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IMMIGRANT WOMEN'S PARTICIPATION AND PERFORMANCE IN THE U.S. LABOR MARKET

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Approximately half of all immigrants to the United States are women, yet previous research on the labor market assimilation and performance of migrants has focused mostly on men. Given the increasing education levels of migrant women and their higher participation in the labor market, there are no excuses for the absence of the gender dimension in policy debates and research on migration and labor markets. Analysis of women's labor market participation and performance levels is becoming especially important as many women are migrating individually for employment purposes, while their families stay at home. Furthermore, the educational gaps between women and men are rapidly eroding in many migrant-sending developing countries, and we are observing higher levels of brain drain among educated women. Thus there is greater urgency for migration, development, and gender issues to be explored jointly.

We address several interrelated questions in this chapter. As the vast literature on labor economics has shown in the context of women's labor market outcomes, performance and participation levels need to be analyzed jointly, as employed women are not chosen from a random sample. Using empirical methods that control for such sample selection biases, we analyze the determinants of migrant

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women's participation and performance levels, which are measured via two separate variables. In addition to wages—the standard performance variable used in the literature—we look at the average skill level of the occupation obtained by the migrant as a measure of her relative placement in the labor market. The occupational placement of migrants relative to their education and skill levels is a relatively underexplored, yet very important, issue in the brain drain debate.[1]

Our results indicate striking differences in the labor market participation and placement levels of female migrants with similar educational backgrounds but from different countries. Even after we control for age, education, experience, and various family characteristics such as marital status and number of children, we find that migrant women from different countries have widely different labor market experiences. For example, a hypothetical 35-year-old college-educated Nigerian migrant has a 68 percent probability of labor market participation, while a Mexican migrant of identical age, education, experience, and family structure has only a 46 percent probability. In terms of labor market outcomes, the most successful migrants come from Western Europe or English-speaking developing countries. Latin American migrants have lower levels of participation and performance. We find that a large portion of the low performance levels of Latin American migrants is simply due to low levels of education. Once we control for education, the gaps in labor market performance among migrant women from most developing countries disappear.[2] African and Eastern European female migrants have higher levels of participation, but lower levels of performance. Asian and Middle Eastern women have low levels of participation and high levels of performance. Personal and family characteristics, such as marital status, number of children, age, and experience, have the expected effects on migrant women. One key variable is education; an extra year of education increases labor market participation levels by 2.3 percent and annual wages by $3,000 to $4,000, depending on the home country of the migrant.

Some of these variations are due to factors that affect the quality of the human capital accumulated at home prior to migration. Among these factors are the resources spent on education as well as the prevalence of English in daily life. That is why migrants from ex-British colonies, such as South Africa, Nigeria, and India, perform remarkably well in the U.S. labor market. There are obviously other social and cultural factors that affect the trade-offs made by women between labor market participation and household responsibilities. This issue is closely related to the reasons why women migrate. We can broadly classify migrant women into two main categories: those who migrate to follow a husband or another family member and those who migrate alone for educational or occupational reasons. The labor market participation and performance levels of these two groups are likely to be rather different, even though education levels and other human capital

characteristics are the same. We try to control for the factors that differentiate "economic migrants" from "accompanying migrants" through the selection model as well as other variables such as marital status, nationality of the husband, number of children, and location of education, among others. However, there are still substantial differences among migrants with different nationalities, even though they might have similar marital and demographic characteristics. This is another indication of the need for further research, especially identifying the impact of differences in migration decisions.

Our results have many implications, especially in terms of development policies and migration issues. One aspect is the relatively low level of employment of educated migrant women from many developing countries, which implies that their skills are being underutilized. Obviously, we need to compare these to employment levels at home to see if there is a global misallocation of human capital. If the employment levels are similar, then the low participation levels in the United States are likely to be due to cultural and personal preferences rather than to labor market constraints or discrimination. The second issue is the large variation in performance among migrant women from different countries, whether the differences are measured through wages or types of jobs obtained. Part of the variation is obviously due to the quality of the education received at home and other factors influencing the level of human capital acquired before migration. However, we still face the question of whether the positive social externalities generated by educated women would have been higher in their home country even if the private returns are likely to be higher in the United States. This question lies at the heart of the brain drain debate and is hard to explore empirically.

Our work is related to two strands in the literature on migration. The "assimilation" literature comprises a wide range of rigorous empirical analyses focusing on the performance of migrants in the host country (surveyed in Borjas 1994). The "brain drain" literature consists of sophisticated theoretical, but rather limited empirical work focusing on the effects of skilled migration, mostly on the home country (surveyed in Commander et al. 2003).

The existing "assimilation" literature focuses primarily on earnings as a measure of performance. Earnings do not reveal what immigrants actually do, even though they are likely to be correlated with occupational choices. If the global creation and allocation of human capital are a concern, then it is of interest what kind of jobs the highly educated immigrants obtain. Early studies note that the degree of similarity of the home country to the United States and immigration laws may influence the quality distribution of immigrants (Chiswick 1978, 1985). But this empirical research does not focus on the links between the characteristics of the home country and immigration behavior (Borjas 1985; Chiswick 1985). Borjas's (1987) influential paper emphasizes the importance of selection biases in

migration patterns that are due to differences in the patterns of income distribution in the home and destination countries. His empirical analysis shows that earnings differences of immigrants with the same measured education levels are attributable to variations in political and economic conditions in the home countries. In particular, migrants from Western European countries do quite well compared with migrants from less-developed countries. Methodologically, our chapter is most closely related to Green (1999). Using the 1981, 1986, and 1991 censuses of Canada, he finds little evidence of immigrants being underrepresented in more skilled occupations relative to native-born workers with similar education and experience characteristics. One reason is Canadian immigration policy, which is characterized by a point system that screens migrants for their skill and education levels. Furthermore, differences in occupational attainment are linked to linguistic fluency-based differences, and the study does not relate outcomes to the differences in home-country attributes. Using detailed data from Israel, another country that has experienced a large influx of skilled migrants, Friedberg (2000) focuses on the source of the immigrants' human capital. She finds that human capital is imperfectly portable, and the national origin of an individual's education and experience is a crucial determinant of his or her value in the labor market.

Among the few papers on women migrants, Long (1980) finds that earnings of U.S. immigrant women are higher than those of native women (in the United States) around the time of migration and decrease over time. The author's explanation of this finding is the so-called "family investment strategy" in which women work harder at the beginning to support their husband's investment in human capital and other marketable skills. Later, as men assimilate to the U.S. labor market and earn higher wages, women work less. Baker and Benjamin (1994, 1997) build on the work of Long (1980) and confirm his findings. Some of our findings with respect to lower earnings of migrant women are consistent with this explanation. Duleep and Sanders (1993) and Schoeni (1998) use U.S. data and examine female labor force participation mainly focusing on assimilation. The former focuses on family characteristics, and the latter differentiates cohort effects. Both papers find that there are significant assimilation effects via higher participation rates, especially within the first decade of arrival, and that these are stronger among Asian migrants. Duleep and Sanders (1994) analyze the impact of children on the labor supply of migrants and natives. They find that the gaps are rather narrow and that similar child-status-work relations are present among migrants and natives. Schoeni (1998) uses data from three censuses to evaluate the assimilation effect purged of the cohort effect for female immigrants, using the procedure introduced by Borjas (1985) for male immigrants. Labor force participation and wage determinants are explored in the same paper; however, these are

estimated separately, rather than jointly, even though the latter is the economically and empirically appropriate method. Cobb-Clark (1993) writes one of the few papers that examine the selectivity issue for women migrants. She finds that, as is the case with men, women from richer countries perform better in the United States. There has, however, been little investigation of joint labor market participation and performance decisions, especially when the participation decision is endogenous. This complication is relatively less important for men but creates significant selection biases for women—hence the importance of the empirical methodology we employ in this chapter.

The other strand of literature relevant to our study is on the brain drain. The main focus has been the negative impact on the sending developing countries, due to the decline in positive externalities that an educated labor force generates within the economy and lost investments in education and potential tax revenue (see Bhagwati and Hamada 1974; Bhagwati 1976). More recent work has pointed to benefits for source countries of return migration, resource repatriation, migrant networks, and the flow of information and knowledge (for example, Puri and Ritzema 2000). The magnitude of such benefits is likely to depend on how emigrants perform in the host-country labor market; substantial underachievement abroad could diminish the potential benefits. Recent work by Docquier and Marfouk (2006) provide the much needed and widely cited data on bilateral migrant flows by education levels. Our results imply that it might not be adequate to measure brain drain in terms of numbers of educated migrants; rather, the quality of their human capital needs to enter the analysis.

