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ECONOMIC EFFECTS
of Immigration Policies

A 50-STATE ANALYSIS

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Business Roundtable

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Economic Effects of Immigration Policies

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Executive Summary

Immigration is central to America's identity. Since the United States' founding, immigrants have strengthened our country through their talent and hard work while enriching our culture. New arrivals not only add energy and innovation to American society, but they also have long been and remain essential to our strong, dynamic economy.

To continue this legacy, the United States needs sound immigration policies that provide strong border security while also promoting economic growth, supporting U.S. job creation and boosting American competitiveness. Policymakers and business leaders across the political spectrum agree that our current immigration system fails to meet these standards. However, there are several views on how to reform the system to generate the economic vibrancy that would benefit all Americans.

To help inform this discussion, Business Roundtable commissioned an economic modeling analysis by Regional Economic Models, Inc., to quantify the national and state-level economic effects of two potential scenarios for immigration reform. The first is a balanced approach that addresses flaws in the current system from top to bottom, from border security to legal immigration; the second has a narrower focus on border security and internal enforcement only.

Under a "Balanced Reform" scenario that addresses the need for both security and economic growth:

- The U.S. economy would expand by an additional 3.9 percent over 10 years relative to the baseline status quo, amounting to an additional $831 billion in gross domestic product (GDP). This scenario would create 8.4 million jobs over the next decade and raise the median U.S. household income by $254 in the first year alone.
- Nearly every industry would see substantial job creation, with professional, scientific and technical services; retail; and construction gaining the most. Likewise, every state would experience faster GDP and job growth and higher household incomes than under the status quo.

Under an "Enforcement Only" approach that solely addresses security concerns:

- The U.S. economy would contract by 3.0 percent over 10 years relative to the baseline, resulting in a loss of $640 billion in GDP. Nearly 7 million jobs would disappear in the next decade, and the median U.S. household would lose $153 in income in the first year alone.
- While nearly every industry would suffer widespread job losses and output decline, among the most affected would be construction, real estate and retail. Likewise, every state would experience slower GDP and job growth and lower household incomes than under the status quo.

The United States is at a crossroads. One path points toward a vibrant future with millions of new jobs, rising living standards and faster growth — all while improving security, promoting fairness and reinforcing the ideals on which the country was founded. The other would hamstring the economy by removing a productive population from the U.S. growth engine and restricting access to future workers, innovators and entrepreneurs — a self-inflicted economic wound. At a time when U.S. businesses must navigate a highly competitive landscape due to the interconnectedness of the global economy, it is imperative that policymakers pursue reforms that provide access to needed labor in a transparent and secure manner that is consistent with our nation's long history as a free, open and thriving economy.

To view results for each scenario by state, go to www.brt.org/XXXX.

I. Background and Context

Immigrants have been core contributors to the United States throughout its history. From the colonial era to the present day, immigrants have been woven into the fabric of American society to such an extent that nearly every American is an immigrant or has immigrant ancestors. Immigrants helped transform the United States into a preeminent world power at the beginning of the 20th century, and the country continues to rely on their hard work and innovation as an engine of growth. Unfortunately, our current immigration system prevents the United States from fully realizing its economic potential.

Economists are in near-unanimous agreement about the benefits of immigration for the U.S. economy, while experts in immigration law and policy hold that our system is highly inefficient and hinders U.S. competitiveness. Business Roundtable explored these two issues in previous publications:

- ***Contributing to American Growth: The Economic Case for Immigration Reform*** (2014) outlines the numerous economic arguments for improving our immigration system. Reform that provides enough legal immigration channels while upgrading enforcement measures would create stronger gross domestic product (GDP) and wage gains, reduce the federal deficit, and stimulate entrepreneurship and job creation.[1]
- ***State of Immigration: How the United States Stacks Up in the Global Talent Competition*** (2015) illustrates how the United States' complex and patchwork immigration system is among the least favorable to growth compared with those of 10 other advanced economies. Due to various laws and regulations that impose unrealistic numerical quotas and extensive rules on hiring, the U.S. system is less attractive to foreign entrepreneurs, fails to meet employer demand for both high- and lesser-skilled workers, and falls short in retaining talented international students educated here. As a result, the United States lags behind in the global competition for talent.[2]

Immigration and the Economy

Immigrants make great contributions to the U.S. economy. Numerous analyses have shown that the immigrant workforce boosts GDP; increases employment, wages and income; reduces government deficits; supports the housing market; and promotes entrepreneurship and innovation that keep our economy dynamic. Any discussion about reform should begin with the understanding that immigrants are a catalyst for economic growth.

Immigration and GDP

Immigration is well understood to have strong beneficial effects on the U.S. economy. Countless studies examining immigration from a variety of angles and using different methodologies have settled on this conclusion.[3]

- On the supply side, immigrants boost growth primarily through two effects: increasing labor input and increasing the productivity of capital. With respect to the first effect, immigrants allow businesses to expand by reducing shortages of qualified labor and spurring additional hiring in other parts of the economy through increases in aggregate demand. Regarding the second effect, immigrants tend to be entrepreneurial, leading to new business start-ups, new inventions and fresh innovations that increase capital productivity.
- New immigrants are consumers who increase the overall demand for goods and services across the economy. This consumption boost not only adds directly to economic growth, but it also induces additional economic activity. For example, increases in consumption raise business revenues and promote business expansion — which, in turn, encourage business investment and job creation. Higher levels of consumption also increase government revenues, allowing state and local governments to hire more teachers and

public safety workers, for example, and invest in infrastructure improvements and other public projects.

Immigration and Employment

Immigration increases total employment in the U.S. economy. By filling critical skills gaps in the workforce and reducing hiring shortages, immigrants allow companies to produce more goods and services. As a result, businesses expand, which increases their demand for new labor, creating new job opportunities. Those jobs, which otherwise would not have existed, are often filled by native-born Americans. Despite common misconceptions, several oft-cited studies conclude that immigrants complement, rather than compete with, the skills of the native-born workforce.[4]

Immigration also has a positive effect on income and wages because of immigrants' effect on productivity. For example, one study finds that native-born workers earn 4 percent higher real wages due to immigration.[5] Another concludes that an increase of 1 percent in immigration-based employment is associated with a $5,100 rise in per-worker annual income over the long run.[6]

Although a small minority of research points to a slight negative effect from immigration on wages in the short term for lesser-skilled workers, those analyses generally do not account for the imperfect substitutability of skill levels and abilities between immigrants and native-born workers.[7] For example, while native-born workers excel at occupations that require strong English communication skills, immigrants are generally well suited for jobs that require the flexibility and willingness to migrate based on where the work is, which is the case for seasonal work in the agriculture and hospitality sectors. For these reasons, immigrants and native-born Americans generally complement each other rather than compete for the same jobs. Studies that account for this reality overwhelmingly conclude that immigrants have a net positive effect on wages, especially in the long run.[8]

Immigration and the Deficit

By spurring economic growth, immigrants help keep federal, state and local budgets sustainable. Contrary to the views of some anti-immigration advocates, there is scant evidence that immigrants, including undocumented immigrants, are burdens to state and local budgets or contribute to national deficits. In fact, because new immigrants are often ineligible for many public services — and less likely to take advantage of these services when they become eligible — evidence suggests that their effect on the budget is roughly neutral.[9]

Moreover, when the positive impacts of immigrants on economic growth are taken into account, immigrants actually have a net positive effect on reducing government deficits.[10] This reality stems from the fact that immigrants are, on average, younger than the overall U.S. population and more likely to participate in the labor force — which helps address demographic concerns related to population aging. In short, immigrants provide positive contributions to the economy, and their efforts fund entitlement spending and other government programs that primarily benefit native-born citizens.

Immigration and the Housing Market

Immigrants also provide a noticeable boost to the housing market, which is itself a key driver of growth in the U.S. economy. Immigrants account for one-third of the growth in housing demand in the United States, and trends suggest that future demand for housing will be driven increasingly by immigrants.[11] Considering the slow recovery in demand for housing since the Great Recession, immigrant demand has helped keep the sector buoyant. On the supply side, immigrant labor is essential to the construction workforce, filling jobs where construction firms have perennial difficulty finding workers.[12]

Trends over time support what construction firms have long known: Immigrants help the housing industry respond more flexibly to changes in market demand. For example, immigrants were absorbed into the housing workforce more quickly during the housing boom in the 2000s but were also the first to lose jobs after the housing bubble burst.[13] This finding suggests that immigrant laborers are brought into the construction industry during times of need but generally do not displace native-born construction workers.

Immigration and Entrepreneurship

American history shows that immigrants have long contributed to the overall innovation and dynamism of the U.S. economy, and that trend continues today. Entrepreneurial immigrants help generate growth and employment gains in the U.S. economy by starting new businesses in existing sectors and by inventing technologies, methods and research that help spawn new industries and increase labor productivity. Multiple analyses illustrate the innovation and entrepreneurial spirit that immigrants continue to bring to the U.S. economy. For example:

- Immigrants are almost twice as likely to start a new business as native-born workers, and they are responsible for more than 25 percent of new businesses in seven of the eight fastest-growing sectors — despite representing less than 13 percent of the U.S. population.[14]
- Immigrants earn patents at double the rate of native-born Americans; for every 1 percentage point increase in the foreign share of U.S. college graduates, U.S. per-capita patents go up by more than 9 percent.[15]
- As high-skilled H-1B immigrant admissions increase, so does the rate of American inventions.[16]
- The presence of high-skilled immigrants in urban areas drives advances in productivity that contribute to wage gains for the population living nearby.[17]

Immigration is an inherently entrepreneurial act, so the fact that immigrants display a high degree of entrepreneurship is not surprising. By inventing technologies and starting new businesses, immigrants create jobs and increase incomes for all Americans.

