

Working Paper for the Penn Project on the Future of U.S.-China Relations

Reforming the H-1B Visa Program to Retain America-Trained Chinese Talent

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Amid intensifying U.S.–China competition in science, technology, and innovation, the United States faces a structural contradiction in its high-skilled immigration system. Although Chinese students have historically constituted the largest share of international students in U.S. higher education and earn a disproportionately high number of doctoral degrees, particularly in STEM fields, they receive only a modest share of H-1B approvals under a visa cap that has remained fixed at 85,000 since 2005. The combination of a stagnant cap, a lottery system, and the recent imposition of a \$100,000 petition fee has weakened the education–immigration nexus and increased the risk that U.S.-trained talent will return to competitor economies. This policy paper argues that retaining America-trained Chinese graduates is a strategic imperative. It recommends creating a U.S.-Educated Graduate Track within H-1B that prioritizes U.S.-trained Ph.D. recipients, adopting normalized wage metrics rather than raw salary ranking, and repealing or substantially modifying the \$100,000 petition fee to expand sponsorship capacity among universities, research institutions, and mid-sized firms. In an era when technological leadership will shape the trajectory of U.S.–China relations, aligning immigration policy with talent retention is essential to sustaining America’s long-term strategic advantage.

Over the past decade, competition between the United States and China in technology and innovation has intensified. Both nations recognize that advances in artificial intelligence (AI), quantum computing, semiconductor development, biotechnology, and cybersecurity will shape future economic and military power. Historically, the U.S. has leveraged its ability to attract and retain top global talent to sustain its technological lead. Yet as skilled immigration channels tighten, the U.S. is inadvertently fueling China’s tech ambitions by forcing highly educated Chinese graduates trained in the U.S. out of the country.

This challenge is rooted in the current H-1B visa system, which caps the number of skilled workers permitted to remain in the U.S. each year. This paper argues that the H-1B visa system has failed to adapt to the massive expansion of U.S.-trained international talent, particularly from China, and now undermines America’s own innovation and national competitiveness.

What is H-1B and How Has It Evolved?

Under current law, the H-1B program is capped at 85,000 new visas annually, including 65,000 for general applicants and 20,000 for those holding advanced degrees from U.S. institutions, often referred to as the “master’s cap.” The basic framework was created by the Immigration Act of 1990,¹ but the numerical limit has not been constant. During the late 1990s and early 2000s, amid the dot-com boom, Congress temporarily raised the cap to meet the surging demand for skilled tech workers—first to 115,000 in FY1999 and FY2000, and then to a peak of 195,000 between FY2001 and FY2003.² When the economy cooled and concerns about outsourcing

¹ Immigration Act of 1990, Pub. L. No. 101-649, 104 Stat. 4978 (1990). The H-1B program was codified at 8 U.S.C. § 1101(a)(15)(H)(i)(b). Full text available at: <https://www.govinfo.gov/content/pkg/STATUTE-104/pdf/STATUTE-104-Pg4978.pdf>

² American Competitiveness and Workforce Improvement Act of 1998, Pub. L. 105-277;

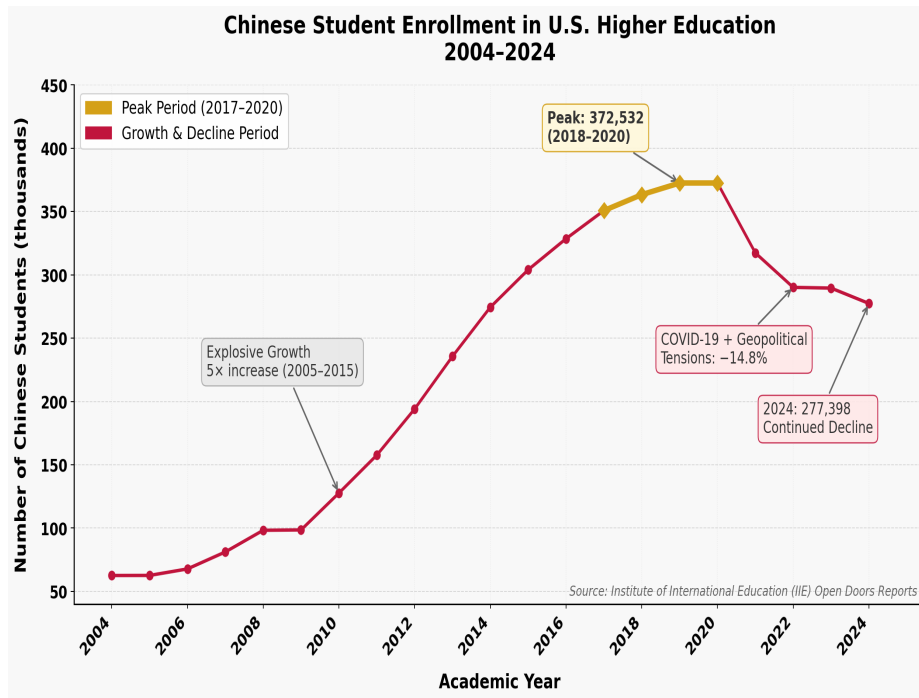
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intensified, the cap was reduced back to 65,000 in FY2004, where it has remained ever since, with the additional 20,000 advanced-degree exemption added in 2005.³

Public discussion of the H-1B program has largely centered on outsourcing firms and offshored jobs, obscuring the program’s critical function in retaining U.S.-educated international talent. For international students, the H-1B visa represents the **only viable legal pathway** to long-term employment in the United States. Following graduation, students may work under Optional Practical Training (OPT) for 12 months, with a possible 24-month extension for STEM fields, but continued employment beyond this period requires transition to H-1B status. If they fail to secure an H-1B visa during or after OPT, they are required to leave the United States, regardless of their education, skills, or employer demand.

