

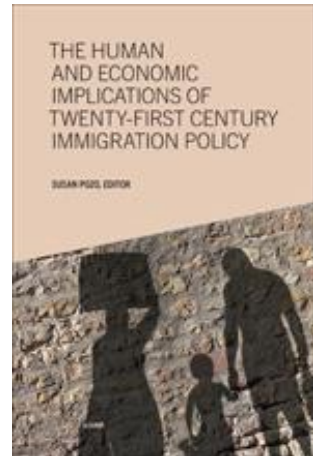
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# The Economic and Fiscal Effects of Immigration Implications for Policy

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*Editor*

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# 2

## The Economic and Fiscal Effects of Immigration

### Implications for Policy

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#### RECENT TRENDS IN IMMIGRATION AND ECONOMIC GROWTH

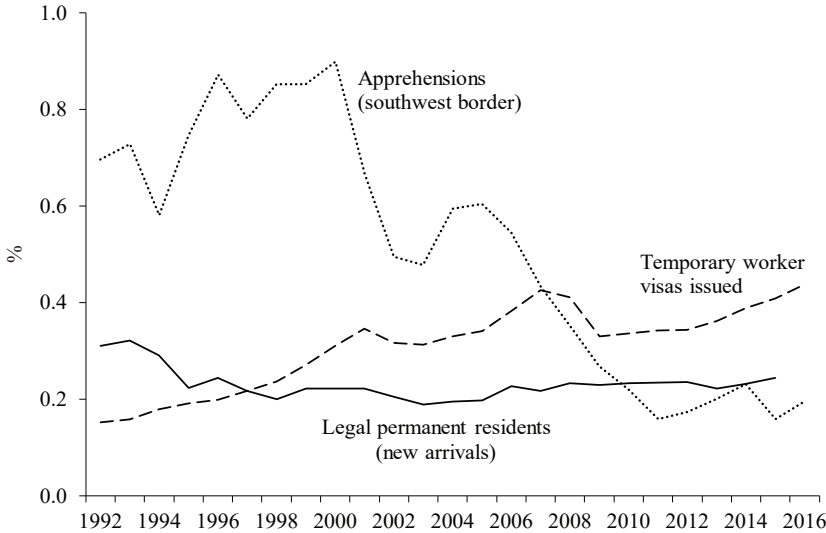
The United States is the world's largest economy and top migrant destination. U.S. GDP accounts for 25 percent of global output.<sup>1</sup> And although the United States makes up less than 5 percent of the world's population, it is home to 19 percent of the world's international migrants.<sup>2</sup> The U.S. foreign-born population increased rapidly between 1990 and 2010, rising from 19.8 million in 1990 to nearly 40 million in 2010, but growth since then has slowed.<sup>3</sup> The foreign born today number around 45 million, representing a little over 13 percent of the total population. And while it's true the United States takes in the most migrants, there are an increasing number of countries with higher migrant shares, such as Canada, at 22 percent, or Australia, at 28 percent. Even some Western European nations now have higher migrant shares than does the United States, including Germany and Sweden.

Immigration has contributed significantly to U.S. labor force growth. In fact, between 1995 and 2015, immigrants and their children accounted for more than half of labor force growth (National Academies of Science, Engineering and Math [NAS] 2016, p. 68). Given the contribution of immigration to employment growth, slowing immigration will slow future economic growth, particularly considering the quickening labor force exodus of the baby boomers.

Immigration to the United States is slowing, even as the economy continues to steadily grow. GDP growth has averaged about 2 percent since 2010, job growth 1.8 percent, and the unemployment rate has fallen to well below 5 percent, a rate most economists would consider to be below the NAIRU (nonaccelerating inflation rate of unemployment). Wages have begun to increase in real terms on average (if not in every group) and in certain regions more than others. In past decades, this relatively robust labor market would have attracted more immigration, both legal and illegal, but migration trends have remained modest by recent historical standards (see Figure 2.1).

The decline in illegal immigration, as measured by Border Patrol apprehensions along the U.S.-Mexico border, is by far the most pronounced change. Apprehensions today are around 400,000 per year, levels last observed in the 1970s, when the U.S. economy was about one-third its current size. The decline in inflows has resulted in a shrink-

**Figure 2.1 Migrant Inflows as a Percent of Working-Age Population**



NOTE: Working-age population is 16–64.  
 SOURCE: U.S. Department of State, *Report of the Visa Office*, various years; U.S. Department of Homeland Security, *Yearbook of Immigration Statistics*, various years; U.S. Customs and Border Protection; U.S. Census Bureau.

ing of the unauthorized immigrant population, which peaked in 2007 at 12 million but estimates suggest was down to 11.3 million by 2016 (Krogstad, Passel, and Cohn 2017).

