

The Costs of Brain Waste among Highly Skilled Immigrants in Washington State

By Ariel G. Ruiz Soto, Jeanne Batalova, and Michael Fix

Washington State is home to nearly 1 million immigrants, a number that has tripled since 1990.¹ The state's strong, diverse economy, led by the high-tech industry, growing services sector, and agriculture, employs immigrant workers at all skill levels. Nonetheless, a substantial number of college-educated immigrants in Washington find that they cannot put their academic and professional qualifications to full use.

Using an innovative methodology developed by the Migration Policy Institute (MPI), this fact sheet examines the skill underutilization of highly skilled immigrants—also known as “brain waste”—and its economic costs in Washington. The authors estimate the number and share of college-educated immigrants who work in low-skill jobs or are unemployed in Washington State. They identify the key factors underlying this brain waste, and estimate the amount of annual earnings and state and local taxes lost because immigrant college graduates end up working in low-skilled jobs. In general, the analysis employs two types of comparisons: (1) between the foreign born² and U.S. born who are college graduates; and (2) between foreign-educated and U.S.-educated immigrants. This fact sheet accompanies a national report on skill underutilization, *Untapped Talent: The Costs of Brain Waste among Highly Skilled Immigrants in the United States*.³

Box 1. What Is Brain Waste? Quick Definitions

Brain waste describes the situation when college graduates cannot fully utilize their skills and education in the workplace despite their high professional qualifications. (The terms *college educated* and *highly skilled* are used interchangeably in this fact sheet.)

Brain waste (or *skill underutilization*) is defined here as comprising two unfavorable labor market outcomes: unemployment and underemployment.

- *Unemployment* occurs when a person who is actively searching for employment is unable to find work.
- *Underemployment* refers to work by the highly skilled in *low-skilled jobs*, that is, jobs that require only moderate on-the-job training or less (e.g., home-health aides, personal-care aides, maids and housekeepers, taxi and truck drivers, and cashiers). These occupations typically require a high school diploma or less.

In contrast, highly skilled individuals who are *adequately employed* work in high- or middle-skilled jobs. *High-skilled* jobs require at least a bachelor's degree (e.g., surgeons, scientists, and engineers); *middle-skilled* jobs require long-term on-the-job training, vocational training, or an associate's degree (e.g., carpenters, electricians, and real estate brokers).

Because individuals in middle-skilled jobs are considered adequately employed in this analysis, underemployment refers only to those who are *severely underemployed*, or in positions substantially below their level of training.

Key Findings

- Washington State was home to 179,000 highly skilled immigrants with at least a bachelor's degree during the 2009-13 period.⁴ Of this group, 23 percent—or 41,000 people—were either working in low-skilled jobs or unemployed. That compared to the 25 percent rate of brain waste for college-educated immigrants nationwide.
- Low-skilled employment resulted in immigrant college graduates in Washington State forgoing approximately \$827.2 million in annual earnings. As a result, Washington experienced \$74.9 million in unrealized state and local tax revenue. Nationally, immigrant underemployment resulted in more than \$39.4 billion in lost annual earnings and \$3 billion in forgone state and local taxes.
- As with the country as a whole, highly skilled immigrants in Washington State experienced higher levels of brain waste than the U.S. born—with 23 percent of college-educated immigrants in the state working in low-skilled jobs or without work, compared to 19 percent of Washingtonians born in the United States.
- Having a degree earned outside the United States increases the likelihood of brain waste: Foreign-educated⁵ immigrants in Washington State were more likely to be either underemployed or unemployed (26 percent) than U.S.-educated immigrants (20 percent). (Nationally, these shares were 29 percent and 21 percent, respectively). Immigrants in Washington State were also more likely to experience brain waste if they had limited English skills, had only a bachelor's degree, or were Hispanic or Black.⁶ Time in the United States reduced skill underutilization for immigrant women, but not for men.⁷
- Unlike in the country as a whole, U.S. citizenship did not appear to reduce brain waste for highly skilled immigrants in Washington State. Naturalized U.S. citizens and legal permanent residents had a skill underutilization rate of 28 percent among immigrants educated abroad and 20-21 percent among those educated in the United States.
- As at the national level, Hispanics in Washington experienced the highest brain waste rates (45 percent) among foreign-educated immigrants of all racial and ethnic groups. Among U.S.-educated immigrants, 33 percent of Hispanics and Blacks experienced skill underutilization. In contrast, Asian and White immigrants had relatively low rates of underemployment or unemployment.