Data

Empirical research on the performance of migrants in destination labor markets, especially with respect to issues regarding education, skill level, and brain drain, suffers from the absence of high-quality and detailed data. One exceptional source is the U.S. census, which includes detailed information on the social and economic status of foreign-born people who are living in the United States. The data in this chapter are from the 5 percent sample of the 2000 census.[3] We restrict our analysis to female migrants who were between 16 and 64 years old at the time of the census and arrived in the United States between 1980 and 1999. We distinguish between migrants who completed their education in the United States and those who obtained their final degree before arrival, by their decade of entering the United States. Each individual observation in the census has a population weight attached to it, which is that representative observation's proportion in the overall U.S. population. We end up with close to 400,000 observations in our data set, which corresponds to more than 8.8 million migrants.

Among the most important variables influencing labor market participation and performance of a migrant is her education level. Each individual in the census declares an education level and a profession. For the education levels in our analysis, we simply take the years of education completed that are appropriate for the level declared by the individual. In terms of occupation, there are more than 500 separate categories in the census. In order to create a metric that would capture differences among occupations, we calculate the average education level of all people, including native-born Americans, who are employed in each category. Thus we arrive at an "average educational attainment" variable for each occupation, which reflects the skill level in that category. For example, the average educational attainment in the census is 17.2 years for all physicians, whereas it is 10.1 for restaurant workers.

We divide the data by the decade of arrival—1980s and 1990s—in order to separate cohort effects (Borjas 1987). Table 6.1 provides the distribution of the observations in each cohort across education levels and geographic regions. For example, we have close to 225,000 observations (corresponding to almost 5 million people) for female migrants who arrived in the 1990s. Of these, 8.2 percent have graduate degrees (master's, professional, and doctorate), 32.3 percent have

Table 6.1. Description of Data: All Female Migrants, Age 16–64 as of 2000, by Decade of Arrival
(percent unless otherwise noted)

Indicator	1990s	1980s
Total sample (number)	224,931	177,409
Corresponding population (number)	4,952,706	3,830,151
Education category		
Less than 9 years	25.2	24.8
High school	34.3	33.8
College	32.3	35.2
Graduate degree	8.2	6.2
Continent		
Latin America	51.1	54.5
Asia	27.0	28.9
Western Europe	7.7	8.0
Eastern Europe	8.2	3.8
Middle East	2.8	2.9
Africa	3.2	1.9

Source: U.S. 2000 census data.

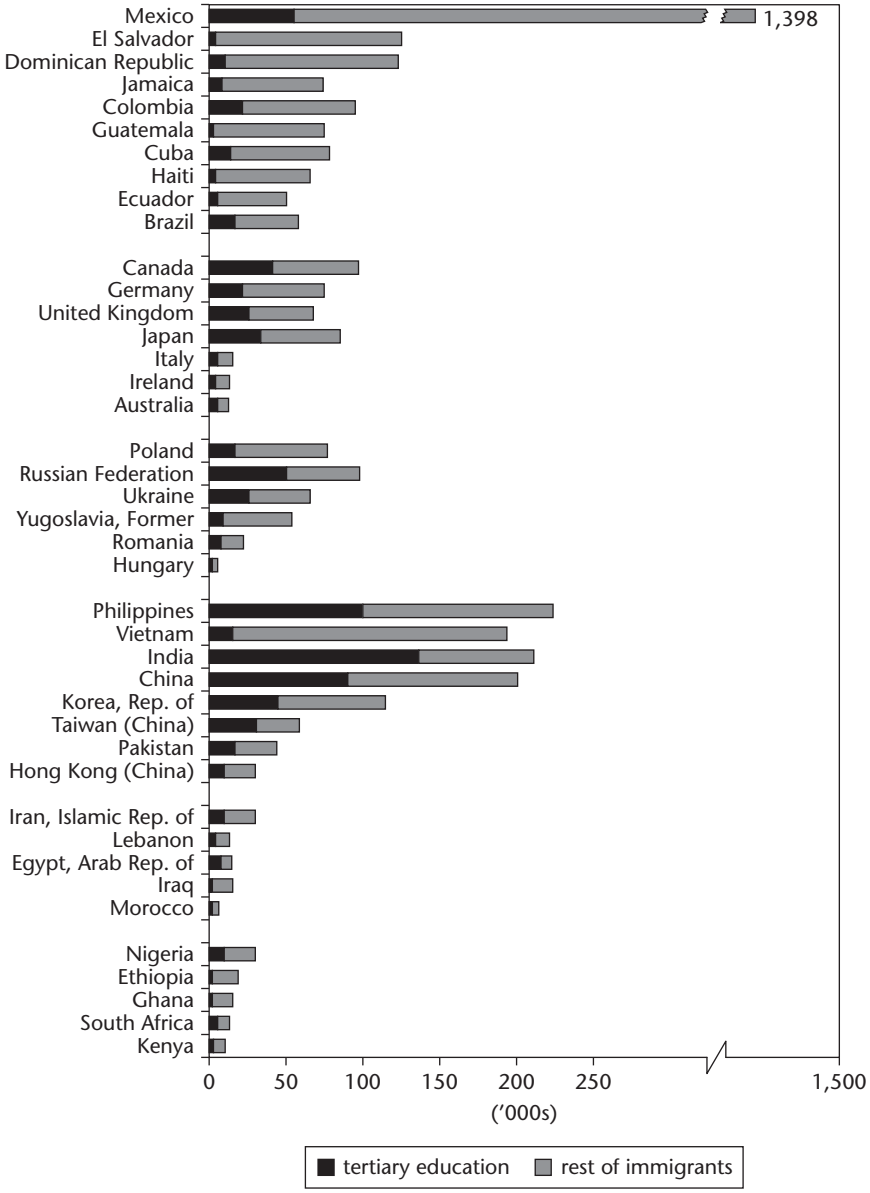
college studies, and 34.3 percent have attended high school. In terms of place of origin, 27 percent came from Asian countries and 51.1 percent came from Latin American countries. When we examine the changes across cohorts, we see that average education levels of female migrants, especially for those with a graduate degree, increased in the 1990s, but the ratio of immigrants from most geographic regions stayed relatively stable. The only exception is the jump in the level of female migrants from Eastern Europe after the Berlin Wall collapsed. The decline in Latin American migrants is due to people who entered as children in the 1990s but had not entered employment age as of 2000.

Figure 6.1 presents the number of migrant women who arrived in the 1990s from the main source countries in each geographic region. Mexico dominates the sample, with close to 1.4 million migrants, but only 50,000 (around 4 percent) have tertiary education. Several Asian countries, such as the Philippines, Vietnam, India, and China, are the home countries for more than 200,000 migrants each. More than 60 percent of Indian women have tertiary education, compared with around 50 percent of women in the Philippines and China and only around 15 percent of women in Vietnam. Education levels of migrant women show large variation across countries, as seen in this figure. As is the case with male migrants, European, Asian, Middle Eastern, and African migrant women are more educated than migrant women from the Caribbean and Latin American countries.

The location where the education is obtained is one of the key issues in the brain drain and assimilation literature. Unfortunately, the census asks the respondents only their level of education, not where they obtained it. However, we know the age at which an immigrant entered the United States. Based on this information, we designate a person as "U.S. educated" if she arrived in the United States before she normally would have finished her declared education level. For example, if a university graduate arrived at the age of 23 or older, then she is considered "foreign educated." Figure 6.2 presents the share of female migrants from various countries who completed their education at home for the 1990s cohort. For example, more than 80 percent of all female Mexican migrants completed their education at home, compared with less than 60 percent of the tertiary-educated Mexican women. The figure reveals that a larger portion of tertiary-educated migrants from Central America and the Caribbean (along with various Asian countries) actually completed their education after migration, compared with the migrants from Europe. This finding reflects the higher level of migration of children who come with their parents (as is the case with many Latin American migrants) and of high school- and college-age students who complete their higher education in the United States (as is more common among Asian migrants).

