PENN WHARTON
UNIVERSITY *of* PENNSYLVANIA

Budget Model

Budgetary Effects of Granting Green Cards to Immigrants with Advanced STEM Degrees

Summary: PWBM estimates that exempting from immigrants with advanced STEM degrees from numerical limitations on green cards would reduce deficits by $129 billion over the 2025-2034 period and by $634 billion over the 2035-2044 period.

Key Points

- In recent years, policymakers have considered reforms to the employment-based immigration system that would increase the number of foreign workers with backgrounds in science, technology, engineering, and math (STEM) fields. These reforms would exempt immigrants with advanced STEM degrees from statutory limits of the number of green cards granted each year.

- PWBM estimates that enacting this change would increase the U.S. population by about 825 thousand in 2034 and more than 2.5 million in 2044.

- The increase in the population would lead to higher outlays for federal benefits and higher tax receipts. Over the 2025-2034 period, PWBM estimates that direct spending would increase by 4 billion and revenues would increase by $133 billion. Over the 2035-2044 period, PWBM estimates that direct spending would increase by 74 billion and revenues would increase by $708 billion.

NOTE: This brief provides background on estimates presented in How Does Accounting for Population Change Affect Estimates of the Effect of Immigration Policies on the Federal Budget?.

Introduction

The number of immigrants granted lawful permanent resident (LPR) status (also called a green card) is governed by the Immigration and Nationality Act (INA).[1] The INA specifies numerical annual limits on different categories of immigration (or "preferences") as well as limits on the number of immigrants who come from any one country.

Under the INA, around 140,000 foreign-born workers sponsored by an employer are granted LPR status each year in employment-based (EB) preference categories. A per-country ceiling limits the number EB immigrants from any single country to 7 percent of that total.[2]

Immigrants from most countries are unaffected by the limits on EB green cards because there are not enough others from the same country for the ceiling to bind. However, the limits pose a major obstacle for prospective immigrants from large countries that send significant numbers of workers to the U.S. In particular, the number of immigrants from India and China who meet the requirements for employment-based LPR status exceeds the number of green cards available to them by a wide margin, leading to a backlog of applicants who are approved for a green card but have not received one.[3]

In recent years, policymakers have considered reforms to the employment-based immigration system that focus specifically on foreign workers with backgrounds in science, technology, engineering, and math (STEM) fields. Prospective immigrants with STEM backgrounds are more likely to be affected by the statutory limits because they are disproportionately Indian or Chinese nationals. Two recent legislative proposals sought to address this by creating an exemption from the limits for immigrants with advanced degrees in STEM fields: Section 80303 of H.R. 4521, alternately referred to as the America COMPETES Act of 2022 or the United States Innovation and Competition Act of 2021; and S. 2384, the Keep STEM Talent of 2023. However, neither proposal was enacted.

In this brief, we estimate the budgetary effects of a similar proposal to exempt employment-based immigrants with advanced STEM degrees from the INA's statutory limits, increasing the number of green cards available to them.

Proposal

The proposal would modify the INA by adding a new category of immigrants who would not be subject to any numerical limitations on the number of green cards granted each year. The exemption would apply to immigrants with a master's or doctoral degree in a STEM field from a qualified U.S. research institution or an equivalent foreign institution.[4] The proposal defines STEM broadly to include any of the following fields of study:[5]

- Agricultural sciences,
- Natural resources and conservation,
- Computer and information sciences and support services,
- Engineering,
- Biological and biomedical sciences,
- Mathematics and statistics,
- Military technologies,
- Physical sciences,
- Medical residency and fellowship programs
- Accounting and related services and taxation.

To obtain a green card, a prospective immigrant would still have to meet the current-law requirements for employment-based immigration under of one of the first three EB preference categories:

- EB-1 visas are limited to persons of extraordinary ability in the sciences, arts, education, business, or athletics; outstanding professors or researchers; and certain multinational executives and managers.

- EB-2 visas are limited to members of the professions holding advanced degrees or persons of exceptional abilities in the sciences, arts, or business.

- EB-3 visas are limited to professionals, skilled workers, and certain other workers.