I. Highly Skilled Immigrants by the Numbers

Highly Skilled Immigrants. There were 179,000 immigrant college graduates in the Washington civilian labor force during the 2009-13 period (see Table 1). They accounted for 17 percent of all highly skilled workers in the state—higher than the share that immigrants made up of the total Washington population (13 percent). (“College graduates” and the “highly skilled” are used interchangeably in this fact sheet and refer to adults with a bachelor's degree or higher.)

Brain Waste Levels. Twenty-three percent (41,000) of college-educated immigrants in

Table 1. Employment Status of Highly Skilled Adults in Washington State and United States, by Nativity (%), 2009-13

	Washington State		United States	
	Immigrants	U.S. Born	Immigrants	U.S. Born
Total labor force	179,000	898,000	7,618,000	37,936,000
<i>Percent</i>	100	100	100	100
Unemployed	5	4	6	4
Employed by job type				
High-skilled	62	63	57	62
Middle-skilled	15	18	18	19
Low-skilled	18	15	19	14
Brain waste: Unemployed or in low-skilled jobs				
Number	41,000	171,000	1,918,100	6,974,800
Percent	23	19	25	18

Source: Migration Policy Institute (MPI) analysis of U.S. Census Bureau data from the pooled 2009-13 American Community Survey (ACS) and 2008 Survey of Income and Program Participation (SIPP), with legal status assignments by James Bachmeier of Temple University and Jennifer Van Hook of The Pennsylvania State University, Population Research Institute.

Washington State were either underemployed or unemployed, compared to 19 percent (171,000) of their U.S.-born counterparts (see Table 1). This is a slightly lower level of brain waste than highly skilled immigrants experienced nationwide (25 percent).

II. Economic Cost of Brain Waste

Beyond the human-capital losses that are felt by individuals and their families, brain waste has broader economic implications. Workers who are either underemployed or lack employment despite their high professional qualifications have lower disposable incomes to spend and invest, and they pay less in taxes as a result of these forgone earnings. At the same time, employers—and the economy—miss an opportunity to hire available workers with needed skills and qualifications.

In this fact sheet, the Migration Policy Institute (MPI) for the first time estimates the value of forgone earnings associated with low-skilled employment of highly skilled immigrants, as well as the state and local taxes that would be generated by those earnings.⁸ To do so, the

authors compared the average annual earnings of highly skilled immigrants working in low-skilled jobs to those of “adequately” employed immigrants—i.e., those working in middle- and high-skilled jobs. Using decomposition analysis, the authors then estimated the amount of earnings losses attributable to low-skilled employment after controlling for demographic, educational, linguistic, legal status, and other factors.⁹ It is important to note that these figures are in some ways conservative, as they do not account for the lost wages of highly skilled immigrants who were unemployed during the study period, despite wanting to work. Lost wages are also not quantified for highly skilled immigrant workers in occupations that require more than a high school diploma but less than a bachelor’s degree (e.g., dental hygienists, teacher assistants, and electricians).

The value of annual earnings that highly skilled immigrants in Washington State lost due to their employment in low-skilled jobs amounted to \$827.2 million during the period surveyed. If these immigrants had instead been adequately employed and remunerated correspondingly, their households would have paid an additional \$74.9 million in state and local taxes. Nationwide, the low-skilled employment of college-

educated immigrants resulted in \$39.4 billion in forgone wages and \$3 billion in unrealized state and local taxes annually.¹⁰

III. Factors Driving Brain Waste

Several demographic characteristics of highly skilled immigrants in Washington help explain their rates of skill underutilization. Some of these factors are examined below.

