0142)	-.0748*** (.0158)	-.0654*** (.0149)	-.1329*** (.0165)	-.0503*** (.0176)
War	-.1023*** (.0226)	-.0552*** (.0175)	-.1046*** (.0245)	-.0612*** (.0180)	-.1075*** (.0266)	-.0339 (.0218)
Constant	-.6159*** (.2073)		.3704 (.2394)		-1.2587*** (.2238)	
R <sup>2</sup>	.275	.734	.270	.752	.259	.695
Country-fixed effects	No	Yes	No	Yes	No	Yes
Observations	3,639	3,639	3,330	3,330	3,009	3,009

Source: Authors.

Note: The dependent variable is the count of out-migrants from the country-of-origin stock of immigrants in Norway at the beginning of the year. Standard errors are reported in parentheses. The regression sample covers flows of out-migrants from 178 countries over the 1970–2003 period. Zero-count flows are excluded from the regressions.

\*Significant at 10% level. \*\*Significant at 5% level. \*\*\*Significant at 1% level.

immigrants to leave Norway. In the fixed-effects regressions, the effect of home GDP is large and positive for countries near Norway, but the coefficient of the interaction term with distance is relatively large, and the effect of home GDP declines to zero when the distance from Norway is about that to Northern Africa and the Middle East.

In the out-migration regressions, the evidence shows that armed conflicts deter migrant flows. This result is robust whether or not the estimation model includes fixed effects and whether or not migration flows are separately considered for men and women. When the home country is the location of an armed conflict or a war, fewer immigrants leave Norway.

### *Third-Country Migrant Flows*

The longitudinal migration records allow examination of the destinations—whether to home countries or to a third country—of immigrants who leave Norway. (Third-country moves are admittedly measured with some imprecision, as 7.7 percent of the out-migration records lack information on destination country. In the analyses, these unknown moves are treated as return moves to the home country, but no qualitative conclusions are affected if moves with an unknown destination are instead excluded from the analyses' samples.) In the data used in the present study, the source countries with the highest third-country migration rates are Vietnam, Malaysia, and Syria. In all of these countries, more than half of those who left Norway during the sample period chose not to return home. The most popular third-country destinations are Sweden, the United Kingdom, and the United States. Approximately 45 percent of all onward migrants listed one of those three countries as their destination. Interestingly, the 45 percent statistic is roughly constant across the three main source-country categories—OECD, Eastern Europe, and nonwestern countries.

This section addresses the empirical links between choice of third-country destination and the economic migration fundamentals. It considers the choice of destination given that the immigrant has decided to leave Norway, and it estimates the conditional probability that out-migrants choose not to return home. Because this setup assumes that the decision to leave Norway already has been made, a simpler version of the empirical specification is used, per capita GDP in Norway is excluded, and the interaction term between home-country GDP and distance is dropped from the empirical model. Table 9.8 lists results.

As the table reveals, the richer the source country, the less likely out-migrants are to move to a third country, and the farther away the source country from Norway, the more likely out-migrants are to opt for a third country. These results reinforce the above-noted evidence that migrants consider wage levels at the destination

**Table 9.8. Determinants of Migration Flows to Third Countries, Grouped Probit Regressions**

	All migrants		Males		Females	
	(1)	(2)	(3)	(4)	(5)	(6)
ln (per capita GDP Home)	−.1289*** (.0078)	−.2309*** (.0342)	−.1132*** (.0087)	−.2432*** (.0389)	−.1487*** (.0093)	−.2295*** (.0398)
ln (distance)	.1871*** (.0108)		.1760*** (.0125)		.1975*** (.0433)	
Armed conflict	−.0509* (.0292)	−.0110 (.0297)	−.0690** (.0323)	−.0396 (.0323)	−.0475 (.0345)	.0196 (.0364)
War	−.1021** (.0486)	.0918** (.0431)	−.1228** (.0538)	.0699 (.0477)	−.0753 (.0576)	.1254** (.0521)
Constant	.1893** (.0760)		.0796 (.0843)		.3745*** (.0904)	
R <sup>2</sup>	.343	.619	.282	.561	.382	.668
Country-fixed effects	No	Yes	No	Yes	No	Yes
Observations	2,489	2,489	2,125	2,125	1,900	1,900

Source: Authors.

