5 Assimilation

Migration changes people's lives. Many migrants learn a new language, get more education, acquire new skills or enter a new occupation. They are likely to earn more than if they had not migrated. They may marry someone different than they would have married if they had not migrated, and they may have a different number of children. Where migrants go plays a central role in shaping these changes. A person from Poland who migrates to Russia is likely to have a different life in many respects than if she had migrated to England, for example.

This chapter examines how immigrants do in the destination, both initially and over time. The focus is on immigrants' labor market outcomes, particularly their earnings. The chapter also discusses a number of other economic outcomes, such as immigrants' participation in public assistance programs and fluency in the destination country's language. In addition, the chapter discusses cultural factors that have economic implications, such as the determinants of who immigrants marry and how many children they have. All of these outcomes are likely to be quite different than they would be if immigrants had never migrated. They also may be quite different for immigrants than for natives.

Economists use the terms "assimilation" and "integration" when comparing immigrants to natives. Economic models typically examine how immigrants' outcomes compare with natives' soon after immigrants arrive and as their duration of residence in the destination increases. If immigrants' outcomes become more similar to natives' over time, immigrants are said to have assimilated or integrated. Although assimilation is usually viewed as desirable, it can be undesirable if immigrants initially do better than natives but experience "downwards assimilation" towards natives as their duration of residence in the destination increases.

Labor market assimilation

Immigrants typically have worse labor market outcomes than natives when they first arrive in the destination and then converge towards natives over time. Most immigrants who are not admitted on the basis of employment need some time to find a job and to get acclimated to the destination country's labor market. Their employment and earnings improve over time as they acquire skills that are valued in the destination, become more fluent in that country's language and create networks that help them find better jobs.

Economists use "age-employment" or "age-earnings" profiles to examine how employment or earnings evolve as people age. Economists also use these profiles to examine how immigrants' employment or earnings evolve as their duration of residence in the destination increases.

People's employment and earnings tend to follow a rainbow-shaped pattern over the course of their lifetime. When people are young, their earnings tend to be low since they enter the labor force with little experience. Young adults also are less likely to be employed, either because they are in school or because employers are reluctant to hire them since they do not have much experience. Over time, their experience and skills increase. This causes their employment and earnings to increase as they age. Eventually, skills deteriorate or people decide to work less. This leads to reductions in employment and earnings as people reach their fifties and sixties.

As an example of this pattern among immigrants, Figure 5.1 shows how employment and average annual earnings change with years since migration among immigrants in the United States in 2010.[1] The fraction of adult immigrants who are employed increases for the first 22 years since migration and then declines. Earnings increase for the first 30 years and then decline. The downward portion of the employment curve likely reflects labor force withdrawal among retired older immigrants. The downward portion of the earnings curve may be due to selective labor force withdrawal among high-income older immigrants who can afford to retire, causing average earnings to be lower among those who continue to work. It may also reflect lower skill levels among older immigrants who have been in the country longer.

Immigrants with low initial earnings may experience faster earnings growth over time. Immigrants who lack skills that are valued in the destination have a lower opportunity cost of investing in skill acquisition in the destination—they forego less in earnings than skilled immigrants while going to school. Immigrants who invest in acquiring human capital that is valued in the destination are likely to have faster earnings growth than other immigrants. Consistent with this, Harriet Duleep and Mark Regets (2013) show that immigrants with lower earnings soon after entering the United States invest more in acquiring human capital in the destination and experience faster earnings growth than immigrants with higher earnings at entry.

Figure 5.1 actually says nothing about how well immigrants do compared with U.S. natives since it only plots employment and earnings for immigrants. Figure 5.2 therefore shows the

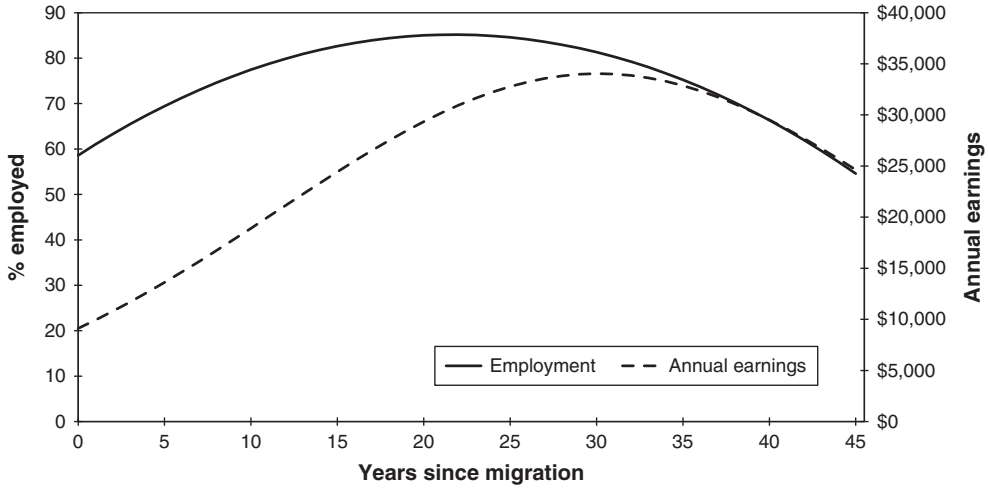

Figure 5.1 Employment and earnings amont U.S. immigrants by years since migration, 2010.

Source: Authors' calculations based on immigrants aged 20 to 65 in 2010 American Community Survey using data from IPUMS (https://usa.ipums.org/usa/).

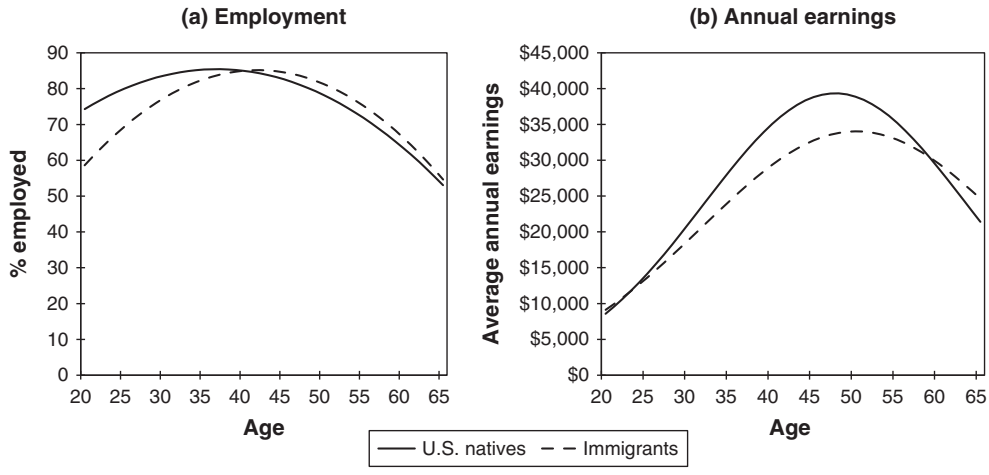

Figure 5.2 Employment and earnings assimilation among U.S. immigrants, 2010.

Source: Authors' calculations based on immigrants aged 20 to 65 in 2010 American Community Survey using data from IPUMS (https://usa.ipums.org/usa/).

same profiles for immigrants as in Figure 5.1 together with the age-employment or age-earnings profile for U.S. natives.[2] Employment increases more rapidly with age for immigrants than for U.S. natives, with immigrants becoming more likely to be employed than U.S. natives by age 40. Immigrants do not overtake U.S. natives in terms of earnings until age 59, however.