The Case for Reform

Despite strong evidence that immigrants benefit the economy in myriad ways, current immigration laws prevent the United States from fully harnessing these benefits. Legal experts generally agree that the complex network of overlapping laws, visa categories and regulations is inefficient. This confusing array of legal and regulatory requirements for both employers and potential immigrants makes helping U.S. businesses and the larger economy unnecessarily difficult for in-demand foreign workers. All too often, the result of this dysfunction is that potential immigrants pursue careers elsewhere or return to their home countries — a fact that constitutes a lost opportunity for the U.S. economy.

High-Skilled Immigration Reform

Countless examples of the system's inefficiencies abound. Among the most unfortunate examples is the current quota of 85,000 H-1B visas awarded to high-skilled immigrants each year, which is far below the available supply and employer demand.

- With respect to supply, the United States is home to most of the world's best universities and attracts top-tier international students who come for a world-class education. These students are often interested in staying in the country after they graduate and applying their newfound knowledge at American companies and organizations. Unfortunately, the current H-1B system forces most foreign students to return home upon graduation, taking their skills and U.S. training with them. In 2016, 236,000 applications were filed for just 85,000 slots. Because of the low limit on available visas, U.S. Citizenship and Immigration Services was forced to close down the application period just one week after it opened.[18]
- Regarding H-1B demand, current law also harms American employers. After paying a fee and complying with other requirements, firms that attempt to sponsor a high-skilled worker for an H-1B visa usually find their applications rejected because no visas are available — meaning that the position typically remains unfilled.[19] The shortage of H-1B visas is particularly problematic given a widely cited skills gap.[20] In a Business Roundtable/Change the Equation survey, 98 percent of responding member companies reported that finding qualified candidates to fill open positions is a problem.[21] H-1B visas are designed to supplement native-born workers for certain highly specialized positions as a temporary measure to plug gaps in the American workforce, but the program cannot accomplish this goal under the current highly constrained quota system.

Green Card Reform

The inefficiencies extend to the United States' green card (permanent residence card) program. The United States allows immigrant workers and their families to apply for permanent residency. Doing so has the potential to expand their employment opportunities, which would in turn boost productivity and grow the economy. However, the system in practice does not live up to its theoretical promise.

Currently, millions of would-be green card recipients are stuck in a severe application backlog.[22] Those waiting remain in a status limbo during which they may be ineligible to renew their temporary employment visa, and they may not receive permanent residence status for years. Further, because of nationality-based quotas established decades ago, some immigrants are arbitrarily forced to wait much longer than others.[23] The inefficiency and lack of transparency surrounding the U.S. system of issuing green cards prevents immigrants who have contributed to the economy for years from reaching their full economic potential.

Lesser-Skilled Agricultural Immigration Reform

U.S. agricultural employers frequently struggle to find the workers they need when they need them. These employers face perennial labor shortages because local workers are often unable or unwilling to take on the long hours of travel and manual labor that farm work often requires. Although the current H-2A visa program does not impose a quota like that of the H-1B program, employers nevertheless have considerable difficulty dealing with the extensive requirements and costs of hiring H-2A workers. These requirements and costs include visa, consular and transportation costs, as well as filling out extensive paperwork — a particularly cumbersome process to face given that agricultural employers typically need to hire with short notice and often for short periods of time.[24] A streamlined and workable H-2A visa program that makes complying with the law easier for employers would provide substantial benefits to the agricultural sector.

Lesser-Skilled Nonagricultural Immigration Reform

U.S. businesses in certain sectors also face difficulty finding qualified lesser-skilled workers to fill year-round, nonagricultural positions (e.g., elder-care workers, cleaners and servers). Under current law, the only way for nonagricultural employers to hire lesser-skilled foreign-born workers is through the H-2B visa program, which is intended for short-term, seasonal work lasting six months or less.

Evidence suggests that employers struggle to find enough qualified native-born workers to fill longer-term, lower-skilled positions. According to the U.S. Bureau of Labor Statistics, there were a record 6.2 million job openings as of June 2017. At the same time, jobless claims are at all-time lows, and the mid-4 percent unemployment rate is consistent with an economy that is at or near full employment.[25] Looking ahead, the U.S. economy will need 3 million additional workers to fill lesser-skilled positions over the next decade, but the number of U.S. workers entering the labor force over the same period is expected to be just 1.7 million — for all skill levels.[26]

The numbers paint a clear picture: The United States needs lesser-skilled workers but lacks sufficient legal channels to hire them. Assuming employers can demonstrate that a qualified local worker is unavailable, providing a way to hire temporary foreign workers on a year-round basis would fill this unmet need and boost economic growth.

Immigration Enforcement Reform

The lack of viable legal channels for hiring lesser-skilled workers is a major driver of unauthorized immigration to the United States. In 2014, the country was estimated to have roughly 11.1 million undocumented residents.[27] Because foreign workers seeking economic opportunities have few legal ways of doing so, some resort to illegal means — which raises legitimate concerns that the United States is not doing enough to secure the border and enforce existing law to ensure fairness to native-born and legal immigrant workers.

Potential Economic Impact of Immigration Reform

A Balanced Reform approach is the best way to upgrade America's immigration system and bring it fully into the 21st century. Such an approach combines the country's urgent need for greater border security and enforcement with its equally critical need to clear the green card backlog and increase the number of legal channels for employment of high-skilled and lesser-skilled workers.

This Business Roundtable analysis is the latest in a long line of studies modeling the economic impact of various approaches to immigration reform. One of the most notable in recent years was conducted by the Congressional Budget Office (CBO) as part of its analysis of the Border Security, Economic Opportunity, and Immigration Modernization Act of 2013. CBO estimated that the immigration reform legislation would increase GDP by 5.4 percent over 20 years.[28] The Bipartisan Policy Center (BPC) conducted a similar analysis of the same bill and estimated that the economy would grow by 4.8 percent over 20 years relative to a "no-action" baseline.[29]

On the other hand, the American Action Forum analyzed the effect of an agenda focused on deporting millions of undocumented immigrants and found that it would decrease GDP by 5.7 percent over 20 years.[30] Another recent study corroborates this conclusion, finding that unauthorized workers contribute 3 percent of annual private-sector GDP and estimating that an Enforcement Only approach would subtract $5 trillion from the U.S. economy over 10 years.[31] The BPC's 2013 analysis also considered the economic consequences of deporting unauthorized immigrants and eliminating future unauthorized immigration, and it found that such a policy would reduce economic growth by 5.7 percent over 20 years.[32]

II. Modeled Scenarios

Immigration generates positive ripple effects throughout the economy, improving the picture by a wide variety of measures. To evaluate how reform of the immigration system might affect these dynamic outcomes, Business Roundtable employed an integrated macroeconomic model developed by Regional Economic Models, Inc. (REMI). The REMI model is well respected for providing quality, in-depth quantitative analysis of the economic impacts of public policy choices.

The REMI model was used to evaluate two immigration reform scenarios, as shown in Figure 1. The first scenario ("Balanced Reform") consists of six modules designed to improve specific aspects of current U.S. immigration policy. These reform modules draw from several previously proposed pieces of federal legislation, including the Border Security, Economic Opportunity, and Immigration Modernization Act passed by the U.S. Senate in 2013, as well as more recent legislative proposals. The second scenario ("Enforcement Only") is intended to represent an approach that focuses on increasing border security (thereby reducing future illegal entry) and ramping up internal enforcement efforts, which would result in increased deportation and voluntary departure of unauthorized immigrants.

Figure 1: Components of Balanced Reform and Enforcement Only Scenarios

Scenario 1: BALANCED REFORM	Scenario 2: ENFORCEMENT ONLY
Improved Border Security and Enforcement	Aggressive Border Security and Enforcement
Temporary High-Skilled Workers (H-1B Reform)	Deportation and Voluntary Departure
Green Card Reform	
Temporary Agricultural Workers (H-2A Reform)	
Temporary Nonagricultural Lesser-Skilled Workers (H-2C Creation)	
Pathway to Legal Status	

Scenario 1: Balanced Reform

The Balanced Reform scenario consists of the following features (for a detailed description of each module, see the Appendix: Methodology and Assumptions):

- **Improved Border Security and Enforcement:** To strengthen border security and incentivize legal immigration, the Balanced Reform scenario includes an enforcement module intended to replicate the security measures set forth in Senate-approved legislation, including a plan to secure the southern border and implement a fencing strategy, impose a mandatory employment verification system for all employers (e.g., E-Verify), and implement an electronic entry/exit system at air and sea ports. Collectively, these measures are assumed to reduce illegal immigration by 25 percent.[33]

- **Temporary High-Skilled Workers (H-1B Reform):** To address the shortage of high-skilled immigrant workers, the Balanced Reform scenario raises the annual limit on H-1B visas and makes foreign-born, advanced-degree graduates of American universities exempt from this cap, among other reforms.

- **Green Card Reform:** To streamline the green card issuance process and address the millions of people who are currently caught in the application backlog, the Balanced Reform scenario increases the number of family- and employment-based green cards issued in the first several years after implementation. It also exempts the spouses and children of employment-based green card recipients from the annual cap, thereby modestly expanding the number of employment-based green cards awarded each year.

- **Temporary Agricultural Workers (H-2A Reform):** To encourage agricultural employers to hire farm workers through legal channels, the Balanced Reform scenario includes a set of incentives and enforcement measures that would result in a net increase in temporary visas for agricultural work.

- **Temporary Nonagricultural Lesser-Skilled Workers (H-2C Creation):** To address the unmet demand for a legal immigration channel for lesser-skilled, year-round, nonagricultural labor, the Balanced Reform scenario creates a new H-2C visa category that would admit up to 65,000 foreign guest workers annually to work in the United States for up to three years.

- **Pathway to Legal Status:** To bring the estimated 11.1 million undocumented residents out of the economic shadows, the Balanced Reform scenario allows for the creation of a pathway to legal status for eligible undocumented residents who have no criminal record, satisfy federal tax liabilities and agree to pay a fine, among other requirements.[34]

Scenario 2: Enforcement Only

The Enforcement Only scenario consists of two elements:

- **Aggressive Border Security and Enforcement:** Enforcement efforts that prevent future illegal immigration would be strengthened under the Enforcement Only scenario. Specifically, the scenario assumes that the enforcement measures discussed in the Balanced Reform approach would result in a 75 percent reduction in the future flow of unauthorized immigration.

