Ready to Work

Understanding Immigrant Skills in the United States to Build a Competitive Labor Force

Rob Paral

JANUARY 2018

THE CHICAGO COUNCIL ON GLOBAL AFFAIRS

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EXECUTIVE SUMMARY

Investing in human capital—workers' education and skills—is key to building a productive workforce, supporting innovation, and fostering economic growth. As the United States strives to build a workforce that will maintain its economic competitiveness in an increasingly global marketplace, the conversation about human capital must increasingly consider the unique characteristics of foreign-born workers, who currently represent one in every six workers.

This report details those unique attributes, including their sociodemographic characteristics, geographic distribution, and current education levels and training. To provide context, the analysis compares immigrant workers to categories of native-born workers.

The purpose of this analysis is to inform the labor field's broader conversations about policies and programs to maximize foreign-born workers' contributions to the US workforce. There are several core takeaways from this research:

- Immigrants are significant contributors to the US labor force. They currently represent 17 percent of workers. Many immigrants are in their prime working years, in contrast to an aging native-born workforce.
- Significant portions of immigrants and the native born are currently working in jobs for which they are educationally overqualified. But when immigrants are educationally overqualified they earn less than their native-born peers with similar skills in similar jobs.
- Foreign-born workers may benefit from greater access to additional education and training, particularly professional licenses and certificates. Post-secondary education and workforce development institutions will be most effective in reaching these workers with programs that are responsive to immigrant workers' unique characteristics.
- Findings should be evaluated against the evolving landscape of immigration policy, demographic change, and population shifts to most effectively inform future programs and investments. The US economy's future vitality depends on its ability to maximize the skills and talents of all workers—foreign born and native born alike.

INTRODUCTION

Many reasons exist for ensuring that workers in the United States—both native born and foreign born—possess the appropriate levels of skills, training, and education. The US economy is constantly evolving, and the skill sets and education levels that once served workers and employers are in a state of flux as new industries, technologies, methods, and markets develop. Planners and educators of decades past could hardly have foreseen, for example, the rise of the digital era. Even apart from the growing influence of information technology, workers in many industrial sectors including service, manufacturing, education, health, and social services are expected to perform and accomplish tasks that planners and analysts could not have forecasted just a few decades ago.

Widespread agreement in public policy literature shows that investing in human capital—workers' education and skills—is key to building a productive workforce, supporting innovation, and fostering economic growth.[1] Fully employed individuals are likely to earn more income, pay more taxes, consume more products and services, and make investments in the economy—all activities that create more jobs. Increasing human capital advances the use of technology, which increases demand for more-educated workers.[2] Thus it is important to accurately understand the current skills, training, and education of American workers to know where to invest resources for increasing postsecondary educational attainment.

A full examination of the skills and education of the American workforce must carefully consider the country's significant number of foreign-born workers. The United States is home to about 41 million immigrants, around 27.2 million of whom are active participants in the labor force (Table 1). While foreign-born persons represent just 13 percent of the total population, they make up 17 percent of the workforce—one in six workers in the United States.[3] Almost all growth in the US workforce over the next 40 years is expected to come from immigrants and their children.[4]

Building a strong economy means investing in education and training for foreign-born workers. This immigrant population is complex and multifaceted. For the purposes of this analysis, major groups of foreign-born workers include:

- Naturalized immigrants who have completed the process of becoming a US citizen.
- Legal permanent residents (LPRs) who have been granted authorization to permanently live and work in the United States.
- Undocumented immigrants who do not have authorization to work in the United States. These individuals either entered the United States illegally or entered legally but remained here past the terms of their temporary visas.

Important nuances exist within these groups: some of the immigrants with an LPR or naturalized status were originally admitted as refugees or asylees, for example. Some groups of undocumented immigrants, such as recipients of the Deferred Action for Childhood Arrivals (DACA), are authorized to work, though this may change under the current administration.[5]

Many institutions and policy makers across the nation are concerned about ensuring the overall US labor force is prepared to meet the demands of future jobs. The Georgetown Center on Education and the Workforce found that by 2020, two-thirds of all jobs will require postsecondary education and that higher educational attainment correlates with "overall better social, economic, and personal outcomes for citizens."[6]

Given the significant number of foreign-born workers that comprise the US labor force, understanding how they are currently positioned to contribute to the US workforce is key to informing future policy, programs, and philanthropic efforts to boost immigrants' skills and educational attainment.

This report describes the US foreign-born population in the labor force, detailing their unique characteristics related to their training and education, either current or prospective. The analysis compares immigrant workers with major native-born groups to provide context and examines distinct subpopulations of immigrants. It also offers an analysis of the implications of the data for the field, outlining recommended next steps to guide thinking on current and future policies and programs.

The analysis generated several key findings:

- **Immigrants are a significant portion of the US workforce.** More than 27 million immigrants are in the US labor force, and they represent 17 percent of all US workers. Large numbers of immigrants fall into each of the major legal status categories, including 12.7 million naturalized immigrants, 6.9 million legal LPRs, and 7.6 million undocumented immigrants.
- **Demographic and economic characteristics of immigrants make them a key part of the future US labor force.** Immigrant workers are relatively young, with 50 percent falling into the prime working-age category of 25 to 44 compared with 42 percent of native-born workers. Key groups, such as the naturalized and the undocumented, have high rates of labor force participation, at 65 percent for naturalized and 76 percent for undocumented, compared with 62 percent for native born.
- **Overall, immigrants are both more and less educated than their native-born peers.** Nearly half of the foreign-born workforce—48.9 percent—has a high school degree or less, compared with 33 percent of their native-born peers. At the same time, naturalized immigrants are more likely than native-born Whites to have a master's, professional, or doctoral degree. LPRs have the highest attainment rates of doctoral degrees of all categories.
- **Significant numbers of immigrants are working in jobs for which they are educationally overqualified.** Despite a significant share of foreign-born workers with low levels of education, 42 percent have an education level that exceeds the need of their job. Some

Nearly half of the foreign-born workforce—48.9 percent—has a high school degree or less, compared with 33 percent of their native-born peers.

22 percent have less education than their job requires, while 36 percent have earned an education that matches the needs of their job. In the native-born cohort, 48 percent of workers have an education level that exceeds their job needs.

- **LPRs and undocumented immigrants are less likely than other workers to have job certifications but more likely to work in jobs that require licensure.** LPRs and undocumented immigrants are among the workers least likely to have an active professional certification or license: only 10 percent of these groups have these credentials compared with 21 percent of the total labor force. Yet among workers required to have a certification or license, a higher percentage of immigrants have one as compared to their native-born peers. Certification or licensure is a job requirement for almost 90 percent of LPRs and undocumented immigrants who have those credentials, compared with 79 percent of all workers.
- **Characteristics of immigrants may affect their likelihood of accessing additional education or training.** Age profiles differ markedly for some categories of foreign-born workers. Some are relatively young and at an age when full-time education may be viable, while others are in their prime working years and would benefit from training opportunities that wrap around full-time employment. Immigration status varies across the groups, with almost half of certain younger learners likely to be undocumented, a factor that limits their access to some postsecondary institutions and workforce development programs. Lack of English language skills affects immigrants in all groups.
- **Immigrant workers' characteristics have personal and local economic impacts.** Whether an immigrant worker falls into one or another of the categories analyzed in the report has real-life significance. Persons educated abroad, recent refugees, persons with more education than their job requires, women, and the undocumented pay a financial penalty—in terms of lower earnings. These costs extend to local economies in the form of lower taxes paid and lower productivity.

The information in this report is based on the 2014 American Community Survey (ACS) conducted by the US Census Bureau, augmented with information on immigrants' legal statuses and descriptions of worker capacities derived from the US Bureau of Labor Statistics (BLS). The methodology section of this report describes the data sources and their use in this document. ■

IMMIGRANTS IN THE US LABOR FORCE

Twenty-seven million immigrants are in the US labor force.[7] In the aggregate, immigrant workers are more numerous than major native-born minority groups, such as African American, Latino, and Asian workers. The immigrants, however, have different legal statuses that play a key role in how they participate in the labor force.

Immigrants are characterized by distinct legal status.

Nearly half of all immigrants in the workforce, or 12.7 million, are naturalized citizens (Table 1). Most immigrants who naturalize have lived in the United States for at least five years, demonstrated English-language proficiency, and obtained sufficient education and knowledge to pass a test on US civics and history. Many immigrants take more than five years to naturalize, so being a naturalized citizen implies a certain amount of integration into US society. And naturalized citizens have access to certain jobs, especially in the public sector, that require US citizenship.

Table 1: Race, ethnicity, and immigration status of the US labor force; United States, 2014

	Number	%
Total	**160,998,942**	**100**
All native born	**133,798,391**	**83**
Native born, White, non-Latino	98,110,119	60.9
Native born, Black, non-Latino	16,577,567	10.3
Native born, Asian, non-Latino	2,163,213	1.3
Native born, Other, non-Latino	3,423,418	2.1
Native born, Latino	13,524,074	8.4
All foreign born	**27,200,551**	**17**
Foreign born, naturalized	12,707,608	7.9
Foreign born, legal permanent resident	6,851,069	4.3
Foreign born, undocumented	7,641,874	4.7

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Nearly 6.9 million LPRs are in the labor force. Some of these persons were authorized to reside in the United States because they had a family member who could sponsor their admission. Others were allowed to enter, live, and work in the United States explicitly because of their skills and willingness to work in certain occupations or industries. This group includes high-skill immigrants with specialized skills in short supply in the United States, such as physicians and information technology workers.

Approximately 7.6 million undocumented or unauthorized immigrants are in the labor force. They represent 1 in 20 US workers. These immigrants are not authorized to work in the United States but often find employment in industries that struggle to hire native-born workers, including the agriculture, construction, and leisure and hospitality sectors.[8]

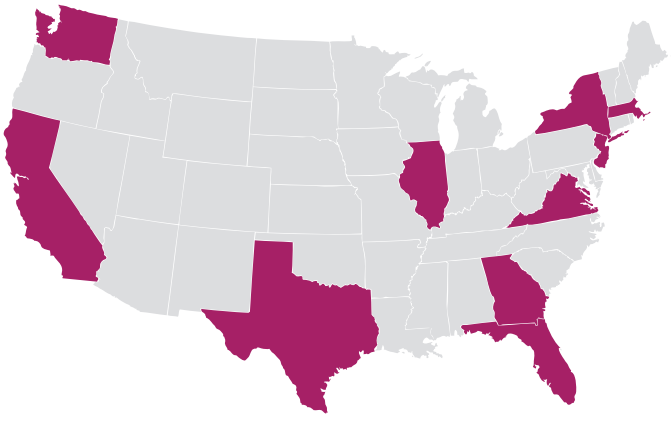
Immigrant populations concentrate in traditional gateway states, but with important in-state variations.

The US foreign-born population is geographically concentrated, with three-quarters of the immigrant population living in 10 states, and the rankings of the top 10 states vary somewhat by type of immigrant (Map 1). California, Florida, Illinois, New Jersey, New York, and Texas—traditional immigrant gateways—are the leading states of residence for immigrants of each status, with California holding the largest population in each category. North Carolina and Georgia are among the states with the largest undocumented populations, but these states do not fall among the top states in naturalized or LPR populations.

Differences among states can be explained by factors such as the number of recent immigrant arrivals, receiving a disproportionate number of refugees, and economic profile. It is also of note that states have different occupational licensure requirements that affect the ability of immigrants to use their skills in the labor force.[9]

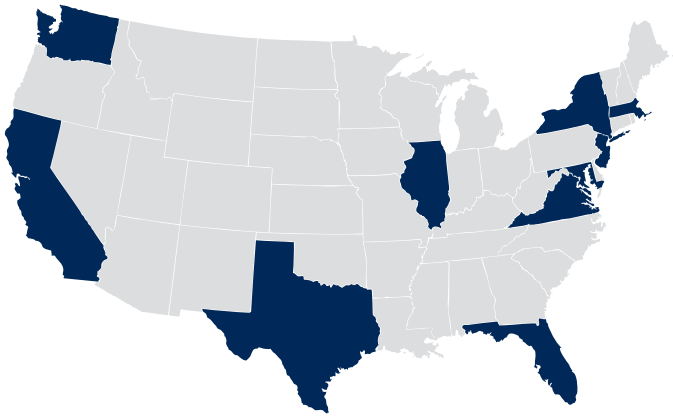
Map 1: Leading states of residence for foreign-born workers in US labor force by immigrant status

Foreign born



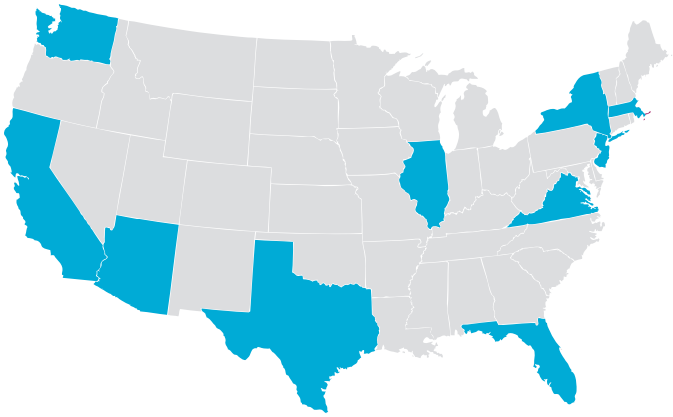
State	%
California	25.1
Texas	10.7
New York	10.6
Florida	9.4
New Jersey	4.6
Illinois	4.2
Massachusetts	2.5
Virginia	2.4
Georgia	2.4
Washington	2.2
Other	26.0

