

Effects on CBO's Baseline of the Increase in Immigration Among Other Foreign Nationals

November 21, 2024

Presentation at the 72nd Annual Economic Outlook Conference of the University of Michigan's Research Seminar in Quantitative Economics

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The Increase in Immigration Among Other Foreign Nationals

The number of people entering the United States has increased sharply in recent years. In CBO's projection, that increase in immigration boosts economic growth and reduces the size of the budget deficit over the 2024–2034 projection period.

This presentation describes the demographic characteristics of the people in the immigration surge and the effects of the surge on CBO's projection of the following:

- Gross domestic product;
- Compensation and wages;
- Interest rates, unemployment, and inflation; and
- The federal budget.

CBO's Projection of Net Immigration and the Characteristics of Immigrants in the Surge

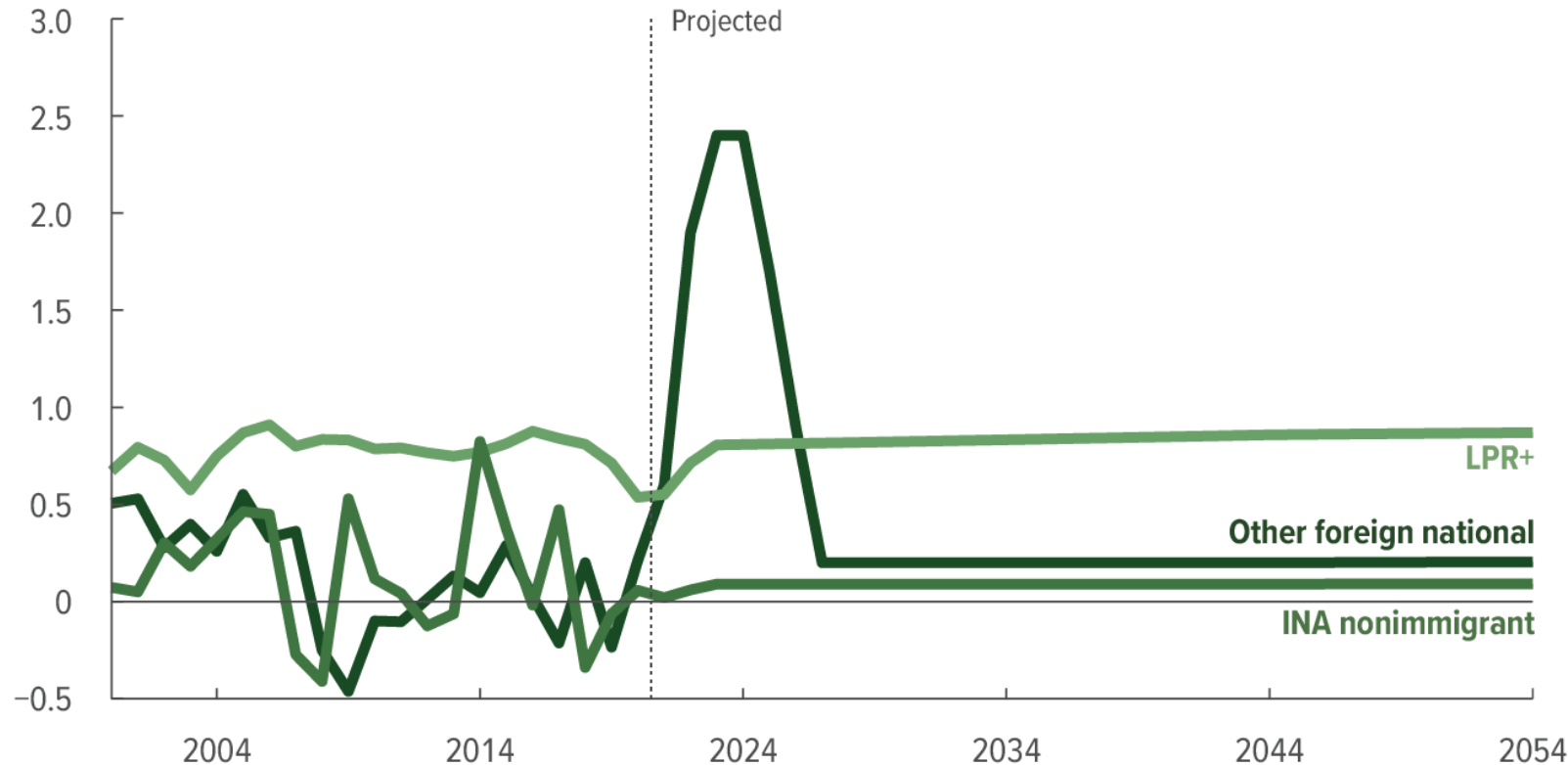
Categories of Immigration

Net immigration is the number of people who enter the United States in a given year minus the number who leave in that year. CBO groups those immigrants into three categories:

- The **LPR+ category** includes lawful permanent residents (LPRs) plus people who are eligible to apply to become LPRs on the basis of their current status, such as asylees and refugees.
- The **INA nonimmigrant category** refers to people admitted as nonimmigrants under the Immigration and Nationality Act (INA), including students and temporary workers.
- The **other-foreign-national (OFN) category** consists of people in the United States who are not in the first two categories and who have not subsequently become U.S. citizens or received LPR, asylee, or nonimmigrant status—such as people who entered the United States illegally and people who were permitted to enter through the use of parole authority and who may be awaiting proceedings in immigration court.

Net Immigration, by Category

Millions of people



In CBO’s projections, net immigration of people in the other-foreign-national category is 2.4 million people in 2023 and 2024; after 2024, it falls to a level more consistent with historical experience—200,000 people per year. Net immigration of OFNs returns to that level in large part because the projections are subject to significant uncertainty.

Total net immigration is 3.3 million people in 2024, 2.6 million people in 2025, and 1.8 million people in 2026, in CBO’s projections. It averages 1.1 million people per year over the 2027–2054 period.

Demographic Characteristics of Immigrants in the Surge

In CBO's estimation, the demographic characteristics of immigrants in the surge differ from those of the general population:

- Immigrants in the surge are younger, on average, and are more often male than people in the general population.
- They have lower levels of educational attainment, on average, than the general population.
 - In the general population, 40 percent of people have a high school diploma or less, and 60 percent have at least some college.
 - About half of OFNs have a high school diploma or less, and about half have at least some college, CBO estimates.