- **Deportation and Voluntary Departure:** Under the Enforcement Only scenario, 8 million undocumented immigrants currently living in the United States (or roughly three-fourths of the estimated total undocumented population) would leave the country over an eight-year period. These departures would be due to aggressive enforcement without the provision of a legal status for the 11.1 million undocumented U.S. residents.

III. Results

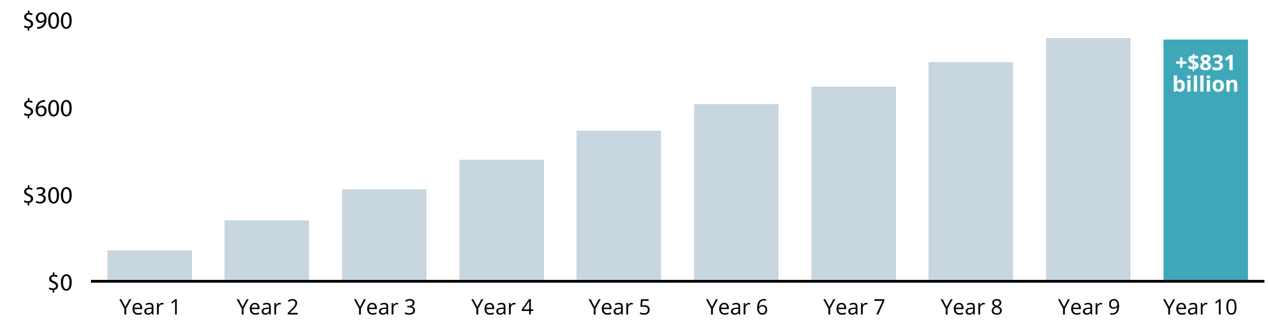
As shown in Figures 2 and 3, the modeling results reveal significant differences between an immigration reform approach that addresses the joint needs of improving enforcement and expanding legal immigration channels (Balanced Reform) and an approach that focuses solely on enforcement and deportation (Enforcement Only):[35]

- Under the Balanced Reform scenario, the REMI model projects that GDP would expand by 3.9 percent, create 8.4 million new jobs and raise the inflation-adjusted incomes of all Americans by 2.3 percent over a 10-year period. In current dollars, this increase would amount to an extra $254 in income for the median household in the first year alone.[36]

- The REMI model projects that the Enforcement Only scenario would reduce U.S. growth by 3.0 percent relative to baseline, eliminate 6.9 million jobs and lower inflation-adjusted incomes by 1.3 percent over 10 years. In current dollars, this decrease would cause the median household to lose $153 in the first year alone.

Figure 2: Projected Increase in GDP from 2018 to 2027 under Balanced Reform Scenario*

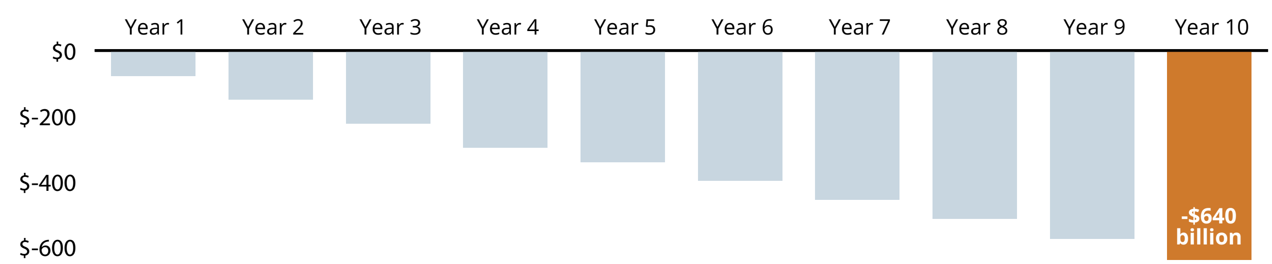
Billions USD Gained



*Relative to baseline case.

Figure 3: Projected Decline in GDP from 2018 to 2027 under Enforcement Only Scenario*

Billions USD Lost

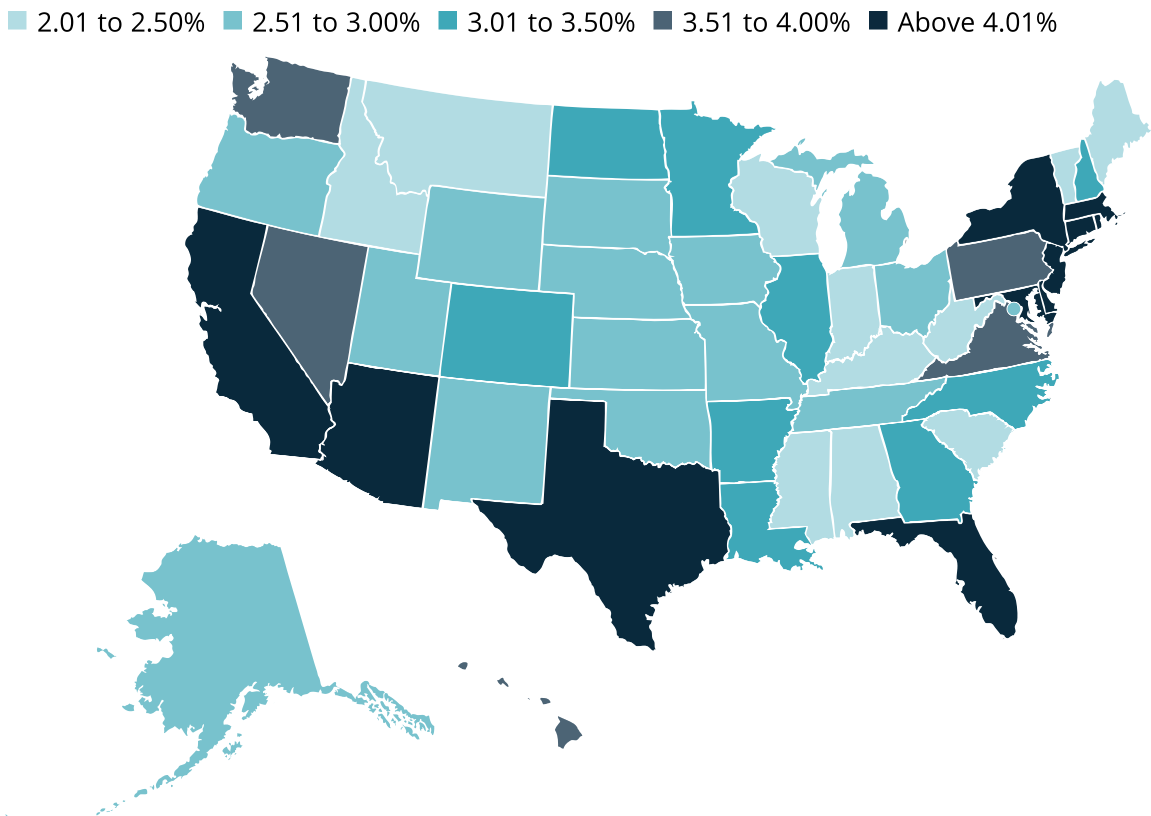


*Relative to baseline case.

Scenario 1: Balanced Reform

Under the Balanced Reform scenario, the U.S. economy is estimated to grow by an additional 3.9 percent over the next 10 years relative to the status quo, equivalent to an extra $831 billion in GDP for the U.S. economy (see Figure 2). These effects would begin accruing immediately; in the first year of implementation, GDP would increase by 0.6 percent ($105 billion), and after five years, GDP would rise 2.7 percent ($518 billion) above baseline. These benefits stem from the economic activity generated by new legal immigrants. By filling needed skill gaps in the labor force, immigrants boost U.S. economic production. Businesses that no longer suffer from an acute shortage of certain skills can expand, thereby hiring additional labor or increasing their level of investment. New legal immigrants also generate growth in the economy on the demand side by boosting aggregate levels of consumer spending. While states with relatively high populations of immigrants stand to benefit the most, all U.S. states would experience faster growth under a Balanced Reform approach (see Figure 4).

Figure 4: 10-Year GDP Gains under Balanced Reform Scenario*



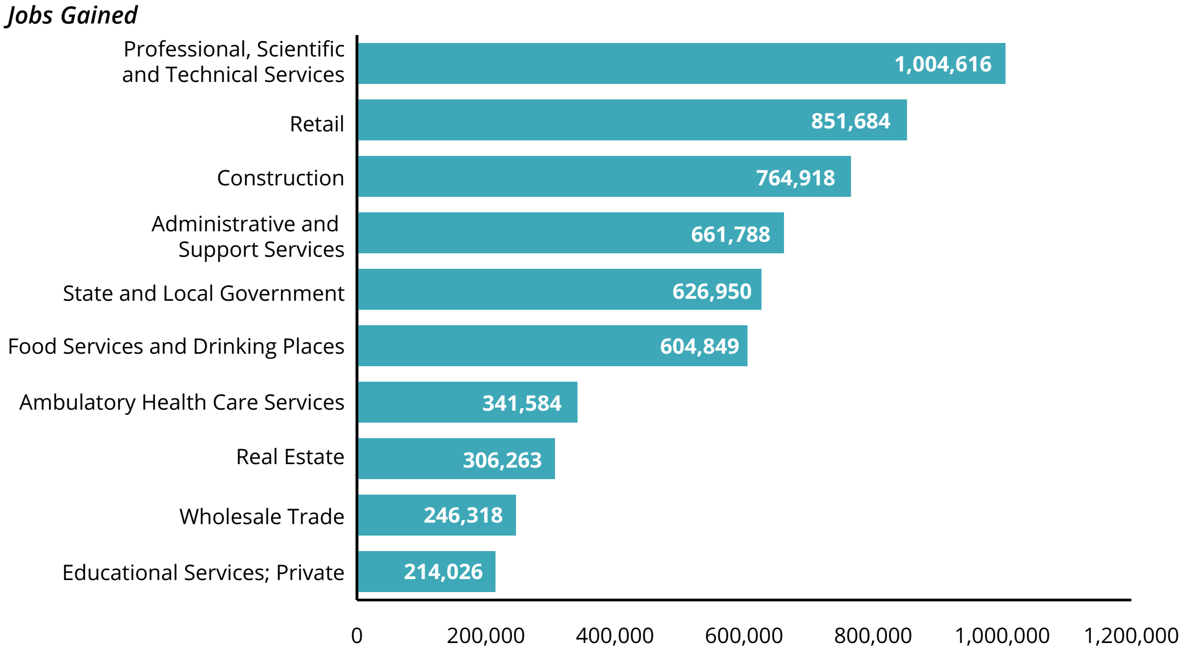
*Relative to baseline case. Excludes GDP gains associated with farm and agricultural support employment.