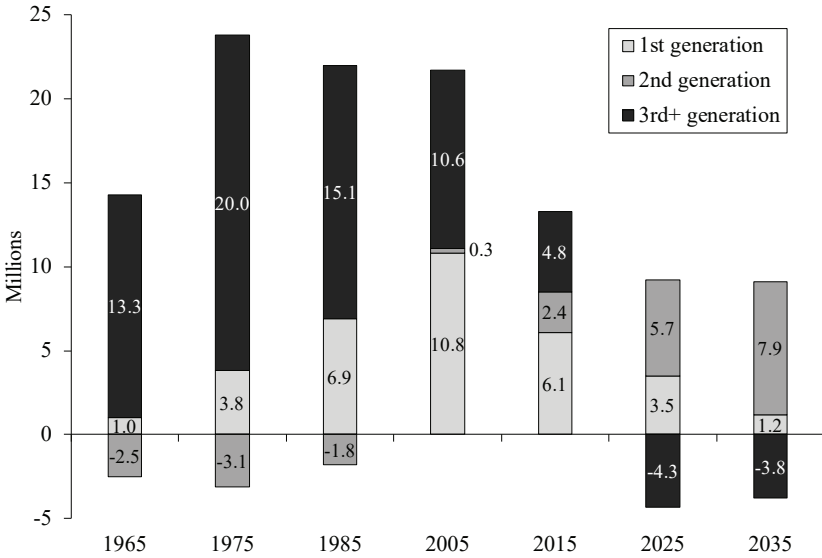
Inflows of legal immigrants have been more stable. New arrivals of legal permanent residents, which include family, humanitarian, and employment-based green cards, have been flat around 480,000 per year since 2010. Temporary worker visas, which declined during the Great Recession, have picked up some since 2013. Increases have been mostly in the uncapped visa programs, which include agricultural workers (H-2A) and NAFTA professionals (TN). A special provision exempting returning seasonal nonagricultural workers (H-2B) from the cap also resulted in a large increase in those visas (although that exemption was rescinded in 2016). It is very likely that the decline in illegal immigration has compelled employers to make more use of visa programs for low-skilled workers.

There is no reason to expect that the relationship between economic growth and immigration should remain constant. In fact, this relationship is likely changing along several dimensions, some of which can be addressed by public policy. Production of both goods and services is becoming less labor intensive as technology makes further inroads into the U.S. workplace. Consumption patterns are also changing. Fewer workers may be needed in the future, at least relative to economic output. However, there are also forces acting in the opposite direction, such as the aging of the U.S. labor force with the retirement of the baby boomers. The United States is currently in its most significant period of aging in history. As Figure 2.2 shows, the U.S.-born labor force, not including children of immigrants, is projected to decline by 8.2 million workers over the next two decades (2015–2035). Immigrants—first generation—and to a larger extent their children—the second generation—will make up all the growth in the labor force over this period. Hence, less immigration will mean slower labor force growth.

## **IMMIGRANTS IN THE U.S. LABOR MARKET**

The foreign-born share of the population is a little over 13 percent, as noted above, but immigrants are overrepresented in the labor force,

**Figure 2.2 Net Change in Working-Age Population (25–64), by Generation for Each Decade**

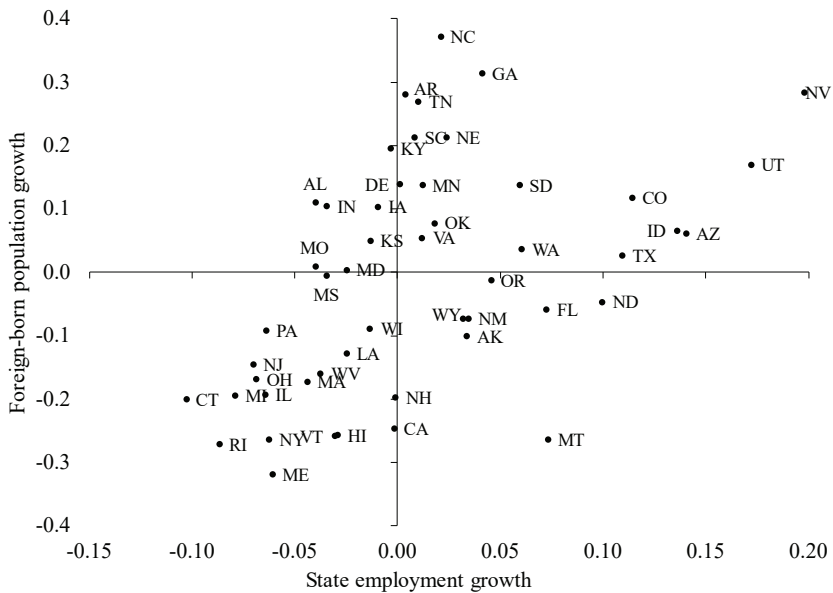


NOTE: Data for 2015 onward are projections.  
 SOURCE: Pew Research Center.

where they make up over 17 percent of all U.S. workers. Immigrants are more likely to work than natives primarily because they tend to be of prime working age. Nearly 60 percent of immigrants are between the ages of 25 and 54, compared with fewer than 40 percent of U.S. natives.<sup>4</sup> It bears noting that U.S. immigration policy, labor market regulation, and the lack of worksite enforcement of immigration laws are effective in encouraging that immigrants work or, at a minimum, requiring that they be self-sufficient. This is most obvious among male unauthorized immigrants who are not allowed to work yet have the highest labor force participation rates of any immigrant (or native) group (see Passel and Cohn [2016]).

Furthermore, immigrants are not randomly sprinkled across occupations, industries, or regions, but tend to flow into the areas where they are most in demand. The relationship between immigration and regional growth is apparent in Figure 2.3, which plots relative state growth in the

**Figure 2.3 Growth in Foreign-Born Population and Employment, by State**



NOTE: Coordinates indicate deviation from median foreign-born population growth (vertical axis) and from median state nonfarm payroll growth (horizontal axis) from 1990 to 2016.  
 SOURCE: U.S. Census Bureau; 2016 American Community Survey; Bureau of Labor Statistics.

foreign-born population along the vertical axis and job growth by state along the horizontal axis, both for the 1990–2016 period. States that have experienced the fastest employment growth have had the highest relative growth in foreign-born population; these are the states in the top right quadrant and include Southern and Mountain West states. States in the lower left quadrant have had below-average job growth and immigration and include many states in the Northeast and Midwest. There are relatively few states in the top left and bottom right quadrants because growth and immigration are typically positively—not negatively—correlated.