Demographic Characteristics of Immigrants in the Surge (Continued)

- Immigrants in the surge have lower average weekly wages on arrival in the United States than do people in the general population with similar levels of educational attainment:
 - Those who have a high school diploma or less earn roughly 15 percent less than their similarly educated counterparts in the general population.
 - Those with at least some college earn roughly 30 percent less than their similarly educated counterparts in the general population.

- Over time, the average wages of people in the surge population converge on those of the general population within educational groups.

Effects of the Immigration Surge on CBO's Projection of Gross Domestic Product

Effect of Immigration on CBO's Economic Baseline

The surge in immigration increases the demand for goods and services and the supply of labor and capital services. In CBO's baseline, the surge increases nominal gross domestic product (GDP) by \$8.9 trillion, or 2.4 percent, over the 2024–2034 period. That increase is attributable to five sources:

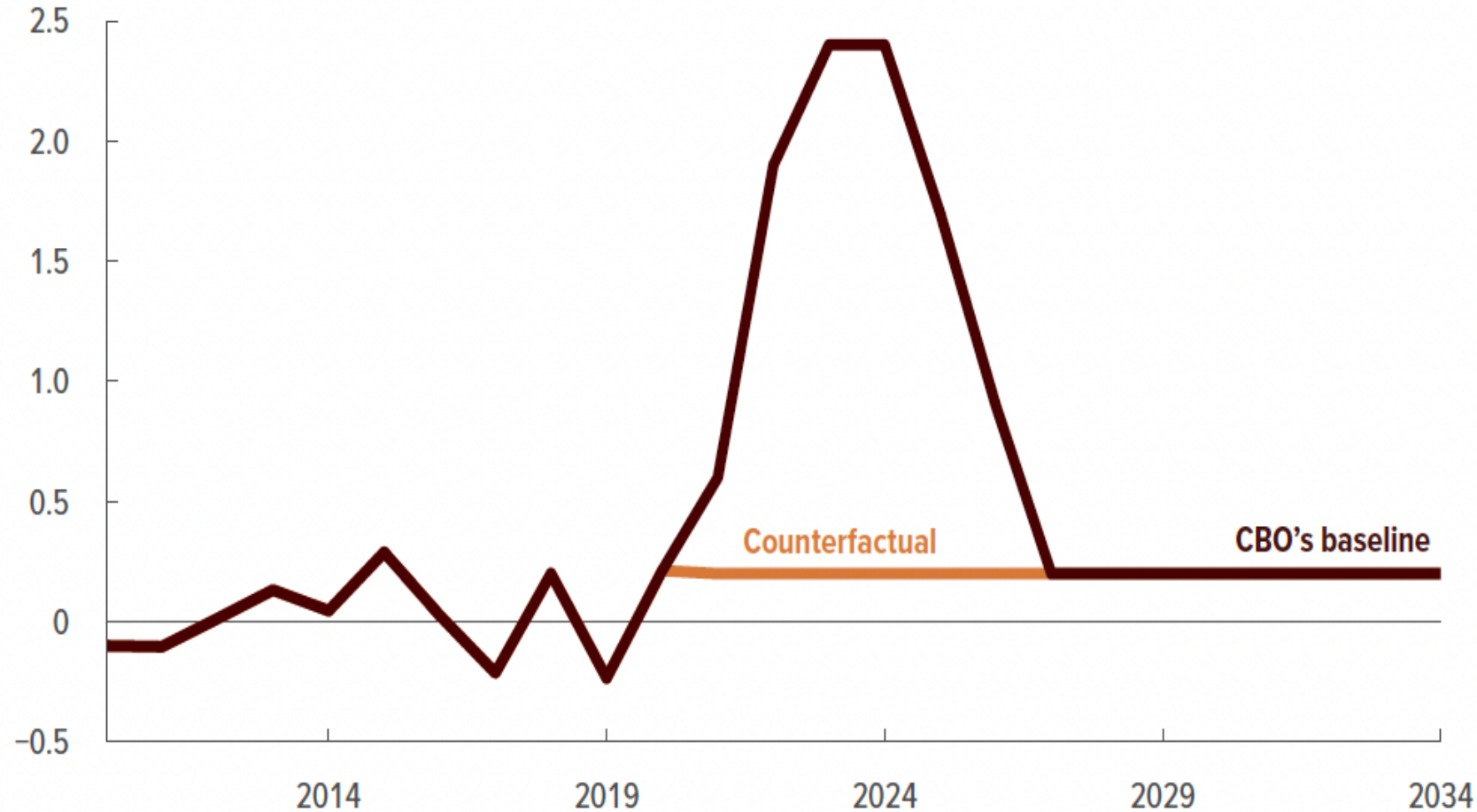
- The size of the population,
- The average rate of participation in the labor force,
- The composition of employment,
- Innovation-related productivity, and
- Transitory factors.

In CBO's assessment, the surge in immigration increases total compensation and reduces average compensation per hour. The effect on wages differs for people with various levels of educational attainment.

Additionally, in CBO's estimates, the surge in immigration increases interest rates by roughly 0.1 percentage points in 2034 and modestly increases inflation and the unemployment rate over the 2024–2034 period, on average.

A Counterfactual Demographic Projection of Net Immigration

Millions of people



CBO constructed a counterfactual demographic projection that excludes the recent and projected surge in the immigration of OFNs.

To quantify the effect of the surge on the economy, CBO subtracted the flow of net immigration of OFNs in the counterfactual projection from the flow in the baseline.

Changes in the Labor Force Participation Rate of Immigrants in the Surge After Arrival

