The Economic Contributions of Immigrants in Ohio's Workforce

Ohio is home to nearly 550,000 immigrants—making up 4.7 percent of the state's population—who play a crucial role in Ohio's economy, including in some of the state's fastest-growing and most in-demand fields, such as science, technology, engineering, and math (STEM), manufacturing, healthcare, and education.[1] In fact, immigrants regularly punch above their weight in the state's workforce,[2] making up 5.7 percent of all workers, 12.9 percent of STEM workers, 23.1 percent of postsecondary teachers, and 24.7 percent of physicians.[3]

In 2019, more than 3.7 million Ohioans were 55 or older and will reach retirement age in the next decade, further exacerbating workforce shortages.[4] In today's tight labor market, Ohio will need additional workers to complement the U.S.-born workforce, especially as current workers age out of the labor force.

For Ohio to remain competitive and meet the critical workforce needs across key industries, it will be crucial to implement policies that not only attract and retain global talent that is complementary to the U.S.-born workforce, but that also build career pathways for immigrants who already call the state home. One way to achieve this goal is to remove barriers to professional and occupational licenses.

Ohio's regulatory framework currently makes it prohibitively difficult for many immigrants to obtain state occupational and professional licenses, certificates, and registrations. **Removing such barriers would expand economic opportunities for all residents and help meet the state's pressing workforce needs in the process**. In doing so, Ohio would join states like Arkansas, Michigan, Nebraska, and Virginia that have already taken similar steps.
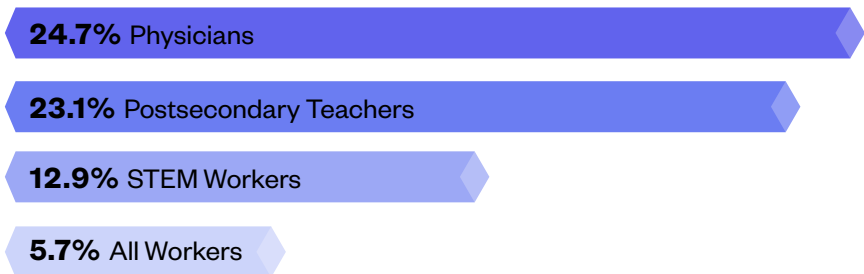
Ohio is home to

550,000

immigrants, making up

4.7%
of the population.
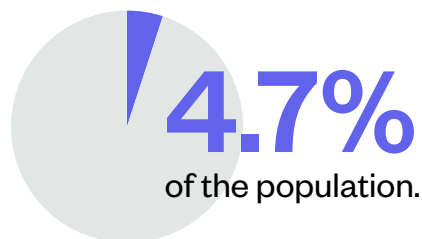
Immigrant share of Ohio's workforce:

24.7% Physicians

23.1% Postsecondary Teachers

**12.9%** STEM Workers

5.7% All Workers

THE GROWING DEMAND FOR WORKERS IN OHIO

Despite the challenges posed by the COVID-19 pandemic, labor shortages, and an increasing number of baby boomers approaching retirement, the Ohio economy continues to grow larger and stronger, as evidenced by an increase in demand for workers.
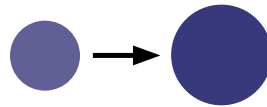
From 2017 to 2021, the number of online job postings in Ohio increased from 837,326 to 1,540,723,[5] or

+84.0%
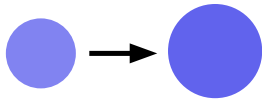
During that time, demand for **bilingual workers** across all occupations grew[6] by

+106.5%

Immigrants will be crucial to meeting demand in a multitude of sectors that power the Buckeye state's economy.

MANUFACTURING

Manufacturing is a key economic driver in Ohio and spurs economic development and innovation throughout the state. In 2019, manufacturers in the state accounted for 16.1 percent of the total output of goods and services and generated more than $112 billion in produced goods and services.[7] Even as the Ohio manufacturing sector weathered pandemic-related challenges, the industry continues to grow and the demand for talent across the skills and education spectrum continues to increase.