Note: The dependent variable is the count of migrants moving to a third country from the country-of-origin specific out-migration flow from Norway during the year. Standard errors are reported in parentheses. The regression sample covers flows of migrants to third countries from 147 source countries over the 1970–2003 period. Zero-count flows are excluded from the regressions.

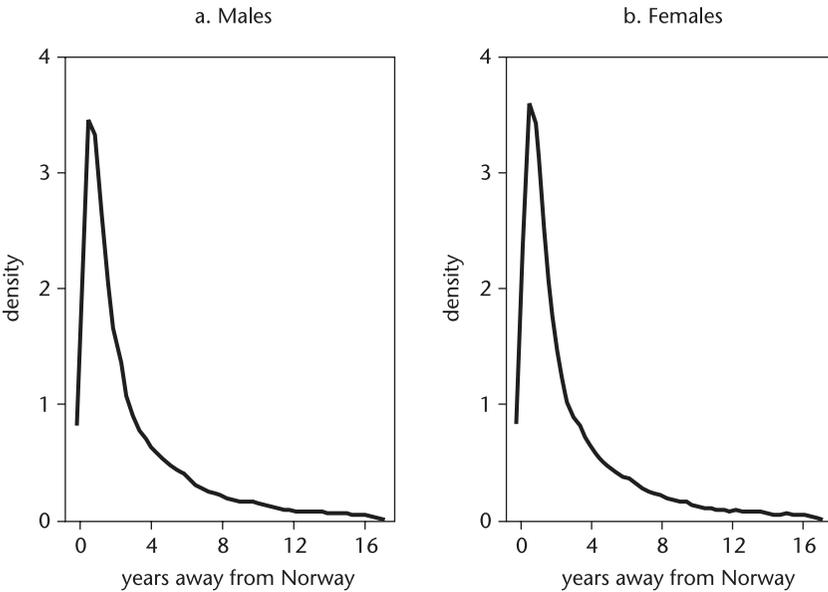
\*Significant at 10% level. \*\*Significant at 5% level. \*\*\*Significant at 1% level.

when they form migration decisions and that long distances discourage moves. The latter result is consistent with the finding of DaVanzo (1983) for internal migrants in the United States. DaVanzo reports that the likelihood of onward moves increases with the distance of the first move and offers an alternative interpretation to that of migration costs, namely, that the longer the distance, the less reliable the information on which the original migration decision may be based. (DaVanzo considers the unconditional probability that someone in the migrant stock moves onward, but the positive coefficient of distance to the source reported here is unchanged if the dependent variable is instead specified as the unconditional probability that an immigrant leaves Norway for a third country.) Finally, in table 9.8 the sign of coefficients of the conflict variables depends on whether the empirical model includes fixed source-country effects. Results from models without fixed effects yield the seemingly odd pattern that immigrants who out-migrate tend to return home to war-prone countries. The result may reflect (forced) repatriation of refugees. The fixed-effects models, on the other hand, show that such return moves tend not to take place during periods of war. When there is an ongoing war in the source country, those who leave Norway are more likely to move onward to a third country.

### *Reimmigration Flows*

The final migration flow considered is that of former out-migrants who return to Norway. Table 9.1 showed that almost 15 percent of the immigrants who left Norway during the 1967–2002 period later reimmigrated to Norway. Figure 9.5 shows plots of the kernel density functions for the length of the stay away from Norway for male and female reimmigrants. (Not depicted are administrative records of zero-month stays, which make up 6.6 percent of the reimmigration events, and a few stays exceeding 17 years, which make up less than 2 percent of all reimmigration events.) The plots show skewed density functions; most of the stays away from Norway are of relatively short duration. In fact, about 40 percent of individuals who reimmigrated returned to Norway within one year, and 60 percent returned within two years.

Table 9.9 presents regression results for the conditional probability of reimmigration. The dependent variable is specified as the count of immigrants making their second migration to Norway relative to the count of first-time out-migrants over the last four years. (About 1 percent of the total sample of out-migrants—0.5 percent of all immigrants—is recorded with more than two moves to Norway, but here only the second immigration event is considered. The incidence of multiple moves appears slightly higher for males than for females, particularly among immigrants originating in OECD countries.)

**Figure 9.5. Kernel Density Plots of Duration until Reimmigration**

Source: Authors.