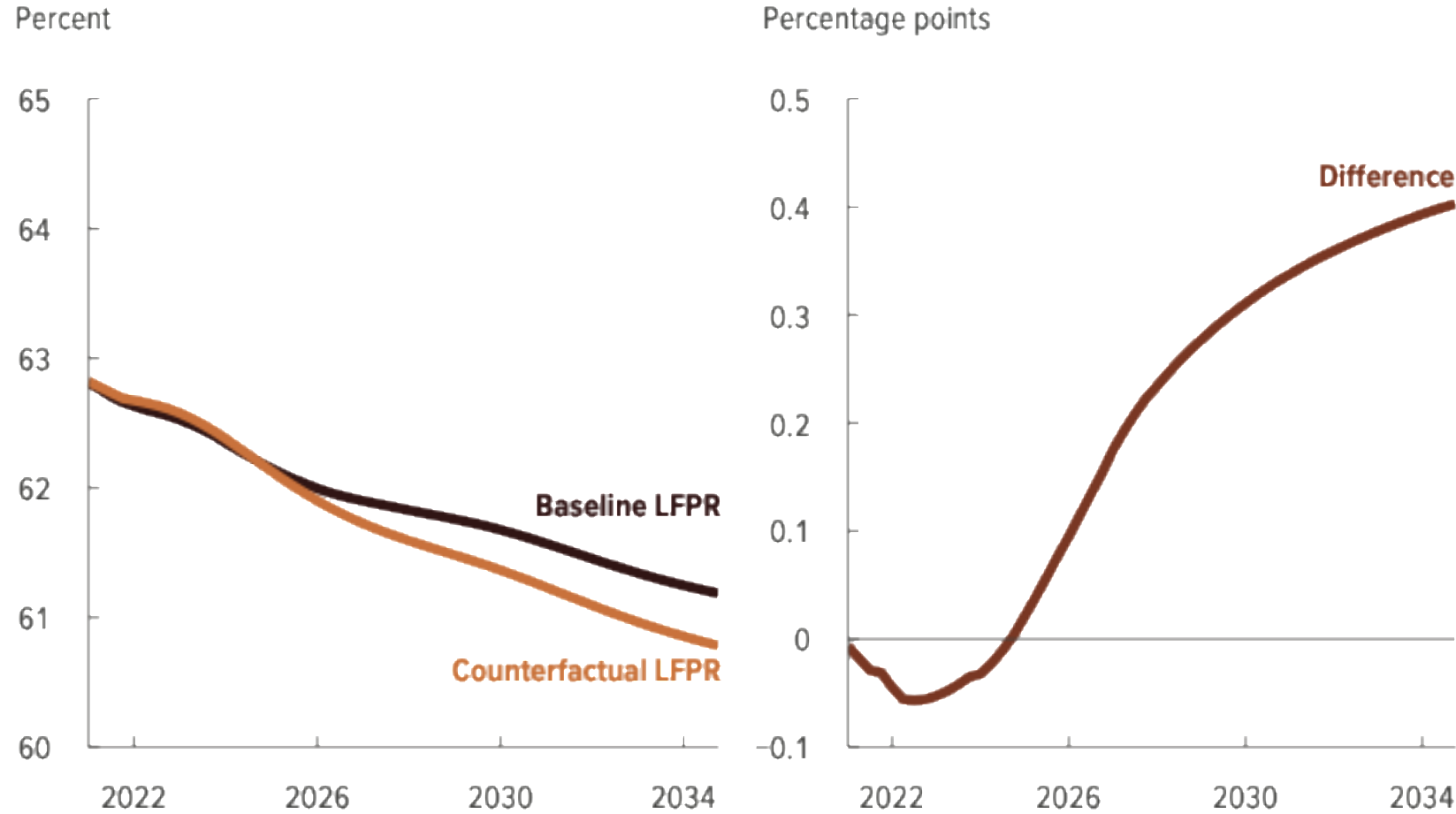
When immigrants in the surge first arrive, their labor force participation rate (LFPR) is lower than it will ultimately be because it takes time for people to obtain work authorizations and find work. Over the first nine months, that rate increases quickly:

- In CBO's assessment, about half of immigrants in the surge receive work authorization about six months after entering the United States, on average.
- Some immigrants find work without work authorization.

After nine months, the average labor force participation rate of immigrants in the surge is higher than the average rate in the general population, CBO projects, because of differences between those groups in age, sex, and LFPRs by age and sex.

- For example, men over age 30 in the surge have higher LFPRs than their counterparts in the general population.
- Women in the surge, by contrast, have lower LFPRs than their counterparts in the general population, regardless of age.

Effect of the Immigration Surge on Labor Force Participation



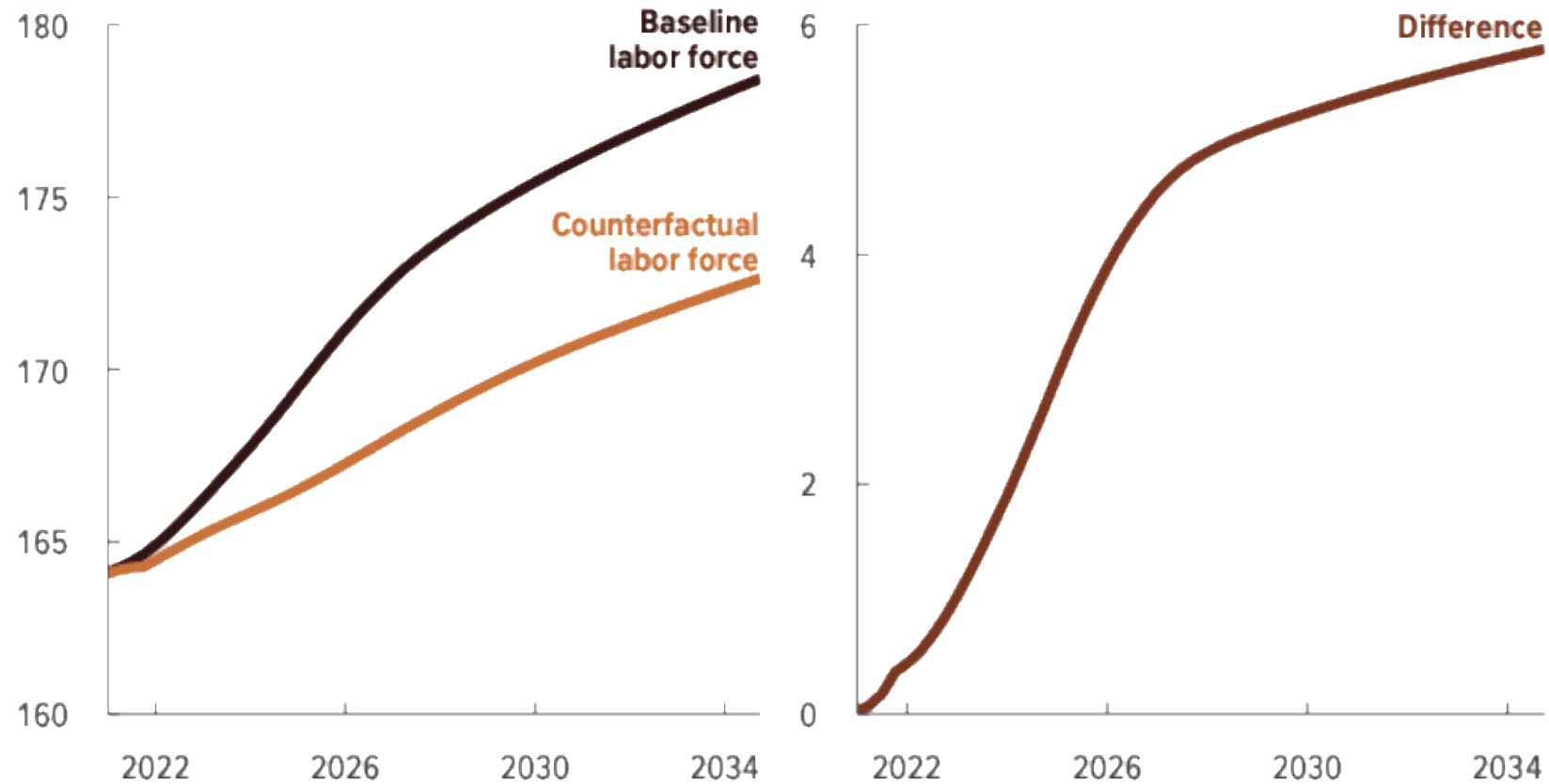
Between 2021 and 2024, the labor force participation rate of the general population in CBO's baseline is lower than in the counterfactual scenario without the surge.

