UNDER THE TABLE: EVALUATING THE IMPACT OF LOW-SKILLED UNDOCUMENTED IMMIGRANTS ON THE ECONOMY

Christopher Baldacci

Abstract

The question of how the United States should deal with illegal immigration is increasingly contentious. While illegal immigration across the Mexican border has decreased slightly over the last decade, undocumented workers still constitute 5% of the labor force. Opponents of illegal immigration argue that low-skilled undocumented workers take jobs from other low-skilled workers and drain social services, while others argue that these workers actually contribute to the economy through their labor and taxes. This study performs secondary analysis in an attempt to better understand how low-skilled undocumented workers affect economic growth by examining the indicators of wages, government expenditures, and economic efficiency. It hypothesizes that low-skilled undocumented immigrants positively affect the economies in which they reside. This study finds that undocumented immigrants have a moderately positive effect on economic growth.

Introduction

In 2002, Pedro Chan began his two-year journey to the United States. He left his village in Guatemala and traveled to Mexico, where he arranged for a smuggler to take him across the U.S. border into Texas. From there he traveled to Brooklyn, New York, where he arrived in 2004. Once in New York City, he met up with his uncle, who helped him get a construction job in the city. Pedro still works construction to this day as an undocumented employee, making about $25,000 dollars a year—considerably less than the thousands of documented construction workers in the city (Davidson, 2013).

Pedro is just one illegal immigrant out of millions who live and work in the United States. There are approximately 11.1 million undocumented immigrants in America, 8 million of whom are employed without authorization (Krogstad, Passel, & Cohn, 2016). This means that undocumented immigrants now make up 5% of the American labor force ("Wage War," 2016). Given the high volume of illegal immigration, the issue of immigration reform has been a contentious part of American politics for the last several decades; however, it became especially important during the last presidential election cycle. With President Trump's emphatic assertions that he would build a wall along the U.S.-Mexico border and impassioned rhetoric against immigrants, the status of undocumented immigrants in the United States became a national talking point. Much of the debate has centered around the economic impact of immigrants. During a 2015 debate between Republican presidential candidates, Donald Trump stated in no uncertain terms, "We have to stop illegal immigration. It's hurting us economically. It's hurting us from every standpoint" ("Republican presidential debate," 2015, para. 108). Other conservatives have argued that undocumented workers take American jobs and depress wages, while supporters of immigration believe that the influx of workers makes goods cheaper and has a net-positive effect on the economy.

While there has been significant research in the last twenty years about the effects of undocumented immigrants, academics continue to disagree about the economics of immigration. When more mainstream political outlets try to weigh in on the debate, they tend to select the academic literature which supports their side, blurring the lines between what is settled and what is speculative and occasionally distorting the truth. Especially when it comes to the economic impact of low-skilled workers, there are proponents and detractors. Yet before policymakers can make meaningful and beneficial reforms, they must determine if undocumented workers are helping or hurting the economy. The purpose of this study is to synthesize much of this prior research and paint a more holistic picture of the economic effects of immigration to provide more insight for legislators and policy analysts.

This study asks the research question: does the presence of low-skilled, undocumented immigrants increase economic growth? This study hypothesizes that such migrants benefit the economy and that there is a positive relationship between the presence of undocumented immigrants and overall economic growth.

Literature Review

Economists and scholars generally agree that immigration on the whole is economically advantageous ("The effects," 2016). However, there is a significant amount of literature about the impacts of undocumented immigration, and academics are especially split about the economic impacts of low-skilled migrant workers.

Researchers are first divided over whether or not undocumented immigrants contribute more to social services than they take. Lipman (2006), Chomsky (2007), and Campbell (2016) argued that undocumented immigrants contribute far more to the economy than they cost to social services. Gee, Gardner, Hill, and Wiehe (2017) documented the significant contributions immigrants make through state and local taxes and argued that greater amnesty should be granted to undocumented workers to increase tax revenues. However, organizations that are more opposed to immigration have argued that immigrants pose a net cost to the federal government because of their use of services (FAIR, 2011). The Congressional Budget Office (2007), while acknowledging some of the economic impacts of migrant workers, also admitted that immigrants inevitably cost states money. Camarota (2004) pinpointed this number as a $10 billion deficit for the United States. The Heritage Foundation also produced a significant study claiming undocumented immigrants cost each American household $14,387 (Richwine & Rector, 2013). However, other authors have criticized the methodology of that study (Nowraseth, 2013a).

The majority of the literature written on the topic of immigrants and the economy concerns the impact that undocumented workers have on wages. The simple textbook explanation is that in a "closed-market" economy, an increased supply of workers should depress wages (Samuelson, 1964). Lalonde and Topel (1997) argued that population increases via immigration always reduce aggregate wages. However, this did not seem to be the case in America. Early on, Friedberg and Hunt (1995) argued that immigrants had a negligible impact on the wages of American citizens. Economists quickly began to try to evaluate the complex factors that go into immigration. Most of the foundational research in this area comes from the 1990s and early 2000s when the undocumented immigrant population in the United States increased exponentially.

Blau and Mackie (2016) explained that three methods eventually developed to measure the impact of workers on wages: spatial, skill set, and structural studies. The first type of study was spatial, comparing cities with high immigration to those with low immigration (e.g. Card, 2001). However, these studies were widely criticized for not considering all the reasons why immigrants move to certain cities and how migration disperses labor. This led to the development of skill set studies, pioneered by Harvard economist George Borjas (2003), who is considered the most influential economist in the area of labor and immigration. Skill set studies compare immigrants and native workers with similar education and work experience to evaluate how increases in one group (immigrants) affect the other (native workers). Borjas and Katz (2007) found that wages for native-born workers and especially low-skilled workers decrease as immigration increases. On the other hand, several other scholars contend that there are more complex factors that go into comparing workers of similar skill sets, and subsequently that immigrants have a net positive effect on the wages of native American workers (Card & Shleifer, 2006; Ottaviano & Peri, 2008). The last type of study is a structural study, attempting to ascertain the function of immigrants in the economy and estimate the impact if those workers were to leave. For example, *The Economist* argued that the economic growth of Arizona slowed as a result of increased deportation ("Wage War," 2016).