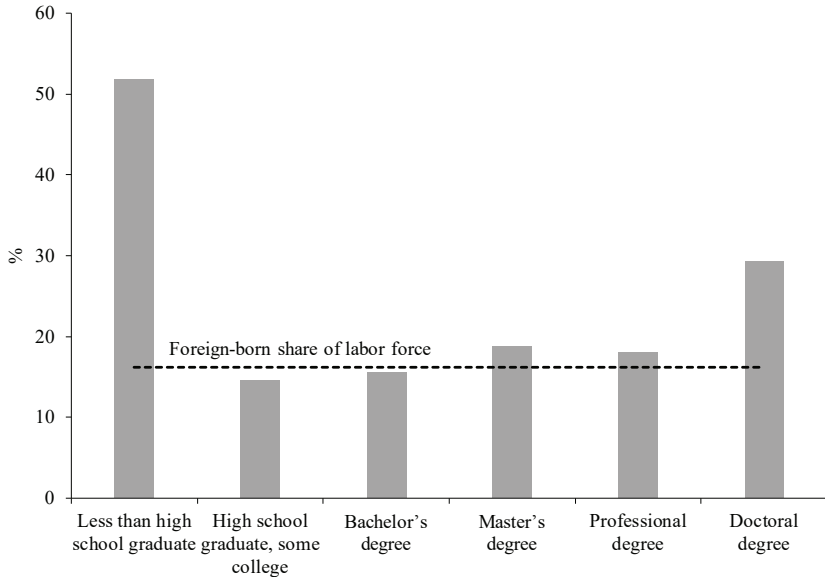
The tendency of immigrants to flow where demand is growing is one of the most important economic benefits of immigration. Several effects follow: resources are reallocated from slowing to growing



regions, which improves the allocation of workers, speeds up overall growth, and lowers the national unemployment rate. Monetary policy-makers have noted how this particular aspect of immigration increases the speed limit of the economy since growing regions are less likely to overheat, reducing the likelihood of excessive wage pressure and ensuing monetary policy action.

Immigrants also flow into occupations and industries where there is a relative need. Historically, this has been at the low and high ends of the education distribution, where U.S. workers are relatively scarce. Figure 2.4 shows that the disproportionate inflow of low-education immigrants, many of them arriving as undocumented immigrants from Mexico and Central America, has resulted in immigrants making up over half of the low-skilled labor force, those with less than a high school diploma. Immigrants are also overrepresented among workers with very high levels of education, including master's (18.8 percent),

**Figure 2.4 Share of Foreign-Born Workers in the U.S. Labor Force, by Education**



NOTE: Percent of foreign workers aged 25 and over in the U.S. labor force by education. SOURCE: 2015 American Community Survey.

professional (18.1 percent), and PhD degrees (29.4 percent). There are relatively fewer immigrants in the categories where natives are concentrated, namely among workers with a high school diploma and some college and among those with a bachelor's degree.

It's not surprising to find immigrants at the bottom and top of the education distribution of workers. After all, nearly 30 percent of immigrants lack a high school degree or equivalent, compared with just under 10 percent of U.S. natives.<sup>5</sup> Immigrants are also slightly more likely to hold a graduate or professional degree, about 12 percent versus 11 percent of U.S. natives.

Unauthorized immigration has boosted the share of less-educated immigrants. Nearly half of unauthorized adults aged 25–64 lack a high school diploma (Passel and Cohn 2009). Commensurate with their relatively low educational attainment, immigrants are concentrated in low-skilled occupations such as housekeeping, farm work, food preparation, construction, and groundskeeping.

Top jobs for highly educated immigrants include STEM (science, technology, engineering, and math) and health care occupations; the high-skilled occupations with the highest share of immigrants include computer software developers, medical scientists, engineers, registered nurses, subject instructors, computer systems analysts, and dentists and physicians.

On both ends of the skill distribution, immigrants are disproportionately found in occupations and industries that have grown quickly or that U.S. natives have exited or eschewed. For example, there are stark differences when one compares the college majors of U.S.-born college-educated workers with those of immigrants. Almost half of such immigrants have a STEM major compared to 28 percent of natives (see Peri, Shih, and Sparber [2014]).

## **IMMIGRATION'S ECONOMIC IMPACT**

The effects of immigration are similar to those of international trade. There are net economic gains from immigration (trade) that accrue to natives. The controversial aspect of immigration (trade) is not the overall benefits, but who gets them. Opening up the economy to these addi-

tional workers (goods in the case of trade) creates winners and losers among the native population, at least in the short run.

Immigration's first-order effect is to increase the labor force and, thus, economic output. As long as immigrants differ from natives, there can be additional benefits or second-order effects, such as greater efficiency and factor mobility. Immigration can also affect productivity growth. High-skilled immigration in the STEM fields is associated with innovation, which drives productivity growth.

Regarding the specifics, labor in-migration shifts out the labor supply curve, which increases total output, or gross domestic product (GDP). Most of the gain in GDP accrues to immigrant workers in the form of labor earnings, but the fall in the cost of labor also raises the return to capital. Owners of capital, who tend to be natives, get a wind-fall gain, whether they are business owners, landowners, or shareholders. Consumers also benefit from the lower prices and the specialization in production that may occur. The distribution of the gains is uneven, however, with owners of capital and complementary workers typically benefiting, while substitutable workers who compete directly with immigrants lose out.

Estimates of the immigration-induced increase in GDP that accrues to natives, also referred to as the "immigration surplus," are typically based on simulations or back-of-the-envelope calculations using labor's share of national income, the size of the foreign-born workforce, and the responsiveness of labor demand to changes in wages (Borjas 1995). In a standard competitive model, the immigration surplus is between 0.2 and 0.4 percent of U.S. GDP. In any case, a plausible range under standard assumptions and in a \$19 trillion economy may be \$40–\$80 billion per year in income gains to natives from immigration.

