

## Research



# The Labor and Output Declines from Removing All Undocumented Immigrants

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## EXECUTIVE SUMMARY

We build on previous American Action Forum (AAF) research that found removing all undocumented immigrants from the United States and preventing all future unlawful entry would cost between \$400 billion and \$600 billion and reduce real gross domestic product (GDP) by over \$1 trillion. In this paper, we examine how removing undocumented immigrant workers would directly impact each major industry.

In 2012 roughly 6.8 million employed workers in the private sector were undocumented immigrants, making up 5.6 percent of all employed people in the private sector. We estimate the direct economic cost of removing these workers from the labor force. We find that even if native and lawful foreign-born residents were to fill jobs left by undocumented immigrants, there were not nearly enough unemployed workers in 2012 to offset a loss of all 6.8 million employed undocumented workers. As a result, the U.S. private sector would face a substantial labor decline. Based on 2012 workforce and production levels, we find that:

- Private sector employment would fall by 4 million to 6.8 million workers, and
- This worker decline by itself would reduce private industry output by between \$381.5 billion and \$623.2 billion.

Moreover, we find that removing all undocumented immigrant workers would disproportionately affect industries that rely heavily on them. The industries most strained would include agriculture, construction, and leisure and hospitality.

## INTRODUCTION

The question of how to address unauthorized immigration has been among the most prominent issues in the 2016 presidential race. Presidential candidates [Donald Trump](#) and [Senator Ted Cruz](#) have both proposed that the government fully enforce current law and remove all 11.3 million undocumented immigrants currently living in the country. As AAF [previously found](#), this would be a major task that would severely hamper the U.S. economy: fully enforcing current law towards all undocumented immigrants would take at least 20 years and cost the government \$400 billion to \$600 billion. Removing all undocumented immigrants in just [two years](#), as Donald Trump has proposed, would require monumental expansions in U.S. immigration enforcement operations. Most importantly, under both the 20-year and 2-year time frames, the U.S. economy would shrink by over \$1 trillion.

This economic decline would in large part be driven by the removal of undocumented immigrant workers from

the labor force, inducing substantial labor declines. Since some parts of the economy depend on undocumented immigrants more than others, how would the economic effects of removing all undocumented immigrants differ by industry? Would some industries fair worse than others? In this paper, we build on our previous research by analyzing how removing all undocumented workers would directly impact each major industry's workforce and, in turn, its annual production. Overall, we find that removing all undocumented immigrant workers would directly result in private sector labor declining by 4 million to 6.8 million workers. This reduction would consequently cause production to fall between \$381.5 billion and \$623.3 billion. As one would expect, the industries that rely the most heavily on undocumented immigrant workers, such as agriculture and construction, are the ones that would suffer the largest declines in both labor and production.

## AAF'S PREVIOUS IMMIGRATION ENFORCEMENT RESEARCH

Last year, AAF estimated the budgetary and economic costs of fully enforcing current law toward undocumented immigrants.[1] We found that the federal government would have to spend \$400 billion to \$600 billion to remove all undocumented immigrants currently living in the United States and to prevent all future unlawful entry. Depending on how the government conducts its apprehensions, it would need to spend \$100 billion to \$300 billion arresting and removing all undocumented immigrants residing in the country, a process we estimate would take 20 years based on Immigration and Customs Enforcement's (ICE) current removal capacity. In addition, to prevent the entry of any new undocumented immigrants going forward, the government at a minimum would have to maintain current immigration enforcement levels. This results in an additional \$315 billion in continuing enforcement costs over that time period.

More recently, we examined what it would take to execute Donald Trump's [promise](#) to remove all undocumented immigrants in just two years.[2] We detailed current immigration enforcement operations and estimated exactly how large each component of the enforcement process would have to be in order to accomplish this task. We found that to remove all undocumented immigrants in two years, the federal government would need to increase federal immigration apprehension workers from 4,844 to 90,582, immigration detention personnel from 5,203 to 53,381, federal immigration attorneys from 1,430 to 32,445, and immigration courts from 58 to 1,316. In addition, the number of immigration detention beds would need to increase from 34,000 to 348,831 and to physically transport all undocumented immigrants out of the country the government would need to charter a minimum of 17,296 flights and 30,701 bus trips each year.