The improvements modeled under the Balanced Reform scenario would also boost U.S. employment. Specifically, the economy would add 8.4 million new jobs over 10 years, including 1.2 million in the first year and 5.6 million over the first five years. These gains would account for a substantial portion of the country's total job creation during this period.

New legal immigrants create jobs through multiple channels. First, they help businesses address problems of labor shortages and skills gaps in the local economy, thereby enabling businesses to expand their operations. This expansion, in turn, helps firms create new additional jobs that would not have existed without immigration. Second, they power job growth by sparking an increase in consumer spending, which helps businesses increase revenues and expand even more. Immigrants, especially high-skilled immigrants, also create new employment opportunities for native-born Americans through their innovation and entrepreneurship by starting new businesses, generating groundbreaking research and inventing technologies.

The modeling results demonstrate that job growth is not a zero-sum game in which each job filled by an immigrant means one less job for an American worker. Rather, the presence of immigrants in the economy provides positive direct, indirect and induced economic effects that boost the overall demand for labor. Businesses that face fewer labor shortages due to the increased presence of immigrants can expand their operations to meet the increased demand for their products and services. This expansion leads to new jobs for all Americans.

Figure 5: Industries with Largest 10-Year Employment Gains under Balanced Reform Scenario*

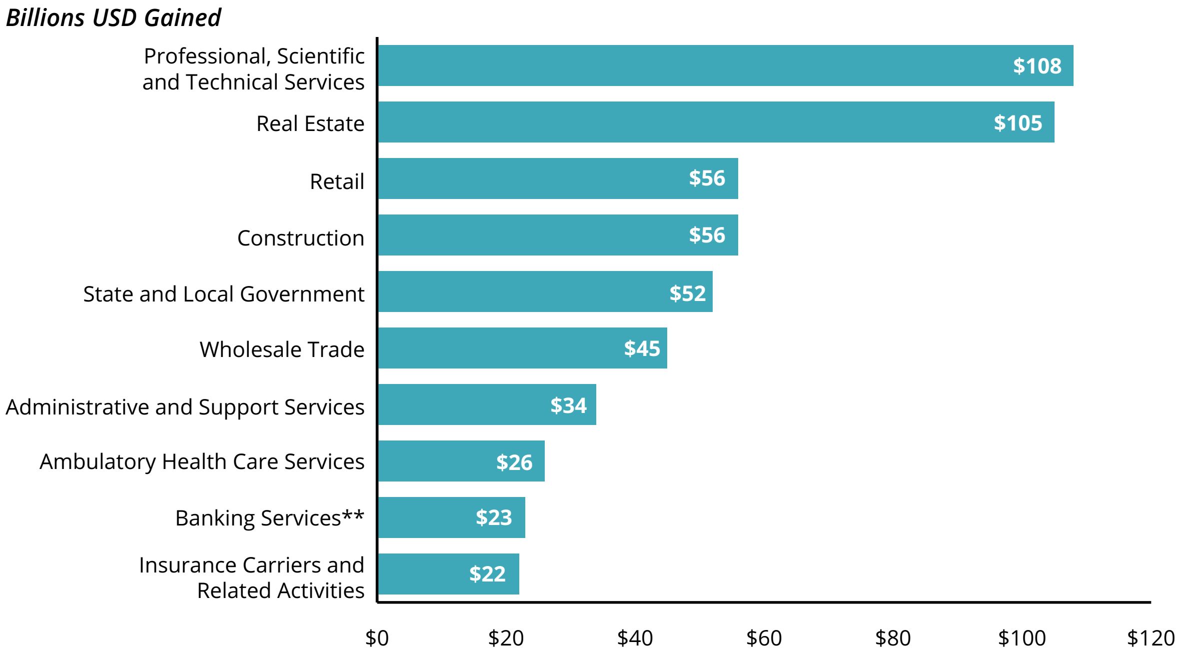


*Relative to baseline case.

Of note, these job gains would apply to nearly every industry. While some industries would experience stronger employment because new legal immigrants are likely to flow directly into those sectors, most would expand because legal immigrants increase labor input, drive productivity gains and raise overall consumer demand in the economy. Thus, the strongest absolute job gains tend to occur among the U.S. economy's largest industries, including state and local government, ambulatory health care services, and private educational services — despite being among the least likely industries to hire immigrant workers (see Figure 5).[37] Overall, the reforms under the Balanced Reform scenario would create millions of new jobs, and most of those jobs would flow to native-born American workers.

These job gains would go hand in hand with substantially increased revenues and higher output for nearly all sectors of the U.S. economy. As businesses face less difficulty finding the right qualifications and have greater access to the top talent in highly specialized fields, they are better able to innovate and expand. Not surprisingly, the industries that would experience the largest employment gains overlap with the industries that would provide the biggest increase to GDP, including professional services and real estate (see Figure 6).

Figure 6: Industries with Largest 10-Year Gains in Contribution to GDP under Balanced Reform Scenario*



*Relative to baseline case.

**Includes the following: monetary authorities — central bank; credit intermediation and related activities; and funds, trusts and other financial vehicles.

Table 1: States with Largest 10-Year Employment Gains under Balanced Reform Scenario*

STATE	PERCENTAGE INCREASE IN EMPLOYMENT	INCREASE IN NUMBER OF JOBS
New Jersey	6.6%	377,000
Arizona	5.5%	214,000
New York	5.5%	707,000
Massachusetts	5.3%	264,000
Texas	5.3%	921,000
Connecticut	5.0%	120,000
Delaware	4.9%	29,000
California	4.9%	1,163,000
Maryland	4.7%	184,000
Rhode Island	4.7%	31,000

*Relative to baseline case. Excludes employment gains in farm and agricultural support industries.

As with GDP growth, states with relatively large immigrant populations would tend to experience the greatest percentage increase in jobs, but all U.S. states would experience job growth (see Table 1). In addition to boosting GDP and driving job creation, the Balanced Reform scenario would produce other economic benefits. For example, real disposable personal income (i.e., the money left over to spend after accounting for taxes and adjusting for inflation) would increase by 2.3 percent over a 10-year period. In current dollar terms, the growth in personal income would equate to a windfall of $254 in the first year for the median U.S. household. These income gains would be driven in large part by productivity gains, which would result from the increase in high-skilled immigrants and their ability to generate new research and technologies. In turn, these innovations would benefit the entire U.S. population by spawning new industries and jobs.

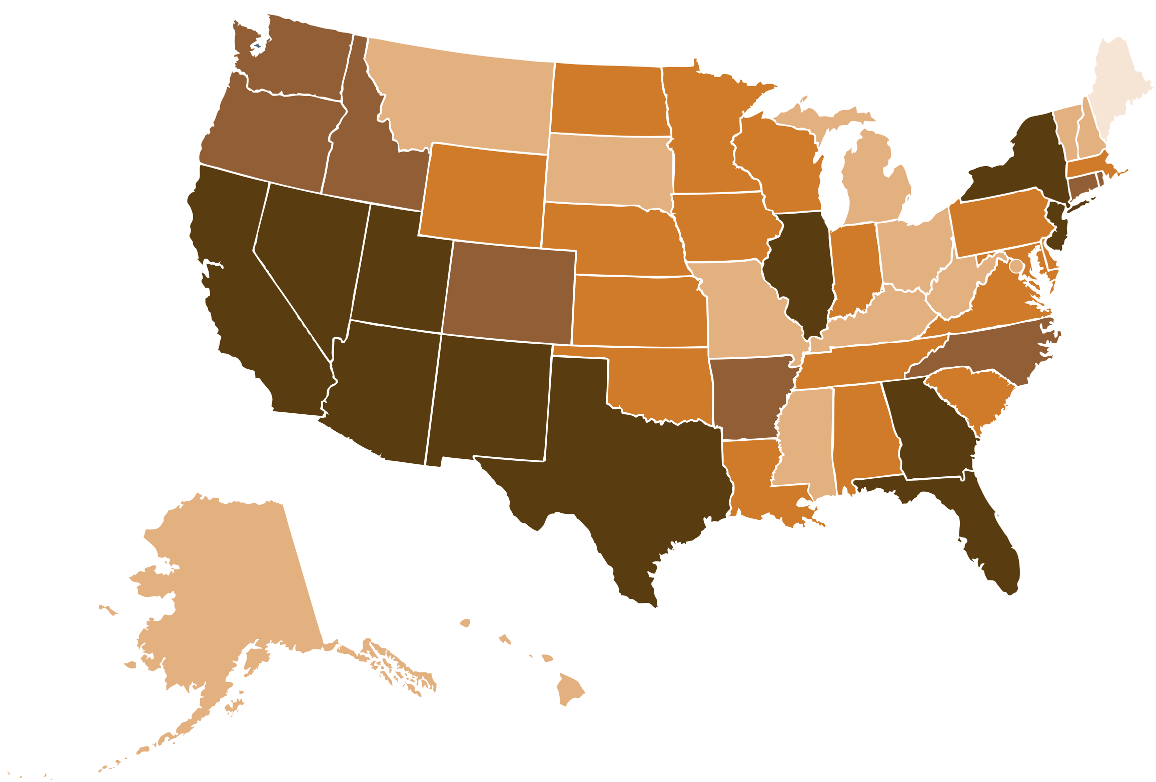
Scenario 2: Enforcement Only

The REMI analysis demonstrates that under an Enforcement Only approach, U.S. economic growth would be reduced by 3.0 percent over a 10-year period, which would amount to a loss of $640 billion in constant dollar terms. The negative effects would be immediate; in the first year of implementation, GDP would be reduced by 0.4 percent ($78 billion), and after five years GDP would be reduced by 1.8 percent ($342 billion) relative to baseline (see Figure 3). The cut to U.S. growth would extend to every U.S. state and the District of Columbia, but states with larger populations of unauthorized residents stand to lose the most (see Figure 7).