Lastly, the literature has considered the role of low-skilled immigrant workers in the economy. Hanson (2007) argued that undocumented immigrants fill a natural need in the economy for low-skilled, low-educated workers. Scholars have similarly argued that if the undocumented workforce were to decrease, there would be significant labor shortfalls (Goodman, 2014; Jaeger, 2006). However, the same scholars that argue undocumented workers depress wages also suggest that the abundance of jobs for undocumented workers stems from their willingness to take lower wages and that native-born workers should be filling those positions at higher income levels.

Data and Methods

This study performs secondary, qualitative analysis on prior research to determine the effects of undocumented labor. Both statistical data and social and historical analysis about the status of migrant workers are considered.

First, it is important to define what type of individuals this study considers. Undocumented workers are those who have come to the United States in violation of the law and do not have the documentation to prove that they have a right to residency in the United States. These workers also do not participate in temporary residency programs like student or worker visas and therefore work illegally. Many of these immigrants use fake Social Security numbers, while others are paid in cash or do not fill out W-2s (Campbell, 2016). There is some debate about how to define "unskilled" laborers. Some consider anyone with only a high-school education or lower to be unskilled (Card, 2009). Borjas used a complex matrix that involved eight interval levels of work experience (in increments of five years) and four interval levels of school experience (high school dropout, high school, some college, and college education) to create 32 skill categories (2003). While this may be helpful for more precise statistical analysis, such a complex definition is not necessary for the purposes of this qualitative study. This study will consider unskilled laborers to be all those with the equivalent of a high school education or less who tend not to have specialized skills or years of experience in the workforce.

Second, it is necessary to define "economic growth" for the purposes of the hypothesis. While economic growth is commonly understood to be the increase of goods and services produced and the accumulation of wealth in a society, this must be further operationalized so that the impact of undocumented workers specifically can be analyzed. There are three indicators of economic growth that are especially relevant to this research question. First, wages: rising wages are usually a sign of an economic boom, so this study will consider whether undocumented immigrants hurt or help the average wages of those they compete against, as well as those they do not. It will also consider the role that immigrants have to play in the economy and the effect they have on the number or type of wage-earning jobs. Second, fiscal impact: how much immigrants cost the federal and local governments. Immigrants' use of social services and programs must be compared to how much they contribute in taxes, since this will affect both states and the national economy. Immigrant workers can cost the government money through the use of infrastructure and public services, and if they receive more than they are taxed, they force the government to tax others to make up for the deficit. Third and finally, economic productivity: this indicator considers whether or not immigrant workers actually increase the overall output and efficiency of the economy through their participation in businesses and industry. For example, do they receive back most of their productivity through their wages or do unskilled laborers increase in productivity over time? And does this capital stay in America? These three indicators together will help establish a well-rounded picture of the impact of undocumented, unskilled laborers on economic growth.

Research

Background: Immigration in America

Even though the political focus on international immigration appears to be a recent development, the amount of immigration from low-income countries to high-income countries has been increasing for the last half-century (Peri, 2016). There are now approximately 42.4 million immigrants currently living in the United States, the most in American history (Camarota & Ziegler, 2016). The Pew Research Center estimated that just over 11 million of these are undocumented immigrants

(Krogstad, Passel, & Cohn, 2017). While that is an exponential increase over the 3 million illegal immigrants present in the U.S. in 1995, the number has remained largely constant since 2009 and even represents a slight decrease from the historical high of 12.2 million undocumented immigrants. In 2014, 52% of all unauthorized immigrants were Mexican, but this number is declining, as increasing numbers of undocumented workers come over from Asia and Central America (Gee et al., 2017).

Although it is difficult to calculate because most undocumented laborers are employed surreptitiously, around 8 million undocumented immigrants work in the U.S., making up 5% of the labor force (Krogstad et al., 2017). It appears that these immigrants are planting their roots in America, as more and more immigrants are permanent residents—two-thirds of unauthorized immigrants have been in the United States for 10 years or more (Krogstad et al., 2017). Undocumented immigrants are also clustered in a few states and localities, meaning certain states are disproportionately impacted by immigration. Almost two-thirds of undocumented immigrants live in California, Texas, Florida, New York, New Jersey, and Illinois (Hinojosa-Ojeda, 2012). Undocumented immigrants account for 7.4% of California's population, 10.2% of Los Angeles County's population, and 7% of Arizona's population (Hinojosa-Ojeda, 2012).

While generalizing about a given population can be problematic, undocumented immigrants have a few common characteristics and motivations that can inform our economic analysis. First, it is important to know why people immigrate to the United States. With the exception of refugees and those seeking political asylum, immigration is often a response to economic factors—when labor and business prospects get worse in one country, and there is demand for labor in another country, people move. Much of the immigration to the United States from 1990-2010 was a result of Mexico's struggling economy and America's relative economic growth. As America faced the recession after 2008, labor demand decreased, as did the number of immigrants crossing the border without authorization ("Wage War," 2016). However, there are still strong economic incentives for many people to come to America, especially for low-skilled workers. For example, minimum-wage work pays $5.30 per hour more in America than in Mexico (Hanson, 2007). It is no surprise then that family-based immigrants, students, and high-skilled workers tend to try to immigrate legally, while low-skilled workers largely immigrate illegally (Hanson, 2007).

