

How Did Education and Gender Affect U.S. Immigrants' Employment During the Period 2009-2022?

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"I'm the daughter of refugees. The immigrant mentality is to work hard, be brave, and never give up in your pursuit of achieving the American Dream..."

Reshma Saujani, Founder of "Girls Who Code," Author of "Brave, Not Perfect"

ABSTRACT: The United States has long been a leading destination for immigrants looking for a better economic opportunity, refuge, or family reunification. The population of foreign-born residents in the US is immensely diverse in terms of country of origin, ethnicity, gender, age, and education. These characteristics can influence an immigrant's ability to integrate into American society. In this paper, I examine the impact of gender and level of education on the employment prospects of foreign-born residents from 2009 to 2022. First, my research concludes that higher levels of education lead to substantially better employment rates and wages for foreign-born residents. Second, my findings reveal that immigrant women, in comparison to their native-born peers, have made bigger strides in their labor participation, employment rates, and wages over the last decade versus immigrant men, who have remained more closely aligned with their respective native-born peers. I highlight some reasons why these two specific factors, gender and education, affect employment and wages and what policies could be adopted to improve the integration prospects for immigrants.

KEYWORDS: Behavioral and Social Sciences; Sociology; Immigration; Gender and Education; Employment.

■ Introduction

The United States is a nation of immigrants. According to the World Population Review, approximately 50.6mm foreign-born residents live in the US (Table 1, below), representing more than 15% of the total population as of 2020.¹

Table 1: Top 5 countries with the highest number of foreign-born residents.

Country	# Immigrants
United States	50.6M
Germany	15.8M
Saudi Arabia	13.5M
Russia	11.6M
United Kingdom	9.4M

Source: World Population Review.¹

Historical data on US immigration can be traced back to 1850 when the US started collecting nativity data through the Census.³ The Migration Policy Institute (MPI) has tabulated immigration data from the mid-19th century.³ In 1850, the country had 2.2 million immigrants, representing 10% of the total population (Figure 1, below). The history of immigration prior to the 1960s is characterized by high inflows of foreign-born individuals who arrived either through coercion or in search of a better life. It was followed by a swell of nativism that led to a series of laws restricting immigration. In the 1960s, with the adoption of a modern legal framework, immigration inflows inflected upward again. New legislation

removed previous barriers to entry. The Immigration and National Act of 1965 abolished the national-origin admissions quotas. Furthermore, the Refugee Act of the 1980s created formal refugee resettlement programs. As a result of these two Acts, immigration increased, rising to its prior peak of 15% of the total population.³

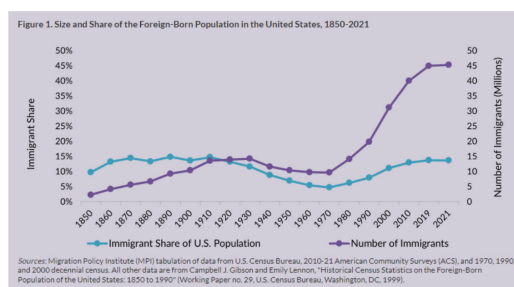


Figure 1: Size and share of the foreign-born population in the US, 1850-2021.³ Except for the period 1929-1970, the immigrant share of the population has varied between 10% and 15%.

The origin composition of the immigrant population has varied over the years. Until the 1960s, European-born arrivals dominated the migrant flows to the US. After the reforms were adopted in the 1960s and 1980s, Latin America and Asia have become the primary immigration sources.⁴ Figure 2 below, based on data compiled by the Pew Research Center, shows the change in migrant flows by origin.⁴

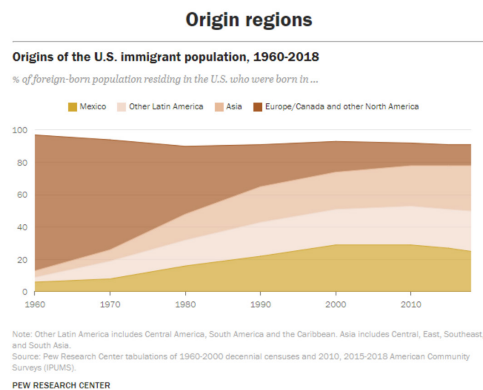


Figure 2: US immigration - origin regions, 1960-2020.⁴ After the 1970s immigration reforms, migrant flows shifted from predominantly European to mainly Latin-American and Asian.