Naturalized



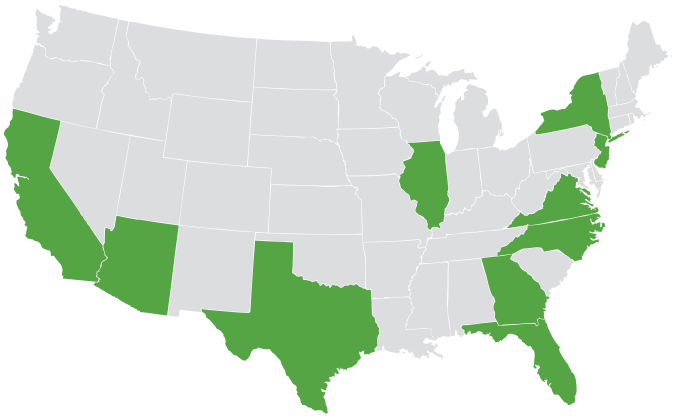
State	%
California	26.0
New York	12.3
Florida	10.7
Texas	7.8
New Jersey	5.3
Illinois	4.5
Massachusetts	2.7
Virginia	2.4
Maryland	2.2
Washington	2.1
Other	23.8

Legal permanent resident



State	%
California	24.5
Texas	10.9
New York	10.6
Florida	9.7
New Jersey	3.8
Illinois	3.7
Massachusetts	3.1
Arizona	2.5
Washington	2.3
Virginia	2.2
Other	26.8

Undocumented



State	%
California	23.9
Texas	15.9
New York	7.5
Florida	6.5
Illinois	4.3
New Jersey	4.2
Georgia	3.2
North Carolina	3.0
Arizona	2.5
Virginia	2.5
Other	26.6

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Policies and programs aimed at boosting foreign-born workers' access to postsecondary education and participation in local economies will benefit from careful consideration of both the size and characteristics of state-specific immigrant workforces.

US immigrants have distinct national origins.

Where immigrants choose to settle is not a random matter: a combination of US visa policy, economic, and geographic factors determine who immigrates to the United States and under what circumstances. The top countries of origin of US immigrants include a mix of Latin American and Asian nations, though the leading countries of origin vary when analyzed by immigration status. Mexico is the top country of origin across all immigrant-status groups. Immigrants from five Asian countries are nearly 25 percent of the naturalized, but only 17 percent of LPRs. And Asian countries are just 10 percent of the leading countries of origin of the undocumented, while 72 percent of undocumented persons in the labor force come from just six Latin-American nations (Table 2).

Table 2: Top ten countries of origin of major immigrant-status groups; United States, 2014

Foreign born, naturalized			Foreign born, legal permanent resident			Foreign born, undocumented		
	Number	%		Number	%		Number	%
Mexico	2,092,570	16.5	Mexico	1,702,092	24.8	Mexico	4,179,806	54.7
Philippines	880,362	6.9	India	474,195	6.9	El Salvador	471,297	6.2
India	713,160	5.6	China	322,652	4.7	Guatemala	383,557	5.0
Vietnam	652,296	5.1	Cuba	310,359	4.5	India	263,114	3.4
China	526,380	4.1	Philippines	222,903	3.3	Honduras	246,841	3.2
Korea	402,878	3.2	El Salvador	222,535	3.2	China	199,095	2.6
Cuba	354,881	2.8	Canada	210,583	3.1	Philippines	162,875	2.1
Dominican Republic	326,872	2.6	Dominican Republic	170,663	2.5	Dominican Republic	122,574	1.6
Jamaica	326,857	2.6	Guatemala	138,086	2.0	Ecuador	104,833	1.4
El Salvador	305,672	2.4	Vietnam	119,071	1.7	Korea	101,792	1.3

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Where immigrants choose to settle is not a random matter: a combination of US visa policy, economic, and geographic factors determine who immigrates to the United States and under what circumstances.

Naturalized and undocumented immigrants have high labor force participation.

The total population eligible to work in the United States includes about 254 million persons, and on average about 63 percent of these persons are in the labor force, meaning they are either at work or looking for work. Undocumented immigrants are far more likely to be in the labor force than any other group, with almost 76 percent of the undocumented in the labor force. The lowest unemployment rate is seen among naturalized immigrants, with 5.3 percent unemployment compared with 7.2 percent unemployment among all persons in 2014 (Table 3).

Table 3: Labor force participation and employment; United States, 2014

	Number of persons aged 16+	% in labor force	% of labor force employed	% of labor force unemployed
Total	**254,301,392**	**63.3**	**92.8**	**7.2**
All native born	**213,373,845**	**62.7**	**92.6**	**7.4**
Native born, White, non-Latino	156,559,652	62.7	94.2	5.8
Native born, Black, non-Latino	27,276,846	60.8	86.3	13.7
Native born, Asian, non-Latino	3,321,179	65.1	93.0	7.0
Native born, Other, non-Latino	5,509,053	62.1	88.1	11.9
Native born, Latino	20,707,115	65.3	89.9	10.1
All foreign born	**40,927,547**	**66.5**	**93.6**	**6.4**
Foreign born, naturalized	19,422,630	65.4	94.7	5.3
Foreign born, legal permanent resident	11,424,977	60.0	91.9	8.1
Foreign born, undocumented	10,079,940	75.8	93.4	6.6

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Foreign-born workers are younger than their native-born peers.

The US workforce, analyzed by race and ethnicity and immigration status, has distinct age profiles (Table 4). The youngest labor force is found among native-born groups including native-born Asians and Latinos, whose median ages are 31 and 32, respectively. The native-born White population is older, with a median age of 43. The median age of the overall workforce is 41 and foreign-born workers have a median age of 42. However, the percent of immigrants in the midcareer age range of 35 to 44—nearly 28 percent of immigrants overall—exceeds the native-born share.

Partly due to having been in the United States long enough to go through the process of becoming a US citizen, naturalized immigrants are among the oldest groups in the labor force. Almost 27 percent of the naturalized group are aged 55 or older, as are close to 25 percent of native-born Whites.

Table 4: Age of persons in the labor force; United States, 2014

	Median age	Total of all age ranges, %	Aged 16–24, %	Aged 25–34, %	Aged 35–44, %	Aged 45–54, %	Aged 55–64, %	Aged 65+, %
Total	**41**	**100**	**14.5**	**22.1**	**21.0**	**21.5**	**16.0**	**4.9**
All native born	**41**	**100**	**15.9**	**22.1**	**19.6**	**21.0**	**16.3**	**5.1**
Native born, White, non-Latino	43	100	13.4	20.3	19.2	22.5	18.5	6.1
Native born, Black, non-Latino	38	100	18.2	24.0	21.4	20.1	13.0	3.2
Native born, Asian, non-Latino	31	100	24.0	36.6	18.3	11.5	7.8	1.9
Native born, Other, non-Latino	34	100	24.9	26.9	20.5	15.4	9.6	2.7
Native born, Latino	32	100	27.5	28.9	20.3	14.0	7.5	1.7
All foreign born	**42**	**100**	**7.7**	**22.5**	**27.5**	**24.3**	**14.1**	**3.9**
Foreign born, naturalized	46	100	4.5	14.8	24.9	29.2	20.3	6.3
Foreign born, legal permanent resident	40	100	7.9	25.8	28.0	22.6	12.4	3.3
Foreign born, undocumented	36	100	12.8	32.1	31.6	17.5	5.5	0.4

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

On average, immigrants rank both above and below native-born workers on educational attainment.

Immigrants' educational attainment levels complement those of their native-born peers (Table 5). The undocumented tend to have lower educational attainment than their native-born peers, and naturalized immigrants have higher education levels than the native born. LPRs are clustered at both ends of the spectrum.

Table 5: Educational attainment of persons in the labor force (%); United States, 2014

	Median age	Total	Less than or equal to six years of schooling	7–11 years of schooling	High school diploma or equivalent	Some college but no degree	Associate's degree	Bachelor's degree	Master's degree	Professional degree	Doctoral degree
Total	**41**	**100**	**2.8**	**6.5**	**24.7**	**21.6**	**9.3**	**21.8**	**9.4**	**2.4**	**1.6**
All native born	**41**	**100**	**0.6**	**4.9**	**25.2**	**23.4**	**9.9**	**22.6**	**9.5**	**2.4**	**1.4**
Native born, White, non-Latino	43	100	0.4	3.9	24.4	22.1	10.1	24.4	10.3	2.7	1.6
Native born, Black, non-Latino	38	100	0.7	7.3	30.0	28.6	9.3	15.2	7.1	1.0	0.7
Native born, Asian, non-Latino	31	100	0.9	2.0	12.7	17.2	8.1	36.7	12.8	6.8	2.7
Native born, Other, non-Latino	34	100	0.8	5.6	23.8	27.7	10.2	20.7	7.8	2.1	1.3
Native born, Latino	32	100	2.3	10.3	28.0	26.9	9.7	15.5	5.4	1.2	0.6
All foreign born	**42**	**100**	**12.4**	**13.7**	**22.4**	**13.8**	**6.2**	**17.8**	**9.0**	**2.2**	**2.4**
Foreign born, naturalized	46	100	5.8	8.4	20.5	16.8	8.5	23.2	10.8	3.2	2.7
Foreign born, legal permanent resident	40	100	13.7	13.9	22.1	11.9	5.2	17.5	10.3	2.2	3.2
Foreign born, undocumented	36	100	23.1	23.1	26.2	10.0	3.1	8.2	4.7	0.5	1.1

Note: Figures may not sum to 100% due to rounding.

Universe: persons aged 25 years or older in labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

A striking characteristic of LPRs and undocumented immigrants is that both populations have low levels of formal education. Some 14 percent of LPRs have less than 6 years of education, and another 14 percent have about 7 to 11 years of school, so that well more than a quarter of this group lacks a high school education. For the undocumented, the portion without a high school diploma is 46 percent, while the share of the native-born population without a diploma is 5.5 percent (Table 4).

On the one hand, the naturalized and LPRs have relatively high levels of education. On the other hand, attainment rates of degrees (for example, associate's degrees and higher) also vary by immigration status. Naturalized citizens had the highest attainment rate among immigrant groups (48.4 percent) followed by LPRs (38.4 percent), then undocumented immigrants (17.6 percent). The attainment rates for naturalized citizens and LPRs was higher than native-born Blacks (33.3 percent) and native-born Latinos (32.4 percent). Analysis reveals that naturalized immigrants are more likely than native-born Whites to have a master's, professional, or doctoral degree, and LPRs have the highest attainment rates of doctoral degrees of all categories.

A look at the education levels immigrants bring to their jobs

Understanding basic sociodemographic characteristics of the foreign-born workers provides an important foundation for how their immigration status, education levels, and other factors affect the skills they bring to the workforce.

The educational attainment information described in the previous section is self-reported by respondents to the ACS and describes the education workers bring to their jobs. However, no information in the ACS describes what education or training is actually required of workers in those jobs; that information is available from the BLS regarding the education and training typically needed by new entrants into a specific occupation. For the purposes of this study, BLS occupation information is combined with ACS data; the methodology section offers additional details on the analysis.

Analysis reveals that naturalized immigrants are more likely than native-born Whites to have a master's, professional, or doctoral degree, and legal permanent residents have the highest attainment rates of doctoral degrees of all categories.

Large numbers of native- and foreign-born workers are in jobs requiring low skills.

About 23 percent of all US workers are in jobs that require no formal educational credentials and another almost 35 percent of workers are in jobs that do not require more than a high school diploma. Disproportionately large numbers of LPRs and undocumented immigrants are in jobs with these requirements. Some 60 percent of LPRs and 82 percent of undocumented workers are in jobs that require no formal credentials or require only a high school level education (Table 6).

Table 6: Educational requirements of jobs held by workers (%); United States, 2014

	Total	No formal educational credential	High school diploma or equivalent	Some college but no degree	Postsecondary nondegree award	Associate's degree	Bachelor's degree	Master's degree	Doctoral or professional degree
Total	**100**	**22.8**	**34.8**	**0.9**	**9.1**	**1.9**	**26.5**	**0.9**	**3.1**
All native born	**100**	**20.9**	**35.7**	**1.0**	**8.9**	**2.0**	**27.4**	**1.0**	**3.0**
Native born, White, non-Latino	100	19.0	35.3	1.1	8.2	2.1	29.9	1.0	3.5
Native born, Back, non-Latino	100	25.7	37.5	0.7	13.0	1.6	19.1	1.0	1.3
Native born, Asian, non-Latino	100	18.6	28.1	0.8	6.3	2.3	35.7	0.9	7.4
Native born, Other, non-Latino	100	26.6	34.2	0.7	9.2	2.1	23.7	1.0	2.4
Native born, Latino	100	28.0	38.4	0.7	10.0	1.8	18.9	0.7	1.4
All foreign born	**100**	**31.8**	**30.6**	**0.6**	**10.1**	**1.4**	**21.9**	**0.4**	**3.3**
Foreign born, naturalized	100	21.0	30.9	0.9	11.5	2.0	28.8	0.6	4.3
Foreign born, legal permanent resident	100	32.2	27.8	0.5	9.6	1.2	23.7	0.4	4.6
Foreign born, undocumented	100	49.4	32.3	0.3	8.0	0.6	8.7	0.2	0.6

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Immigrants' education levels compared with their job needs

Understanding the connection between immigrants' educational levels and their current job requirements provides an opportunity to boost foreign-born workers' postsecondary educational attainment and maximize their contributions to the workforce. This dynamic is measured by combining two data sets. The ACS data on immigrants' educational attainment can be compared against data from the BLS on the education typically required by new entrants into their occupation. This comparison provides an indication of the extent to which workers have more, enough, or not enough education given what is normally expected of them in their occupation.[10] This report uses the term "education/job match" to describe the comparison of worker education with job requirements.[11]

ACS data on educational attainment is well known. It describes the level of education a worker reports obtaining, such as a high school diploma, an associate's degree, a bachelor's degree, or another higher degree. This self-reported description of education is widely cited when describing the preparation of workers, and it formed the basis of a recent analysis that found most newly hired workers since 2010 have education levels higher than high school, while relatively few workers with high school diplomas or less have entered the labor force in recent years.[12]

The BLS, however, provides an important, alternative understanding of the labor force. The BLS publishes descriptions of the skills and education typically needed for new hires in each occupation. When we combine BLS and ACS information (by coding each record in ACS microdata) we can identify workers with a degree that does not match the education usually required for their job. An example of this would be a worker with a college degree who works a retail sales or food service job—a situation that many of us encounter daily.