Additionally, undocumented immigrants, especially Mexican immigrants, tend to have lower levels of education. Nearly 60% of Mexican immigrants (who are statistically more likely to be undocumented) had less than a high-school education ("Wage War," 2016). There is a growing asymmetry of education, as non-Mexican and native-born workers are increasingly graduating college and Mexican immigrants are not (Borjas & Katz, 2007). However, it is not just undocumented Mexican workers; 44% of the 16 million workers in the United States without a high school diploma were foreign-born (Enchategui, 2015). These low-skilled, low-educated workers gravitate towards more manual labor. "Unauthorized immigrants are overrepresented in farming occupations (26%) and construction occupations (15%)" (Krogstad, Passel, & Cohn, 2016, para. 8). Even though the jobs that illegal immigrants take in the United States are usually worse than legal jobs, they are significantly more productive than jobs in Mexico and other countries, so unauthorized immigration remains attractive for many laborers (Chassambouli & Peri, 2014).

Impact on Wages

In order to analyze how immigrants affect wages, it is first important to determine the role of undocumented immigrants in the economy. More specifically, researchers have questioned whether or not low-skilled undocumented immigrants are interchangeable with native-born workers and therefore directly compete with them. If a native worker has the same set of skills as an undocumented immigrant such that an employer could reasonably hire either one to fill the same position, economists call these workers "perfect substitutes." On the other hand, if there are experiential or language differences between a native worker and an undocumented worker such that an immigrant could *not* replace a native worker at his job, these workers are called "imperfect substitutes." When a population of immigrant workers in the same skill category as native workers are perfect substitutes, it is likely that the presence of immigrants will have a greater effect on wages since they are competing for the same jobs. When the supply of the labor market for a given set of positions increases, wages decrease. But if low-skilled immigrants and low-skilled U.S. citizens are *not* interchangeable, then they likely do not directly compete against each other for jobs, completely changing the dynamics of wages.

First, and more generally, there is the question: should high school dropouts and those with a high school diploma be considered essentially an equivalent skill class? Borjas and his intellectual progeny thought that these are two separate skill classes, so his studies recorded the effects of low-skilled immigrants against the very concentrated class of "high school dropouts" (approximately 14% of the population). However, Peri (2016) pointed out that the empirical evidence does not support such a distinction, "as relative wages of high school dropouts and graduates do not seem to respond to changes in their relative supply, either at the national…or the local level" (p. 12). Instead, high school dropouts and high school graduates should be considered one broader skill group that low-skilled immigrants potentially compete against, and this is a much larger section of the population (approximately 60%)

(Card, 2009). Are low-skilled immigrants interchangeable with American workers in this broader skill group?

There is strong evidence that low-skilled immigrants and native workers are not perfect substitutes. In the first place, as a college education becomes more ubiquitous among American citizens, there are simply fewer low-skilled native workers. By the year 2022, the U.S. job market will add 4 million more jobs that do not require high school degrees (Misra, 2015). These positions must be filled by low-skilled workers, and there is a decreasing amount of native-born laborers to do the job, giving the high numbers of undocumented low-skilled laborers opportunities to take jobs without competing with natives. Additionally, there already exists a significant language disparity between immigrants and other classes of workers. This means that immigrants tend to take jobs that require less communication, while native workers specialize in more communication-heavy jobs (Lewis, 2011). This is borne out in the research of Enchategui (2015), who found that certain jobs are dominated by immigrants. Immigrants constitute 80% or more of the food processing, manicuring, and sewing industries (Enchategui, 2015). Immigrants are also dramatically overrepresented in manual labor jobs. On the other hand, the jobs that are most heavily dominated by low-skilled native labor are all jobs that involve much more communication, including receptionists and hosts/hostesses. The specialization of both groups of laborers should significantly mitigate any wage effects between the two groups (Peri & Sparber, 2009).

While this evidence is sometimes colloquially phrased as "there are jobs that Americans just won't do," this seems to be an overgeneralization. As Camarota and Ziegler (2013) noted: "If the argument is correct, there should be occupations comprised entirely or almost entirely of immigrants (legal and illegal). But Census Bureau data collected from 2009 to 2011, which allows for detailed analysis of all 472 separate occupations, shows that there were only a handful of majority-immigrant occupations" (p. 1). In a separate study, Camarota (2013) wrote:

> There are 67 occupations in which 25 percent or more of workers are immigrants (legal and illegal). In these high-immigrant occupations, there are still 16.5 million natives—accounting for one out of eight natives in the labor force. The idea that there are jobs that only immigrants do is simply incorrect. (para. 38)

However, there are enough occupations that are dominated by low-skilled immigrant workers and enough differences between undocumented immigrants and native workers that it seems the two groups do not compete with each other. The Wharton School of Business at the University of Pennsylvania (2016) summarized:

> Because less-educated immigrants often lack the linguistic skills required for many jobs, they tend to take jobs in manual labor-intensive occupations such as agriculture and construction. Even for low-skilled native-born workers in these industries, the effects of increased competition from immigrants are ambiguous, as many take advantage of their superior communication abilities and shift into occupations where these skills are more valuable, such as personal services and sales. (p. 4)

To the contrary, it seems that low-skilled immigrants compete with each other more than they compete with natives. Costa, Cooper, and Shierholz (2014) argued:

> Unauthorized immigrants…have essentially no bargaining power and virtually no labor or employment rights. If they complain about workplace safety violations or being paid less than the minimum wage, for example, an employer can fire them or threaten them with deportation. That puts downward pressure on the wages and working conditions of workers—both native- and foreign-born—in the occupations and in the places where unauthorized workers are present. (p. 6)

If anything, this is a larger worry than any impact on the wages of American workers. For those workers who do not face direct competition from immigrant workers, their wages are largely unaffected by increased immigration—in fact, their wages may be positively affected as demand for their work increases (Camarota, 2013).