Place of Education. Of the 179,000 highly skilled immigrants in Washington State, 52 percent (93,000) were foreign educated and 48 percent (86,000) obtained their degrees in the United States. Highly skilled immigrants in Washington were as likely as immigrants nationally to have been educated abroad (52 percent).

Like the country as a whole, foreign-educated immigrants in Washington were more likely to be either underemployed or unemployed (26 percent) than U.S.-educated immigrants (20 percent). These higher rates of skill underutilization among the foreign educated reflect a number of

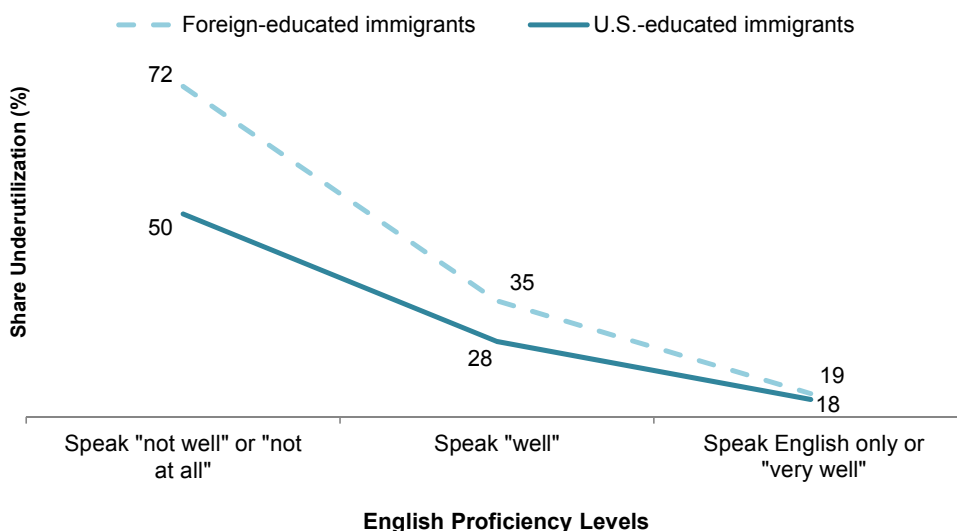
factors, among them real and perceived differences in the quality of U.S. and foreign education, adult newcomers' access to professional networks, and the difficulties that immigrants can face in getting their foreign credentials and professional experiences recognized by employers and professional licensing bodies.

English Proficiency. The majority of highly skilled immigrants in Washington were English proficient: 71 percent of the foreign educated and 87 percent of the U.S. educated (compared to 67 percent and 86 percent respectively at the national level).¹¹

Limited English skills contribute significantly to higher risk of brain waste. Immigrants in Washington who spoke English "not well" or "not at all" were approximately three to four times more likely to be underemployed or unemployed than those who spoke English "only" or "very well" (see Figure 1).

