

## The Costs of Brain Waste among Highly Skilled Immigrants in Michigan

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

Between 2000 and 2015, while the U.S.-born population in Michigan declined by about 144,000 people, the foreign-born population increased by 131,000—giving the state a net loss of about 13,000 people. As a result, the growing immigrant population has arrested the state’s population decline, which threatened the health of the Michigan economy, future supply of workers, and long-term well-being of residents. Immigrants, who represented 7 percent of the state’s 10 million residents in 2015,<sup>1</sup> have also contributed to the population’s education and skills. Immigrant adults in Michigan are much more likely to have university degrees than U.S.-born adults (41 percent versus 26 percent).<sup>2</sup> Despite the higher levels of education they tend to bring, however, a substantial number of college-educated immigrants find that they cannot put their academic and professional qualifications to full use.

### 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.

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 Michigan. The authors estimate the number and share of college-educated immigrants who work in low-skilled jobs or are unemployed in Michigan. They identify the key factors underlying this brain waste and estimate the amount of an-

nual 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 born<sup>3</sup> 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*.<sup>4</sup>

## Key Findings

- Michigan was home to 144,000 highly skilled immigrants with at least a bachelor's degree during the 2009-13 period.<sup>5</sup> Of this group, 20 percent—or 29,000 people—were either working in low-skilled jobs or unemployed. That compared to the 25 percent rate of skill underutilization for college-educated immigrants nationwide.
  - Low-skilled employment resulted in immigrant college graduates in Michigan forgoing approximately \$510.2 million in annual earnings. As a result, Michigan experienced \$48.6 million in unrealized state and local taxes. Nationally, immigrant underemployment resulted in more than \$39.4 billion in annual earnings losses and \$3 billion in forgone state and local taxes.
  - Unlike the country as a whole, there was no difference in the levels of brain waste for highly skilled immigrants and their U.S.-born counterparts in Michigan: both groups had a rate of 20 percent.
  - Having a degree earned outside the United States increases the likelihood of brain waste: Foreign-educated<sup>6</sup> immigrants in Michigan were more likely to be either underem-
- ployed or unemployed (22 percent) than U.S.-educated immigrants (18 percent). (Nationally, these shares were 29 percent and 21 percent, respectively). Immigrants in Michigan were also more likely to be experience brain waste if they had limited English skills, had only a bachelor's degree, or were Hispanic or Black.<sup>7</sup> Time in the United States reduced skill underutilization for immigrant women more than for men.<sup>8</sup>
- Unlike the country as a whole, legal status and citizenship appeared to reduce skill underutilization rates for foreign-educated immigrants, but not for U.S.-educated immigrants in Michigan. Among immigrants educated abroad, those who were unauthorized had a skill underutilization rate of 29 percent, compared to 27 percent for legal permanent residents and 22 percent for naturalized U.S. citizens.
  - Black immigrants in Michigan had the highest skill underutilization rates of all racial and ethnic groups (29 percent), followed by Hispanic and White immigrants (24 percent each). In contrast, Asian immigrants had relatively low levels of brain waste (16 percent).
  - The fact that immigrants and the U.S. born in Michigan had the same brain waste rate can be attributed in part to the fact that larger shares of immigrants hold advanced degrees (54 percent versus 36 percent). Further, even though immigrants in Michigan were more likely to be educated abroad than immigrants nationwide, they had stronger English skills, were more likely to be on temporary visas, hold advanced degrees, and come from Asia and Canada—characteristics associated with a lower risk of skill underutilization. Finally, state and local governments

in Michigan have supported efforts not only to attract skilled immigrants and entrepreneurs, but also to reduce their underemployment.<sup>9</sup>

than they were nationwide. In the country as a whole, 25 percent of highly skilled immigrants were working in low-skilled jobs or seeking employment.

