

OHIO'S GLOBAL FIGHT FOR TALENT

The Case for State-Based Visas for High-Skill Immigrants



By Logan Kolas



THE BUCKEYE INSTITUTE

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EXECUTIVE SUMMARY

The international semiconductor labor shortage highlights the need for state and federal leaders to make significant changes to U.S. immigration policy. The concurrent global “arms race” to replenish that shortage with new semiconductor manufacturing capacity has exacerbated high-skill labor shortages and made qualified workers more difficult to find. Intel’s recent decision to invest \$20 billion in state-of-the-art semiconductor plants in central Ohio exemplifies the challenges and market complexities, and how strategic state-based immigration reforms can help.

A well-designed state-based visa program would not displace Ohio workers, but would instead help fill current gaps in high-skilled job markets—especially markets critical to national security. Job openings in Ohio exceed the state’s unemployed, which means that legally admitted skilled immigrants are likely to fill job vacancies rather than displace hard-working Americans. Filling those gaps can ease strains in an increasingly tight national labor market and spur local economic activity. Immigrants to the United States tend to be highly educated¹ and entrepreneurial,² being twice as likely as native-born Americans to start new businesses and hold patents.³ Those are valuable traits for high-tech industries, employers, and economies looking to remain competitive. But U.S. immigration policy is driven entirely by federal lawmakers with virtually no voice given to state and local leaders. That should change.

State and federal policymakers should collaborate and work cooperatively to craft a high-skilled immigration policy that allows states to grant state-based visas to prospective immigrants that states want to admit. Such a policy would better align immigrant skill-sets with the sorts of economic activities that each state pursues. It would replace the federal one-size-fits-all approach with a more tailored plan that is more sensitive to the nuances of local employers and markets. And it would complement other efforts in Ohio to further upskill and reskill its existing

¹ United States Census Bureau, American Community Survey 1-Year Estimates Public Use Microdata Sample: **Educational Attainment**, 2021 (Last visited May 23, 2023).

² New American Economy in partnership with US Together, the Columbus City Council, and the Franklin County Commissioners, **New Americans in the Columbus Metro Area**, May 20, 2021.

³ FWD.US, **The Case for Protecting Legal Immigration Against Recent Attacks**, April 2019, p. 2; and Jennifer Hunt and Marjolaine Gauthier-Loiselle, “**How Much Does Immigration Boost Innovation**,” *American Economic Journal: Macroeconomics*, Volume 2 (April 2010), pp. 31-56.

workforce.⁴ Intel's investment in Columbus gives Ohio a unique opportunity to call for a new collaborative approach. Ohio desperately needs more qualified workers and skilled immigrants to make Intel's project successful, and state leaders should help draft the policies that ultimately govern how, when, and under what circumstances those workers and immigrants arrive.

⁴ Logan Kolas, *Policy Solutions for More Innovation: Modernizing Ohio's Policies to Seize New Economic Opportunities*, The Buckeye Institute policy report, March 21, 2022.

THE INTERNATIONAL SEMICONDUCTOR LABOR STRUGGLE

Intel's decision to build two significant semiconductor manufacturing plants in central Ohio highlights the international struggle for semiconductor capacity and the global fight for sophisticated, manufacturing talent. State and federal lawmakers have lauded semiconductor subsidies as a matter of national security.⁵ Semiconductors are needed for cell phones, satellites, commerce, and national defense weapons systems—they are the lifeblood of modern commercial activity and essential to U.S. defense capabilities.⁶ The American military alone uses 1.9 billion chips per year, and their prominent uses in 5G telecommunication networks, artificial intelligence, and quantum computing means their importance will likely grow.⁷

The United States is the dominant player in the semiconductor supply chain, contributing 39 percent to its total value⁸ and responsible for over half of the industry's research and development. China, by contrast, contributes only six percent. But vulnerabilities to that dominance remain. Although it once manufactured 37 percent of the world's semiconductors, the United States now produces only 12 percent.⁹ Taiwan Semiconductor Manufacturing Company's (TSMC) founder, Morris Chang, noted that although Taiwan excels at producing a semiconductor production workforce, the United States does not.¹⁰ That struggle is a problem because, according to *The Wall Street Journal*, U.S. semiconductor

⁵ **Governor DeWine Issues Statement on Passage of CHIPS for America Act**, Governor of Ohio Mike DeWine press release, July 29, 2022; and Nik Popli, **How a Closed-Door National Security Briefing Convinced Senators to Pass the Chips Bill**, *Time*, July 28, 2022.

⁶ Sujai Shivakumar and Charles Wessner, **Semiconductors and National Defense: What are the Stakes?**, Center for Strategic and International Studies, June 8, 2022.

⁷ Michaela D. Platzer, John F. Sargent Jr., and Karen M. Sutter, **Semiconductors: U.S. Industry, Global Competition, and Federal Policy**, Congressional Research Service, October 26, 2020; and Melissa K. Griffith and Sophie Goguichvili, **The U.S. Needs a Sustained, Comprehensive, and Cohesive Semiconductor National Security Effort**, Wilson Center, March 23, 2021.

⁸ Saif M. Kahn, **The Semiconductor Supply Chain: Assessing National Competitiveness**, Center for Security and Emerging Technology issue brief, January 2021.

⁹ Antonio Varas, Raj Varadarajan, and Falan Yinug, **Government Incentives and US Competitiveness in Semiconductor Manufacturing**, Boston Consulting Group and Semiconductor Industry Association, September 16, 2020.

¹⁰ Jeremy Neufeld, **Semiconductor Investments Won't Pay Off If Congress Doesn't Fix the Talent Bottleneck**, Lawfare Blog, May 10, 2022; and Morris Chang, Jude Blanchette, and Ryan Hass, **Can Semiconductor Manufacturing Return to the US?**, The Brookings Institute's Vying for Talent Podcast, April 14, 2022.

factories will need an additional 70,000 to 90,000 workers by 2025.¹¹ And according to the president and CEO of the semiconductors industry association SEMI, Ajit Manocha, finding willing and talented workers remains the single largest impediment to global semiconductor manufacturing capacity today.¹² TSMC now manufactures “more than half of the world’s advanced semiconductors and 90% of the most advanced chips,”¹³ but its proximity to an aggressive China puts that supply and manufacturing capacity at risk. The U.S. would be wise, therefore, to take steps to ensure a stable supply of semiconductors, make policy reforms to strengthen its own domestic semiconductor production, and design an immigration policy to support that investment.

Labor shortages in the semiconductor industry are global, not local, and not unique to the United States. Europe, South Korea, Japan, and especially China, all face tight markets for chip-manufacturing workers.¹⁴ Even the semiconductor manufacturing powerhouse Taiwan, home to TSMC, had a 30,000 semiconductor-producing worker shortage at the tail end of 2021.¹⁵ South Korea and Japan both cite similar labor shortages and predict that they will each need to hire more than 30,000 additional skilled workers each over the next decade.¹⁶ China’s shortages seem especially severe. Its semiconductor industry already faces a worker shortage of more than 300,000 workers.¹⁷ And a broader view shows the labor force issues in national security sensitive areas are not confined to their semiconductor industry. The country’s Ministry of Human Resources and Social Services anticipates a demand gap of 30 million workers, or 48 percent of workers needed to meet demand, in 10 key manufacturing areas by 2025.¹⁸ To confront the crisis, China has been scouring Asia for manufacturing talent—enflaming tensions

¹¹ Stephanie Yang, **Chip Makers Contend for Talent as Industry Faces Labor Shortage**, *The Wall Street Journal*, January 2, 2022.

¹² Stephen Ezell, vice president, global innovation policy, Information Technology & Innovation Foundation, **Public Comments** to the Department of Commerce on “Incentives, Infrastructure, and Research and Development Needs to Support a Strong Domestic Semiconductor Industry,” March 25, 2022.

¹³ Vivek Ramswamy and Mike Pompeo, **China’s Threat to Taiwan Semiconductors**, *The Wall Street Journal*, October 10, 2022.

¹⁴ Sujai Shivakumur and Charles Wessner, **Reshoring Semiconductor Manufacturing: Addressing the Workforce Challenge**, Center for Strategic and International Studies report, October 6, 2022.

¹⁵ *Ibid.*

¹⁶ *Ibid.*

¹⁷ Aaron Raj, **The World Needs More Skilled Semiconductor Workers**, Techwire Asia, January 26, 2022.