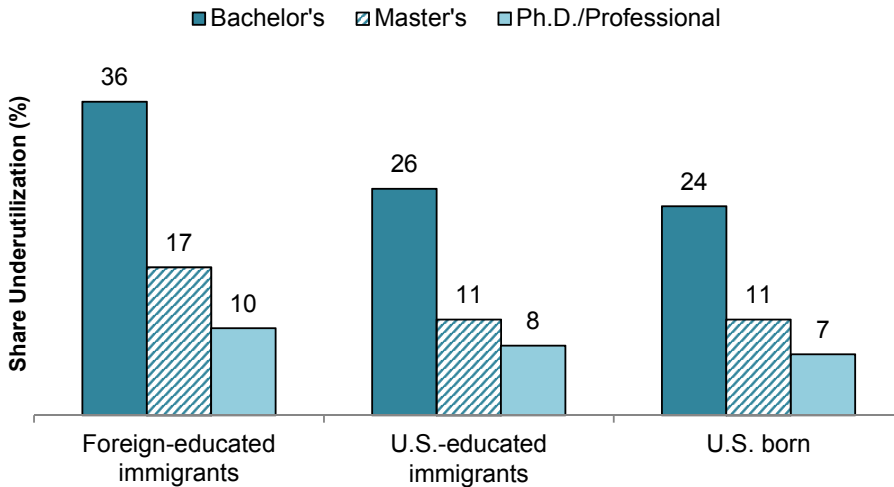
Level of Degree. College-educated immigrants in Washington were more likely than the U.S. born to have advanced degrees:¹² 43 percent and 35 percent, respectively. Nationally, immi-

Figure 1. Underemployment and Unemployment of Highly Skilled Immigrants in Washington State, by Place of Education and English Proficiency (%), 2009-13



Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

Figure 2. Underemployment and Unemployment of Highly Skilled in Washington State, by Nativity, Place of Education, and Degree Level (%), 2009-13



Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

grants were also more likely to hold a graduate degree than the U.S. born (43 percent versus 37 percent).

Regardless of place of birth or education, bachelor degree holders were substantially more likely to be underemployed than those with advanced degrees. Among the foreign educated in Washington, 36 percent of bachelor degree holders experienced brain waste compared to 10 percent of those with a Ph.D. or professional degree, such as a law or medical degree (see Figure 2). Foreign-educated immigrants at all degree levels were more likely to be underemployed or unemployed than those with U.S. degrees. In contrast, there was little difference among U.S.-educated immigrants with advanced degrees and their U.S.-born counterparts.

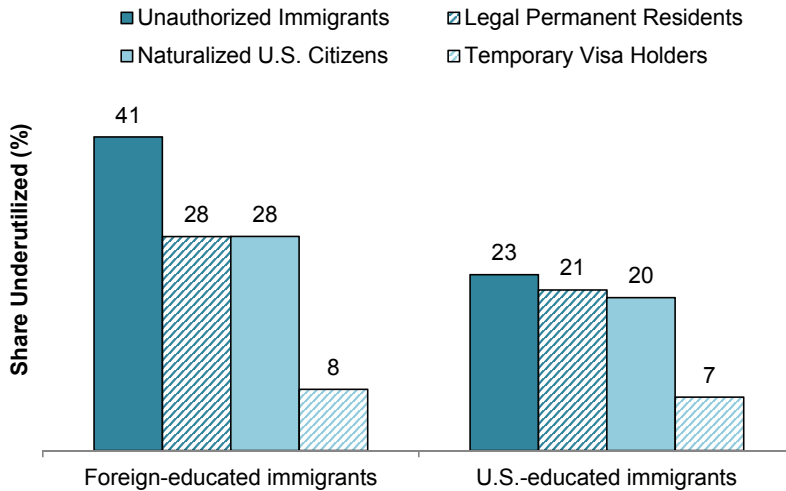
Legal Status/Citizenship. Fifty-two percent of highly skilled immigrants in Washington were naturalized U.S. citizens, 28 percent were legal permanent residents (LPRs), 11 percent were temporary visa holders, and 9 percent were unauthorized immigrants. Highly skilled immigrants in Washington were less likely to be naturalized U.S. citizens than those nationwide (57 percent), but more likely to be on temporary visas than the U.S. average (8 percent).

As in the rest of the country, temporary visa holders had the lowest rates of skill underutilization—owing in large part to visa requirements.¹³ For instance, many temporary visa holders have visas such as the H-1B (for highly skilled workers) or the L-1 (for intracompany transfers), meaning they have presumably been sponsored by a company or nonprofit institution to perform a job commensurate with their experience and skill level.