The immigration surplus, natives' income gains from immigration, is larger when skill levels of immigrants differ from those of natives. If immigrants' skills are complementary to those of most natives, then the immigration surplus is larger than it would be if immigrants and natives were close substitutes (Borjas 1995). In fact, if immigrants and natives are exactly alike, then income per capita does not change at all in response to immigration and the immigration surplus is zero. If skilled immigrants are complementary to capital, as the literature suggests, then the immigration surplus is larger with high-skilled rather

than low-skilled immigration, regardless of the skill composition of the native workforce.

High-skilled immigration has an additional benefit: there is mounting evidence that such immigration, by contributing to growth in the STEM occupations, is contributing directly to productivity growth. In the long run, increases in output per capita come from productivity growth, which is a result of technological progress. More recent work in macroeconomics has suggested that this technological progress is endogenous, stemming from investment in research and development, which generates innovations that permanently raise productivity (see Aghion and Howitt [1992] and Romer [1990]). Drinkwater et al. (2007) show that adding high-skilled immigration to an endogenous growth model substantially increases innovation, boosts the immigration surplus, and leads to a higher long-term growth rate. Jones (2002) estimates that 50 percent of total factor productivity growth between 1990 and 2010 came from the increase in the science and engineering workforce. Since immigrants made up 80 percent of that workforce growth, some economists argue that STEM immigrants accounted for as much as 40 percent of productivity growth during this time period (Peri, Shih, and Sparber 2014).

There is additional evidence that supports the correlation between high-skilled immigration and innovation. For example, Hunt and Gauthier-Lauselle (2010) find that immigrants patent new products at double the rate of U.S. natives, a difference explained by immigrants' overrepresentation in STEM occupations. They also find some evidence of positive spillovers on patenting among U.S. natives. In related work, Hunt (2011) demonstrates that these STEM immigrants are primarily entering on temporary work-based visas and student visas. Kerr and Lincoln (2010) also find that these visas play a key role by demonstrating that increases in H-1B visas (temporary skilled worker visas) significantly raise patent activity by immigrants, without reducing patenting among natives.

Immigrants also appear to be more entrepreneurial than U.S. natives. They are more likely to own a business; typically, the difference is about one or two percentage points with regard to the fraction of immigrants who are self-employed. Foreign-born business owners make up 18.2 percent of all business owners, which is greater than the immigrant

share of the labor force (Fairlie and Lofstrom 2014). Immigrants are particularly overrepresented among new business owners, making up a quarter of business startups. Immigrants' entrepreneurial activities are likely a net benefit for the economy, but they may also reflect the lack of opportunities some immigrants face in the labor market. Moreover, while immigrants are more likely to start a business, immigrant-owned businesses are also more likely to fail than native-owned businesses.

### **Labor Market Effects**

According to standard economic theory, immigrant inflows should have a negative effect on the wages and employment of existing workers, at least in the short run. Despite that clear prediction and the massive immigrant inflows that the United States has experienced since the 1970s, most empirical evidence on the wage and employment effects of immigration suggests that immigration has had either no effect or just a small adverse effect on natives' labor market outcomes (see NAS [2016]). Negative effects are not found on native workers overall, but for subgroups of workers, typically high school dropouts and prior low-skilled immigrants. There is little evidence of significant negative effects on medium- and high-skilled natives' wages.

The magnitude of the wage and employment effects on natives depends on how substitutable immigrants are for native workers. Natives whose skills are complementary to those of immigrants may see increases in their wages and employment from immigration, while natives with substitutable skills are most likely to lose. The brunt of the negative labor market impact falls on earlier immigrants, not natives, because they are most similar to new immigrants and hence compete most closely with them.

Why doesn't immigration have a more negative effect on natives? First, the number of low-skilled workers in the United States has been on the decline for several decades. There are, in a sense, fewer native workers that compete directly with low-skilled immigrants. Second, the economy—including its workers—is constantly adapting to the forces that shape economic activity. When the cost of labor falls, firms will use more labor. In other words, immigration affects the factor mix that is used by firms to produce output. Immigration can also affect the output mix; firms may begin to produce goods or services that are more labor intensive.

The decline in the cost of labor also raises the relative return to capital, as noted above, so immigration should spur investment and inflows of capital. Immigrants also tend to move to booming areas that otherwise might experience labor shortages, relieving growth bottlenecks. Natives and other immigrants may also move or change occupations or industries in response to immigration, making adverse wage and employment effects difficult to measure. And immigrants are themselves consumers and create jobs via their own effect on aggregate demand. Last but not least, certain immigrants also create jobs via their entrepreneurial activities and innovation, as discussed above.

## IMMIGRATION'S FISCAL IMPACT

Apart from immigration's direct economic and labor market impacts, it has a fiscal impact—the difference between what immigrant families pay in taxes and what they consume in government-provided benefits.<sup>6</sup>

Immigrants, much like natives, contribute taxes in several ways: they pay taxes on earnings, including income and payroll taxes, purchases (sales taxes), housing (property taxes), motor vehicles (registration fees), and so on. Similar to natives, immigrants typically also consume at least some government-provided services, which may include public schools for their children, subsidized health care in the form of Medicaid and/or Medicare, income support programs such as the Earned Income Tax Credit, and welfare programs such as Temporary Assistance for Needy Families (TANF) or the Women and Infant Children (WIC) program, and Social Security. It bears noting that unauthorized immigrants are not eligible for most welfare programs, including TANF, and there are restrictions on the eligibility of some legal immigrants as well. Immigrants also rely on publicly provided services such as police and fire protection.