The number of job postings in production occupations **more than doubled** from 2017 to 2021.[8]

In 2021, production workers were in the highest demand in the manufacturing industry, with online job postings **tripling in five years**,[9] from

5,063 to 19,477

During that year, first-line supervisors of production workers were the second highest in demand, with job postings **doubling in five years**,[10] from

2,744 to 6,519

The average share of workers from 2015 to 2019 who were immigrants:[11]

5.4% Production Workers

4.1% Inspectors, Testers, and Sorters

3.8% First-Line Supervisors

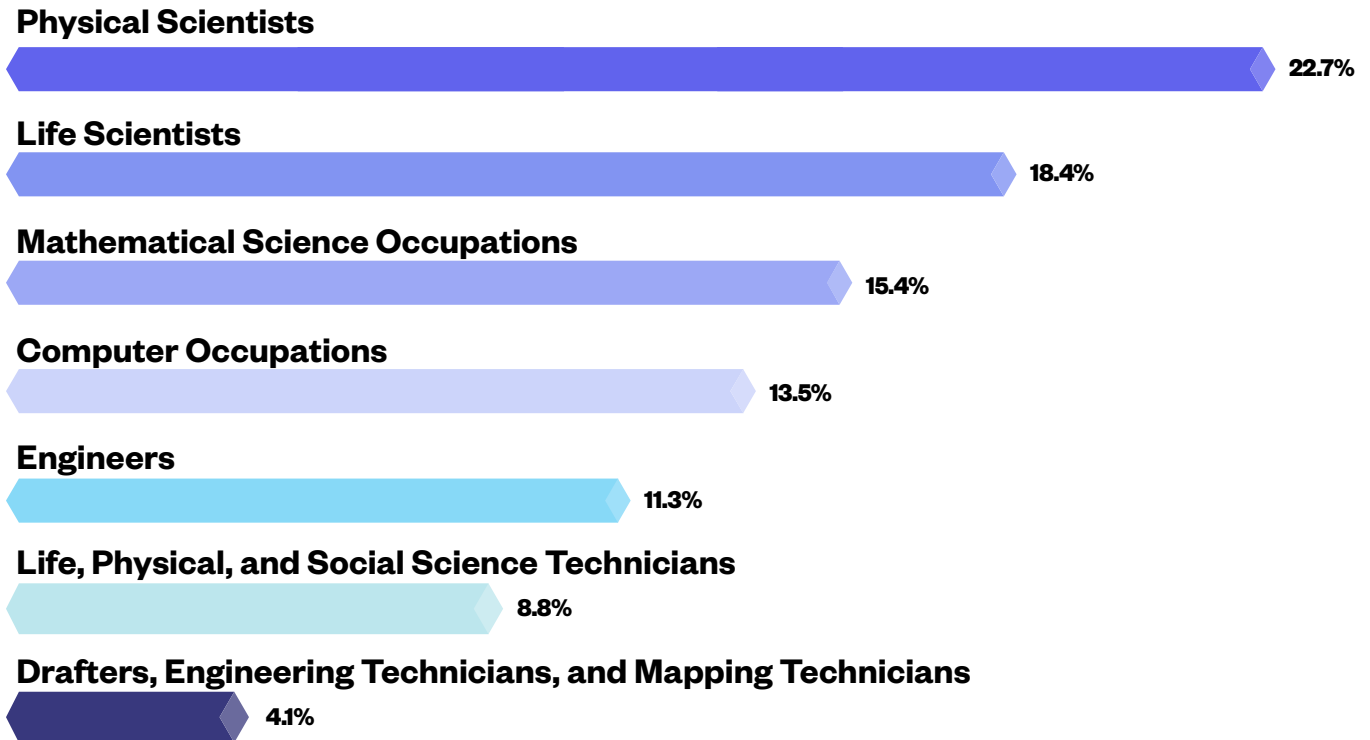## SCIENCE, TECHNOLOGY, ENGINEERING, AND MATH (STEM)[12]

Immigrants play an important role in meeting Ohio's demand for workers in STEM fields. Tapping into the diverse skillsets these communities bring will help ensure the state can remain innovative as the need for high-skilled STEM workers grows.

The greatest number of online STEM job postings in 2021 was in the computer jobs family, such as **computer systems analysts**, **computer programmers**, and **software developers.**[13]

From 2017 to 2021, job postings for physical scientists **doubled**,[14] from

242 to 494

The average share of STEM workers from 2015 to 2019 who were immigrants:[15]