Figure 1 shows the remarkable rise and recent decline of Chinese student enrollment in the U.S over the past two decades. Despite decline, the current Chinese student enrollment still represents a 344% increase from 2004 level. This, along with the general increase of enrollment by international students, creates a huge demand for H-1B visas.

Figure 1. Chinese Student Enrollment in U.S. Higher Education 2004-2024⁴



American Competitiveness in the Twenty-First Century Act of 2000, Pub. L. 106-313. The cap was raised to 115,000 for FY1999 and FY2000, then to 195,000 for FY2001–FY2003. Full text (Pub. L. 105-277): <https://www.govinfo.gov/content/pkg/PLAW-105publ277/pdf/PLAW-105publ277.pdf>

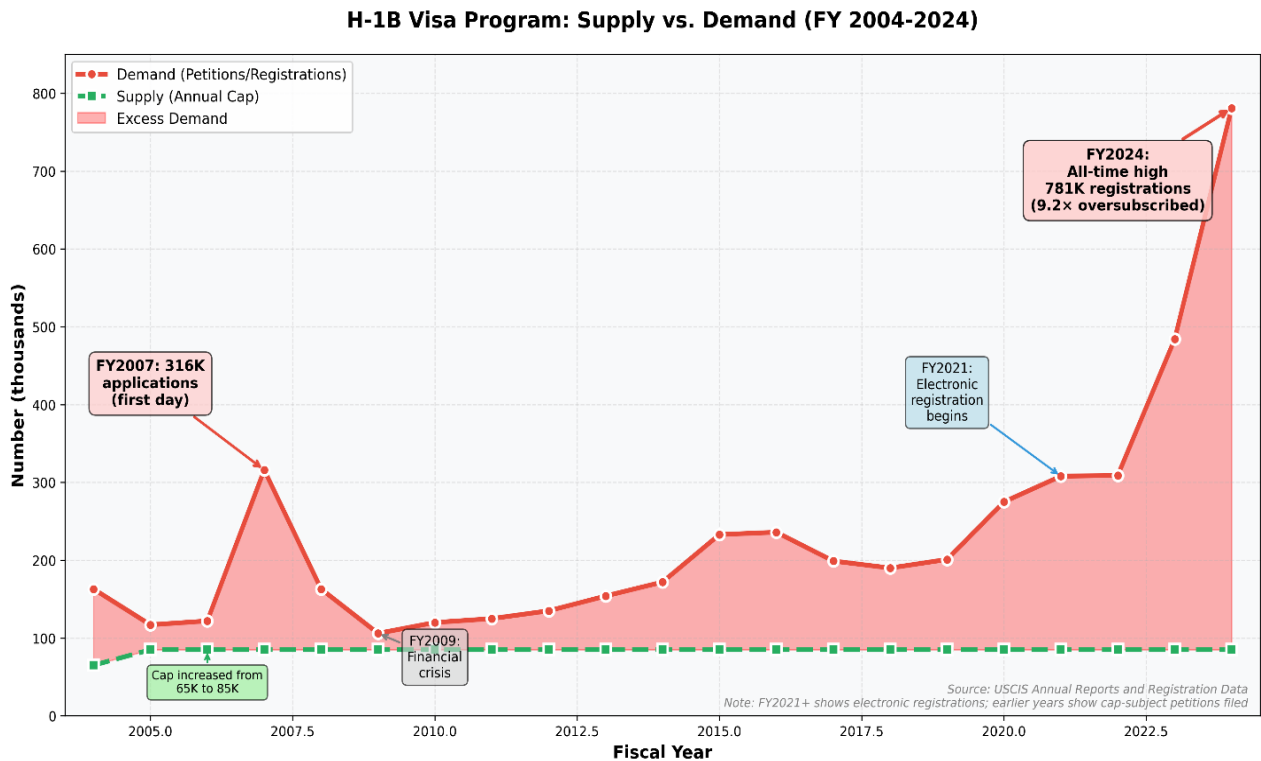
³ H-1B Visa Reform Act of 2004, included in Pub. L. 108-447. The 65,000 cap was restored for FY2004, and the additional 20,000 advanced-degree exemption was added under the Save Our Small and Seasonal Businesses Act of 2005, Pub. L. 109-13. Full text (Pub. L. 108-447): <https://www.govinfo.gov/content/pkg/PLAW-108publ447/pdf/PLAW-108publ447.pdf>

⁴ Open Doors Data. 2024. "International Students." <https://opendoorsdata.org/annual-release/international-students/>. Covers 2023/24 academic year — source for the 277,398 figure.

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Surveys consistently show that a substantial share of international students intend to remain in the United States for employment after graduation, and that access to U.S. work opportunities is a central motivation for choosing to study in the United States in the first place.⁵ However, this rising demand for post-study employment has collided with a stagnant supply of work visas. While international student enrollment has nearly doubled since the mid-2000s, the statutory H-1B cap has remained fixed at 85,000 visas for more than two decades. As applications began to exceed this cap by large margins, the U.S. government responded not by expanding visa availability but by instituting a randomized lottery system beginning in FY2008,⁶ transforming what was originally a labor market-based employment visa into a system governed largely by chance.

Figure 2. The Supply-Demand Mismatch of H-1B from 2004-2024⁷



⁵ NAFSA: Association of International Educators. 2021. “Losing talent: An economic and foreign policy risk America can’t ignore.” *NAFSA*. <https://www.nafsa.org>.

⁶ The H-1B lottery was first used for FY2008, when the cap was reached on the very first day of filing (April 2, 2007). AILA Doc No. 07040368 (Apr. 3, 2007). The electronic pre-registration lottery system was introduced in FY2021. See USCIS H-1B Cap Count History, <https://www.aila.org/library/h-1b-cap-count-history>.