The ACS and the BLS use somewhat different measures of education and training, yet overall they are largely comparable. Table 7 shows both the ACS and BLS categories and indicates how the two systems can be compared to one another, permitting the development of an education/job match calculation.

Table 7 reveals a disconnection in education/job match across almost all categories; the percentage of workers with particular education levels is disparate with the percentage of jobs that require that particular education level. About 25 percent of the US workforce has only a high school degree, but 35 percent of US jobs only require a high school degree. However, about 24 percent of the workforce has some college but no degree, while only 10 percent of jobs require a comparable level of education for new hires.[13]

Associate's and master's degrees are also disconnected with the needs of employers. Almost 9 percent of all US workers have an associate's degree, but few jobs, only 2 percent, require new hires to have such a degree. A similar finding is seen in the case of master's degrees: 8 percent of workers have a master's degree, but only 1 percent of jobs require this credential for entry.

Table 7: Assessing education/job match in US labor force

Educational attainment (per ACS) in %		Education typically required for new hire (per BLS) in %	
Total	100	Total	100
≤6 years of schooling	2	No formal education credential	23
7–11 years of schooling	8		
High school diploma or equivalent	25	High school diploma or equivalent	35
Some college but no degree	24	Postsecondary, nondegree award	9
		Some college, no degree	1
Associate's degree	9	Associate's degree	2
Bachelor's degree	20	Bachelor's degree	26
Master's degree	8	Master's degree	1
Professional degree beyond bachelor's degree	1	Doctoral or professional degree	3
Doctoral degree	1		

Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology, US Bureau of Labor Statistics

Table 8 categorizes all US workers according to their education level and the education needed by a new hire in their job. The table reveals that most US workers have either more, or less, but not exactly the education needed for a new hire in their occupation. Table cells in green are workers with less education than typically needed for a new hire. Cells in blue describe persons whose education matches that of their job's entry requirements. Yellow cells are workers with more education than typically needed to enter the job they hold.

Again, Table 8 reveals an overall disconnection in education/job match across categories; some two in three workers have an education level that does not match the requirements of new hires in their job. Of the approximately 158 million persons in the labor force,[14] about 74.5 million, or 47 percent, have more education than required of new hires in their job. Another 52.5 million (33 percent) have exactly the education required, and 30.5 million, or 19 percent, have less education than required for new hires.

Table 8: The education/job match: Educational attainment of all US workers vs. education typically needed for new hires in their job (number of workers); United States, 2014

- Workers with less education than typically needed for a new hire
- Persons whose education matches that of their job's entry requirements
- Workers with more education than typically needed to enter their job they hold

Educational attainment of the worker	Education typically needed for the job they have								
	No formal educational credential	High school diploma or equivalent	Some college but no degree	Postsecondary nondegree award	Associate's degree	Bachelor's degree	Master's degree	Doctoral or professional degree	
≤6 years of schooling	2,065,393	1,344,762	5,648	346,964	10,890	112,275	2,859	4,219	3,893,010
7–11 years of schooling	5,763,874	4,245,265	47,882	1,324,617	50,017	507,252	12,333	10,059	11,961,299
High school diploma or equivalent	12,355,603	17,857,433	382,093	5,325,950	410,993	3,397,207	51,979	44,842	39,826,100
Some college but no degree	9,300,423	15,987,487	549,971	4,477,486	779,698	6,142,360	126,306	126,295	37,490,026
Associate's degree	2,171,143	5,257,621	173,953	1,489,979	717,513	3,843,743	78,751	89,968	13,822,671
Bachelor's degree	3,503,882	8,269,776	242,720	1,096,473	811,410	17,218,704	355,376	615,388	32,113,729
Master's degree	603,212	1,617,362	45,565	240,586	170,813	8,897,232	649,921	733,436	12,958,127
Professional degree beyond bachelor's degree	74,641	208,606	4,365	63,105	37,847	787,773	33,762	2,068,992	3,279,091
Doctoral degree	35,551	104,385	2,551	21,152	15,741	829,338	44,321	1,153,458	2,206,497
Total	**35,873,722**	**54,892,697**	**1,454,748**	**14,386,312**	**3,004,922**	**41,735,884**	**1,355,608**	**4,846,657**	**157,550,550**

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology, US Bureau of Labor Statistics

Foreign-born immigrants have a unique education profile

The extent to which the education of foreign-born workers aligns with the types of jobs they hold is different than the alignment education/job match among the native born. Among all three types of immigrants, workers are more likely to be undereducated (have less education than what is needed for their job) compared with those who are native born; but the largest share of workers in all three groups are those who are overeducated (Table 9).

The foreign born—including naturalized immigrants, LPRs, and the undocumented—are more likely than the native-born group to have a level of education below the level typically required by their job. For example, 18.8 percent of native-born workers are undereducated. For the naturalized, LPRs, and undocumented, the comparable rates are 20.9 percent, 23.5 percent, and 23.3 percent, respectively.

Table 9: Education/job match by race, ethnicity, and birth category; United States, 2014

	Total	Education exceeds job needs, %	Education matches job needs, %	Education below job needs, %
Total	**100**	**47.3**	**33.3**	**19.4**
All native born	**100**	**48.4**	**32.8**	**18.8**
Native born, White, non-Latino	100	47.9	33.6	18.4
Native born, Black, non-Latino	100	51.0	29.7	19.4
Native born, Asian, non-Latino	100	50.2	35.6	14.2
Native born, Other, non-Latino	100	50.8	30.2	18.8
Native born, Latino	100	47.6	30.9	21.5
All foreign born	**100**	**41.9**	**35.8**	**22.2**
Foreign born, naturalized	100	46.1	33.0	20.9
Foreign born, legal permanent resident	100	40.3	36.2	23.5
Foreign born, undocumented	100	36.4	40.3	23.3

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Although the foreign-born group is more likely than the native-born group to be undereducated, it is important to note that the plurality of the foreign-born workers—the largest share of their population—falls in the category of having more education than what is needed by their job. Some 46.1 percent of the naturalized fall in this category, as do 40.3 percent of LPRs and 36.4 percent of the undocumented.

A mismatch of education and job requirements has consequences for earnings.

Workers with less education than required for new hires in their occupation pay a price for their situation. As seen in the table below, the median hourly wage for all full-time workers with less education than what is needed for their job is $15.00 but, it is $11.50 for LPRs and $10.00 for the undocumented (Table 10).[15] Various factors including age, occupation, and gender contribute to wage differentials, but these data suggest being an LPR or an undocumented immigrant play a role in wage disparities.

Table 10: Median hourly wage for full-time workers by education/job match; United States, 2014

	Median wage when education exceeds job needs, $	Median wage when education matches job needs, $	Median wage when education below job needs, $
Total	**14.50**	**16.67**	**15.00**
All native born	**14.70**	**17.50**	**16.00**
Native born, White, non-Latino	15.50	19.00	17.50
Native born, Black, non-Latino	12.50	13.40	13.50
Native born, Asian, non-Latino	15.00	23.64	15.00
Native born, Other, non-Latino	11.94	14.59	14.21
Native born, Latino	12.00	13.00	13.50
All foreign born	**14.00**	**13.00**	**13.00**
Foreign born, naturalized	16.90	20.00	15.00
Foreign born, legal permanent resident	12.62	12.13	11.50
Foreign born, undocumented	10.33	9.50	10.00

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

On the other end of the spectrum, immigrants with more education than what is needed for their jobs also make less than their native-born peers in similar situations. Undocumented immigrants in this category make less than any other group: a median $10.33 per hour. LPRs make a median $12.62 per hour, which is much less than native-born Whites, at $15.50.

The lower earnings of LPRs and undocumented workers whose educational attainment is below their job requirements are found after controlling for educational attainment.[16] Among these persons with high school education where educational attainment falls below job needs, each of the three major immigrant groups earns less than native-born Whites (Table 11).

Table 11: Median hourly wage by race, educational attainment, and education/job match; United States, 2014

	Median wage when education exceeds job needs, $	Median wage when education matches job needs, $	Median wage when education below job needs, $
High school only			
Native born, White, non-Latino	9.50	15.00	15.00
Foreign born, naturalized	10.83	14.85	14.00
Foreign born, legal permanent resident	9.00	12.00	11.67
Foreign born, undocumented	9.00	10.57	11.00
Some college but no degree			
Native born, White, non-Latino	12.50	13.78	20.00
Foreign born, naturalized	13.89	14.00	20.00
Foreign born, legal permanent resident	10.00	11.50	14.89
Foreign born, undocumented	10.00	11.00	15.00
Bachelor's degree			
Native born, White, non-Latino	17.75	27.50	21.50
Foreign born, naturalized	16.50	32.00	26.50
Foreign born, legal permanent resident	12.50	30.00	14.86
Foreign born, undocumented	11.00	30.00	19.25

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Workers with less education than required for new hires in their occupation pay a price for their situation.

This dynamic is also true for LPRs and undocumented immigrants with more education than what is needed for their job: both groups have a median wage lower than that of native-born Whites at all education levels.

LPRs and undocumented immigrants are less likely to have a job certification, but those with certification are more likely to be in jobs that require it.

Neither the educational attainment measures reported by the ACS nor the job skill metrics of the BLS indicate whether workers have or need special certification or licensure for their role, such as a real estate license, medical assistant certification, teacher's license, or information technology certification. Understanding how many workers have these qualifications is helpful in assessing how many may have access to better-paying jobs; this discussion reasonably assumes that jobs requiring licensure and certification are likely to pay slightly more, due to the costs expended in attaining credentials. A key group of concern for those interested in bolstering the postsecondary credentials of the US labor force is the population of workers who report having some kind of post-high school education but less than an associate's degree.

The Current Population Survey (CPS) is conducted by the US Census Bureau primarily for analysis of unemployment and other labor force statistics. The sample of the CPS is smaller than that of the ACS and thus the CPS is not normally used for demographic analyses.

Table 12 illustrates CPS findings on certificates and licenses held by persons in the labor force in January 2016.[17] LPRs and the undocumented are among the workers least likely to have an active professional certification or license—only 10 percent for these groups compared with 21 percent for the total population. Similarly, some 9 percent of LPRs and undocumented immigrants have a government-issued professional certification or license compared with 18 percent of all workers. Federal law may be the reason there is a limited pool of immigrants with these licenses because its regulations restrict states from extending professional licenses to undocumented immigrants. However, some states have affirmatively opted out of these restrictions by passing local legislation expanding eligibility.[18]

Yet among workers who are required to have a certification or license, a higher percentage of immigrants have one compared with their native-born peers. Certification or licensure is a job requirement for almost 90 percent of LPRs and undocumented immigrants who have those credentials compared with 79 percent of all workers (Table 12).

Table 12: Percent with certification or license among workers with "some college, no degree"

	Has active professional certification or license, %	Has government-issued professional certification or license, %	Certification is required for job, %
Total	**20.6**	**18.0**	**79.1**
Native born, White, non-Latino	22.0	19.0	79.6
Native born, Black, non-Latino	19.8	16.8	70.9
Native born, Asian, non-Latino	9.7	8.7	74.9
Native born, Latino	16.3	14.7	78.4
Native born, Other, non-Latino	25.5	22.8	75.9
Foreign born, naturalized	24.3	22.3	87.4
Foreign born, legal permanent resident and undocumented	10.0	9.4	89.5

Universe: US labor force
Source: January 2016 Current Population Survey

A discussion of findings on immigrant workers

Analysis around education/job match highlights various issues regarding the needs for training and education of foreign-born workers in the US labor force.

Distinctions among immigrant groups raise discussions on populations to target for postsecondary programs.

Large numbers of immigrants fall into distinct categories such as immigration status, age cohort, educational attainment, and education/job match. This diversity of clusters raises the question of which groups would benefit most from support to improve their education and job skills. Additional training readiness may vary by age, as younger workers are somewhat more in touch with traditional education systems. Immigrants with lower levels of educational attainment may require more education and training than more highly educated workers, yet the payoff to low-skilled workers may be proportionately higher. Philanthropic, policy, and programmatic interventions may want to focus efforts on a specific population, or adjust goals and objectives based on which groups are prioritized.

Large numbers of workers in low-skill jobs reflect the current labor market more than the capabilities of workers.