Perhaps most important are the economic costs associated with removing all undocumented immigrants. Under both time frames, we found that removing all undocumented immigrants would cause the economy to decline by over \$1 trillion.

## THE SIZE OF THE UNDOCUMENTED IMMIGRANT WORKFORCE

In this paper we estimate the reductions in labor and resulting output declines in each industry that would occur if policymakers removed all undocumented immigrants from the United States. So just how important are undocumented immigrants in the U.S. labor force? Pew estimates that in 2012 they accounted for approximately 5 percent of all people working or searching for work.[3] The prevalence of undocumented immigrant workers, however, varies substantially by industry.[4]

Table 1 contains an estimated number of private sector employees in each industry who were undocumented immigrants in 2012. We derive these numbers by applying Pew's undocumented immigrant industry

proportions to unpublished industry level 2012 Current Population Survey (CPS) labor estimates, which we obtained from the Bureau of Labor Statistics (BLS).<sup>[5]</sup> <sup>[6]</sup>

**Table 1: Employed Undocumented Immigrants by Industry in 2012**

Industry	Undocumented Immigrant Workers	Share of Industry
Agriculture, Forestry, Fishing, and Hunting	342,608	16.1%
Mining	29,512	3.1%
Construction	1,043,222	12.2%
Manufacturing	918,729	6.3%
Wholesale/Retail Trade	829,500	4.2%
Transportation and Utilities	193,644	3.3%
Information	77,980	2.8%
Financial Activities	215,349	2.3%
Professional and Business Services	1,030,144	6.4%
Educational and Health Services	375,360	1.7%
Leisure and Hospitality	1,148,940	9.0%
Other Services	584,578	8.2%
Total	6,789,566	5.6%

We estimate that there were over 7.4 million undocumented immigrants either working or searching for work in the private sector in 2012. Of those 7.4 million in the labor force, 6.8 million were employed.

Clearly, undocumented immigrant workers are more highly concentrated in some industries than in others. In education and health services, for example, they only accounted for 1.7 percent of employees in 2012. Meanwhile, undocumented immigrants are very prevalent in the agricultural, forestry, fishing, and hunting

industry, representing 16.1 percent of workers in 2012. Similarly, they are prevalent in construction and leisure and hospitality, accounting for 12.2 percent and 9 percent of employees in those industries in 2012, respectively. These industries would likely suffer the most if lawmakers were to fully enforce current law towards all undocumented immigrants.

## METHODS FOR DERIVING LOWER- AND UPPER-BOUND ESTIMATES

In analyzing the labor declines and resulting impacts on output in each industry, we project a range of estimates. In our lower-bound estimate, we account for the possibility that native and lawful foreign-born workers would fill jobs that undocumented immigrants would have to leave. In our upper-bound estimate, we assume that no native or lawful foreign-born workers would fill any of the jobs left vacant. We perform this analysis with 2012 data because that is the latest year for which Pew examined the prevalence of undocumented immigrant workers in each industry.

For our lower-bound estimate, to find how many employed undocumented immigrants could be replaced by native and lawful foreign-born workers, we first have to estimate how many native and lawful foreign-born workers are actually available to fill the undocumented immigrant workers' jobs. For this, we examine unemployment among native and lawful foreign-born workers in each industry. These are the workers who are jobless and actively looking for work. We assume that these unemployed workers would fill the jobs left by the removed undocumented immigrants until the industry's unemployment rate falls to the long-run natural unemployment rate. The Congressional Budget Office determined that in 2012, the long-run natural unemployment rate was 5.1 percent.<sup>[7]</sup> Generally hovering around 5 percent, the long-run natural unemployment rate is the rate at which the labor force is considered to be at full employment, as no one is unemployed due to fluctuating economic conditions and those who remain unemployed tend to be transitioning between jobs. With the natural rate of unemployment reached in each industry, we designate the remaining unfilled jobs to be the lower-bound labor decline.

