

**Does Immigration Harm Native-Born Workers?**  
**A Citizen's Guide**

Don Mathews, Director, Reg Murphy Center  
and Professor of Economics, College of Coastal Georgia

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### Purpose

The Reg Murphy Center usually confines its research to economic conditions and events on the Southeast Georgia Coast. But in recent months, local residents have persistently peppered us with questions about immigration. Two in particular: Does immigration depress the wages of native-born workers? Does immigration reduce the employment of native-born workers? The two questions are closely related.

Economists have studied immigration and its effects with great intensity for more than four decades. The research they have conducted has been careful and dispassionate. It also answers to those two questions.

So, to better serve our coastal public, we have written this economic brief, *Does Immigration Harm Native-Born Workers? A Citizen's Guide*. Our *Guide* is an educational “just the facts” guide: the information it provides comes entirely from the extensive research economists have conducted on immigration. Our *Guide* takes no political position, nor does it offer any policy recommendations. We leave those things to our readers.

Local residents have also frequently asked us about illegal immigration. We will address some economics of illegal immigration in a separate guide in short order.

## Immigrants in the Labor Market: Basic Data

First, some statistical context to our question “Does immigration harm native-born workers?” might be helpful. Table 1 below shows figures for the total number of people in the U.S. labor force, the number in the labor force who are foreign born, and the percentage of the labor force that is foreign born for the years 1996-2014.

**Table 1. Composition of the U.S. Labor Force, 1996-2014**

Year	Total	Foreign born	%
1996	133,951,000	14,467,000	10.8
1997	136,301,000	15,402,000	11.3
1998	137,680,000	16,109,000	11.7
1999	139,380,000	16,586,000	11.9
2000	142,586,000	18,964,000	13.3
2001	143,769,000	19,840,000	13.8
2002	144,856,000	20,280,000	14.0
2003	146,500,000	21,096,000	14.4
2004	147,380,000	21,370,000	14.5
2005	149,320,000	22,042,000	14.8
2006	151,428,000	23,148,000	15.3
2007	153,124,000	23,994,000	15.7
2008	154,287,000	24,063,000	15.6
2009	154,142,000	23,926,000	15.5
2010	153,889,000	24,356,000	15.8
2011	153,617,000	24,391,000	15.9
2012	154,974,000	25,026,000	16.1
2013	155,389,000	25,328,000	16.3
2014	155,922,000	25,735,000	16.5

Source: U.S. Bureau of Labor Statistics

Two items in Table 1 are especially notable. One is: the percentage of the labor force that is foreign born increased from 10.8 percent in 1996 to 16.5 percent in 2014. A second is: between 1996 and 2014, the U.S. labor force increased by 21,971,000, while the number of foreign-born workers increased by 11,268,000. In other words, immigrants have accounted for slightly more than half of the increase in the U.S. labor force since 1996.

Table 2 below shows the level of educational attainment of native-born and foreign-born workers age 25 and over in 2014:

**Table 2. Educational Attainment of U.S. Labor Force, 2014**

	Native Born		Foreign Born	
	Number	%	Number	%
Total, 25 years and over	110,744,000		23,883,000	
Less than a high school diploma	5,144,000	4.6	5,684,000	23.8
High school graduates, no college	30,177,000	27.2	5,856,000	24.5
Some college or associate degree	33,153,000	29.9	4,168,000	17.5
Bachelor's degree or higher	42,270,000	38.2	8,176,000	34.2

Source: U.S. Bureau of Labor Statistics

From one angle, educational attainment in the two labor force populations looks similar: among the native born in the labor force, 38.2 percent have bachelor’s degrees or higher while 61.8 percent have less than a bachelor’s degree; among the foreign born in the labor force, 34.2 percent have bachelor’s degrees or higher while 65.8 percent have less than bachelor’s degrees. From another angle, educational attainment in the two labor force populations looks quite different: 4.6 percent of the native born in the labor force did not complete high school while 23.8 percent of the foreign born in the labor force did not complete high school.

## **How Does Immigration Affect the Wages and Employment of Native-Born Workers? The Evidence**

According to a 2011 survey by Transatlantic Trends, more than half of Americans believe that immigrants reduce the wages and employment of native-born workers.<sup>1</sup> Some Americans even believe that “every job gained by an immigrant is a job lost by a native-born worker.” Is there evidence for either belief?

The second belief – “every job gained by an immigrant is a job lost by a native-born worker” – is clearly false. The number of jobs in an economy is not fixed. In just the 12 months from November 2014 thru October 2015, payroll employment in the U.S. increased by more than 2.8 million. Between 1996 and 2014, employment in the U.S. increased by almost 20

<sup>1</sup> See [http://trends.gmfus.org/files/2011/12/TTImmigration\\_final\\_web1.pdf](http://trends.gmfus.org/files/2011/12/TTImmigration_final_web1.pdf)

million. In other words, the labor market is not a zero-sum game in which one person's gain is another person's loss. If it were, we'd have to worry about all the fresh high school and college graduates that enter the labor force each year, never mind immigrants.