It seems clear, then, that researchers' stances on whether low-skilled immigrants and low-skilled natives are perfect substitutes will significantly affect their research model. Borjas in 2003 and 2013 resisted the idea that immigrants and natives were imperfect substitutes and thus directly compared the effects of immigrants on natives in similar skill groups. Therefore, he found that there was a "4 percent decline in the wage of high school dropouts (relative to college graduates), both in the short and long runs" (Borjas, 2013, p. 13). Both he and Camarota (2013) claimed that even if it is assumed that native workers are complementary and not competitive, then the wages of high school dropouts still falls between 2% and 5%. Interestingly, Borjas's estimates of the effect on the wages of native high school dropouts have gotten increasingly conservative with time. In 2003 he estimated an 8.9% decrease in the wages of high school dropouts; this fell to 4% by 2013. Borjas's research partner, another Harvard professor named Lawrence Katz, has since argued that the effect of immigration on the wages of American workers is negligible (Edsall, 2016).

Conversely, when studies consider a more nuanced picture of immigration, they find that immigrants positively affect wages. Ottaviano and Peri published several studies in response to the early work of Borjas and Katz using what they called a "general equilibrium" model that (1) did not assume that natives and immigrants were perfect substitutes and (2) took into account that businesses and investors usually adjust their allocation of capital in response to an enlarged labor market. Their calculations found that from 1990-2006, immigration affected the wages of low-skilled natives by +0.5% to +0.7% (Ottaviano & Peri, 2008). Higher skilled workers saw incrementally larger wage increases. This makes sense if such workers are truly complementary, since firms that save money with less expensive, low-skilled laborers have more capital to grow their business and increase the wages and hours of other workers. The most comprehensive review of the studies on the economics of immigration was conducted by the National Academy of Sciences in their massive paper published last year (Blau & Mackie, 2016). They noted that "[i]mmigration raises the return to capital, making capital more productive and increasing income to owners of capital" (Blau & Mackie, 2016, p. 127). Furthermore, "[t]he immigration surplus is larger when immigrant workers are complementary to natives. Income from the surplus accrues to both owners of capital and high-skilled workers when immigrants are low-skilled" (Blau & Mackie, 2016, p. 137).

The National Academy of Sciences concluded that across the various studies, low-skilled natives may be slightly negatively affected by immigration, but middle-skilled and high-skilled natives generally get a wage boost when immigration increases. Indeed, as mentioned previously, "[t]he group whose wage was most negatively affected by immigration is…the group of previous immigrants; however, it is they who probably receive the largest non-economic benefits from the immigration of spouses, relatives or friends, making them more willing to sustain those losses" (Ottaviano & Peri, 2006 p. 4). On the whole, Nowraseth (2013b) also concluded that even comparing the most pessimistic wage forecasts from Borjas and Katz (2007) against the more positive forecasts from Peri and others, immigration seems to have a negligible or small positive effect on wages, especially when considering that Borjas's methodological assumptions may inflate his estimation of the harm. Figure 1 shows the comparison of the two major studies.

In summary, unskilled immigrants tend to fill very different roles in the economy than their native counterparts, meaning that theoretically they should not significantly affect the wages of native workers. It is important to note that Ottaviano and Peri, Borjas, and the National Academy of Sciences studied immigration in general and not just undocumented workers; however, given that most undocumented workers are low-skilled, the analysis of the impacts of low-skilled immigrants is relevant. Furthermore, we must be careful not to commit an ecological fallacy by assuming that wage increases will be seen generally in all areas.

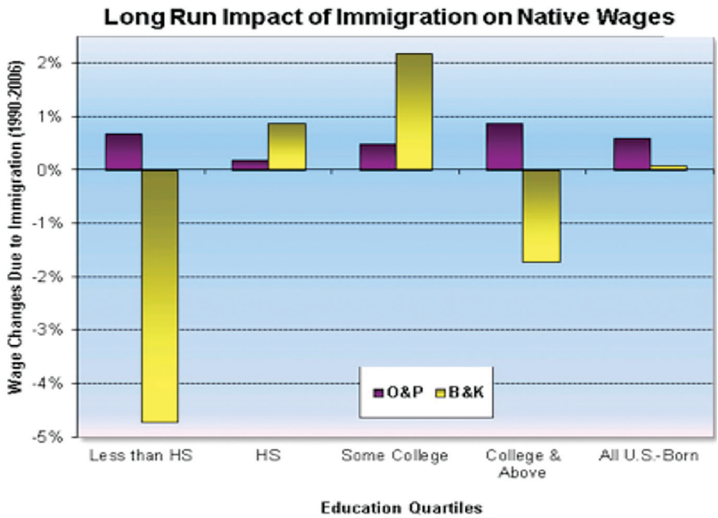

Figure 1. Comparison of the long-run impacts of immigration on native wages (Borjas & Katz, 2007; Ottaviano & Peri, 2008).

Some cities and localities where certain industries are more dominant or that have disproportionately high numbers of undocumented workers may see differences in the effect on the wages of native workers. However, the weight of the research seems to at least mitigate concerns about undocumented immigrants "stealing American jobs" or depressing wages. To the contrary, they may even help American workers by boosting the value of complementary work.

Fiscal Impact

The second question is the fiscal impact of low-skilled illegal immigrants. This directly affects the budgets and deficits of the state, local, and federal governments; however, it also indirectly affects the economy, as increased use of government programs may necessitate tax increases. At the very least, such increased use may drain government capital that could be used for other individuals or more economically beneficial projects.

It is first important to note that undocumented workers pay a significant amount of taxes. Contrary to the stereotype that undocumented workers generally make money under the table, untraced and tax-free, at least 50% of the undocumented workforce pays taxes (Institute on Taxation and Economic Policy, 2013). They either use Individual Tax Identification Numbers (ITINs) or fake Social Security numbers. However, estimates vary on exactly how much they have paid in taxes. The Institute on Taxation and Economic Policy estimated in 2013 that undocumented workers paid $10.6 billion in state and local taxes. Others think that number is higher. For example, Stephen Goss, the chief actuary of the Social Security Administration, noted that undocumented workers have paid approximately $13 billion into the Social Security fund alone each year (Goss et al., 2013). Camarota (2004) estimated that undocumented households have paid $16 billion in total taxes. Many immigrants are incentivized to pay taxes because they believe following the laws in this way will increase their chances of citizenship or amnesty in the future. When nonprofits have targeted cities with programs that encourage undocumented workers to pay taxes, many file returns (Campbell, 2016).