Two results stand out in the table. First, the poorer the source country, the more likely immigrants who have left Norway are to reimmigrate to Norway. Whether the analysis considers estimates from the cross-sectional or the longitudinal models, or for males or females, the probability of reimmigration declines significantly with the source country's per capita GDP. The better the economic conditions at home, the fewer the number of out-migrants who may find it profitable to undertake a second migration to Norway. Alternatively, the result may reflect a greater tendency of immigrants from poor countries to make planned short-term moves back to source country compared with immigrants from wealthy countries; this comparative tendency may be related to differences in consumption cost levels.

Second, the coefficients of the conflict variables that appear in the fixed-effects regressions are positive. When a war breaks out in the source country, former immigrants to Norway are more likely to reimmigrate. Because of lack of data on international multiple migration movements, the flows of people reimmigrating to immigrant-receiving countries remain little studied and poorly understood. The results in table 9.9 provide suggestive evidence that the process of reimmigration is influenced by the factors affecting other migration flows. The decision to reimmigrate appears particularly sensitive to economic and political developments in the source country.

**Table 9.9. Determinants of Reimmigration Flows, Grouped Probit Regressions**

	All immigrants		Males		Females	
	(1)	(2)	(3)	(4)	(5)	(6)
ln (per capita GDP) Home	−.0717*** (.0074)	−.1729*** (.0485)	−.0620*** (.0091)	−.1951*** (.0572)	−.0886*** (.0088)	−.1571*** (.0591)
ln (distance)	.2471*** (.0453)		.2208*** (.0563)		.3800*** (.0549)	
ln (per capita GDP) Home*ln (distance)	−.0221*** (.0046)	−.0156 (.0206)	−.0266*** (.0057)	−.0319 (.0254)	−.0411*** (.0056)	−.0240 (.0239)
ln (per capita GDP) Norway	.0070 (.0176)	.0676** (.0311)	.0067 (.0207)	.1063*** (.0363)	.0054 (.0203)	.0104 (.0383)
Armed conflict	.0277* (.0145)	.0436*** (.0168)	.0332** (.0161)	.0473** (.0197)	−.0225 (.0197)	.0357* (.0208)
War	−.0361 (.0259)	.0826*** (.0234)	−.0280 (.0291)	.1083*** (.0263)	−.0644* (.0343)	.0555* (.0302)
Constant	−1.0933*** (.2160)		−1.1502*** (.2143)		−.9241*** (.2150)	
R <sup>2</sup>	.255	.489	.177	.436	.338	.556
Country-fixed effects	No	Yes	No	Yes	No	Yes
Observations	2,497	2,497	2,086	2,086	1,877	1,877

Source: Authors.

Note: The dependent variable is the count of reimmigrants from the country-of-origin specific flow of out-migrants from Norway over the previous four years. Standard errors are reported in parentheses. The regression sample covers flows of reimmigrants from 149 source countries over the 1970–2003 period. Note that zero-count flows are excluded from the regressions.

\*Significant at 10% level. \*\*Significant at 5% level. \*\*\*Significant at 1% level.

## Conclusions

This chapter used individual longitudinal migration records to study migration of foreign-born persons to and from Norway over the 1967–2003 period. During that period, more than 500,000 immigrants arrived in Norway; about 50 percent of these individuals remained in the country at the beginning of 2004. The patterns of out-migration behavior vary significantly by country of origin. Immigrants from the OECD area tend to stay for short periods only; out-migration rates are much lower for immigrants from Eastern Europe and in particular for immigrants from other nonwestern source countries.

The variation in patterns of out-migration by source country is closely related to the class of admission and the basis for immigration to Norway. Among immigrants from Eastern Europe and other nonwestern states, very few immigrants admitted on the grounds of family reunification out-migrate. More than 10 years after arrival, only 15 percent of such immigrants have left the country. Primary refugees are more likely to out-migrate or move onward to a third country; 10 years after entry, fewer than 70 percent remain in Norway. Immigrants admitted with work visas have the highest propensities to out-migrate; about 50 percent leave within 10 years of arrival. Most immigrants from the OECD area arrive for reasons of work, but a few immigrate on the basis of family reunification. Most foreign students end up leaving Norway, but far from all do. Despite legislation restricting continued stay in Norway on graduation, more than 25 percent remain in the country for more than 10 years after entry.