What about the more common belief, that immigration reduces the wages and employment of native-born workers? Does the evidence support the belief?

It does not.

Over the past 30 years, economists have conducted numerous empirical studies of the extent that immigration affects the wages and employment of native-born workers.<sup>2</sup> The studies consistently show that the effects of immigration on the wages and employment of native-born workers are quite small.

In a 2014 paper, labor economist Giovanni Peri reviewed the results of 27 of the most prominent immigration studies published between 1982 and 2013.<sup>3</sup> From each study, Peri calculated the average estimated effect of a one percentage point increase in the percentage of immigrants in a labor market (whether city, state, country, skill, or occupational group) on the average wage of native-born workers in the same labor market. For example, an estimated effect of -1.0 percent means the study found that a one percentage point increase in the percentage of immigrants in a labor market results in a 1.0 percent decrease in the average wage of native workers in that labor market.

Peri then compiled a list of the estimates from the 27 studies. Of the 27 studies, 14 find that immigration decreases the wages of native-born workers, 13 find that immigration increases the wages of native-born workers.

What is striking are the magnitudes of the studies' estimated effects. In 25 of the 27 studies, the average estimated effect of a one percentage point increase in the percentage of immigrants in a labor market is between -0.3 percent and 0.4 percent. In 19 of the 27 studies, the average estimated effect is between -0.1 percent and 0.1 percent. The average estimated effect of the 27 studies is 0.008 percent – meaning a one percentage point increase in the percentage of immigrants in a labor market results in a 0.008 percent increase in the average wages of native-born workers in that labor market. That's eight *thousandths* of a percent.

Let's put the estimates in context by applying the above estimates to the U.S. labor market. Again, Table 1 indicates that the share of immigrants in the U.S. labor force rose from 10.8 percent in 1996 to 16.5 percent in 2014 – an increase of 5.7 percentage points. If the

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<sup>2</sup> For a discussion of how economists have attempted to estimate the effects of immigration on wages and employment, as well as synopses of a number of prominent immigration studies, see the Appendix of this brief.

<sup>3</sup> Giovanni Peri, "Do immigrant workers depress the wages of native workers?" IZA World of Labor 2014:42.

change in native-born wages caused by a one percentage point increase in the share of immigrants in the labor market is somewhere between -0.3 percent and 0.4 percent, then the 5.7 percentage point increase in the share of immigrants in the U.S. labor force changed the wages of U.S.-born workers by somewhere between -1.71 and 2.28 percent (-0.3 percent times 5.7 percent and 0.4 percent times 5.7 percent). A change between -1.71 and 2.28 percent is a very small effect of 18 years of immigration.

Applying the average estimated effect of 0.008 percent, the 5.7 percentage point increase in the share of immigrants in the U.S. labor force caused the average wage of U.S.-born workers to increase by 0.0456 percent (5.7 times 0.008). That would mean: for a U.S.-born worker making \$20 per hour, 18 years of immigration changed his wage by a penny.

Economists have not conducted quite as many studies on the effect of immigration on the employment of native-born workers as on the wages of native-born workers, but the estimates of the employment studies are comparable to those of the wage studies. While some studies find that immigration reduces the employment of native-born workers and other studies find that immigration increases the employment of native-born workers, virtually all find the effect of immigration on the employment of native-born workers – if there's any effect at all – to be very small.

That the evidence shows so overwhelmingly that immigration has little or no effect on the wages and employment of native-born workers might come as a surprise. After all, isn't the belief that immigration reduces the wages and employment of native-born workers consistent with the basic economics of supply and demand? Workers make up the supply of labor. Most immigrants are workers, so immigration increases the supply of labor. Other factors constant, an increase in the supply of something tends to depress its price. So, shouldn't we expect an increase in the supply of labor to depress prices of labor – wage rates? And at lower wage rates, shouldn't we expect some native-born workers to offer less labor on the market – which would result in a decrease in employment of native-born workers? Basic supply and demand, right?

Well, then...

## **Why Does Immigration Have So Little Effect on the Wages and Employment of Native-Born Workers?**

Indeed, immigration increases the supply of labor. But immigration also increases the demand for labor, and in a variety of ways.

One way is rather obvious. Immigrants are not just workers. They are consumers. They buy food, clothing, shelter, and all sorts of other products. Producing food, clothing, shelter, and other products requires resources – including labor. So, by increasing the demand for goods and services, immigration also increases the demand for labor.