Despite paying these taxes, undocumented families cannot avail themselves of most of these social services. Lipman (2006) described:

> Undocumented immigrants are barred from almost all government benefits, including food stamps, Temporary Assistance for Needy Families, Medicaid, federal housing programs, Supplemental Security Income, Unemployment Insurance, Social Security, Medicare, and the Earned Income Tax Credit (EITC). Generally, the only benefits federally required for undocumented immigrants are emergency medical care, subject to financial and category eligibility, and elementary and secondary public education. Many undocumented immigrants will not even access these few critical government services because of their ever-present fear of government officials and deportation. (pp. 5-6)

Goss (2013) believed that somehow undocumented workers had received about $1 billion in benefits from Social Security, but this was only a fraction of their $13 billion contribution. The question is, does the undocumented workforce cost governments more than it contributes?

The majority of the evidence available suggests that immigrants are a net cost to the federal government and to state and local authorities. The most extreme estimate of the cost of immigrants comes from Heritage Foundation experts Richwine and Rector (2013), who concluded that “[i]n 2010, the average unlawful immigrant household received around $24,721 in government benefits and services while paying some $10,334 in taxes. This generated an average annual fiscal deficit (benefits received minus taxes paid) of around $14,387 per household" (p. vi). A more conservative estimate comes from Camarota (2004), who calculated that “[h]ouseholds headed by illegal aliens imposed more than $26.3 billion in costs on the federal government in 2002 and paid only $16 billion in taxes, creating a net fiscal deficit of almost $10.4 billion, or $2,700 per illegal household” (p. 5). The National

Academy of Sciences study used a methodologically rigorous approach and came up with eight different models to estimate the fiscal cost of immigrants with a variety of different assumptions. Under all eight models, immigrants were concluded to use more in social services then they paid in taxes (Blau & Mackie, 2016).

Other studies have come to different conclusions, but these alternative analyses seem to have significant flaws. Many organizations have touted the fiscal contributions of immigrants without a serious analysis of how much they cost in social services (Gee et al., 2017). Lipman (2006) asserted that immigrants cannot take advantage of most of the social services they pay into: "As a result of all these factors, undocumented immigrants provide a fiscal windfall, and may be the most fiscally beneficial of all immigrants" (p. 7). This facially makes logical sense; however, when considering how little immigrants take from the social services they are taxed to fund, Lipman does precious little statistical work to prove that immigrants truly do not have a fiscal impact. Others have tried to criticize the methodologies of the studies claiming a net fiscal loss. The Heritage Foundation study especially was criticized by both conservatives and liberals. Alex Nowraseth of the Cato Institute said it never adequately considered the economic benefits that immigrants provide (2013a), and Contreras appropriately noted that Richwine and Rector assumed that low-skilled workers and their children will always remain uneducated and ignored any contributions that immigrants make to the economy (Contreras, 2013). Costa et al. (2014) emphasized the large discrepancy between undocumented immigrants' contribution to federal programs and the amount they take out, but he seemed to not consider state and local costs as well as incidental burdens to infrastructure, public programs, and others.

However, while alternative projections may be deficient, there are several mitigating factors to consider that make the costs projected by Camarota and others less significant. First, there is a distinction between state, local, and federal costs. A majority of immigrants do contribute to federal programs and yet cannot take advantage of Social Security, Medicare, Medicaid, and others. Therefore, they may contribute more than they take at the federal level. However, immigrants primarily use infrastructure, education, and medical relief at the local level, which seems to be a bane to public budgets. The Congressional Budget Office's (2007) analysis showed that states incur invariable costs due to the presence of undocumented immigrants that they do not recoup in taxes. Second, demographics and locality will significantly affect these statistics. One cannot infer from the national data whether each individual state experiences shortfalls as a result of immigration. Especially in areas of Arizona and Texas with large amounts of children and high rates of crime in immigrant communities, education and policing costs are higher (Davidson, 2013). Third, future generations may offset current costs. While children initially perpetuate the fiscal problem by draining public resources without contributing anything, the children of undocumented immigrants born in the United States are citizens and future taxpayers. They may eventually contribute more in taxes than their parents. The NAS report concluded:

> For the 2011-2013 period, the net cost to state and local budgets of first generation adults is, on average, about $1,600 each. In contrast, second and third-plus generation adults create a net positive of about $1,700 and $1,300 each, respectively, to state and local budgets. These estimates imply that the total annual fiscal impact of first generation adults and their dependents, averaged across 2011-13, is a cost of $57.4 billion, while second and third-plus generation adults create a benefit of $30.5 billion and $223.8 billion, respectively. (Blau & Mackie, 2016, p. 12)

Fourth and finally, the economic productivity of immigrants can offset the fiscal burden on local and state governments by enriching the economy. Less expensive labor provides capital to businesses and more consumers for an economy. Estimates vary significantly as to how much economic growth should be weighed against the fiscal drain, but it is a factor that must be considered.

Perhaps Camarota summarized it best: "In my view, the best way to think about immigration is that it is primarily a redistributive policy, transferring income from some workers to owners of capital and from taxpayers to low income immigrant families" (2016, para. 21). It seems clear that, at least when fiscal impacts are observed in a vacuum, undocumented immigrants are a net cost to public budgets. However, it remains possible that such costs could be outweighed either by the other two indicators of wages and economic growth or by the productivity of future generations of immigrants.