¹⁸ Briana Boland and Jude Blanchette, **How China’s Human Capital Impacts Its National Competitiveness**, Center for Strategic and International Studies, May 16, 2022.

with Taiwan, which has accused China of illegal poaching.¹⁹ In response, Taiwan has initiated more than 100 probes into Chinese companies accused of poaching Taiwanese high-tech talent and endangering Taiwan's national security.²⁰

The U.S. is better positioned than China to recruit the desired workers, but it still lags Japan, South Korea, and Taiwan. America led the way on semiconductor research and development, while its Asian allies did the lion's share of chip fabrication. Thus, Japan, South Korea, and Taiwan already have existing manufacturing infrastructure and need to add roughly 30,000 workers each over the next decade, while the United States must add three times as many by 2025.²¹ A recent paper by the Center for Security and Emerging Technology at Georgetown University finds that the United States needs to add at least 3,500 foreign-born, mostly high-skilled workers to staff eight new fabrication facilities in the United States—without which Intel's Ohio investment may fail.²² As tempting as it may seem to pursue domestic manufacturing self-sufficiency, the realities of the labor market warn against that strategy lest the U.S. find itself facing the same 300,000 worker shortage as China.²³ Fortunately, the U.S. still ranks among the most desirable countries to live.²⁴ Policymakers should pair that advantage with America's impressive network of colleges and universities²⁵ to recruit more international talent and boost domestic production while still trading with Asian allies.

Ohio and federal lawmakers have been adamant about the need for federal investment incentives for semiconductors but have been much less vocal about the

¹⁹ **Taiwan Says China Waging Economic Warfare Against Tech Sector**, Reuters, April 28, 2021.

²⁰ Reuters, **Taiwan's Spy Catchers Go After Mainland Chinese Poachers of Chip Talent**, *South China Morning Post*, April 8, 2022.

²¹ Stephanie Yang, **Chip Makers Contend for Talent as Industry Faces Labor Shortage**, *The Wall Street Journal*, January 2, 2022.

²² Will Hunt, **Reshoring Chipmaking Capacity Requires High-Skilled Foreign Talent: Estimating the Labor Demand Generated by CHIPS Act Incentives**, Center for Security and Emerging Technology, Georgetown University, February 2022; and Brendan Bordelon and Eleanor Mueller, **Biden Wants an Industrial Renaissance. He Can't Do It Without Immigration Reform**, Politico, July 31, 2022.

²³ The effectiveness of such a plan to create a domestic, stable supply of semiconductors during crisis would yield far from certain results. Clustering production—even at home—reduces diversification and opens needed supply up to the risks of domestic policy shocks. A more thorough approach would target policy at ensuring a stable supply during times of uncertainty. Stephanie Yang, **Chip Makers Contend for Talent as Industry Faces Labor Shortage**, *The Wall Street Journal*, January 2, 2022.

²⁴ Charlotte Edmond, **Which Countries Do Migrants Want to Move To?**, World Economic Forum, November 22, 2017.

²⁵ **World University Rankings 2023**, *U.S. News and World Report*.

importance of skilled immigration reform.²⁶ That must change. Working with Washington to create a system of state-based visas for skilled immigration would reverse that trend and show the world that Ohio is serious about skilled immigration reform and its investments from Intel.

²⁶ Mark Feuerborn and Natalie Fahmy, **What is the Chips Act and Why Does Intel Want it For Ohio**, NBC4i, July 25, 2022.

INTRODUCING STATE-BASED VISAS FOR HIGH-SKILLED IMMIGRANTS

Within the strictures of the U.S. Constitution, immigration policy and admission to the United States is the province of the federal government, with states playing virtually no role in setting immigration policy. And yet states must live with the consequences of that policy for good or ill. A better system would find a seat for states at the policy table and give them a limited role—within constitutional bounds—in defining U.S. policy for admitting workers looking to enter the country. State and federal lawmakers should work together to establish a system of state-based visas for “high-skilled” immigrants. Such a system would rebalance the state-federal power sharing, restock America’s labor market, keep Intel’s Ohio investment on track, attract more employers, and alleviate some of the labor market challenges confronting America’s semiconductor industry.

For decades, federal visa policy has failed states and employers. Since the Immigration Act of 1990, the federal government has capped the number of high-skilled H-1B visas at 65,000.²⁷ In 2004, Washington approved an additional 20,000 visas for foreign-born workers receiving an advanced degree at U.S. universities, pushing the cap to 85,000 H-1B visas per year. Even that increase, however, has been insufficient as demand far outstrips the visa cap.²⁸ In fiscal year 2024, for example, the U.S. Citizenship and Immigration Services received 780,884 H-1B registrations, up more than 61 percent from the previous fiscal year.²⁹ With a little more than 110,000 selections, this means that over 75 percent of registrations for skilled H-1B visas have been rejected, even excluding those with multiple registrations.³⁰ But rather than raise the visa quota, federal policymakers have relied on granting visas by lottery.³¹

²⁷ Daniel Griswold, **Chapter 1: Automatic Adjustment of the H-1B Visas and Employment-Based Green Card Caps**, Cato Institute, May 13, 2020.

²⁸ *Ibid.*

²⁹ U.S. Citizen and Immigration Services, **H-1B Electronic Registration Process** (Last visited May 24, 2023).

³⁰ Stuart Anderson, **Immigration Services Likely to Change H-1B Lottery**, *Forbes*, May 1, 2023.

³¹ Sharma and Chad Sparber, **Buying Lottery Tickets for Foreign Workers: Search-Cost Externalities Induced by H-1B Policy**, Cato Institute, Research Brief in Economics, Number 246, January 13, 2021.

With Washington politically unwilling to increase high-skilled worker visas, federal lawmakers should instead implement a state-based visa system that empowers states to pursue their own economically-based immigration policies for admitting high-skilled workers. In a well-designed state-based visa program, the federal government would retain authority over admissions, security checks, and processing immigrants.³² Federal officials would remain responsible for ensuring that prospective immigrants do not pose a national security or criminal threat, and do not carry serious diseases.³³ Federal law and regulations would structure work-visa durations and set limits for how many visas each state could sponsor.

Critically, however, states could then select how many visas (up to a point) beyond the federal cap that they would sponsor, and expand on the base qualifications for “high-skilled” immigrants set by Washington, such as requiring a bachelor’s degree, master’s degree, or similar training to be eligible for sponsorship. Setting the minimum-level qualification to be a bachelor’s degree, for example, would set a federal skill-level floor for states looking to sponsor visas. Wages and compensation are inherently tied to skill level, and research shows that additional years of education yield higher pay through a “wage premium”—more education, leads to more skills, and better compensation. States could then tailor their programs to sponsor workers most needed by their employers and industries.³⁴ And states could choose whether even to participate in the program and sponsor visas or not.³⁵ Importantly, state-based visas would not tether immigrants to specific employers, but instead would allow states to admit a certain number of pre-defined “high-skilled” immigrants who would be free to work anywhere within the state. With congressional approval, states could even sell visas to other states or high-skilled workers looking to emigrate. In Ohio, for example, the proceeds of such sales could reinforce upskilling and reskilling programs, such as Ohio’s TechCred and Individual Microcredential Assistance Program (IMAP).³⁶ States could be authorized to set visa prices, giving them flexibility to adjust pricing according to labor market and population conditions, lowering prices during tight labor markets and raising them when markets improve.

³² *Ibid.*

³³ **8 U.S. Code § 1182 – Inadmissible Aliens.**

³⁴ Jonathan James, **The College Wage Premium**, Federal Reserve Bank of Cleveland, August 8, 2012.

³⁵ Brandon Fuller and Sean Rust, **State-Based Visas: A Federalist Approach to Reforming U.S. Immigration Policy**, Cato Institute Policy Analysis, Number 748, April 23, 2014.

³⁶ TechCred, **Upskill Your Workforce Today with TechCred** (Last visited May 25, 2023); and Individual Microcredential Assistance Program (IMAP), **What Is IMAP?** (Last visited May 25, 2023).

States have shown interest in working with Washington to establish a state-based visa system. So far, 15 states have taken relevant legislative actions, but only two bills have become law.³⁷ In Ohio, Akron Mayor Daniel Horrigan has called for federal policymakers to transfer some immigration-related economic decision-making to local officials to increase high-skilled immigration.³⁸ Ohio policymakers should follow Mayor Horrigan's lead and take two decisive steps: pass a resolution calling for a state-based visa system; and then proactively design a state-based visa plan for high-skilled immigration that would take effect if and when federal legislation passes. Taking these steps would signal Ohio's firm interest in and support for such a program and deny Washington policymakers the excuse that states have no appetite for state-based immigration reform.

³⁷ **Colorado House Bill 08-1325**; and **Utah Code § 63G-12-205**

³⁸ The United States Conference of Mayors, **2022 Adopted Resolutions**, Heartland Visas, Resolution Number 49, 2022.