Figure 7: 10-Year GDP Losses under Enforcement Only Scenario*

-1.01 to -1.50% -1.51 to -2.00% -2.01 to -2.50% -2.51 to -3.00% Below -3.01%

*Relative to baseline case.



Likewise, employment losses under an Enforcement Only approach would be substantial. Over 10 years, the U.S. economy would shed 6.9 million jobs, including 940,000 in the first year after implementation and 3.9 million after five years. The disappearance of these jobs reflects the substantial decline in economic activity that would result from the increased labor shortages that businesses would face. With increased difficulty finding qualified workers when they are needed, businesses would be less able to carry out the work that needs to be done, thereby forcing a decline in revenues and business investment. Thousands of immigrant-owned small businesses would close. Job losses would also stem from a reduced consumer base, which means businesses would sell fewer goods and the demand for housing would fall (as would home values). All U.S. states would lose under this scenario, but states with the greatest numbers of undocumented residents would suffer the most (see Table 2).

Table 2: States with Largest 10-Year Employment Losses*

STATE	PERCENTAGE DECREASE IN EMPLOYMENT	DECREASE IN NUMBER OF JOBS
Nevada	-6.1%	-110,000
California	-5.6%	-1,379,000
Texas	-4.9%	-875,000
Arizona	-4.4%	-172,000
New Jersey	-4.4%	-251,000
New Mexico	-3.9%	-46,000
Utah	-3.7%	-74,000
New York	-3.6%	-458,000
Illinois	-3.6%	-290,000
Georgia	-3.5%	-217,000

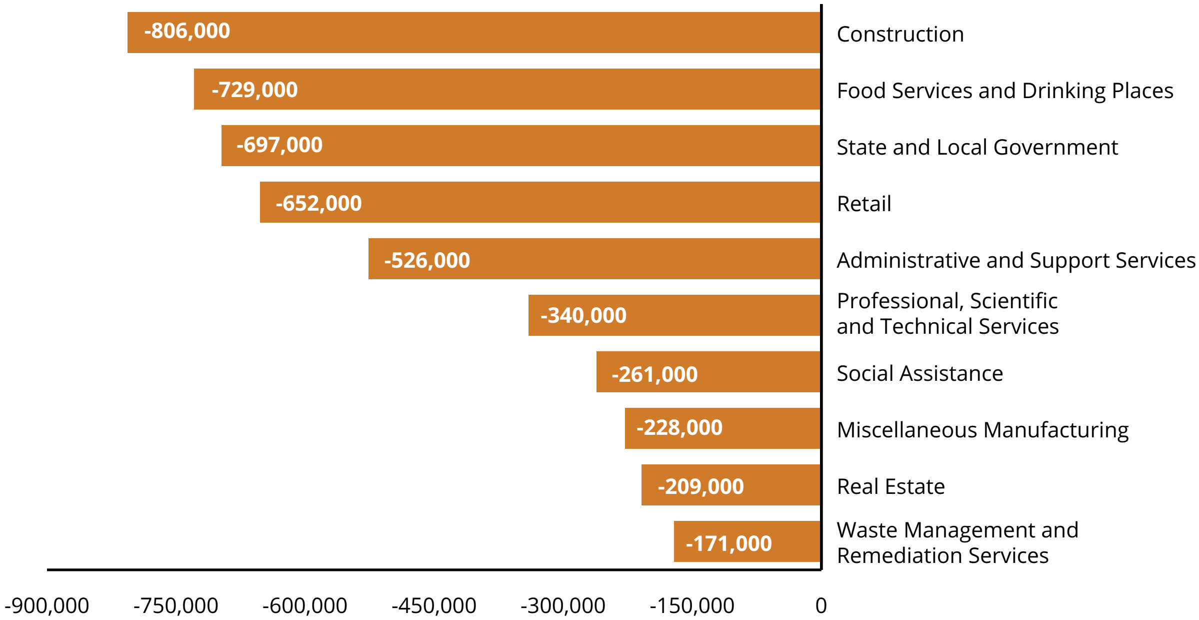
*Relative to baseline case.

As shown in Figure 8, under the Enforcement Only scenario, nearly every U.S. industry would see marked reductions in employment. This widespread reduction may seem counterintuitive given that undocumented immigrants are heavily concentrated in a few industries (e.g., construction, agriculture and hospitality) and virtually absent from others. However, the loss in economic activity once generated by these individuals would produce negative indirect and induced effects throughout the economy, resulting in widespread job losses. Thus, even state and local government, which employs only native-born Americans and legal immigrants, still ranks third among industries most negatively affected by an Enforcement Only approach, as a sudden reduction in the local population would lead to job losses for teachers, firefighters, policemen and other positions that would be no longer needed. Likewise, a sudden fall in aggregate consumption in the local economy would lead to lower tax revenues and tighter government budgets.

As Figure 9 shows, these job losses would translate directly into reduced revenues for the firms in those industries, as a relatively sudden decrease in the supply of labor would lead to losses in firms' production capacity. Firms that made long-term investment plans years ago under the assumption of status quo labor access would face an increased risk of delinquency and bankruptcy on debt-financed assets. These losses would also diminish firms' ability to innovate and expand due to dramatically lower consumer demand for their products and services. Industries tied to housing, which would suffer from both a loss in construction labor and reduced demand for homes, would be among the most affected. Thus, real estate (-$68 billion) and construction (-$59 billion) would see the greatest declines in contribution to GDP.

Figure 8: Industries with Largest 10-Year Employment Losses under Enforcement Only Scenario*

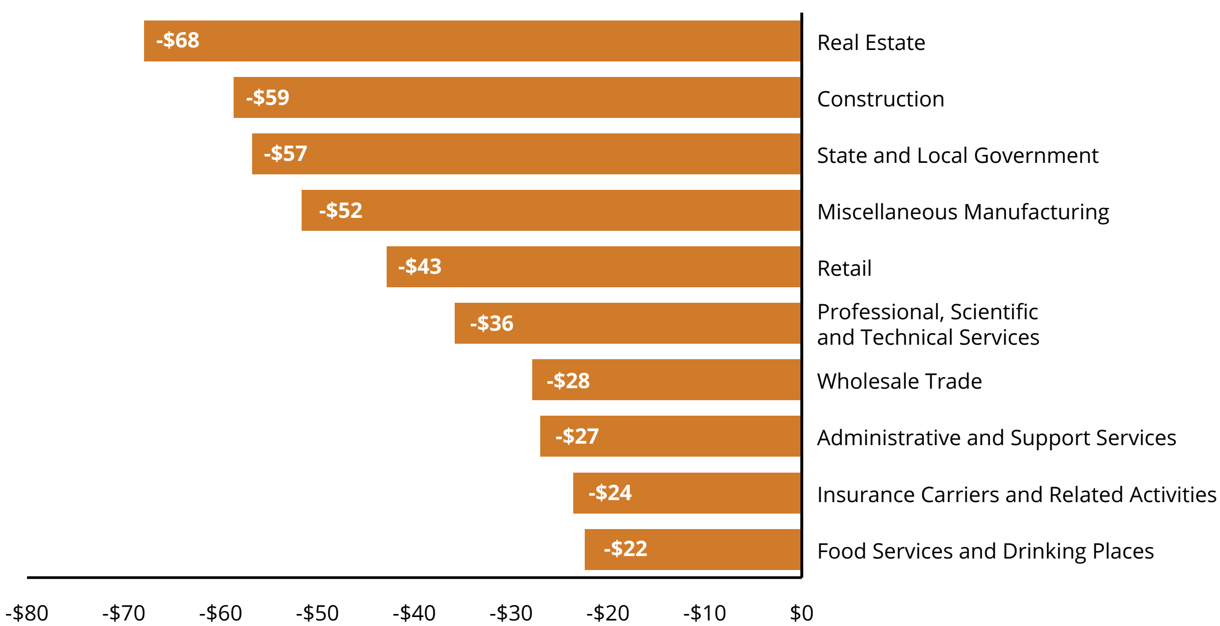
Jobs Lost



*Relative to baseline case.

Figure 9: Industries with Largest 10-Year Losses in GDP Contribution under Enforcement Only Scenario*

Billions USD Lost



*Relative to baseline case.

The sharp reduction in economic activity under the Enforcement Only scenario would cause personal income to fall by 2.0 percent over 10 years, with a nominal loss of $153 for the median household in the first year. Likewise, real disposable personal income, which adjusts for inflation and tax payments, would fall by 1.3 percent over 10 years relative to baseline. These income declines would be caused by increased labor shortages and reduced consumer spending that would negatively affect the industries in which Americans work.

Finally, the Enforcement Only scenario would lead to a 3.4 percent decline in the overall U.S. population over 10 years relative to baseline. Since undocumented immigrants tend to be younger than the overall population, this policy would accelerate demographic aging, reduce the number of hours worked, increase the demands on public services (as fewer working-age adults would be available to pay for these services) and reduce innovation. Immigration reform policies that focus only on deportation and border security measures, without addressing other needs, would produce an economy that is less dynamic and less competitive in the global marketplace.