Similar shifts in the immigrant population composition can be observed both in terms of age, gender, and education. While the split between female and male migration has remained relatively equal at around 50%, with small 1-4% variations over the years, the average age of foreign-born residents has decreased.^{3,4} The level of educational attainment among U.S. immigrants has also improved substantially.⁴ In 1960, only 2.5% of the immigrants ages 25 and older had a bachelor's or a post-graduate degree. These figures reached 18% and 14% six decades later, respectively.⁴

Factors such as gender, level of education, language skills, and age can influence an immigrant's ability to integrate better into American culture, obtain gainful employment, and improve one's living standards. In this paper, I research the impact of gender and level of education on the employment prospects of foreign-born residents over the last decade. First, my research concludes that higher levels of education lead to substantially better employment rates and wages for foreign-born residents. Second, my findings reveal that immigrant women, compared to their U.S. native-born peers, have made more significant strides in their labor participation, employment rates, and wages since 2009 versus immigrant men, who have remained more closely aligned with their respective U.S. native-born peers. I highlight some reasons why these two specific factors, gender and education, affect employment and wages and what policies could be adopted to improve the integration prospects for immigrants.

■ Literature Review

The Bureau of Labor Statistics (BLS) and the Migration Policy Institute (MPI) offer research and data on the topic of immigration.^{5,6} MPI's Nicole Ward and Jeanne Batalova provide a cross-sectional analysis on a wide range of immigration metrics.³ Their research article, "*Frequently Requested Statistics on Immigrants and Immigration in the United States*," lays out valuable immigration data organized by demographics, ethnicity, geography, educational attainment, employment, wealth, health insurance coverage, and legal status.³ The information in these sources has provided the data and background for the cross-analysis of immigrant and native-born Americans throughout this paper.³ The Ward and Batalova statistics are particularly relevant to this research paper, which centers on immigrants' level of education attainment. Their study shows

that recently arrived foreign-born individuals increasingly hold at least a bachelor's degree. In fact, recent foreign-born arrivals exceed their U.S.-born peers on this metric.³

Bandyopadhyay and Grittayaphong from the Federal Reserve Bank of St. Louis analyzed in their article, "*Educational Attainment of Immigrants at the National and Eighth District Levels*" the educational attainment in the Eighth Federal Reserve District (AK, MS, KY, MO) and its impact on respective median incomes.⁷ The paper breaks down the district's largest cities by both birthplace (i.e., native-born vs. foreign-born) and education levels. While most district areas are shown to be populated with predominantly less-educated immigrants, the relatively larger city of St. Louis boasts foreign-born residents who have more bachelor's or graduate degrees compared to native-born individuals. The data provided by Bandyopadhyay and Grittayaphong demonstrates that, typically, in cities like St. Louis, where the foreign-born population is better educated, immigrants earn as much as their native-born counterparts. The paper concludes that the observed geographical distribution is likely a reflection of demand-side factors driven by the need to fill both highly skilled jobs and those requiring manual labor.⁷ Their research demonstrates two themes relevant to this paper. This first is the positive correlation between education and improved employment opportunities. The second is that immigrants with higher education earn equal pay compared to their native-born counterparts, highlighting the importance of educational opportunities in the process of integration.

MPI's Hofstetter and McHugh published a research article, "*Leveraging Data to Ensure Equitable and Effective Adult Skills Programming for Immigrants*," discussing immigrants' contribution to the vitality of the United States economy.⁸ Many immigrants face limited economic mobility and integration opportunities despite their important and positive impact. Hofstetter and McHugh analyze the obstacles immigrants experience upon their arrival, including language barriers, unfamiliarity with American institutions and culture, lack of formal education, and prior experience. MPI focuses on addressing immigrant families' needs regarding more equitable access to education, health insurance coverage, and social services. Through data provided by the US Census Bureau's American Community Survey, Hofstetter and McHugh examined the disparity in education, employment, and income between immigrants and U.S. native-born residents in their research. The authors identify some factors leading to such disparities – lower educational attainment and lack of English fluency.⁸ They further outline possible solutions, including introducing adult skill systems to optimize integration and employment opportunities for immigrants. In my research herewith, I further explore the impact educational attainment has on employment and income opportunities.

Research conducted by Blossfeld *et al.*, published under "Gender, Education, and Employment: An International Comparison of School-to-Work Transitions," examines the recent rise in women's educational attainment and its correlation to female employment and access to higher-paying jobs. However, better-earning potential has not necessarily induced greater labor participation for women overall, according to the

study. Despite improved access to higher education programs, women are still outnumbered by men in the labor market. The research article argues that this phenomenon is a consequence of continuing gender inequalities in the job market, an issue that is pronounced in the immigrant community.¹¹ In the following sections of my research, I provide additional data on the variance of labor participation, unemployment rates, and earnings between US native-born and immigrant women. David Autor and Melanie Wasserman authored “*The Emerging Gap in the Labor Market and Education*,” reflecting on recent trends regarding male and female education and employment. They observed a concerning stagnation in male education, resulting in higher unemployment and lower wages. Conversely, during the observed period, women advanced in educational attainment and employment. Female high school and university graduation rates have outperformed males. The research also highlights that women are more adaptive than men to changes in the job market, particularly relating to high-skill technical professions. The authors argue that declining male employment rates are partly a consequence of rising female employment rates. The research conducted by both Blossfeld *et al.*, and David Autor and Melanie Wasserman, demonstrates the important connection between gender, education, and the labor market. Therefore, in this research paper, I have examined men and women as separate cohorts further separated by birthplace and educational attainment to explore further the correlation between gender, education, and labor opportunities.⁹

■ Methods

In this research paper, I aim to show the relationship between education and gender and immigrants’ employment and income prospects. To achieve that, I have collected and analyzed data from the U.S. Bureau of Labor Statistics (BLS) covering select sociodemographic metrics defined below.⁵ The key research questions addressed in my study are as follows:

Question #1: How does education relate to immigrants’ employment and income prospects?