Today, about 25 percent of the US workforce has only a high school degree, yet 35 percent of US jobs only require a high school degree (Table 7). This finding, on its surface, raises the issue of whether there are enough higher-skill jobs, as opposed to higher-skill workers.

This discovery also has implications for the efforts to "upskill" workers: while there are clearly higher-skill occupations with low unemployment rates and high demand for workers, there is significant demand for lower-skilled workers in the current economy. A recent report analyzed the job growth of 23 major occupational categories since 2010. Four of the top 10 highest areas of growth were shown to be low-skill jobs in transportation, installation, production, and food prep.[19] According to the BLS Employment Projections program (which looks at all occupations), the first and second largest growth occupations in the 2016–2026 time period are anticipated to be in the low-skill occupations of personal care aides and food prep workers.[20] This finding requires attention, because there is a limit to how many workers can be upskilled and the number of employees who can be placed in a higher-skilled job given the economy's continued creation of low-skill jobs.

Workers "in the middle" experience a mismatch of education/job availability.

Almost a quarter of workers have "some college with no degree" but only about 10 percent are expected to have this level of education in their jobs. One task for researchers is to ascertain the precise types of job openings for this population. Another task is to take a hard look at exactly what "some college" means for these workers (for example, remedial skills, college-level credit, and vocational preparation); given the lack of detailed data from the ACS on this topic, more analysis is necessary.[21]

The mismatch of education and required job skills may reflect qualitative characteristics of immigrants in the job market.

The education/job match calculation shows there may be a fundamental mismatch of formal education and job needs for a large portion of the entire US workforce. The fact that LPRs and the undocumented are disproportionately found in jobs that usually require more skills than these workers have may reflect the finding that many of these workers have low education. In other words, these immigrant groups, by virtue of low formal education, simply have greater odds of being in jobs that require more education than they actually have. It also may be that these immigrant groups "punch above their weight" in the job market, meaning their ambition or willingness to work long hours compensate for their comparatively lower levels of educational attainment.

There are large numbers of immigrants in all major legal-status categories; the undocumented face specific barriers to additional education and training.

Legal status is fundamentally important to understanding immigrants' ability to access post-secondary education and training opportunities. The naturalized population is older and better educated compared with LPRs and the undocumented. The latter two groups arguably have greater needs for education or training to improve their employment situation. The fact that about 28 percent of immigrants in the labor force are undocumented raises the question of how their immigration status may impede their access to training (Table 1). For example, if workforce-related education is available through community colleges or other higher education institutions, or is dependent upon high tuition levels that require student loans, the undocumented are at a disadvantage in many states where they cannot pay in-state tuition.[22] In addition, workforce-related education financed through the federal Workforce Innovation and Opportunity Act requires immigrants to be legally authorized to work in order to receive services.[23]

Many immigrant workers are in prime working years; additional education and training may need to wraparound their full-time work.

Since many immigrant workers, 54 percent of LPRs and 64 percent of the undocumented, are in the 25 to 44 age range—their prime working years—this concentration has important implications for how these populations could obtain more education or training (Table 4). Working-age adults have financial and caregiving responsibility and will benefit from flexible education and training opportunities responsive to these realities.

Data suggest that native-born workers may be better positioned to access traditional postsecondary systems. Native-born Whites represent an older workforce, closer to retirement years with more flexibility to access postsecondary systems. Their native-born, non-White Asian and Latino peers, inversely, are disproportionately young and at the beginning of their careers at an age where the traditional mode of college education may still be accessible. Foreign-born workers, however, may be best served by education models that allow them to maintain their current jobs.

Significant numbers of immigrant workers have more education than needed for their jobs.

The findings suggest that—on average—immigrants are less likely than their native-born peers to have more education than is needed for their job. Yet significant portions of foreign-born workers—46 percent of the naturalized, 40 percent of LPRs, and 36 percent of the undocumented—are in this situation (Table 9). Challenges associated with having more education than required by a job affect large numbers of both foreign-born and native-born workers, yet research points to effective program and policy interventions recognizing the distinct challenges of foreign-born workers in this situation.[24]

Low education levels of many immigrants imply a need for basic instruction.

Large numbers of both LPRs and undocumented immigrants, as discussed earlier, have low levels of formal education, making them more likely than their native-born peers to be in a job where they have less education than is typically required for their jobs. Relatively low education levels suggest that many LPRs and undocumented immigrants may require basic education prior to moving onto higher technical or workforce training usually available to persons with at least a high school degree. Investing in foundational skills training may help these workers access higher-level education and training opportunities.[25]

SPECIAL IMMIGRANT POPULATION GROUPS

While a broad understanding of immigrant legal status, geographic concentration, and education and skill levels is vital to developing effective policy interventions, it is equally important to recognize a multitude of factors that can influence broader trends. This section analyzes five sociodemographic factors related to foreign-born workers. The factors, fully defined below, include learner type, country of education, refugee status, gender, and education/job match.[26]

Foreign-born worker learner types

As discussed in the previous section, calibrating workers' skills against the needs of their jobs is critical to a well-functioning workforce. However, opportunity also exists in connecting more foreign-born workers with postsecondary degrees. As such, it is helpful to understand the characteristics of the foreign-born population that has not yet earned a postsecondary degree. This report uses three categories to describe the age and level of education of these "learner types":[27]

1. **"Traditional-age students" who are aged 18 to 24;**
2. **"Adults without recognized postsecondary education" who are aged 25 to 64 with high school education only; and**
3. **"Returning adult students" who are aged 25 to 64 with some college but no formal degree past high school.**

Each of these groups has specific needs for education or training. Young persons aged 18 to 24, traditional-age students, fit within the age range traditionally served by colleges and universities, and these younger persons may be more likely to enroll or be enrolled in school. Relatively older learners, aged 25 or older, who ended their education at high school are classified in this analysis as adults without recognized postsecondary education. The group of returning adult students have carried their education somewhat further than high school but without obtaining an associate's or bachelor's degree; they may have completed a year or more of college education or taken nondegree courses.[28]

Table 13 shows that some 12 percent of the foreign-born workers may be classified as returning adult students compared with nearly 19 percent of the native-born group. Yet, relatively few foreign-born persons, only 7.3 percent, are traditional-age students, compared with close to 15 percent of the native-born population.

Table 13: Native-born and foreign-born learner types; United States, 2014

	Native born	Foreign born
	133,798,391	**27,200,552**
Total number of workers	100.0%	100.0%
Traditional-age students (aged 18–24)	14.5%	7.3%
Adults without recognized postsecondary education (aged 25–64 with high school education only)	24.1%	43.0%
Returning adult students (aged 25–64 with some college but no formal degree past high school)	18.5%	12.2%
Other	42.8%	37.5%

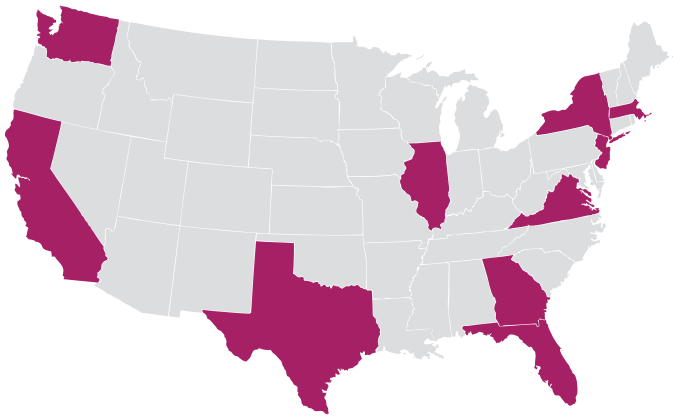
Note: Learner type definitions based on descriptions used by the Lumina Foundation. Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

These learner types are mainly concentrated in states that are home to the largest immigrant populations, as described earlier in this report. For traditional-age students and for adults without recognized postsecondary education, the leading states of residence are California, Texas, and New York. Florida is one of the top three states of residence for returning adult students (Map 2).

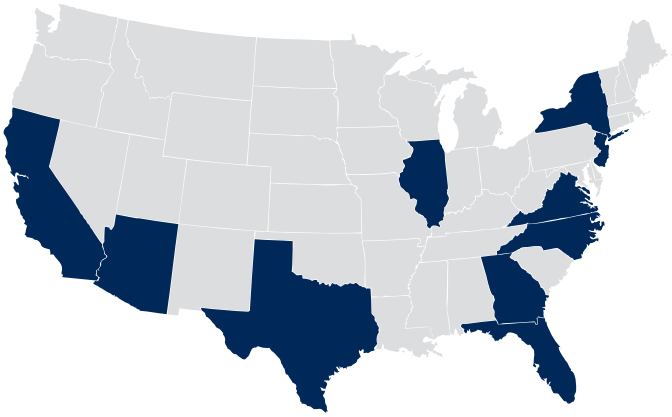
Map 2: Leading states by adult learner type

Percent (%) of traditional-age students (aged 18–24)



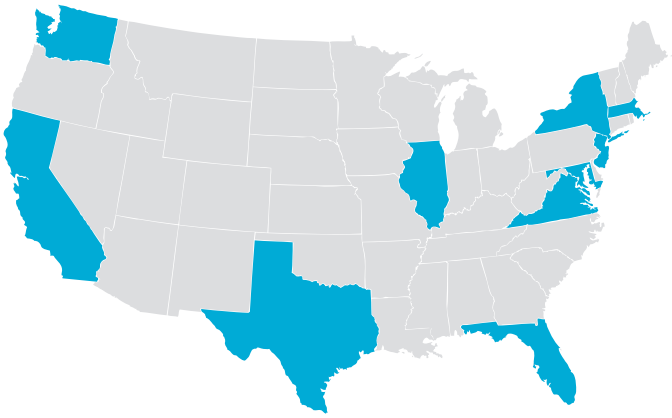
State	%
California	**18.8**
Texas	**12.2**
New York	**9.2**
Florida	**8.8**
New Jersey	**4.0**
Illinois	**3.7**
Georgia	**2.8**
Washington	**2.8**
Virginia	**2.8**
Massachusetts	**2.7**
Other	**32.2**

Percent (%) of adults without recognized postsecondary education (aged 25–64 with high school education only)



State	%
California	26.0
Texas	13.0
New York	9.8
Florida	8.3
Illinois	4.3
New Jersey	4.1
Georgia	2.5
Arizona	2.3
North Carolina	2.2
Virginia	2.1
Other	25.4

Percent (%) of returning adult students (aged 25–64 with some college but no formal degree past high school)



State	%
California	26.0
New York	9.1
Florida	10.0
Texas	11.1
New Jersey	4.6
Illinois	4.9
Virginia	2.4
Massachusetts	2.2
Maryland	1.6
Washington	2.2
Other	25.9

Note: Learner type definitions based on descriptions used by the Lumina Foundation. Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

However, the younger, traditional-age students are more likely to be found outside the larger states. Some 32 percent of them are distributed outside the top 10 immigrant states, compared with nearly 26 percent of adults without recognized postsecondary education or returning adult students.

Immigrants educated in the United States versus educated abroad

Understanding how many immigrants have received their highest level of education abroad instead of in the United States is important because international credentials may not be recognized by US employers. Immigrants educated abroad may need to have their credentials evaluated and accepted before they can enroll in a US educational institution, and they may also have to recertify and improve their English skills. Licensing and recredentialing is complex as each state has its own set of requirements for licensing in different occupations. In addition, the significant time and money required to go back to school also serve as disincentives for immigrants to pursue additional education.

The ACS does not report where immigrants received their education; therefore, this report estimates the likelihood of a person being educated abroad or in the United States based on a combination of his or her age upon entering the United States and the highest degree he or she obtained. For example, an adult immigrant with a bachelor's degree who entered the United States as a child is likely to have earned that degree in the United States. Alternatively, a person without a high school degree who entered the country as an adult probably completed his or her education abroad.[29]

Nearly two-thirds of foreign-born immigrants are likely to have been educated abroad (Table 14). This finding reflects the fact that most immigrants arrive in the United States as adults, not as children in the K–12 age range.

The characteristics of this group—representing more than two in three foreign-born workers—are important when considering opportunities for postsecondary education. A large portion of

Table 14: Education of immigrants in US labor force; United States, 2014

	Total number of immigrants	%
Total number of workers	**27,200,550**	**100**
Likely educated abroad	17,762,481	65.3
Likely educated in United States	9,438,069	34.7

Note: Figures may not sum to 100% due to rounding.

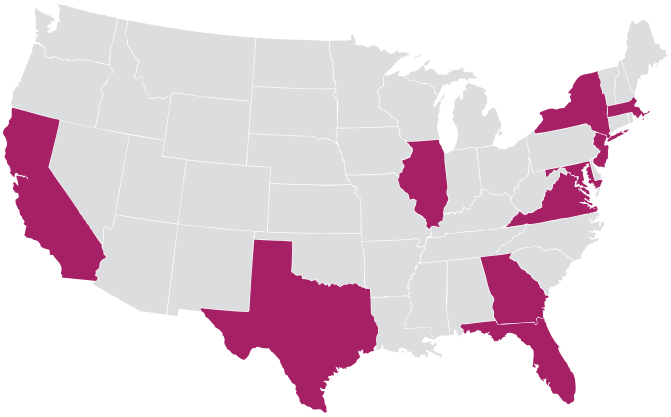
Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

immigrants likely to be educated abroad do not speak English well (34.6 percent) compared with only 8.2 percent of those likely educated in the United States. Nearly 69 percent of those likely educated abroad are either an LPR or a naturalized citizen; for those likely to be educated in the US, the number is 84 percent (Table 19, on pages 40–43).