Figure 5.2(b) suggests that there is a sizable earnings gap between U.S. natives and immigrants for most of the lifecycle. This pattern was not always the case in the United States. In a seminal study using data from 1970, Barry Chiswick (1978) finds three patterns: Immigrants start off earning less than U.S. natives; immigrants' earnings rise faster than natives'; and immigrants' earnings eventually surpass natives'. Specifically, Chiswick shows that male immigrants earn about 10 percent less than male natives after five years in the United States, the same after about 13 years, 6 percent more after 20 years and 13 percent more after 30 years, all else equal. Chiswick concludes,

> That the foreign born eventually have higher earnings than the native born suggests that they may have more innate ability, are more highly motivated toward labor market success, or self-finance larger investments in post-school training. The higher earnings may therefore be a consequence of a self-selection in migration in favor of high ability, highly motivated workers, and workers with low discount rates for human capital investments.
>
> (pp. 919–920)

Why does the pattern Chiswick observed no longer hold? One reason is that the origin countries of immigrants to the United States have changed over time. Most U.S. immigrants are now from Latin America or Asia; a few decades ago, most immigrants were from Europe. In addition, recent immigrants face a different economic environment than earlier immigrants did. The United States has greater income inequality and higher returns to skill now than in

1970. Meanwhile, recent cohorts of immigrants have lower levels of education relative to U.S. natives than earlier cohorts did, and they have lower levels of English fluency. The implication of these cohort differences for assimilation has been a major research topic in the economics of immigration.

Cohort differences in assimilation

Figures 5.1 and 5.2 are based on cross-sectional data, or data at a single point in time. Inferring assimilation from cross-sectional data requires assuming that recent immigrants will earn the same as earlier immigrants as their duration of residence in the destination increases. But recent arrival cohorts may differ from earlier cohorts. In addition to the reasons noted above, different cohorts may face a different macroeconomic environment upon arrival or in subsequent years that affects their employment and earnings path.

If cohort "quality" has changed over time, cross-sectional data may give a misleading picture of immigrant assimilation. Suppose that each successive cohort of immigrants does worse in the labor market, both initially and over time. Figure 5.3 depicts this situation. Wages increase at the same rate over time for each cohort, but each successive cohort earns less than the previous cohort did at the same number of years since migration. (The figure assumes for simplicity that wages increase linearly.) Cross-sectional data would give the relationship between wages and years since migration indicated by the dotted line. This method clearly overestimates how much wages increase over time for a given cohort. If cohort quality instead increases over time, cross-sectional data would underestimate wage growth.

George Borjas (1985) argues that researchers need repeated cross sections or panel data in order to properly assess assimilation. The decennial U.S. Census is an example of repeated cross-sectional data. Researchers use responses to a Census survey question that asks when

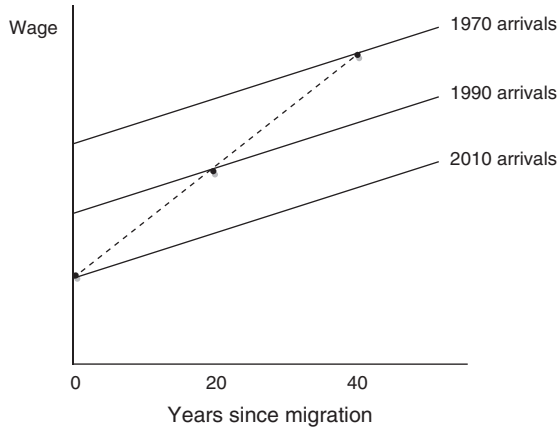

Figure 5.3 Cross-sectional data can give a misleading picture of assimilation.

Suppose earnings increase linearly with years since migration, and each successive cohort earns more than the previous cohort. The true relationship between years since migration and earnings for each cohort is given by the solid lines. Cross-sectional data would indicate a more positive relationship, as indicated by the dotted line.

people born abroad moved to the United States to create cohorts. Researchers then examine how cohorts' outcomes change over time. For example, they examine how immigrants who arrived in the 1960s do in 1970, 1980 and so on. Unlike the decennial Census, panel data—also called longitudinal data—follow specific individuals over time, enabling researchers to get a better estimate of assimilation. Few large-scale panel datasets are publicly available, however, so researchers typically use repeated cross sections to measure assimilation.

Borjas (2013) proposes an empirical model that allows immigrants' initial wages and their wage trajectories to differ across cohorts. It is not possible to separately identify aging, cohort and time period effects for immigrants and natives, so Borjas's model assumes that the time period has the same effect on immigrants and natives. In other words, a recession or economic boom has the same effect on immigrants as it does on natives. Figure 5.4 shows calculations of immigrants' average wages, relative to U.S. natives at the same time, for four arrival cohorts by years since migration based on Borjas's model and decennial U.S. Census data from 1970–2010.

Figure 5.4 shows that earlier cohorts of immigrants appear to have experienced faster assimilation than recent cohorts. Immigrants who arrived during 1965–1969 surpassed U.S. natives after 30 years of residence. Immigrants who arrived during 1975–1979 experienced assimilation but had not yet surpassed U.S. natives at the 30-year mark. Immigrants who arrived during 1985–1989 experienced wage growth during their first 20 years in the United States but earned less soon after arriving than earlier cohorts. They also experienced less wage growth over their first ten years in the United States than earlier cohorts. Immigrants who arrived during 1995–1999 not only experienced less assimilation than earlier immigrants during their first ten years in the United States but actually experienced wage losses relative to U.S. natives—the relative wage line for that cohort is negatively sloped in the figure. Immigrants who arrived during 2005–2009, the most recent cohort of immigrants, are not shown

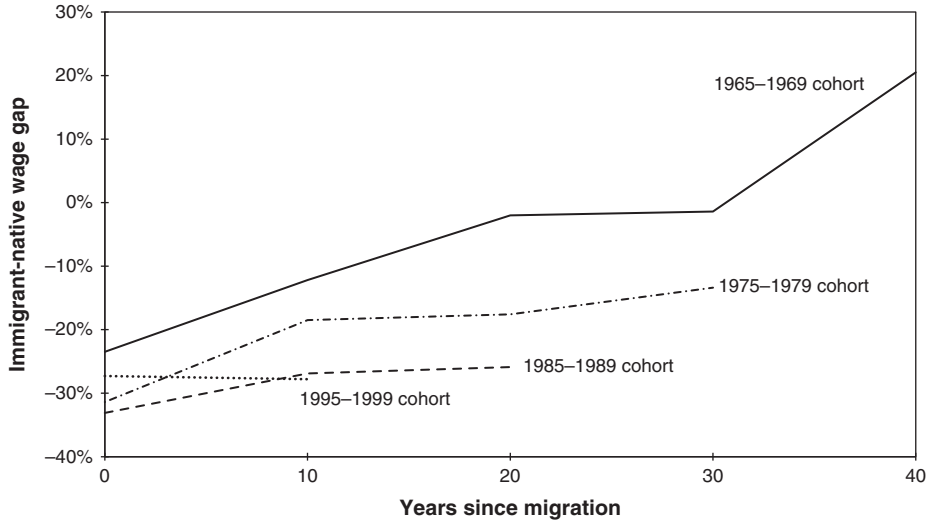

Figure 5.4 Wage gap between immigrants and U.S. natives, by arrival cohort.

Source: Authors' calculations from table 2 of Borjas (2013).

in the figure since they have not yet been in the United States long enough to measure their wage growth. That cohort earned about 33 percent less than U.S. natives soon after arriving, putting them on par with the 1985–1989 arrival cohort soon after they entered.

The data thus suggest that recent cohorts of immigrants do worse soon after arriving and experience slower wage growth, or less assimilation, than earlier cohorts. This seems to contradict the theory that immigrants with lower earnings at entry invest more in acquiring human capital and then experience faster earnings growth over time. However, human capital acquisition in the origin may be a complement to human capital acquisition in the destination (Duleep and Regets, 2013). Immigrants who have more human capital at entry—even if it is not valued in the destination—may find it easier to acquire additional human capital in the destination that is valued there. If recent cohorts of immigrants enter with low levels of human capital, they may not acquire human capital in the destination and therefore may have both low earnings at entry and low earnings over time.