## I. Highly Skilled Immigrants by the Numbers

**Highly Skilled Immigrants.** There were 144,000 immigrant college graduates in the Michigan civilian labor force during the 2009-13 period (see Table 1). They accounted for 11 percent of all highly skilled workers in the state—almost double the share that immigrants made up of the total state population (6 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.** Unlike the country as a whole, immigrant and U.S.-born college graduates in Michigan had similar rates of skill underutilization: With 20 percent being either underemployed or unemployed (see Table 1). Additionally, highly skilled immigrants were less likely to experience brain waste in Michigan

## 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.<sup>10</sup> To do so, the authors compared the average annual earnings of highly skilled immigrants working in low-skilled

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

	Michigan		United States	
	Immigrants	U.S. Born	Immigrants	U.S. Born
<b>Total labor force</b>	<b>144,000</b>	<b>1,144,000</b>	<b>7,618,000</b>	<b>37,936,000</b>
<i>Percent</i>	100	100	100	100
Unemployed	5	5	6	4
Employed by job type				
High-skilled	66	60	57	62
Middle-skilled	14	20	18	19
Low-skilled	15	15	19	14
<b>Brain waste: Unemployed or in low-skilled jobs</b>				
Number	29,000	229,000	1,918,100	6,974,800
Percent	20	20	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.

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.<sup>11</sup> 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 Michigan lost due to their employment in low-skilled jobs amounted to \$510.2 million during the period surveyed. If these immigrants had instead been adequately employed and remunerated correspondingly, their households would have paid an additional \$48.6 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.<sup>12</sup>

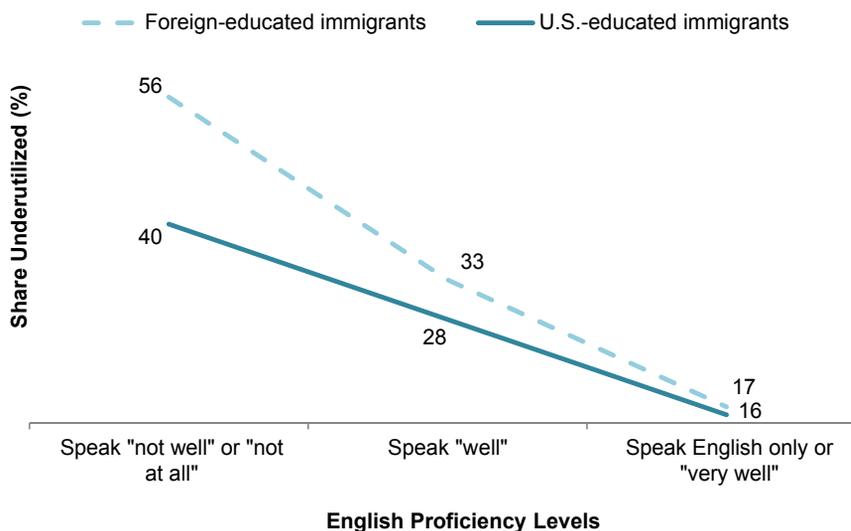
### III. Factors Driving Brain Waste

Several demographic characteristics of highly skilled immigrants in Michigan help explain why they have similar rates of skill underutilization as the U.S. born. These factors include their higher-than-average level of education, as well as underlying demographic characteristics. Some of these issues are examined below.

**Place of Education.** Of the 144,000 highly skilled immigrants in Michigan, 58 percent (83,000) were foreign educated and 42 percent (61,000) obtained their degrees in the United States. Highly skilled immigrants in Michigan were more likely than immigrants nationally to have been educated abroad (52 percent).