Six states—California, Texas, New York, Florida, New Jersey, and Illinois—are home to both the largest shares of immigrants likely educated abroad and those likely educated in the United States. About three-quarters of all immigrants profiled in the map below are found in 10 states (Map 3).

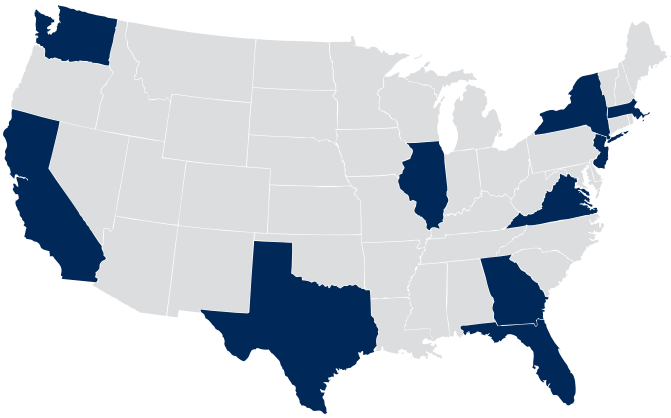
Map 3: Leading states of residence of immigrants in US labor force by likely place of education

Likely educated abroad (%)



State	%
California	23.6
Texas	10.9
New York	10.6
Florida	9.2
New Jersey	5.1
Illinois	4.3
Virginia	2.6
Georgia	2.5
Massachusetts	2.5
Maryland	2.4
Other	26.3

Likely educated in United States (%)



State	%
California	27.9
New York	10.3
Texas	9.9
Florida	8.8
New Jersey	4.7
Illinois	4.7
Massachusetts	2.5
Virginia	2.3
Georgia	2.2
Washington	2.2
Other	24.4

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Recent refugees from countries of conflict

Refugee status is granted to people of "special humanitarian concern" to the United States. This definition pertains to refugees who were persecuted—or experienced the fear of persecution—in their home countries based on their race, religion, nationality, or membership in a particular social group and are unable to return to their countries of origin for security and safety reasons.[30] Recent refugees who arrived in the United States within the past 10 years are an important foreign-born population group because they represent a substantial number of persons in the country, many with distinct training and education needs. Refugees, for example, may have experienced interrupted schooling or lack of access to educational documents if they came from countries in conflict. The refugees were allowed into to the United States for humanitarian reasons with a wide range of educational backgrounds and skill sets. Overall, the United States took in just more than 661,000 refugees from 2008 to 2017 (Table 15).

Table 15: Recent refugee admissions to the United States; 2008–2017

	Number of admissions	%
Total	**661,374**	**100**
Burma	150,469	23
Iraq	140,620	21
Bhutan	93,326	14
Somalia	59,839	9
Democratic Republic of the Congo	47,881	7
Iran	32,646	5
Cuba	29,979	4
Syria	20,941	3
Eritrea	16,378	2
Sudan	10,424	2
Other	59,871	9

Note: Figures may not sum to 100% due to rounding.

Source: US Department of State, Refugee Processing Center Admissions and Arrivals

The 2014 ACS inquires whether respondents are naturalized citizens, but it does not ask immigrants whether they are LPRs or undocumented[31] or entered the United States as refugees. To estimate the characteristics of recent refugees, this analysis adopts a widely used proxy methodology based on immigrant groups that include large numbers of recent refugees. (See methodology section.)

Education/job match

Immigrants are more likely than the native born to have less education than their jobs require, as noted earlier in this analysis. Yet workers with more education than required by their jobs constitute the largest share of immigrant workers by far, representing 41.9 percent of immigrants (Table 16). These workers may not be able to make full use of their education or attain the highest possible earnings they deserve given their education level. Some individuals may have foreign credentials not recognized by US employers, and some may simply not have opportunities available to them; for example, they may live in areas with high unemployment or few jobs. Still others may choose to work at a level below their education.

The leading states of residence of persons in the three education/job match categories generally track the distribution of the entire immigrant population nationally (Map 4). The same six states—California, Florida, Illinois, New Jersey, New York, and Texas—are the leading places of residence for each category.

Table 16: Immigrants' place in the education/job match continuum; United States, 2014

	Total population	%
Total foreign born	**26,735,671**	**100**
Education exceeds job needs	11,211,764	41.9
Education matches job needs	9,578,578	35.8
Education below job needs	5,945,329	22.2

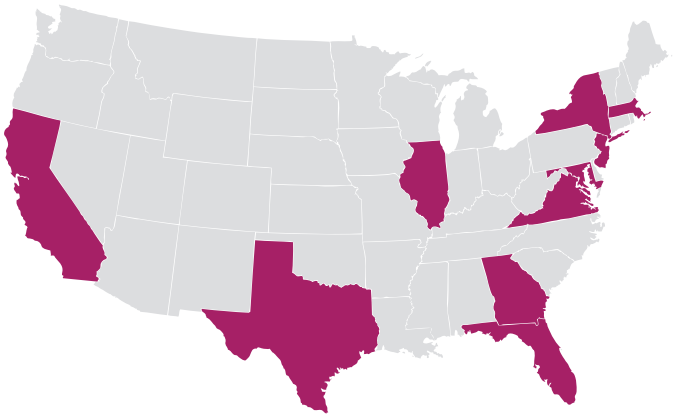
Notes: Figures may not sum to 100% due to rounding. The number of workers included in this table (26.7 million) is lower than the number of workers in the labor force (27.2 million) because it excludes some workers for whom the relationship between education and job requirements could not be determined. These include persons in the labor force who have been unemployed for more than five years; the American Community Survey does not provide an occupational category for these persons.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Workers with more education than required by their jobs constitute the largest share of immigrant workers by far, representing 41.9 percent of immigrants.

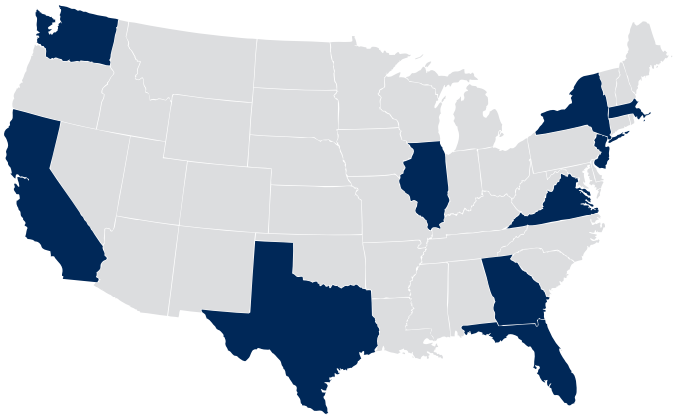
Map 4: Leading states of residence of immigrants in US labor force by education/job match

Educational attainment greater than job training (%)



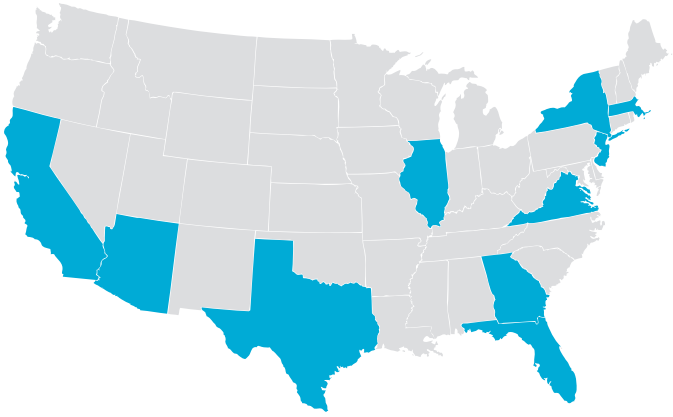
State	%
California	22.7
New York	11.2
Florida	10.2
Texas	8.9
New Jersey	5.4
Illinois	4.6
Virginia	2.9
Massachusetts	2.7
Maryland	2.5
Georgia	2.4
Other	26.4

Educational attainment equal to job training (%)



State	%
California	25.5
Texas	11.5
New York	9.7
Florida	7.9
New Jersey	4.8
Illinois	4.1
Massachusetts	2.4
Virginia	2.4
Georgia	2.4
Washington	2.3
Other	29.2

Educational attainment less than job training (%)



State	%
California	25.8
Texas	13.0
New York	10.0
Florida	8.6
Illinois	4.3
New Jersey	4.1
Georgia	2.7
Arizona	2.4
Massachusetts	2.2
Virginia	2.1
Other	25.0

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Gender

Males represent the majority of native-born workers and an even larger share (nearly 57 percent) of immigrant workers (Table 17). The gender breakdown of foreign-born workers has implications for workforce-development efforts and illustrates the fact that many women across all populations are not in the labor force.

Table 17: Gender of US labor force by nativity, 2014

	Native born	Foreign born
Total	**133,798,391**	**27,200,551**
Total %	100.0%	100.0%
Male	52.0%	56.8%
Female	48.0%	43.2%

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Findings on special populations

Programs and policies designed to boost foreign-born workers' access to postsecondary learning opportunities will be most effective when developed in accordance with the unique sociodemographic characteristics of distinct groups of immigrants.

Age

As the American Community Survey does not identify where a person was educated, the methodology employed in this report is based on the assumption that people who arrived in the United States at a young age could not have obtained advanced levels of education in their home countries. As such, the analysis suggests immigrants likely to be educated in the United States are younger than those educated abroad (Table 19, on pages 40–43). About 38 percent of immigrants likely educated in the United States are aged 25 to 34, compared with only 18 percent of those educated abroad.[32] Immigrants educated abroad are older than those educated in the United States; most immigrants arrive in the United States in their working years as they come here to work. Younger immigrants, including those who arrive as children, are more likely to be able to access education and training opportunities within traditional postsecondary systems.

Findings vary for recent refugees, who are younger than the average foreign-born person. More than 46 percent of recent refugees are aged 16 to 34, compared with about 30 percent of all other immigrants. The refugee selection process may favor younger applicants, perhaps because of their greater mobility and ability to leave a country where they were in danger.

Immigration status

The immigration statuses that apply to the foreign-born labor force vary notably across all the immigrant types analyzed in this report (Table 19, on pages 40–43). Among learner types, naturalized immigrants constitute 58.2 percent of returning adult students but only 27 percent of traditional-age students. Nearly half (almost 47 percent) of traditional-age, foreign-born students are estimated to be undocumented.

Most immigrants likely to have completed their highest degree in the United States are naturalized US citizens. In contrast, a plurality of immigrants likely to have been educated abroad (40 percent) are naturalized but nearly a third (31.3 percent) are undocumented. Of recent refugees, nearly four in five (78 percent) are LPRs, compared with nearly a quarter (24 percent) of all other immigrants.[33]

Immigrants whose educational attainment exceeds the requirements of their jobs are mostly naturalized citizens (52 percent). Undocumented workers represent a large portion of workers whose education matches the requirements of their jobs and workers whose education is less than what is normally required by their jobs. Finally, about 77 percent of female immigrants are legally residing in the United States (as either naturalized immigrants or LPRs) compared with 68 percent of male immigrants; gender distribution is likely a product of family-based immigration and refugee resettlement policy.

English ability

Several groups of immigrants have particularly low levels of English-language ability (Table 19, on pages 40–43). Among learner types, about 45 percent of adults without recognized postsecondary education do not speak English well or at all. More than one-third of immigrants likely to be educated abroad speak English not well or not at all, as do almost 48 percent of recent refugees.

Type of adult learner

Of the groups analyzed here, recent refugees (13 percent) are more likely to be traditional-age students than other foreign-born individuals (Table 19, on pages 40–43).[34] Seven percent of immigrants overall are traditional-age students, compared with 13 percent of refugees. At almost 70 percent, persons with educational attainment below what is normally required at their job have a relatively high rate of being adults without recognized postsecondary education. Men are more likely to be adults without recognized postsecondary education than women, at 46 percent for men and 39 percent for women.

Country of education

Among the three types of adult learners, adults without recognized postsecondary education are the most likely—at 79.2 percent—to have obtained their education outside of the United States (Table 19, on pages 40–43). Recent refugees are almost all educated outside of the United States, at almost 92 percent. Among the three categories of workers within the education/job match category, persons with educational attainment exceeding the requirements of their jobs are most likely to have been educated abroad.

Education/job match

Among the three types of adult learners, 67 percent of individuals in the returning adult students category have more education than what is needed for their job (Table 19, on pages 40–43). Within the category of country of education, almost half (48 percent) of persons educated in the United States have more education than required for their job.

Gender

In each of the categories reviewed here—learner types, country of education, refugee status, and education/job match—persons are more likely to be male than female (Table 19, on pages 40–43). The groups with the highest proportion of males include adults without recognized postsecondary education, at 61 percent male; refugees, at 60 percent male; and persons with education below their job needs, at 61 percent male.

Earnings

Workers' hourly wages show clear patterns across the groups, by both different groups' earnings and the value of education (Table 20, on pages 44–45).[35] Immigrants likely to be educated in the United States earn more than immigrants likely to be educated abroad, across nearly all education levels. Recent refugees earn less than other immigrants regardless of educational attainment. Persons with more education than what is needed for a new entrant into the type of job they hold earn less than other immigrants in nearly all cases. Men earn more than women of comparable education, and undocumented legal status lowers wages at nearly every level of education.