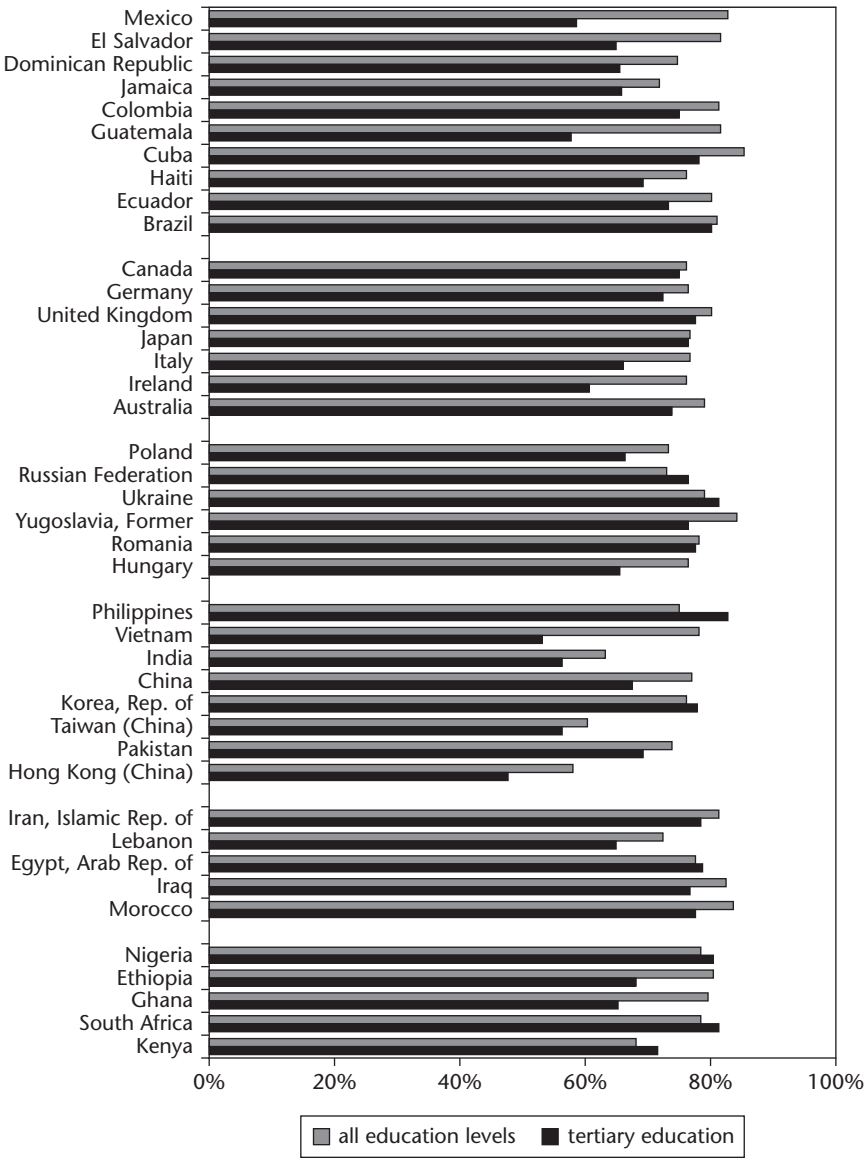
The differences in underlying education levels—whether completed at home or in the United States—can be due to several reasons. First, the average education

Figure 6.1. Number of Female Migrants from Select Countries and Their Education Levels: 1990s Arrivals
(in thousands)



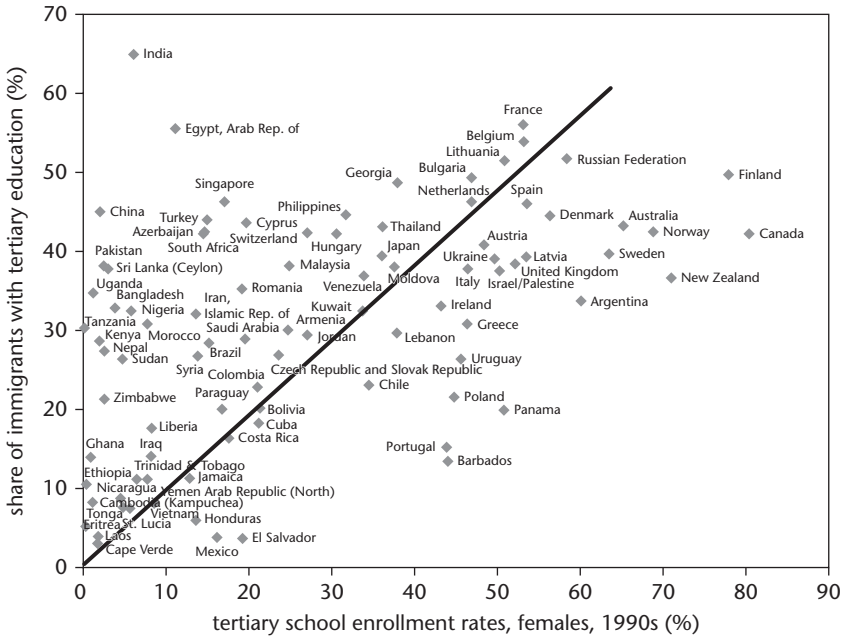
Source: U.S. 2000 census data.

Figure 6.2. Share of Female Migrants Who Completed Their Education Prior to Migration: 1990s Arrivals



Source: U.S. 2000 census data.

Figure 6.3. Tertiary School Enrollment Rates for Migrants and Native Populations



Source: U.S. 2000 census data.

levels, especially for women, might vary in their home country. Second, the migrants might be disproportionately drawn from different segments of the education spectrum of their home country. Figure 6.3 depicts the distribution of select countries along these two dimensions: the proportion of *all* immigrants to the United States with tertiary education against the proportion of tertiary education enrollment in the home country. The education levels among Latin American and developed-country migrants are lower than the average levels in their home country (that is, they are below the 45 degree line in figure 6.3). In contrast, immigrants from Africa, Middle East, and Asia, on average, are highly educated, even though education levels are lower in their home country. This evidence is an example of the fact that migrants do not form a random sample of the population of their home country. Furthermore, women migrants have several other selection issues. A large portion migrates with the family and has no plans to participate in the labor market but rather intends to take care of the household responsibilities. As a result, higher education is not an important asset and does not affect migration eligibility. However, highly educated women from developing

countries might be more inclined to migrate individually if they face discrimination in their domestic labor market. These are complicated questions that are not easily answered with the existing data.

As is the case with native-born American women, labor market participation rates of immigrant women are lower than those of the comparable male population. This differential is one of the most important and well-researched areas in labor economics, and we borrow tools developed in this area in the empirical section. In our sample, around 35 percent of the migrant women in the 1990s cohort are in the labor force; for the 1980s cohort, the percentage is around 45 percent.[4] This relatively large gap might be due to differences in cohort characteristics as well as time needed to learn English and raise children until they reach a certain age. In the empirical estimation, we try to determine the causes of these differences. Table 6.2 presents the distribution of employed women along several dimensions: different cohorts, education levels, geographic regions, and professions.

Table 6.2. Description of Data: All Employed Female Migrants, Age 16–64 as of 2000

(percent unless otherwise noted)

Indicator	1990s	1980s
Total sample (number)	77,397	79,847
Corresponding population (number)	1,722,300	1,739,254
Education category		
Less than 9 years	17.2	16.5
High school	30.0	29.2
College	40.2	44.9
Graduate degree	12.6	9.4
Continent		
Latin America	42.7	48.2
Asia	30.5	33.4
Western Europe	10.2	8.9
Eastern Europe	10.2	4.3
Middle East	2.2	2.6
Africa	4.1	2.5
Job category		
Unskilled (less than 10 years)	44.1	37.7
Semiskilled (10–12 years)	29.8	36.0
Skilled (12–14 years)	19.6	20.8
Professional (14+years)	6.6	5.5

Source: U.S. 2000 census data.

It is best to compare tables 6.1 and 6.2 in order to identify overall differences in labor market participation levels. For example, women migrants with less than nine years of education form 25.2 percent of the overall sample for the 1990 arrivals, as seen in table 6.1. However, they form only 17.2 percent of the employed female migrants. Migrants with at least some college education are 40.2 percent of the 1990s migrants, but they represent 52.8 percent of the employed among them. These numbers imply that only around 25 percent of migrant women with less than a high school degree are in the labor force, compared with about 50 percent of women with some college. And it reaches 70 percent for those with a doctorate. Thus education level is among the most important determinants of employment for migrant women, as is the case for all other segments of the population.