Not all immigrants who leave Norway move back home. At least 14 percent of out-migrants over the sample period chose to move onward to a third country. The propensity to prefer a third destination country is greatest among immigrants from less developed countries. The most popular third-country destinations are Sweden, the United Kingdom, and the United States. For many immigrants, the stay in Norway may represent one step toward a preferred destination country. Finally, a large number of out-migrants later reimmigrate to Norway.

Recent studies have emphasized the role of gender in migration (Donato et al. 2006), and there is evidence that migration decisions of women are motivated by factors different than those of men (Cerrutti and Massey 2001). When the present analysis contrasts the out-migration patterns of female immigrants with those of male immigrants, gender differences typically conform to the interpretation that males are the primary migrants and that females are more likely to be admitted on the basis of family reunification. This pattern is strongest for immigrants from less developed nations.

The underlying panel of migration records allows examination of the variation in migration flows by source country. Empirical analyses of annual immigration, out-migration, third-country migration, and reimmigration flows, show that

these flows are affected by economic conditions in Norway and by economic and political conditions in the source country in a pattern that is consistent with economic theory. The long panels permit estimation accounting for unobserved source-country effects. Accounting for unobserved factors turns out to be important, as estimates of several key effects of economic fundamentals and political unrest on the migration decision are sensitive to whether the empirical model includes country-fixed effects.

## Notes

1. SOPEMI (2003) tabulates outflows of the foreign-born population from a few additional OECD countries, but does not relate these outflows to the original inflow by year of entry. Nonetheless, the outflow figures suggest sizable out-migration rates among immigrants in all of the included countries.

2. Data on per capita GDP and source-country population come from World Bank (2006).

3. Note that the grouped probit estimator will drop observations for which the observed migration rate is zero (as the probability of such an event in a normal distribution is zero, and hence the inverse cumulative standard normal is minus infinity). To examine whether such exclusion of data points leads to sample selectivity bias, the analysis has reestimated all empirical models, replacing zero-count flows with a flow of one person. This experiment led to no appreciable differences in coefficient estimates compared with those reported below.

## References

- Borjas, George J. 1987. "Self-Selection and the Earnings of Immigrants." *American Economic Review* 77: 531–53.
- . 1989. "Immigrant and Emigrant Earnings: A Longitudinal Study." *Economic Inquiry* 27: 21–37.
- Borjas, George J., and Bernt Bratsberg. 1996. "Who Leaves? The Outmigration of the Foreign-Born." *The Review of Economics and Statistics* 78 (1): 165–76.
- Bratsberg, Bernt. 1995. "Legal versus Illegal U.S. Immigration and Source Country Characteristics." *Southern Economic Journal* 61 (3): 715–27.
- Brekke, Jan-Paul. 2001. "The Dilemmas of Temporary Protection—The Norwegian Experience." *Policy Studies* 22 (1): 5–18.
- Cerrutti, Marcela, and Douglas S. Massey. 2001. "On the Auspices of Female Migration from Mexico to the United States." *Demography* 38 (2): 187–200.
- Clark, Ximena, Timothy J. Hatton, and Jeffery G. Williamson. 2004. "Explaining U.S. Immigration 1971–98." Policy Research Working Paper 3252, World Bank, Washington, DC.
- Constant, Amalie, and Douglas S. Massey. 2003. "Self-Selection, Earnings, and Out-Migration: A Longitudinal Study of Immigrants to Germany." *Journal of Population Economics* 16: 631–53.
- DaVanzo, Julie. 1983. "Repeat Migration in the United States: Who Moves Back and Who Moves On." *The Review of Economics and Statistics* 65 (4): 552–59.
- Donato, Katharine M., Donna Gabaccia, Jennifer Holdaway, Martin Manalansan, and Patricia R. Pessar. 2006. "A Glass Half Full? Gender in Migration Studies." *International Migration Review* 40 (1): 3–26.
- Dustmann, Christian. 2000. "Temporary Migration and Economic Assimilation." *Swedish Economic Policy Review* 7: 213–44.
- . 2003. "Return Migration, Wage Differentials, and the Optimal Migration Duration." *European Economic Review* 47: 353–69.