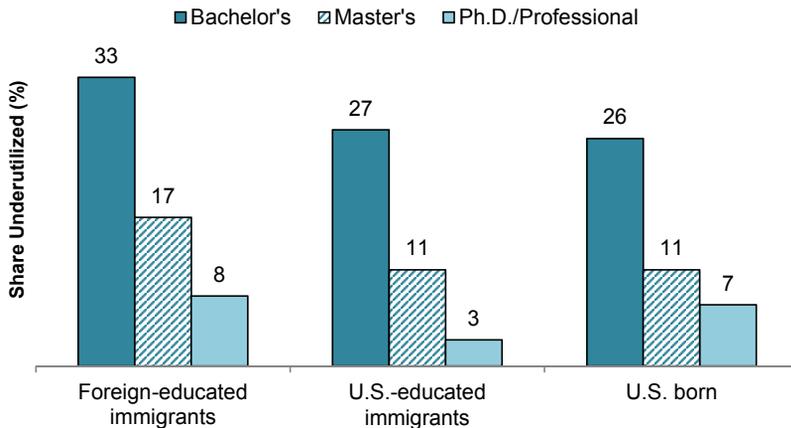
Like the country as a whole, foreign-educated immigrants in Michigan were more likely to be either underemployed or unemployed (22

**Figure 1. Underemployment and Unemployment of Highly Skilled Immigrants in Michigan, 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 Michigan, 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.

percent) than U.S.-educated immigrants (18 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 Michigan were English proficient: 74 percent of foreign-educated immigrants and 91 percent of U.S.-educated immigrants (compared to 67 percent and 86 percent respectively at the national level).<sup>13</sup>

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

**Level of Degree.** As at the national level, college-educated immigrants in Michigan were more likely than the U.S. born to have advanced degrees:<sup>14</sup> 54 percent and 36 percent, respectively. Nationally, 43 percent of college educated immigrants had advanced degrees—making the

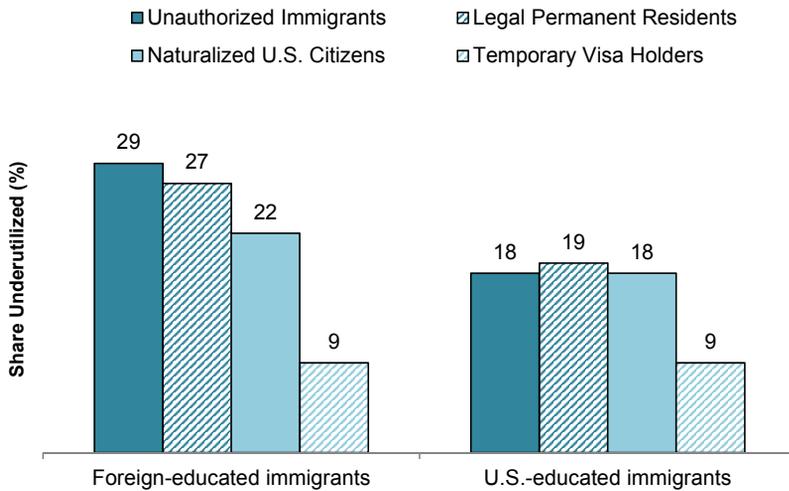
high education level of immigrants in Michigan particularly notable.

Regardless of place of birth or education, bachelor degree holders had much higher rates of skill underutilization than those with advanced degrees. Among the foreign educated in Michigan, 33 percent of bachelor degree holders experienced brain waste, compared to 8 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.

**Legal Status/Citizenship.** Fifty-three percent of highly skilled immigrants in Michigan were naturalized U.S. citizens, 27 percent were legal permanent residents (LPRs), 13 percent were temporary visa holders, and 8 percent were unauthorized immigrants. Highly skilled immigrants in Michigan were less likely to be naturalized U.S. citizens than the trend nationwide, where 57 percent of high-skilled immigrants were naturalized. They were, however, more likely to be on temporary visas (8 percent of immigrants fall into that category nationally).