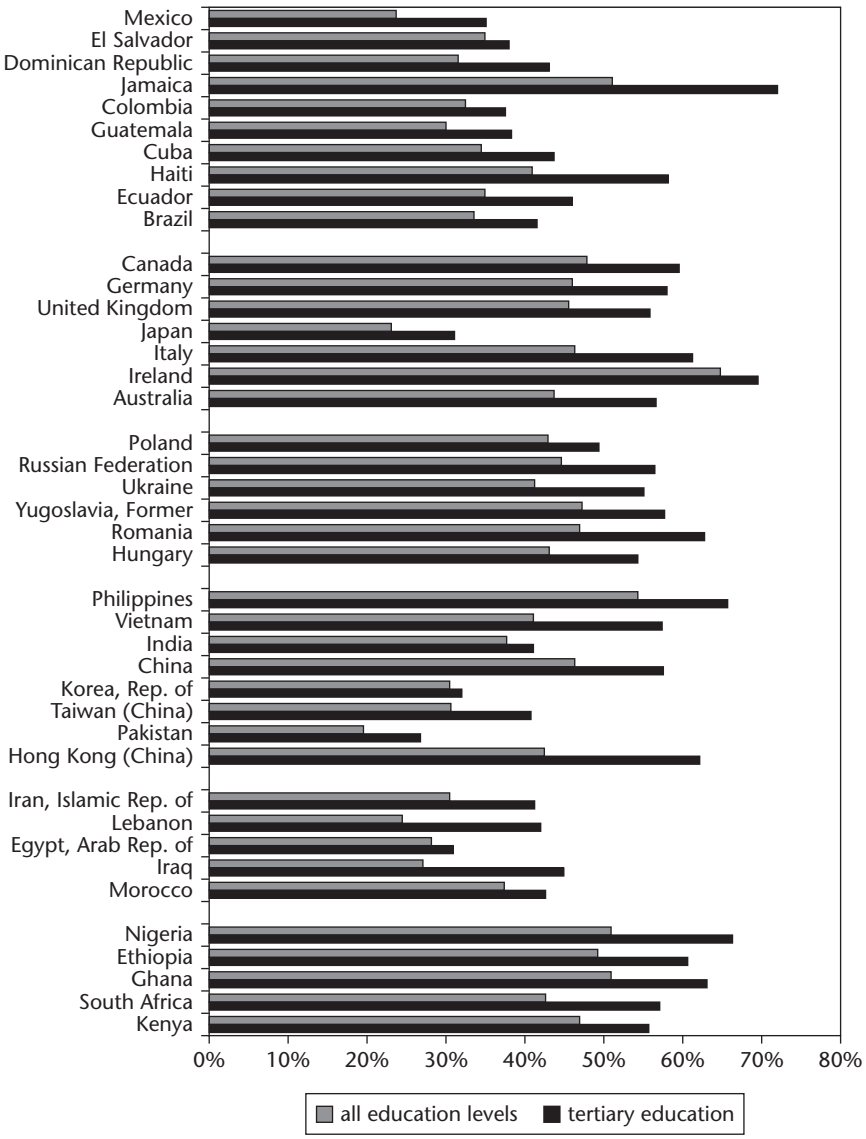
The next issue to consider is the geographic dispersion of employment. Latin American migrants form more than 50 percent of the overall sample, but they are only 42.7 percent of the employed group. Western European women are 7.7 percent of the migrant population, but 10.2 percent of the employed. These figures indicate that the employment level is around 30 percent of Latin American and Middle Eastern, around 40 percent of Asian, and more than 45 percent of European and African migrant women.

Finally, we need to look at the occupational distribution of migrant women. We divide the occupational categories according to the average education levels of *all* people (migrant and nonmigrant) employed in that category, as explained earlier. Categories for which the average education level is less than 10 years are denoted as unskilled; semiskilled categories have between 10 and 12 years, and skilled have between 12 and 14 years of average education. Finally, professional categories have more than 14 years. As the last section of table 6.2 presents, 44.1 percent of migrant women who arrived in the 1990s are employed in unskilled occupations, whereas 26.2 percent are in skilled and professional categories.

Similar data are presented in figure 6.4 for the 1990s cohort from various countries. For example, 24 percent of all Mexican migrants are in the labor force, compared with around 36 percent of tertiary-educated Mexican women migrants. Labor market participation levels are higher for educated women regardless of the country of origin. However, overall participation levels are higher for European and African migrants and are significantly lower for tertiary-educated migrants from the Middle Eastern countries (such as Lebanon, Iraq, and Egypt) and the East and South Asian countries (such as Japan, Republic of Korea, Pakistan, and Taiwan, China).

The following section empirically analyzes these patterns in the data. There is wide variation in the education and employment levels of migrants from different countries. First, we seek to identify the personal determinants of labor market participation, such as education and experience, as well as country-specific

Figure 6.4. Share of Female Migrants Who Are in the Labor Force, by Education Level: 1990s Arrivals



Source: U.S. 2000 census data.

variables. For example, it is very likely that the low levels of employment among Mexican women are due to low levels of education and that the differences with European migrants might disappear once the educational gap is taken into account. The second issue of interest is performance in the labor market—in terms of both wages and occupational placement. Mattoo et al. (2005) identify large differences in performance among male migrants from different countries with identical educational backgrounds and find similarly wide variation. The variation among women is more complicated, as the labor market participation decision of women is further influenced by other cultural and demographic factors. Whereas most men migrate for economic reasons, a large portion of women migrate to accompany their family and do not intend to participate actively in the labor market. These differences create certain biases and are controlled in the empirical estimation in this chapter.

This brain waste effect can be explained partially by country-specific factors that influence the quality of human capital, such as educational expenditures and dominance of English in the source country, and partially by factors that influence selection effects. For women, there is an additional empirical complication because their labor market participation rates are lower as they shoulder more of the household responsibilities. This leads to well-known sample selection biases, and, as such, we need to estimate labor market participation and performance levels simultaneously. This is the topic of the next section.

Empirical Framework

Our empirical analysis proceeds in several stages. For female migrants, labor market performance is critically related to the labor market participation decision. In other words, when identifying the determinants of labor market performance of female migrants (whether this is the wage level or the type of job obtained), there will be significant selection biases due to the employment decision. The seminal work of Heckman (1979) on sample selection bias was motivated by questions concerning the determinants of wages and labor supply behavior of women. Because employed women are unlikely to be chosen randomly from the underlying population of all migrant women, the employment decision and performance need to be estimated simultaneously.

The conventional sample selection model has the following form:

$$d_i^* = z_i'\gamma + \varepsilon_i, \qquad i = 1, \ldots N \tag{6.1}$$

$$y_i^* = x_i'\beta + \nu_i, \qquad i = 1, \ldots N, \tag{6.2}$$

where d^* is the latent labor market participation variable and y^* is the primary labor market performance variable. In our analysis, we use two endogenous performance

variables: first is the wage earned by individual i, and second is the average educational attainment level, that is, the skill level of the occupation of the individual. This variable captures the quality of the labor market placement of the migrant, especially with respect to her education level. Naturally, we observe these performance variables only if the person is actually employed. The indicator variable d, which takes the value of 1 if y^* is observed and y is the observed counterpart of y^*. Thus we have the following relationships among these four variables:

$$d_i = 1 \quad \text{if } d_i^* > 0 \quad \text{and} \quad d_i = 0 \quad \text{otherwise} \tag{6.3}$$

$$y_i = y_i^* \star d_i. \tag{6.4}$$

Equation 6.1 captures sample selection, and equation 6.2 estimates the market performance, whether via the wage or the occupational placement variables. x and z are the exogenous variables, while β and γ are the vectors of parameters to be estimated. See Vella (1998) for the assumptions regarding the distributional properties of the error terms.

The explanatory variables that we use in the labor market performance equation (equation 6.2) are the following:

- *Years of education and years of education squared.* This is the number of years that corresponds to the education level declared by the individual.
- *Age and age squared.* These approximate the aggregate experience of the individual.
- *Years in the United States and years in the United States squared.* These approximate the experience of the individual in the U.S. labor market.
- *Country dummy variables.* These capture all of the relevant country-specific social and economic characteristics that influence an individual's performance. We use a dummy variable for each one of the 130 countries represented in the sample.

In the labor market participation equation (equation 6.1), we use the following variables in addition to the ones listed above:

- *Number of children.* This variable captures the extent of the household responsibilities placed on women.
- *Presence of a grandmother.* This is the number of women above the age of 65 who reside in the same household and measures the extent of domestic help available.
- *Marital status.* This is a set of eight dummy variables: never married, married to a husband of the same nationality, married to a husband of U.S. nationality, married to a husband of different nationality, married to an absent spouse, separated, divorced, and widowed.

We divide the data set along the following dimensions: cohorts (1990s and 1980s) and location of education (home country versus the United States). We perform the estimation separately for these four subsamples for each dependent variable (wage and occupational placement), for a total of eight estimated equations. The estimation is the standard Heckman selection model via maximum likelihood.

The coefficients estimated for the labor market participation equation are presented in table 6.3. The first four columns are for home-educated migrants, and the latter four are for migrants who completed their education in the United States. Columns 1–2 and 5–6 are for the 1990s cohort, whereas columns 3–4 and 7–8 are for the 1980s cohort. Finally, the odd-numbered columns are for the wage equation, and the even-numbered columns are for the labor market placement equations. Since the data are identical for this stage of the estimation for the wage and placement equations, the coefficients are also very similar for the same cohort and education location groups.