Borjas attributes the decline in immigrants' relative wages across cohorts to a relative decline in their skill levels. Educational attainment has risen over time more slowly among immigrants than among U.S. natives. Figure 5.5 shows the distribution of adult U.S. natives and immigrants by educational attainment during 1980–2010. Immigrants are consistently more likely than U.S. natives to have not completed high school or to have an advanced degree (a master's, professional degree or a PhD) and less likely to have completed high school, some college or a bachelor's degree. Both groups become better educated over time, with the fraction who have not completed high school falling noticeably. However, the decrease is much larger for U.S. natives than for immigrants. The ratio of the fraction of immigrants who have not completed high school to the comparable fraction of natives is 1.4 in 1980 and 3 in 2010.

Borjas notes that the relative decline in immigrants' educational attainment is due to a shift in where immigrants are from. Borjas (1995) states, "The shift in the national origin mix away from the traditional European source countries toward Asian and Latin American countries generates a less 'successful' immigrant flow" (p. 202). Changes in U.S. immigration policy in 1965 led to an increase in immigration from Asia and Latin America, while the share of immigrants from Europe declined. The average education level of immigrants from those new regions, particularly Latin America, tends to be much lower than among immigrants from Europe. A change in immigrants' origin and skill levels that occurred in the United States a century ago gave rise to similar concerns about slower assimilation (see Box 5.1, "Assimilation and cohort effects in the United States a century ago").

Borjas (2013) also attributes part of the decline in immigrants' wage growth across cohorts to recent cohorts of immigrants not becoming as fluent in English as earlier cohorts. Although U.S. immigrants' English tends to improve as their duration of residence increases (as discussed more later in this chapter), rates of English acquisition have slowed across cohorts. Borjas notes that immigrants' English proficiency tends to be lower when there are a large number of immigrants from their origin country in the United States. If there are enough immigrants who speak the same language, there may be less need for immigrants to learn the destination country's language.

Changes in macroeconomic conditions may have contributed to the pattern observed in Figure 5.4. Recent cohorts of U.S. immigrants may have faced a more adverse macroeconomic environment, such as slower GDP growth and a higher unemployment rate, when they

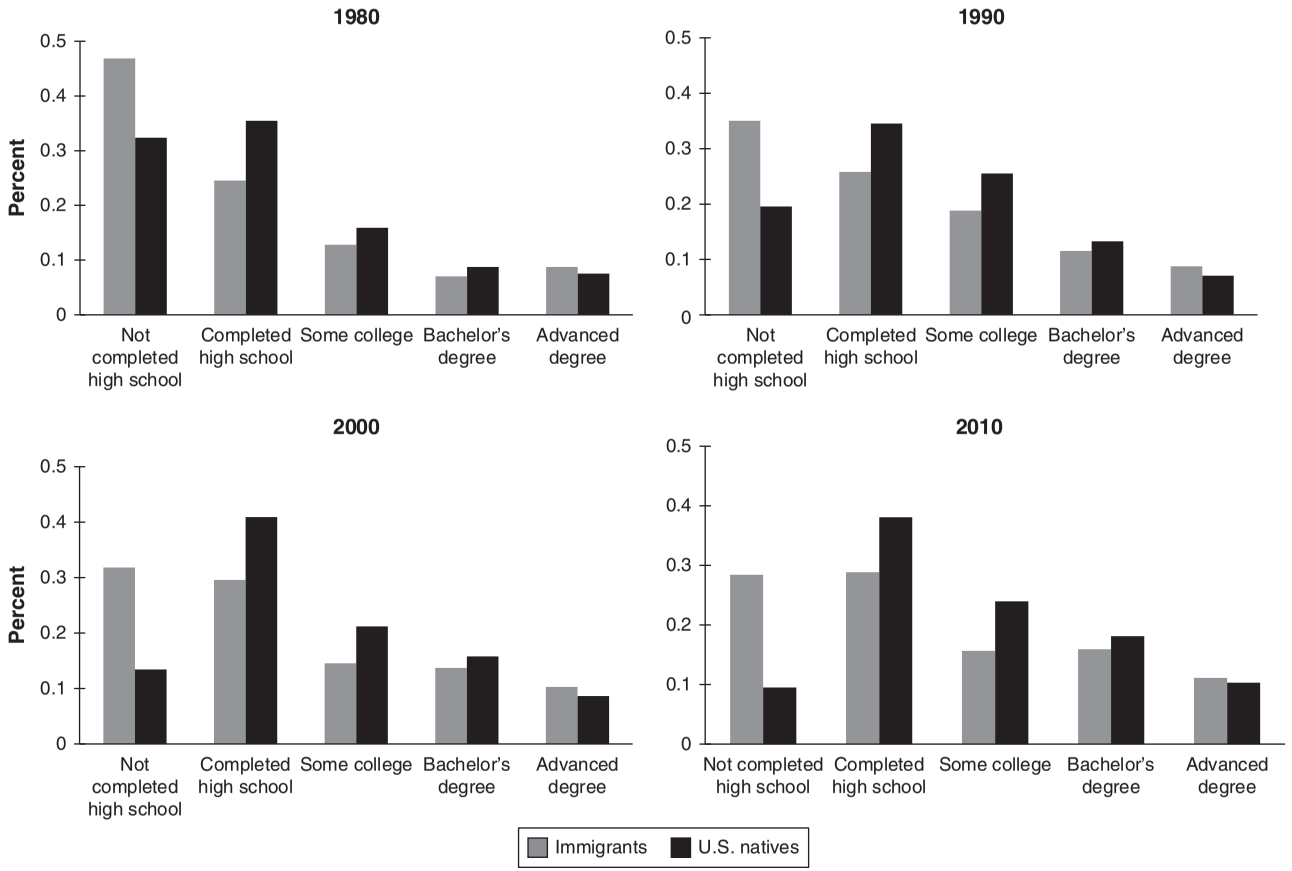

Figure 5.5 Distribution of immigrants and U.S. natives by educational attainment, 1980–2010.

Source: Authors' calculations based on U.S. natives and immigrants aged 25 and older in 1980–2000 Census and 2010 American Community Survey using data from IPUMS (https://usa.ipums.org/usa/).

Box 5.1 Assimilation and cohort effects in the United States a century ago

The United States faced a similar change in immigrants' origins during the late 1800s and early 1900s, when immigrant origins shifted from Northern and Western Europe—mainly Britain and Germany—to Southern and Eastern Europe. At that time, national origin was essentially viewed as the same as race, so immigrants from Southern and Eastern Europe were viewed as being of different races than immigrants from Britain, Germany and Scandinavia. The Immigration Commission of 1907–1911, also known as the Dillingham Commission, issued a report in 1911 that claimed:

> The old and the new immigration differ in many essentials. The former was, from the beginning, largely a movement of settlers who came from the most progressive sections of Europe.... They mingled freely with the native Americans and were quickly assimilated, although a large portion of them, particularly in later years, belonged to non-English-speaking races....
>
> On the other hand, the new immigration has been largely a movement of unskilled laboring men who have come, in large part temporarily, from the less progressive and advanced countries of Europe in response to the call for industrial workers in the eastern and middle western States. They have almost entirely avoided agricultural pursuits, and in cities and industrial communities have congregated together in sections apart from native Americans and the older immigrants to such an extent that assimilation has been slow as compared to that of the earlier non-English-speaking races.
>
> The new immigration as a class is far less intelligent than the old, approximately one-third of all those over 14 years of age when admitted being illiterate. Racially they are for the most part essentially unlike the British, German, and other peoples who came during the period prior to 1880, and generally speaking they are actuated in coming by different ideals, for the old immigration came to be a part of the country, while the new, in a large measure, comes with the intention of profiting, in a pecuniary way, by the superior advantages of the new world and then returning to the old country.
>
> (pp. 13–14)

Much has changed since 1911. We no longer consider Italians and Russians to belong to different races than the English and Germans. And we now know that those immigrants and their descendants assimilated. Of course, circumstances may have changed, and recent cohorts of U.S. immigrants may no longer experience the same upwards trajectory as earlier cohorts. Whether they do is a hotly contested topic in economics and other disciplines.

arrived. Entering under worse macroeconomic conditions may depress earnings at entry and earnings growth over time (Barth, Bratsberg and Raaum, 2004; Bratsberg, Barth and Raaum, 2006). For example, research shows that the adverse effect of entering when the unemployment rate is high persists for at least ten years among immigrants to Sweden (Åslund and

Rooth, 2007). A similar effect occurs among natives—young adults who enter the labor market during an economic downturn earn less years later than young adults who enter the labor market during an economic expansion (Kahn, 2010).