⁷ USCIS. 2017. “Trend of H-1B Petitions Filed FY 2007 Through 2017.” <https://www.uscis.gov/sites/default/files/document/data/h-1b-2007-2017-trend-tables.pdf>; USCIS, “H-1B Electronic Registration Process — Cap Season Statistics.” <https://www.uscis.gov/working-in-the-united-states/temporary-workers/h-1b-specialty-occupations/h-1b-electronic-registration-process>; USCIS, “H-1B Cap Season.” <https://www.uscis.gov/working-in-the-united-states/temporary-workers/h-1b-specialty-occupations/h-1b-cap-season>. Note: FY2004–FY2020 figures reflect cap-subject petitions filed; FY2021–FY2024 figures reflect electronic registrations under the beneficiary-centric system introduced in FY2021. The two series are not directly comparable due to methodology changes.

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The Supply–Demand Mismatch

Figure 2 illustrates the widening gap between H-1B supply and demand in absolute terms. While the statutory cap has remained fixed at 85,000 visas, the volume of eligible registrations has continued to rise sharply, resulting in persistent oversubscription. In Fiscal Year 2024, for example, U.S. Citizenship and Immigration Services (USCIS) received 780,884 total registrations, of which 758,994 were eligible for the 85,000 slots,⁸ yielding a selection probability of roughly one in nine. This structural imbalance means that access to H-1B status is governed not by the characteristics of applicants or the needs of the U.S. economy, but by statistical scarcity.

The consequences of this mismatch are particularly acute for U.S.-trained talent. Highly educated graduates from American universities, including recipients of Ph.D. degrees in fields such as artificial intelligence, biomedical research, and other advanced disciplines, enter the same randomized allocation process as all other applicants, regardless of their training, public investment, or potential contribution. Many of these individuals were educated with support from U.S. institutions through fellowships, teaching assistantships, and federally funded research grants. When they fail to secure H-1B status, the United States effectively exports human capital it has helped to cultivate. Given that China remains one of the largest source countries for doctoral students in advanced fields, these dynamics risk channeling U.S.-trained expertise back into strategic competitor economies, undermining the very national interests the H-1B program is meant to serve.

Structural Failures: Sector Bias and Employer Exploitation

The supply-demand mismatch is compounded by two interlocking structural failures that together determine not just *how many* international graduates can stay, but *which* ones get to stay. The first is a field and sector bias that channels H-1B sponsorship toward large IT and consulting firms. The second is an employer-tether structure that, once a visa is secured, creates dangerous asymmetries of power. Both failures disproportionately harm U.S.-educated graduates working outside the IT pipeline, including many Chinese graduates in research, academia, healthcare, and the social sciences.

Sector Bias

Chinese graduates in the United States are spread across a wide spectrum of fields: basic research, engineering, business, social sciences, humanities, and the arts.⁹ Many work in academic labs, hospitals, think tanks, or smaller firms where employers may have limited familiarity with the H-1B process or fewer resources to navigate it.¹⁰ By contrast, candidates of many nationalities

⁸ U.S. Citizenship and Immigration Services (USCIS). FY 2024 H-1B Cap Season. USCIS received 780,884 total registrations for FY2024, of which 758,994 were deemed eligible for the lottery. <https://www.uscis.gov/working-in-the-united-states/temporary-workers/h-1b-specialty-occupations/h-1b-cap-season>.

⁹ IIE Open Doors. Fields of Study by Place of Origin. Chinese students in 2020/21: math/computer science (22.2%), business and management (16.6%), engineering, social sciences, physical/life sciences, fine arts, and humanities. <https://opendoorsdata.org/data/international-students/fields-of-study-by-place-of-origin/>.

¹⁰ CSIS. 2025. "Practical H-1B Reforms to Serve U.S. Economic Interests." Explicitly notes: "Small firms, startups, hospitals, and manufacturers cannot absorb six-figure hiring costs, which means talent will concentrate in the largest tech companies." <https://www.csis.org/analysis/practical-h-1b-reforms-serve-us-economic-interests>.

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who are placed into large IT and consulting firms enter highly structured sponsorship pipelines. The result is a field and sector bias: Students whose training and career trajectories intersect with these large sponsors enjoy systematically higher odds of securing H-1B status than equally qualified peers working in more fragmented or resource-constrained environments.

The concentration of H-1B sponsorship in large, organizationally sophisticated firms has persisted even as the composition of firm has shifted. In FY2024, Cognizant (2,873), Infosys (2,504), and TCS (1,452) alone accounted for over 6,800 initial approvals—concentrated in IT outsourcing. By FY2025, however, a structural realignment had occurred: For the first time in the program's history, the top four sponsors were all U.S. Big Tech companies—Amazon (4,644), Meta (1,555), Microsoft (1,394), and Google (1,050)—rather than Indian IT outsourcing firms. The top 7 Indian IT companies collectively received only 4,573 approvals in FY2025, down 37% from FY2024 and 70% from FY2015. What has not changed is the underlying dynamic: Sponsorship remains dominated by large, capitalized firms with dedicated legal infrastructure, crowding out small employers where many graduates—particularly those in non-IT fields—actually work.¹¹

Geopolitical and security concerns further narrow opportunities in some fields. Federal policies and public discourse have become more cautious about research collaboration involving certain countries in sensitive domains, such as AI, semiconductors, and aerospace. Some employers respond with broad “de-risking” strategies that reduce sponsorship for affected nationals across entire units or projects, even when roles are not directly covered by export-control law. The net effect is that the U.S. often educates highly skilled individuals in precisely the areas it deems strategically important but then fails to offer them predictable pathways to remain.

Employer Abuse and Unfair Working Conditions

The risks of the H-1B program are well-documented.¹² Chief among them is the abuse of the system through the outsourcing business model. Under the current H-1B framework, the legal status of a worker is tightly bound to a single sponsoring employer, creating asymmetric power that can be exploited in subtle but consequential ways. Because an H-1B petition can be withdrawn at any time by the sponsoring employer, the implicit threat of petition withdrawal functions as a powerful disciplinary tool. Workers who challenge excessive workloads, unpaid overtime, or workplace mistreatment may fear immediate loss of lawful status, triggering a narrow grace period and the risk of forced departure from the United States.