As in the rest of the country, temporary visa holders had the lowest rates of skill underutilization—owing in large part to visa require-

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



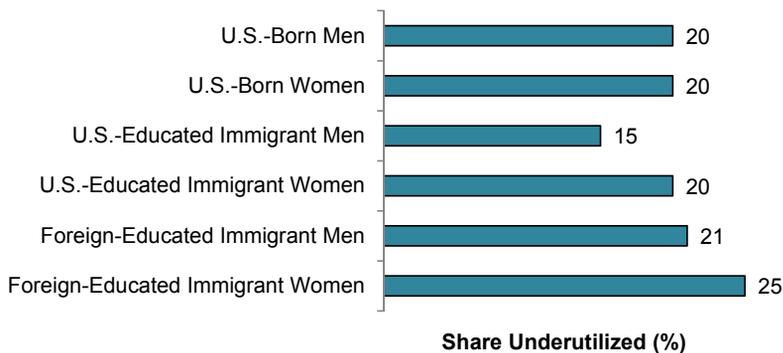
Source: MPI analysis of 2009-13 ACS and 2008 SIPP data from the U.S. Census Bureau, with legal status assignments by Bachmeier and Van Hook.

ments.<sup>15</sup> 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.

Highly skilled immigrants in Michigan displayed an unexpected pattern when it came to legal status and citizenship, however. For those edu-

cated abroad, legal status and citizenship were associated with lower skill underutilization, as unauthorized immigrants had the highest rates (29 percent) followed by LPRs (27 percent), naturalized U.S. citizens (22 percent), and temporary visa holders (9 percent) (see Figure 3). But for U.S.-educated immigrants, legal status and citizenship seemed to have little impact on brain waste as unauthorized immigrants, LPRs, and naturalized citizens all had similar rates of skill underutilization.

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

Race/Ethnicity	Michigan		
	Foreign-Educated Immigrants	U.S.-Educated Immigrants	U.S. Born
<b>Number</b>	<b>83,000</b>	<b>61,000</b>	<b>1,144,000</b>
<i>Percent</i>	100	100	100
Hispanic	6	6	2
Non-Hispanic Black	5	5	8
Non-Hispanic Asian	50	43	1
Non-Hispanic White	39	46	89

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.

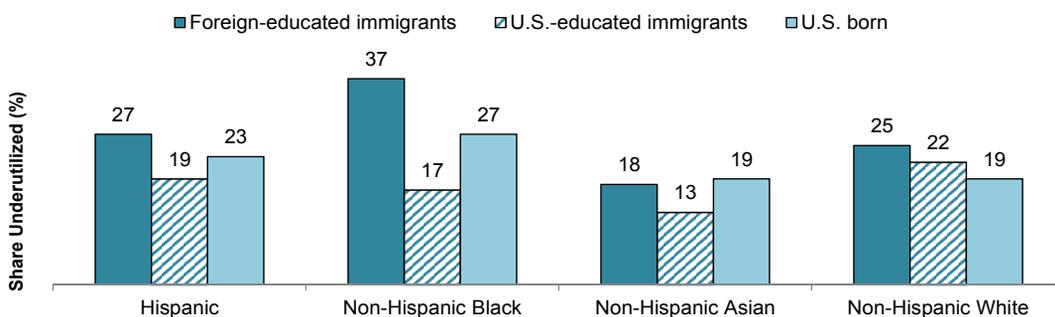
**Gender.** Women represented 40 percent of the 144,000 highly skilled immigrants in Michigan and 50 percent of the state’s 1.1 million U.S.-born college graduates. Foreign-educated immigrant women had the highest skill underutilization rates of all college-educated workers (25 percent) (see Figure 4).

**Time in the United States.** Length of residence in the United States had a bigger impact on the skill underutilization of immigrant women than of men—a change that may owe to shifting social norms within immigrant families as well as a need for higher household earnings.<sup>16</sup> The levels of brain waste among immigrant women

decreased from 29 percent of recent arrivals (i.e., in the country for five years or less) to 19 percent of long-term residents (i.e., in the country for 15 years or more). By contrast, skill underutilization rates of immigrant men declined from 22 percent of recent arrivals to 16 percent of long-term residents.