Unlike at the national level, U.S. citizenship did not appear to reduce brain waste levels for highly skilled immigrants. Naturalized U.S. citizens and LPRs both had a skill underutilization rate of 28 percent among immigrants educated abroad and 20-21 percent among those educated in the United States (see Figure 3).

Unauthorized immigrants had the highest risk of brain waste, with 41 percent of those who were foreign educated and 23 percent of the U.S. educated either working in low-skilled jobs or being unemployed. Nonetheless, it is noteworthy that more than 50 percent of college-educated unauthorized immigrants worked in middle- or high-skilled jobs.

Figure 3. Underemployment and Unemployment of Highly Skilled Immigrants in Washington State, by Place of Education and Legal Status (%), 2009-13

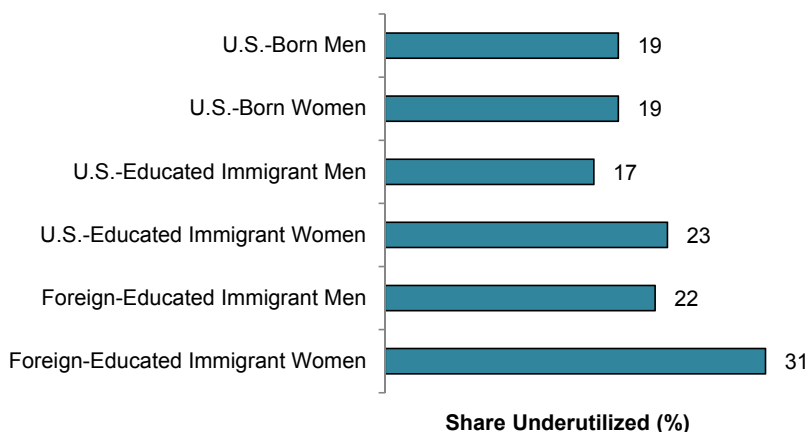


Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

Gender. Women represented 44 percent of the 179,000 highly skilled immigrants in Washington and 48 percent of the state’s 898,000 U.S.-born college graduates. Foreign-educated immigrant women had the highest underemployment rates of all college-educated workers in the state (31 percent) (see Figure 4). Regardless of place of education, immigrant women had higher skill underutilization rates than men. There was no gender gap among the U.S. born.

Time in the United States. Length of residence in the United States had an impact on the skill underutilization of immigrant women, but not on those of men—a change that may owe to shifting social norms within immigrant families as well as a need for higher household earnings.¹⁴ The levels of brain waste among immigrant women decreased from 38 percent of recent arrivals (i.e., in the country for five years or less) to 23 percent of long-term residents

Figure 4. Underemployment and Unemployment of Highly Skilled in Washington State, by Nativity, Place of Education, and Gender (%), 2009-13



Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

Table 2. Race and Ethnicity of the Highly Skilled in Washington State, by Nativity and Place of Education (%), 2009-13

Race/Ethnicity	Washington State		
	Foreign-Educated Immigrants	U.S.-Educated Immigrants	U.S. Born
Number	93,000	86,000	898,000
<i>Percent</i>	100	100	100
Hispanic	7	8	3
Non-Hispanic Black	4	3	2
Non-Hispanic Asian	53	58	3
Non-Hispanic White	36	31	92

Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

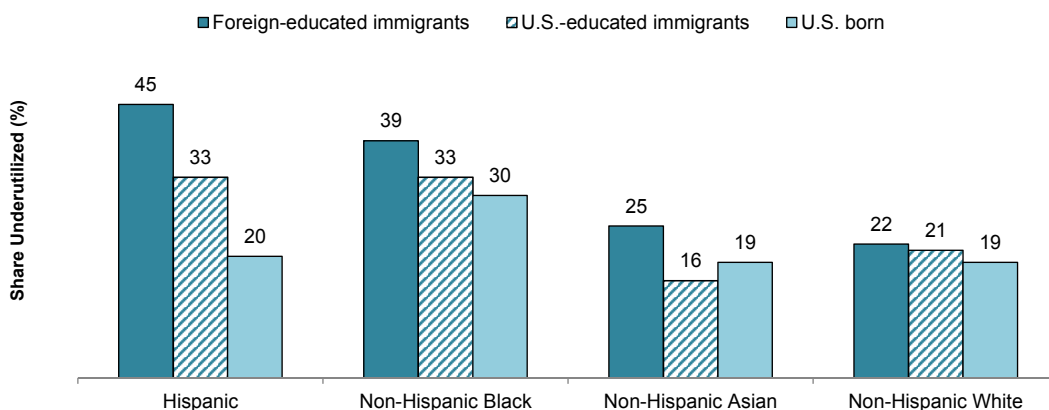
(i.e., in the country for 15 years or more). By contrast, underemployment and unemployment rates for immigrant men increased from 20 percent of recent arrivals to 21 percent of long-term residents.

Race and Ethnicity. The racial and ethnic composition of highly skilled immigrants in Washington was roughly the same by place of education (see Table 2): 53-58 percent were Asian, 31-36 percent were White, 7-8 percent were Hispanic, and 3-4 percent were Black. The racial and ethnic makeup of U.S.-born college

graduates was predominantly White, with that group making up 92 percent of the population. Nationwide, Hispanics represented 18 percent of all highly skilled immigrants.

Hispanics had the highest skill underutilization rates (45 percent) among foreign-educated immigrants of all racial and ethnic groups (see Figure 5). Among U.S.-educated immigrants, 33 percent of Hispanics and Blacks experienced brain waste. Asians and Whites had relatively low rates of underemployment and unemployment. Among the U.S. born, Black college gradu-

Figure 5. Underemployment and Unemployment of Highly Skilled in Washington State, by Nativity, Place of Education, and Race/Ethnicity (%), 2009-13



Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

Table 3. Region/Country of Birth and Place of Education for Highly Skilled Immigrants in Washington State and United States (%), 2009-13

Region or Country of Birth	Washington State		United States	
	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)
Total (Number)	93,000	86,000	3,992,000	3,626,000
<i>Percent</i>	100	100	100	100
East Asia	21	21	16	16
China	13	12	9	10
Japan/Asian Tigers*	8	9	6	6
Southeast Asia	15	20	13	14
Philippines	11	8	10	6
Southwest Asia	18	19	20	17
India	15	15	15	12
Middle East	2	2	3	3
Central America	4	5	7	11
Mexico	3	4	5	7
Caribbean	1	1	5	9
South America	4	2	8	7
Canada	7	8	3	3
Australia/Oceania	2	1	1	<1
European Union/EEA**	14	12	12	11
Rest of Europe	7	5	6	4
Africa	6	4	7	5

* Japan/Asian Tigers refers to Hong Kong, Japan, Singapore, and South Korea.

** European Union/EEA refers to the 28 European countries that were part of the European Union as of 2013, plus Iceland, Liechtenstein, and Norway, which are part of the European Economic Area (EEA).

Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

ates experienced the highest levels of brain waste (30 percent).

There were wide differences between the skill underutilization rates of Hispanic foreign-educated immigrants (45 percent), U.S.-educated Hispanic immigrants (33 percent), and U.S.-born Hispanics (20 percent). No other group evidenced such large declines by place of birth and education.

Region and Country of Birth. Immigrants from East Asia represented 21 percent of the state’s foreign- and U.S.-educated populations—higher shares than they represented nationally (see

Table 3). By contrast, immigrants from Central America, South America, and the Caribbean represented lower shares of the immigrant populations in Washington State than nationwide.