This lock-in also distorts the wider labor market for U.S. workers by enabling employers to maintain dual wage ladders and by tilting hiring toward models that depend on control, not merit. In short, the one-employer tether amplifies bargaining asymmetries, suppresses mobility, and dulls the disciplining effect of market exit—conditions under which both H-1B employees and American coworkers can be treated unfairly. This vulnerability is especially acute for graduates

¹¹ NFAP. 2025. “H-1B Petitions and Denial Rates in FY 2025.” NFAP, November 17. Table 1. <https://nfap.com/wp-content/uploads/2025/11/H-1B-Petitions-and-Denial-Rates-For-FY-2025.NFAP-Policy-Brief.2025.pdf>; and NFAP FY2024 report, Table 2. <https://nfap.com/wp-content/uploads/2024/12/H-1B-Petitions-and-Denial-Rates-For-FY-2024.NFAP-Policy-Brief.December-2024.pdf>.

¹² Ruiz, N. 2023. Senate Budget Committee testimony on H-1B outsourcing. https://www.budget.senate.gov/imo/media/doc/ronil_testimony_913.pdf.

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employed outside large firms, who lack the institutional buffers that corporate legal departments provide.

H-1B Is Not a “Big Tech” Problem: The Breadth of International Talent Dependence

High-skilled immigration in the United States extends far beyond the technology sector. In medicine, approximately one in four U.S. physicians is foreign-born, according to the Migration Policy Institute’s analysis of the American Community Survey (ACS) (approx. 26%).¹³ These clinicians are disproportionately represented in underserved specialties and geographic shortage areas, and many complete their medical education, residency, or fellowship training in the United States. Yet their ability to remain after training depends heavily on employer-sponsored visas.

Other essential non-STEM professional fields also rely significantly on immigrant talent. In accounting, immigrants comprise roughly 13–14% of the workforce,¹⁴ while the domestic pipeline is shrinking; U.S. bachelor’s and master’s degree completions in accounting have fallen over the past decade.¹⁵ Similar patterns appear in architecture, occupational therapy, speech-language pathology, veterinary medicine, and postsecondary faculty roles, where international students earn substantial shares of U.S. graduate degrees and frequently remain integral to research universities, hospitals, and regional labor markets.¹⁶

These data demonstrate that H-1B demand is not a “Big Tech problem”; it is a broad labor-market reality spanning health care, accounting, architecture, education, and research. Employers in these sectors depend on international graduates and foreign-born professionals because the domestic pipeline is insufficient in volume, geographic distribution, or specialization.

Recent Policy Reforms and Their Limits

The Trump administration has introduced significant reforms to the H-1B system in 2025. The first, effective for the FY2025 cap season, was a shift to a **beneficiary-centric selection process**.¹⁷ Under this change, each individual could be entered into the lottery only once, regardless of how many employers submitted registrations on their behalf. The impact was immediate: Total eligible registrations dropped from 758,994 in FY2024 to 470,342 in FY2025—a 38.0% decrease—while the number of unique individuals applying remained stable at approximately 442,000. The average number of registrations per person fell from 1.70 to 1.06, confirming a dramatic reduction in duplicate filings engineered to game the lottery.¹⁸

¹³ Migration Policy Institute. 2022. "Frequently Requested Statistics on Immigrants and Immigration in the United States." <https://www.migrationpolicy.org/article/frequently-requested-statistics-immigrants-and-immigration-united-states>. Immigrant health-care workers in the United States. Foreign-born physicians constitute approximately 26% of the U.S. physician workforce.

¹⁴ Zhou, M. 2023. Immigrants in the accounting profession. *Journal of Accounting Research*, 61(2), 355–389.

¹⁵ AICPA. 2021–2023. "Trends: The Accounting Profession’s Pipeline Report." Documents declining accounting degree completions and CPA candidate numbers over the past decade.

¹⁶ U.S. Census Bureau. 2021. "American Community Survey (ACS)." Used widely for occupational immigrant-share estimates across professional fields.

¹⁷ USCIS. 2024. Improving the H-1B Registration Selection Process and Program Integrity (Final Rule). 89 FR 15602. Effective March 4, 2024. <https://www.federalregister.gov/documents/2024/02/02/2024-01770/improving-the-h-1b-registration-selection-process-and-program-integrity>.

¹⁸ USCIS. 2024. FY 2025 H-1B Cap Registration Statistics. Total: 479,953; eligible: 470,342 (38.0% decrease)

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On September 19, 2025, President Trump signed a proclamation imposing a \$100,000 fee on new H-1B visa petitions, effective September 21, 2025.¹⁹ U.S. employers now face unprecedented costs in hiring foreign graduates. The fee amplifies the structural bias already built into the H-1B system. Large outsourcing firms in the IT consulting sector may absorb these costs, while smaller firms, research labs, and universities—where many Chinese and other international graduates work—are least able to do so. The Center for Strategic and International Studies has noted explicitly that “small firms, startups, hospitals, and manufacturers cannot absorb six-figure hiring costs, which means talent will concentrate in the largest tech companies.”²⁰

Further escalating the controversy, on October 29, 2025, Florida Governor Ron DeSantis directed the Florida Board of Governors to “pull the plug” on the use of H-1B visas at state universities, citing a need to prioritize American workers.²¹ “Why do we need to bring someone from China to talk about public policy?” he asked. His statement reveals a fundamental misunderstanding of academic labor markets. Positions in public policy, like those in economics or data analytics, require Ph.D.-level expertise. The assumption that American universities can easily find sufficient domestic candidates overlooks a well-documented reality: International students constitute a significant share of the doctoral pipeline in virtually every quantitatively demanding discipline. In economics, for instance, temporary visa holders earn more than half of all U.S. doctoral degrees; in fields like econometrics and applied mathematics, the figure is substantially higher. The NSB’s 2024 Science and Engineering Indicators highlighted that in key areas, like AI and quantum computing, nearly 60% of doctorate degrees were awarded to international students, with Chinese students comprising the largest group.²² Public policy programs rely heavily on these quantitatively trained economists and international scholars. DeSantis’s rhetoric thus exposes a gap between political perception and the structural realities of U.S. higher education and research.