**Race and Ethnicity.** Asian and White immigrants represented nearly 90 percent of both U.S.- and foreign-educated immigrants in Michigan (see Table 2)—much higher than the national share of 72-76 percent. At the same time, Hispanics represented only 6 percent of highly skilled immigrants in Michigan versus

**Figure 5. Underemployment and Unemployment of Highly Skilled in Michigan, 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 Michigan and United States (%), 2009-13**

Region or Country of Birth	Michigan		United States	
	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)
<b>Total (Number)</b>	<b>83,000</b>	<b>61,000</b>	<b>3,992,000</b>	<b>3,626,000</b>
<i>Percent</i>	100	100	100	100
East Asia	17	12	16	16
China	9	6	9	10
Japan/Asian Tigers*	7	6	6	6
Southeast Asia	8	9	13	14
Philippines	7	5	10	6
Southwest Asia	26	24	20	17
India	22	20	15	12
Middle East	8	11	3	3
Central America	3	3	7	11
Mexico	3	2	5	7
Caribbean	-	-	5	9
South America	3	3	8	7
Canada	5	9	3	3
Australia/Oceania	-	-	1	<1
European Union/EEA**	15	15	12	11
Rest of Europe	6	6	6	4
Africa	6	6	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.

18 percent nationwide. The racial and ethnic makeup of U.S.-born college graduates was predominantly White, with that group making up 89 percent of the population. On average, Hispanic and Black immigrants were more likely to experience brain waste nationwide. Thus, the racial and ethnic makeup of the highly skilled immigrant population in Michigan may help explain why immigrants fared better than average.

Among both foreign-educated immigrants and U.S.-born college graduates, Blacks had the highest skill underutilization rates of all racial and

ethnic groups: 37 percent of foreign-educated and 27 percent of U.S.-born immigrants were either underemployed or unemployed (see Figure 5). Whites had the highest underutilization rates (22 percent) among U.S.-educated immigrants. Regardless of place of education, Asians had lower levels of brain waste than White immigrants.

**Region and Country of Birth.** Four sending countries and regions of origin stood out among the foreign and U.S.-educated immigrants in Michigan: India, the Middle East, Canada, and

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

Region or Country of Birth	Michigan		United States	
	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)	Foreign-Educated Immigrants (%)	U.S.-Educated Immigrants (%)
<b>Total (%)</b>	<b>22</b>	<b>18</b>	<b>29</b>	<b>21</b>
East Asia	16	12	20	16
China	13	7	16	14
Japan/Asian Tigers*	18	18	25	20
Southeast Asia	33	16	35	20
Philippines	35	14	35	21
Southwest Asia	16	11	23	16
India	15	11	18	13
Middle East	30	30	28	21
Central America	29	20	51	36
Mexico	28	16	47	36
Caribbean	-	-	44	24
South America	16	18	37	25
Canada	14	14	12	15
Australia/Oceania	-	-	16	18
European Union/EEA**	20	22	18	19
Rest of Europe	38	30	33	23
Africa	35	16	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.

the European Union (EU) countries (see Table 3). In each instance, their shares of all immigrants exceeded the national shares: While Middle Easterners accounted for only 3 percent of immigrant college graduates in the United States, they represented 8-11 percent of highly skilled immigrants in Michigan. By contrast, immigrants from Central America and Southeast Asia represented smaller shares of highly skilled immigrants in Michigan than nationwide.

Among the foreign educated, the top three origin groups with the highest levels of brain waste

were immigrants from non-EU/European Economic Area (EEA) countries in Europe (38 percent), and Africa and the Philippines (35 percent each) (see Table 4). Among the U.S. educated, non-EU/EEA European immigrants and those from the Middle East had the highest rates (30 percent), followed with a gap by those from the European Union (22 percent). By contrast, Central American immigrants had significantly lower skill underutilization rates in the state than at the national level.

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## IV. Conclusion

In sum, 20 percent of the 144,000 college-educated immigrants living in Michigan were underemployed or unemployed in the 2009-13 period. Low-skilled employment among these highly skilled immigrants comes with a price tag: \$510.2 million in annual lost earnings. And if this amount of earnings had not been forgone, immigrant households would have paid an additional \$48.6 million in state and local taxes.