Spouses and minor children of qualifying immigrants – whether accompanying or following to join later – would also be exempted from the limits.
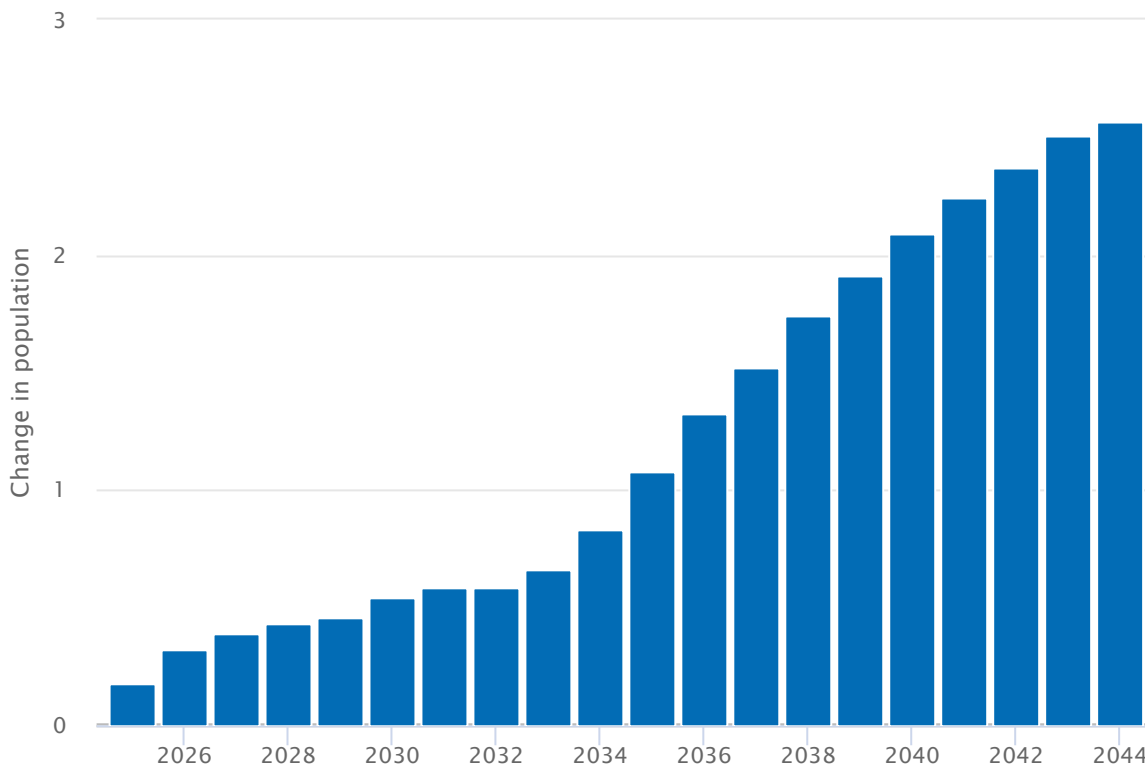
Effects on the U.S. Population

PWBM estimates that enacting the proposal would increase the U.S. population by about 825 thousand in 2034 and more than 2.5 million in 2044. Figure 1 shows PWBM's estimates of the change in population by year.

Figure 1. Estimated Effect on the U.S. Population

Millions

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Source: Penn Wharton Budget Model

PWBM did not independently estimate the number of foreign nationals who would enter the U.S. or adjust their immigration status as a result of the proposed change. Instead, we relied on estimates from Esche, Neufeld, and Williams (2024).[6] Based on these estimates, PWBM projected the total effect on the population, accounting for the increase in the number foreign nationals entering and residing in the U.S., including family members (who may arrive much later through sponsorship); changes in the likelihood that those already in the U.S. would remain rather than return to their home country; the increase in the number of children born in the U.S.; and mortality of the foreign-born. It also accounts for the fact that some of those who enter the U.S. under the proposal would not remain permanently.