The characteristics of immigrants, such as their age, earnings, and family size, will be key to determining how much they fiscally contribute and receive. The progressivity of the tax system and the generosity of public programs will also play a role. Tax and benefit systems, as well as the characteristics of immigrants, vary greatly across states, which

suggests the fiscal impacts of immigration may also be different across states.<sup>7</sup>

Other considerations are also key to determining fiscal effects, particularly the time horizon over which revenues and expenditures are measured. Cross-sectional or static short-run estimates look at individuals (or households) at a point in time. While this is a transparent method, it ignores the crucial role played by age and time in the United States. Dynamic or long-run estimates are much more representative of an immigrant's complete fiscal impact because tax contributions and government benefits are typically measured over an entire lifetime and will include the contributions of descendants. The downside to dynamic estimates, however, is that projecting income and benefits into the future requires making many assumptions. The 2016 National Academies of Science (NAS) report presents both static (short-run) and dynamic (long-run) estimates.<sup>8</sup>

### **Past Estimates of Immigration's Fiscal Impact**

Before the 2016 NAS report, most scholars cited the fiscal estimates in the National Research Council report, *The New Americans: Economic, Demographic and Fiscal Effects of Immigration* (1997). The report finds that, over their lifetimes, low-educated immigrants, those with a high school diploma or less, impose a net fiscal cost while high-educated immigrants, those with a college degree or higher, represent a net fiscal benefit.<sup>9</sup> Using a similar dynamic methodology, Lee and Miller (2000) find that the initial fiscal impact of immigrants and their households is negative due to their low initial earnings and the costs of schooling their children. However, after about 16 years, the impact of a representative immigrant turns positive.

Another finding in the 1997 NRC report, which was later reinforced by updated analysis in Lee and Miller (2000), shows that immigration's fiscal impact is typically negative at the state and local level but positive at the federal government level. A key reason is that state and local governments bear the bulk of education costs, which immigrants disproportionately incur because they have more children and lower education and incomes than natives.

## New Fiscal Estimates of Immigration: Static and Dynamic

The cross-sectional fiscal impact estimates from the 2016 NAS report are shown in Table 2.1, which replicates two scenarios from the 2016 report—namely, one in which immigrants are assigned the average cost of public goods (top rows), and another in which immigrants are assigned the marginal cost of public goods (bottom rows).<sup>10</sup> Public goods include the cost of national defense, interest on the national debt, and foreign aid, among other shared expenses.<sup>11</sup> The columns reflect three groups: immigrants and their minor children or ‘dependents’ (“first generation”), the adult children of immigrants and their dependents (“second generation”), and other U.S.-born adults and their dependents (“third generation”).<sup>12</sup> This methodology assigns parents the education expenses of their children; in the case of immigrants, the returns to this investment in education (which mainly take the form of higher tax payments resulting from higher earnings) is thus attributed to the second generation. The rows in Table 2.1 also break the total effect into fiscal impacts at the federal versus state and local government level.

**Table 2.1 Net Per Capita Fiscal Impacts of First, Second, and Third-plus Generations in 2013, by Public Goods Scenario and Level of Government**

	1st generation with dependents		2nd generation with dependents		3rd generation with dependents	
	Receipts – outlays (\$)	Fiscal gap (%)	Receipts – outlays (\$)	Fiscal gap (%)	Receipts – outlays (\$)	Fiscal gap (%)
Scenario 1: Immigrants assigned average cost of public goods						
Federal	–2,650	27.1	–3,598	27.5	–2,577	21.4
State and local	–2,372	38.6	–1,062	17.4	–1,031	17.7
Total	–5,021	31.6	–4,660	24.3	–3,608	20.2
Scenario 2: Immigrants assigned marginal cost of public goods						
Federal	963	–15.7	–4,239	30.9	–3,218	25.4
State and local	–1,746	31.7	–1,177	18.9	–1,146	19.2
Total	–782	6.7	–5,415	27.1	–4,364	23.4

SOURCE: Cross-sectional fiscal estimates based on NAS (2016, Table 8-2). Fiscal gap is defined as 1 minus receipts/outlays. Scenario 2 corresponds to scenario 5 in the NAS report.



It is notable that, with one exception, every generation, immigrant and native, at every level of government, consumes more in public benefits than it contributes in taxes. Because the nation is running a sizable deficit, the entire public represents a net cost on average. Fiscal impacts are negative in every case except immigrants in the second scenario at the federal level. In the “Total” row, the fiscal gap in funding varies from a low of 6.7 percent for the first generation to a high of 31.6 percent, also for the first generation.

The assumption about how to assign the costs of public goods makes a big difference in evaluating the fiscal impact of immigrants. Although the 2016 NAS report does not indicate a preferred or baseline specification, the marginal cost assumption is clearly the most relevant for future policy decisions because it represents the incremental effect of immigrants on public goods spending.

It is clear from Table 2.1 that the fiscal funding gap for immigrants is most acute at the state and local government level. As noted above, this is primarily due to the costs of public education; immigrant families in the United States have more children than do native families, which drives up their costs at the state and local levels relative to non-immigrants. The offset, the higher incomes and tax contributions of their children, is attributed to the second generation. Immigrants’ lower incomes also mean they pay less in taxes on average than natives.

As discussed above, cross-sectional or static fiscal estimates like those presented in Table 2.1 are inherently limited by several shortcomings, including not controlling for differences in age between the foreign born and native-born populations at a point in time, and hence should be used with great caution. Long-run or lifetime estimates are preferred when, for example, evaluating fiscal impacts to formulate immigration policy. The 2016 NAS report’s long-run fiscal estimates are presented in Table 2.2 and broken down for two sets of immigrants—those who arrived recently (in the last five years) and all immigrants. We again show the fiscal impact with and without assigning immigrants the cost of public goods. The top row is the weighted average of the remaining rows, which show fiscal impacts by education levels of immigrants and their dependents. Education level is a key determinant of income, so it will be an effective predictor of fiscal impact.