In addition, recent cohorts of immigrants may face a higher rate of return to skill and greater income inequality. An increase in the return to skill will reduce average wages among recent immigrant cohorts if those cohorts have lower average skill levels relative to natives than earlier cohorts did, as is the case in the United States. Research shows that the rise in the return to skill in the United States during the 1980s and early 1990s reduced the earnings of new immigrants relative to U.S. natives by 10 to 15 percentage points (Lubotsky, 2011). Continued increases in the return to skill could contribute to slower earnings growth among those cohorts relative to earlier cohorts.

The U.S. experience does not appear to be universal. A similar decline across cohorts in wages soon after arrival appears to have occurred in Canada, but immigrants' wage growth over time does not appears to have slowed there (Aydemir and Skuterud, 2005). Changes in immigrants' language ability and their distribution across origin countries can explain about one-third of the decline in wages at entry there. Changes in Canadian macroeconomic conditions also contributed to the decline in earnings at arrival. In the United Kingdom, recent cohorts of immigrants appear to earn more soon after arriving than earlier cohorts (Lemos, 2013). Recent cohorts also appear to experience faster wage assimilation toward UK natives.

Research on immigrants in several European countries indicates that immigrants from other European countries or from OECD countries tend to do better in the labor market than other immigrants (e.g., Longva and Raaum, 2003; Algan et al., 2010; Sarvimaki, 2011). Differences remain after controlling for educational attainment, indicating that the wage gaps are not due solely to differences in years of education. Differences in fluency in the destination country language may play a role in the wage gaps.

The fact that immigrants from different regions tend to have different economic outcomes in a destination, both initially and over time, raises an important question: Who is the correct comparison group? Should immigrants' labor market success be evaluated relative to all natives and all earlier immigrants, or relative to natives and earlier immigrants with the same ethnic background? Should immigrants be compared only to natives with similar levels of education or to all natives? There is no single right comparison group. Economists and policymakers should be aware of who a study uses as a comparison group and how using that particular comparison group affects the measurement of immigrants' success.

Gender issues in immigrants' labor market assimilation

In many industrialized countries there are bigger sex differences in immigrants' labor force participation than in natives' labor force participation. In the United States, for example, foreign-born men were more than 23 percentage points more likely than foreign-born women to be in the labor force in 2012, compared with a 10 percentage point gap among U.S. natives (U.S. Bureau of Labor Statistics, 2013). A similar pattern of lower labor force participation among immigrant women than among native-born women holds in many European countries (de la Rica, Glitz and Ortega, 2013).

Gender norms in the origin are a potential reason why immigrant women have a relatively low rate of labor force participation in the destination. Female immigrants in industrialized countries are more likely to work in the destination the higher women's labor force participation rate is in their origin (Antecol, 2000; Bredtmann and Otten, 2014). Immigrant women appear to assimilate toward native-born women's work behavior, but the work behavior of women in the origin still matters over time. When they first enter the United States, for example, immigrant women from countries with high female labor force participation rates and from countries with low rates both work less than U.S.-born women (Blau, Kahn and Papps, 2011). Those from countries with high female labor force participation rates catch up with U.S.-born women after living in the United States for six to ten years. Those from countries with low rates also assimilate towards U.S. natives but never catch up. In addition, a U.S.-born woman married to foreign-born man is less likely to work if the man is from a country with a low female labor force participation rate.

Households may make labor force participation decisions jointly instead of individually. One spouse may work in order to help finance the other spouse's human capital investment. For example, a husband may work to support the family while the wife is in school and then stop working once the wife has finished school and entered the labor force. In the context of immigration, one spouse may work when the family first arrives in order to support the family while the other spouse acquires skills valued in the destination, and then stop working when the other spouse begins working. Evidence for Canada suggests that immigrant women tend to behave this way—their labor force participation actually decreases over time relative to natives (Baker and Benjamin, 1997).[3]

Accounting for return migration

Selective out-migration may bias estimates of assimilation, as noted in Chapter 4. If out-migration is negatively selected, estimates of assimilation will be biased upwards because high-skilled, high-wage immigrants remain in the destination while low-skilled, low-wage immigrants leave. Darren Lubotsky (2007) uses panel data to assess the bias imparted by selective out-migration. He finds that the wage gap between immigrants and U.S. natives closes twice as slowly when using panel data instead of repeated cross sections. In other words, assimilation is one-half as fast when using longitudinal data. The difference between panel and cross-sectional data suggests that low-wage immigrants leave. This negative selection in out-migration creates upwards bias in estimates of assimilation that do not account for selective out-migration.

Negatively selected out-migration from the United States can also bias estimates of assimilation during the early 1900s. Cross-sectional data from 1900–1920 indicate that immigrants initially worked in lower-paid occupations than U.S. natives but experienced rapid assimilation toward natives (Abramitzky, Boustan and Eriksson, 2013). However, panel data from that period indicate that recently arrived immigrants and U.S. natives actually worked in similarly paid occupations, on average, and advanced into higher-paying occupations at the same rate. (Box 5.2, "Ancestry.com and immigration research," further discusses research using historical data.) In addition, immigrants who arrived in the 1890s were less skilled than immigrants who arrived in the 1880s. Estimates that do not account for such cohort effects will overestimate assimilation, as in Figure 5.3.

Box 5.2 Ancestry.com and immigration research

The website Ancestry.com is a treasure trove of historical data for researchers. The website is run by a genealogy company and has a wide array of historical documents posted, including U.S. Census records, ships' passenger lists and U.S. citizenship and naturalization records. The Census records posted on Ancestry.com are a near universe of everyone living in the United States at the time of a decennial Census. People's name, age, birthplace, current place of residence and occupation are available. Some Censuses also ask about education, literacy and what language people speak. (Because of confidentiality restrictions, individual records are publicly available only after 72 years, so 1940 records are the most recent ones that researchers are currently able to use in their entirety. Subsets of more recent data are available with individual identifiers, like name and address, removed.)

Ran Abramitzky, Leah Platt Boustan and Katherine Eriksson use data from Ancestry.com to examine immigrant selection and assimilation. As discussed in Chapter 4, they estimate the returns to migration and selection among migrants by comparing men who migrated from Norway to the United States during the 1800s and early 1900s with their brothers who remained in Norway. They also use U.S. Census data to estimate the extent of assimilation among immigrants from 16 European countries. Using people's names, ages and birthplaces, they track individuals over time in the Census and look at how immigrants' occupations changed as they spent more time in the United States compared with how natives' occupations changed as they aged.