Question #2: How does gender relate to immigrants’ employment and income prospects?

The subjects of education, employment, and immigration have been the central focus of several studies, as highlighted in the Literature Review section above. This paper differs from other research articles on the following points: 1) its focus on historical, multi-year trends over a full economic cycle (2009-2022) rather than offering single, annual snapshots; 2) its use of four different educational level categories vs. two or three utilized by others; and 3) reliance on nation-wide data as opposed to narrower, regionally-focused studies. Further, in addressing the second research question, the paper analyzes why foreign-born women experienced substantially lower labor participation rates and incomes relative to their U.S.-born peers and why this gap has started to narrow.

The analysis in the following section uses the following sociodemographic metrics, defined as:

• **Immigrant:** A person moving from one country’s permanent residence to another seeking better economic opportunity, political asylum, or family reunification.

• **Foreign-born:** Used interchangeably with immigrant.

• **Unemployment Rate:** The unemployment rate represents the number of unemployed people as a percentage of the total labor force. The labor force is defined as the sum of all employed and unemployed people.

• **Wage:** A fixed, regular payment, typically paid daily or weekly, made by an employer to an employee.

• **Labor Participation Rate:** The labor force participation rate is defined as the percentage of all working-age people who are either employed or are actively seeking work.

To formulate the answers to the two research questions above, I have collected and analyzed unemployment and labor participation rates as well as wages for foreign-born and U.S.-native-born men and women for the period 2009-2022.⁵ The period length was selected to include a full economic cycle starting with the emergence from the Great Financial Crisis (2008) to the exit from the COVID-19-induced recession (2020). Further, I have broken the data further by four levels of educational attainment: 1) less than high-school education; 2) high-school degree; 3) some college or associate degree; and 4) bachelor’s degree or higher graduate education. Lastly, I have analyzed career choices made by foreign-born and U.S. native-born residents and their impact on income. For the second research question, I have separated foreign-born and U.S. native-born men and women by the presence and ages of children. In particular, the research focused on women with children under 6 years old and those with children between the ages of 6 and 17 years, as these cohorts exhibited abnormal trends vs. others. I have summarized the collected data in table and chart formats and have conducted comparison analyses to establish prevalent trends.

■ Results and Discussion

This section discusses in detail the two research questions posed above. The goal is to establish how education and gender relate to employment and income prospects and how these trends are from 2009 to 2022.

RESEARCH QUESTION #1: Evidence and Analysis: How does education relate to immigrants’ employment and income prospects?

The level of educational attainment impacts employment prospects for both foreign-born and U.S. native-born residents across all key metrics: labor participation, unemployment rate, and median wages. The labor participation rate varies widely by cohort, as shown in Table 2 below. The most extreme difference in labor participation rates is between U.S. native-born residents without high school education and U.S. native-born residents with completed college education. The former has a 36.3% labor participation rate and 72.5%, respectively. The same metrics for foreign-born residents are less extreme but still divergent at 56.2% and 74.4%, respectively. Notably, in the lowest educational attainment category (less than high-school education), the difference in labor participation is vast between foreign-born and U.S. native-born residents, ranging between 20%-25% over the observed period. That gap between the birthplace cohorts shrinks as the level of educational attainment increases and converges in the college-degree holders’ group. *Note: In the tables below, the difference columns (highlighted*

in pastel colors) compare the foreign-born individual's metrics relative to their U.S. native-born counterparts. A negative difference conveys that foreign-born individuals' metrics fall beneath their native-born counterparts, and a positive difference means the values are above their native-born counterparts.'

Table 2: Labor participation rate % by educational attainment – foreign-born vs. U.S. native-born residents. Labor participation has increased proportionally with higher education attainment for both cohorts. An essential distinction in the table is that foreign-born residents with less education have significantly higher labor participation.⁵