As the coefficients show, almost all of the coefficients are significant given the sample size, and they have the expected signs. Years of education, age, years in the United States, and the presence of a grandmother have a positive coefficient, whereas the number of children has a negative sign. Among the marital status dummy variables, "separated" was dropped from the estimation, and the coefficients for marital status variables should be interpreted as their impact relative to this dropped variable. Being married, especially to a husband with the same nationality, has the largest negative effect on the decision to enter the labor market. Being a widow, having a spouse who is absent from the household, or never being married also have negative effects compared to being separated. Only divorced women seem to have a higher likelihood of employment.

When we compare U.S.- and home-educated migrants, we see that education and age have stronger positive effects and the number of children has stronger negative effects on employment for U.S.-educated women. Years in the United States and marital status have similar effects. Finally, if we compare the 1980s and 1990s cohorts, education and age have similar effects, while years in the United States has weaker positive effects and number of children has weaker negative effects for U.S.-educated women. Marital status variables are again quite similar.

In order to assess the impact of the country-specific factors that operate through country dummy variables in the estimation, we calculate the predicted probability of employment for individuals with identical personal characteristics, but from different countries of origin. This artificial person is 35 years old, has been in the United States for six years (she arrived in 1994, hence she is in the 1990s cohort), has a college degree, has no children or a grandmother in the house, and is married to a spouse with the same nationality. Figure 6.5 presents the predicted

Table 6.3. First Stage of Heckman Selection Estimation

	Home educated				U.S. educated			
	1990s arrivals		1980s arrivals		1990s arrivals		1980s arrivals	
Variable	Wage (1)	Placement (2)	Wage (3)	Placement (4)	Wage (5)	Placement (6)	Wage (7)	Placement (8)
Years of education	0.024	0.024	0.023	0.023	0.151	0.134	0.056	0.049
	(6.10)***	(6.01)***	(4.94)***	(4.92)***	(6.45)***	(5.74)***	(3.87)***	(3.39)***
Years of education squared	0.001	0.001	0.002	0.002	−0.004	−0.003	0.003	0.003
	(5.36)***	(5.41)***	(7.95)***	(7.94)***	(3.75)***	(2.59)***	(3.83)***	(4.70)***
Age in 2000	0.112	0.112	0.13	0.13	0.426	0.398	0.288	0.289
	(44.77)***	(44.65)***	(25.67)***	(25.55)***	(27.14)***	(24.88)***	(40.69)***	(41.12)***
Age in 2000 squared	−0.001	−0.001	−0.002	−0.002	−0.007	−0.006	−0.004	−0.004
	(45.28)***	(45.09)***	(27.67)***	(27.45)***	(21.55)***	(19.55)***	(36.04)***	(36.32)***
Years in the United States	0.195	0.195	−0.01	−0.009	0.198	0.189	−0.036	−0.037
	(36.64)***	(36.70)***	(0.56)	(0.54)	(16.56)***	(15.70)***	(1.54)	(1.60)
Years in the United States squared	−0.013	−0.013	0.001	0.001	−0.012	−0.011	0.002	0.002
	(27.30)***	(27.32)***	(1.13)	(1.09)	(12.20)***	(11.61)***	(2.44)**	(2.46)**
Number of children	−0.093	−0.093	−0.058	−0.056	−0.2	−0.198	−0.135	−0.119
	(27.68)***	(27.72)***	(17.09)***	(16.47)***	(11.03)***	(15.33)***	(21.74)***	(19.12)***
Grandmother present	0.012	0.015	0.12	0.116	0.069	0.05	−0.035	−0.031
	(0.78)	(0.93)	(7.33)***	(7.04)***	(2.95)***	(2.37)**	(1.94)*	(1.76)*
Never married	0.003	0.001	−0.071	−0.077	−0.09	−0.118	−0.095	−0.074
	(0.13)	(0.03)	(3.16)***	(3.42)***	(1.58)	(2.27)**	(2.87)***	(2.19)**
Married with same nationality	−0.303	−0.304	−0.132	−0.135	−0.276	−0.256	−0.103	−0.122
	(16.14)***	(16.07)***	(6.83)***	(6.97)***	(4.81)***	(4.79)***	(3.08)***	(3.63)***

(*Table continues on the following page*)

Table 6.3. First Stage of Heckman Selection Estimation (Continued)

	Home educated				U.S. educated			
	1990s arrivals		1980s arrivals		1990s arrivals		1980s arrivals	
Variable	Wage (1)	Placement (2)	Wage (3)	Placement (4)	Wage (5)	Placement (6)	Wage (7)	Placement (8)
Married with U.S. citizen	−0.207	−0.187	−0.147	−0.119	−0.109	−0.076	−0.039	−0.011
	(9.53)***	(8.33)***	(6.30)***	(4.92)***	(1.82)*	(1.34)	(1.11)	(0.31)
Married with other nationality	−0.338	−0.338	−0.145	−0.144	−0.252	−0.215	−0.074	−0.092
	(13.96)***	(13.84)***	(5.75)***	(5.65)***	(3.89)***	(3.60)***	(1.92)*	(2.38)**
Married, spouse absent	−0.137	−0.14	−0.156	−0.161	−0.142	−0.126	−0.174	−0.189
	(5.91)***	(6.06)***	(5.42)***	(5.55)***	(2.22)**	(2.14)**	(4.11)***	(4.47)***
Divorced	0.071	0.064	0.077	0.064	−0.081	−0.078	0.094	0.072
	(3.06)***	(2.76)***	(3.40)***	(2.79)***	(1.11)	(1.13)	(2.33)**	(1.77)*
Widowed	−0.272	−0.274	−0.131	−0.153	−0.125	−0.081	−0.206	−0.276
	(9.23)***	(9.22)***	(4.45)***	(5.23)***	(0.69)	(0.47)	(2.09)**	(3.02)***
Constant	−2.8	−2.796	−2.736	−2.756	−7.946	−7.528	−5.864	−5.881
	(9.26)***	(9.25)***	(6.02)***	(6.18)***	(11.99)***	(11.88)***	(11.28)***	(11.46)***

Source: U.S. 2000 census data.

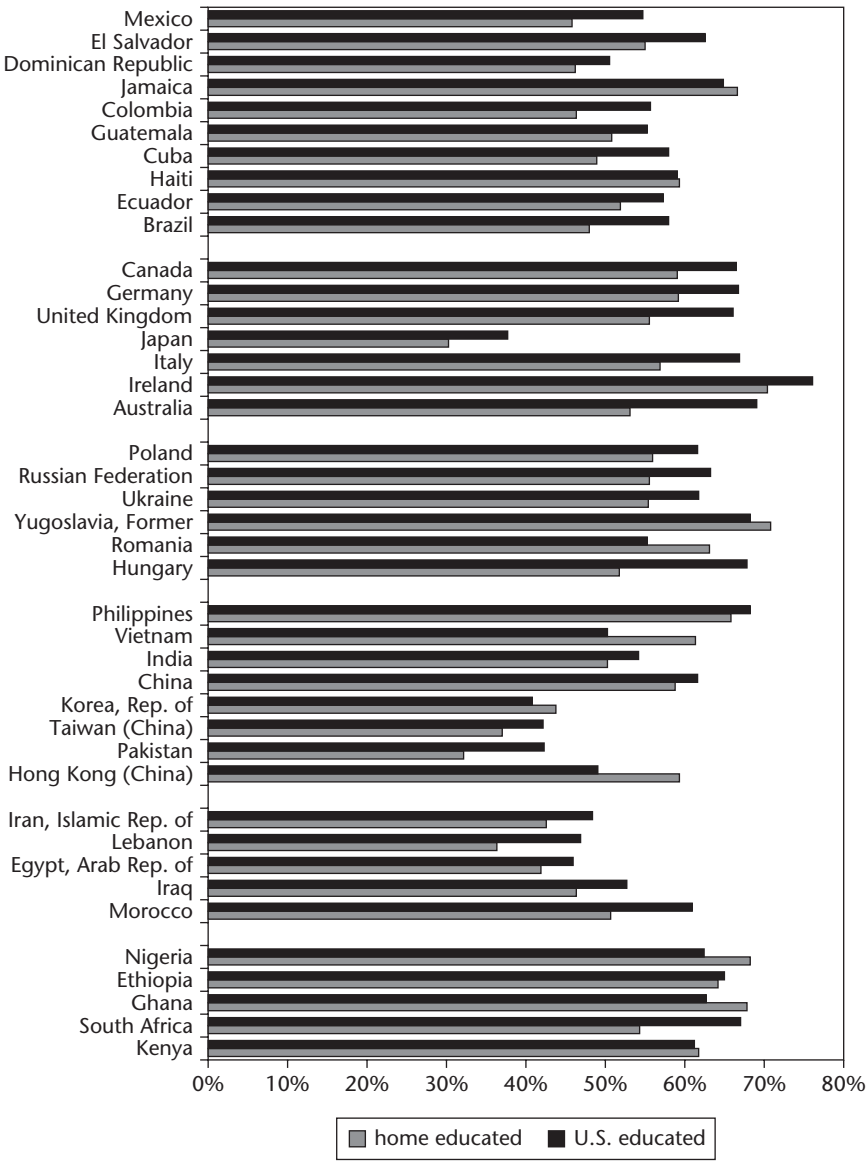
Note: Robust *z* statistics are in parentheses. Country dummies are included.