RESTOCKING OHIO'S LABOR MARKET WITH INTERNATIONAL TALENT

As the 21st century rolls on and the technology revolution of the internet age matures, employers across the country increasingly demand that their employees possess new and different skillsets for employment. These new requirements and skillsets are transforming the U.S. labor market. Unfortunately, Ohio has failed to quickly adjust to the new market demands and fallen behind its peers. Even with low rates of job churn and lackluster startup rates, acute workforce mismatches have created significant labor shortages for Ohio employers still struggling to upskill and retrain workers.³⁹ With an aging and shrinking domestic labor pool, increasing high-skilled legal immigration can help Ohio in the short- and long-run by adding to the productive worker and consumer pools, and by spurring innovation and entrepreneurship. Both sets of benefits will enhance economic activity, deepen the tax base, and ease the burdens weighing on employers, municipalities, and taxpayers.

Population Stagnation Suffocating Ohio's Economic Activity

The quality and quantity of labor help determine a state's economic output and standard of living.⁴⁰ Growing populations benefit from more specialization that yields better products and more innovative opportunities, which ultimately improve quality of life for residents. Shrinking and stagnated populations, like Ohio's however, forfeit these benefits.

In 2021, America posted its slowest population growth rate ever,⁴¹ with more than 40 percent of U.S. counties suffering population decline.⁴² Ohio's situation looks even worse. Two-thirds of Ohio counties have lost population over the last decade;⁴³ and in 2021, total population in Ohio actually *declined* for the first time since

³⁹ John Lettieri and Kenan Fikri, *The Case for Economic Dynamism and Why It Matters*, Economic Innovation Group, March 2022.

⁴⁰ Daniel J. Ikenson, *More and Better Foreign Direct Investment*, Cato Online Forum, November 21, 2014; and Brink Lindsey, *Why Growth is Getting Harder*, Cato Institute Policy Analysis, Number 737, October 8, 2013.

⁴¹ Connor O'Brien, *The High Opportunity Cost of Falling Immigration for Slow-Growth Communities*, Economic Innovation Group, March 29, 2022.

⁴² *Ibid.*

⁴³ Mark Ferencik, Bill Bush, and Marc Kovac, *Census: Two-thirds of Ohio Counties Lose Population; Columbus Passes 900,000 Residents*, *The Columbus Dispatch*, August 12, 2021.

1986 (Figure 1).⁴⁴ That negative trend continued into 2022, with Ohio losing more than 8,000 people from 2021 into 2022.⁴⁵ Had a state-based visas program similar to that introduced by Representative John Curtis (R-UT)—and had Ohio received the average state level number of 10,000 visas a year as proposed—then Ohio’s population would not have declined for a second year in a row.⁴⁶ Subtracting deaths from births represents the “natural rate of population growth,” and Ohio’s has been falling for years (Figure 2 and Figure 3).⁴⁷ Perhaps the decline will be a short-lived anomaly, but given declining fertility rates, which predict population trends, long-term challenges remain. The total fertility rate—a measure of children per woman—in the United States has fallen from more than seven children per woman in 1800 to 1.78 children in 2020. More recently, from 2010 to 2020, every state across the country saw their total fertility rates drop. Ohio’s, for example, fell from 1.90 in 2010 to 1.72 in 2021, well below the replacement rate of 2.1 needed to sustain a stable population.⁴⁸ And Ohio’s raw number of births have been trending downward for two decades, so any growth rate rebound as the Coronavirus pandemic subsides will likely be anemic.

Migration rates also affect population levels. When more people enter a state than leave it, the state enjoys “positive net migration.” Ohio has experienced positive net migration in only four of the last 20 years (Figure 3). Foreign immigrants, however, have buoyed Ohio’s population and helped offset declining birth and rising death rates (Figure 4). Given Ohio’s recent struggles with natural rate growth, attracting workers from other states along with foreign immigrants is imperative for sustaining the state’s population and promoting economic growth.⁴⁹

⁴⁴ Kenneth Johnson, **Deaths Exceeded Births in a Record Number of States in 2020**, University of New Hampshire Carsey School of Public Policy, May 5, 2021.

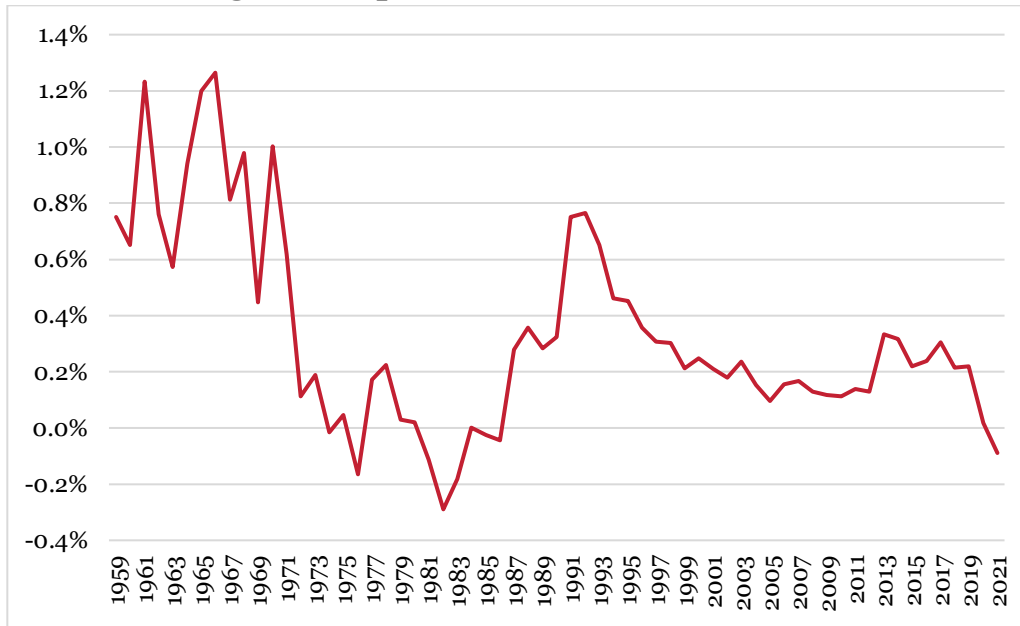
⁴⁵ **Ohio Population 1900-2022**, Macrotrends (Last accessed May 8, 2023).

⁴⁶ Alex Nowrasteh, **Why We Need State-based Immigration Visas**, *Daily News*, November 20, 2019.

⁴⁷ Max Filby, **Ohio Had More Deaths Than Births in 2020: A Grim First in State History Amid Covid-19**, *The Columbus Dispatch*, October 25, 2021.

⁴⁸ National Center for Health Statistics, **National Vital Statistics Reports**, Volume 7, Number 1, January 1, 2023.

⁴⁹ Andrew J. Kidd, Ph.D., Economist, The Buckeye Institute, Testimony Before the Ohio Senate General Government and Agency Review Committee, **“Universal Licensing Reciprocity: How to Welcome Workers to Ohio,”** February 12, 2020.

Figure 1: Population Growth Rate in Ohio⁵⁰

Low population growth rates and real number losses present real economic consequences. One study found “a 1 percentage point decline in a country’s population growth rate is associated with a 2-3 percentage point decline in its [business] startup rate over the past decade.”⁵¹ Forthcoming research by Charles Jones in the *American Economic Review* reveals that stagnating and then declining population rates threaten to lower life quality by reducing available knowledge and ideas—providing evidence that people not only consume resources but are also resources themselves.⁵² And the Cato Institute found that for more than three decades “every additional human being born on [Earth] appears to have made resources proportionately more plentiful for [everyone].”⁵³ Data from the United States bear this out as the 10 states with the most robust population growth since 2000 have also overseen a significant increase in inflation-adjusted economic output of 68 percent, on average, while the slowest growing 10 states have grown

⁵⁰ Bureau of Economic Analysis, **SAINC30 Economic Profile**, Regional Data (Last visited May 22, 2023).

⁵¹ Adam Ozimek, Kenan Fikri, and John Lettieri, ***From Managing Decline to Building the Future: Could a Heartland Visa Help Struggling Regions?***, Economic Innovation Group, April 2019. p. 27.

⁵² Charles I. Jones, **“The End of Economic Growth? Unintended Consequences of a Declining Population,”** *American Economic Review* (Forthcoming).