We turn to the unpublished CPS labor force figures to estimate private sector unemployment rates and levels among native and lawful foreign-born workers in each industry. Specifically, we reduce each industry's labor force by size of the undocumented immigrant labor force. Then with the remaining native and lawful foreign-born workers, we calculate 2012 unemployment and unemployment above the long-run natural rate of unemployment. For each industry, the unemployment rate above the long-run natural rate is simply the percentage point difference between the unemployment rate and the long-run natural unemployment rate (5.1 percent). We then multiply that percentage point difference by the native and lawful foreign-born labor force to estimate the number of unemployed workers in each industry above the natural rate. It is important to note that we in effect assume that unemployment rates for undocumented workers are the same as native and lawful foreign-born workers.

Table 2 displays by industry both overall 2012 unemployment among native and lawful foreign-born workers and unemployment above the long-run natural rate of 5.1 percent. The latter represents the number of native and lawful foreign-born workers who are available to replace the employed undocumented immigrants.

### **Table 2: Native and Lawful Foreign-Born Worker Unemployment by Industry in 2012**

Industry	Unemployment	Unemployment Above Natural

Rate	Workers	Rate	Workers	
Agriculture, Forestry, Fishing, and Hunting	8.1%	157,732	3.0%	58,633
Mining	5.8%	57,171	0.7%	7,208
Construction	11.7%	991,262	6.6%	557,811
Manufacturing	7.1%	1,051,314	2.0%	300,819
Wholesale/Retail Trade	7.8%	1,593,154	2.7%	546,958
Transportation and Utilities	6.5%	396,470	1.4%	86,858
Information	7.3%	211,896	2.2%	63,031
Financial Activities	4.7%	455,282	-0.4%	-34,468
Professional and Business Services	7.8%	1,271,088	2.7%	437,904
Educational and Health Services	5.3%	1,211,056	0.2%	42,356
Leisure and Hospitality	9.9%	1,276,730	4.8%	619,147
Other Services	6.2%	431,460	1.1%	75,690
Total	7.3%	9,104,615	2.2%	2,761,947
*Negative because the long-run natural rate of unemployment is larger than the unemployment rate in that industry.				

To find the lower-bound labor decline estimates in each industry, we subtract the number of unemployed native and lawful foreign-born workers above the long-run natural rate of unemployment (in Table 2) from the estimated number of employed undocumented immigrant workers (in Table 1). Meanwhile, for the upper-bound worker decline estimates, we assume no native or lawful foreign-born workers would fill the jobs left open by the removed undocumented workers. As a result, the upper-bound estimates in each industry are simply the number of employed undocumented immigrant workers in 2012.

We then calculate the decline in output in each industry that would result from removing all undocumented immigrant workers. To accomplish this, we divide real output by the number of employed people in each industry in 2012, which estimates output per employed worker in each industry that year.<sup>[8]</sup> We then multiply

the estimated output per worker by the lower- and upper-bound reductions in labor to yield lower- and upper-bound declines in output in each industry. This method inherently assumes output per undocumented immigrant worker is the same as native and lawful foreign-born workers.

It is important to note that this analysis has a few shortcomings. Since 2012, unemployment rates have fallen substantially and there are very few industries that have unemployment rates significantly above the long-run natural rate today. This means that today there are likely very few unemployed native and lawful foreign-born workers who are available to replace the employed undocumented immigrants. In this regard, the lower-bound estimates may be larger than we project in this analysis. However, our methods also do not take into account the possibility that native and lawful foreign-born workers not currently looking for work may enter the labor force to fill the jobs that would be left open by removing all undocumented immigrants. Since there is no way of knowing how many workers would enter the labor force, we do not take into account this possibility, which would make the lower-bound labor and output declines smaller than what we project.