Economic Productivity

At least at the macro-level, the research indicates that immigrants contribute significantly to the overall economy, making it more productive. Even Borjas and Camarota, the largest skeptics of the economic benefits of undocumented labor, acknowledged that undocumented workers increase the Gross Domestic Product (GDP) of the United States. According to Borjas (2013), immigration makes the U.S. economy 11% larger each year, which equates to a growth of approximately $1.6 trillion dollars. Camarota (2016) estimated that undocumented immigrants increase the GDP by $395-472 billion. However, simple GDP increases do not tell the whole story, as they do not consider how that capital is spent or where it goes. Does most of this money go back to immigrants in wages or is it reinvested? Moreover, do other considerations offset the advantages of GDP growth?

There is much evidence that suggests the economic growth brought about by undocumented workers produces substantive gains. There are individual case studies on immigration that show economic growth is strongly correlated with high levels of immigration. California's economy grew exponentially as a result of immigration in the 1990s (McCarthy & Vernez, 1997). Georgia's economy grew as a result of heightened immigration. Conversely, when Arizona cracked down on immigration in 2007, its economy shrank by 2% ("Wage War," 2016). If the undocumented labor force disappeared, it would result in $651.511 billion in annual lost output and 8.1 million lost jobs (Perryman, 2008). Nowraseth (2013) simulated that the GDP would shrink by $2.6 trillion over a decade if the undocumented workforce were removed. Additionally, these increases in economic growth help offset costs to the public. In both taxes and goods and services produced and spent, immigrants living and working in the United States "make significant contributions to the overall prosperity of local economies" (Hinojosa-Ojeda, 2012, p. 186). Indeed, CBO estimates of the relationship between GDP and public debt suggest that over 10 years, for every 0.1% increase in economic growth, the federal deficit is reduced by $300 billion (Holtz-Eakin, 2013).

However, none of these numbers take into account where the capital that immigrants produce goes. 97.8% of the money that immigrants produce is returned to them in the form of wages and government benefits; the remaining money that goes to benefit businesses and the native-born population is referred to as the "immigration surplus" (Borjas, 2013). Borjas summarized the calculation:

> The immigration surplus or benefit to natives created by illegal immigrants is estimated at around $9 billion a year or 0.06 percent of GDP — six one-hundredths of 1 percent. Although the net benefits to natives from illegal immigrants are small, there is a sizable redistribution effect. Illegal immigration reduces the wage of native workers by an estimated $99 to $118 billion a year, and generates a gain for businesses and other users of immigrants of $107 to $128 billion. (2013, p. 2)

Camarota (2013) added: "Thus the net gain from immigration is 0.24 percent of GDP. (Expressed as decimal it is .0024.) If GDP is $15 trillion, then the net benefit would be about $35 billion" (para. 33). Camarota argued that this meager eventual gain in GDP is outweighed by the drain on public resources, which he currently estimates as approximately $30 billion dollars based on data from the NAS study.

However, while this certainly mitigates any quixotic beliefs about the overwhelming economic productivity of undocumented immigrants, it is not enough evidence to suggest they drag down the overall economy. First of all, both

Camarota and Borjas's numbers assume their higher estimates for the negative effect of illegal immigrants on wages. If one adopts Ottaviano and Peri's more reasonable estimates about the effect on the wages of native workers—and certainly if one accepts the evidence that the wages of complementary workers are increased—then the value of the economic production of immigrants increases. Second, some of the wages made back by immigrants return to the economy through investment. One study estimated that undocumented workers invest up to 6.5% of their income (Orrenius & Zavodny, 2004). Camarota (2016) contested this, arguing that illegal aliens are not significantly more entrepreneurial because the self-employment rate of immigrants and natives is essentially the same. However, this still means that undocumented immigrants are entrepreneurial and any increase in consumption or money invested in businesses is beneficial to an economy. Lastly, the fact that low-skilled undocumented workers are so economically productive at such a low cost means that firms expand:

> As a consequence of the availability of more workers, firms invest: they expand their productive capacity and build more establishments. The productive capacity (capital) per worker has grown in the U.S. economy at a constant rate during the period from 1960 to 2009. If anything, capital per worker was higher when immigration was at its peak in 2007 than it was in 1990 before the immigration boom began. Investments, that is, were responsive to the predictable inflows of workers. Hence, immigrants did not crowd out existing firms over the long run. Rather, they increased the size and number of firms providing investment opportunities. (Peri, 2013, p. 15)

Not all of this data is specific to undocumented workers, but there are several generalizations that can be made. Even accepting the most negative numbers from Camarota and Borjas, undocumented immigrants do not significantly slow economic growth. Alternatively, the increased capital they provide to businesses and the labor they give the economy suggests that they are vital to economic productivity and contribute marginally if not significantly to national economic growth.

Conclusion

Even though the number of undocumented immigrants coming to the United States has slowed over the past decade, the question of immigration reform remains unresolved. With increasing attention being given to immigration policy in national discussions, it is likely to be a significant issue moving forward. Perhaps more importantly, there are millions of people like Pedro Chan living in the United States. They work laborious jobs, accept lower wages, pay taxes, and raise families—but always live under the threat of deportation. For them, there are no domestic policies more meaningful than the ones that concern their status in this country. This study does not attempt to answer any of the policy questions surrounding immigration, to advise policymaking concerning these millions of undocumented workers, nor to weigh in on the legitimacy of any specific solutions. However, a stronger understanding of the economic impacts of illegal migration should help legislators craft more efficacious and prudent policies.