⁵³ Gale L. Pooley and Marian L. Tupey, ***The Simon Abundance Index: A New Way to Measure Availability of Resources***, Cato Institute Policy Analysis, Number 857, December 4, 2018.

only by a little more than 20 percent.⁵⁴ Over that same span, unfortunately, Ohio was the 45th fastest growing state by population and the 11th slowest growing economy.⁵⁵ Struggling to attract people and grow economically, “Ohio demonstrates the false promise of an economic ‘stability’ premised on low rates of churn and change,”⁵⁶ and it lags the nation in population and economic growth, trailing in per-capita personal income, earnings, and wages and salaries every year of the 2000s.⁵⁷

⁵⁴ Authors calculations from Bureau of Economic Analysis data. Inflation adjusted GDP uses chain-weight GDP data. Simple averages for growth rates of the ten fastest and ten slowest growing states. Fastest states by population are Nevada, Utah, Idaho, Arizona, Texas, Florida, Colorado, Georgia, Washington, and North Carolina. Slowest states by population are Connecticut, Pennsylvania, New York, Rhode Island, Ohio, Mississippi, Louisiana, Illinois, Michigan, and West Virginia. Economic growth rates are the simple average among states in the top 10 and bottom 10 for population growth. U.S. Bureau of Economic Analysis, **Regional Data**, Real GDP in chained dollars and population from economic profiles (Last visited May 24, 2023).

⁵⁵ Authors calculations from Bureau of Economic Analysis Data.

⁵⁶ John Lettieri and Kenan Fikri, *The Case for Economic Dynamism: And Why It Matters for the American Worker*, Economic Innovation Group, April 2022.

⁵⁷ U.S. Bureau of Economic Analysis, **Regional Data**, Real GDP in chained dollars and population from economic profiles (Last visited May 24, 2023); and U.S. Bureau of Economic Analysis, **Regional Data**, Personal Income and Employment by Major Component, SAINC30 (Last visited May 24, 2023).

Figure 2: Annual Births and Deaths in Ohio⁵⁸

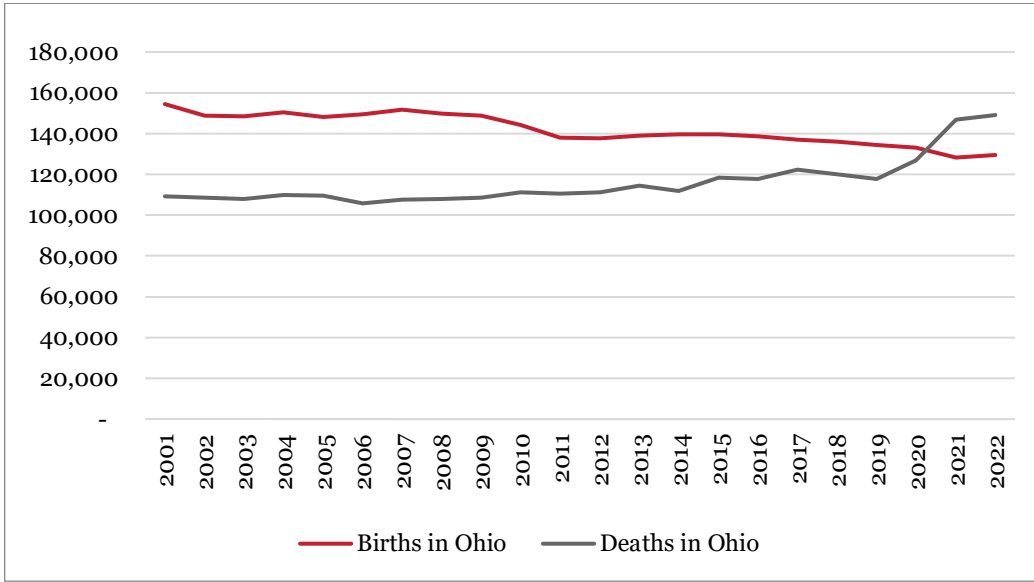
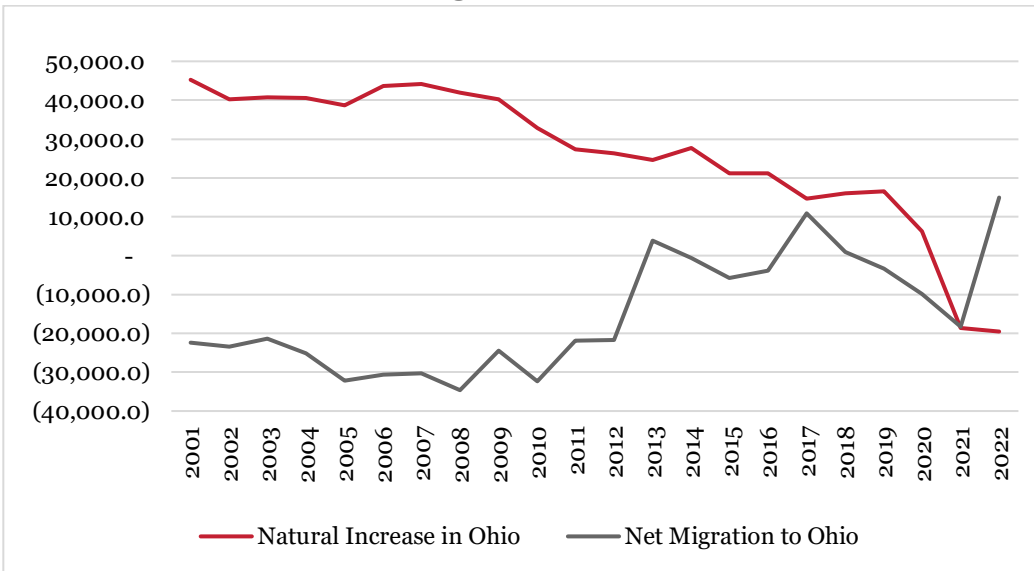


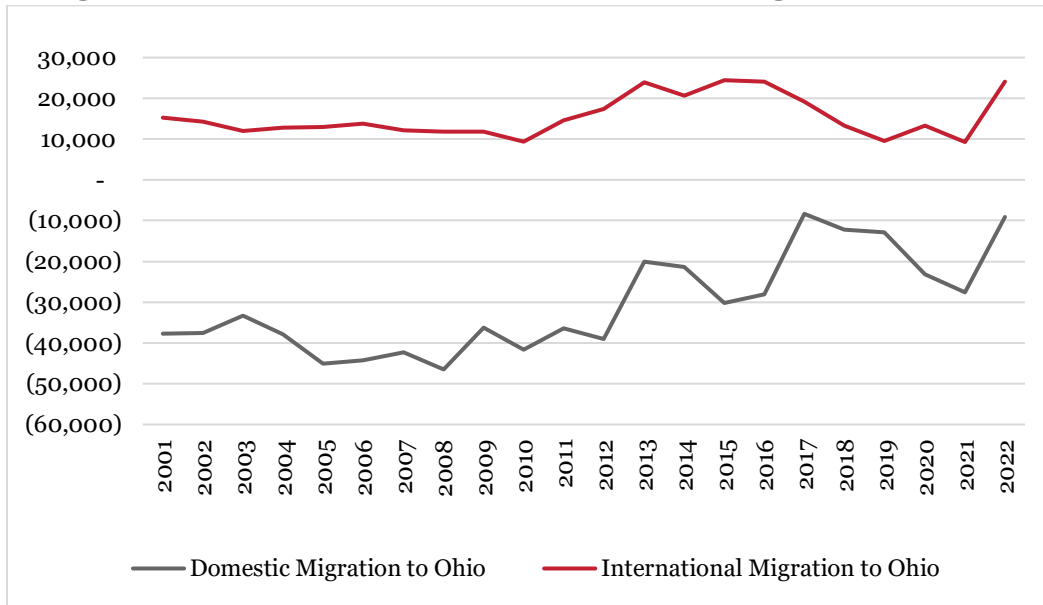
Figure 3: Annual Natural Population Growth and Net Migration in Ohio⁵⁹



⁵⁸ Source: United States Census Bureau, **State Population Totals and Components of Change: 2001-2010** (Last visited May 22, 2023); United States Census Bureau, **State Population Totals and Components of Change: 2010-2019** (Last visited March 22, 2023); United States Census Bureau, **State Population Totals and Components of Change: 2010-2020** (Last visited May 23, 2023); and United States Census Bureau, **State Population Totals and Components of Change: 2020-2022** (Last visited May 22, 2023). Note: All data from 2001-2022 is calculated year-over-year from July.