IV. Conclusion

Countless studies have illustrated the economic benefits that immigration brings to America. Immigrants have complemented native-born workers in driving economic growth through hard work, creativity and entrepreneurship, and they have played an important role in maintaining America's global competitiveness.

The current U.S. immigration system is broken, and there is broad recognition of the need for change. Whether immigration can continue to deliver great benefits to America and its citizens depends on the path policymakers choose to fix the shortcomings of the current system. While strong border security is an essential component of any reform proposal, this analysis demonstrates the importance of simultaneously addressing the economy's need for additional legal immigration channels.

Under an Enforcement Only approach, economic growth would suffer across all 50 states, millions of jobs would disappear and the average American household would be worse off. A Balanced Reform approach that recognizes the dual need for security and economic growth would jump-start the U.S. economy by creating millions of quality jobs for all Americans and improving living standards. To achieve those goals, we must strengthen border security and employment verification while expanding the legal channels for hard-working immigrants who strive to contribute to our economy in accordance with the law. If policymakers embrace this crucial piece of the immigration reform puzzle, the United States will embark on a renewed growth trajectory that will enhance our global competitiveness and improve the lives of millions of Americans.

To view results for each scenario by state, go to www.brt.org/XXXX.

Appendix: Methodology and Assumptions

Description of REMI Model

To complete this analysis, Business Roundtable employed a structural economic forecasting and policy analysis model called PI+, developed by Regional Economic Models, Inc. (REMI). The model integrates input-output, computable general equilibrium, as well as econometric and economic geography methodologies. The model is dynamic, incorporating interlinking behavioral responses to compensation, price and other economic factors, and it generates forecasts and simulations annually.

The model consists of thousands of simultaneous equations with a structure that is relatively straightforward. The overall structure of the model can be divided into five major blocks: (1) Output and Demand; (2) Labor and Capital Demand; (3) Population and Labor Supply; (4) Compensation, Prices and Costs; and (5) Market Shares. The blocks and their key interactions are shown in Figures 1 and 2.

Figure 1: REMI Model Linkages

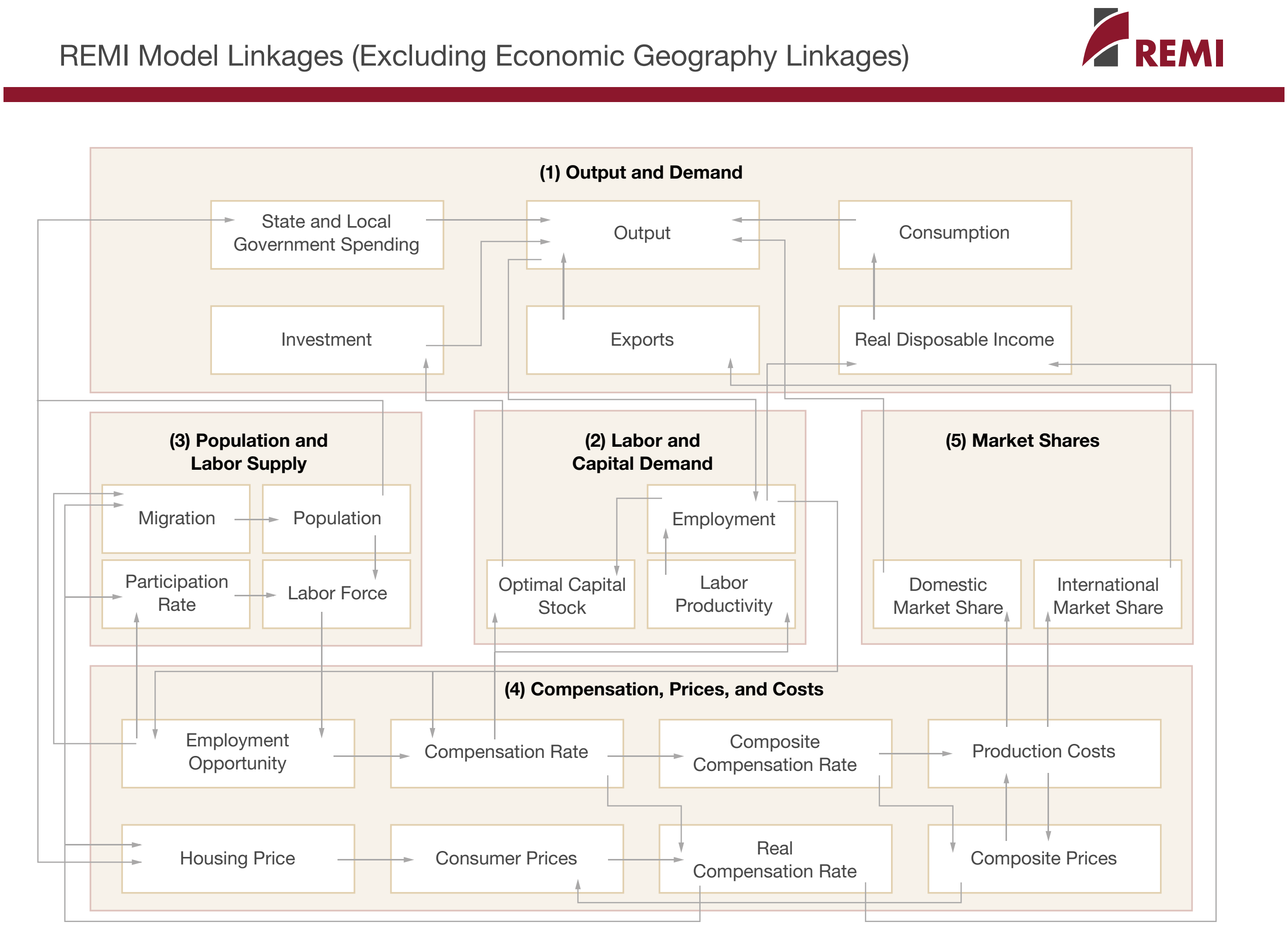
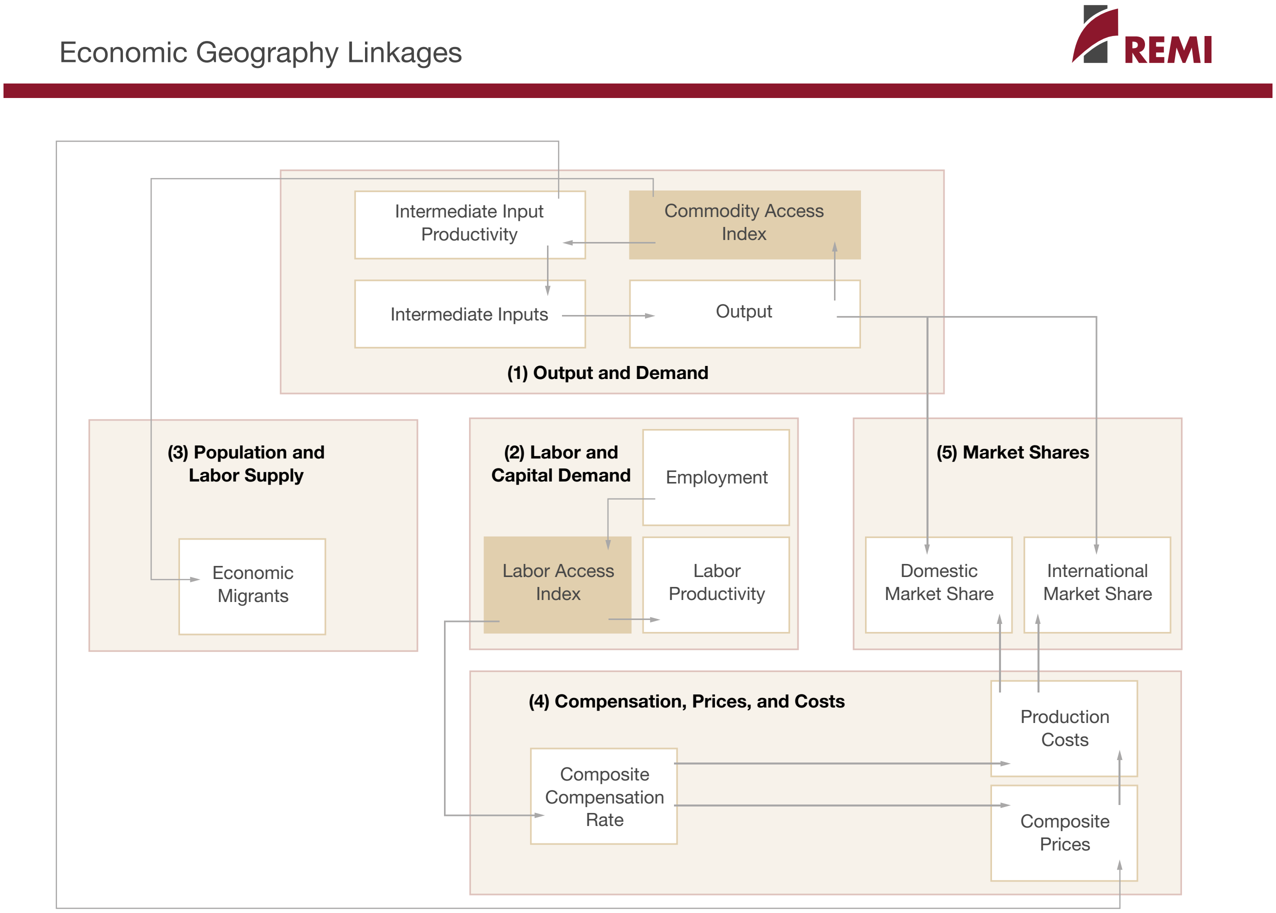


Figure 2: Economic Geography Linkages



The Output and Demand block consists of output, demand, consumption, investment, government spending, exports and imports, as well as feedback from output change due to the change in the productivity of intermediate inputs. The Labor and Capital Demand block includes labor intensity and productivity as well as demand for labor and capital. Labor force participation rate and migration equations are in the Population and Labor Supply block. The Compensation, Prices and Costs block includes composite prices, determinants of production costs, the consumption price deflator, housing prices and the compensation equations. The proportion of local, inter-regional and export markets captured by each region is included in the Market Shares block.