Table 2.2 shows that in dynamic, long-run scenarios, the present value of the net fiscal impact of immigration is typically positive and

**Table 2.2 Dynamic 75-Year Per Capita Net Fiscal Impacts for Recent and All Immigrants, by Public Goods Scenario and Education Level (000s of 2012 \$)**

Education level	Recent immigrants <sup>a</sup>		All immigrants	
	No public goods	Public goods	No public goods	Public goods
Average	259	173	58	-5
Less than high school	117	-200	-196	-259
High school degree	49	-33	-47	-109
Some college	261	170	99	34
College degree	481	395	280	216
More than college degree	812	726	547	485

<sup>a</sup> Arrived in the past five years.

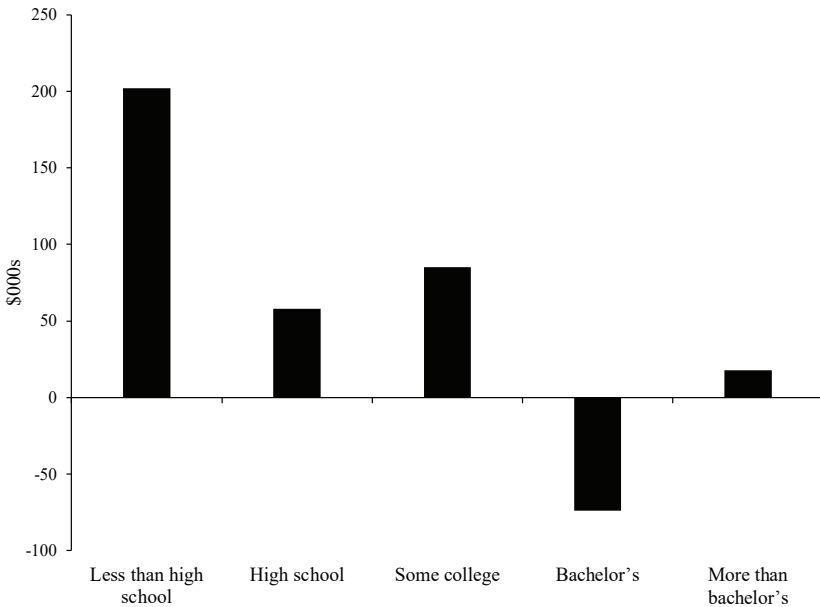
NOTE: Forecast is based on the CBO long-term budget outlook. Includes taxes and expenditures at the federal, state, and local levels for an individual and his dependents.

SOURCE: NAS (2016, Table 8-12).

can be quite large. If we assume that an additional immigrant does not increase spending on public goods, which is a reasonable assumption, a new immigrant represents a positive fiscal contribution with a net present value of \$259,000. A recent immigrant has a much larger positive fiscal impact than does an immigrant who reflects the characteristics of the population of all immigrants (\$58,000). The difference is because the stock of all immigrants has, on average, less education and is older than recent immigrants. The rise over time in education levels among U.S. immigrants partly reflects the rise in employment-based immigration in the post-1990 era and the more recent decline in low-skilled immigration.

Some of the estimates are astounding. A representative recent immigrant with more than a college degree contributes over \$800,000 to government coffers on net over a 75-year period. In contrast, a typical recent immigrant who lacks a high school diploma represents a net cost of about \$117,000 dollars. Interestingly, this net cost does not reflect disproportionate outlays as compared with similar natives. Figure 2.5 shows the difference in net fiscal 75-year impacts of immigrants versus natives by education level. Although low-skilled immigrants impose a net fiscal cost, apparent in Table 2.2, the net fiscal cost of natives of similar education is far larger. For example, the difference is on the

**Figure 2.5 Immigrant-Native Difference in 75-Year Dynamic Net Fiscal Impact, by Education Level**



NOTE: Estimates assume no public goods are included in benefits.

SOURCE: NAS (2016, Table 8-13).

order of \$200,000 less in fiscal cost of an immigrant who lacks a high school diploma versus a high school dropout native. The only education category where immigrants impose a smaller (in this case, less positive) fiscal benefit than natives is among those with bachelor's degrees.

**Summary of Fiscal Impacts**

New estimates of the fiscal impact of immigration reflect some of what was already known while also highlighting some important new findings. Cross-sectional estimates based on 2013 CPS data suggest that immigrants represent a net fiscal drain on average. However, so does everyone else, including natives. When immigrants are assigned the marginal cost of public goods, their fiscal impact is significantly less negative than that of natives. Immigrants' tax contributions cover 93 percent of their publicly provided benefits, while natives' contri-

butions cover only 77 percent of theirs. The dreary overall fiscal scenario is due to large public deficits and high national debt—problems that were much less pronounced in the 1997 report. In addition, natives have grown more costly over time because they have become an older population; their health costs impose a disproportionate burden on the federal government because it pays for Medicare and subsidizes related expenses such as nursing homes. Meanwhile, immigrants are more costly than natives at the state and local levels because they have lower incomes and more minor children; this means immigrants are particularly burdensome to state and local governments, which pay for public schools.

The long-run, dynamic estimates of immigration's fiscal impact are both far more positive and arguably more relevant, at least from a policy perspective. Recent immigrants represent a large fiscal boon because they are projected to pay much more in taxes than they use in benefits over the next 75 years. Even low-skilled immigrants, those without any college education, while they impose a net long-run cost, are far less costly than similarly educated natives.

The overall results of the 2016 NAS report suggest that the rise of high-skilled immigration and more recent decline in low-skilled immigration is resolving some of the most pressing concerns around immigration's fiscal impact. Since present trends are likely to continue and possibly intensify in future immigration flows, immigration may increasingly be seen as a fiscal boon rather than a burden. Immigration may even play a part in future plans to address the nation's looming fiscal shortfalls.