⁵⁹ *Ibid.*

Figure 4: Annual Domestic and International Migration in Ohio⁶⁰



Foreign Immigrants are Innovative and Entrepreneurial

Adding high-skilled immigrants can do more than just reverse worrisome population declines—it can also raise the skill level of Ohio’s workforce and add entrepreneurs to the talent pool. Immigrants in Ohio are highly educated⁶¹ and entrepreneurial.⁶² Thirty-seven percent of foreign-born Ohioans have a bachelor’s, master’s, or doctoral degree, while only 21.4 percent of American citizens at birth living in Ohio can say the same.⁶³ Foreign-born Ohioans are more than three times as likely as native-born Ohioans to hold doctorate degrees.⁶⁴

Just as significantly, immigrants across the United States are twice as likely as native-born Americans to start new businesses and hold patents.⁶⁵ Immigrants drastically improve innovation, account for a significant increase in patents, and

⁶⁰ *Ibid.*

⁶¹ United States Census Bureau, American Community Survey 1-Year Estimates Public Use Microdata Sample: **Educational Attainment**, 2021 (Last visited May 23, 2023).

⁶² New American Economy in partnership with US Together, the Columbus City Council, and the Franklin County Commissioners, **New Americans in the Columbus Metro Area**, May 20, 2021.

⁶³ United States Census Bureau, American Community Survey 1-Year Estimates Public Use Microdata Sample: **Educational Attainment**, 2021 (Last visited May 24, 2023).

⁶⁴ *Ibid.*

⁶⁵ FWD.US, **The Case for Protecting Legal Immigration Against Recent Attacks**, April 2019, p. 2; and Jennifer Hunt and Marjolaine Gauthier-Loiselle, “**How Much Does Immigration Boost Innovation**,” *American Economic Journal: Macroeconomics*, Volume 2 (April 2010), pp. 31-56.

support the success of technology-oriented businesses. Economists Jennifer Hunt and Marjolaine Gauthier-Loiselle found that a “1 percentage point increase in immigrant college graduates’ population share increases patents per capita by 9-18 percent” in the United States.⁶⁶ Scholars at the Stanford Graduate School of Business found that immigrants account for 16 percent of inventors but were responsible for 30 percent of innovation through patents since 1976.⁶⁷ A National Bureau of Economic Research working paper observed that, between 1990 and 2010, a rise in STEM professionals immigration resulted in 30-50 percent of total factor productivity growth—a measure of economic output given a certain amount of primary inputs and a key determinant of economic growth.⁶⁸ And recent research by economists at the Massachusetts Institute of Technology revealed that immigrants in the United States are 80 percent more likely to found a firm than native-born Americans, and have even founded more firms of every size, on average.⁶⁹ Attracting more high-skilled immigrants to Ohio can help jumpstart Ohio’s six percent startup rate over the past three years, which was among the lowest in the country.⁷⁰

Indeed, Intel’s own corporate history bears this out. Joining Intel on its first day of incorporation, Andy Grove, was a U.S. immigrant,⁷¹ a refugee. Born András István Gróf, he survived Nazi Germany’s occupation of Hungary and escaped the Soviet response to the Hungarian Revolution.⁷² Grove fled to Austria in 1956 and a year later arrived in the United States without a penny to his name. He ascended the ranks of American universities, eventually earning his doctorate in engineering from Berkeley. Intel founders Robert Noyce and Gordon Moore made Grove their first employee. A successful hire, he later became the company’s CEO and

⁶⁶ Jennifer Hunt and Marjolaine Gauthier-Loiselle, “**How Much Does Immigration Boost Innovation?**,” *American Economic Journal: Macroeconomics*, Volume 2, Number 2 (April 2010) p. 31-56.

⁶⁷ Shai Bernstein, Rebecca Diamond, Timothy James McQuade, and Beatriz Pousada, **The Contribution of High Skilled Immigrants to Innovation in the United States**, Stanford Graduate School of Business working paper, Number 3748, November 6, 2018.

⁶⁸ Giovanni Peri, Kevin Y. Shih, and Chad Sparber, **Foreign STEM Workers and Native Wages and Employment in U.S. Cities**, National Bureau of Economic Research working paper, Number 20093, May 2014.

⁶⁹ Peter Dizikes, **Study: Immigrants in the U.S. are More Likely to Start Firms, Create Jobs**, MIT News, May 9, 2022; and Pierre Azoulay, Benjamin F. Jones, J. Daniel Kim, and Javier Miranda, “**Immigration and Entrepreneurship in the United States**,” *American Economic Review: Insights*, Volume 4, Number 1 (March 2022) pp. 71-88.

⁷⁰ John Lettieri and Kenan Fikri, **The Case for Economic Dynamism: And Why It Matters for the American Worker**, Economic Innovation Group, April 2022.

⁷¹ Ars Staff, **Andy Grove—Former Intel CEO, Chairman, and First Employee Hired—Dead at 79**, Ars Technica, March 22, 2016.

⁷² *Ibid.*

president,⁷³ and made the executive decision to pursue microprocessors instead of RAM that made Intel an American success story.

Despite fears that adding high-skilled foreign immigrants to the labor pool will displace workers or lower their wages, there is no relationship between Ohio's foreign-born workforce and the state's unemployment rate (Figure 6). In fact, with job openings outstripping the number of unemployed in Ohio (Figure 7), immigrants are more likely than ever to fill vacant job openings than displace Ohio workers. Instead, with skilled-immigrants more likely to start firms and hold patents,⁷⁴ adding highly skilled immigrants would likely increase—not decrease—employment opportunities. Foreign immigrants are likely to form companies in manufacturing-related services and software industries where they hire domestic talent.⁷⁵ In fact, according to one economic study, denying immigrants H-1B visas designed for the highly skilled, deprived American workers of more than 230,000 technology-related jobs during the Great Recession in 2007 and 2008.⁷⁶ In addition to job-creation, a National Bureau of Economic Research study found that adding foreign-born STEM workers raised wages for native-born workers while not significantly impacting employment rates.⁷⁷ Earlier research showed that a divergence in skill level between immigrants and native-born workers made the work of both groups complementary.⁷⁸ By working in different economic sectors and holding different skills, immigrants are net job creators and often complement rather than compete with native Ohio workers.

American employers primarily bring needed, highly-skilled, immigrant labor to the United States using federal H-1B visas. More than 68 percent of approved H-1B visa holders in fiscal year 2021 work in computer-related occupations,

⁷³ *Ibid*; and Michael Neidert, **How 12 Great Immigrant Entrepreneurs Have Made America Great**, Medium, August 8, 2018.

⁷⁴ FWD.US, **The Case for Protecting Legal Immigration Against Recent Attacks**, April 2019, p. 2; and Jennifer Hunt and Marjolaine Gauthier-Loiselle, “**How Much Does Immigration Boost Innovation**,” *American Economic Journal: Macroeconomics*, Volume 2 (April 2010), pp. 31-56.

⁷⁵ Vivek Wadhwa, AnnaLee Saxenian, and F. Daniel Siciliano, **America's New Immigrant Entrepreneurs: Then and Now**, Ewing Marion Kauffman Foundation, October 2012.

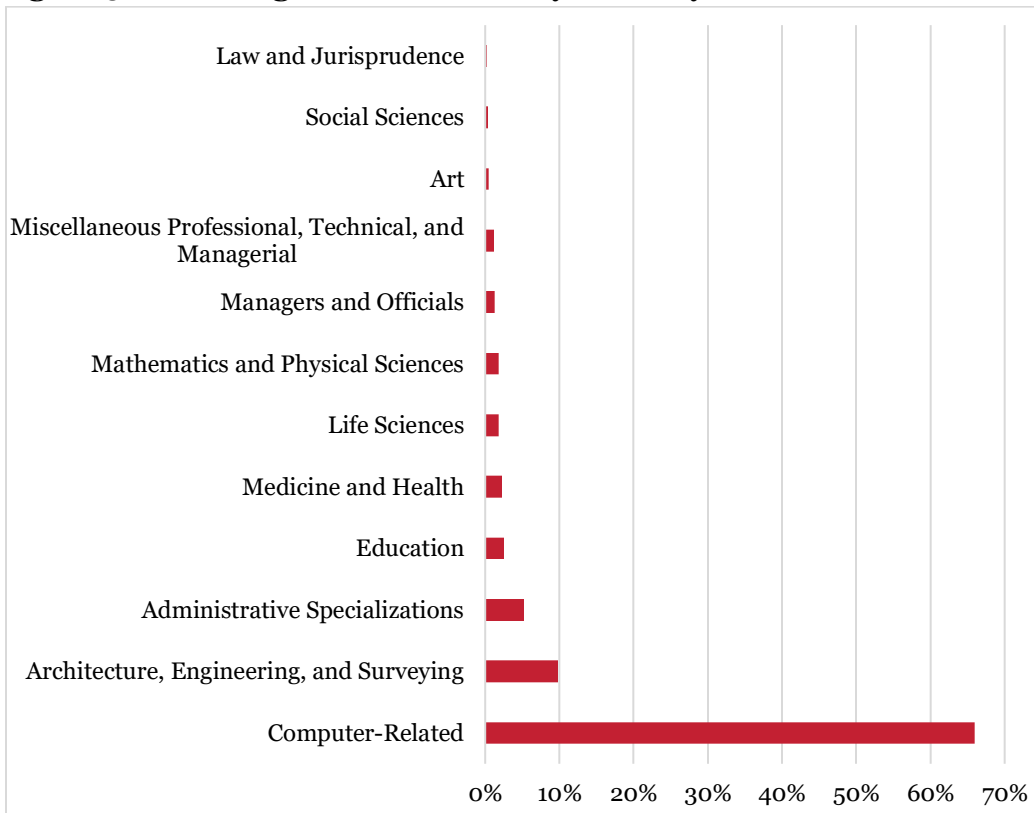
⁷⁶ Giovanni Peri, Kevin Shih, Chad Sparber, and Angie Marek Zeitlin, **Closing Economic Windows: How H-1B Visa Denials Cost U.S.-Born Tech Workers Jobs and Wages During the Great Recession**, The Partnership for a New American Economy, June 2014.