The wage-suppression critique of the H-1B program requires important disaggregation. Critics are not entirely wrong: The Economic Policy Institute has documented that in FY2019, 60% of H-1B positions were certified at below-median wage levels (Levels 1 and 2 out of 4)—a pattern driven heavily by large outsourcing and IT staffing firms that exploit the program’s employer-tether structure to hold down labor costs.²³ However, this critique does not apply to the population

from FY2024’s 758,994 eligible). Average registrations per beneficiary dropped from 1.70 to 1.06. <https://www.uscis.gov/working-in-the-united-states/temporary-workers/h-1b-specialty-occupations/h-1b-electronic-registration-process>.

¹⁹ Trump, Donald J. 2025. “Proclamation: Restriction on Entry of Certain Nonimmigrant Workers.” The White House, September 19. The proclamation took effect 12:01 a.m. EDT on September 21, 2025. <https://www.whitehouse.gov/fact-sheets/2025/09/fact-sheet-president-donald-j-trump-suspends-the-entry-of-certain-alien-nonimmigrant-workers/>.

²⁰ Luck, Philip, and Thibault Denamiel. 2026. “Practical H-1B Reforms to Serve U.S. Economic Interests.” CSIS, February 2. https://www.csis.org/analysis/practical-h-1b-reforms-serve-us-economic-interests?utm_source=chatgpt.com.

²¹ DeSantis, Ron. 2025. “Governor Ron DeSantis Directs Florida Board of Governors to Crack Down on H-1B Visa Abuse in Higher Education.” Press Conference, University of South Florida, Tampa. Florida Governor’s Office Press Release, October 29. <https://www.flgov.com/eog/news/press/2025/governor-ron-desantis-directs-florida-board-governors-crack-down-h-1b-visa-abuse>. See also Inside Higher Ed (Oct. 29, 2025); Orlando Sentinel (Oct. 29, 2025).

²² National Science Board. 2024. “Science and Engineering Indicators 2024.” NSF. <https://nces.nsf.gov/pubs/nsb20243/key-takeaways>.

²³ Costa, Daniel, and Ron Hira. 2021. “H-1B visas and prevailing wage levels.” Economic Policy Institute.

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most relevant to this paper: U.S.-educated international Ph.D. graduates. Data from the Federal Reserve Bank of Richmond show that H-1B holders with doctorate degrees had a median salary of \$129,000—well above both the overall H-1B median of \$92,600 and the median for H-1B holders with only a bachelor's or master's degree.²⁴ The same study finds no evidence that hiring H-1B workers displaces native college-educated workers. Broader research confirms the positive spillovers: Economists at the Peterson Institute for International Economics find that a 1% increase in foreign tech workers in a U.S. city caused 7–8% higher wages for college-educated native workers and 3–4% higher wages even for workers without a college degree, and that H-1B workers were associated with 30–50% of all U.S. productivity growth between 1990 and 2010.²⁵

In December 2025, the administration finalized a rule to overhaul the randomized lottery system toward a weighted selection process that prioritizes positions with the highest wages, effective February 27, 2026.²⁶ The new system will “implement a weighted selection process that will increase the probability that H-1B visas are allocated to higher-skilled and higher-paid” foreign workers. Under the final rule, a position classified at Wage Level IV will have four times the selection probability of a Wage Level I position.

This reform was a step toward addressing the problem of the lottery being anti-merit, but it narrows the definition of “merit” to absolute wage levels, leaving unresolved questions about occupational diversity, regional variation, and the role of U.S. educational investment. Nor has it changed the underlying cap or the structural scarcity that pushes out talent, especially U.S.-trained talent.

Opportunities: Education–Immigration Nexus

U.S. institutions remain magnets for international talent. For decades, American universities have functioned not only as educational institutions but as global talent-selection systems. Admission into U.S. graduate programs—particularly in STEM and research-intensive fields—already represents a rigorous screening process that filters for academic ability, technical expertise, English proficiency, and research competence. A strong “education-immigration nexus”

<https://www.epi.org/publication/h-1b-visas-and-prevailing-wage-levels/>. In FY2019, 60% of H-1B positions were certified at the two lowest prevailing wage levels (below the local median), largely reflecting the outsourcing and IT staffing sector's use of the program. This wage-level concentration is distinct from U.S.-educated Ph.D. graduates, who command substantially higher salaries.

²⁴ Morales, Nicolas. 2025. "Understanding the Potential Impact of H-1B Visa Program Changes." Federal Reserve Bank of Richmond Economic Brief EB25-39, October.

https://www.richmondfed.org/publications/research/economic_brief/2025/eb_25-39. H-1B doctorate holders had a median salary of \$129,000 and professional degree holders \$150,000—both well above the overall H-1B median of \$92,600. The study also finds no evidence that hiring H-1B workers displaces native college-educated workers.

²⁵ Clemens, Michael A. 2025. "New US curb on high-skill immigrant workers ignores evidence of its likely harms." Peterson Institute for International Economics, October. <https://www.piie.com/blogs/realtime-economics/2025/new-us-curb-high-skill-immigrant-workers-ignores-evidence-its-likely>.

²⁶ Weighted Selection Process for Registrants and Petitioners Seeking To File Cap-Subject H-1B Petitions (Final Rule). 90 FR [Dec. 29, 2025]. Effective February 27, 2026. <https://www.federalregister.gov/documents/2025/12/29/2025-23853/weighted-selection-process-for-registrants-and-petitioners-seeking-to-file-cap-subject-h-1b>.