By 2025, the LFPR of that population is higher than it otherwise would be because more immigrants in the surge have been in the United States for nine months or longer.

Beyond 2034 (not shown), the difference between LFPRs in the baseline projection and in the counterfactual projection decreases as the surge population ages.

Effect of the Immigration Surge on the Size of the Labor Force

Millions of people



In CBO's baseline projection, most of the increase in the size of the labor force coming from the surge in immigration occurs between 2024 and 2026. By 2034, the surge in immigration increases the size of the labor force by 5.8 million people.

The increase in the size of the population accounts for about 80 percent of the total boost to the labor force in 2034.

The higher rates of labor force participation among immigrants accounts for the rest.

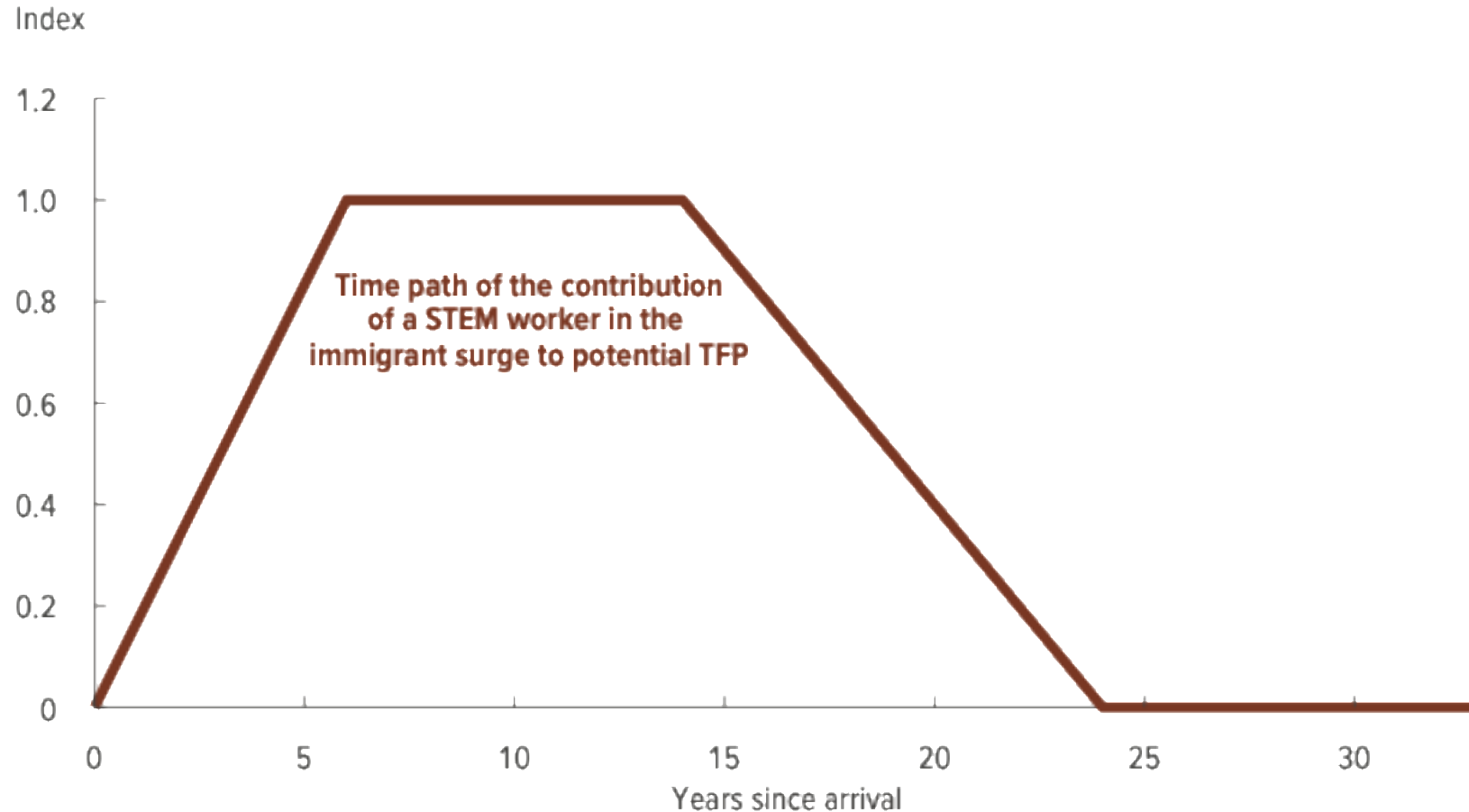
Innovation-Related Productivity

In CBO's assessment, people with a college degree who work in science, technology, engineering, and mathematics (STEM) occupations are disproportionately likely to contribute to innovation-related activities that will increase potential total factor productivity (TFP) growth.

CBO's assessment of that effect depends on three estimates:

- The number of college-educated STEM workers in the surge,
- The contribution of each STEM worker in the immigrant surge to potential TFP over their working life, and
- The time path of that contribution to potential TFP.

Innovation-Related Productivity (Continued)



In CBO's estimates, immigrants produce innovations shortly after arrival, with a one-year delay for job matching (Prato 2023; Bernstein 2022).