This study examines the effects of immigration on the entire United States, as well as each of the 50 states and the District of Columbia. The modeling analysis is therefore categorized as a multiregional model and accounts for interactions among states, such as trade and commuting flows.

General Modeling and Economic Assumptions

This study analyzes the economic effects of two possible immigration reform scenarios: Balanced Reform and Enforcement Only. The Balanced Reform scenario consists of six modules: one that models the effect of new enforcement measures designed to reduce illegal immigration to the United States and five that simulate reforms to various visa programs and to the process of regularizing undocumented immigrants. The Enforcement Only scenario consists of two modules that simulate the impact on the U.S. economy of removing unauthorized residents from the U.S. population and increasing border security. The economic effects of each scenario are modeled for each year over a 10-year period from 2018 to 2027. The model generates output forecasts for gross domestic product (GDP), total employment and personal income both on the national level and for each of the 50 states and the District of Columbia. It also models the change in output and employment for 70 domestic industries at the national and state levels.

For both scenarios and their respective modules, assumptions are made about the demographic identity of the immigrant groups in question — including their gender, age, race and ethnicity, state of residence, marital status, employment status, and industry of employment — based on the best available data from various sources including the Bureau of Labor Statistics, Pew Research Center, U.S. Citizenship and Immigration Services, Department of Homeland Security, and Center for Migration Studies. Importantly, these sources are used to generate best possible estimates about the industry distribution of new immigrants (under the Balanced Reform scenario) as well as immigrants who are removed from the population (under the Enforcement module in the Balanced Reform scenario and under the Enforcement Only scenario). Those estimates are then mapped onto REMI's PI+ breakdown of 70 industries.

In cases where assumptions are made about the marital status of an immigrant or group of immigrants, an immigrant's spouse is assumed to have the same employment rate as "second earners" of the general U.S. population.

Based on the identity of an immigrant cohort's visa group or legal status, reasonable assumptions are also made about their property income (including dividend income, interest income and rental income) and transfer payments (retirement and disability insurance benefits, medical benefits, income maintenance benefits, unemployment insurance compensation, veteran's benefits, and education and training assistance). Specifically, each visa class or legal status group is assumed to have either no property income or transfer payments or a level of each that is comparable to that of the existing U.S. population.

Modeling Assumptions for Scenario 1: Balanced Reform

The Balanced Reform scenario is modeled on a combined set of immigration proposals that have been introduced in Congress over the last several years. Apart from green card reform, which is modeled based on a combination of two proposed bills, each individual module is derived directly from previous legislation and is not combined with other proposals or otherwise modified, except in rare cases where modeling a portion of the legislation is not feasible or would not significantly affect economic growth. However, the Balanced Reform scenario as a whole does not represent any one specific piece of previously introduced legislation. Rather, it reflects the kind of immigration reform legislation that Business Roundtable has determined is beneficial to the U.S. economy and has the potential to generate support in Congress.

Each module for the Balanced Reform scenario functions both independently and as a piece of a comprehensive scenario. Although each module, and the legislation it represents, has its own effect on the U.S. economy, the aggregated modules also fit together and function as a whole. For example, while some immigrants might migrate from one visa category to another over the course of the study period, the model does not "double-count" them.

Improved Border Security and Enforcement Module

The Improved Border Security and Enforcement Module derives from the measures put forth in the Border Security, Economic Opportunity, and Immigration Modernization Act of 2013 (S.744). That proposal stipulated that the Department of Homeland Security (DHS) must devise a plan for improving the United States' border security and employment verification capabilities. These measures must be implemented before any other immigration legislation can go into effect. Specifically, DHS must (1) substantially deploy a strategy to secure the southern U.S. border; (2) substantially implement a fencing strategy along the southern U.S. border; (3) implement a mandatory employment verification system for all employers; and (4) use an electronic system at air and sea ports that collects machine-readable visa and passport information.[38] In accordance with the legislation, the model assumes that these measures are put in place in conjunction with the other five modules.

The Improved Border Security and Enforcement Module also adopts the assumptions put forth by the Congressional Budget Office (CBO) in its analysis of the economic effects of the S.744 bill. The CBO forecasted that the enforcement provisions of the S.744 bill would result in a 25 percent reduction in the future annual flow of unauthorized residents. The cumulative net decline in the flow of future undocumented immigrants is therefore -0.7 million after five years and -1.6 million after 10 years.[39]

This analysis does not account for the increased costs associated with improving enforcement, nor does it incorporate the associated stimulative effects of increased government spending.

Temporary High-Skilled Workers (H-1B Reform) Module

The H-1B visa program allows U.S. employers to hire foreign workers in specialty occupations that require specialized expertise. The current H-1B program has an annual cap of 65,000 visas each fiscal year, plus an additional 20,000 petitions filed for beneficiaries with a U.S. master's degree or higher that are exempted from this cap. The H-1B reform scenario is modeled on the Immigration Innovation Act of 2015, also known as the I-Squared Act. It raises the current H-1B cap to 155,000 and eliminates the current limit on foreigners with an advanced degree from a U.S. institution.[40] The number of foreigners who earn an advanced U.S. degree who would desire and qualify for an H-1B visa is estimated using data from the National Science Foundation for international students earning advanced science, technology, engineering or mathematics (STEM) degrees from qualifying U.S. institutions and assuming the same growth rate for the next 10 years. Of these foreign-born students, 60 percent are assumed to receive an H-1B visa upon graduating.[41]

The I-Squared Act retains the functioning and duration of the current H-1B visa program. The visa allows beneficiaries to work for the sponsoring employer for three years, after which the visa may be extended once for an additional three years. After six years, an H-1B visa recipient must either leave the country or apply for and receive a green card for legal permanent residency. For each H-1B annual cohort, the model assumes that 2 percent of the remaining H-1Bs will choose to leave the country each year[42] and that 16 percent will leave after the third year.[43] After six years, the entire cohort is removed from the H-1B Module, as all visa recipients either leave the country or are incorporated into the Green Card Module.

H-1B visa holders are permitted to bring a foreign spouse under the H-4 visa, but the spouse may reside in the United States only while the H-1B holder's visa is active. Based on State Department data, the model assumes that 70 percent of the H-1B holders under the 155,000 cap bring a foreign spouse.[44] Given the absence of data on the share of foreign-born STEM graduates married to noncitizens who would bring a spouse on an H-4 visa, the model conservatively assumes that these H-1B recipients do not bring spouses.

Under both current law and the I-Squared Act, eligibility for H-1B visas is subject to stringent legal requirements. These requirements include an employer-employee relationship with the U.S. sponsor and qualification as a specialty occupation related to one's field of study.[45] Employers must also complete a labor market condition application, which is subject to prevailing wage requirements; certain employers must also demonstrate that U.S. workers will not be displaced and give preference to equally or better-qualified U.S. workers.[46] These requirements ensure that most H-1B visas are awarded to noncitizens with highly specialized skills who fill positions that would otherwise go unfilled.[47]

Despite legal requirements for nondisplacement that apply to certain employers, this analysis acknowledges the possibility that H-1B visa holders will provide some level of increased labor force competition for U.S. workers. Specifically, the model assumes that 80 percent of new H-1B visa holders fill jobs that would otherwise go unfilled, which is consistent with CBO's assumptions in its analysis of S. 744.[48] This conservative assumption may mean that the model underestimates the economic benefits of H-1B reform.

Green Card Reform Module

"Green card" is an informal, nonlegal term that refers to a permanent residence card. A green card can be granted to a noncitizen of the United States either after he or she has held a temporary residence visa (e.g., H-1B or H-2A, among others) for a specified number of years or after receiving sponsorship from a family member living in the United States. Green card reform legislation is often intended to clear the existing backlog of employment-based and family-based green card applications.[49]

This Green Card Reform Module is modeled on proposals put forth in both the I-Squared Act and S.744, drawing from the I-Squared Act's reform proposal for employment-based green cards and from S.744's approach to family-based green cards. The scenario does not permanently increase the annual cap on green cards issued; instead, it allows for an increase in the number of employment-based green cards awarded by making immediate family members cap exempt while also temporarily clearing out the backlog of family-based green cards.

The module is based on four assumptions from those two pieces of legislation:

(1) The recapture of unused green cards from previous years will add 200,000 employment-based green cards in the first study year only (2018).

(2) Per the I-Squared Act, the spouses and children of an employment-based green card holder would be excluded from the employment-based green card cap. The current employment-based green card cap of 140,000 per year is unchanged, but exemption of dependents from this cap is assumed to add 75,000 primary employment-based green card holders and an additional 85,000 dependents each year.[50]

(3) Foreigners who hold an advanced STEM degree from an accredited U.S. institution are excluded from the annual employment-based green card cap. As with the H-1B reform scenario, estimates are derived from the National Science Foundation's statistics on advanced STEM degree holders, as well as the assumption that 20 percent of annual STEM graduates would be able to obtain a green card.[51] Due to a lack of data, the Green Card Module also conservatively assumes that none of these STEM graduates would bring foreign spouses, children or other dependents.

(4) The current backlog of family-based green cards will be cleared as stipulated in S.744, along with several modeling assumptions originally suggested by the Bipartisan Policy Center in its 2013 analysis of the economic impact of the S.744 bill.[52] Those assumptions include a clearing of the backlog at a constant rate over the first seven years of the study period, followed by a clearing of the new backlog that would have developed during this period over the subsequent two years.