⁷⁷ Giovanni Peri, Kevin Y. Shih, and Chad Sparber, **Foreign STEM Workers and Native Wages and Employment in U.S. Cities**, National Bureau of Economic Research working paper, Number 20093, May 2014.

⁷⁸ Gianmarco I.P. Ottaviano and Giovanni Peri, **Rethinking the Gains from Immigration: Theory and Evidence from the U.S.**, National Bureau of Economic Research working paper, Number 11672, October 2005.

architecture, engineering, and surveying (Figure 5). Unfortunately, even as America struggled with nation-wide labor shortages, record job openings, and tight labor markets, H-1B application approvals fell in 2021 due to travel and immigration restrictions as pandemic-related lock downs slowed processing times and immigration restrictions increased.⁷⁹ With labor shortages and job vacancies plaguing the country, the federal government can no longer afford the high price of turning away high-skilled immigrants. If Washington cannot decide on the best course of action for immigration reform, they should at least grant states authority to determine which immigrants they need.

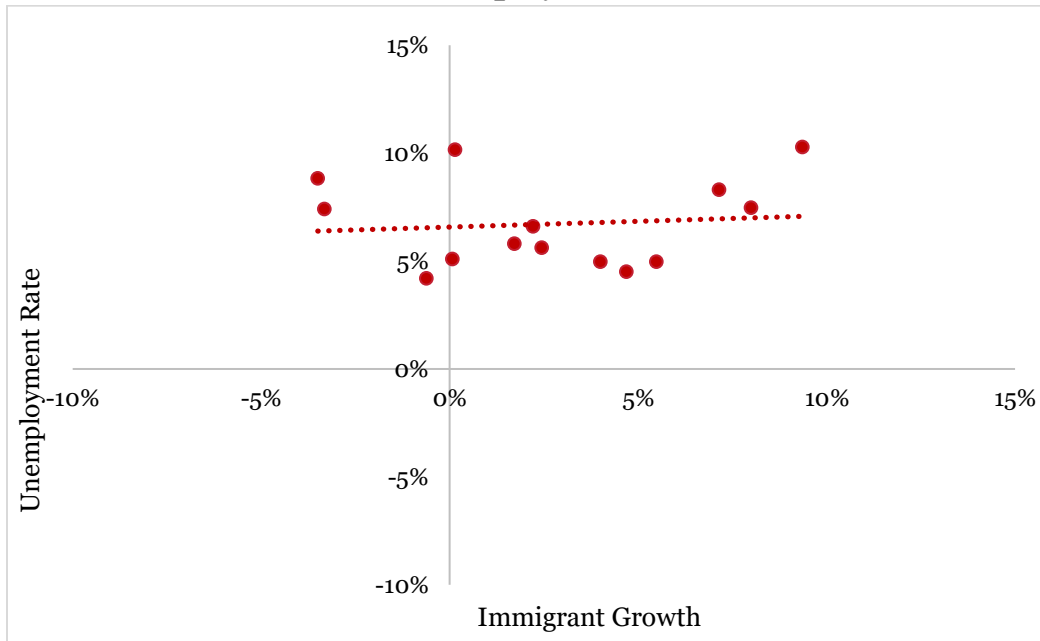
Figure 5: H-1B (High-Skilled) Visas by Industry in the United States⁸⁰



⁷⁹ Linly Lin, **H-1B Applications for STEM Jobs Drop Most in Decade**, Bloomberg, November 30, 2021.

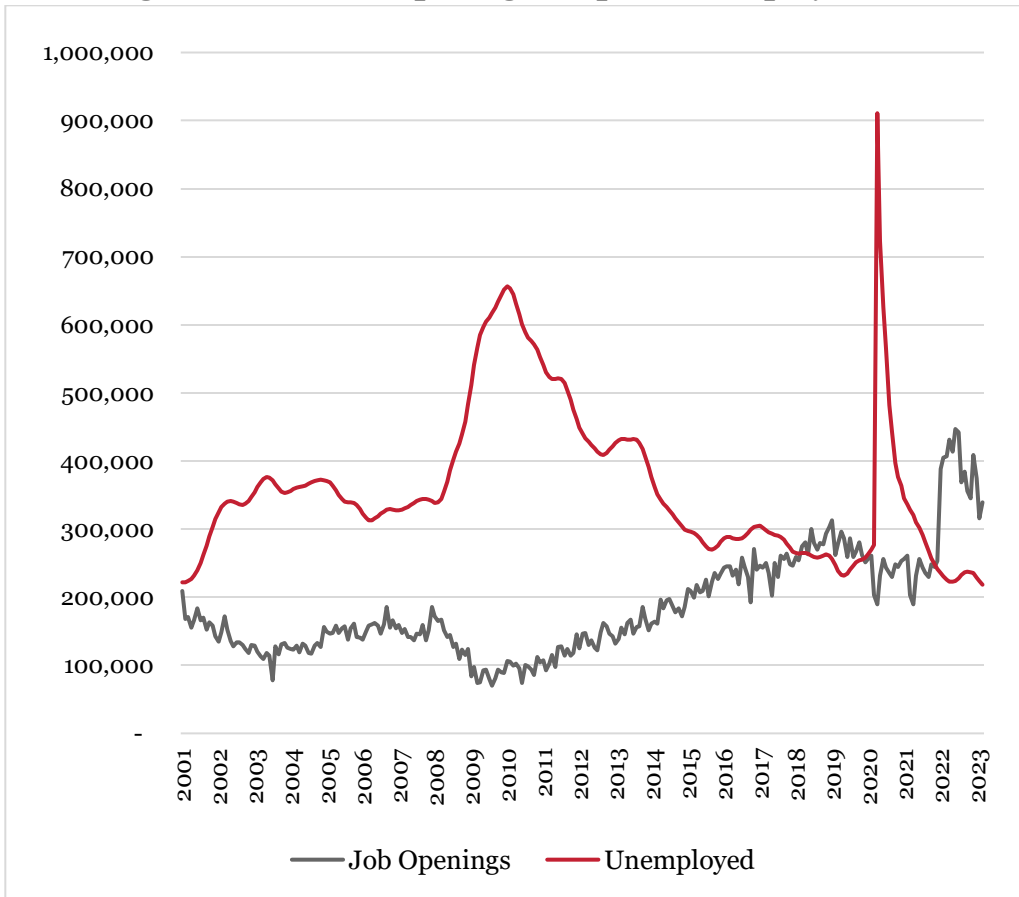
⁸⁰ **Characteristics of H-1B Specialty Occupation Workers**, Fiscal Year 2022 Annual Report to Congress, Department of Homeland Security, U.S. Citizenship and Immigration Services, March 13, 2023.

Figure 6: No Correlation Between Ohio Immigration and Unemployment⁸¹



⁸¹ United States Census Bureau, American Community Survey 1-Year Estimates Public Use Microdata Sample: **Citizenship Status in Ohio**, 2007-2021 (Last visited May 23, 2023); and United States Bureau of Labor Statistics, **Local Area Unemployment Statistics**, Ohio (Last visited May 23, 2023). Note: Immigrant growth is the percentage change in foreign-born Ohioans. Foreign-born is anyone who lives in Ohio but was not a U.S. citizen at birth. Unemployment rate seasonally adjusted.