***Significant at 1 percent.

**Significant at 5 percent.

*Significant at 10 percent.

Figure 6.5. Predicted Probability of Employment for an Identical Person: 1990 Arrivals



Source: U.S. 2000 census data.

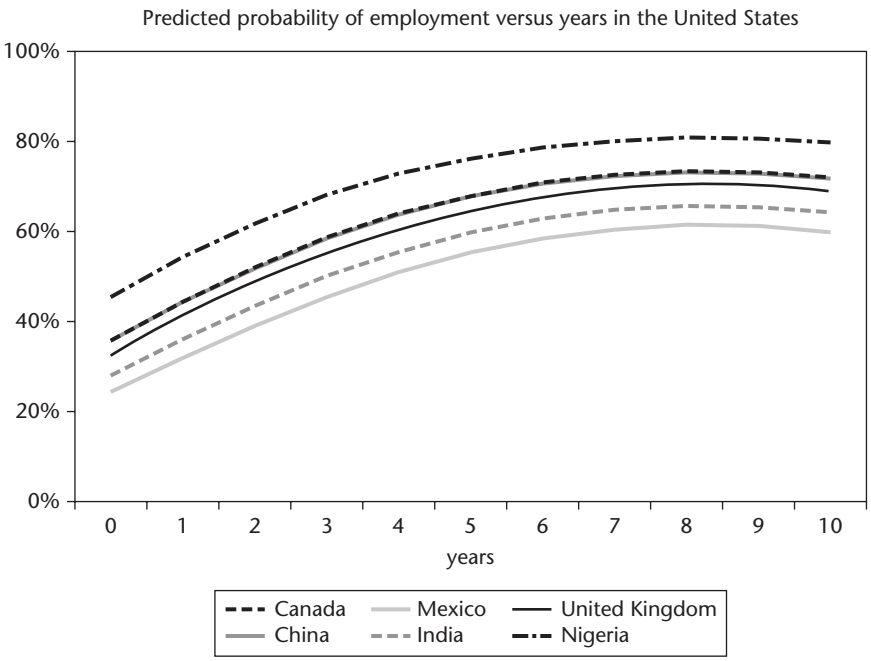
probability of employment for this individual based on location of education and country of origin. The darker bars are for U.S.-educated migrants, and the lighter bars are for home-educated migrants. With few exceptions, such as Jamaica, Ghana, and Nigeria, U.S.-educated migrants are more likely to be employed. This is to be expected, since the quality of education is higher in the United States than in most developing countries. Furthermore, for many migrants, completing their education in the United States is the path to permanent migration.[5] However, we see significant variation between countries, especially for migrants who completed their education at home prior to migration. Migrants from Western and Eastern European countries as well as African countries have the highest levels of labor market participation. In contrast, East Asian countries, such as Japan, Taiwan (China), and Republic of Korea, and Middle Eastern countries have the lowest levels of employment. Earlier, we pointed out that migrants from Latin American and Caribbean countries have relatively low levels of employment compared to migrants from other regions, especially Europe and Africa. Moreover, there is a significant gap in the labor market participation rates of migrants from Latin America compared to migrants from other regions, as presented in table 6.2. It is now apparent that a large portion of the low level of employment is due to low levels of education. Even though there is still a considerable gap in the likelihood of employment for an identically educated Mexican and European migrant, the gap is much lower when education levels are taken into account.

Another interesting exercise is to consider how the predicted probability of employment changes over time. In order to accomplish this, we chose six source countries: Canada, China, India, Mexico, Nigeria, and the United Kingdom. We plotted the predicted probability of employment for the artificial individual by changing the years in the United States (and naturally the age of the migrant). Those predictions are presented in figure 6.6.

In year 0, the migrant, who was educated at home with a college degree, is assumed to be 29 years old; she has just arrived in the United States and has no child or grandmother in the house. She is married to a spouse with the same nationality. These variables do not change; the only variables to change are her age and years in the United States over time. The initial predicted probability of employment is highest for the Nigerian migrant, followed by the Canadian, Chinese, British, Indian, and, finally, Mexican migrants. The predicted probabilities are increasing at a decreasing rate; the assimilation effect is stronger at the beginning and declines over time. At the end of 10 years, our artificial Nigerian migrant has an 80 percent likelihood of employment, whereas the Mexican migrant has only a 60 percent likelihood of employment.

The final exercise we perform is to analyze the marginal effects of the other variables we have used. In table 6.4, we return to our artificial migrant: she is

Figure 6.6. Predicted Probability of Employment for an Identical Person over Time



Source: U.S. 2000 census data.

35 years old, arrived in 1994, has a bachelor's degree obtained at home, is married to a husband with the same nationality, and has no children. This is our "base" case, and we take three home countries: Canada, China, and Mexico. The first column presents the predicted probability of employment. For our base case, the predicted probability of employment is 45.8 percent for the Mexican and 59 percent for the Canadian and Chinese migrants. Now we change one variable at a time. If we increase the age of the migrant by 1 (the second row for each country), the predicted probability of employment increases by around 0.50 percent. If we change the years in the United States by 1, the predicted probability increases by around 1.1 percent. Education has a larger effect, with an extra year of education increasing the probability by around 2.4 percent, whereas the first child decreases the probability of employment by around 3.6 percent. However, the largest effect arises from the marital status of the migrant. Never being married increases the employment probability by around 12 percent compared to a woman married to a person with the same nationality. Being married to an American increases the employment probability by more than 4 percent. Naturally, these results do not

Table 6.4. Predicted Probability of Employment, Wages, and Market Placement in Select Countries

Country and variable	Probability of employment (percent)	Wage (U.S.$ thousand)	Job placement index
Mexico			
Base	45.77	21.09	11.36
Age + 1	46.27	21.15	11.35
Years in U.S. + 1	46.89	21.49	11.39
Education years +1	48.10	23.83	11.94
Number of children + 1	42.12	20.85	11.34
Grandmother at home	46.25	21.12	11.37
Married to an American	49.62	21.33	11.39
Single	57.92	21.83	11.43
Canada			
Base	58.99	34.33	12.84
Age + 1	59.48	34.43	12.83
Years in U.S. + 1	60.08	34.98	12.87
Education years + 1	61.25	38.77	13.41
Number of children + 1	55.36	33.99	12.82
Grandmother at home	59.46	34.38	12.84
Married to an American	62.70	34.68	12.86
Single	70.31	35.38	12.90
China			
Base	58.76	23.55	12.12
Age + 1	59.25	23.62	12.11
Years in U.S. + 1	59.86	23.99	12.15
Education years + 1	61.03	26.59	12.69
Number of children + 1	55.13	23.31	12.10
Grandmother at home	59.23	23.58	12.12
Married to an American	62.48	23.78	12.14
Single	70.11	24.27	12.18

Source: U.S. 2000 census data.

Note: Base is a woman who was 35 years old in 2000, has been in the United States for six years, was educated at home, has a college degree, is married with no children, is married to the same nationality, and has no grandmother in the house.

imply that migrants should divorce their husband or marry an American man in order to find employment, but they reflect complex relationships and trade-offs between labor market outcomes and family formation decisions. These results might imply a selection effect, as working women are more likely to meet and

marry American men. Or women might decide to stay single to pursue a career. This result is consistent with the findings of Meng and Gregory (2005), who find that intermarried immigrants earn higher wages; they attribute these results to faster assimilation.

Labor Market Performance

The next main question is about the labor market performance of migrant women. This is the second stage of our estimation, and, as described earlier, we use two separate measures of performance. The first one, wage, is the standard one used in the labor economics literature and needs no further explanation. It is especially appropriate in this context because most migration decisions are based on the wide wage gap between the source and destination countries' labor market for all skill levels. Thus the wages earned by the migrants become an important measure of their performance and the extent of their assimilation in the destination labor market.