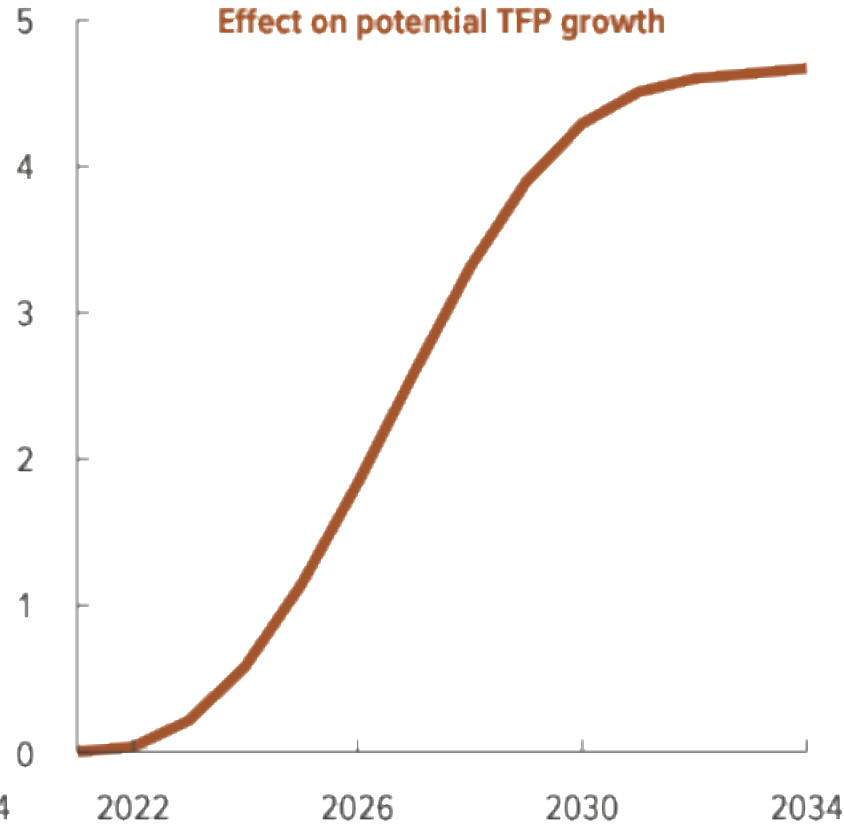
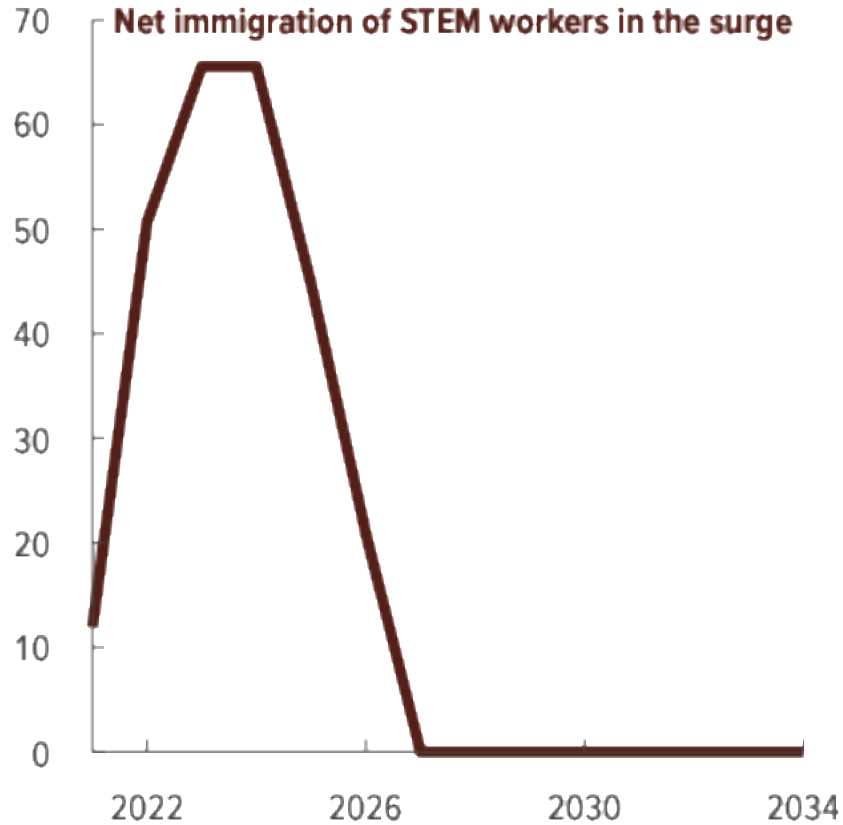
Contributions to potential TFP are modeled over an average career length of 20 years after arrival in the United States.

Although innovations may occur shortly after arrival, the effect of those innovations on potential TFP occurs with a lag, in CBO's assessment (Kogan et al. 2017).

Innovation-Related Productivity (Continued)

Thousands of workers

Basis points



The surge in immigration is projected to add approximately 200,000 STEM workers to the labor force by the end of 2026; the largest flows occur in 2023 and 2024.