Costanza Biavaschi, Corrado Giulietti and Zahra Siddique use naturalization records to examine whether immigrants who changed their first name to a more "American" name benefited from doing so. An example of "Americanization" is changing from a name like Giovanni to a name like William. About one-third of their sample of men who became naturalized U.S. citizens in New York City in 1930 changed their first names to a more American name. Men who changed their name to a very popular American name, like John, were more likely to move into higher-paying occupations than men who did not. The researchers recognize that the causality might run the other direction: men who move into higher-paying occupations might be more likely to change their names, instead of men who changed their names being more likely to move into higher-paying occupations. To control for the possibility of reverse causality, they use an econometric technique called instrumental variables. The researchers predict how likely men are to change their name based on how complicated their name is. They measure this using the number of points men's names would score in the board game Scrabble. More complicated names are worth more Scrabble points: Zbigniew is worth 22 points, while Sam is worth five points. Men with names worth more Scrabble points were more likely to change their names and were more likely to move into higher-paying occupations.

Immigrant types and assimilation

The basis on which immigrants were admitted to the destination may be related to their assimilation. Duleep and Regets (1996) find that immigrants admitted to the United States on the basis of family ties have lower earnings at entry but experience faster wage growth

than employment-based immigrants. Family-based immigrants may have more incentive to invest in human capital acquisition in the destination, and they may have better networks than employment-based immigrants, which facilitates their labor market integration over time. Family-based immigrants may also be more likely to make labor market decisions at the household level instead of at the individual or family level, as their households may include extended relatives. For example, a grandmother may migrate to help care for her grandchildren, which enables her daughter to work.

Refugees are likely to earn less than economic immigrants soon after entering. Since they do not move primarily because of economic gains, refugees may not be a good fit for the labor market in the destination. In the United States, immigrants who are likely to be refugees have lower earnings than economic immigrants soon after entering, but they experience faster wage growth (Cortes, 2004). They also experience faster growth in hours worked. Higher rates of human capital acquisition among refugees contribute to the improvement in their relative outcomes. Refugees may be particularly likely to invest in acquiring destination-specific human capital (skills that are valued only in the destination, not elsewhere) since they are unlikely to return home. (This is also true for permanent immigrants compared with temporary immigrants.) In addition, in many developed countries refugees receive more support than other immigrants from government agencies and other organizations. This support—in the form of transfer payments, language classes and assistance finding jobs, for example—may foster refugees' assimilation.

Unauthorized immigrants typically earn less than other immigrants and experience slower wage growth over time. This is true even after accounting for unauthorized immigrants' relatively low levels of education (e.g., Borjas and Tienda, 1993). Unauthorized immigrants may be less willing than legal immigrants to invest in destination-specific human capital because such investments may not pay off if they are deported. They also may be largely limited to low-skill, low-wage jobs in particular sectors of the economy, such as agriculture, construction and private household services, where more employers are willing to overlook their lack of legal status. Unauthorized immigrants may have less bargaining power in the labor market. They may also have smaller social networks than legal immigrants. All of these factors may reduce unauthorized immigrants' ability to move into better jobs over time unless they are able to obtain legal status.

Participation in public assistance programs

Immigrants' participation in public assistance programs is one of the reasons why immigration tends to be controversial. Because immigrants tend to be poorer than natives in many industrialized countries, they are more likely to qualify for "means-tested" welfare programs, or programs where eligibility depends on income. In the United States, for example, 33 percent of households headed by an immigrant participated in a major means-tested program in 2010–2012, compared with 22 percent of households headed by a native.[4] Another reason why immigrant households are more likely to participate in welfare programs in the United States is that they are more likely than native households to contain children; many welfare programs there are aimed at families with children. However, immigrant households are more likely to receive welfare than native households even after taking such differences into account.

On the other hand, immigrants are more likely than natives to be working age, so they may be less likely to qualify for or receive public assistance in some countries. This appears to be the case among UK immigrants from so-called A-8 countries, the eight Central and Eastern European nations that joined the European Union in 2004. Christian Dustmann, Tommas Frattini and Caroline Hall (2010) show that those immigrants are considerably less likely than UK natives to participate in welfare programs. Among A-8 immigrants who have lived in the United Kingdom for at least a year and therefore are eligible to receive benefits on the same basis as natives, immigrants are 59 percent less likely than natives to receive benefits. The difference is largely due to immigrants' higher probability of working.

If immigrants' labor market outcomes tend to improve as their duration of residence in the destination increases, their participation in public assistance programs should go down as duration increases. However, there are several reasons this may not be the case. First, immigrants may only become eligible for public assistance after a certain number of years of residence. In the United States, for example, most legal immigrants are not eligible for some forms of public assistance until they have been in the country for five years or have become naturalized citizens.

Immigrants' participation in public assistance programs may also increase with their duration of residence because immigrants may learn about those programs over time. Newly arrived immigrants may not know much about public assistance programs, which can have complicated eligibility rules. Over time, immigrant networks may transmit information about public assistance programs (Borjas and Hilton, 1996).

Jorgen Hansen and Magnus Lofstrom (2003) show that immigrants to Sweden are more likely to participate in public assistance programs than natives there. Indeed, they report that social assistance expenditures on immigrants in Sweden equaled expenditures on natives in the mid-1990s even though immigrants comprised only 10 percent of the population. However, immigrants appear to assimilate out of welfare over time: Their participation in social assistance programs decreases as their duration of residence increases. However, it does not decrease fast enough for immigrants to have the same rate of welfare receipt as natives in the long run. Refugees are more likely to receive welfare, but welfare participation rates decline more quickly over time among refugees than among non-refugee immigrants. This may be due to refugees investing more than other immigrants in acquiring human capital in Sweden.

Location choice and enclaves

Immigrants' locations within the destination are likely to change as their duration of residence increases. Immigrants typically first settle in ethnic enclaves—areas with a concentration of people from the same origin—and then move into more integrated areas over time as they become more familiar with the destination country's labor market and language.

Living or working in an enclave offers several advantages for immigrants that are particularly important to recent arrivals. People there are likely to speak the same language as recently arrived immigrants, who may not yet have mastered the language of the destination country. Enclaves can provide a network that can help immigrants find jobs, housing and transportation. Companies owned by earlier immigrants from the same origin often employ recently arrived immigrants in enclaves. Since enclaves contain many people from the same

origin, immigrants are likely to face less discrimination there than in the rest of the destination. Enclaves also provide a sense of community and belonging that may be vital to people who have recently moved to a new country.

However, there can be economic downsides to living or working in an enclave. Employment opportunities are likely to be more extensive and higher paying outside of the enclave than inside it. This may limit enclave residents' opportunities for economic advancement. In the United States, for example, enclaves are often located in older urban areas, away from job growth in the suburbs (Cutler, Glaeser and Vigdor, 2008). Living in an enclave may also limit economic advancement by slowing the acquisition of human capital valued in the destination, particularly language skills. Immigrants who live or work primarily with other immigrants from the same origin have less need or opportunity to learn the main language spoken in the destination. They also have less opportunity to create wider social networks that include natives, which may be helpful in finding better jobs.

It is difficult to assess the effect of living in an enclave on immigrants' outcomes, such as their earnings and language skills, because people who live in enclaves may systematically differ from people who live elsewhere. In the United States, immigrants appear to be negatively selected into enclaves—immigrants with less education and less proficiency in English are more likely to live in enclaves. Naïve estimates of the effect of enclaves on immigrants' outcomes therefore may conclude that enclaves have an adverse effect on outcomes simply because the people who choose to live there are negatively selected. Research that corrects for this negative selection finds that living in an enclave tends to boost young adult immigrants' earnings and English ability in the United States (Cutler, Glaeser and Vigdor, 2008). However, this positive effect does not occur for immigrant groups with very low education levels, such as Mexicans and Central Americans. For those groups, living in an enclave appears to worsen already poor outcomes. Enclaves comprised primarily of less-educated immigrants may offer fewer economic opportunities and transmit less human capital than enclaves of more educated groups of immigrants.