Leading countries of origin

Nationally, the three leading countries of origin for immigrants in the labor force are Mexico, India, and China (Table 18, below, and Table 21, on pages 46–47). Among the various immigrant groups

Table 18: Leading countries of origin of immigrants in US labor force; United States, 2014

Total	**27,200,551**
Mexico	7,974,468
India	1,937,767
China	1,447,140
Philippines	1,266,140
Vietnam	848,711
Cuba	665,240
Former USSR/Russia	648,572
Korea	619,911
Canada	430,402
Poland	281,052

Note: Figures will not sum to total because the table is only looking at leading countries of origin for immigrants in the labor force.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology. Based on persons in the labor force.

analyzed for this report, the adults without recognized postsecondary education group is notable in that its three leading countries of origin are in Latin America—Mexico, El Salvador, and Guatemala (Table 21, on pages 46–47). India does not appear in the list of top 10 countries for adults without recognized postsecondary education, and the Philippines ranks 10th.

The countries of origin are in different rankings by their legal status. Mexico, the Philippines, and India are the top three countries for naturalized immigrants, but three Latin American nations—Mexico, El Salvador, and Guatemala—are the leading countries for the undocumented.

Discussion of findings on special populations

Understanding the interplay among immigrants' sociodemographic factors, their participation in the workforce, and their ability to access postsecondary learning opportunities is critical to designing programs and policies that will maximize foreign-born workers' contributions to the US workforce. The characteristics of the subpopulations potentially affect each group's ability to engage in additional education and job-related training.

- **Age:** The age profile of each group, for example, raises questions about the impact of youth on the likelihood of engaging in new education or training. Groups such as immigrants educated in the United States or recent refugees are younger; for immigrants educated abroad, more than half are over the age of 45 (Table 19, on pages 40–43).
- **Immigration status:** Immigration status can doubtlessly play a large role in future education and training. As noted earlier, undocumented workers' access to workforce development and postsecondary opportunities may be limited by state-level tuition laws and federal Workforce Innovation and Opportunity Act guidelines. Yet, Table 19 shows the undocumented constitute nearly half—47 percent—of traditional-age students, and an intervention aimed only at legally residing immigrants would therefore ignore half of the foreign-born, traditional-age, student population. Unauthorized traditional-age students may also face pressure to prioritize work over unremunerated training due to the lower income levels of undocumented families and lack of eligibility for public benefits.
- **English-language ability:** Lack of sufficient English ability affects immigrants in all the categories analyzed in this report. Two groups, adults without recognized postsecondary education and recent refugees, include large numbers of persons who do not speak English well. For these groups especially, a primary education and training need is to improve their English skills. They may need to learn English prior to, or along with, obtaining education and training strictly oriented to technical job skills.
- **Learner type:** For each of the major immigrant groups, a plurality of individuals fall into the category of adults without recognized postsecondary education. Members of this group have high school degrees but no further education. Regardless of whether these individuals pursue vocational or traditional college education, they may need remedial support to successfully transition from a high school education that may have been completed years ago.

- **Country of education:** Immigrants who have been educated abroad may need orientation to US educational systems. This knowledge would include learning how to enroll and pay for education as well as how US classrooms function differently than foreign systems of education. More than one-third of immigrants educated abroad do not speak English well. US-educated individuals may face somewhat fewer obstacles.
- **Education/job match:** The majority of individuals with education below what their job currently requires are adults without recognized postsecondary education who, by definition, have high school degrees but no further education. For some of these individuals, a relatively small amount of additional training could raise their skills to meet the expectations for their jobs, and the additional training may or may not require a formal degree. This dynamic would suggest that some of these persons are not far from attaining an appropriate level of training for their jobs.
- **Gender:** Males make up the majority of immigrants in all the categories analyzed in this report. It is important to remember that this analysis is based on the labor force, and that the population being analyzed skews toward males because they are more likely to be in the labor force than women.

Subgroups' characteristics have economic impact.

Where an immigrant worker fits into the various categories described in this report has real-life implications. Individuals educated abroad, recent refugees, persons with education exceeding their job needs, women, and the undocumented pay a financial penalty through lower earnings. As the data on wages show, additional training and education raise income and thus improve the lives of immigrants and their families.

The leading countries of origin across immigrant subgroups can have implications for outreach.

The relative ranking of country of origin helps identify key populations to target with education and training efforts. This analysis is important for reaching immigrant populations, because members of a national-origin group often live in ethnically concentrated areas and may be served by ethnic- or community-based organizations. National-origin groups are also frequently concentrated within certain industries or employers.

For some immigrant subpopulations, such as persons educated in the United States, the leading countries of origin track the national average, meaning immigrants hail from Mexico, India, and the Philippines. However, for undocumented immigrants the leading countries of origin are in Latin America. ■

Table 19: Categories of foreign-born workers in US labor force; United States, 2014

		Learner types			Country of education	
	Total foreign-born in labor force	Traditional-age students (aged 18–24)	Adults without recognized post-secondary education (aged 25–64 with high school education only)	Returning adult students (aged 25–64 with some college but no formal degree past high school)	Likely educated in the United States	Likely educated abroad
Total	27,200,551	1,993,036	11,703,926	3,310,764	7,786,653	17,315,855
Total %	100	100	100	100	100	100
16–24 years old	7.7	n/a	n/a	n/a	n/a	n/a
25–34 years old	22.5	n/a	24.7	27.1	38.2	18.1
35–44 years old	27.5	n/a	31.6	29.1	29.7	29.9
45–54 years old	24.3	n/a	27.7	27.8	20.6	28.8
55–64 years old	14.1	n/a	16.0	16.0	9.2	18.1
65+ years old	3.9	n/a	n/a	n/a	2.3	5.1
Total	27,200,551	1,993,036	11,703,926	3,310,764	7,786,652	17,315,855
Total %	100	100	100	100	100	100
Naturalized	46.7	27.3	33.3	58.2	66.7	40.0
Legal permanent resident	25.2	26.0	25.6	21.8	17.3	28.6
Undocumented	28.1	46.7	41.0	20.0	15.9	31.3
Total	27,200,551	1,993,036	11,703,926	3,310,763	7,786,652	17,315,855
Total %	100	100	100	100	100	100
Speaks English not well or not at all	25.8	18.6	45.2	14.3	8.2	34.6
Speaks English well	22.0	17.4	25.4	24.0	16.1	25.2
Speaks English very well	37.3	50.8	20.6	43.0	53.4	28.3
Speaks English only	15.0	13.3	8.8	18.8	22.3	11.8

	Refugee		Education/job match			Gender	
	Recent refugee	Nonrefugee	Education exceeds job needs	Education matches job needs	Education below job needs	Male	Female
Total	449,571	26,750,979	11,211,764	9,578,578	5,945,329	15,443,962	11,756,590
Total %	100	100	100	100	100	100	100
16–24 years old	13.7	7.6	8.9	6.6	5.8	7.8	7.6
25–34 years old	32.5	22.3	23.1	23.1	20.2	23.5	21.0
35–44 years old	28.2	27.5	26.3	29.1	27.7	27.7	27.4
45–54 years old	18.2	24.4	23.7	24.2	25.9	23.5	25.3
55–64 years old	5.8	14.3	14.0	13.4	16.0	13.6	14.9
65+ years old	1.6	3.9	3.9	3.6	4.4	4.0	3.8
Total	449,571	26,750,979	11,211,764	9,578,578	5,945,329	15,443,962	11,756,589
Total %	100	100	100	100	100	100	100
Naturalized	16.4	47.2	51.5	43.2	44.2	42.4	52.4
Legal permanent resident	78.1	24.3	24.1	25.3	26.4	25.6	24.7
Undocumented	5.6	28.5	24.4	31.5	29.4	32.0	22.9
Total	449,571	26,750,979	11,211,764	9,578,579	5,945,328	15,443,962	11,756,590
Total %	100	100	100	100	100	100	100
Speaks English not well or not at all	47.5	25.4	16.6	31.4	33.6	26.8	24.5
Speaks English well	26.7	21.9	22.4	20.3	24.1	22.9	20.8
Speaks English very well	22.3	37.5	44.7	34.0	28.8	36.3	38.5
Speaks English only	3.5	15.2	16.2	14.3	13.6	14.0	16.2

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Table 19: Population by categories foreign-born workers in US labor force; United States, 2014 (continued)

		Learner types			Country of education	
	Total foreign-born in labor force	Traditional-age students (aged 18–24)	Adults without recognized postsecondary education (aged 25–64 with high school education only)	Returning adult students (aged 25–64 with some college but no formal degree past high school)	Likely educated in the United States	Likely educated abroad
Total	27,200,551	1,993,036	11,703,926	3,310,764	17,762,481	9,438,069
Total %	100	100	100	100	100	100
Traditional-age students	7.3	100	0	0	n/a	n/a
Adults without recognized postsecondary education	43.0	0	100	0	31.3	56.4
Returning adult students	12.2	0	0	100	17.8	11.7
Other	37.5	0	0	0	50.9	31.9
Total	27,200,551	1,993,035	11,703,926	3,310,763	17,762,481	9,438,069
Total %	100	100	100	100	100	100
Likely educated abroad	65.3	22.3	79.2	58.2	0.0	100
Likely educated in the United States	34.7	77.7	20.8	41.8	100	0.0
Total	26,735,671	1,896,757	11,526,449	3,258,834	17,499,193	9,243,399
Total %	100	100	100	100	100	100
Education exceeds job needs	41.9	52.4	18.6	66.5	47.8	38.3
Education matches job needs	35.8	30.2	45.3	16.5	33.8	37.2
Education below job needs	22.2	17.4	36.0	16.9	18.4	24.5
Total	27,200,551	1,993,036	11,703,926	3,310,763	17,762,481	9,438,070
Total %	100	100	100	100	100	100
Male	56.8	57.4	61.0	54.0	55.2	57.4
Female	43.2	42.6	39.0	46.0	44.8	42.6

	Refugee		Education/job match			Gender	
	Recent refugee	Nonrefugee	Education exceeds job needs	Education matches job needs	Education below job needs	Male	Female
Total	449,573	26,750,979	11,211,764	9,578,578	5,945,329	15,443,961	11,756,589
Total %	100	100	100	100	100	100	100
Traditional-age students	13.2	7.2	8.9	6.0	5.5	7.4	7.2
Adults without recognized postsecondary education	47.3	43.0	19.1	54.5	69.8	46.2	38.9
Returning adult students	12.1	12.2	19.3	5.6	9.3	11.6	13.0
Other	27.4	37.6	52.7	33.9	15.4	34.8	40.9
Total	449,573	26,750,978	11,211,764	9,578,578	5,945,329	15,443,962	11,756,589
Total %	100	100	100	100	100	100	100
Likely educated abroad	91.6	64.9	64.0	71.0	74.8	69.8	67.9
Likely educated in the United States	8.4	35.1	36.0	29.0	25.2	30.2	31.0
Total	428,025	26,314,567	11,211,764	9,578,578	5,945,329	15,240,857	11,501,736
Total %	100	100	100	100	100	100	100
Education exceeds job needs	45.9	41.9	100	0.0	0.0	40.5	43.9
Education matches job needs	33.3	35.9	0.0	100	0.0	35.8	35.8
Education below job needs	20.8	22.3	0.0	0.0	100	23.7	20.3
Total	449,573	26,750,978	11,211,764	9,578,579	5,945,329	15,443,962	11,756,589
Total %	100	100	100	100	100	100	100
Male	60.0	56.7	55.0	57.0	60.6	100	0.0
Female	40.0	43.3	45.0	43.0	39.4	0.0	100

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Table 20: Median hourly wage by level of educational attainment of foreign-born workers in US labor force; United States, 2014

		Country of education		Refugee status		Education/ job match
Educational attainment	All foreign-born, $	Likely educated abroad, $	Likely educated in United States, $	Nonrefugee, $	Recent refugee, $	Education exceeds job needs, $
≤6 years schooling	10.00	9.50	n/a	9.50	9.00	n/a
7 years to no high school	10.00	10.00	9.18	9.72	9.00	n/a
High school only	11.00	11.00	11.45	11.20	8.15	9.60
Some college but no degree	13.00	12.50	12.50	12.50	8.65	11.90
Associate's degree	15.00	15.00	16.25	15.50	8.50	13.50
Bachelor's degree	21.70	20.00	23.11	22.00	10.00	14.70
Master's degree	32.50	32.00	33.33	32.50	15.00	34.00
Prof degree beyond bachelor's degree	38.00	35.00	40.00	37.50	20.00	25.56
Doctoral degree	39.00	36.00	42.00	39.50	16.00	41.20

	Education/ job match		Gender		Legal status		
Educational attainment	Education matches job needs, $	Education below job needs, $	Male, $	Female, $	Naturalized, $	Legal permanent resident, $	Undocumented, $
≤6 years schooling	8.75	10.40	10.00	8.00	11.30	9.00	9.00
7 years to no high school	8.64	10.95	10.40	8.31	11.50	9.33	9.00
High school only	12.50	12.50	12.00	10.00	13.00	10.40	10.00
Some college but no degree	12.50	18.63	13.70	11.50	15.00	11.00	10.00
Associate's degree	22.50	22.50	16.67	15.00	17.50	13.00	12.00
Bachelor's degree	31.11	20.65	24.50	20.00	24.00	20.00	14.29
Master's degree	25.00	20.00	38.33	26.84	34.00	29.82	35.00
Prof degree beyond bachelor's degree	53.33	n/a	40.95	33.33	42.42	29.00	17.00
Doctoral degree	35.50	n/a	43.08	31.00	45.00	29.50	36.00

Note: Figures may not sum to 100% due to rounding.