	FOREIGN BORN - Less than High School	NATIVE - Less than High School	Less Than High School Difference	FOREIGN BORN - High School Graduates	NATIVE - High School Graduates	High School Graduates Difference	FOREIGN BORN - Some College or Associate	NATIVE - Some College or Associate	Some College or Associate Difference	FOREIGN BORN - Bachelor Degree or Higher	NATIVE - Bachelor Degree or Higher	Bachelor Degree or Higher Difference
2009	61.4	37.9	23.5	67.2	61.4	5.8	73.7	70.9	2.8	75.7	76.9	-1.2
2010	61.6	37.1	24.5	68.4	60.6	7.8	73.4	70.2	3.2	75.5	76.9	-1.4
2011	60.0	37.7	22.3	65.9	59.3	6.6	72.9	69.0	3.9	75.7	76.5	0.9
2012	59.9	36.7	23.2	66.4	58.4	8.0	71.0	68.5	2.5	75.3	76.1	-0.8
2013	59.7	35.7	24.0	66.0	57.5	8.5	70.8	67.4	3.4	75.2	75.5	-0.3
2014	58.9	35.5	23.4	65.5	56.5	9.0	71.7	66.5	5.2	73.9	75.1	-1.2
2015	58.5	36.2	22.3	64.9	55.9	9.0	69.7	65.3	4.4	73.4	74.6	-1.2
2016	58.0	37.0	21.0	65.1	56.1	9.0	69.7	65.9	3.8	73.1	74.3	-1.2
2017	58.5	36.4	22.1	66.1	56.1	10.0	70.4	65.3	5.1	72.9	74.0	-1.1
2018	58.3	37.0	21.3	65.5	56.0	9.5	69.9	64.9	5.0	73.1	73.9	-0.8
2019	57.2	37.6	19.6	66.4	56.3	10.1	69.2	64.4	4.8	73.7	73.9	-0.2
2020	55.8	36.3	19.5	62.9	54.5	8.4	67.1	63.1	4.0	72.9	72.9	0.0
2021	56.1	36.0	20.1	62.2	54.0	8.2	66.4	62.6	3.8	73.8	71.8	2.0
2022	56.2	36.1	20.1	64.7	54.1	10.6	67.7	62.4	5.3	74.4	72.5	1.9

One can observe similar dynamics regarding the unemployment rate. Immigrants with lower levels of education (below college) have lower unemployment rates vs. their U.S. native-born peers. At the college level, that relationship reverses, with U.S. native-born residents exhibiting slightly lower unemployment rates. The data shows that higher education does lead to significantly lower unemployment rates. U.S. native-born residents with bachelor's degrees had unemployment rates of 1.9% in 2022. Even the COVID-19 pandemic could not increase this metric above 4.5% for this cohort. In contrast, U.S. native-born residents with less-than-high-school education saw their unemployment rates as high as 16.5% post the Great Financial Crisis (2008-2009), reaching 11.9% during the COVID-19 pandemic (2020).

Table 3: Unemployment rate % by educational attainment – foreign-born vs. U.S. native-born residents. The unemployment rate declines with higher levels of education for both cohorts. Foreign-born residents with less education have lower unemployment rates than their U.S. native-born counterparts.⁵

	FOREIGN BORN - Less than High School	NATIVE - Less than High School	Less Than High School Difference	FOREIGN BORN - High School Graduates	NATIVE - High School Graduates	High School Graduates Difference	FOREIGN BORN - Some College or Associate	NATIVE - Some College or Associate	Some College or Associate Difference	FOREIGN BORN - Bachelor Degree or Higher	NATIVE - Bachelor Degree or Higher	Bachelor Degree or Higher Difference
2009	12.6	16.5	-3.9	9.2	9.9	-0.6	8.8	7.9	0.9	6.4	4.3	2.1
2010	12.0	17.0	-5.0	9.3	9.2	0.1	9.3	8.3	1.0	6.4	4.3	2.1
2011	11.1	17.0	-5.9	9.3	9.4	-0.1	8.7	7.9	0.8	6.0	4.0	2.0
2012	9.9	14.9	-5.0	9.0	8.8	0.2	7.8	6.6	1.2	5.5	3.9	1.6
2013	8.1	14.1	-6.0	7.1	7.0	0.1	6.5	6.3	0.2	4.6	3.5	1.1
2014	6.4	11.9	-5.5	5.3	6.2	-0.9	5.7	5.4	0.3	4.1	3.0	1.1
2015	5.6	10.6	-5.0	5.1	5.1	0.0	4.7	4.5	0.2	3.3	2.4	0.9
2016	5.2	10.0	-4.8	4.5	5.3	-0.8	4.0	4.1	-0.1	3.1	2.4	0.7
2017	4.6	9.7	-5.1	3.9	4.0	-0.1	3.7	3.9	-0.2	3.2	2.1	1.1
2018	4.1	7.4	-3.2	3.2	4.2	-1.0	3.3	3.3	0.0	2.8	2.0	0.8
2019	3.9	7.0	-3.1	2.7	3.9	-1.2	2.7	3.1	-0.4	2.6	2.0	0.6
2020	11.4	13.0	-1.6	10.9	9.8	1.1	9.3	7.6	1.7	6.2	4.5	1.7
2021	6.5	10.4	-3.9	6.3	6.2	0.1	5.4	5.1	0.3	4.0	2.9	1.1
2022	4.4	6.9	-2.5	3.3	4.1	-0.8	3.2	3.1	0.1	2.3	1.9	0.4