Immigrants who would do worse living in the enclave than elsewhere may be less likely to choose to live in the enclave, while immigrants who would do better in the enclave than elsewhere may be more likely to choose to live in the enclave. Such selection makes it difficult to infer the true effect of enclaves on economic outcomes. In order to control for such selection, Per-Anders Edin, Peter Fredriksson and Olof Åslund (2003) examine a "natural experiment" in Sweden, where the government assigns refugees to initial locations. The researchers find that being assigned to live in an enclave is associated with higher earnings among refugees. The gains to living in an enclave are highest among the least educated. The researchers note that this suggests that "enclaves are associated with ethnic networks that primarily benefit the least skilled" (p. 348). Further, the earnings gains to living in an enclave increase with the average income among enclave residents. This suggests that, as in the United States, the "quality" of the network in Sweden matters.

For many immigrants, assimilation occurs in the context of the immigrant community and the broader society of the destination. How earlier immigrants from that origin did in the destination affects the reception that new immigrants receive, which in turns affects how well new immigrants do. Timothy Hatton and Andrew Leigh (2011) argue, "The more established is the tradition of immigration from a particular source, the more integrated that ethnic

community will be, and the more easily new immigrants from that source will assimilate into the host labour market" (p. 390). If earlier immigrants from an origin have been successful in the destination, they are in a better position to help new immigrants. In addition, natives then tend to look more favorably on immigrants from that origin, which fosters new immigrants' integration and economic success.

Education

Some people migrate because they want to attend school in the destination, while some other immigrants end up attending school in the destination even though education was not the main reason they moved. Most people who migrate specifically to attend school are in university. About 4.1 million people were enrolled in universities outside their country of citizenship in 2010 (OECD, 2013). Other immigrants who end up attending school in the destination include children who migrate with their parents and people who migrate as adults but realize that there are benefits to obtaining additional education in the destination.

In the United States, average educational attainment rises among immigrant cohorts as their duration of U.S. residence increases. This increase could be due to immigrants going to school in the United States. It could also be due to negative selection on education in return migration. Low-education immigrants may be more likely to leave than high-education immigrants. The demographics of circular migrants may contribute as well: Circular immigrants tend to be agricultural workers with relatively low levels of education. Immigrants who regularly leave the country and later reenter are usually counted as part of the cohort that includes the time of their most recent entry, not their first entry. In addition, rising education levels within immigrant cohorts over time could reflect "grade level inflation," which occurs among cohorts of natives as well—people tend to report higher levels of education as they age even if they have not actually attended more school. Understanding whether educational attainment actually increases among immigrants over time matters because education is closely related to income and other economic outcomes.

Among immigrants, education obtained abroad tends to earn a lower return than education received in the destination. (Economics refers to the increase in earnings associated with an additional year of education—or with having a degree, such as a bachelor's degree—as the "return to education." Typical estimates of the return to education in developed countries are that earnings increase by about 7 to 10 percent for each additional year of education.) Because of this, studies that focus on immigrants' educational attainment typically distinguish between immigrants who arrived as children or young adults and therefore are likely to have attended at least some school in the destination and immigrants who arrived as adults and are unlikely to have attended any school in the destination. Few datasets ask where people obtained their education, making it necessary for economists to infer where education occurred based on the age at which a person migrated and how many years of education she has.

The higher return to education acquired in the destination could be due to differences in the language in which instruction occurred. Instruction conducted in the language spoken in the destination is likely to confer language skills that are valued in the destination independent of the actual content of the instruction. For example, taking a math class taught in German helps an immigrant learn German regardless of whether he is a mathematician or a mechanic.

Education may also be higher quality in industrialized countries than in the developing countries from which many immigrants originate. Consistent with this, research shows that U.S. immigrants from countries with lower student-teacher ratios and higher expenditures per student earn higher returns to education acquired in their origin (Bratsberg and Terrell, 2002). In addition, employers in the destination may not be familiar with educational systems abroad and therefore may discount education obtained elsewhere.

Since education acquired in the destination tends to be more valuable than education acquired in the origin, immigrants have an incentive to go to school in the destination. In the United States, immigrants who are already well educated tend to be the most likely to go to school in the destination. Enrollment rates are lower among immigrant teens than among U.S.-born teens, while immigrants in their twenties and thirties are more likely to be enrolled in school than their U.S.-born peers (Betts and Lofstrom, 2000). The low enrollment rate among immigrant teens is driven by Hispanic immigrants. Many—although not all—Hispanics who arrive in the United States as teens appear to not enroll in school when they arrive. A similar result holds in Canada. Immigrants who arrive there during their teenage years have lower educational attainment as adults than either those who arrive when younger or older (Schaafsma and Sweetman, 2001).

Language

Learning a new language involves costs and benefits. For immigrants, the costs include the direct cost of paying for language classes or other instructional materials plus the opportunity cost of time that could instead be spent working. The benefits include finding a job more easily in the destination and earning more. Immigrants who can speak the language of the destination can also more easily communicate with natives when they shop, interact with their children's schools and go about their daily lives. The difficulty of learning the language of the destination can affect the decision to migrate. As discussed in Chapter 2, migration flows are larger between countries that share a language or use languages that are more linguistically similar.

How well immigrants can speak the language of the destination is typically related to their age at migration.[5] Younger people are usually better able to learn a new language than older people. They also have more opportunities to do so, particularly if they are in school. And since younger immigrants have a longer time to reap the benefits of being proficient in the language of the destination, they have more incentive to learn it.

There are often synergies between education and language acquisition. Highly educated people may find it easier to learn a new language. Speaking the language of the destination facilitates acquiring more education there. In addition, the return to speaking the language of the destination may be bigger for highly educated immigrants. Better-paying jobs may require both more education and greater fluency in the language of the destination. Highly educated immigrants are in a better position to obtain such jobs than less-educated immigrants (because they already meet the education requirement) and therefore have more motivation to learn the language.

Barry Chiswick and Paul Miller (2014) call the determinants of whether immigrants become proficient in the language of the destination the three "E's": exposure to the language of the destination, efficiency in learning the new language and economic incentives for

learning the new language. Exposure is higher among immigrants who are still in school and among immigrants who work primarily with natives. Efficiency refers to how difficult it is for an immigrant to learn the language of the destination. This depends on factors such as age at migration, education, ability and the linguistic distance between an immigrant's native language and the language of the destination. For example, English is close to Dutch and Norwegian, while Spanish is close to Italian and Portuguese. The economic incentives for learning the language of the destination are typically biggest for young and highly educated immigrants. Immigrants who expect to stay longer in the destination also have more incentive to learn the language spoken there.

Immigrants' earnings increase with their proficiency in the language of the destination. Research on the United States, for example, finds that a childhood immigrant who speaks English well earns 33 percent more, on average, as an adult than one who speaks English poorly, and one who speaks English very well earns 67 percent more (Bleakley and Chin, 2004). Most of this effect is because childhood immigrants who speak English better also obtained more education. After taking education into account, it is not clear that childhood immigrants who speak better English earn more. Research on all male U.S. immigrants, not just childhood immigrants, finds that immigrants who are proficient in English earn 14 percent more than those who are not, even after taking education into account (Chiswick and Miller, 1995). The positive relationship between proficiency in the language of the destination and earnings is not unique to the United States nor to English-speaking countries. Studies find similar results on the returns to language among immigrants to Australia, Canada (where English and French are spoken), Germany, Israel and the United Kingdom (Chiswick and Miller, 2014).

Immigrants' ability to speak the language of the destination affects other outcomes as well. In the United States, immigrants who speak English better are more likely to marry a U.S. native or an immigrant from a different origin country (Bleakley and Chin, 2010). Their spouses speak English better, earn more and have more education. Immigrants who speak English better are more likely to be divorced, more likely to never marry and have fewer children. They also are less likely to live in ethnic enclaves. Being more proficient in the language spoken in the destination increases assimilation along many dimensions.