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

Table 21: Leading countries of origin by category of foreign-born workers in US labor force; United States, 2014

Learner types

Traditional-age students		Adults without recognized postsecondary education		Returning adult students	
Total	1,993,041	**Total**	11,703,929	**Total**	3,310,726
Mexico	708,173	**Mexico**	5,651,569	**Mexico**	766,526
China	80,855	**El Salvador**	700,624	**Philippines**	225,200
Guatemala	78,151	**Guatemala**	456,177	**Vietnam**	123,025
El Salvador	73,930	**Vietnam**	355,133	**El Salvador**	107,904
Philippines	67,163	**China**	326,183	**Dominican Republic**	102,122
Dominican Republic	59,388	**Dominican Republic**	299,128	**Cuba**	95,108
India	59,138	**Cuba**	285,565	**Haiti**	88,423
Honduras	44,853	**Honduras**	274,485	**Jamaica**	81,687
Colombia	41,187	**Philippines**	188,251	**Korea**	80,141

Legal status

Naturalized		Legal permanent resident		Undocumented	
Total	12,707,608	**Total**	6,851,069	**Total**	7,641,874
Mexico	2,092,570	**Mexico**	1,792,092	**Mexico**	4,179,806
Philippines	880,362	**India**	474,195	**El Salvador**	471,297
India	713,160	**China**	322,652	**Guatemala**	383,557
Vietnam	652,296	**Cuba**	310,359	**India**	263,114
China	526,380	**Philippines**	222,903	**Honduras**	246,841
Korea	402,878	**El Salvador**	222,535	**China**	199,095
Cuba	354,881	**Canada**	210,583	**Philippines**	162,875
Dominican Republic	326,872	**Dominican Republic**	170,663	**Dominican Republic**	122,574
Jamaica	326,857	**Guatemala**	138,086	**Ecuador**	104,833

Country of education

Likely educated abroad		Likely educated in United States	
Total	17,315,863	**Total**	7,786,656
Mexico	5,133,542	**Mexico**	2,094,268
India	972,931	**India**	415,278
Philippines	829,438	**Philippines**	365,920
China	721,364	**Vietnam**	310,012
El Salvador	690,914	**China**	242,010
Vietnam	496,074	**Korea**	234,478
Guatemala	462,452	**El Salvador**	230,750
Cuba	421,478	**Cuba**	202,296
Dominican Republic	371,024	**Dominican Republic**	187,922

Education/job match

Education exceeds job needs		Education matches job needs		Education below job needs	
Total	10,210,156	**Total**	8,948,762	**Total**	5,599,435
Mexico	1,907,830	**Mexico**	3,046,353	**Mexico**	2,187,779
India	776,080	**India**	490,414	**El Salvador**	278,206
Philippines	589,309	**Philippines**	429,037	**Vietnam**	255,384
China	490,059	**El Salvador**	366,043	**Guatemala**	177,430
Korea	306,765	**China**	316,558	**Philippines**	158,489
Cuba	275,093	**Vietnam**	275,987	**Dominican Republic**	148,685
El Salvador	265,486	**Guatemala**	256,115	**China**	147,192
Vietnam	263,621	**Cuba**	198,089	**Cuba**	135,161
Dominican Republic	230,238	**Korea**	183,416	**Jamaica**	122,117

Universe: US labor force
Source: 2014 American Community Survey with undocumented immigrant estimates derived by Center for Migration Studies of New York; see methodology

THE EFFECTS OF POLICY AND DEMOGRAPHIC SHIFTS

The information in this report is based on the 2014 American Community Survey. However, several important trends may influence future analyses and recommendations. The following three shifts provide important examples for future consideration.

- **Demographic change:** As research by the Pew Hispanic Center has demonstrated,[36] the foreign-born population is evolving to become relatively more Asian over time. This trend is due, in part, to the fact that the undocumented population, which is heavily Latino, has been growing at a slow or negative rate for approximately a decade. Demographic change will shift the relative size of key groups among immigrants, along with other characteristics. For example, the undocumented population will, on average, become older as it is not replenished by young arrivals. That same undocumented population is also aging because the last large-scale legalization program (part of the Immigration Reform and Control Act of 1986) required most applicants to have been residing in the United States since before 1982. Thus, the nation is accruing an unauthorized population comprising many individuals who have been in the United States for three or four decades.
- **Federal policy:** The White House has embraced a legislative platform that would cut legal immigration in half and build selective visa programs that favor higher-skilled immigrants. While legislative proposals around such dramatic cuts enjoy little support in Congress, federal prioritization of highly skilled immigrants would have implications for workforce development in the long term. Such policies fail to recognize the US economy's ongoing need for lower-skilled workers and could negatively affect the immigrants who need additional workforce training over time, though it would not reduce the needs of those immigrants already in the country.
- **Geographic concentration:** Another change taking place among US immigrants includes a well-known shift from traditional "gateway" states and cities toward areas that had not previously received large numbers of immigrants a few decades ago but are now important destinations for foreign-born persons. These locations include states such as Georgia, Nevada, and North Carolina, as well as cities and small towns in the Midwest near meatpacking factories. Efforts to reach immigrants and provide them with training will need to be cognizant of these geographic shifts. ■

THE START OF A CONVERSATION

The various characteristics of immigrant workers in the labor force have an impact on their likely need for additional education and skills and the types of training that may best suit them. Education levels, age, gender, and other features of immigrants differentiate them from one another and from native-born workers. These sociodemographic characteristics have implications for programs, investments, and efforts to improve workforce-related skills of the 27.2 million immigrant workers currently in the United States.

The real work of connecting foreign-born workers with postsecondary education and training opportunities will require a coordinated effort among philanthropic organizations, postsecondary institutions, immigrant-serving organizations, employers, the private sector, and political leaders. Successful programs and practices have emerged from such cross-sector collaborations in communities across the country, and they show promise for scaling nationwide.[37] In many cases, programs and policies that serve immigrant workers effectively will provide solutions for their native-born peers as well.

Researchers and academics must continue to seek answers to key research questions to inform the field's evolving understanding of challenges and opportunities associated with maximizing the contributions of foreign-born workers. These data raise several pressing areas of research:

- **Understanding detailed characteristics of the immigrant population.** Given gaps in federal data sets around foreign-born workers, this report uses proxy and other methodologies to approximate several sociodemographic aspects of the foreign-born workforce, including whether they received their education in the United States or abroad, their immigration status (specifically LPR or undocumented), and their attainment of licenses or other professional credentials. How can the United States build more complete data sets to better understand the detailed characteristics of the foreign-born workforce?
- **Projecting future workforce demands and issuing visas based on those needs.** This analysis offers an important look at the education and training needs of the 27.2 million immigrants currently contributing to the US workforce. It is built on 2014 data from the US Census Bureau's American Community Survey and the Bureau of Labor Statistics—the most recent data available at the time of report publication. As workforce development and training programs are most effective when calibrated against future economic needs, how can federal data sets project future workforce and training needs?
- **Supporting immigrants in obtaining US career and education credentials.** Nearly two-thirds of the foreign-born are likely to have been educated abroad, increasing the likelihood that most immigrants arrived in the United States as adults. As each US state has its own requirements and processes for licensing and credentialing, how can well-informed career navigation and recredentialing guidance be scaled up to help immigrants identify the best pathway to meet their educational and career goals?

- **Meeting the continued demand for low-skilled workers.** Currently, 25 percent of US workers have only high school degrees, and 35 percent of US jobs require only a high school degree. While projections suggest two-thirds of jobs in the future will require postsecondary education, there will still be a need for low-skilled workers in our economy (Table 7, on page 17). Who, within the foreign-born and native-born populations, will be trained to fill these jobs?
- **Ensuring that the skills of "overskilled" workers match their job requirements.** A large share of all workers—47 percent—have more education than their job currently requires (Table 9, on page 19). If so many workers are already "overskilled," how will the country ensure employees who continue to upskill and increase postsecondary attainment have careers that match their skill sets?
- **Designing postsecondary training for adult learners.** Fifty-four percent of LPRs and 64 percent of the undocumented are aged 25 to 44 and in their prime working years (Table 4, on page 12). Training and certification programs will need to be designed around adult learners' current schedules or in partnership with their employers, outside of traditional programs within institutions of higher education, particularly full-time attendance aimed at a four-year degree. What successful models and programs already exist that should be more broadly scaled up to improve adult learners' postsecondary educational attainment while maintaining their current jobs?
- **Preparing the refugee population for postsecondary education.** Recent refugees are younger than the average foreign-born worker. More than 46 percent of recent refugees are aged 16 to 34, compared with about 30 percent of all other immigrants (Table 19, on pages 40–43). As refugees enter their prime working years, what specialized programs can help ensure their proactive pursuit of postsecondary education in the United States?
- **Improving gender equity in labor-force participation.** Males represent a majority of native-born workers and an even larger share (57 percent) of foreign-born workers (Table 17). Across all populations, many women are not in the labor force. Males are the majority of immigrants in all the categories analyzed in this report. If efforts to train and educate immigrants focus on individuals currently in the workforce, then men will benefit more from these efforts than women. How can educational institutions and employers support efforts to improve gender equity in labor-force participation?
- **Responding to geographic distribution.** Large concentrations of foreign-born workers live in traditional, immigrant-gateway states, including California, Florida, New York, and Texas. How should investments in programs and policies be made at state and local levels to simultaneously reach large numbers of foreign-born workers in current gateways and support smaller, specialized pockets of workers in emerging gateways with limited social support and infrastructure to provide services to immigrants?

At the core of these questions is a shared understanding that the US economy's continued ability to compete on a global scale depends on its ability to maximize the skills and talents of all workers—foreign born and native born alike. ■

METHODOLOGY

Linking the 2014 American Community Survey and BLS data by occupation

This section describes the method used to link American Community Survey (ACS) data to workers' occupations with Bureau of Labor Statistics (BLS) data on the education typically required for various occupations.

Procedures

A major step in this project involved assigning education and training information to 2014 ACS records. The 2014 ACS data set, obtained from the Center for Migration Studies of New York (CMS), was used because CMS flagged individuals in the ACS records as likely undocumented or not. The ACS records from CMS use 1990 occupational codes. Because occupational categories were redefined in both 2000 and 2010, certain steps were required to join the 1990 codes to current BLS education and training classifications. These steps included using a crosswalk to transform year 1990 occupation codes to year 2000 codes; using a crosswalk to transform year 2000 codes to year 2010 codes; and assigning BLS education and training classifications to 2010 codes. The resulting data set has education and training information for all occupations in the CMS microdata.

Specific adjustments had to be made during the transformations.

- **1990 to 2000.** In instances where a 1990 category split into multiple 2000 categories, the 2000 occupational code linked with the 1990 code was chosen on the basis of the category with the largest number of employed workers. The employment population numbers can be found in the 1990 to 2000 crosswalk described below in "Sources of data."
- **2000 to 2010.** In instances where 2000 categories were split into multiple 2010 categories, the 2000 and 2010 data were linked on the basis of employment population numbers tabulated by the author from the ACS.
- **Assigning BLS education and training.** In some instances, BLS education and training information were provided for subcategories of year 2010 occupations. In these cases, assignment of education and training to a year 2010 occupation was done on the basis of the BLS category with the largest employed population. A table with employed numbers of persons in each BLS category is available from BLS.

Sources of data

2014 Census public-use microdata samples with immigration status identifier

The Center for Migration Studies of New York (CMS) provided Rob Paral and Associates with a set of 2014 American Community Survey (ACS) microdata that included an identifier to flag a record as likely undocumented or not. CMS developed this information using a series of major steps including "logical edits" to identify immigrants highly likely to be legal immigrants, development

of population control totals for unauthorized populations by country of origin, and adjustments to account for population undercount in the ACS.

The ACS contains the most recent set of data from CMS, which is why all tables in this report reference data from 2014.

For a description of the CMS project and methodology, see Robert Warren's "Democratizing Data about Unauthorized Residents in the United States: Estimates and Public-Use Data, 2010 to 2013," in the *Journal on Migration and Human Security,* 2014, at http://dx.doi.org/10.14240/jmhs.v2i4.38.

Crosswalk between 1990 and 2000

The source of information on how to transform and allocate 1990 occupational codes to 2000 occupational codes is Thomas Scopp's paper, *The Relationship Between the 1990 Census and Census 2000 Industry and Occupation Classification System,* Technical Paper #65, Washington, DC: US Department of Commerce, Economic and Statistics Administration, US Census Bureau, October 2003, accessed May 1, 2017, at https://www.census.gov/library/working-papers/2003/demo/tp-65.html.

This source includes frequency tests for all 2000 occupational codes that matched up to a certain 1990 occupational code. These frequency tests were used to establish the plurality for the 325 cases where the 1990 occupational code split into multiple 2000 occupational codes. Of these 325 cases, 289 were a simple majority as well as being a plurality. Nine cases had a close second within 5 percent of the 2000 occupational code that held the plurality.

Crosswalk between 2000 and 2010

The source of information on how to translate and allocate 2000 occupational codes to 2010 occupational codes is a crosswalk file published by the US Census Bureau and accessed May 1, 2017, at https://www.census.gov/people/io/files/2010_OccCodeswithCrosswalkfrom2002-2011nov04.xls.