Earnings do not reveal what immigrants actually do, even though they are likely to be highly correlated with occupational choices. The type of jobs a migrant finds, especially highly educated ones, is of interest as well. For this purpose, we use the average education level of the occupation of the migrant. As discussed earlier, we calculate the average education level for each occupation category taking into account all the people employed in each occupation, including native-born Americans and migrant men. This is a measure of the skill level of the occupation. For example, if a migrant with 16 years of education is employed in an occupation where the average education level is only 10 years, then there is significant misallocation of human capital and the migrant is "underplaced" in the labor market. There might be several reasons for this underperformance, and these are explored in detail for male migrants in Mattoo et al. (2005).

The first stage of our estimation is discussed earlier and presented in table 6.3. Now table 6.5 presents the coefficients from the second stage of our estimation controlling for cohort and education and location differences. The only variables in this stage are years of education, age and years in the United States (and their squares), as well as the country dummy variables. Again all of the variables have the expected signs. For example, years of education has a negative sign, but its square has a positive sign. The squared term strongly dominates (after three years), so the net effects for all relevant education levels are positive. When we compare cohorts, we do not see much difference in the effects of education, age, or years in the United States on wages or placement for the home-educated migrants. However, the effects are stronger for the U.S.-educated migrants. Education has a bigger positive impact for the U.S.-educated migrants, especially in terms of

Table 6.5. Second Stage of Heckman Selection Estimation

	Home educated				U.S. educated			
	1990s arrivals		1980s arrivals		1990s arrivals		1980s arrivals	
Variable	Wage (1)	Placement (2)	Wage (3)	Placement (4)	Wage (5)	Placement (6)	Wage (7)	Placement (8)
Years of education	−0.06	−0.29	−0.059	−0.246	−0.023	−0.716	−0.134	−0.441
	(19.12)***	(38.87)***	(16.16)***	(32.88)***	(1.04)	(14.29)***	(12.68)***	(18.11)***
Years of education squared	0.006	0.029	0.006	0.027	0.004	0.045	0.008	0.034
	(34.29)***	(69.08)***	(30.35)***	(60.58)***	(4.03)***	(21.04)***	(17.88)***	(31.72)***
Age in 2000	0.021	−0.018	−0.004	−0.041	0.272	−0.286	0.08	−0.121
	(9.37)***	(3.56)***	(0.86)	(4.63)***	(12.42)***	(8.55)***	(12.04)***	(9.53)***
Age in 2000 squared	0	0	0	0	−0.004	0.005	−0.001	0.002
	(9.55)***	(0.48)	(0.32)	(3.20)***	(10.09)***	(7.60)***	(7.89)***	(8.27)***
Years in the United States	0.014	−0.058	0.013	0.022	0.124	−0.178	−0.011	0.02
	(2.70)***	(5.16)***	(1.09)	(0.83)	(9.20)***	(6.69)***	(0.71)	(0.57)
Years in the United States squared	0	0.006	0	0	−0.007	0.013	0	0
	(0.32)	(6.58)***	(0.21)	(0.21)	(7.67)***	(6.09)***	(0.60)	(0.42)
Constant	9.155	12.038	10.034	12.149	4.944	17.981	10.672	15.013
	(40.36)***	(16.72)***	(26.33)***	(36.11)***	(10.71)***	(21.29)***	(33.38)***	(21.11)***
Number of observations	174,596	174,596	109,679	109,679	50,293	50,293	67,700	67,700

Source: U.S. 2000 census data.

Note: Robust *z* statistics are in parentheses. Country dummies are included.

***Significant at 1 percent.

**Significant at 5 percent.

*Significant at 10 percent.

placement. This indicates that U.S. education is naturally more valued in the labor market.

We now turn to our predicted values for wages and labor market placement in order to compare migrants from different countries. Our artificial migrant is the same one we used earlier: she is 35 years old, has a bachelor's degree, arrived in the United States in 1994, is married to a husband of the same nationality, and has no children. Figure 6.7 presents the predicted wages for these identical migrants from different countries. First, except in the case of Australia and South Africa, U.S.-educated migrants are predicted to earn more than their home-educated counterparts. In some cases, the gap is rather significant. However, we again see large variations in predicted wages based on the country of origin even if migrants completed their education in the United States. This effect might be due to differences in the professions chosen by migrants or to cultural and social explanations that are beyond the scope of this chapter. Another possibility is that there are selection effects based on professional categories. For example, East Asian and Western European women might be choosing careers at the high end of the salary range (such as finance or engineering) where the gap is highest between their home country and the United States. For lower-paying skilled jobs (such as in education or humanities), they might prefer not to migrate or decide to return home after finishing their education in the United States.

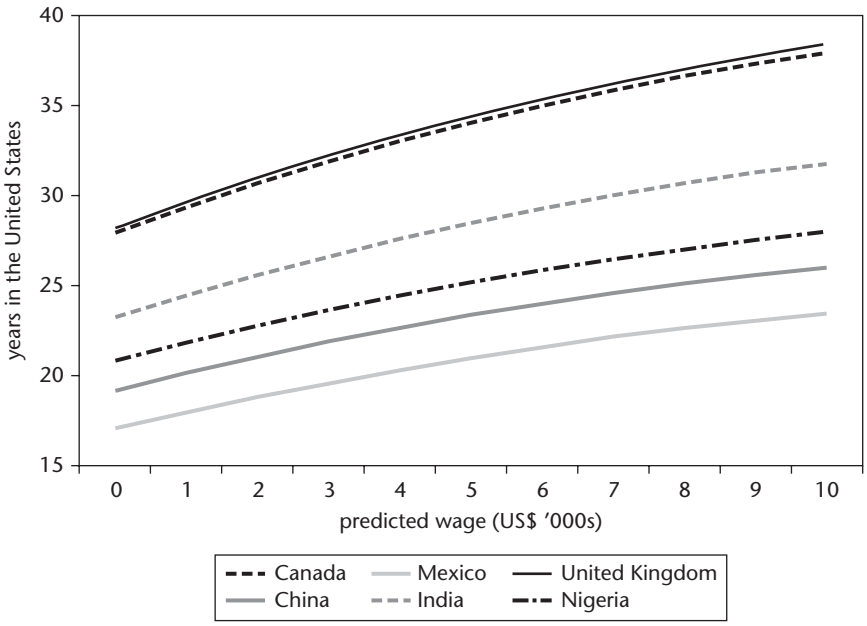
The predicted wage gaps are even higher for home-educated migrants, as expected, since the quality and level of human capital acquired in different countries are more likely to differ even if people have the same diploma. As a result, migrants from English-speaking countries, whether these are developed countries such as the United Kingdom, Ireland, or Australia or developing countries such as India and Kenya, have higher predicted wages. The lowest wages are for Latin American and Caribbean countries, which reflect lower levels of educational quality and certain selection effects. Since it is easier for a Mexican migrant to enter the United States, compared to an Indian migrant, whether through legal or informal channels, we expect the Indian migrant to have higher human capital or earning potential, even for people with the same notional education level. This is clearly displayed in figure 6.7.

We also plot the change in the wages of identical migrants from different countries over time for the same artificial migrant we use in figure 6.6, and we only change her years in the United States and her age. The predicted wages are presented in figure 6.8. The Canadian and British migrants have the highest predicted wages, followed by the Indian, Nigerian, Chinese, and Mexican migrants. Nigerian and Chinese migrants have higher predicted probabilities of employment than Canadian and British migrants, but their wages are much lower. Interestingly, the wage gap increases over time in dollar terms but is stable in relative terms. Over a

Figure 6.7. Predicted Wages for an Identical Person

Source: U.S. 2000 census data.

Figure 6.8. Predicted Wage for an Identical Person over Time



Source: U.S. 2000 census data.

period of 10 years, these migrants are predicted to increase their wages by around 35 percent. This change is due to both the increase in labor market experience and economic and social assimilation effects.

Our final exercise with respect to wages is to estimate the impact of changes in the other variables, as we did with employment probabilities. These are presented in the second column of table 6.4. Our base migrant from Canada is predicted to earn $34,300, whereas the Mexican and the Chinese migrants earn $21,100 and $23,500, respectively. An increase in their age, years in the United States, number of children, or change in their marital status has an expected, but marginal, impact on their wages. These results imply that these variables, especially marital status variables, have an impact on the employment decision of women, but not on their labor market performance. However, an extra year of education increases their predicted wages significantly. The increase is $2,700 for the Mexican, $3,000 for the Chinese, and $4,400 for the Canadian migrant. These numbers can be interpreted as the return to education in the U.S. labor market. When summed over the career of a migrant—say, 20 years—the return to education is rather high.