The United States does not screen immigrants on their ability to speak or understand English. Indeed, English is not even the official language of the country, although it is the official language in most U.S. states. Immigrants who want to naturalize must take a test on U.S. civics that is given in English (this test is further discussed later in the chapter). Some countries, such as Australia and Canada, include language skills as a criterion used in awarding permanent resident status. In 2006, the Netherlands adopted a unique policy that requires most non-European immigrants to pass an exam on knowledge of the Dutch language and society. Immigrants already living there when the policy was adopted must pass a similar exam in order to be allowed to stay in the country permanently.

Marriage and fertility

Marriages between immigrants and natives both indicate and facilitate immigrants' economic and cultural assimilation into the destination country. The more assimilated immigrants are,

the more likely they are to marry a native. Marriages between immigrants and natives are also an indicator of natives' acceptance of immigrants, at least those from a particular national origin group. Meanwhile, marrying a native fosters economic assimilation by improving an immigrant's labor market outcomes and proficiency in the language of the destination. It fosters cultural assimilation as well since an intermarried immigrant becomes more exposed to the destination country's norms. First, some terminology: Marriages between individuals who are in different groups, including immigrants and natives, are termed "intermarriages," "exogamy" or "heterogamy" (the opposites of the last two categories are "endogamy" and "homogamy," marriages between people who are in the same group).

Table 5.1 reports the fraction of immigrants married to a native, and vice versa, for several countries. Immigrants are more likely to be intermarried than natives are. This is not surprising since there are more natives than immigrants in a given country—the "marriage market" for natives and, once they have arrived, immigrants consists primarily of natives. Of course, many adult immigrants are already married before they migrate. Studies on immigrants' marriage patterns therefore often focus on immigrants who were unmarried or young when they migrated.

Immigrants are more likely to marry natives or immigrants from a different origin country if they have been in the destination longer, arrived at a younger age, are more educated, live outside an ethnic enclave or are more proficient in the language of the destination (Furtado and Trejo, 2013). Those factors matter in part because they affect who immigrants meet. For example, immigrants who live outside an ethnic enclave are more likely to meet natives or immigrants from other origin countries. Group size matters as well. If there are fewer people from the same origin in the destination, immigrants are more likely to intermarry. The sex ratio may matter as well. If there are more men than women from the origin in the destination, the men may be more likely than the women to intermarry, and vice versa. However, studies find only weak support for this possibility (Adserà and Ferrer, 2014a).

Intermarriage between immigrants and natives can affect a number of outcomes. It is likely to increase immigrants' proficiency in the language of the destination. Independent of the effect on language proficiency, intermarriage may help immigrants find a better job by broadening

Table 5.1 Intermarriage rates between immigrants and natives

Country	*% of immigrants married to a native*	*% of natives married to an immigrant*
Austria	27.1	6.6
Belgium	36.2	6.5
France	37.0	7.0
Germany	28.5	6.8
Greece	17.1	1.6
Netherlands	39.6	5.1
Spain	21.0	3.1
Sweden	34.4	5.4
United Kingdom	31.1	5.1
United States	27.9	4.4

Source: Adserà and Ferrer (2014a).

their social network to include the native-born spouse's family and friends. Xin Meng and Robert Gregory (2005) find that male immigrants in Australia from non-English-speaking countries who marry a native or an immigrant from an English-speaking country earn 20 percent more, on average, than those who marry another immigrant from a non-English-speaking country. Female immigrants earn 46 percent more. Research on the United States indicates that marrying a native boosts immigrants' likelihood of being employed but not their earnings (Kantarevic, 2004; Furtado and Theodoropoulos, 2010).

Immigrants' fertility usually converges toward the fertility of natives in the destination. Migrating can affect fertility behavior through three channels: selection, disruption and adaptation (Adserà and Ferrer, 2014a). The selection channel notes that immigrants can differ systematically from non-migrants (and natives) in ways that are related to their fertility behavior. For example, if female immigrants are positively selected on education, they are likely to have fewer children than non-migrants since highly educated women typically have fewer children regardless of their migration status.

The disruption channel focuses on disruptions due to the migration process. Spouses may be separated as a result of migrating, or women may try to time their fertility to not give birth around the time they plan to move. In addition, there may be a temporary drop in family income around the time of migration, leading to a reduction in fertility then. The disruption channel predicts that there is a temporary decrease in fertility right before and around the time of a move and then a temporary increase after a move to make up for any postponed births.

The adaptation channel is directly related to assimilation. As immigrants integrate into the destination, their fertility behavior begins to resemble that of the native-born population. Since most industrialized countries have lower birth rates than most developing countries, fertility decreases for many immigrants. In addition, the direct cost of raising children and the opportunity cost of women's time are typically higher in industrialized countries than in developing countries. Meanwhile, social norms regarding the desired number of children differ across countries and usually are lower in industrialized countries.

Health

Initially, immigrants tend to be healthier than people who remain in the origin and than natives in the destination. As discussed in Chapter 4, the "healthy immigrant effect" may be largely due to positive selection. As their duration of residence in the destination increases, however, immigrants' health typically worsens and converges toward natives' health (e.g., Antecol and Bedard, 2006). There are a number of potential reasons why immigrants' health deteriorates, on average. Immigrants may adopt natives' unhealthy habits. Immigrants moving from developing to industrialized countries may become more sedentary, eat more processed foods and smoke more, for example. They may experience stress as a result of migrating that worsens their health over time. Immigrants may work in physically strenuous jobs that worsen their health. Better medical care in the destination than in the origin may reveal previously unknown adverse health conditions.

Several factors should lead to better health outcomes among immigrants as their duration of residence in the destination increases. For immigrants moving from developing to

industrialized countries, better medical care should improve their health. The higher income that typically accompanies migration and then assimilation should lead to better health outcomes over time given the strong link between income and health. These positive effects do not appear to dominate, however.

Selection in return migration does not appear to contribute to immigrants' downward assimilation with respect to health. Immigrants who are in ill health are more likely to return to their home country. These return migrants may need the help of family and friends in the origin while they are ill. They may feel more comfortable utilizing medical care in their origin than in the destination, or they may be unable to afford medical care in the destination. This negative selection in return migration actually reduces the measured extent of the decline in immigrants' health as their time in the destination increases. Premature deaths by less-healthy immigrants who remain in the destination similarly lead to underestimates of the decline in immigrants' health over time.

Naturalization

One of the most salient indicators of assimilation is becoming a naturalized citizen of the destination country. Naturalization rates vary considerably across countries, as Figure 5.6 shows.

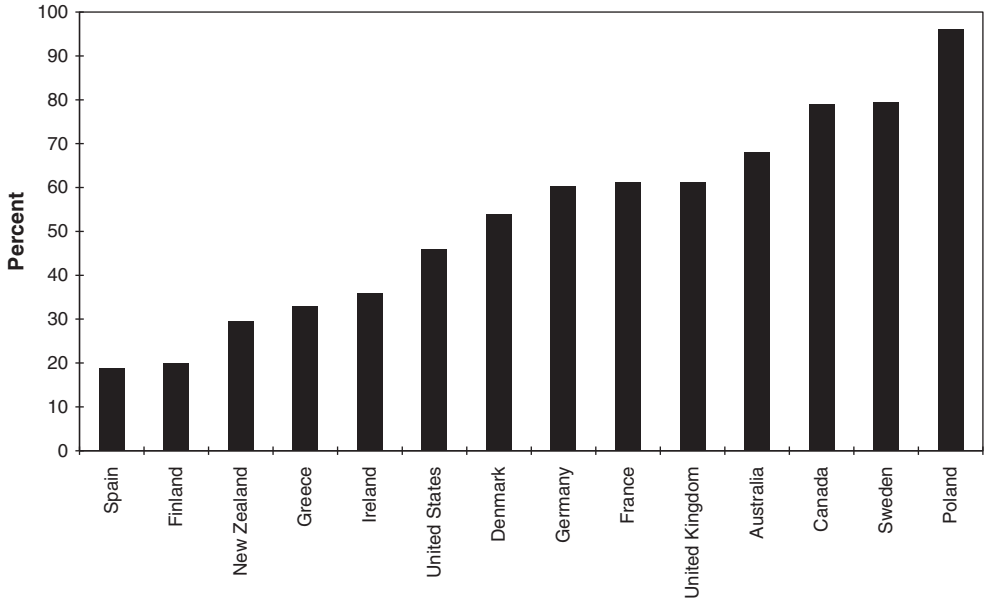

Figure 5.6 Naturalized citizenship rates for immigrants.