In cases where a 2000 occupational code split into multiple occupational codes in 2010, the 2010 occupational code with the plurality of cases was assigned to the 2000 occupational code. This plurality was established through one of two frequency tests. The first frequency test was run using the American Community Data for 2011–15. A second frequency test using the Bureau of Labor Statistics data for 2016 was run for cases where the ACS data did not break up into the specific 2010 occupational codes. Either one or both frequency tests were run for 119 cases where the 2000 occupational codes broke up into multiple 2010 occupational codes. Of these 119 cases, 89 cases were a simple majority as well as being a plurality. Ten cases had a close second within 5 percent of the 2010 code holding the plurality.

Education and training of 2010 occupations

For information on the education and training related to each occupation, the source is the education and training classification system of the US Bureau of Labor Statistics, as reported in the Employment Projections database at https://data.bls.gov/projections/occupationProj. The database includes year 2010 occupational codes linked to standard occupational categories.

BLS also provides a table of employed population for each of its standard occupational categories, as of May 2016, at https://www.bls.gov/oes/current/oes_nat.htm.

Occupational training was assigned to 1990 occupational codes using the standard occupational categories code, which was assigned to each 2010 occupational code.

Special case: Postsecondary teachers
From 1990 to 2000, 30 occupational codes were combined to form the 2000 occupational code "220," or "postsecondary teachers." From 2000 to 2010, this occupational code was split back into more specific postsecondary teacher categories. Thus, the 1990 occupational codes for post-secondary teachers (113–119, 123–129, 133–139, 143–149, 153) were hand matched to the 2010 codes.

Special cases: Occupation training assignment
The 2010 standard occupational category 25–3090 separated into "teachers, all other, except substitutes" and "substitute teachers." For the purposes of the match, we considered them both to have the training of "teachers, all other."

In addition, the 1990 occupational code "737," or "Bookbinding," disappeared in the 2000-to-2010 crosswalk. Thus, this 1990 occupational code was assigned the occupational skills of "Print binding and finishing workers."

Estimating the number of persons educated abroad

The ACS does not identify where a person obtained her or his education. We used a set of rules to estimate whether an immigrant's education was completed abroad or in the United States, as displayed in the table below.

The rules assume that high levels of education reported by an individual could not have been obtained in their home country if the individual arrived in the United States prior to a certain age. For example, a person who arrived at age 24 or younger is unlikely to have completed a professional degree abroad, because most professional degrees require at least three years of study beyond the bachelor's degree, and most people do not complete their bachelor's until age 22 (Table 22).

Table 22: Rules for assigning respondent's education as likely completed in the United States

Educational attainment reported	Age at entry into the United States
Doctoral degree	<26 years
Professional degree beyond a bachelor's degree	<25 years
Master's degree only	<24 years
Bachelor's degree only	<22 years
Associate's degree only	<20 years
Some college but no degree	<19 years
High school only	<18 years
Seven years of schooling to no high school completion	<17 years
Less than or equal to six years of schooling	Assume education completed abroad

Coding scheme for workers educated in the United States or abroad

An immigrant was coded as "likely educated in the United States" if they met one of the following criteria:

- Their age at arrival was less than 17, **and** they had more than seven years of schooling
- Their age at arrival was less than 18, **and** they had at least received a high school degree or equivalent
- Their age at arrival was less than 19, **and** they had at least attended college but not necessarily graduated
- Their age at arrival was less than 20, **and** they had an associate's degree or greater
- Their age at arrival was less than 22, **and** they had a bachelor's degree or greater
- Their age at arrival was less than 24, **and** they had a master's degree or greater
- Their age at arrival was less than 25, **and** they had a professional or doctoral degree beyond a bachelor's degree

An immigrant was coded as "likely educated abroad" if they met one of the following criteria:

- Their age at arrival was 17 or greater, **and** they had one to seven years of schooling or more but did not receive a high school degree
- Their age at arrival was 18 or greater, **and** they had a high school degree or equivalent, or less
- Their age at arrival was 19 or greater, **and** they had attended college without receiving a degree, or less
- Their age at arrival was 20 or greater, **and** they had an associate's degree or less
- Their age at arrival was 22 or greater, **and** they had a bachelor's degree or less
- Their age at arrival was 24 or greater, **and** they had a master's degree or less
- Their age at arrival was 25 or greater
- They had less than seven years of schooling

Estimating refugee characteristics by proxy method

We estimated the characteristics of refugees using a proxy methodology pioneered by researchers at the Urban Institute. First, we determined the top 10 source countries of admitted refugees using administrative data from the US Department of State Refugee Processing Center (http://www.wrapsnet.org/admissions-and-arrivals/). Next, we selected immigrants in the ACS who arrived from the same countries within the past decade, and adjusted their sample weights to reflect their relative representation among the actual refugee flow. ■

Endnotes

1 Audrey Singer, *Investing in the Human Capital of Immigrants, Strengthening Regional Economies*, The Brookings Institution Metropolitan Policy Program, September 2012, https://www.brookings.edu/wp-content/uploads/2016/06/immigrants-human-capital-singer.pdf.

2 Audrey Singer, *Investing in the Human Capital of Immigrants, Strengthening Regional Economies*, The Brookings Institution Metropolitan Policy Program, September 2012, https://www.brookings.edu/wp-content/uploads/2016/06/immigrants-human-capital-singer.pdf.

3 "In the Meantime: How to Support Immigrant Skill Building While Waiting for Federal Action on Immigration," National Skills Coalition, http://www.nationalskillscoalition.org/resources/publications/file/In-the-Meantime-How-to-Support-Immigrant-Skill-Building-While-Waiting-for-Federal-Action.pdf.

4 Jeffrey S. Passel, "Demography of Immigrant Youth: Past, Present, and Future," *The Future of Children*, vol. 21, no. 1, (Spring 2011): 19–42, http://www.princeton.edu/futureofchildren/publications/docs/21_01_02.pdf.

5 US Department of Homeland Security, "Fact Sheet: Rescission of Deferred Action for Childhood Arrivals (DACA)," September 5, 2017, https://www.dhs.gov/news/2017/09/05/fact-sheet-rescission-deferred-action-childhood-arrivals-daca.

6 Anthony P. Carnevale, Nicole Smith, and Jeff Strohl, *Recovery: Job Growth and Education Requirements Through 2020,* Georgetown University Center on Education Center for Education and the Workforce, 2013, https://cew.georgetown.edu/wp-content/uploads/2014/11/Recovery2020.ES_.Web_.pdf.

7 This report is based on the 2014 American Community Survey from the US Census Bureau because that is the most recent year for which the special estimates of undocumented immigrants are available from the Center for Migration Studies of New York (see methodology).

8 Jeffrey S. Passel and D'Vera Cohn, "Industries of Unauthorized Immigrant Workers," Pew Research Center, Hispanic Trends, November 3, 2016, http://www.pewhispanic.org/2016/11/03/industries-of-unauthorized-immigrant-workers/.

9 Jeanne Batalova, Margie McHugh, and Melanie Morawski, "Brain Waste in the Workforce: Select U.S. and State Characteristics of College-Educated Native-Born and Immigrant Adults," Migration Policy Institute, May 2014, http://www.migrationpolicy.org/research/brain-waste-US-state-workforce-characteristics-college-educated-immigrants.

10 The US Bureau of Labor Statistics, in describing its estimates of education needed for job entry, notes that for some workers their educational attainment may not match what is required by their job because the worker has obtained more education after becoming employed. BLS also notes that the education typically needed for entry into a job today may be different than what was required in the past, and today's job requirements for new entries may not apply to experienced workers. Also, BLS categorizes jobs by the education typically needed for entry, but there may be multiple paths of entry to a job. For example, BLS reports that a bachelor's degree is typically needed for entry into nursing, but there are some nursing jobs that require only an associate's degree.

11 Throughout this section, "job requirements" refers to skill requirements of new hires for any given occupation as reported by the Bureau of Labor Statistics; persons hired in the past may have been expected to have a different set of skills than persons hired today for the same occupation.

12 Anthony P. Carnevale, Artem Gulish, and Tamara Jayasundera, *America's Divided Recovery: College Haves and Have-Nots*, Georgetown University Center on Education and the Workforce, 2016, https://cew.georgetown.edu/wp-content/uploads/Americas-Divided-Recovery-web.pdf.

13 BLS provides two categories of education that together approximately correspond to the Census Bureau category of "some college but no degree."

14 This number is lower than what is cited elsewhere because it excludes some workers for whom the relation between education and job requirements could not be determined. These numbers include persons in the labor force who have not been employed for more than five years; the 2014 American Community Survey does not provide an occupational category for these persons.

15 These and all other dollar amounts in this report are in 2014 dollars.

16 Table 11 includes only Whites among the native born to simplify presentation.

17 The table does not include breakouts for LPRs or the undocumented because that information is not available from the Current Population Survey.

18 Catholic Legal Immigration Network, Inc., "Professional Licenses for Undocumented Immigrants," https://cliniclegal.org/resources/professional-licenses-undocumented-immigrants.

19 Anthony P. Carnevale, Artem Gulish, and Tamara Jayasundera, *America's Divided Recovery: College Haves and Have-Nots*, Georgetown University Center on Education and the Workforce, table 3.1, 2016, https://cew.georgetown.edu/wp-content/uploads/Americas-Divided-Recovery-web.pdf.

20 US Bureau of Labor Statistics, Employment Projections, "Employment change, 2016–2026," Employment change [thousands] column, https://data.bls.gov/projections/occupationProj.

21 While it is a relatively small data set, the Survey of Adult Skills from the Programme for International Assessment of Adult Competencies (PIACC) does offer more explicit information about which types of postsecondary education adults have pursued.

22 Undocumented youths with aspirations for postsecondary education are limited by financial and political hurdles. They cannot use federal student-loan programs to finance their education and many states do not allow them to pay in-state tuition rates.

23 *In the Meantime: How to Support Immigrant Skill Building While Waiting for Federal Action on Immigration*, National Skills Coalition, http://www.nationalskillscoalition.org/resources/publications/file/In-the-Meantime-How-to-Support-Immigrant-Skill-Building-While-Waiting-for-Federal-Action.pdf.

24 James D. Bachmeier, Jeanne Batalova, and Michael Fix, *Untapped Talent: The Costs of Brain Waste among Highly Skilled Immigrants in the United States*, Migration Policy Institute, December 2016, https://www.migrationpolicy.org/research/untapped-talent-costs-brain-waste-among-highly-skilled-immigrants-united-states.

25 Amanda Bergson-Shilcock, *Foundational Skills in the Service Sector,* National Skills Coalition, February 2017, https://www.nationalskillscoalition.org/resources/publications/file/NSC-foundational-skills-FINAL.pdf.

26 In preparing this report, an advisory group was assembled to discuss possible findings and interpretations. The group suggested inclusion of categories such as country of education and refugee status. The category of "learner type" is included here as it relates to definitions used by the Lumina Foundation to understand adult learner needs. See methodology for additional details.

27 For consistency, learner type definitions used in this analysis complement those employed by the Lumina Foundation, which funded this report.

28 For this last group, unfortunately, the 2014 American Community Survey does not report specifically on details of post-high school education.

29 Our tables in this section are based on persons 25 years of age or older, which is the age range typically used when reporting on educational attainment.

30 US Citizenship and Immigration Services, "Refugees & Asylum," last updated November 12, 2015, https://www.uscis.gov/humanitarian/refugees-asylum.

31 The ACS reports on whether immigrants are naturalized or "noncitizens."

32 This finding may partially reflect our method of assigning country of education to immigrants, a method that assumes immigrants who were over a certain age when they entered the United States were likely to have gotten their education abroad.

33 Few recent refugees are naturalized citizens because most applicants for US citizenship must have LPR status for at least five years, and because many recent refugees have yet to master the required English skills and knowledge of US civics and history. Most refugees are LPRs because they are required to apply for this status after living in the United States for a year.

34 Our definition of persons likely educated in the United States or not is based on persons aged 25 years or older, so this category excludes persons who might fall into the category of traditional-age students, all of whom are aged 18–24.

35 This portion of the analysis excludes learner types because by definition these groups do not include all levels of education; for example, no "adults without recognized postsecondary education" have less than a high school education or more than a high school education.

36 Pew Research Center, Hispanic Trends, "Among New Arrivals, Asians Outnumber Hispanics," May 3, 2017, http://www.pewhispanic.org/chart/among-new-arrivals-asians-outnumber-hispanics/.

37 Amanda Bergson-Shilcock, *Upskilling the New American Workforce: Demand-Driven Programs that Foster Immigrant Worker Success & Policies That Can Take Them to Scale*, National Skills Coalition, June 2016, http://www.nationalskillscoalition.org/resources/publications/file/Upskilling-the-New-American-Workforce-1.pdf; IMPRINT, "Steps for Success: Integrating Immigrant Professionals in the United States," World Education Services, September 2015, https://www.imprintproject.org/stepstosuccess.

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As principal of Rob Paral and Associates, Paral has assisted more than 100 human services, advocacy, and philanthropic organizations in understanding the communities they are trying to serve. He works with large-scale data and geographic information systems technology to develop both national and highly localized portraits of human needs and contributions among low-income and immigrant populations.

Paral was the senior research associate of the Washington, DC, office of the National Association of Latino Elected and Appointed Officials, and research director of the previously existing Latino Institute of Chicago. He has been a fellow or adjunct faculty member of the Institute for Latino Studies at Notre Dame University, the DePaul University Department of Sociology, and the American Immigration Council in Washington, DC. He writes about Chicago demography on the *Chicago Data Guy* blog.

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