The third observable employment-related metric, median earnings, also exhibits a wide range of outcomes by educational attainment. College-educated residents earn more than twice as much as those who have not completed high school. At the highest educational bracket (college / post-graduate degree), foreign-born residents earn more than their U.S. native-born counterparts. The likely factor in higher pay for immigrant college graduates is their greater representation in the STEM (science, technology, engineering, and math) fields. According to the American Immigration Council, immigrants made up almost one-fourth, or 23.1%, of all STEM workers in the United States in 2019, a significant increase from just 16.4% in 2000.¹³ Considering foreign-born residents account for c.15% of the total U.S. population,¹ it means that immigrants

are over-represented in the STEM professions, which offer on average 80% higher salaries.¹⁴ Notably, foreign-born residents' earnings have risen at faster annual rates over the observed periods, closing the gap vs. their U.S. native-born peers. Across all cohorts, the percentages of immigrants' wages as a fraction of their U.S. counterparts have increased by c. 3-10% between 2009 and 2022.

Table 4: Median weekly earnings by educational attainment – foreign-born vs. U.S. native-born residents. Median weekly earnings increase substantially with higher levels of education for both cohorts. Foreign-born residents with a college or post-graduate education earn, on average, more than U.S. native-borns.⁵

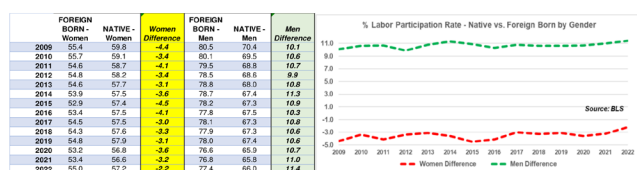
	FOREIGN BORN - Less than High School	NATIVE - Less than High School	Less Than High School Difference	FOREIGN BORN - High School Graduates	NATIVE - High School Graduates	High School Graduates Difference	FOREIGN BORN - Some College or Associate	NATIVE - Some College or Associate	Some College or Associate Difference	FOREIGN BORN - Bachelor Degree or Higher	NATIVE - Bachelor Degree or Higher	Bachelor Degree or Higher Difference
2009	415.0	498.0	-83.0	530.0	644.0	-114.0	641.0	733.0	-92.0	874.0	1,129.0	-255.0
2010	416.0	496.0	-80.0	521.0	648.0	-127.0	656.0	741.0	-85.0	882.0	1,119.0	-237.0
2011	417.0	497.0	-80.0	530.0	651.0	-121.0	665.0	746.0	-81.0	891.0	1,148.0	-257.0
2012	428.0	519.0	-91.0	550.0	675.0	-125.0	673.0	788.0	-115.0	882.0	1,164.0	-282.0
2013	428.0	511.0	-83.0	565.0	674.0	-109.0	691.0	754.0	-63.0	874.0	1,235.0	-361.0
2014	463.0	517.0	-54.0	581.0	689.0	-108.0	685.0	771.0	-86.0	885.0	1,222.0	-337.0
2015	476.0	519.0	-43.0	599.0	696.0	-97.0	699.0	770.0	-71.0	890.0	1,255.0	-365.0
2016	489.0	525.0	-36.0	608.0	709.0	-101.0	710.0	789.0	-79.0	890.0	1,311.0	-421.0
2017	506.0	560.0	-54.0	619.0	734.0	-115.0	727.0	808.0	-81.0	890.0	1,340.0	-450.0
2018	535.0	578.0	-43.0	632.0	754.0	-122.0	750.0	837.0	-87.0	892.0	1,362.0	-470.0
2019	577.0	617.0	-40.0	675.0	768.0	-93.0	778.0	868.0	-90.0	897.0	1,415.0	-518.0
2020	601.0	655.0	-54.0	702.0	801.0	-99.0	829.0	910.0	-81.0	917.0	1,450.0	-533.0
2021	610.0	669.0	-59.0	725.0	826.0	-101.0	846.0	934.0	-88.0	926.0	1,521.0	-595.0
2022	663.0	708.0	-45.0	767.0	879.0	-112.0	873.0	981.0	-108.0	951.0	1,537.0	-586.0

The data in Table 4 indicates that, apart from college-educated immigrants, the other foreign-born cohorts earn less than their U.S. native-born peers. This income divergence is also partly explained by career choices. According to BLS data, US-born native-born residents occupy a greater percentage of higher-paying jobs in management, professional services (e.g., law, medicine), and technology. Immigrants, on the other hand, are more represented in agriculture, construction, hospitality, and manufacturing, and they tend to pay less.⁵

RESEARCH QUESTION #2: Evidence and Analysis: How does gender relate to immigrants' employment and income prospects?