The scale of this economic impact suggests that policymakers would do well to continue their efforts to address the barriers to full employment that immigrants—particularly those who are foreign educated—face in the Michigan 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.

Michigan is one state that has already taken some steps in this direction. In 2013, the state provided a series of guidelines for skilled immigrants that would help them gain licensure in 11 high-need professions.<sup>17</sup> The Michigan International Talent Solutions program builds upon the work that the nonprofit Upwardly Global has been doing in the state, coaching skilled immigrants on how to find and interview for suitable jobs.<sup>18</sup> In 2011, the state launched the Michigan Global Talent Retention Initiative, a first-of-its kind effort to help international students and graduates match with employers seeking their skills.<sup>19</sup>

Although this research project did not study the specific impact of such integration programs, they may be contributing to the fact that Michigan's college-educated immigrants are doing somewhat better when it comes to brain waste than equivalent immigrants in other states. The hundreds of millions of dollars in forgone earnings for underemployed Michigan immigrants indicates, however, that more targeted work needs to be done to remove the unique barriers this population faces in the labor market.

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***Policymakers would do well to continue their efforts to address the barriers to full employment that immigrants ... face in the Michigan labor market.***

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## Endnotes

- 1 Authors' tabulations of U.S. Census Bureau data from the 2000 Census and 2015 American Community Survey (ACS).
- 2 Authors' tabulations of U.S. Census Bureau data from the 2014 ACS.
- 3 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.
- 4 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](http://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](http://www.migrationpolicy.org/topics/brain-waste-credential-recognition).
- 5 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.
- 6 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.
- 7 Persons identified as Black, Asian, and White refer to non-Hispanic individuals. Persons identified as Hispanic are of any race.
- 8 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*.
- 9 See Steve Tobocman, *Revitalizing Detroit: Is There a Role for Immigration?* (Washington, DC: MPI, 2014), [www.migrationpolicy.org/research/revitalizing-detroit-is-there-a-role-for-immigration](http://www.migrationpolicy.org/research/revitalizing-detroit-is-there-a-role-for-immigration).
- 10 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](http://www.migrationpolicy.org/research/uneven-progress-employment-pathways-skilled-immigrants-united-states).
- 11 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 Michigan was not estimated.
- 12 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*.

- 13 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.
- 14 Refers to master, doctoral, and professional degrees.
- 15 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”).
- 16 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](http://www.nap.edu/catalog/21746/the-integration-of-immigrants-into-american-society).
- 17 See Upwardly Global, “Michigan Professional Licensing Guides,” accessed October 5, 2016, [www.upwardly-global.org/skilled-immigrant-job-seekers/american-licensed-professions/michigan/michigan-professional-licensing-guides](http://www.upwardly-global.org/skilled-immigrant-job-seekers/american-licensed-professions/michigan/michigan-professional-licensing-guides).
- 18 See Michigan State Government, “New State Initiative Connects Global Talent with Employers; Skilled Immigrants Can Help Grow the Economy and Fill Skills Gap,” accessed October 5, 2016, [www.michigan.gov/som/0,4669,7-192-29943-368409--,00.html](http://www.michigan.gov/som/0,4669,7-192-29943-368409--,00.html).
- 19 See Global Talent Retention Initiative of Michigan, “What We Do,” accessed October 5, 2016, [www.migtri.org/about-gtri](http://www.migtri.org/about-gtri).

## About the Authors



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New American Economy brings together more than 500 Republican, Democratic, and Independent mayors and business leaders who support sensible immigration reforms that will help create jobs for Americans today.

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World Education Services (WES) is a nonprofit organization dedicated to helping immigrants in the United States and Canada achieve their academic and professional goals through the recognition of their education and training earned abroad. Its Global Talent Bridge program conducts outreach and provides training, tools, and resources designed to ensure the successful integration of immigrant professionals.

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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