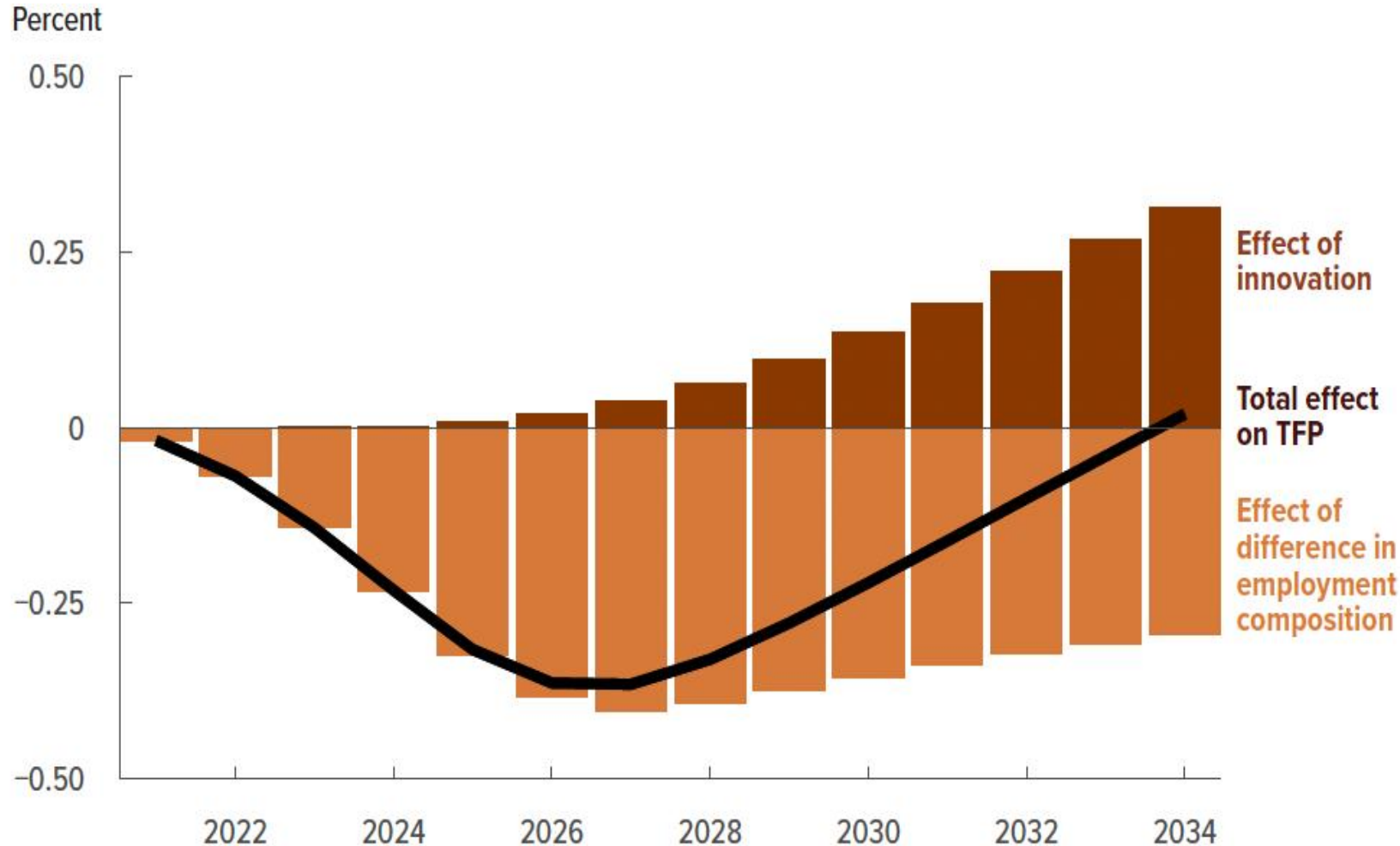
Innovations made by those STEM workers, including their effect on other workers' productivity, boost TFP growth by 4.5 basis points toward the end of the 10-year period.

Employment Composition Effect

The employment composition effect accounts for the lower-than-average levels of educational attainment and work experience in the U.S. labor market among people in the surge. That composition effect is captured in CBO's baseline through a change in total factor productivity.

In CBO's assessment, the employment composition effect partially diminishes over time, consistent with assimilation observed in wage data. Within educational groups, the average wages of people in the surge population converge on those of the total population over an eight-year period.

Combining the Innovation and Employment Composition Effects

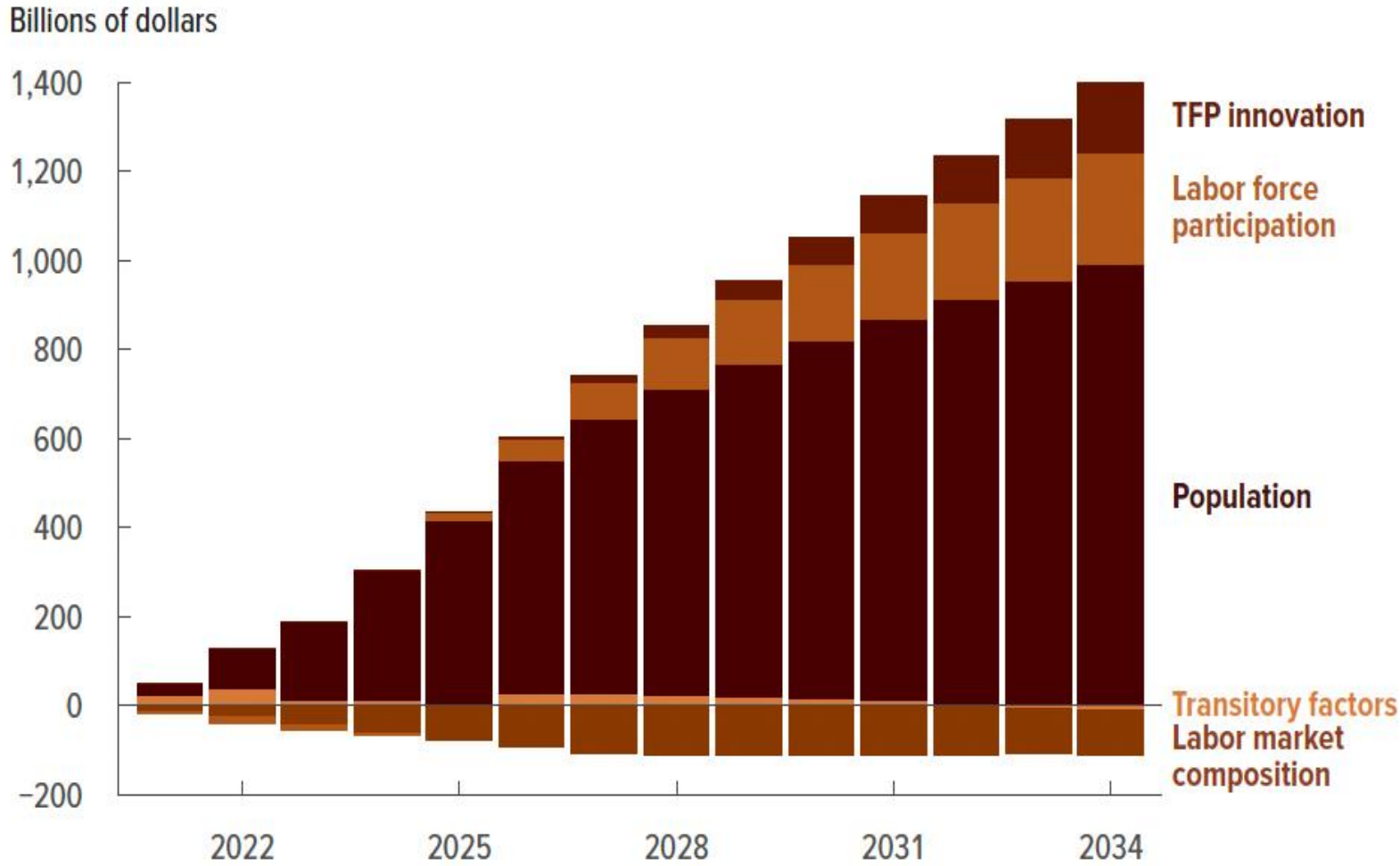


In CBO's projections, immigrants in the surge affect potential TFP growth through an innovation effect and a compositional effect.