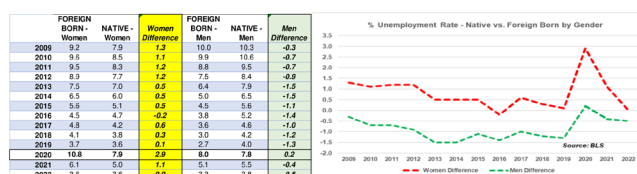
In Research Question #1, I provided a cross-sectional analysis by birthplace and level of educational attainment. To set the background for Research Question #2, I begin with some general employment metrics providing context for the educational cross-sectional analysis discussed later. Table 5 below shows labor participation by gender and birthplace. The data indicates that labor participation has generally declined over the observed period, especially for men. Native-born born men's labor participation rates have declined by 4.4%, while immigrants' have gone down by 3%. Native-born born women have seen their labor participation decrease by 2.8%, while foreign-born women have kept their labor participation constant. Immigrant men have a greater labor participation rate (c. 10-11% higher) than U.S. native-born residents. At the same time, foreign-born women have made consistent strides to close their lagging participation rate compared to U.S.-born women. Overall, the data shows that immigrants' labor participation rates are higher than those of U.S. native-born residents. The most likely explanation is the need and desire of foreigners arriving in the U.S. to rebuild their lives, often starting from scratch.⁵

Table 5: Labor Participation Rate – men vs. women by birthplace (foreign-born vs. U.S. native-born). Foreign-born men have greater labor participation than U.S. native-born men. Foreign-born women's participation has lagged compared to the three other cohorts, but the gap has been closing over the last decade.⁵



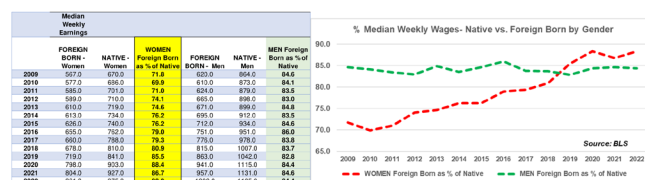
The following Table 6 shows the unemployment rate for both foreign-born and U.S. native-born cohorts, broken by gender. There is no significant difference between the cohorts, with immigrant women having slightly higher unemployment and immigrant men having slightly lower unemployment. However, during the COVID-19 crisis, immigrants' unemployment spiked more significantly, especially for women. This phenomenon was likely due to immigrants' labor participation skewing towards services that were more affected by business closures. Notably, the unemployment rate gap for both men and women nearly closed in the last observable year.⁵

Table 6: Unemployment Rate – men vs. women by place of birth (foreign-born vs. U.S. native-born). The unemployment rate for both immigrant and native-born cohorts has remained closely aligned apart from the COVID-19 crisis.⁵



The two datasets presented in Tables 5-6 that labor participation is higher among immigrant men and is increasing for foreign-born women relative to U.S. native-born women. Similarly, unemployment rates are lower among immigrant men and declining among foreign-born women relative to U.S. native-born women. Table 7 provides evidence of how such "hard work" translates into earnings. Foreign-born men's income has kept pace with their U.S. native-born residents' peers, maintaining a steady ratio of approximately 85%. Both cohorts have seen their median weekly wages grow at 4.5% annually over the observed period. The progression in the female cohort was different during the observed period. Foreign-born women's earnings grew faster than those of their U.S. native-born peers. In 2009, immigrant women had median weekly wages amounting to 71.3% of U.S. native-born women. By 2022, that difference had declined by 17%, reaching 88.3%. In Research Question #1, I have addressed the two factors, level of education and career selection, that keep immigrants' incomes lower than those of native-born U.S. residents.⁵

Table 7: Median Weekly Wages – men vs. women by birthplace (foreign-born vs. U.S. native-born). Overall, immigrants' wages are below those of their U.S. native-born peers. While foreign-born men have seen their wages oscillate around c.85% of their native-born peers, foreign-born women have been rapidly rising compared to their native-born female peers.⁵



Having presented general labor participation and unemployment rates for both men and women, the following data analysis will only focus on the female cohort. The BLS data set used in this research paper breaks down cohorts by the number and age of children in both foreign-born and U.S. native-born families. Notably, there appears to be a strong correlation between the presence of young children in the household and women's employment, especially for immigrants. This is understandable newly arrived foreigners typically have fewer resources. According to Table 10, provided by the Pew Research Center, mothers are more likely to stay home to take care of their young children. This correlation is not observed for immigrant men, as their employment participation is relatively high when young children are present in the household. Table 8 below displays the percentage of foreign-born and U.S. native-born women with children ages 0-6 and 6-17. The table shows that the proportion of women with young children is declining for both cohorts, especially for foreign-born women, who saw a 4.6% decline from 2009 to 2022. The percentage of foreign-born women with older children (6-17 years old) is likely temporarily boosted by the higher number of mothers with children under 6 years old in prior years. Table 8 indicates that, on average, foreign-born women are 3-5% more likely to have young children than their native-born peers.