Physical Scientists
22.7%

Life Scientists
18.4%

Mathematical Science Occupations
15.4%

Computer Occupations
13.5%

Engineers
11.3%

Life, Physical, and Social Science Technicians
8.8%

**Drafters, Engineering Technicians, and Mapping Technicians**
4.1%

SKILLED TRADES

Across the vast array of skilled trades, job postings increased by 23.9 percent, from 27,306 in 2017 to 33,829 in 2021,[16] demonstrating the critical need for skilled workers across the state. The need for more skilled workers in these specialized roles will continue to increase as shortages across the industry persist.
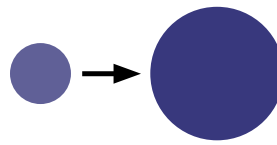
From 2017 to 2021, job postings for **construction laborers** saw one of the highest percentage increases,[17] growing from 39 to 220 postings, or
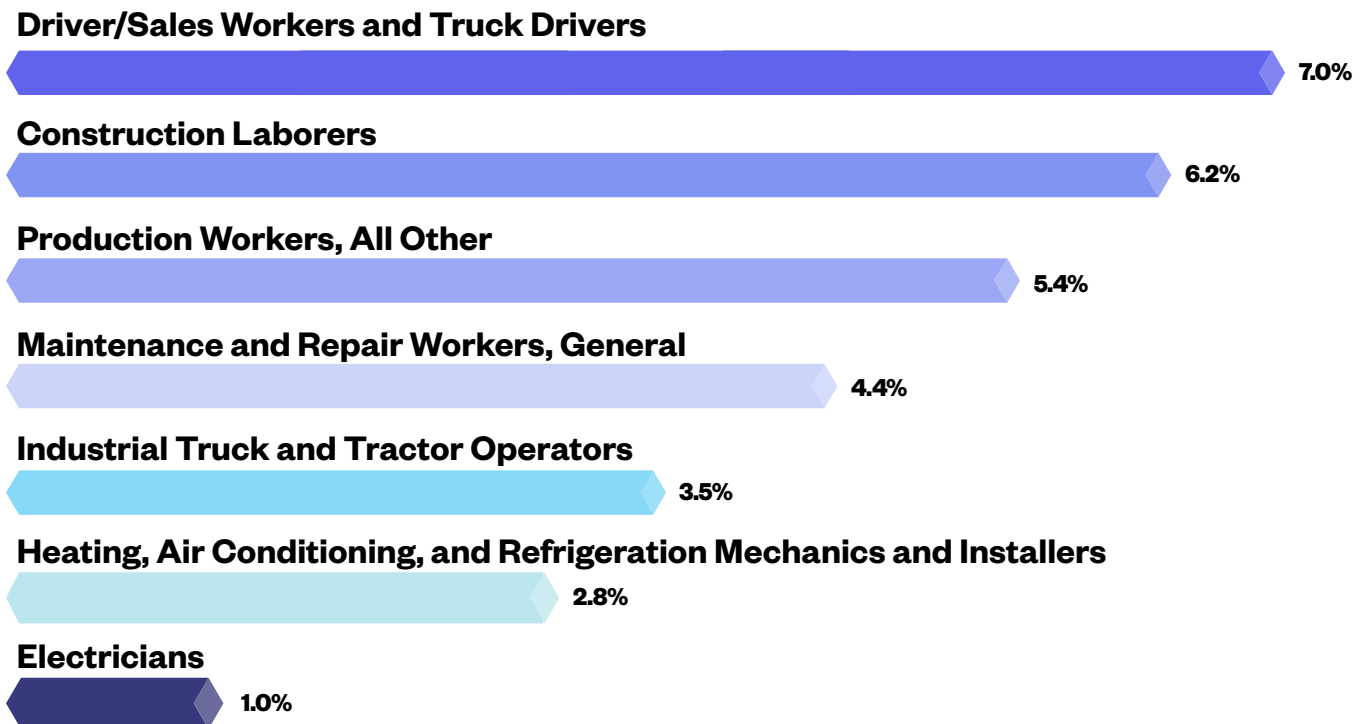
+464.1%
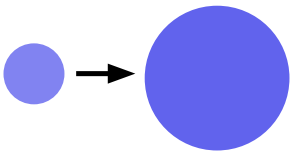
During the same time, demand for **maintenance and repair workers** increased[18] by

+379.9%

The average share of skilled trade workers from 2015 to 2019 who were immigrants:[19]

Driver/Sales Workers and Truck Drivers
7.0%

Construction Laborers
6.2%

Production Workers, All Other
5.4%

Maintenance and Repair Workers, General
4.4%

Industrial Truck and Tractor Operators
3.5%

Heating, Air Conditioning, and Refrigeration Mechanics and Installers
2.8%

Electricians
1.0%

HEALTHCARE

Nursing and Home Health

In the healthcare industry, job postings increased by 82.1 percent from 2017 to 2021,[20] demonstrating the critical need for healthcare workers across Ohio. As the state's population continues to age, the need for additional healthcare workers will increase.