Two other key assumptions have a significant impact on the Green Card Module. First, the analysis assumes that only one in six employment-based green card recipients is a "net-new" addition to the U.S. economy, which is consistent with DHS data showing that 86 percent of applicants already reside in the United States.[53] Second, the analysis assumes that new employment-based green card recipients and current U.S. workers compete to some extent with one another for jobs, despite the existence of safeguards in the application process designed to avoid this.[54] Specifically, the analysis conservatively assumes that for every 10 foreign workers who receive a green card, five new jobs are created.

Temporary Agricultural Workers (H-2A Reform) Module

The H-2A visa program allows U.S. employers facing a shortage of workers to temporarily hire foreign nationals to perform agricultural work. Although no cap currently exists on the number of H-2A visas granted annually, the visa program is underused by agricultural employers.[55] As a result, a large number of undocumented agricultural workers currently reside in the United States to fill this demand.

This module is modeled on reforms to the H-2A visa program put forth by the S.744 bill. Under S.744, an annual cap of around 110,000 H-2A visas would be introduced, combined with a set of enforcement and incentive measures designed to encourage agricultural employers to sponsor workers legally using this mechanism.[56] As a result, the H-2A module assumes that the cap will be consistently met each year. The H-2A visa is valid for three years and may be renewed once. H-2A visa holders must be paid at least the local minimum wage, are permitted to change employers (provided they continue to work in agriculture), and may not bring any family or dependents.

Temporary Nonagricultural Lesser-Skilled Workers (H-2C Creation) Module

Currently, the only legal channel through which employers can hire lesser-skilled foreign workers on a temporary basis is through the H-2B visa program, which is intended for nonagricultural seasonal work only. The Balanced Reform scenario envisions a new visa program under which employers may hire lesser-skilled workers on a temporary basis for longer than six months. This module is based on the proposal introduced in S.2827, the Willing Workers and Willing Employers Act of 2016.

This proposal would create a new H-2C visa category that would have a cap of 65,000 visas in the first year of implementation, followed by a cap that would fluctuate between 45,000 and 85,000 in subsequent years. For simplicity, the model assumes that 65,000 visas will be granted each year.[57] H-2C visas would expire after three years, and the renewal structure works as follows:

(1) Workers initially admitted in the first five years may renew for up to two additional consecutive three-year periods, for a maximum stay of nine years.

(2) Workers admitted in years six through nine after implementation may renew for one additional three-year period.

(3) Workers admitted after year nine may not renew.

As envisioned, H-2C visa holders would be able to change employers while living in the United States but would not be allowed to bring family members or dependents from their country of origin.

Pathway to Legal Status Module

The Pathway to Legal Status Module is modeled on a proposal put forth in S.744 that intends to address the legal status of the approximately 11 million undocumented immigrants currently residing in the United States. Under the proposal, all current unauthorized residents with no criminal record would be permitted to achieve registered provisional immigrant (RPI) status by paying a $1,000 fee and an additional processing fee, satisfying federal tax liabilities, and meeting several other requirements. RPI workers would be eligible to switch to legal permanent resident (i.e., green card) status after 10 years. (Because the study period is 10 years, this component is not modeled.)

CBO's analysis of S.744 assumes that 8 million of 11.5 million unauthorized residents would attain legal status within five years of the bill's implementation. The model uses CBO's ratio (69.6 percent) to the estimated number of 7.925 million undocumented workers in the United States in 2012 to estimate the number of workers who would be regularized under the program within five years.[58]

Attaining legal status is likely to raise the wages of previously undocumented immigrants for two main reasons. First, employers are more likely to comply with minimum wage, overtime and other labor requirements if their workers are legal residents. Second, legal workers are typically more productive because they can move more freely in the workforce and accept positions that better align with their skills and because they are more likely to develop skills that make them more employable (e.g., learning English).

Drawing from a study tracking the wages of immigrants who were regularized under the Immigration Reform and Control Act of 1986, the model assumes that immigrants who attain legal status under this proposal would see wage gains of 15 percent over a period of five years following the point at which they become regularized.[59] Because these wage gains are driven not only by productivity gains but also by increased compliance on the part of employers, it is assumed that 20 percent of the wage gains are a "deadweight loss" to employers.

Modeling Assumptions for Scenario 2: Enforcement Only

The Enforcement Only scenario is based on two main assumptions related to curbing illegal immigration:

(1) One million undocumented immigrants would be removed from the U.S. population (i.e., deported voluntarily or by force) in each of the first four years of the study period, with an additional 0.5 million removed in each of the following six years for a total removal of 7 million people. The remaining unauthorized immigrants (approximately 3 million) are assumed to remain in the U.S. population.[60]

(2) Additional enforcement measures would prevent some unauthorized immigrants from entering the United States. These measures are assumed to be similar in nature to those proposed under the Improved Border Security and Enforcement Module of the Balanced Reform scenario but three times as effective. Therefore, the United States would see a net decline in the future flow of undocumented immigrants of 2.1 million after five years and 4.8 million after 10 years.

Reducing the immigrant population by 11.8 million people (including those future immigrants who would not come to the United States) implies a loss of approximately 8.25 million people from the U.S. labor force based on the assumption that roughly 70 percent are actively employed or looking for work.[61] Given that the U.S. economy is near full employment, a downward adjustment to the job growth rate in the forecast period is made to offset the lower labor supply resulting from the deportations.[62] The scenario assumes that direct, indirect and induced job losses lower total employment to maintain a full-employment equilibrium. Accounting for labor force adjustments, the scenario assumes that two direct jobs are lost for every 10 deported migrants and that further jobs are lost through the multiplier effect.[63]

As with the Improved Border Security and Enforcement Module of the Balanced Reform approach, this scenario does not account for the increased costs associated with greater enforcement, nor does it incorporate the associated stimulative effects of increased government spending.

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33. The projected 25 percent reduction in unauthorized immigration is based on a 2013 Congressional Budget Office (CBO) assessment of the Border Security, Economic Opportunity, and Immigration Modernization Act. CBO argues that “enforcement and employment verification requirements in the legislation would probably reduce

the size of the U.S. population by restricting the future flow of unauthorized residents. Unauthorized residents would find it harder both to enter the country and to find employment while unauthorized. However, other aspects of the bill would probably increase the number of unauthorized residents—in particular, people overstaying their visas issued under the new programs for temporary workers. CBO estimates that, under the bill, the net annual flow of unauthorized residents would decrease by about 25 percent relative to what would occur under current law … ."

34. Pew Research Center. (2016). "5 Facts About Illegal Immigration in the U.S." Fact Tank: News in the Numbers. Pew Research estimated in 2014 that there were 11.1 million unauthorized residents living in the United States.
35. For each scenario, results are presented relative to a baseline scenario in which the current status quo immigration policies are maintained for the full study period.
36. In the Balanced Reform scenario, economic effects related to farming and agricultural-related activities are excluded due to data limitations. This exclusion has the effect of reducing slightly the positive economic impact of the Balanced Reform scenario in most states. Farming and agricultural-related activities are included in the Enforcement Only scenario.
37. The job gains in state and local government might appear especially surprising, given that almost no immigrant workers are eligible to work in state and local government. Instead, these jobs (e.g., teachers, public safety workers and firefighters) would be filled by American workers.
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48. Congressional Budget Office. (2013).
49. In general, employment-based green cards are awarded based on sponsorship by an employer, while family-based green cards are issued to certain categories of family members of current U.S. citizens or permanent residents.
50. These figures are calculated based on DHS data on the current number of employment-based green cards issued to primary workers versus spouses and dependents.
51. Due to the cost and difficulty employers face in sponsoring an employee for a green card, the analysis assumes that only 20 percent of STEM graduates would be sponsored for a green card, even though all STEM graduates would qualify for sponsorship. This conservative assumption may underestimate the benefits of green card reform.
52. Bipartisan Policy Center. (2013).
53. Department of Homeland Security Office of Immigration Statistics. (2016). "2014 Yearbook of Immigration Statistics."
54. Green card holders are free to compete for the same jobs as U.S. workers, but certain categories of employment-based green card applications require a sponsoring employer to certify that (1) there are not sufficient U.S. workers able, willing, qualified and available to accept the job position and (2) that the employment of the foreign worker will not adversely affect the wages and working conditions of similar U.S. workers.
55. Semuels, A. (2013). According to the ***Los Angeles Times,*** agricultural employers are reluctant to hire workers legally under the current H-2A visa program due to the high cost of compliance, which includes visa fees, consulate fees, transportation fees and housing, among other costs.
56. S.744 proposes eliminating the H-2A program and replacing it with two new agricultural visa programs: W-3 and W-4. However, the distinction between the two

programs has no relevance from an economic modeling perspective, and as such, this analysis continues to refer to temporary agricultural visas as H-2A visas.

57. As with other modules, 80 percent of the new H-2C visas are assumed to result in “net-new” jobs based on the assumption that the year-round temporary and relatively low-paying jobs are difficult to fill with US permanent residents.

58. Pew Research Center. (2016).

59. Smith, S. et al. (1996). “Characteristics and Labor Market Behavior of the Legalized Population Five Years Following Legalization.” U.S. Department of Labor Bureau of International Labor Affairs.

60. Statistics related to removals have relied on evolving definitions of “deportations” over the last 10 years.

61. Center for Migration Studies. “State-Level Unauthorized Population and Eligible-to-Naturalize Estimates.” According to the Center for Migration Studies, of the estimated 10.9 million unauthorized individuals in the U.S. population in 2014, approximately 7.6 million (70 percent) are in the labor force, and 7.1 million (65 percent) are employed.

62. Board of Governors of the Federal Reserve System. (2016). The Board of Governors of the Federal Reserve System notes that ”many estimates suggest that the long-run normal level of the unemployment rate — the level that the unemployment rate would be expected to converge to in the next 5 to 6 years in the absence of shocks to the economy — is in a range between 4.5 and 6 percent.”

63. The national baseline forecast of the REMI model balances labor demand with labor supply. A major shock to labor supply therefore requires an additional adjustment to labor demand that is not automatically accounted for by the model.

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