Figure 7: Ohio Job Openings Outpace Unemployment⁸²



⁸² Source: United States Bureau of Labor Statistics, **Job Openings and Labor Turnover Survey** (Last visited May 23, 2023); and United States Bureau of Labor Statistics, **Local Area Unemployment Statistics**, Ohio (Last visited May 23, 2023). Note: Job openings and nonfarm unemployed seasonally adjusted.

STATE-BASED VISA REFORM CAN HELP KEEP INTEL'S INVESTMENT ON TRACK

Last winter computer chip maker Intel chose Ohio for its new semiconductor manufacturing site, promising to build the largest semiconductor plant on the planet.⁸³ The plant will begin producing microchips for cars and a highly advanced chip—the “Intel 18A”—for use in data centers in global technology companies like Amazon, as well as automotive and aerospace applications.⁸⁴ Intel’s investment gives Ohio a historic economic opportunity in the short-term and an opportunity to attract future investments from other companies in the long-term. But in the face of persistent labor shortages across all skill levels, Ohio should coordinate with Washington to pursue state-based visas to expand legal, high-skilled immigration.

Intel chose central Ohio for its new plant for many reasons,⁸⁵ but chief among them are the area’s well-educated labor market and highly skilled immigrant pool that Intel believes will be particularly valuable for building corporate infrastructure.⁸⁶ As Intel senior vice president, Keyvan Esfarjani, told *The Columbus Dispatch*, central Ohio “has a proud heritage as an industrial and manufacturing powerhouse, it sits near the fast-growing Columbus metropolitan area, it has a robust existing infrastructure with the capacity for future growth, and a strong talent pipeline sustained by world-class educational institutions in the area.”⁸⁷ Indeed, the Columbus area’s young talent runs up and down the educational

⁸³ Mark Williams, **Intel Picks Columbus Area for Largest Chip Factory in the World**, *The Columbus Dispatch*, January 20, 2022.

⁸⁴ John Seewer and Andrew Welsh-Huggins, **Intel to Build \$20B Ohio Chip Facility Amid Global Shortage**, Associated Press, January 21, 2022; Chaim Gartenberg, **Intel Hopes to Start Making Chips for Car Companies Within Six to Nine Months**, *The Verge*, April 12, 2021; and Michael Larabel, **Arm Opens Up to Using Intel’s 18A for Leading-Edge SoCs**, *Phoronix*, April 12, 2023.

⁸⁵ **Why did Intel Pick Ohio to Build One of the World's Largest Semiconductor Factories?**, *Capital Frontiers*, (Last visited May 25, 2023); and Kathleen Gallagher, **Intel Chose Ohio for Chip Plant Over Wisconsin's Foxconn Site for Good Reasons - that State Made a Far Better Pitch**, *Milwaukee Journal Sentinel*, March 8, 2022; and Michael J. Hicks, **Intel’s Choice of Ohio for its \$20 Billion Factory Shows What Matters At Least As Much as Low Taxes—and it Costs Money**, *MarketWatch*, February 5, 2022.

⁸⁶ *Ibid.*

⁸⁷ Keyvan Esfarjani, **Vice President Explains Why Intel is Ready to Invest Up to \$100 Billion in New Ohio Sites**, *The Columbus Dispatch*, January 23, 2022.

ladder. Ohio has nearly 3.4 million residents with a higher education degree.⁸⁸ Graduating more than 2,400 graduates in 2020, Ohio State produces the ninth most engineers in the country.⁸⁹ It ranks seventh nationally in STEM bachelor's degrees and total invention disclosures.⁹⁰ Out of 1,279 colleges and universities, Ohio State ranked 18th for popularity among international students, which comprise around 11 percent of Ohio State's main campus student body.⁹¹ The Columbus area also boasts a healthy and growing immigrant population⁹² that helped make it a top tech-sector city in 2019.⁹³ And with foreign-born workers making up 10 percent of the chipmaking-related workforce,⁹⁴ Intel seized the opportunity to pair skilled immigrants and talented university graduates to secure and grow its workforce. Now Ohio must make Intel's opportune investment an opportunity of its own.

Anticipating the need for more factory workers, Intel has already partnered with nearby community colleges, like Columbus State, to upskill the labor pool.⁹⁵ Partnering with community colleges is a commendable first step, but the other 30 percent of Intel's future workforce, which will require more than an associate degree, poses a more serious challenge to its investment. And that challenge will require federal action on immigration as a remedy. An advanced STEM degree is five times more likely to be needed in the semiconductor industry than other industries. Politico calls Intel's Columbus investment the Biden administration's "poster child for reviving high-tech manufacturing" and, after talking to federal officials and policy experts, warns that a "failure to allow a small number of foreign-born doctorates to stay in the U.S. could cause the [Ohio Intel investment] effort to fizzle."⁹⁶ Labor shortages across all skill levels—from construction workers to PhD scientists—threaten to derail Intel's \$20 billion Ohio investment. But state-

⁸⁸ Higher education degree defined as an Ohioan with an associate's, bachelor's, master's, or doctoral degree as well as those with a professional degree beyond a bachelor's degree. **Citizenship Status by Grade Level Microdata – Ohio**, US Census Bureau, 2021 (Last visited May 24, 2023).

⁸⁹ **Engineering, Contains STEM Majors**, Data USA, (Last visited May 25, 2023).

⁹⁰ Tyler Buchanan and Alissa Widman Neese, **Ohio State's tech expertise**, Axios Columbus, May 27, 2022.

⁹¹ **Ohio State University - Main Campus International Student Report**, College Factual, (Last visited May 25, 2023).

⁹² Dany Bahar and Greg Wright, **Immigration As an Engine for Reviving the Middle Class in Midsized Cities**, The Brookings Institution, November 18, 2021.

⁹³ Ben Geier, **The Best American Cities to Work in Tech in 2019**, SmartAsset, June 12, 2019

⁹⁴ Greg Wright, Dany Bahar, and Ian Seyal, **Smarter Immigration Policies Could Help Alleviate the Semiconductor Shortage**, The Brookings Institution, June 17, 2022.

⁹⁵ Virginia Brown, **How Ohio Colleges are Building a 'Silicon Heartland' Workforce Ready for Intel**, *Columbus CEO*, May 24, 2022

⁹⁶ Brendan Bordelon and Eleanor Mueller, **Biden Wants an Industrial Renaissance. He Can't Do It Without Immigration Reform**, Politico, updated August 11, 2022.

based visas that can deepen the doctorate-level talent pool in the United States will help keep that investment on track.

MORE IMMIGRANTS, MORE CORPORATE INVESTMENT

A state-based visa program for high-skilled immigration would not only strengthen Intel’s investment in central Ohio, it would also make Ohio more attractive to other companies looking to invest, headquarter, or manufacture products. Immigrants can patch holes in deficient labor markets, but they often also bring with them an entrepreneurial spirit crucial to business formation. Forty-four percent of the founders of risky start-up companies valued at \$1 billion or more, otherwise known as “unicorns,” were not born in the United States.⁹⁷ Immigrants constitute a quarter of all American entrepreneurs.⁹⁸ And nearly half of all Fortune 500 companies were founded by immigrants or their children.⁹⁹

Immigration also attracts foreign direct investment (FDI) from immigrants’ native countries.¹⁰⁰ A 2016 study analyzing the effects of migration on FDI from the 1800s to the present in the United States found that FDI follows migrants “as much as it follows differences in productivity, tax rates, and education.”¹⁰¹ But FDI does not merely track immigrant communities. According to the international economic advisory firm OCO Global, FDI also flows more heavily to areas with higher education and skill levels.¹⁰² This tendency could be reenforced by a state-based visa program that prioritizes high-skill immigration, which in turn could perpetuate “virtuous cycles” whereby international businesses select investment locations at least in part due to quality labor and then reinvest in those regions to further enhance employee skill levels.¹⁰³ More high-skilled immigration in Ohio

⁹⁷ Ilya Strebulaev, **Twitter post**, January 13, 2022, 11:18 a.m.

⁹⁸ Michael Blanding, **One Quarter of Entrepreneurs in the United States are Immigrants**, Harvard Business School, August 13, 2016.

⁹⁹ Ian Hathaway, **Almost Half of Fortune 500 Companies Were Founded by American Immigrants or Their Children**, The Brookings Institution, December 4, 2017.

¹⁰⁰ Konrad B. Burchardi, Thomas Chaney, and Tarek A. Hassan, **Migrants, Ancestors, and Investments**, National Bureau of Economic Research working paper, Number 21847, May 2017.

¹⁰¹ Konrad Burchardi, Thomas Chaney, Tarek Hassan, **The Effect of Migration on Foreign Direct Investment**, Center for Economic Policy Research, November 12, 2016.