The innovation effect accounts for the boost to innovation resulting from an increase in the number of STEM workers.

The compositional effect accounts for differences in education and work experience between immigrants in the surge and the general population.

Effects of Immigration on Nominal and Potential GDP

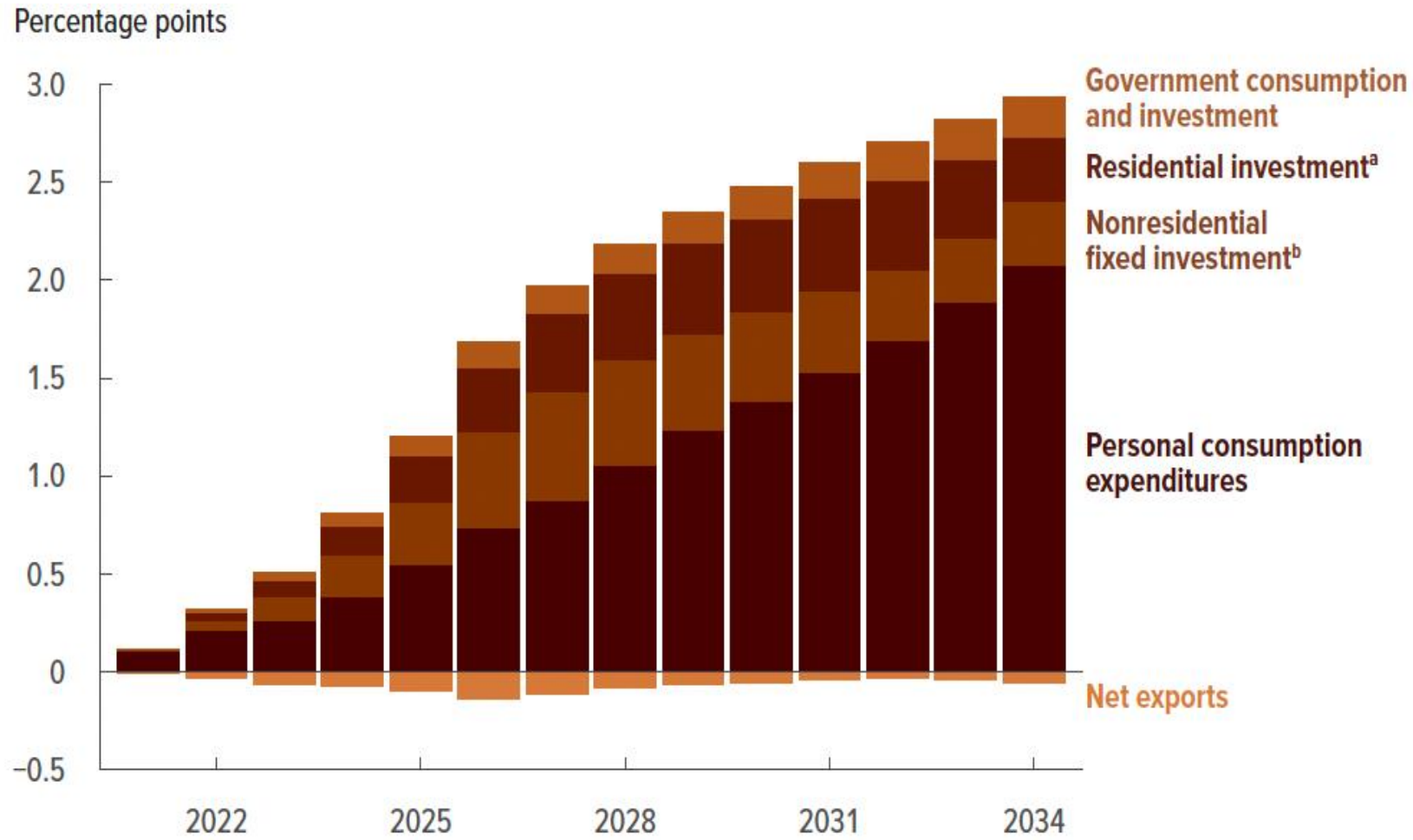


The increase in the population is the largest driver of the increase in potential GDP. From 2024 to 2034:

- Population boosts potential GDP by \$7.8 trillion,
- Higher LFPRs among immigrants increase potential GDP by \$1.5 trillion,
- An increase in innovation-related productivity increases potential GDP by \$600 billion, and
- The effect of the employment composition decreases potential GDP by \$1.1 trillion.

In addition to those effects on potential GDP, transitory factors slightly boost nominal GDP.

Contribution of Components of Real GDP



By 2034, the surge in immigration increases real GDP by 2.9 percent. On average, over the 2024–2034 period:

