



Does High-Skilled Immigration Reduce Opportunities for US Workers?

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HIGH-SKILLED IMMIGRATION TO THE UNITED STATES

Why did lawmakers create pathways for high-skilled immigrants?

The rationale for accepting high-skilled immigrants into the US workforce is that they possess specialized knowledge—particularly in STEM fields—that is crucial to US firms’ ability to innovate, grow, and maintain a technological advantage over their competitors. Cutting-edge expertise is scarce, and some specializations are so frontline that the most qualified workers may not yet exist in sufficient numbers in the United States. Take, for example, the initial cohort recruited for Meta’s Superintelligence Labs—all of whom were foreign-born.¹ Just as American firms compete with other companies around the world to provide services and sell products, so employers around the world compete for the best talent to outperform their competitors.

High-skilled immigration has traditionally held bipartisan support in America. Citizens across the political spectrum accept that attracting the world’s best scientists, engineers, doctors, and entrepreneurs strengthens our economy and gives the US a competitive edge. However, those who oppose high-skilled immigration often criticize its perceived adverse effects on employment and wages for American workers. Are these concerns misplaced, or does the arrival of high-skilled immigrants, in fact, displace American workers and lower their wages?

COMPETITION WITH NATIVE WORKERS

If US companies are hiring STEM workers from abroad, what does that mean for US-born STEM workers?

High-skilled immigration does not impact all domestic workers equally. Whether an individual is better or worse off depends on their specific skills, education, and sector of employment.

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Despite detractors' claims to the contrary, the decision by US firms to hire foreign-born talent does not *necessarily* mean American workers will face increased competition for jobs. Sometimes a growing industry needs specialized skills that American workers have not yet acquired in large numbers. For example, policymakers on both sides of the aisle support bringing semiconductor manufacturing to the US—but political will alone can't change the fact that the US lacks a sufficient number of native-born workers with the requisite skills to ramp up production. Despite sizable federal financial support for the industry provided by the 2022 CHIPS and Science Act, Taiwanese chip maker TSMC faced delays in opening a new plant in Arizona, due in part to a worker shortage.² In the semiconductor sector alone, projections show that of the 115,000 US-based jobs that will be created by 2030, 67,000—nearly 60 percent—risk going unfilled.

In other cases, the hiring of foreign-born workers can impact employment opportunities for domestic workers, though the outcome tends to be more complex than the term *displacement* suggests. For example, Meta's recruitment push for Superintelligence Labs illustrates what can happen to native workers who have similar, but not identical, skill sets to foreign-born talent that is hired. To compete in the development of frontier AI models, Meta needed workers with experience building and training AI models. Certainly, computer scientists with AI capabilities already existed in the US labor force; however, to become a leading player globally in the industry, Meta needed experienced, best-in-class talent that appeared to be more readily available in the global talent pool.³ This kind of global recruitment might displace native workers with lower-tier skills from certain *positions* in the field. These workers may pursue or be reassigned to roles that complement the expertise that specialized foreign workers bring, or, in some cases, they can lose their employment in the sector if there is not enough demand for their skills.

Research confirms that high-skilled immigration can impact similarly skilled native workers' wages and opportunities. With respect to the impact on wages, the existing empirical evidence is not conclusive as to whether it usually boosts or suppresses them. At best, a literature review of existing studies finds varied effects of small magnitude.⁴ For example, one study of the French labor market estimated a 1 percent average wage decrease for domestic high-skilled workers following a two-decades-long immigration wave that was dominated by highly educated foreign-born workers.⁵ By the same token, a different study analyzed the impacts on US workers when H-1B visas—a common pathway for high-skilled foreign-born workers to gain work authorization in the US—were restricted in 2017.⁶ The researchers estimated a resulting 0.7 percent "welfare gain" for American computer scientists due to decreased competition for jobs, part of which reflected increased wages. This research suggests that high-skilled immigration's impact on wages, while not nonexistent, tends to be negligible.

Beyond these modest wage effects, research also finds some evidence of high-skilled immigrants displacing their American counterparts. One team of economists examined the impact that hiring an H-1B visa applicant had on the total level of employment at a firm.⁷ The study concluded that for every H-1B visa holder a firm successfully hired, 1.5 existing workers were "crowded out" of employment at that firm—a net loss of 0.5 workers. However, an H-1B hire doesn't affect every worker the same way. In a different setting, another team investigated not

only the impact on the total level of employment at a firm when an H-1B visa holder was hired but also the effects on different groups of workers within a firm.⁸ To start, rather than a net loss, they estimated a net gain of 0.8 employees.