¹⁰² Dr. Neil Bentley-Gockmann, **Promoting Technical Skills to Win Foreign Investment: Learning from Other Markets**, OCO Global, February 17, 2022; Daniele Checchi, Gianfranco De Simone, and Riccardo Faini, **Skilled Migration, FDI and Human Capital Investment**, IZA Discussion Paper No. 2795, May 2007.

¹⁰³ Rumu Sarkar, “**A Re-Visioned Foreign Direct Investment Approach From an Emerging Country Perspective: Moving from a Vicious Cycle to a Virtuous Cycle**,” *ILSA Journal of International and Comparative Law*, Volume 17, Article 5 (2010); and Stephen D. Cohen, **Chapter**

today means more businesses, more investment, and a more educated workforce tomorrow.

Looking Back, Looking Forward: The Case of Honda Marysville

Born in Yokohama, Japan,¹⁰⁴ Shige Yoshida moved to the United States, tasked by Honda Motor Company to lead a “feasibility study” to determine if and how Honda could build cars and motorcycles in the United States.¹⁰⁵ An “industrious and quality” Ohio workforce impressed Yoshida. As Jim Krumel of *The Lima News* recounted, “[w]hen Honda came looking, Ohio had the right people at the right time.”¹⁰⁶ On September 10, 1979, the first Honda Elsinore CR 250 motorcycle rolled off the assembly line in Marysville, Ohio.¹⁰⁷ Automobile production would soon follow at the adjacent Marysville Auto Plant in 1982.¹⁰⁸

Honda’s decision shows the powerful correlation between industrial progress and population. A deep talent pool and growing population helped attract industry to Marysville. From 1969-1979, the decade preceding Honda’s assembly line, Ohio’s statewide population growth registered a meager 2.2 percent. But Union County, Marysville’s surrounding county, had a growth rate of more than 24 percent over the same period—roughly 11 times the state’s rate.¹⁰⁹ Union County’s growth provided employable talent for Honda’s operations. Honda’s arrival, in turn, helped attract more people, more commerce, and more employers to the region—perpetuating a virtuous cycle. From 1979 to 2021, Ohio has grown by a little more than nine percent while Union County has grown by 121 percent.¹¹⁰ Honda now employs 4,700 people in Marysville and 15,000 people across the state.¹¹¹ It uses

12: The Case for Foreign Direct Investment and Multinational Corporations (February 2007): pp. 283-307.

¹⁰⁴ City of Columbus, “**Columbus Rotary: Honda of America Manufacturing**,” YouTube video, [3:41-8:19], April 24, 2018.

¹⁰⁵ JD Malone, **Honda in Ohio: The Back Story**, *The Columbus Dispatch*, April 28, 2018.

¹⁰⁶ Jim Krumel, **Ohio Had the Right People at the Right Time**, *The Lima News*, September 16, 2019.

¹⁰⁷ *Ibid*; and **Honda Celebrates 20th Anniversary of U.S. Auto Production**, Honda press release, November 1, 2002; and Mac Cordell, **40 Years with Honda**, *Marysville Journal-Tribune*, September 10, 2019.

¹⁰⁸ Melanie Speicher, **Honda Celebrates 40 Years of Manufacturing in America**, *Sidney Daily News*, September 10, 2019.

¹⁰⁹ Bureau of Economic Analysis, **Regional Data**, County and MSA Personal Income Summary: Personal Income, Population, Per Capita Personal Income, CAINC30 (Last visited May 24, 2023).

¹¹⁰ Bureau of Economic Analysis, **Regional Data**, County and MSA Personal Income Summary: Personal Income, Population, Per Capita Personal Income, CAINC30 (Last visited May 24, 2023).

¹¹¹ Kaitlin R. Schroeder and Thomas Gnau, **Honda’s Investment 40 Years Ago Grows to 15k Ohio Jobs**, *Dayton Daily News*, September 11, 2019.

600 U.S. suppliers, has produced 20 million vehicles, gives millions of dollars in charitable donations, and has yet to lay off an employee.¹¹²

Ohio is now home to five Honda manufacturing plants, separate research and engineering facilities, and corporate offices.¹¹³ Honda has a talent pipeline flowing from Columbus State Community College's electro-mechanical technology program, which provides Honda with skilled labor and students with high-paying, in-demand jobs and skillsets.¹¹⁴ At the four-year degree level, Honda partnered with Ohio State to endow transportation programs in 1988 when the Honda of America facility opened in East Liberty, Ohio. That endowment now invests \$1.5 million annually in the university.¹¹⁵ Honda also offers scholarships for diversity in engineering and for high school seniors who win the Honda-Ohio State STEM award.¹¹⁶ Honda's investment has been so successful that it chose Ohio to lead its electric battery production and has partnered with LG Energy Solution to produce lithium-ion batteries.¹¹⁷

¹¹² Jim Krumel, **Ohio Had the Right People at the Right Time**, *The Lima News*, September 16, 2019.

¹¹³ JD Malone, **Honda in Ohio: The Back Story**, *The Columbus Dispatch*, April 28, 2018.

¹¹⁴ **Electro-Mechanical Engineering Technology**, Columbus State Community College (Last visited May 25, 2023).

¹¹⁵ **Honda-Ohio State Partnership**, The Ohio State University College of Engineering (Last visited May 25, 2023).

¹¹⁶ *Ibid.*

¹¹⁷ Governor Mike DeWine, **Governor DeWine Announces Honda to Invest in Ohio for Electric Vehicle Production, Including New Battery Plant with LG Energy Solution**, Governor Mike DeWine press release, October 11, 2022.

CONCLUSION

The history of U.S. industrial policy is complicated and messy—especially with respect to the semiconductor industry. As Scott Lincicome of the Cato Institute notes, “previous U.S. government support for the semiconductor industry has ranged from ‘checkered’ to total debacle.”¹¹⁸ Lincicome goes on to argue that efforts in the 1980s to support the semiconductor industry actually cost the United States billions of dollars, encouraged offshoring, strengthened foreign competition, and ultimately did not improve production capacity.¹¹⁹ In today’s global semiconductor market, China has replaced Japan as America’s top competitor, pitfalls that have plagued industrial policy ambitions for decades remain, and labor shortages and supply chain issues have become acute. These challenges, along with national security concerns and the simultaneous need to protect U.S. semiconductor supply chains from foreign competition and political adversaries, make industrial policy—and semiconductor policy, in particular— exceedingly difficult to navigate.

State-based visas will not cure many of the problems that have plagued industrial policy. Revising the visa program, for example, will not make governments any better at picking industry winners and losers. Nor will it discourage economically harmful corporate welfare or end disruptive market distortions. But a state-based visa program for high-skill immigrants will be a key component for solving emerging issues in industrial policy. Most notably, high-skill immigration reform can alleviate national labor shortages in important industries and help secure the supply of national security-sensitive products like semiconductors.

¹¹⁸ Scott Lincicome, **Does the U.S. Semiconductor Industry Really Need Urgent Taxpayer Support to Stop China?**, Cato at Liberty blog, July 23, 2020.

¹¹⁹ *Ibid.*

ABOUT THE AUTHOR



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Kolas has conducted state-level tax modeling and budget research for states such as Iowa, Louisiana, New Hampshire, and North Carolina. He has authored policy papers, book chapters, blog posts, and op-eds on restoring Ohio's technology and innovation leadership, the effects of federal and state labor market policies on work, and on modernizing Ohio's outdated economic system to return the Buckeye State to economic prosperity and leadership. He is the author of The Buckeye Institute's three-part "Policies for More Innovation" series where he authored the reports ***A Policy Primer for Emerging Technology in Ohio*** and ***Modernizing Ohio's Policies to Seize New Economic Opportunities***. Kolas has also conducted **multiple analyses** estimating the number of state-level jobs lost to a \$15 per hour minimum wage.

Kolas has testified to legislative committees on free-market policy and privacy issues. His commentary has been published by *The Columbus Dispatch*, *The Cincinnati Enquirer*, *Crain's Cleveland Business*, *The Lima News*, *St. Louis Post Dispatch*, *Daily Signal*, and the Foundation for Economic Education, amongst others.

Prior to joining Buckeye, Kolas was a research associate at the Herbert A. Stiefel Center for Trade Policy Studies at the Cato Institute, where his research focused on how employment is impacted by international trade, the effect of international trade taxes on state and federal government policies, and the regulatory burden imposed by government on American businesses and families.

Kolas is a native of Cincinnati and throughout his career has focused on researching Ohio-related policies. He earned his Bachelor of Science in economics and political science from **George Washington University** and holds a Master of Science in applied economics from the **University of Maryland**.

Ohio's Global Fight for Talent: The Case for State-Based Visas for High-Skill Immigrants

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