Our final labor market performance variable—occupational placement and predicted levels according to different countries—is presented in figure 6.9. Recall

Figure 6.9. Employment Placement for an Identical Person: 1990 Arrivals

Source: U.S. 2000 census data.

that our artificial migrant has a college degree, which translates into 14 years of education in the estimation. There is again large variation across countries, and the gaps are larger for the home-educated migrants, as is the case with predicted wages. Home-educated migrants from many Western European countries are placed in higher-skilled jobs. This result might indicate that many European-educated female migrants choose higher-skilled but lower-paying jobs in the United States compared to their fellow citizens who finish their education in the United States. Employment placement is especially low for home-educated migrants from Latin America, indicating that they end up not only with lower wages but also in jobs that are relatively low skilled compared to their nominal education level. Another surprise is the relatively high-skilled placement from the Middle Eastern and African countries. We can argue that labor market participation of Middle Eastern women is rather low and, as a result, only the highly qualified end up working and that this selection bias results in high placement. However, African women have high employment rates so the selection bias is not present. But it is another puzzle why their wages are low given their high-skilled placement. Finally, we observe that the placement levels of Eastern European women are rather low. This might be partially due to the sudden inflow of migrants in the 1990s and the mismatch between their education under the previous communist regime and the demands of the U.S. labor market.

Our final exercise is to examine the impact of changes in other variables on labor market placement, which are presented in the last column of table 6.4. We use the same migrant for our predictions. If she is from Mexico, she is predicted to be placed in an occupation that requires, on average, 11.36 years of education. The level increases to 12.12 if she is from China and to 12.84 if she is from Canada. These results again reflect the varying valuation of their home education in the U.S. market. As is the case with wages, changes in age, years in the United States, number of children, and marital status have only a marginal impact on the migrant's labor market placement regardless of her home country. However, an extra year of education, regardless of the home country, increases the placement level by around 0.6 unit.[6] This again indicates the importance of education in labor market outcomes, especially for migrants, and this is in addition to its impact on employment levels.

Conclusions

Women constitute close to half of all migrants in the United States. Many women migrate together with their family; others migrate alone and send remittances to support their family back home. Some migrate as children with their parents; others go abroad to complete their education and then settle in the host country.

Whatever the patterns and reasons might be, women's labor market participation and performance levels are not properly explored in the migration and development literature. This chapter seeks to contribute to the nexus of gender, development, and migration research agenda.

We use data from the U.S. 2000 census to analyze jointly the labor market participation and performance levels of migrant women. We divide the sample into four groups based on the decade of arrival and location of education and perform the analysis separately for each group. We use two measures of performance: wage and skill level of the occupation of the migrant; the latter is a proxy for the quality of the job that the migrant obtains. The data reveal large variations in education, participation, and performance levels based on the country of origin. Latin American migrants have much lower levels of participation and performance, but this is mostly due to lower education levels. African and Eastern European migrants have higher levels of participation, but lower levels of performance. Asian and Middle Eastern women have low levels of participation and high levels of performance. Women educated in Western Europe and the United States perform much better in every dimension, mainly due to the higher human capital provided by their education. Nevertheless, education levels are the most important variables influencing labor market outcomes, regardless of where they were obtained. An extra year of education, even if obtained in a developing country, increases performance significantly. Other social and demographic variables, such as marital status and number of children, have the expected impact on participation levels, but almost no effect on performances.

Our results have important policy implications. The first is for the design of education policies in developing countries. Significant public and private resources are being spent on those who might make little use of this education because they decide not to enter the labor force or end up being employed in a low-skilled job in the destination country. Having a better sense of what is awaiting them in the destination-country labor market should help individuals and countries to improve their allocation of resources for education. If brain drain and brain waste are a major concern, then it is socially and individually more efficient to use private funds for potential migrants' education. One successful example is the privately financed education of nurses in the Philippines, which uses an American curriculum to train students for the U.S. labor market.

There are also important implications for the design of immigration policies in destination countries. First, there is a need to properly design family unification and employment policies. Under many visa categories in the United States, spouses of migrants (even if the migrants are permanent residents) are prevented from being employed and attending school; this leads to significant waste and erosion of human capital. Such policies disproportionately affect women, who often

follow their husband abroad. Second, employment decisions of many migrant women are strongly influenced by personal, cultural, and social preferences. These need to be carefully taken into account in the design of policies.

Endnotes

1. Mattoo et al. (2005) explore the "brain waste" among educated migrant men.

2. This is not necessarily the case with migrant men, as shown in Mattoo et al. (2005). One interpretation is that most migrant men need to work even if they do not face promising prospects in the labor market and end up in lower-paying and lower-ranking jobs even if they are educated. However, women can simply exit the labor force and take care of household responsibilities.

3. Extracts from the census samples were made through the Integrated Public Use Microdata Series (http://www.ipums.org).

4. We consider a migrant to be in the labor force if she is listed as "working" in the census and her wages are reported to be higher than U.S.$5,000.

5. This also has to do with immigration policy, because migrants educated in the United States are eligible for a temporary visa on graduation, which allows them to enter the labor market and apply for permanent residency. This process is more difficult for migrants completing their education abroad.

6. This is a *marginal* effect of an extra year of education for somebody who already has a college degree.

References

Baker, Michael, and Dwayne Benjamin. 1994. "The Performance of Immigrants in the Canadian Labor Market." *Journal of Labor Economics* 12 (3): 369–405.

———. 1997. "The Role of the Family in Immigrants' Labor Market Activity." *American Economic Review* 87 (4): 705–27.

Bhagwati, Jagdish, ed. 1976. *The Brain Drain and Taxation: Theory and Empirical Analysis.* Amsterdam: North-Holland.

Bhagwati, Jagdish, and Koichi Hamada. 1974. "The Brain Drain, International Integration of Markets for Professionals, and Unemployment: A Theoretical Analysis." *Journal of Development Economics* 1 (1): 19–42.

Borjas, George. 1985. "Assimilation, Changes in Cohort Quality, and the Earnings of Immigrants." *Journal of Labor Economics* 3 (4): 463–89.

———. 1987. "Self-Selection and Earnings of Immigrants." *American Economic Review* 77 (4): 531–53.

———. 1994. "The Economics of Immigration." *Journal of Economic Literature* 32 (4): 1667–717.

Chiswick, Barry R. 1978. "The Effect of Americanization of the Earnings of Foreign-Born Men." *Journal of Political Economy* 86 (5): 897–921.

———. 1985. "Is the New Immigration More Unskilled Than the Old?" Working Paper E-85-6. Hoover Institution, Stanford University, Palo Alto, CA.

Cobb-Clark, Deborah. 1993. "Immigrant Selectivity and Wages: The Evidence for Women." *American Economic Review* 83 (4): 986–93.

Commander, Simon, Mari Kangasniemi, and L. Alan Winters. 2003. *The Brain Drain: Curse or Boom?* IZA Discussion Paper 809. Bonn: Institute for the Study of Labor (IZA).

Docquier, Frédéric, and Abdeslam Marfouk. 2006. "International Migration by Educational Attainment, 1990–2000." In *International Migration, Remittances, and the Brain Drain,* ed. Çağlar Özden and Maurice Schiff, 151–200. New York: Palgrave Macmillan.

Duleep, Harriett O., and Seth Sanders. 1993. "The Decision to Work by Married Immigrant Women." *Industrial and Labor Relations Review* 46 (4): 677–90.

———. 1994. "Empirical Regularities across Cultures: The Effect of Children on Woman's Work." *Journal of Human Resources* 29 (2): 328–47.

Friedberg, Rachel M. 2000. "You Can't Take It with You: Immigrant Assimilation and the Portability of Human Capital." *Journal of Labor Econo*mics 18 (2): 221–51.

Green, David A. 1999. "Immigrant Occupational Attainment: Assimilation and Mobility over Time." *Journal of Labor Economics* 17 (1): 4–79.

Heckman, James J. 1979. "Sample Selection Bias as a Specification Error." *Econometrica* 47 (1): 151–62.

Long, James E. 1980. "The Effect of Americanization on Earnings: Some Evidence for Women." *Journal of Political Economy* 88 (3): 620–29.

Mattoo, Aaditya, Ileana Cristina Neagu, and Çağlar Özden. 2005. "Brain Waste? Educated Immigrants in the U.S. Labor Market." Policy Research Working Paper 3581. World Bank, Washington, DC.

Meng, Xin, and Robert Gregory. 2005. "Intermarriage and the Economic Assimilation of Immigrants." *Journal of Labor Economics* 23 (1): 135–76.

Puri, Shivani, and Tineke Ritzema. 2000. "Migrant Worker Remittances, Micro-Finance, and the Informal Economy: Prospects and Issues." Working Paper 21. International Labour Organisation, Social Finance Unit.

Schoeni, Robert F. 1998. "Labor Market Assimilation of Immigrant Women." *Industrial and Labor Relations Review* 51 (3): 483–504.

Vella, Francis. 1998. "Estimating Models with Sample Selection Bias." *Journal of Human Resources* 33 (1): 127–69.