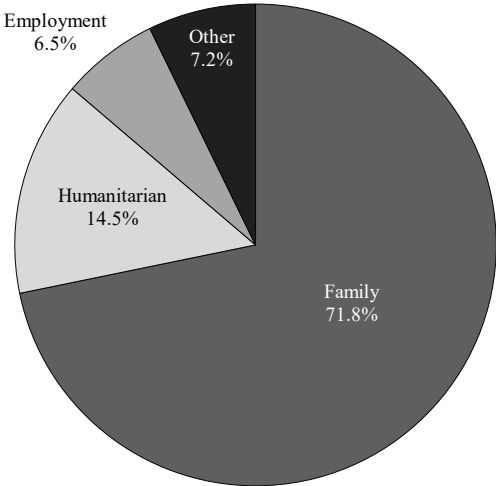
## **IMMIGRATION POLICY**

Nations use immigration policy to meet many objectives, including economic, humanitarian, political, cultural, and national security. The United States has a multifaceted immigration policy that engenders some of each of these, although it is principally a family reunification policy. Most permanent resident visas (green cards) are designated for family members of U.S. citizens, many of whom are immigrants themselves. Immediate family members of U.S. citizens include parents,

spouses, and unmarried children, and they enter without limit. Other family members, employment-based immigrants, diversity immigrants, and refugees and asylum seekers are all subject to annual caps, which are typically exhausted every year.<sup>13</sup> After five years on a green card, permanent residents can naturalize. Once citizens, they too can sponsor their foreign-born relatives, a process that is sometimes referred to as *chain migration*.

Under this system, the United States annually issues about 1.1 million green cards. About 94 percent are to family members of U.S. citizens or permanent legal residents, people seeking humanitarian refuge, and diversity immigrants (Figure 2.6). The remaining 6 percent are to people who are immigrating for employment, most of whom are high-skilled. As can be seen in Table 2.3, no other major developed economy places such a low priority on permanent employment-based immigration.

**Figure 2.6 Allocation of Permanent Resident Visas, by Category**



NOTE: Work includes free-movement migrants. Family includes accompanying family of workers. Data refer to 2015.  
SOURCE: OECD (2017).

**Table 2.3 Permanent Visas, by Category and Country**

Country	Total number (000s)	Work (%)	Family (%)	Humanitarian (%)	Other (%)
United States	1,051	6.5	71.8	14.5	7.2
Switzerland	131	76.5	16.0	5.4	2.1
United Kingdom	379	75.9	13.0	4.8	6.3
Spain	195	72.7	20.3	0.5	6.5
Germany	686	66.2	12.0	20.9	0.9
Netherlands	147	57.6	14.3	28.1	0.0
Italy	161	48.2	30.2	18.4	3.1
France	256	44.4	40.4	6.5	8.7
Australia	226	36.6	57.2	6.1	0.1
Canada	272	28.2	58.6	13.2	0.0

NOTE: Only includes OECD countries. Work includes free-movement migrants. Family includes accompanying family of workers. Data refer to 2015.

SOURCE: OECD (2017).

### Temporary Worker Programs

The United States has several temporary visa programs that help make up for the low number of hard-to-get employment-based green cards. The best known of these is the H-1B program, which brings in over 100,000 high-skilled workers in a typical year, many of them computer programmers from India and many others foreign-born STEM graduates from U.S. universities. The private sector faces a cap on H-1B visas of 85,000 each year, while there is no limit on nonprofit institutions. The number of H-1B applications outstrips supply every year.

Another important temporary job-based visa is the Trade NAFTA (TN) visa, which admits an additional 70,000-plus professionals, mostly from Canada but a growing number from Mexico. The L-1 program is for intracompany transferees (uncapped, with about 75,000 annually), and the O-1 program provides temporary visas for a small number of workers of “extraordinary ability.”

The growth in temporary job-based visas has not led to any increases in the green card caps. As a result, there is a growing mismatch between the number of immigrants on temporary visas who wish to stay permanently in the United States and the number of available permanent resi-

dence visas. Although it is impossible to know how many temporary visa holders are in the green card queue, one study estimates that nearly 1.1 million people were waiting for an employment-based green card in fiscal year 2006 (Jasso et al. 2010). It is likely that many more would have applied if permanent visas were available. For those in the queue, green cards typically won't be available for many years because of the numerical limits on work-based permanent visas. Country-of-origin limits further restrict the number of visas that can go to immigrants from populous nations such as India and China.

Low-skilled workers face even longer odds. There are two temporary visa programs designed for low-skilled workers—the H-2A (for farm workers) and H-2B (other seasonal workers) programs. Both are only for work that lasts less than one year. H-2A visas are not capped and have grown considerably in recent years. H-2B visas have an annual cap of 66,000.

### **Illegal Immigration**

Employers' usage of temporary visas has increased notably as illegal immigration has tapered off. This is encouraging in that it suggests employers will hire legal workers if that option exists and unauthorized workers are hard to find. And they are increasingly scarce. Estimates suggest the unauthorized immigrant population peaked in 2007 and has since declined from 12 to 11.3 million (Krogstad, Passel, and Cohn 2017). The Great Recession and accompanying housing bust and financial crisis may well have been the end of mass illegal immigration to the United States, at least from Mexico. Illegal immigration from Mexico never recovered from the Great Recession, and heightened enforcement is likely the reason why. Since the early 2000s, both federal and state governments have significantly tightened both border and interior enforcement and increased penalties.