That's important. An increase in the demand for labor has the opposite effects of an increase in the supply of labor. Other factors constant, an increase in the demand for something tends to increase its price. So, we should expect an increase in the demand for labor to increase wage rates. And at higher wage rates, we should expect some native-born workers to offer more labor on the market – which would result in an increase in employment of native-born workers.

That means: the negative effects on native-born workers of an immigration-induced increase in the supply of labor are at least partially offset by the positive effects of the immigration-induced increase in the demand for labor.

Immigration increases the demand for labor in less obvious ways, too. For instance, immigration tends to increase the rate that businesses invest in capital.

In aggregate, capital and labor are complementary inputs: capital makes labor more productive, and labor makes capital more productive. By increasing the supply of labor, immigration raises the return to capital. Business firms respond by increasing their investment in capital. In turn, more capital makes labor more productive, which causes the demand for labor to increase.

The process in which firms increase their capital investment, which then raise labor productivity and the demand for labor does not happen overnight. But it does happen. And immigration is a trigger to the process.

Another way in which immigration increases the demand for labor is related. If immigration makes labor significantly more abundant, some business firms are likely to adopt production techniques that use labor more intensively. Like capital investment, shifts in production technique take time. But, like capital investment, shifts to production techniques that use labor more intensively increase the demand for labor.

And there is yet another way in which immigration increases the demand for labor: firm expansion and creation.

Finding workers is time-consuming and costly for employers. It can be so time-consuming and costly in some areas that firm expansion and even firm creation suffer.

For example, suppose a business is considering expanding its operations by opening a new factory in, say, Brunswick, Georgia. The new factory requires 4,000 workers. That's a lot of workers. Finding 4,000 workers for a factory in Brunswick is not going to be easy, and it's going to be expensive. If the business determines that it's too costly to recruit 4,000 workers in Brunswick, it doesn't build the factory. There's no new production and no new jobs.

But suppose Brunswick has a steady stream of immigrants. If the stream of immigrant workers reduces search and recruitment costs sufficiently, the business builds the factory. And if the business builds the factory, the demand for labor – immigrant and native-born – increases.

So: while immigration increases the supply of labor, it also increases the demand for labor. Immigration increases the demand for labor by (i) increasing the demand for goods and services, (ii) stimulating capital investment, (iii) spurring shifts to more labor intensive production techniques, and (iv) spurring the creation and expansion of business firms. Immigration-induced increases in the demand for labor are important because, again: while the immigration-induced increase in the supply of labor pushes the wages and employment of native-born workers down, immigration-induced increases in the demand for labor push the wages and employment of native-born workers up. If immigration increases the supply of labor and the demand for labor by roughly the same degree, the wages and employment of native-born workers will change little if at all. And that's just what the empirical evidence on immigration seems to be showing.

There's one more reason why immigration has so little effect on the wages and employment of native-born workers.

We typically assume that immigrant workers are ready substitutes for native-born workers in the labor market and, thus, that immigrant workers and native-born workers compete with each other for jobs in the labor market. But are immigrant workers ready substitutes for native-born workers in the labor market? Much evidence suggests that they are not – *even when they have similar levels of education and similar vocational skills*.

Why? Differences in language skills. When immigrants first arrive, their language skills tend to be inferior to the language skills of native-born workers. Consequently, immigrant workers pursue jobs in which language skills are relatively less important, while native-born workers tend to move to jobs in which language skills are relatively more important. Economists find much evidence of immigrants and natives sorting themselves into jobs according to language skills at every level of educational attainment.<sup>4</sup>

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<sup>4</sup> See Ferrar, Green, and Ridell (2006), Peri (2007), and Peri and Sparber (2009).



Differences in language skills and the labor market sorting that occurs because of differences in language skills reduces the degree that immigrant and native-born workers compete with each other for jobs. It may seem only natural to assume that immigrants compete with native-born workers for jobs, but the evidence suggests the competition is quite limited.

And if the competition between immigrants and native-born workers for jobs is quite limited, the effect of immigration on the wages and employment of native-born workers will be quite limited, as well. Thus, a further reason why immigration has so little effect on the wages and employment of native-born workers.

## **Conclusion**

How immigration affects the wages and employment of native-born workers is not the only concern people have about immigration. But it is a leading concern. Many Americans worry that immigration depresses the wages and reduces employment of native-born workers.

The evidence indicates the contrary: immigration has little if any effect on the wages and employment of native-born workers. Though immigration increases the supply of labor, it also increases the demand for labor, which offsets the downward pressure on the wages and employment of native-born workers caused by the increase in supply. Further, differences in language skills significantly limit competition between immigrants and native-born workers for jobs, which significantly limits the effect of immigration on the wages and employment of native-born workers.