Additionally, the researchers discovered that several categories of existing employees saw their wages increase when an additional H-1B visa holder was hired; more-junior workers may have even had more opportunities for advancement. The employees who appeared to lose out were a specific group: those under forty who had been at the company longer. After the new hires arrived, this group tended to earn less and left their firms at higher rates.

The long-term outcomes for workers who do get displaced from firms are hard to track. Some may find jobs at different companies in the same sector, but others may need to look for work in different sectors altogether. However, it should be noted that displacement is only one potential effect of high-skilled immigration policy. The bigger picture is more complicated, because when the rules change, firms and workers don't sit still.

UNINTENDED CONSEQUENCES

How do firms and immigrants shift their behavior in response to restrictive immigration policy?

The globalized nature of today's economy means that when the US decides to restrict immigration, companies and foreign-born workers can go elsewhere for hiring and employment.

Research shows that in the US, firms have reacted to visa restrictions by offshoring operations to countries where hiring immigrants is less difficult. In 2004, the number of permitted H-1B visas was reduced by 110,000. One study examined how US-based multinational companies responded to this drop in the supply of high-skilled workers, finding that for every potential recruit for whom a firm failed to obtain a visa, it hired an average of 0.4 employees at its foreign branches.⁹ For the most globalized multinational corporations, the impact was even greater, with 0.9 employees hired abroad per visa rejection. In both cases, the impact was most pronounced for research and development (R&D) positions.

Workers originating from other countries may also adjust their plans when the US restricts immigration. In 2017, the US tightened the eligibility criteria for H-1B visas, which caused denial rates to increase from 6 percent in 2016 to 16 percent in 2018.¹⁰ Taking note, foreign-born high-skilled laborers pivoted their job search toward a neighboring advanced economy: Canada. The influx of talent enabled Canadian firms to produce and sell more, spurring strong growth. Notably, approximately 40 percent of this growth was in exports—increasing Canada's share of global business relative to that of other countries, including the US.

How did this shift in immigration policy affect STEM high-skilled workers at American firms? The H-1B visa restrictions that set off this chain of events initially produced a small wage increase for American computer scientists, who faced less competition for roles. However,

these benefits didn't extend to non-computer scientist employees at these firms—a sign that immigration policy's effects don't stop at the workers it directly targets.

NON-STEM NATIVE WORKERS

What is the impact of restricting high-skilled immigration on American workers who don't work in STEM occupations?

So far, we've examined the effect of high-skilled immigration, particularly in STEM fields, on American-born workers with similar skill sets. However, this group represents a very small subset of the US workforce; native-born college graduates working in STEM occupations make up only 2.5 percent of all US workers. Conversely, native-born college graduates working in non-STEM positions and native-born workers without a college degree together account for 85.3 percent of the workforce.¹¹ This large group of workers, which is not in direct competition with H-1B visa holders, encompasses a wide range of occupations—from “low-skilled” work in manufacturing, retail, and custodial services to the white-collar professions typically filled by college graduates, such as operations, human resources (HR), and marketing.

So, how does the arrival of high-skilled foreign-born workers impact the opportunities and wages of this large segment of the US workforce?

First, evidence shows that non-STEM workers employed in STEM industries suffer when high-skilled immigration is restricted. Returning to the study that analyzed the impacts of the H-1B criteria tightening in 2017, the most immediate result of these restrictions was a 1.6 percent fall in immigrant labor in the US.¹² Simultaneously, the influx of talent to Canada enabled Canadian firms to export more services at more competitive prices, translating to less sales for American companies in the global marketplace.

Both the reduced numbers of foreign-born workers in the US and the increased competition from Canadian firms hurt US firms' bottom lines, with the most pronounced effects concentrated in high-skilled services sectors: software development and information technology (IT) services, finance, and high-tech manufacturing. As these industries contracted, demand for non-STEM employees within them fell, and it's possible that workers such as managers, HR personnel, and custodial staff faced layoffs, reduced opportunity for advancement, and lower wages.