Sources: Picot, G., and Hou, F. (2012) "Citizenship acquisition in Canada and the United States: Determinants and economic benefit." In: *Naturalisation: A Passport for the Better Integration of Immigrants?* Paris: OECD; Dronkers, J. and Vink, M. P. (2012) "Explaining access to citizenship in Europe: How citizenship policies affect naturalization rates." *European Union Politics* 13, pp. 390–412; DeVoretz, D.J. (2013) "The economics of immigrant citizenship ascension." In: Constant, A.F. and Zimmermann, K.F. (eds.) *International Handbook on the Economics of Migration*. Cheltenham, UK: Edward Elgar, pp. 470–488.

One reason why the rate varies so much across destination countries is differences in their rules regarding naturalization. These differences include how long immigrants must live there before they can apply for naturalization; how difficult naturalized citizenship is to obtain; how high the fees are; and whether dual citizenship (being a citizen of both the original and new country) is allowed. In the United States, immigrants are usually eligible to apply to become naturalized U.S. citizens five years after receiving legal permanent resident status. Applicants must demonstrate knowledge of U.S. civics and proficiency in English (see Box 5.3, "Can you pass the U.S. citizenship civics test?"). As of late 2013, the application fee was $595. The United States allows dual citizenship.

Naturalization rates also vary because of differences in immigrants' characteristics across destination countries, particularly differences in where immigrants are from. Origin country rules regarding dual citizenship, whether citizens living abroad have to pay taxes and whether citizens can vote in elections while living abroad affect the costs and benefits of becoming a naturalized citizen elsewhere. For example, if a country requires citizens living abroad to pay taxes—like the United States does—emigrants from that country have a greater incentive to become naturalized citizens wherever they are living and renounce their citizenship in the

Box 5.3 Can you pass the U.S. citizenship civics test?

There are 100 civics questions on the naturalization test. A U.S. Citizenship and Immigration Services officer asks applicants up to ten of these questions in English. Applicants must orally answer six of the ten questions correctly to pass the civics test. Officers give special consideration to applicants who are 65 years of age or older and who have been living in the United States for at least 25 years. There are 20 specially designated civics questions for such elderly applicants.

Here are some of the questions (and answers):

What is the supreme law of the land? (The Constitution)
The idea of self-government is in the first three words of the Constitution. What are these words? (We the People)
What is the economic system in the United States? (capitalist economy; market economy)
If both the President and the Vice President can no longer serve, who becomes President? (The Speaker of the House of Representatives)
Under the Constitution, some powers belong to the federal government. What is one power of the federal government? (to print money; to declare war; to create an army; to make treaties)
Who wrote the Declaration of Independence? (Thomas Jefferson)
What is the name of the national anthem? (The Star-Spangled Banner)

More than 90 percent of applicants pass the test (U.S. Citizenship and Immigration Services, 2013). But 90 percent of U.S. natives probably can't—one survey indicates that one-third of voting-age U.S. natives cannot answer enough questions correctly to pass the test (Center for the Study of the American Dream, 2012).

origin. For young adults, particularly males, whether citizens are required to serve in the military in the origin (or the destination) for a certain period of time may affect whether they choose to become naturalized citizens. Military service requirements are significant in some countries. In Israel, for example, male citizens are required to serve for three years, and women for two years. Unmarried male migrants who arrive at age 18 or 19 must serve for two and one-half years, and women two years.

Immigrants who have formed more ties in the destination and plan to remain there are more likely to become naturalized citizens. Economic migrants tend to have relatively low naturalization rates since they are more likely to return home. Refugees who are resettled in industrialized countries typically have high naturalization rates since they are unlikely to return home. Family-based migrants' naturalization rates tend to fall in between economic migrants' and refugees'. In industrialized countries, immigrants from other industrialized countries tend to be more likely than immigrants from developing countries to return home and therefore are less likely to become naturalized citizens.

Immigrants who become naturalized citizens tend to have better labor market outcomes than immigrants who do not. In the United States, for example, immigrants who are naturalized citizens earn about 9 percent more than other immigrants (Picot and Hou, 2011). In Canada, the "citizenship premium" is about 5 percent. It is not clear whether becoming a naturalized citizen causes immigrants' labor market outcomes to improve or if immigrants who choose to become naturalized citizens are different from other immigrants. Employers may see naturalized citizens as more committed or more assimilated. Alternatively, immigrants who choose to become naturalized citizens may be positively selected. In addition, people who will reap greater benefits from becoming a naturalized citizen may be the ones who opt to do it. For example, immigrants who can qualify for better jobs if they are a citizen of the destination country may opt to become a naturalized citizen while those who can't, don't. Being a citizen is often required for public sector jobs. Immigrants may also invest more in acquiring destination-specific human capital if they become a naturalized citizen, such as learning the language, and the labor market gains may be returns to that human capital, not to naturalization itself.

Final thoughts on assimilation

Assimilation implies that immigrants become like natives over time. But natives also may change over time in response to immigration. Such changes may lead to convergence, with both immigrants and natives changing and becoming more similar to each other. Alternatively, natives may deliberately try to distinguish themselves from immigrants. Chapters 7 and 8 discuss how such dynamics can play out for natives in the labor market. But first the next chapter examines another aspect of assimilation: how the children of immigrants do.

Problems and discussion questions

1 What are the concerns about using cross-sectional data to measure assimilation?
2 Why might each successive cohort have better labor market outcomes than the previous cohort?

3 Suppose the transferability of skills from an origin to a destination increases. What is likely to happen to immigrants' wages relative to natives' in the destination? What do you think will happen to immigrants' skill acquisition in the destination, and why?
4 How does selection in migration and return migration affect immigrants' assimilation with respect to their health?
5 What factors determine whether immigrants choose to become naturalized citizens in the destination?

Notes

1 The figures are based on a linear regression of employment or log annual earnings (conditional on employment) on age, age squared, years since migration and years since migration squared for immigrants aged 20 to 65 in 2010. Values are then predicted assuming an immigrant arrives at age 20, so that age and years since migration increase together.
2 The figures are based on a linear regression of employment or log annual earnings (conditional on employment) on age, age squared, years since migration and years since migration squared for immigrants aged 20 to 65 in 2010.
3 However, Adserà and Ferrer (2014b) find that this is only true for relatively uneducated immigrant women in Canada. Educated immigrant women appear to experience rising labor force participation and wage assimilation.
4 Major means-tested programs include public health insurance (primarily Medicaid and SCHIP; Medicare is not included), food stamps (SNAP), cash welfare (TANF or SSI) and subsidized housing. Calculations are based on 2011–2013 March Current Population Survey data for benefits received during the previous calendar year using IPUMS data from King et al. (2010).
5 Many countries have multiple common and even official languages, but for simplicity this discussion is written as if the destination has only one language. Studies that examine immigrants' proficiency in the language of the destination in countries with multiple languages, like Canada (English and French), typically look at proficiency in either language.

Internet resources

Information on the Netherlands exam on knowledge of Dutch language and society is available at: http://www.naarnederland.nl/en/the-exam.

The full list of the 100 questions on the U.S. naturalized citizen test is available at: http://www.uscis.gov/sites/default/files/USCIS/Office%20of%20Citizenship/Citizenship%20Resource%20Center%20Site/Publications/100q.pdf.

Suggestions for further reading

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