Between 2017 and 2021, online job postings for **home healthcare aides** saw the highest increase,[21] increasing by
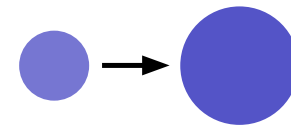
+800%
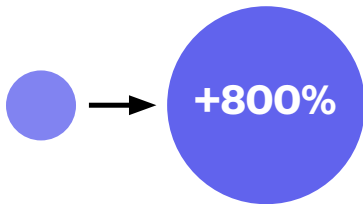
From 2017 to 2021, **registered nurses (RNs)** had the most job postings,[22] rising

+62.4%
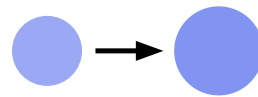
During that same period, job postings for **nursing assistants** increased[23] by

+186.7%

The average share of healthcare and nursing workers from 2015 to 2019 who were immigrants:[24]

Home Health and Personal Care Aides
13.6%

Nurse Practitioners
13.1%

Registered Nurses
4.4%

Nursing Assistants
4.4%

Practical and Licensed Vocation Nurses
3.4%

HEALTHCARE (CONTINUED)

Oral Health

The demand for oral healthcare workers also grew in Ohio.

From 2017 to 2021, online job postings for **dentists** increased,[25] growing from

439 to 605

During the same period, the number of job postings for **dental assistants**[26]

tripled

The average share of oral health workers from 2015 to 2019 who were immigrants:[27]

Dentists, General

7.1%

**Dental Assistants**

5.3%

K-12 EDUCATION

As school districts struggle to recruit and retain teachers, immigrants can play a critical role in addressing teacher shortages. With an increase in demand for multilingual and culturally competent educators in areas like English as a second language and bilingual special education, immigrants are uniquely positioned to provide support in the classroom.

From 2017 to 2021, online job postings for **teachers** and **teaching assistants**[28] in the state's K-12 schools increased
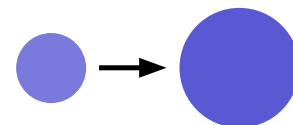
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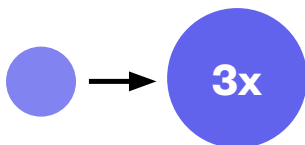
In 2021, demand for **teaching assistants**[29] alone increased the most, with job postings increasing since 2017 by
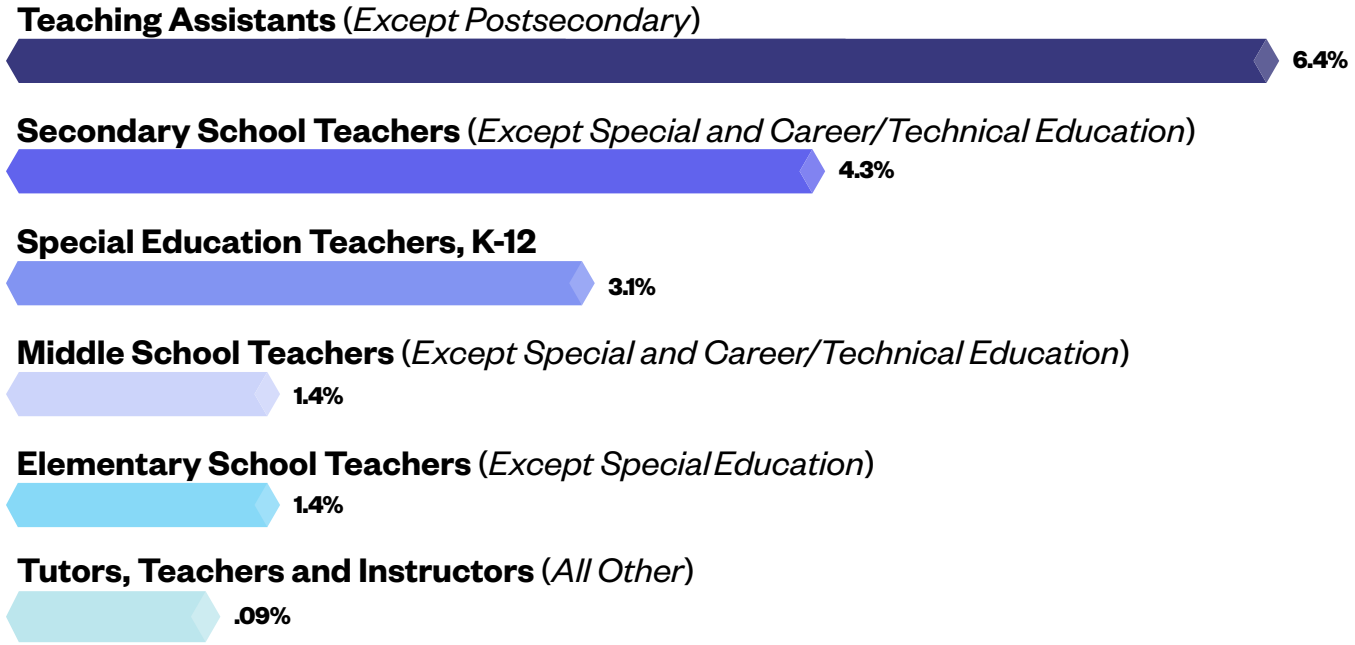
+428.1%
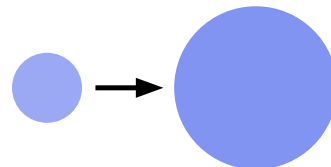
Middle school teachers had the next highest rate of increase in job postings during that time, increasing from 904 to 2,657,[30] or