## LABOR DECLINES

We find that removing the entire unauthorized workforce would cause private sector employment to decline by 4 million to 6.8 million workers.

**Table 3: Projected Employment Decline by Industry**

Industry	Lower-Bound	Upper-Bound
Agriculture, Forestry, Fishing, and Hunting	283,975	342,608
Mining	22,304	29,512
Construction	485,411	1,043,222
Manufacturing	617,910	918,729
Wholesale/Retail Trade	282,542	829,500
Transportation and Utilities	106,786	193,644
Information	14,949	77,980
Financial Activities*	215,349	215,349
Professional and Business Services	592,240	1,030,144

Educational and Health Services	333,004	375,360
Leisure and Hospitality	529,793	1,148,940
Other Services	508,888	584,578
Total	3,993,152	6,789,566

\*In financial activities, the labor decline in the lower-bound scenario is the same as in the upper-bound scenario. That is because in 2012 the unemployment rate in financial activities was below the long-run natural rate of unemployment of 5.1 percent. This means that in 2012 there were no native or lawful foreign-born workers in financial activities readily able to replace the undocumented immigrants.

Even if native and lawful foreign-born workers replaced undocumented immigrants until the unemployment rate falls to 5.1 percent in each industry, private sector employment would still decline by approximately 4 million workers. If native and lawful foreign-born workers do not fill any of the jobs left by undocumented immigrants, then U.S. private sector employment would decline by 6.8 million workers. The largest labor declines would occur in construction and leisure and hospitality, as employment each could end up decreasing by over 1 million workers.

## OUTPUT DECLINES

The labor declines would result in a substantial decline in industry output. Overall, removing all undocumented immigrants would cause private sector output to decline by between \$381.5 billion and \$623.2 billion. This translates to a 2.9 percent to 4.7 percent reduction in total annual output from the private sector. Table 4 contains the decline in output in each industry.

**Table 4: Projected Real Output Decline by Industry (in 2009 dollars)[9]**

Industry	Lower-Bound		Upper-Bound	
	Real Output (in billions)	Percent	Real Output (in billions)	Percent
Agriculture, Forestry, Fishing, and Hunting	\$16.4	13.3%	\$19.8	16.1%
Mining	\$7.5	2.3%	\$9.9	3.1%
Construction	\$32.3	5.7%	\$69.4	12.2%
Manufacturing	\$77.5	4.2%	\$115.2	6.3%
Wholesale/Retail Trade	\$25.4	1.4%	\$74.5	4.2%



Transportation and Utilities	\$13.0	1.8%	\$23.6	3.3%
Information	\$4.0	0.5%	\$20.8	2.8%
Financial Activities*	\$70.6	2.3%	\$70.6	2.3%
Professional and Business Services	\$68.3	3.7%	\$118.8	6.4%
Educational and Health Services	\$19.1	1.5%	\$21.5	1.7%
Leisure and Hospitality	\$23.9	4.2%	\$51.9	9.0%
Other Services	\$23.5	7.1%	\$27.0	8.2%
Total	\$381.5	2.9%	\$623.2	4.7%

\*In financial activities, the reduction in output in the lower-bound scenario is the same as in the upper-bound scenario. That is because in 2012 the unemployment rate in financial activities was below the long-run natural rate of unemployment of 5.1 percent. This means that in 2012 there were no native or lawful foreign-born workers in financial activities readily able to replace the undocumented immigrants.

Table 4 shows that industries with the highest proportion of undocumented workers would be hit hardest by fully enforcing current law. For example, output in the agriculture, forestry, fishing, and hunting industry would decrease by 13.3 percent to 16.1 percent (\$16.4 billion to \$19.8 billion). While output in the construction industry could fall by up to 12.2 percent (\$69.4 billion), the industry's high unemployment rate (11.7 percent) for native and lawful foreign-born workers indicates that there are a sizeable number of workers who may be readily able to replace the removed undocumented immigrants. However, even if every available unemployed construction worker took the job of a removed undocumented immigrant until the unemployment rate fell to 5.1 percent, output in the industry would still decrease by 5.7 percent (\$32.3 billion). Finally, output in leisure and hospitality would decline a substantial 4.2 percent to 9 percent (\$23.9 billion to \$51.9 billion).