Budgetary Effects

PWBM estimates that exempting employment-based immigrants with advanced STEM degree from statutory limits would reduce deficits by $129 billion over the 10-year period from 2025 to 2034. Over the following ten years, from 2035 to 2044, deficits would be $634 billion less than under current law.[7]

Table 1 shows PWBM's estimates of how the proposal would affect outlays, revenues, and deficits over the 2025-2034 period. The proposal would increase direct spending by $4 billion over the decade, mainly because some of those who immigrate under the exemption would qualify for federal benefits. LPRs are generally eligible for all federal benefit programs, although some impose a five-year waiting period.[8] However, recent immigrants with advanced degrees – who are typically working age and have higher incomes – use relatively few federal benefits, and the impact on most programs would be negligible. Most of the increase in outlays would be for subsidies for health insurance purchased on the Affordable Care Act exchanges, with smaller amounts for other health programs and for unemployment insurance.

Table 1. Estimated budgetary effects, 2025-2034

Billions of dollars

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Fiscal Year	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2025-2034
Increases or Decreases (-) in Direct Spending											
Outlays	0.1	0.2	0.3	0.2	0.3	0.4	0.5	0.5	0.6	1.1	4.2
Increases or Decreases (-) in Revenues											
Revenues	2.0	3.2	5.3	9.9	16.7	19.7	19.4	15.9	17.9	22.8	132.8
Net Increases or Decreases (-) in the Primary Deficit											
Effect on the deficit	-1.9	-3.0	-5.0	-9.7	-16.5	-19.3	-18.9	-15.4	-17.2	-21.7	-128.6

Source: Penn Wharton Budget Model
Components may not to sum to totals due to rounding.

PWBM estimates that the proposal would increase revenues by $133 billion over the 2025-2034 period. Immigrants who obtain employment-based green cards under the proposal would mostly be employed, generating additional income and payroll tax receipts. Average earnings would also rise, because the new workers would earn comparatively high wages. The increase in the number of taxpayers accounts for most of the increase in revenues.

Table 2 shows the proposal's budgetary effects over the 2035-2044 period. PWBM estimates that outlays would increase by $74 billion relative to current law, with health insurance subsidies accounting for the greatest share. Compared with the 2025-2034 period, outlays for refundable tax credits make up a larger share of the increase in spending in the second decade.

Table 2. Estimated budgetary effects, 2035-2044

Billions of dollars

[DOWNLOAD DATA](#)

Fiscal Year	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2035-2044
Increases or Decreases (-) in Direct Spending											
Outlays	1.9	2.7	3.8	5.3	7.3	8.5	9.3	10.6	11.8	12.7	73.9
Increases or Decreases (-) in Revenues											
Revenues	29.9	37.5	47.6	61.3	75.2	81.6	82.4	86.6	98.1	107.9	708.1
Net Increases or Decreases (-) in the Primary Deficit											
Effect on the deficit	-28.0	-34.8	-43.8	-55.9	-67.9	-73.2	-73.1	-76.0	-86.4	-95.2	-634.2

Source: Penn Wharton Budget Model
Components may not to sum to totals due to rounding.

PWBM estimates that the proposal would increase revenues by $708 billion over the 2035-2044 period, reflecting the cumulative growth in the labor force and in the number of high-earning immigrants from the increase in green cards. Some households would also receive additional capital income because of the increase in the size of the economy, further boosting tax receipts relative to current law.

This analysis was produced by Alex Arnon, Vidisha Chowdhury, Duncan Haystead, Brendan Novak, and Youran Wu. Mariko Paulson prepared the brief for the website.

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1. LPR status authorizes an immigrant to remain in the U.S. permanently, work, collect government benefits (subject to some limitations), and become a U.S. citizen through naturalization. ↵

2. There are several exceptions to the per-country ceiling related to reallocation of unused visas. ↵

3. See the Congressional Research Service's overview and analysis of the employment-based green card backlog. ↵

4. A qualified research institution is generally defined as one spending $25 billion on research and development over a three-year period. ↵

5. The classification of fields is based on the Department of Education's Classification of Instructional Programs. ↵

6. See Esche, Matthew, Jeremy Neufeld, and Heidi Williams (2024) "Estimating counterfactual population and status," https://sites.google.com/view/heidi-l-williams/writing. ↵

7. All estimates for the deficit in this brief refer to the primary deficit and do not include additional interest costs. ↵

8. The major programs with a five-year waiting period are Medicaid, the Children's Health Insurance Program (CHIP), Supplemental Nutrition Assistance Program (SNAP), and Supplemental Security Income (SSI). ↵