+193.9%

K-12 EDUCATION (CONTINUED)

The average share of K-12 education workers from 2015 to 2019 who were immigrants:[31]

Teaching Assistants (*Except Postsecondary*)

6.4%

Secondary School Teachers (*Except Special and Career/Technical Education*)

4.3%

Special Education Teachers, K-12

3.1%

Middle School Teachers (*Except Special and Career/Technical Education*)

1.4%

Elementary School Teachers (*Except Special Education*)

1.4%

Tutors, Teachers and Instructors (*All Other*)

**.09%**

SOCIAL WORK AND BEHAVIORAL HEALTH

Social workers and behavioral health practitioners play an essential role in ensuring that the state provides a safe, healthy, and secure environment for all Ohioans. As the state becomes more diverse, the demand for culturally competent and multilingual social workers and behavioral health professionals will continue to grow.

From 2017 to 2021, online job postings for **general social workers** doubled.[32]

2x
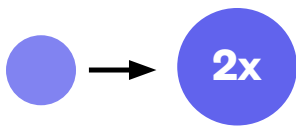
Out of all social work occupations, **counseling** had one of the highest rates of increases in 2021.[33]

In 2021, demand for **licensed counselors** increased by:[34]

+246.6 Substance Abuse Counselors

+100.8% Marriage and Family Therapists
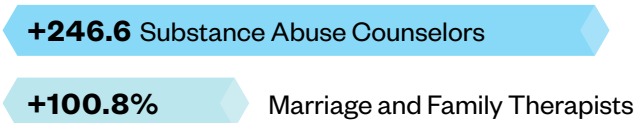
In 2021, demand for **social workers** increased by:[35]

+259.3 Mental Health Social Workers

+187.9% Healthcare Social Workers

SOCIAL WORK AND BEHAVIORAL HEALTH (CONTINUED)
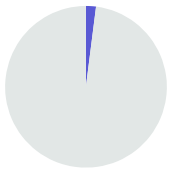
2.0%

of social workers were immigrants from 2015 to 2019.[36]

BRAIN WASTE IN OHIO

Despite the growing need for workers in Ohio, many immigrants who have received specialized education, training, and licensing abroad are unable to practice in the state, facing challenges such as recredentialing and attaining language proficiency. Their skillsets are all too often underutilized—in what is known as "brain waste"—which frequently leads to under- or unemployment.[37]

27.9%

of college-educated immigrants in Ohio in 2019 worked in occupations that did not require a bachelor's degree.[38]

WELCOMING POLICIES EXPAND OPPORTUNITIES FOR ALL OHIOANS

Immigrants already contribute skills that are crucial to innovation, healthy living, and educating the state's future workforce. As demand for workers increases across the Buckeye state, Ohio has an opportunity to leverage this untapped talent and expand economic opportunity for all Ohioans. If Ohio is to meet the growing demands of the labor market, the state must create policies and welcoming strategies that ensure immigrants can thrive and fully participate in the economy.