Second, workers in non-STEM sectors were not left completely unscathed either. Canadian producers' ability to compete more aggressively with US exporters in international markets depressed demand for US exports and squeezed wages across the US economy. Why might all sectors be affected? Distinct industries in the US economy are nonetheless interconnected. Big tech companies and finance firms spend a lot, and many other businesses depend on them. When they cut back, their shrinking expenditures hurt the bottom line of the firms around them. The tech company that used to order catered lunches every day cuts back, so the catering company loses business. The catering company then buys

less from the food supplier. The food supplier orders fewer delivery trucks. And so on down the chain.

To sum it up: The evidence points toward restrictions on high-skilled immigration harming non-STEM native workers in high-tech and skilled service industries. Additional studies support this. One examines the long-run effects of the H-1B program and finds that non-STEM college graduates employed in the computer systems design sector—the industry most exposed to H-1B hiring—saw long-run income gains somewhere between 5 and 15 percent, depending on the method of calculation.¹³

As described above, these effects appear to reach other sectors as well, though more faintly. A separate study takes a different approach, comparing cities rather than industries: It finds that native workers in cities receiving more H-1B-driven STEM inflows saw meaningfully faster wage growth than those in cities receiving fewer, with college-educated natives gaining roughly twice as much as non-college-educated natives.¹⁴ Because this study sorts workers by education rather than occupation, it can't isolate non-STEM workers—but it does suggest that the benefits are not confined to a narrow group.

Most workers outside high-skilled STEM occupations, then, are more likely to lose than gain when foreign high-skilled workers are kept out of the US labor force.

THE FINAL VERDICT

What does the evidence show, on balance?

So, does high-skilled immigration hurt American workers? For domestic high-skilled STEM workers, maybe. There can be real short-term frictions when high-skilled immigrants join the US workforce. Increased competition for certain positions may displace workers or decrease prevailing wages for those occupations. By the same token, certain occupations, such as computer scientists, may benefit when restrictions on high-skilled immigration protect them from competition for jobs.

However, in today's global economy—where firms across the world compete on exports and for talent—immigration restrictions aimed at protecting native workers may prove counterproductive. If firms can't obtain domestic workers with the skills they're looking for, they may instead choose to offshore high-skilled roles to different countries, with support roles offshored in tow. When US immigration policy becomes more restrictive, it forces high-skilled foreign-born workers applying for a US-based job to gamble on a drawn-out and potentially unsuccessful visa application. As a result, they may instead choose to look for work in other advanced economies. The increased competition for US-based firms can result in reduced profits and, in turn, fewer job opportunities for domestic workers.

By contrast, for workers not employed in high-skilled STEM occupations—a group that makes up a large majority of the workforce—the evidence shows that high-skilled immigration is broadly beneficial. This is especially true in sectors that employ many foreign-born

professionals. And yet, a meaningful percentage of the workers who may benefit from high-skilled immigration are also the most likely to oppose it: A 2024 survey found that among those who oppose high-skilled immigration, 43 percent have a high school degree or less—while those in opposition with at least a bachelor’s degree made up only 24 percent.¹⁵

For most Americans, visa policy feels distant—a bureaucratic debate about other people, happening somewhere else. If the rules tighten and fewer foreign workers arrive, what’s the harm? But counting the visas that don’t get issued is a poor way to measure what Americans stand to lose.

The bigger question is one no study can answer directly: What would the US economy look like today if the talent of the past thirty years had gone somewhere else? American workers are far more productive than their European counterparts, and the gap is widest in exactly the technology-heavy industries where foreign-born workers have clustered for a generation. It would be too much to credit immigration policy with that lead. It is not too much to ask what the lead rests on. The costs of turning high-skilled immigrants away accumulate quietly, across the whole economy, and by the time they’re visible, they are very hard to undo.

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Note on terminology: This essay refers to the recruitment and work authorization of high-skilled, foreign-born workers as “high-skilled immigration.” Technically, individuals on visas such as the H-1B are classified by the US government as “nonimmigrant temporary workers,” not immigrants; under US immigration law, “immigrant” formally refers to lawful permanent residents. However, colloquially (and in most policy discourse), these workers are often referred to as high-skilled immigrants, and this essay follows that convention.

NOTES

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