Table 8: Percentage of women with children 0-6 years old and 6-17 years old – foreign-born vs. U.S. native-born. A greater percentage of foreign-born women have children, although the proportion of those with young children has declined by 4.6% since 2009.⁵

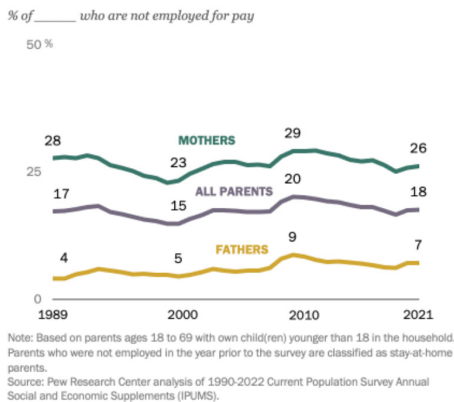
	FOREIGN BORN - With Own Children Under 6 Years Old	NATIVE - With Own Children Under 6 Years Old	Women with Children Under 6 years old Difference	FOREIGN BORN - With Own Children 6-17 Years Old	NATIVE - With Own Children 6-17 Years Old	Women with Children Between 6 and 17 years old Difference
2009	19.7	14.5	5.2	14.2	11.4	2.8
2010	20.5	14.9	5.6	14.2	11.3	2.9
2011	19.6	14.8	4.8	14.4	11.1	3.3
2012	19.0	14.5	4.5	14.8	11.0	3.8
2013	18.6	13.9	4.7	14.9	11.0	3.8
2014	18.4	13.9	4.5	14.9	11.0	3.9
2015	17.8	13.7	4.1	15.0	10.9	4.1
2016	17.2	13.4	3.8	15.1	10.8	4.3
2017	16.8	13.1	3.7	15.1	10.6	4.4
2018	16.7	13.0	3.7	14.9	10.4	4.6
2019	16.0	12.9	3.1	15.0	10.3	4.7
2020	16.0	12.6	3.4	15.0	10.3	4.7
2021	15.2	12.5	2.7	14.9	10.1	4.8
2022	15.1	12.5	2.6	15.0	10.2	4.8

Table 9: % Labor participation rate and % unemployment rate for women with children of ages 0-6 years old and 6-17-years old- foreign-born vs. U.S. native-born residents. Foreign-born women's labor participation for women with children under 6 years old has been increasing since 2009.⁵

% Labor Participation Rate For Women with Young Children						% Unemployment Rate for Women with Young Children									
FOREIGN BORN - With Own Children Under 6 Years Old		NATIVE - With Own Children Under 6 Years Old	Women with Children Under 6 years old Difference	FOREIGN BORN - With Own Children 6-17 Years Old		NATIVE - With Own Children 6-17 Years Old	Women with Children Between 6 and 17 years old Difference	FOREIGN BORN - With Own Children Under 6 Years Old		NATIVE - With Own Children Under 6 Years Old	Women with Children Under 6 years old Difference	FOREIGN BORN - With Own Children 6-17 Years Old		NATIVE - With Own Children 6-17 Years Old	Women with Children Between 6 and 17 years old Difference
Year	Rate	Rate		Year	Rate	Rate		Year	Rate	Rate		Year	Rate	Rate	
2009	49.1	74.0	-24.9	2009	70.2	78.0	-8.8	2009	11.5	8.0	3.5	2009	11.5	8.0	3.5
2010	49.4	73.3	-23.9	2010	69.6	78.1	-8.5	2010	11.8	8.5	3.3	2010	11.8	8.5	3.3
2011	48.6	73.2	-24.6	2011	68.0	78.1	-10.1	2011	12.1	8.6	3.5	2011	12.1	8.6	3.5
2012	50.3	73.1	-22.8	2012	67.1	77.3	-10.2	2012	10.3	8.2	2.1	2012	10.3	8.2	2.1
2013	49.6	72.7	-23.1	2013	66.6	77.0	-10.4	2013	8.3	7.3	1.0	2013	8.3	7.3	1.0
2014	48.5	73.2	-24.7	2014	66.4	77.1	-10.7	2014	8.1	6.1	2.0	2014	8.1	6.1	2.0
2015	47.5	73.5	-26.0	2015	64.8	77.3	-12.5	2015	6.8	5.2	1.6	2015	6.8	5.2	1.6
2016	47.7	73.0	-25.3	2016	65.0	77.2	-11.8	2016	5.7	4.7	1.0	2016	5.7	4.7	1.0
2017	47.9	74.4	-26.5	2017	67.6	78.2	-10.6	2017	5.0	4.0	1.0	2017	5.0	4.0	1.0
2018	46.9	74.7	-27.8	2018	66.4	78.0	-10.5	2018	5.1	3.7	1.4	2018	5.1	3.7	1.4
2019	51.2	75.5	-24.3	2019	68.0	78.6	-10.6	2019	4.5	3.5	1.0	2019	4.5	3.5	1.0
2020	50.7	76.7	-26.0	2020	66.4	78.5	-12.1	2020	11.1	6.8	4.3	2020	11.1	6.8	4.3
2021	50.4	74.0	-23.6	2021	65.9	78.6	-12.7	2021	7.0	4.8	2.2	2021	7.0	4.8	2.2
2022	54.3	79.0	-24.7	2022	68.2	79.5	-11.3	2022	3.8	3.4	0.4	2022	3.8	3.4	0.4