Although they represented a relatively low share of highly skilled immigrants in Washington, those from Central America had the highest rates of skill underutilization: 59 percent among those educated abroad and 36 percent among those educated in the United States (see Table 4). Immigrants from Southeast Asia had higher levels of brain waste in Washington than nationwide. By contrast, South American and Caribbean immigrants had significantly lower rates

Table 4. Underemployment and Unemployment of Highly Skilled Immigrants, by Place of Education and Region/ Country of Birth in Washington State and United States (%), 2009-13

Region or Country of Birth	Washington State		United States	
	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)
Total (%)	25	20	29	21
East Asia	21	15	20	16
China	15	10	16	14
Japan/Asian Tigers*	30	21	25	20
Southeast Asia	43	22	35	20
Philippines	45	26	35	21
Southwest Asia	17	12	23	16
India	15	11	18	13
Middle East	37	19	28	21
Central America	59	36	51	36
Mexico	64	37	47	36
Caribbean	35	10	44	24
South America	29	15	37	25
Canada	16	19	12	15
Australia/Oceania	14	24	16	18
European Union/EEA**	16	21	18	19
Rest of Europe	33	31	33	23
Africa	28	30	37	26

* Japan/Asian Tigers refers to Hong Kong, Japan, Singapore, and South Korea.

** European Union/EEA refers to the 28 European countries that were part of the European Union as of 2013, plus Iceland, Liechtenstein, and Norway, which are part of the European Economic Area (EEA).

Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

of skill underutilization in the state than at the national level.

IV. Conclusion

In sum, 23 percent of the 179,000 college-educated immigrants living in Washington State were either underemployed or unemployed during the 2009-13 period. Low-skilled employment among these highly skilled immigrants comes with a price tag: \$827.2 million in lost earnings annually. And if this amount of earnings had not been forgone, immigrant house-

holds would have paid an additional \$74.9 million in state and local taxes.

The scale of this economic impact suggests that policymakers would do well to examine the barriers to full employment that immigrants—particularly those who are foreign educated—face in the Washington State labor market. Given the costs documented here, policies that promote the recognition of foreign credentials, make licensing requirements more transparent, and expand access to courses that teach professional English and fill educational gaps should provide substantial returns on public investment.

Endnotes

- 1 Authors' tabulations of U.S. Census Bureau data from the 2015 American Community Survey (ACS).
- 2 The foreign born (or immigrants) are persons who were not U.S. citizens at birth. The U.S. born (or natives) are persons who were U.S. citizens at birth, even if they were born outside of the country.
- 3 See Jeanne Batalova, Michael Fix, and James D. Bachmeier, *Untapped Talent: The Costs of Brain Waste among Highly Skilled Immigrants in the United States* (Washington, DC: Migration Policy Institute, New American Economy, and World Education Services, 2016), www.migrationpolicy.org/research/untapped-talent-costs-brain-waste-among-highly-skilled-immigrants-united-states. State-level fact sheets examining brain waste for college-educated immigrants cover California, Florida, Michigan, New York, Ohio, Texas, and Washington, and can be found at www.migrationpolicy.org/topics/brain-waste-credential-recognition.
- 4 All estimates in this fact sheet refer to civilian adults ages 25 and older and are based on analysis of U.S. Census Bureau pooled 2009-13 ACS data unless otherwise stated. The data were pooled to increase the precision of the estimates. James Bachmeier at Temple University, in consultation with Jennifer Van Hook at The Pennsylvania State University and researchers at the Migration Policy Institute (MPI) developed techniques to link the ACS data to the Census Bureau's 2008 Survey of Income and Program Participation (SIPP) to allow for estimates by legal status. The 2009-13 data were the most recent at the time of the analysis.
- 5 The term "foreign educated" refers to immigrants who have at least a bachelor's degree and arrived in the United States at age 25 or later. They were likely to have obtained all of their formal education abroad; "U.S. educated" refers to college-educated immigrants who came to the United States before age 25 and are likely to have been educated in the United States.
- 6 Persons identified as Black, Asian, and White refer to non-Hispanic individuals. Persons identified as Hispanic are of any race.
- 7 The national report that accompanies this fact sheet employs logistic regression models to test the effect of place of education, time in the United States, level of educational attainment, English skills, race and ethnicity, and citizenship and legal status on the odds of low-skilled employment of immigrant men and women. The report finds that each of these variables had an independent and statistically significant impact on the likelihood of low-skilled employment. The analysis assumes that the relationships observed at the national level hold at the state level as well. See Batalova, Fix, and Bachmeier, *Untapped Talent*.
- 8 MPI in 2008 first estimated the size of the immigrant population experiencing brain waste. See Jeanne Batalova and Michael Fix with Peter A. Creticos, *Uneven Progress: The Employment Pathways of Skilled Immigrants in the United States* (Washington, DC: MPI, 2008), www.migrationpolicy.org/research/uneven-progress-employment-pathways-skilled-immigrants-united-states.
- 9 The analysis of forgone earnings was done separately by place of education and gender. See Batalova, Fix, and Bachmeier, *Untapped Talent*, Appendix A-3 for additional discussion of the decomposition methodology. Estimates of unrealized tax contributions at the state and local level were computed for MPI by the Institute on Taxation and Economic Policy (ITEP). See Batalova, Fix, and Bachmeier, *Untapped Talent*, Appendix A-4 for additional discussion of the tax estimation methodology. The value of forgone federal taxes associated with low-skilled employment of immigrants in Washington was not estimated.
- 10 The national report also estimates the amount of forgone federal taxes associated with immigrant low-skilled employment: approximately \$10.2 billion. See Batalova, Fix, and Bachmeier, *Untapped Talent*.