While the economics of immigration still remains opaque at points, the pattern of the research suggests that low-skilled undocumented workers provide modest economic benefits. Concerning the first indicator of wages, undocumented workers seem to have marginal effects on native incomes. Immigrants may slightly decrease the wages of native low-skilled workers, but they increase the wages of complementary workers and increase the capital of businesses to hire more people. When the market adjusts to the influx of labor and native workers specialize in other fields, the wage impacts are negligible at worst and promote growth at best. The second indicator is less positive, suggesting that undocumented workers—especially low-skilled workers with low incomes—are a net drain on state and local economies. However, they contribute much to the federal level, and these losses could be offset with more robust economic contributions. With regards to the last indicator of economic productivity, the data is less clear; however, the negative drains on the economy have the potential to be offset by economic growth. Taken together, low-skilled undocumented immigrants do not unequivocally help every economy they participate in, but there seem to be modest and predictable economic gains associated with high levels of undocumented immigration.

Future research must attempt to better quantify the less tangible economic consequences of immigrants, such as how they spend their money, how they impact business growth, and how they affect shifts in the labor market. Furthermore, as the demographics of immigration change and Mexicans no longer make up the majority of undocumented immigrants to the United States, more skill set comparisons must be done to reexamine whether such immigrants are interchangeable and if they affect wages similarly. As it stands, however, the research on undocumented immigrants provides a rich picture that should encourage policymakers to treat immigrants—even undocumented immigrants—more beneficently. Undocumented immigrants are already benefiting the United States economically: individuals, states, and industries rely on the undocumented workforce for their wages and profitability. We can and must do more to mitigate the ways in which this immigration does drain our resources while maximizing the ways in which it promotes growth.

Reference List

Blau, F. D., & Mackie, C. (Eds.). (2016). *The economic and fiscal consequences of immigration.* Washington, DC: The National Academies Press.

Borjas, G. (2003). *The labor demand curve is downward sloping: Reexamining the impact of immigration on the labor market* (Working Paper No. 9755). National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w9755.pdf

Borjas, G. (2013). Immigration and the American worker. *Center for Immigration Studies.* Retrieved from https://cis.org/Report/Immigration-and-American-Worker

Borjas, G., & Katz, L. (2007). The evolution of the Mexican-born workforce in the United States. In G. Borjas (Ed.), *Mexican immigration to the United States* (13-56). Chicago, IL: University of Chicago Press.

Camarota, S. (2004). The high cost of cheap labor. *Center for Immigration Studies.* Retrieved from http://cis.org/articles/2004/fiscalexec.html

Camarota, S. (2013). The fiscal and economic impact of immigration on the United States. *Center for Immigration Studies.* Retrieved from http://cis.org/node/4573

Camarota, S. (2016, September 22). So what is the fiscal and economic impact of immigration? *The National Review.* Retrieved from http://www.nationalreview.com/article/440305/us-immigration-policy-economic-fiscal-impact-essentially-redistributive

Camarota, S., & Zeigler, K. (2013). Are there really jobs Americans won't do? *Center for Immigration Studies.* Retrieved from http://cis.org/are-there-really-jobs-americans-wont-do

Camarota, S., & Zeigler, K. (2016). Immigrants in the United States: A profile of the foreign-born using 2014 and 2015 Census Bureau data. *Center for Immigration Studies.* Retrieved from http://cis.org/sites/cis.org/files/immigrant-profile_0.pdf

Campbell, A. F. (2016, September 12). The truth about undocumented immigrants and taxes. *The Atlantic.* Retreived from https://www.theatlantic.com/business/archive/2016/09/undocumented-immigrants-and-taxes/499604/

Card, D. (2001). Immigrant inflows, native outflows, and the local labor market impacts of higher immigration. *Journal of Labor Economics, 19*(1), 22-64. doi:10.1086/209979

Card, D., & Peri, G. (2016). Immigration economics: A review. Retrieved from http://davidcard.berkeley.edu/papers/card-peri-jel-april-6-2016.pdf

Card, D., & Shleifer, A. (2009). Immigration and inequality. *American Economic Review, 99*(2), 1-21. Retrieved from http://www.nber.org/papers/w14683

Chassambouli, A., & Peri, G. (2014). The labor market effects of reducing the number of illegal immigrants. *Review of Economic Dynamics, 18*(4), 792-821.

Chomsky, A. (2007). *"They take our jobs!": And 20 other myths about immigration.* Boston, MA: Beacon Press.

Congressional Budget Office. (2007). *The impact of unauthorized immigrants on the budgets of state and local governments* (Report No. 2500). Retrieved from https://www.cbo.gov/sites/default/files/110th-congress-2007-2008/reports/12-6-immigration.pdf

Contreras, R. L. (2013, May 12). Why Heritage's Rector and Richwine are very, very wrong. *Fox News.* Retrieved from http://www.foxnews.com/opinion/2013/05/13/why-heritages-rector-and-richwine-are-very-very-wrong.html

Costa, D., Cooper, D., & Shierholz, H. (2014). Facts about immigration and the economy. *Economic Policy Institute.* Retrieved from http://www.epi.org/publication/immigration-facts/

Davidson, A. (2013, February 12). Do illegal immigrants actually hurt the U.S. economy? *The New York Times.* Retrieved from http://www.nytimes.com/2013/02/17/magazine/do-illegal-immigrants-actually-hurt-the-us-economy.html

Edsall, T. B. (2016, September 29). What does immigration actually cost us? *The New York Times.* Retrieved from https://nyti.ms/2dmt3wt

The effects of immigration on the United States' economy. (2016). *Penn Wharton Budget Model.* Retrieved from http://www.budgetmodel.wharton.upenn.edu/issues/2016/1/27/the-effects-of-immigration-on-the-united-states-economy

Enchautegui, M. E. (2015, October 13). Immigrant and native workers compete for different low-skilled jobs. *The Urban Institute.* Retrieved from http://www.urban.org/urban-wire/immigrant-and-native-workers-compete-different-low-skilled-jobs

Federation for American Immigration Reform. (2011). *Immigration facts: United States.* Retrieved from http://www.fairus.org/states/united-states