It is important to understand that the reduction in output captured in this analysis is simply the value of the labor the United States would lose if policymakers were to remove all undocumented immigrants from the country. It does not include the other ways undocumented immigrants contribute to the U.S. economy, such as consumption, investing, and entrepreneurship. Accounting for these factors would likely make the estimated negative economic consequences of removing all undocumented immigrants far more severe.

## CONCLUSION

We estimate that there were approximately 6.8 million employed undocumented immigrants in the private sector in 2012. Although there were quite a few unemployed native and lawful foreign-born workers in each industry, we find that there were not nearly enough to make up for the reduction in labor that would result from removing all undocumented immigrants from the United States. Fully enforcing current law towards all undocumented immigrants would cause private sector employment to decline by 4 million to 6.8 million

workers. As a result, the labor declines by themselves would reduce real private sector output by 2.9 percent to 4.7 percent or \$381.5 billion to \$623.2 billion. The negative consequences of removing all undocumented workers from the private sector would be particularly harmful to the industries that employ these workers, such as agriculture, construction, and leisure and hospitality.

[1] Ben Gitis & Laura Collins, “The Budgetary and Economic Costs of Addressing Unauthorized Immigration: Alternative Strategies,” American Action Forum, March 2015, <http://americanactionforum.org/research/the-budgetary-and-economic-costs-of-addressing-unauthorized-immigration-alt>

[2] Ben Gitis, “The Personnel and Infrastructure Needed To Remove All Undocumented Immigrants In Two Years,” American Action Forum, February 2016, <http://www.americanactionforum.org/research/the-personnel-and-infrastructure-needed-to-remove-all-undocumented-immigrants-in-two-years/>

[3] Jeffrey S. Passel & D’Vera Cohn, “Unauthorized Immigrant Totals Rise in 7 States, Fall in 14: Decline in Those From Mexico Fuels Most State Decreases,” Pew Research Center, November 2014, p. 8, [http://www.pewhispanic.org/files/2014/11/2014-11-18\\_unauthorized-immigration.pdf](http://www.pewhispanic.org/files/2014/11/2014-11-18_unauthorized-immigration.pdf)

[4] Jeffrey S. Passel & D’Vera Cohn, “Share of Unauthorized Immigrant Workers in Production, Construction Jobs Fall Since 2007,” Pew Research Center, March 2015, <http://www.pewhispanic.org/2015/03/26/share-of-unauthorized-immigrant-workers-in-production-construction-jobs-falls-since-2007/>

[5] Unpublished estimates: “Table 4. Employed and experienced unemployed persons by detailed industry and class of workers, Annual Average 2012,” Current Population Survey, Bureau of Labor Statistics, 2012; obtained by AAF from the BLS on April 11, 2016.

[6] Pew also provided estimates for the number of undocumented immigrant workers in each industry, which are based on American Community Survey data. However, our analysis depends on unemployment rates in each industry, which are not available in the American Community Survey. The information needed to calculate unemployment rates in each private industry is available in the unpublished CPS estimates that we obtained from the BLS. As a result, instead of directly pulling the undocumented immigrant worker data from Pew, we applied the Pew data on the percent of workers in each industry who are undocumented immigrants to the unpublished CPS industry labor force estimates.

[7] US. Congressional Budget Office, *Natural Rate of Unemployment (Long-Term)* [NROU], retrieved from FRED, Federal Reserve Bank of St. Louis, <https://research.stlouisfed.org/fred2/series/NROU>

[8] Real Value Added by Industry, Bureau of Economic Analysis, <http://www.bea.gov/iTable/iTable.cfm?ReqID=51&step=1#reqid=51&step=51&isuri=1&5114=a&5102=10>

[9] Industry output decline figures may not add to total due to rounding.