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can better harness this advantage by ensuring that Chinese and other international graduates remain in the United States to contribute to research and innovation.

This nexus is particularly consequential for Chinese students. Chinese nationals constitute the largest nationality group in multiple STEM doctoral fields, including engineering, computer science, mathematics, and physical sciences. Many are trained in laboratories supported by federal grants and participate directly in cutting-edge research in artificial intelligence, quantum science, advanced manufacturing, and biomedical innovation. The United States therefore already invests substantial public and institutional resources in cultivating this talent pool.

Yet the immigration system does not reliably convert this educational investment into long-term domestic human capital. The “status cliff” at the end of OPT creates instability precisely at the moment when graduates are transitioning from training to productive employment. Because the H-1B cap has not expanded alongside the growth of international enrollment, access to continued employment is governed by statistical scarcity rather than demonstrated merit or economic need.

After completing their degrees, most are permitted to work only temporarily through Optional Practical Training (OPT), typically for 12 months, with a possible 24-month extension in designated STEM fields. Once OPT expires, continued lawful employment depends almost entirely on securing an H-1B visa during a narrow filing window. Failure to do so results in loss of legal work status and, in many cases, required departure from the United States, regardless of the individual’s qualifications, employer demand, or public investment in their training. This structural vulnerability creates instability precisely at the early-career stage when skills are being consolidated and productivity is rising.

One key opportunity lies in leveraging the skills of international graduates to fill critical labor shortages.²⁷ From healthcare to AI, numerous sectors in the U.S. face a growing need for highly skilled professionals. Many of these roles cannot be filled by the domestic workforce alone—experts call this a “STEM talent crisis”²⁸—making it imperative to tap into the pool of international graduates already trained in the U.S.

Policy Recommendations

The foregoing analysis points to three complementary reforms. Together, they constitute a “train-to-retain” model that converts the United States’ substantial investment in higher education into durable domestic human capital.

1. Create a U.S.-Educated Graduate Track (UEGT) Inside H-1B and Prioritize U.S.-Trained Ph.D. Graduates

Wage-based ranking operates only at the point of visa allocation and, therefore, leaves intact the temporal bottleneck between OPT expiration and H-1B approval. Even highly competitive U.S.-educated graduates remain subject to forced exit if they fail to secure sponsorship

²⁷ Brookings Institution. 2024. “U.S. security and immigration policies threaten its AI leadership.” <https://www.brookings.edu/articles/us-security-and-immigration-policies-threaten-its-ai-leadership/>.

²⁸ National Science Board. 2024. “NSB Policy Brief 2024: Science and Engineering Workforce.” National Science Foundation. https://www.nsf.gov/nsb/publications/2024/2024_policy_brief.pdf.

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during a single, constrained filing cycle. A dedicated U.S.-Educated Graduate Track (UEGT) would address this gap by recognizing U.S. educational investment as a distinct form of merit.

Under UEGT, graduates of accredited U.S. institutions would receive priority access to H-1B visas through a separate allocation or first-draw mechanism. H-1B status would remain employer-specific; the reform would change who is selected first, not the regulatory obligations that apply after selection. The UEGT should include explicit prioritization for U.S.-trained doctoral graduates, particularly those in research-intensive and nationally strategic fields. Chinese nationals remain among the largest source country for Ph.D. recipients in key research domains, including engineering, computer science, mathematics, and physical sciences.²⁹ According to NSF data, international students account for roughly 40–60% of doctoral degrees in many STEM fields, with Chinese students constituting the single largest nationality group in several of these areas.

Peer countries already treat post-graduation retention as a core component of skilled-immigration strategy. Canada’s Post-Graduation Work Permit (PGWP) and Australia’s Temporary Graduate Visa provide time-limited but open work authorization that allows graduates to integrate into labor markets before transitioning to employer-sponsored or permanent status. A comparable U.S. pathway, such as a U.S. Talent Visa for recent graduates, would stabilize the transition from education to employment, strengthen the early-career talent pipeline across sectors and regions, and convert U.S. educational investment into domestic human capital. In an era when talent mobility increasingly shapes technological leadership and economic security, retaining those already trained in U.S. classrooms and laboratories is not merely an immigration choice but a strategic national imperative.

2. Beyond the Lottery: Use Normalized Wage Rather Than Raw Wage

The Trump administration has proposed overhauling the existing H-1B lottery system with a weighted process that would favor “higher skilled and higher paid” workers. While reforming the lottery is necessary, the assumed equivalence between “higher skilled” and “higher paid” is a fallacy. Wage is a poor proxy for merit because it varies widely by occupation, industry, and region. Salary mostly reflects occupation- and industry-specific pay structures and bargaining dynamics, not human capital alone.

A more equitable approach would normalize wages using the Bureau of Labor Statistics’ Occupational Employment and Wage Statistics (OES) data. Under this system, a job offer would be assessed based on its percentile ranking within the same Standard Occupational Classification (SOC) code and metropolitan statistical area (MSA). An architect offered a salary at the 75th percentile of architectural wages in Cleveland would be treated as demonstrating comparable labor-market value to an AI researcher offered a 75th-percentile salary in San Francisco. This method preserves wage-based safeguards against underpayment while ensuring that candidates are evaluated relative to their professional peer group rather than against unrelated occupations with fundamentally different pay structures.

Normalized wage evaluation advances three policy goals simultaneously. First, it maintains strong protections for U.S. workers by rewarding employers who pay competitively within their

²⁹ NCSES. 2024. “Doctorate Recipients from U.S. Universities: 2022.” NSF 24-300.

<https://nces.nsf.gov/pubs/nsf24300>. International students account for 40–60% of doctoral degrees in many STEM fields; Chinese students constitute the largest single nationality group in several areas.

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field and region. Second, it broadens access to high-skilled immigration beyond a small set of elite technology firms, allowing hospitals, universities, design firms, and regional employers to compete fairly for talent. Third, it aligns visa allocation more closely with actual skill and labor-market need, rather than with salary inflation driven by geographic concentration or speculative investment cycles.