## Appendix: Approaches to Measuring the Effects of Immigration

Before economists can determine the effects of immigration on the wages and employment of native-born workers, they must first figure out *how* to determine the effects. Immigration is hardly the only factor that affects wages and employment. The business cycle, technological change, changes in the composition of industry, and a zillion different kinds of demographic change affect wages and employment. How can we distinguish the effects of immigration on native wages and employment from the effects of other factors on native wages and employment?

Economists have used a number of different methods to estimate the effects of immigration. The two leading approaches are the spatial correlation approach and the skill cells approach.

### Spatial Correlation

The spatial correlation method examines the correlation between the proportion of immigrants in local labor forces and the wages and employment rates (or unemployment rates) across different cities or areas. Negative correlation between the percentage of immigrants in local forces and wages suggests that immigration depresses the wages of native-born workers, while positive correlation between the percentage of immigrants and local unemployment rates suggests that immigration reduces the employment of native-born workers. In other words, lower wages and higher unemployment rates in cities or areas with proportionally larger immigrant populations immigration is evidence that immigration depresses native wages and employment.

Spatial correlation studies have become more sophisticated over time. More recent spatial correlation studies examine the correlation between immigrant shares and wages and unemployment rates of workers with different levels of education, in different occupations, as well as changes in correlations over time.

Prominent studies employing the spatial correlation approach are Grossman (1982), Altonji and Card (1991), and Card (2001).

### Skill Cells

A number of economists argue that the spatial correlation method has weaknesses that cause it to underestimate the effects of immigration on native wages and employment. One

weakness is that spatial correlation does not control for differences in local economic growth. Immigrants do not choose their destinations randomly. They move where economic opportunities are good: where economic growth is high and unemployment is low. Economically vibrant cities are better able to absorb immigrants, in effect disguising immigration's potentially negative effects on native wages and employment.

The second weakness is related to the first: spatial correlation does not control for the possible migration of native workers away from cities with large inflows of immigrants. If immigration depresses native wages and employment, some native workers – especially displaced, unemployed native workers – may move to cities that have little immigration. Such movement of natives dampens the effects of immigration in cities that natives move from and creates the effects of immigration in cities that natives move to. Like failing to control for differences in local economic growth, failing to control for the migration of native workers disguises immigration's potentially negative effects on native wages and employment.

The skills cells approach captures the effects of immigrant location choice and native mobility. It treats 'the labor market' as a national market segmented by different skill cells, in which a skill cell is a group of workers with very similar measurable skills, such as years of education and work experience. It assumes that workers within a skill cell compete with each other for jobs and workers in different skill cells do not.

To determine the effect of immigration on native wages and employment, the skill cells approach examines the correlation between changes in the percentage of immigrants and changes in wages and employment for each skill cell over time. Negative correlation between the change in the percentage of immigrants and the change in wages in a skill cell suggests that immigration depresses the wages of native-born workers; positive correlation between the change in the percentage of immigrants and the change in the unemployment rate in a skill cell suggests that immigration reduces the employment of native-born workers.

Prominent studies employing the skill cells approach are Borjas (2003), Ottaviano and Peri (2008), and Ottaviano and Peri (2012).

## References

- Altonji, Joseph G. and Card, David. 1991. "The Effects of Immigration on the Labor Outcomes Of Less-Skilled Natives." In *Immigration, Trade and Labor*, eds. John Abowd and Richard B. Freeman, pp. 201-234. Chicago: University of Chicago Press.
- Borjas, George J. 2003. The Labor Demand Curve Is Downward Sloping: Reexamining the Impact of Immigration on the Labor Market." *Quarterly Journal of Economics* 118: 1335-1374.
- Card, David. 2001. Immigrant Inflows, Native Outflows, and the Local Labor Market Impacts of Higher Immigration." *Journal of Labor Economics* 19: 22-64.
- Ferrar, Ana, Green, David A. and Riddell, W. Craig. 2006. "The Effect of Literacy on Immigrant Earnings." *Journal of Human Resources* 41:380-410.
- Grossman, Jean B. 1980. "The Substitutability of Natives and Immigrants in Production." *Review of Economics and Statistics* 64:596-603.
- Ottaviano, Gianmarco I. P. and Peri, Giovanni. 2008. "Immigration and National Wages: Clarifying the Theory and the Empirics." NBER Working Paper No. 14188.
- Ottaviano, Gianmarco I. P. and Peri, Giovanni. 2012. "Rethinking the Effect of Immigration on Wages." *Journal of the European Economic Association* 10: 152-197.
- Peri, Giovanni. 2007. "Immigrants' Complementarities and Native Wages: Evidence from California." NBER Working Paper No. 12956.
- Peri, Giovanni. 2014. "Do Immigrant Workers Depress the Wages of Native Workers?" IZA World of Labor 2014:10.
- Peri, Giovanni and Sparber, Chad. 2009. "Task Specialization, Immigration, and Wages." *American Economic Journal: Applied Economics* 1: 135-169.