In addition to more border fencing, border patrol agents, and stiffer penalties for apprehended migrants, the United States has also implemented more interior enforcement. In the wake of the 9/11 attacks, the Bush administration required that federal contractors and subcontractors participate in E-Verify, created the 287(g) program that trained state and local police to enforce federal immigration law, and launched Secure Communities, a program that checks whether

immigrants in police custody are deportable. Although the Obama administration rolled back many of these programs, the Trump administration has been bringing them back, and many states have implemented their own laws in the meantime. The consequences for unauthorized immigrants are apparent not just in reduced inflows, but also in worse labor market outcomes. Research suggests that the tougher enforcement climate after 9/11 led to a decline in employment and earnings among Hispanic immigrants likely to be unauthorized (Orrenius and Zavodny 2009). Worksite enforcement and other measures likely forced some undocumented immigrants into self-employment or the shadow economy, where wages are lower and fringe benefits are rare.

## IMMIGRATION POLICY REFORM

In implementing immigration reform, policymakers might consider three conclusions from this chapter: 1) there are net economic benefits to natives from immigration, so there should be immigration; 2) high-skilled and employment-based immigration is particularly beneficial, with potential to increase productivity growth and contribute positively to the fiscal balance; and 3) the United States is entering two decades in which the native labor force will shrink as the baby boomers retire. Implementing immigration reform will help offset this drag on labor force expansion and safeguard economic growth.

By following these basic principles, immigration policy could be used to advance the nation's economic and fiscal interests. The current system does not do this as well as it could because it prioritizes family reunification over work-based migration and strictly limits high-skilled immigration. The focus on family-based immigration serves the interests of earlier immigrants and only a small minority of U.S. natives. Since immigrants are already the biggest beneficiaries of immigration, it doesn't make sense to confer additional benefits on them through a system that is overwhelmingly family-based.

A good way to shift the immigration system toward employment-based immigration is to adopt an auction-based system that admits work-based immigrants and redistributes the auction revenue to natives.



In such a system, the federal government would regularly auction off permits to employers that allow them to hire highly skilled foreign workers, who would then receive visas. Visas would be portable across employers to facilitate worker mobility, and employers would be able to resell permits they no longer need (see Orrenius and Zavodny [2010] for more details). The auctions could be extended to include low-skilled and seasonal workers.

An auction-based system would have a number of advantages. Its emphasis on market forces would allocate visas to the workers most desired by employers, as measured by permit auction prices, rather than on the basis of how long someone has been standing in line or the random luck of winning a visa lottery. This emphasis on market forces is better than a point system in which bureaucrats determine how points, and hence visas, are allocated, as has historically been the case in Australia and Canada and has been recently proposed in the United States. Such systems tend to attract highly educated immigrants but not those with the best labor market prospects.

The United States also needs a legalization program to regularize the status of the more than 11 million unauthorized population. A legalization program has the benefit of boosting newly authorized immigrants' earnings, primarily because they are better able to move into higher-paying occupations instead of being trapped in just a few sectors of the economy. It also boosts tax revenues as newly authorized immigrants earn more and move out of the underground economy. The children of newly authorized immigrants are perhaps the biggest beneficiaries. Research indicates that children's educational outcomes improve when their parents obtain legal status (Bean et al. 2011). Children who are able to legalize their own status are more likely to go to college.

Of course, a major concern regarding a legalization program is whether it spurs additional unauthorized immigration. The U.S. experience suggests that increases in border enforcement are unlikely to reduce illegal immigration to publicly palatable levels. Looking to the future, minimizing unauthorized inflows will require creating a way for employers to bring in more foreign workers whose skills are aligned with employers' needs. Auctions would do this. Requiring employers to verify virtually all workers' legal status in an easy, fast, low-cost, and foolproof manner—as with the E-Verify system—is also necessary.

## Notes

The views expressed here are solely those of the authors and do not reflect those of the Federal Reserve Bank of Dallas or the Federal Reserve System.

1. Source is IMF in current dollars; PPP-adjusted U.S. GDP accounts for 15.5 percent of world output.
2. The United Nations estimates the world migrant stock was 243.5 million in 2015. See <http://www.pewglobal.org/interactives/migration-tables/> (accessed June 21, 2017). The UNDP estimates there are 50 million migrants worldwide with irregular status. See [http://hdr.undp.org/sites/default/files/2016\\_human\\_development\\_report.pdf](http://hdr.undp.org/sites/default/files/2016_human_development_report.pdf) (accessed June 21, 2017).
3. We use the terms *immigrant* and *foreign-born* interchangeably in this chapter to refer to all individuals residing in the United States who were born abroad to non-U.S. parents. Immigrants thus include unauthorized immigrants, temporary and permanent resident visa holders, and naturalized citizens.
4. Authors' calculations based on 2015 American Community Survey one-year estimates.
5. 2015 American Community Survey one-year estimates.
6. The fiscal impact section is based extensively on NAS (2016) and Orrenius (2017), a version of which is also forthcoming in Spanish in *Coyuntura Demográfica*, available at <http://www.somede.org/coyuntura-demografica/> (accessed March 15, 2018).
7. Chapter 9 of the 2016 NAS report presents estimates of the fiscal impact by state.
8. See Chapter 7 of the 2016 NAS report for a detailed discussion of the two methods and related assumptions.
9. Immigrants with less than a high school education were found to cost \$89,000 more (based on 1996 estimates) than they contribute in taxes over their lifetimes, whereas immigrants with more than a high school education were found to contribute \$105,000 more in taxes than they use in public services.
10. Tax contributions and benefits receipts are based on data from the March 2013 CPS.
11. Public goods, defined in this way, accounted for one-third of total federal spending in 2013.
12. Some immigrants' dependents are U.S.-born; in addition, some young adults who are students with very low incomes are also included as dependents.
13. Refugee admissions are capped each year, but there is no limit on green cards for refugees or asylees.

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