Using normalized wages rather than raw salary levels in H-1B selection is particularly important for retaining U.S.-trained Chinese graduates whose career trajectories often lie outside the highest-paying segments of the labor market but are nonetheless central to national competitiveness. Evaluating compensation relative to occupation and region allows highly trained graduates to pursue roles in universities, hospitals, mid-sized manufacturing firms, and regional innovation clusters.

Most importantly, wage normalization supports a more democratic and resilient innovation ecosystem. A system that equates merit with raw pay risks producing a narrow immigrant occupational elite concentrated in a few high-paying clusters, while starving other sectors that are essential to national infrastructure, cultural life, and public service. By contrast, evaluating compensation relative to occupation and region recognizes that skill is multidimensional and that national competitiveness depends not only on a handful of frontier technologies, but also on the architects, planners, educators, researchers, and professionals who sustain the broader economy. Normalized wage-based selection thus preserves merit while avoiding wage bias, ensuring that high-skilled immigration serves the full range of American economic and societal needs.

3. Repeal or Substantially Modify the \$100,000 Petition Fee

The \$100,000 flat fee should be repealed or substantially restructured. In its current form, it amplifies bias of the H-1B system that favors large, well-capitalized firms, such as Amazon, with in-house legal teams, while crowding out startups, universities and nonprofits, regional firms and research labs. The U.S. should offer targeted incentives to small and mid-sized employers, simplified legal support or subsidies for filing fees to reduce administrative burdens, and priority processing for first-time H-1B sponsors. Such measures would encourage a more diverse range of employers to participate in the visa process, in order to broaden the American innovation structure and capacity.

If cost recovery is necessary, it should be tiered by employer type and size, Specifically, the U.S. should:

- Exempt universities, nonprofit research institutions, and qualifying hospitals entirely, consistent with their existing cap-exempt status and their outsized role in training and retaining doctoral talent.
- Apply reduced fees (e.g., \$10,000–25,000) for small and mid-sized employers (under 50 employees), first-time sponsors, and employers in federally designated shortage occupations.
- Apply the full fee only to large-cap employers in non-shortage fields, where the program’s outsourcing abuses are most prevalent.

Additionally, the current guidance makes students effectively “country-bound” after graduation because leaving and re-entering could trigger the fee for a future employer. A targeted

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rule should provide that **no fee applies** when the beneficiary (a) earned a recent U.S. degree and (b) held F-1/OPT/STEM-OPT status within the prior two years, regardless of current physical location. This keeps recruitment global without penalizing short trips, conferences, or family visits abroad.

Conclusion

The United States channels only a modest share of its legal immigration through skills-based pathways. In FY2023, employment-based immigrants accounted for roughly 17% of new U.S. permanent residents, while family routes composed about two-thirds of admissions.³⁰ By contrast, Canada’s economic class represented nearly 58% of permanent admissions in 2022,³¹ and Australia’s Skill stream constituted roughly 71% of its 2024–25 Migration Program.³² These comparisons underscore a structural mismatch between U.S. rhetoric about competing for the “best and brightest” and the composition of its permanent inflows.

This paper has argued that three interlocking reforms can break this cycle. **Normalized wage evaluation** would ensure that merit is measured fairly across fields and regions, preventing the de facto concentration of H-1B visas in a handful of high-paying technology clusters. Raw salary is an imprecise proxy for skill because compensation varies systematically by occupation, sector, region, and employer market power. A fairer approach evaluates offers relative to their field and location, so that an architect paid competitively in Cleveland, for example, is not eclipsed by a software engineer’s salary in San Francisco.

A **U.S.-Educated Graduate Track** would recognize the public investment embedded in every American-trained degree and create a reliable pipeline from education to employment, reducing early-career churn and the forced departures that currently export human capital to competitor economies.

Overall, prioritizing American-educated graduates in the H-1B process would not only reward Chinese students for their U.S. academic achievements but also secure their talents for the United States. This approach creates a win–win: Chinese graduates gain stable career opportunities and clarity on their future, while the U.S. gains skilled professionals who fuel economic growth, innovation, and international collaboration. It ensures that the investment these students have made in an American education results in a lasting contribution to the U.S. economy and society, rather than benefiting global competitors. And a **tiered, employer-sensitive fee structure** would align the cost of H-1B sponsorship with the capacity of the institutions most dependent on international talent: universities, hospitals, nonprofits, and small firms that lack the legal infrastructure of large

³⁰ Ward, Alicia. 2024. “U.S. lawful permanent residents: 2023.” Office of Homeland Security Statistics, U.S. Department of Homeland Security. https://ohss.dhs.gov/sites/default/files/2024-09/2024_0906_pley_lawful_permanent_residents_fy2023.pdf. In FY2023, employment-based immigrants accounted for approximately 17% of new lawful permanent residents.

³¹ Immigration, Refugees and Citizenship Canada. (2023). Annual report to Parliament on immigration 2023. Government of Canada. <https://www.canada.ca/content/dam/ircc/documents/pdf/english/corporate/publications-manuals/annual-report-2023-en.pdf>.

³² Department of Home Affairs. (2025). Australia’s migration trends 2024–25. Australian Government. <https://www.homeaffairs.gov.au/research-and-stats/files/migration-trends-2024-25.pdf>.

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technology companies but produce a disproportionate share of the nation's research, innovation and service.

These reforms are not merely immigration policy; they are science policy, economic policy, and national security policy. The United States cannot simultaneously invest billions in STEM education, declare AI and quantum computing national priorities, and then operate an immigration system that exports the graduates of that investment to strategic competitors.