APPENDIX

Annex 1: Definitions of STEM Job Categories and Occupations in Each STEM Job Category, Lightcast

Computer occupations include jobs as Computer systems analysts, Information security analysts, Computer and information research scientists, Computer network support specialists, Computer user support specialists, Computer network architects, Network and computer systems administrators, Database administrators and architects, Computer programmers, Software developers and software quality assurance analysts and testers, Web developers and digital interface designers, and Computer occupations, all other

Engineers include jobs as Aerospace engineers, Agricultural engineers, Bioengineers and biomedical engineers, Chemical engineers, Civil engineers, Computer hardware engineers, Electrical engineers, Electronics engineers, except computer, Environmental engineers, Health and safety engineers, except mining safety engineers and inspectors, Industrial engineers, Marine engineers and naval architects, Materials engineers, Mechanical engineers, Mining and geological engineers, including mining safety engineers, Nuclear engineers, Petroleum engineers, and Engineers (all other)

Drafters/Engineer Techs include jobs as Architectural and civil drafters, Electrical and electronics drafters, Mechanical drafters, Drafters, all other, Aerospace engineering and operations technologists and technicians, Civil engineering technologists and technicians, Electrical and electronic engineering technologists and technicians, Electro-mechanical and mechatronics technologists and technicians, Environmental engineering technologists and technicians, Industrial engineering technologists and technicians, Mechanical engineering technologists and technicians, Surveying and mapping technicians, and Calibration technologists and technicians and engineering technologists and technicians, except drafters (all other)

Life Science Techs include jobs as Agricultural and food science technicians, Biological technicians, Chemical technicians, Environmental science and protection technicians, including health, Geological and hydrologic technicians, Nuclear technicians, Social science research assistants, Forest and conservation technicians, Forensic science technicians, and Life, physical, and social science technicians (all other)

Mathematical Sciences includes jobs as Actuaries, Mathematicians, Operations research analysts, Statisticians, and Data scientists and mathematical science occupations (all other)

Physical Sciences include jobs as Astronomers, Physicists, Atmospheric and space scientists, Chemists, Materials scientists, Environmental scientists and specialists, including health, Geoscientists, except hydrologists and geographers, Hydrologists, and Physical scientists (all other)

Life Sciences includes jobs as Animal scientists, Food scientists and technologists, Soil and plant scientists, Biochemists and biophysicists, Microbiologists, Zoologists and wildlife biologists, Biological scientists, all other, Conservation scientists, Foresters, Epidemiologists, Medical scientists, except epidemiologists, Life scientists (all other)

Social Sciences includes jobs as Economists, Survey researchers, Clinical, counseling, and school psychologists, Clinical, counseling, and school psychologists, Industrial-organizational psychologists, Psychologists, all other, Sociologists, Urban and regional planners, Anthropologists and archeologists, Geographers, Historians, Political scientists, and Social scientists and related workers (all other)

ENDNOTES

1. American Immigration Council analysis of data from the 1-year 2019 American Community Survey. See American Immigration Council, "Map the Impact: Ohio," accessed on June 30, 2023, https://map.americanimmigrationcouncil.org/locations/ohio/.

2. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

3. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

4. Ibid.

5. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basicoverview/.

6. Ibid.

7. National Association of Manufacturers, "2021 Ohio Manufacturing Facts," 2021, https://www.nam.org/state-manufacturing-data/2021-ohio-manufacturing-facts/.

8. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

9. Ibid.

10. Ibid.

11. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

12. Occupation data for STEM online job postings is listed by larger occupation families, and follows the definitions for each occupation as set forth by Lightcast, https://kb.emsidata.com/methodology/.

13. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

14. Ibid.

15. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

16. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

17. Ibid.

18. Ibid.

19. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

20. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

21. Ibid.

22. Ibid.

23. Ibid.

24. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

25. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

26. Ibid.

27. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

ENDNOTES (CONTINUED)

28. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

29. Ibid.

30. Ibid.

31. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

32. American Immigration Council analysis of data compiled by Lightcast, 2022, https://kb.emsidata.com/methodology/emsi-data-basic-overview/.

33. Ibid.

34. Ibid.

35. Ibid.

36. American Immigration Council analysis of the IPUMS microdata from the 2019 American Community Survey, 5-Year Sample.

37. New American Economy, "Untapped Talent: The Costs of Brain Waste Among Highly Skilled Immigrants in the United States," December 2016, http://research.newamericaneconomy.org/wp-content/uploads/2016/12/NAE_BrainWaste_V4_Digital.pdf.

38. American Immigration Council analysis of the 2019 American Community Survey, 1-Year Sample.