- Edin, Per-Anders, Robert J. LaLonde, and Olof Åslund. 2000. "Emigration of Immigrants and Measures of Immigrant Assimilation: Evidence from Sweden." *Swedish Economic Policy Review* 7: 163–204.
- Gleditsch, Nils Petter, Peter Wallensteen, Mikael Erikson, Margarate Sollenberg, and Håvard Strand. 2002. "Armed Conflict 1946–2001: A New Dataset." *Journal of Peace Research* 39 (5): 615–37.
- Greenwood, Michael J., and John McDowell. 1991. "Differential Economic Opportunity, Transferability of Skills, and Immigration to the United States and Canada." *The Review of Economics and Statistics* 73 (4): 612–13.
- Hatton, Timothy J., and Jeffery G. Williamson. 2002. "What Fundamentals Drive World Migration?" Working Paper 9159, National Bureau of Economic Research, Cambridge, MA.
- . 2004. "Refugees, Asylum Seekers and Policy in Europe." Working Paper 10680, National Bureau of Economic Research, Cambridge, MA.
- Jasso, G., and M. Rosenzweig. 1982. "Estimating the Emigration Rates of Legal Immigrants Using Administrative and Survey Data: The 1971 Cohort of Immigrants to the United States." *Demography* 19: 279–90.
- Jensen, Peter, and Peder J. Pedersen. 2005. "To Stay or Not to Stay? Out-Migration of Immigrants from Denmark." Department of Economics, Aarhus School of Business, Aarhus, Denmark.
- Lam, Kit-Chun. 1994. "Outmigration of Foreign-Born Members in Canada." *The Canadian Journal of Economics* 27 (2): 352–70.
- Maddala, G.S. 1983. *Limited-Dependent and Qualitative Variables in Econometrics*. Cambridge: Cambridge University Press.
- Nekby, Lena. 2006. "The Emigration of Immigrants, Return vs. Onward Migration: Evidence from Sweden." *Journal of Population Economics* 19: 197–226.
- Reagan, Patricia B., and Randall J. Olsen. 2000. "You Can Go Home Again: Evidence from Longitudinal Data." *Demography* 37 (3): 339–50.
- Sjaastad, Larry A. 1962. "The Costs and Returns of Human Migration." *The Journal of Political Economy* 70: 80–93.
- SOPEMI (Système d'Observation Permanente sur les Migrations). 2001. *Trends in International Migration 2001*. Paris: Organisation for Economic Co-operation and Development.
- . 2003. *Trends in International Migration 2003*. Paris: Organisation for Economic Co-operation and Development.
- Strand, Håvard, Joachim Carlsen, Nils Petter Gleditsch, Håvard Hegre, Christin Ormhaug, and Lars Wilhelmsen. 2005. "Armed Conflict Dataset Codebook." Oslo: International Peace Research Institute. <http://www.prio.no/cscw/armedconflict>.
- Sørleie, Kjetil. 1998. "Bosetting, sysselsetting og flytting i livsløpsperspektiv." *Søkelys på arbeidsmarkedet* 1998:1.
- Tysse, Tone I., and Nico Keilmann. 1998. *Utvandring blant innvandrere: 1975–1995*. Statistisk sentralbyrå rapport 98/15.
- UDI (Utlendingsdirektoratet: The Norwegian Directorate of Immigration). 2006. *Numbers and Facts 2005 (Tal og fakta 2005)*. Oslo: The Norwegian Directorate of Immigration. <http://www.udi.no>.
- UNHCR (United Nations High Commissioner for Refugees). 2006. *2005 Global Refugee Trends*. Geneva: UNHCR. <http://www.unhcr.org/cgi-bin/texis/vtx/statistics>
- U.S. Bureau of the Census. 1960. *Historical Statistics of the United States*. Washington DC: Government Printing Office.
- Van Hook, Jennifer, Weiwei Zhang, Frank D. Bean, and Jeffrey S. Passel. 2006. "Foreign-Born Emigration: A New Approach and Estimates Based on Matched CPS Files." *Demography* 43 (2): 361–82.
- Warren, Robert, and Jennifer M. Peck. 1980. "Foreign-Born Emigration from the United States: 1960 to 1970." *Demography* 17 (1): 71–84.
- World Bank. 2006. *World Development Indicators*. Washington, DC.

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“This volume represents another outstanding contribution of the International Migration and Development Research Program, an effort I strongly supported from its inception and which established the World Bank’s intellectual leadership in an increasingly important area. Analysts and policy makers will find that the studies presented here constitute an excellent basis for improving migration policies and enhancing their development and poverty alleviation impact.”

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ISBN 0-8213-6935-0