Friedberg, R., & Hunt, J. (1995). The impact of immigrants on host country wages, employment and growth. *The Journal of Economic Perspectives, 9*(2), 23-44. doi:10.1257/jep.9.2.23

Gee, L. C., Gardener, M., Hill, M., & Wiehe, M. (2017). Undocumented immigrants' state & local tax contributions. *Institute for Tax and Economic Policy.* Retrieved from http://www.itep.org/immigration/

Goodman, H. A. (2014, April 23). Illegal immigrants benefit the U.S. economy. *The Hill.* Retrieved from http://thehill.com/blogs/congress-blog/foreign-policy/203984-illegal- immigrants-benefit-the-us-economy

Goss, S., Wade, A., Skirvin J. P., Morris, M., Bye, K. M., & Huston, D. (2013). *Effects of unauthorized immigration on the actuarial status of the social security trust funds.* Social Security Administration: Baltimore, MD. Retrieved from https://www.ssa.gov/oact/NOTES/pdf_notes/note151.pdf

Hanson, G. H. (2007). The economic logic of illegal immigration. *Council on Foreign Relations.* Retrieved from www.cfr.org/content/publications/attachments/ImmigrationCSR26.pdf

Hinojosa-Ojeda, R. (2012). The economic benefits of comprehensive immigration reform. *The Cato Journal, 32*(1), 175-199.

Holtz-Eakin, D. (2013). Immigration reform, economic growth, and the fiscal challenge. *American Action Forum*. Retrieved from https://www.americanactionforum.org/wp-content/uploads/sites/default/files/Immigration%20and%20the%20Economy%20and%20Budget.pdf

Institute on Taxation and Economic Policy. (2013). *Undocumented immigrants' state and local tax contributions.* Retrieved from https://itep.org/wp-content/uploads/undocumentedtaxes.pdf

Jaeger, D. A. (2006). Replacing the undocumented work force. *Center for American Progress.* Retrieved from https://www.americanprogress.org/issues/immigration/news/2006/04/04/1905/replacing-the-undocumented-work-force/

Krogstad, J. M., Passel, J. S., & Cohn, D. (2016). 5 facts about illegal immigration in the U.S. *Pew Research Center.* Retrieved from http://www.pewresearch.org/fact-tank/2016/11/03/5-facts-about-illegal-immigration-in-the-u-s/

Lalonde, R. J., & Topel, R. H. (1997). Economic impact of international migration and the economic performance of migrants. In M. Rosenweig and O. Stark (Eds.), *Handbook of Population and Family Economics* (799-850). Amsterdam: Elsevier.

Lewis, E. (2011). *Immigrant-native substitutability: The role of language ability* (Working Paper No. 17609). National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w17609.pdf

Lipman, F. J. (2006). The taxation of undocumented immigrants: Separate, unequal, and without representation. *Harvard Latino Law Review, 9*(1), 1-58.

McCarthy, K. F., & Vernez, G. (1997). *Immigration in changing economy: California's experience.* Santa Monica, CA: RAND.

Misra, T. (2015, October 21). Immigrants aren't stealing American jobs. *The Atlantic.* Retrieved from https://www.theatlantic.com/politics/archive/2015/10/immigrants-arent-stealing-american-jobs/433158/

Nowraseth, A. (2013a). Immigration's clear benefits. *The Cato Institute.* Retrieved from https://www.cato.org/publications/commentary/immigrations-clear-benefits

Nowraseth, A. (2013b). How does immigration impact wages? *The Cato Institute.* https://www.cato.org/blog/how-does-immigration-impact-wages

Orrenius, P. M., & Zavodny, M. (2004). *What are the consequences of amnesty for undocumented immigrants?* (Working Paper No. 2004-10). Federal Reserve Bank of Atlanta. Retrieved from https://www.econstor.eu/bitstream/10419/100940/1/wp2004-10.pdf

Ottaviano, G., & Peri, G. (2006). *Rethinking the effects of immigration on wages* (Working Paper No. 12497). National Bureau of Economic Research. Retrieved from https://www.nber.org/papers/w12497.pdf

Ottaviano, G., & Peri, G. (2008). *Immigration and national wages: Clarifying the theory and the Empirics* (Working Paper No. 14188). National Bureau of Economic Research. Retrieved from http://www.nber.org/papers/w14188

Peri, G. (2013). The economic benefits of immigration. *Berkeley Review of Latin American Studies,* 14-19. Retrieved from http://clas.berkeley.edu/research/immigration-economic-benefits-immigration

Peri, G. (2016). Immigrants, productivity, and labor markets. *Journal of Economic Perspectives, 30*(4), 3-30. doi: 10.1257/jep.30.4.3

Peri, G., & Sparber, C. (2009). Task despecialization, immigration, and wages. *American Economic Journal: Applied Economics, 1*(3), 135-169. doi: 10.1257/app.1.3.135

Perryman, M. R. (2008). An essential resource: An analysis of the economic impact of undocumented workers on business activity in the US with estimated effects by state and by industry. *Perryman Group.* Retrieved from https://www.perrymangroup.com/wp-content/uploads/Impact_of_the_Undocumented_Workforce.pdf

Republican presidential debate [Speech Transcript]. (2015, November 11). *New York Times.* Retrieved from https://www.nytimes.com/2015/11/11/us/politics/transcript-republican-presidential-debate.html

Richwine, J., & Rector, R. (2013). The fiscal cost of unlawful immigrants and amnesty to the U.S. taxpayer. *The Heritage Foundation.* Retrieved from http://thf_media.s3.amazonaws.com/2013/pdf/sr133.pdf

Samuelson, P. (1964). *Economics: An introductory analysis* (6th ed.). New York, NY: McGraw Hill.

Wage war. (2016, August 25). *The Economist.* Retrieved from http://www.economist.com/news/united-states/21705699-who-are-main-economic-losers-low-skilled-immigration-wage-war