Table 9 above reveals a few notable trends. First, women with children under 6 years old show increasing labor participation, especially foreign-born mothers, who saw a 5% incremental increase over the last 13 years. Second, native-born mothers have high labor participation rates ranging in the mid-70% to high-70%, metrics that are above the national averages (Table 5). Third, the unemployment rate gaps between foreign-born and native-born women visible in 2009 have converged by 2022. Considering overall declining labor participation rates in the United States (Table 5), the fact that mothers with young children are increasingly joining the labor force is significant. Many factors are likely contributing to this effect. My research has led me to some potential reasons why foreign-born and U.S. native-born mothers exhibit higher labor participation rates. Data provided by the Pew Research Center suggests that childcare roles have seen a slight reversal, with stay-at-home dads taking on more parental responsibilities. Having a parent stay home and care for the young children allows mothers to return to work and support their families.

Table 10: A greater share of dads are stay-at-home parents today than 30 years ago.¹⁸



Another possible explanation for the increase in female labor participation is the rise in female educational attainment. Since 2000, the percentage of females with a college degree has risen from 30% to 45%.¹⁹ As demonstrated above, greater educational attainment among all demographics contributes to increased labor participation rates. Furthermore, another likely contribution to the increased presence of women in the labor market, for both U.S. native-born and foreign-born residents, is the adoption of hybrid work. While the COVID-19 pandemic led to a calamitous rise in unemployment, it introduced remote work. The opportunity to perform job duties

from home has enabled mothers to care for their children while remaining a part of the labor market. It is important to note that while the presented observations were likely contributing factors for the rise of female labor participation, there is significant additional context, factors, and data that need to be considered concerning this trend.

■ Further Considerations

Immigration and employment are important and actively debated social issues. These two topics are also closely tied. In the aftermath of the COVID-19 pandemic, labor markets in the global north became increasingly tight, adversely impacted by significant worker shortages. According to an IMF Study,¹⁵ by late 2021, there were 50% to 80% more unfilled jobs in Australia, Canada, the United Kingdom, and the United States than there were prior to the pandemic. These large vacancies were driven by generous social benefits, older workers quitting jobs seeking better work-life balance, job-skills mismatches, and mothers exiting to care for their younger children due to school disruptions. Considering declining birth rates in the US, as highlighted in a recent CDC study,¹⁶ an increase in the population is a potential solution to help fill job shortages. By offering refuge and accepting a greater number of immigrants into the United States, the tighter labor market should normalize. The data presented in this research article demonstrates that immigrant men have a high propensity to work, which is implied by the highest labor participation rates compared to U.S. native-born men or total women. Immigrant women who are not engaged with childcare also show a high propensity to seek employment. The data demonstrates that foreign-born workers have a higher labor participation rate than U.S. native-born participants. Labor availability reduces labor shortages, contributing to the decrease in inflation. According to the IMF study cited above,¹⁵ labor shortages have contributed 1.5% to overall wage inflation, impacting low-wage industries as high as 4-6%.¹⁵ Therefore, thoughtfully structured and well-executed immigration policies, targeting unfulfilled job shortages and matching skills with vacancies, could lead to a more productive, less-inflationary economic environment.

Other policies that could help improve productivity, labor participation, and living standards should focus on better education for immigrants and affordable childcare options. The two research questions discussed herewith demonstrated that higher levels of educational attainment led to greater labor participation, lower unemployment, and better pay. Further, the data indicated that immigrant women who did not have access to affordable childcare remained out of the labor force; however, they did return to work once parental responsibilities were no longer required. Therefore, governmental agencies dedicated to improving labor markets and workers' conditions and well-being should look to provide better education and childcare options for immigrants.

■ Conclusions

This research paper focused on providing a cross-sectional review of select socio-demographic characteristics for immigrants and comparative U.S. native-born peers over the last full economic cycle (2009 to 2022). My findings showed that

immigrant men have the highest labor participation rate, maintaining a relatively stable lead vs. U.S. native-born peers. In contrast, foreign-born women started with much lower labor participation rates in 2009 but have increasingly sought employment over the last decade, converging closer to their U.S. native-born female counterparts. My results show that educational attainment makes a substantial difference in employment prospects and pay. Further, immigrant women with young children are opting to stay home, but as soon as their parental responsibilities are over, they tend to return to work. Therefore, government policies providing affordable education and childcare to immigrants can enhance societal productivity and living standards.

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