At a moment when strategic competition with China centers on artificial intelligence, quantum computing, semiconductor manufacturing, biotechnology, and advanced analytics, talent has become the decisive input of national power. The United States must recognize that talent is the critical currency of global competitiveness. The window for reform is narrow. New enrollment of international students has declined 17% in fall 2025; the \$100,000 fee has introduced profound uncertainty for employers and visa holders alike; and peer nations are actively recruiting the talent the U.S. is turning away. Unless the H-1B system is reformed to reward U.S. educational investment, calibrate merit fairly across fields, and reliably retain the talent America already trains, the United States risks transforming its world-class education system into a training ground for its rivals.

Table 1. Top H-1B Sponsors — Approved Initial Employment Petitions, FY2024 & FY2025

Data sourced directly from NFAP Table 2 (FY2024 report) and NFAP Table 1 (FY2025 report), both drawing from the USCIS H-1B Employer Data Hub. Top 25 employers shown for each year; rows sorted by FY2024 rank. "—" = employer not in NFAP top-25 for that year. Non-profit entities excluded from NFAP ranked tables (see Note 5).

Rank (FY24)	Employer	Sector	FY2024 Approvals	FY2025 Approvals	FY2025 Cont. Approvals	Notes
1	Amazon	Big Tech	3,871	4,644	14,532	#1 both years. FY25 continuing figure inflated by location-change amendments (see Note 4).
2	Cognizant	IT Outsourcing	2,873	743	—	FY24 #2. FY25 initial fell sharply as Indian IT outsourcing contracted. Denial rate rose 4× to 4%.
3	Infosys	IT Outsourcing	2,504	—	—	FY24 #3. Dropped out of NFAP FY25 top-25 entirely — part of Indian IT group down 37% vs FY24.
4	TCS	IT Outsourcing	1,452	846	5,293	FY24 #4. Only Indian IT firm in FY25 top-5. Extension denial rate rose to 7% (FY24: 4%).
5	IBM	Tech/Consulting	1,348	501	—	FY24 #5. Broad portfolio: cloud, AI, enterprise services.
6	Microsoft	Big Tech	1,264	1,394	4,863	FY24 #6; FY25 #3 for initial. Denial rate remained very low both years.
7	HCL America	IT Outsourcing	1,248	379	—	FY24 #7. FY25 initial fell 70%; denial rate jumped to 6%. Ranked 21st in FY25 top-25.
8	Google	Big Tech	1,058	1,050	4,509	FY24 #8; FY25 #4. First time Big Tech holds all four top slots for initial employment.
9	Capgemini	IT Consulting	1,041	401	—	FY24 #9. FY25 initial fell 61%; denial rate rose to 4%.
10	Meta Platforms	Big Tech	920	1,555	4,740	FY24 #10; FY25 #2. Strong AI hiring drove sharp increase in new H-1B petitions.

Rank (FY24)	Employer	Sector	FY2024 Approvals	FY2025 Approvals	FY2025 Cont. Approvals	Notes
11	Deloitte	Consulting	891	432	—	FY24 #11. Professional services across finance, technology, and strategy.
12	Apple	Big Tech	864	823	4,610	FY24 #12; FY25 #6 initial. #5 for continuing employment (4,610).
13	Intel	Semiconductor	851	635	—	FY24 #13. Continued chip design and R&D hiring.
14	Accenture	IT Consulting	833	—	—	FY24 #14. FY25 figure not in NFAP top-25 published list.
15	LTIMindtree	IT Outsourcing	798	401	—	FY24 #15. FY25 denial rate rose to 5%; ranked 20th in FY25.
16	Tesla	Manufacturing	742	319	—	FY24 #16 (new entrant). Engineering, software, supply chain roles.
17	Ernst & Young	Consulting	714	718	—	FY24 #17; FY25 #9. Stable Big Four accounting/consulting hiring.
18	Goldman Sachs	Finance	678	746	—	FY24 #18; FY25 #7. Finance sector H-1B use for quant, tech, and analytics roles.
19	Walmart	Retail/Tech	654	478	—	FY24 #20 (per table order). Walmart Global Tech drives demand for software/data roles.
20	Wipro	IT Outsourcing	609	—	—	FY24 #19. FY25 figure not in NFAP top-25. Higher denial rates reflect outsourcing scrutiny.
21	Tech Mahindra	IT Outsourcing	493	—	—	FY24 #21. FY25 not in top-25 published list.
22	McKinsey & Co.	Consulting	477	303	—	FY24 #22; FY25 #25. Strategy and management consulting.
23	JPMorgan Chase	Finance	468	553	—	FY24 #23; FY25 #12. Financial services technology and operations.

Rank (FY24)	Employer	Sector	FY2024 Approvals	FY2025 Approvals	FY2025 Cont. Approvals	Notes
24	ByteDance	Big Tech	424	449	—	FY24 #24. Parent company of TikTok. AI and social media engineering.
25	Citibank	Finance	399	371	—	FY24 #25. Global financial services; consistent H-1B user.
—	Nvidia	Semiconductor	376	563	—	Not in FY24 top-25 by count; FY25 #11. GPU/AI hardware demand driving rapid growth.
—	Stanford University	University (cap-exempt)	274	—	—	Most H-1B initial approvals among U.S. universities in FY2024. Cap-exempt; petitions filed year-round without lottery. Excluded from NFAP ranked employer table (see Note 5).

Table 2. National Origin of H-1B Beneficiaries — FY2024 (All Approved Petitions)

Rank	Country of Birth	FY2024 Share	FY2024 Approvals (est.)	FY2025 Share (est.)
1	India	71.0%	283,397	~71%
2	China	~11.7%	~46,680	~12%
3	Philippines	~1.3%	~5,250	~1%
4	Canada	~1.1%	~4,220	~1%
5	South Korea	~1.0%	~4,000	~1%
6	Mexico	~0.9%	~3,600	~1%
7	Taiwan	~0.8%	~3,200	~1%
8	United Kingdom	~0.7%	~2,800	~1%
9	Pakistan	~0.5%	~2,000	~1%
10	All other countries	~9.0%	~35,900+	~9%

Primary Sources

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