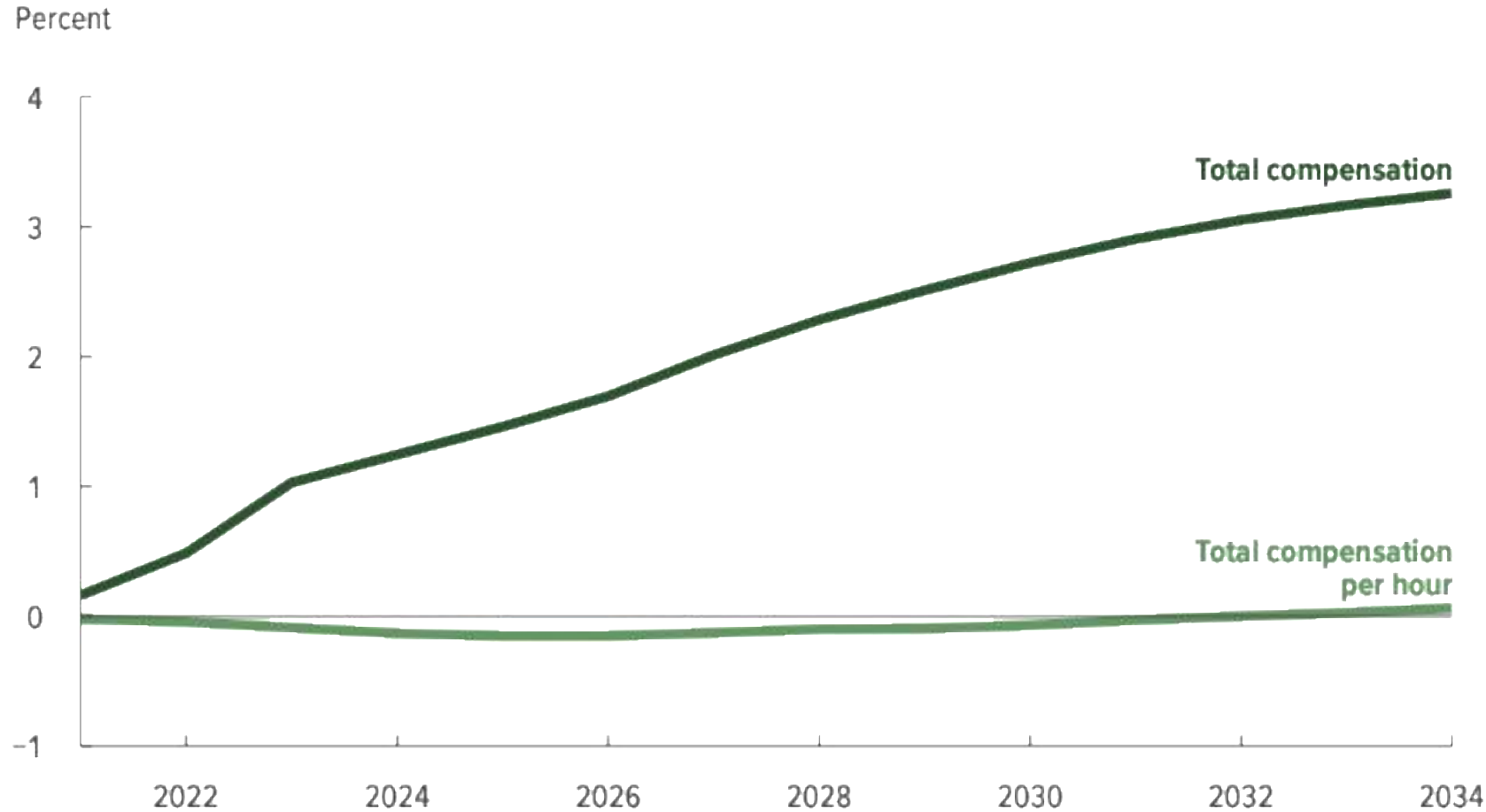
- Personal consumption expenditures account for 1.2 percent of growth,
- Residential investment accounts for 0.4 percent,
- Nonresidential fixed investment accounts for 0.4 percent,
- Government consumption and investment account for 0.2 percent, and
- Net exports offset that growth by 0.1 percent.

a. Includes home construction, renovations, and brokers' commissions.

b. Also known as business fixed investment. Includes businesses' purchases of equipment, structures, and intellectual property products, such as software.

Effects of the Immigration Surge on CBO's Projection of Compensation and Wages

Effect on Total Compensation and Compensation per Hour



The surge in immigration increases total compensation over the 30-year projection period.

From 2021 to 2031, the surge reduces total compensation per hour in the economy because immigrants have lower levels of educational attainment and earn lower wages on arrival than domestic workers.

Over time, increases in productivity and the convergence of immigrants' wages toward those of domestic workers boost average compensation per hour.

Effect on Wages

The surge initially slows the growth of average compensation per hour, because recent arrivals earn below-average wages, in CBO's assessment. After 2031, the surge increases the growth in average compensation per hour for two reasons:

- The average wages of people in the surge population converge on those of the total population—within educational groups—over time, and
- Increases in TFP growth stemming from higher rates of innovation increase average wages.

Effect on Wages (Continued)

Wage growth of people in the United States who are not part of the surge—primarily U.S. citizens—decreases slightly through 2026 before increasing thereafter because of the increase in productivity. The effect varies for people with different levels of educational attainment:

- For people with a high school diploma or less, wage growth initially slows because of the increase in the supply of workers with similar skills.
- For people with at least some college, wage growth is generally unchanged initially but increases over time. The increase in the number of workers with less education increases the demand for people with more education to work with them—pushing up their wages and roughly offsetting the downward pressure stemming from a greater supply of workers with similar skills.

Effects of the Immigration Surge on CBO's Projection of Interest Rates, Unemployment, and Inflation

Effect of the Immigration Surge on Interest Rates

Short-term interest rates initially decline following a small increase in the unemployment rate and a negligible change in the rate of inflation.

Over the projection period, long-term interest rates increase more than they would have without a surge following an increase in the rate of return on capital. The rate of return on capital increases as a result of the following:

- Faster growth of the labor force,
- Faster growth in TFP, and
- Greater demand for residential investment.

Over time, long-term interest rates decline as those effects shrink and the reduction in the debt-to-GDP ratio puts downward pressure on rates.

Effects of the Immigration Surge on Unemployment and Inflation

The overall unemployment rate is mostly unaffected by the immigration surge because two factors offset one another:

- During the peak of the surge, the unemployment rate of new arrivals is relatively high because it takes them time to find work, increasing the average unemployment rate.
- That effect is offset by an increase in the demand for goods and services, which reduces the unemployment rate.

In CBO's assessment, the surge in immigration puts modest upward pressure on prices, on average, but the effect varies by the type of goods and services:

- The surge increases the price of housing services.
- It puts downward pressure on energy prices, some durable goods, and nonenergy and nonhousing services.

Budgetary Effects of the Immigration Surge

Estimated Effects of the Immigration Surge on Deficits

Billions of dollars

	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	Total	
												2024–2028	2024–2034
Increases in revenues													
From taxes paid by immigrants in the surge population	31	41	53	59	65	72	79	86	94	101	108	249	788
From changes in the economy	11	13	18	27	33	36	40	45	49	54	60	103	387
Total	42	55	71	86	99	108	119	131	143	155	167	352	1,175
Increases and decreases (-) in mandatory outlays and net spending for interest													
From benefits provided to immigrants in the surge population and their children	7	11	13	14	15	16	17	19	20	21	23	61	177
From changes in the economy	-1	-2	-2	*	1	3	9	16	23	27	27	-4	101
Total	6	9	11	14	16	19	27	35	43	48	50	56	278
Decrease (-) in the deficit													
Net effect of taxes paid by and benefits provided to immigrants in the surge population and their children	-24	-30	-39	-45	-50	-56	-61	-68	-74	-79	-85	-189	-611
From changes in the economy	-12	-16	-20	-26	-33	-33	-31	-29	-26	-27	-33	-107	-285
Total	-36	-46	-60	-72	-83	-89	-92	-96	-99	-107	-117	-296	-897

* = between -\$500 million and \$500 million.

References

Shai Bernstein and others, *The Contribution of High-Skilled Immigrants to Innovation in the United States*, Working Paper 30797 (National Bureau of Economic Research, December 2022), www.nber.org/papers/w30797.

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