- 11 Persons who reported speaking English only or “very well” in the ACS are considered to be English proficient. Persons who reported speaking English “not well” or “not at all” are considered to have low levels of English proficiency.
- 12 Refers to master, doctoral, and professional degrees.
- 13 Foreigners on temporary visas include those on work visas such as the H-1B visa or the L-1 intracompany transferee visa, or international students on F-1 visas. To obtain an H1-B visa, for instance, foreign workers must have a sponsoring employer (i.e., they will have a job) and the position for which they are hired (in most cases) requires at least a bachelor’s degree (i.e., their job per the definition used in this fact sheet is “highly skilled”).
- 14 See Mary C. Waters and Marisa Gerstein Pineau, eds., *The Integration of Immigrants into American Society* (Washington, DC: The National Academies Press), www.nap.edu/catalog/21746/the-integration-of-immigrants-into-american-society.

About the Authors



Ariel G. Ruiz Soto is a Research Assistant at the Migration Policy Institute (MPI), where he provides quantitative research support across MPI programs. His research focuses on the impact of U.S. immigration policies on immigrant experiences of socioeconomic integration across varying geographical and political contexts. More recently, Mr. Ruiz Soto has analyzed methodological approaches to estimate sociodemographic trends of the unauthorized immigrant population in the United States.



Jeanne Batalova is a Senior Policy Analyst at MPI and Manager of its Data Hub, a one-stop, online resource that provides instant access to the latest facts, statistics, and maps covering U.S. and global data on immigration and immigrant integration. Her areas of expertise include the immigration and integration of highly skilled workers and foreign students in the United States and other countries; the impacts of immigrants on society and labor markets; and the social and economic mobility of immigrant-origin young adults.



Michael Fix is President of MPI, a position he assumed in 2014 after serving as CEO and Director of Studies. He joined the Institute in 2005, and was previously Senior Vice President and Co-Director of MPI’s National Center on Immigrant Integration Policy. His research focus is on immigrant integration and the education of immigrant children in the United States and Europe, as well as citizenship policy, immigrant children and families, the effect of welfare reform on immigrants, and the impact of immigrants on the U.S. labor force.

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WES also hosts IMPRINT, a national coalition of nonprofit organizations that identifies and promotes best practices, and advocates for policies that facilitate the integration of immigrant professionals into the U.S. economy.

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