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# TEXAS NEEDS THE WORKERS!!

An Analysis of the Economic and Fiscal Impact of Undocumented Workers

## THE PERRYMAN GROUP



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## Table of Contents

Introduction.....	1
Immigration Trends .....	4
<b>CHARACTERISTICS OF THE TEXAS IMMIGRANT POPULATION .....</b>	<b>5</b>
Undocumented Immigration.....	9
Economic Benefits and Costs of the Undocumented Workforce.....	13
<b>NET DIRECT ECONOMIC BENEFITS OF THE UNDOCUMENTED WORKFORCE .....</b>	<b>13</b>
<b>TOTAL NET ECONOMIC BENEFITS OF THE UNDOCUMENTED WORKFORCE .....</b>	<b>17</b>
Fiscal Implications for Federal, State, and Local Governments .....	19
Public Policy Implications and the Cost of Restrictive Immigration Policy .....	22
<b>ECONOMIC COST OF RESTRICTIVE IMMIGRATION POLICY.....</b>	<b>23</b>
Conclusion .....	24
<b>Appendix A.....</b>	<b>25</b>
<b>About The Perryman Group .....</b>	<b>26</b>
<b>Methods Used .....</b>	<b>27</b>
Economic Impact Assessment.....	27
Fiscal Impact Assessment .....	30
<b>Detailed Sectoral Results.....</b>	<b>31</b>

## Introduction

Immigration policy has long been a source of heated rhetoric and debate in the political arena, particularly as it relates to the undocumented population. While there are numerous considerations surrounding this issue, it is clear that immigrants, both legal and undocumented, influence business activity in fundamental ways. The value of a readily available workforce cannot be denied, but neither can costs of immigrants such as health care, education, and social services.

*Immigrants, both legal and undocumented, influence business activity in fundamental ways.*

The issues surrounding immigration are complicated (particularly in the case of the undocumented segment), ranging from security to tax policy to the provision of social services. Moreover, given the emotional nature of the immigration debate at times,

the statistics emphasized and the conclusions drawn vary widely. Radical proposals, such as immediate deportation of all undocumented individuals, are often suggested, as well as sensible reforms to make the labor force and the process more effective and efficient.

Beneath all of the sound and fury, however, is one incontrovertible fact: **TEXAS NEEDS THE WORKERS!!** In fact, **the estimated number of undocumented workers in Texas today is approximately twice as large as the total number of unemployed persons in the workforce.** Even if all currently unemployed persons filled jobs now held by undocumented workers (which is impossible for myriad reasons), the state would be left with a glaring gap of hundreds of thousands of workers if the undocumented workforce were no longer available.

In this study, The Perryman Group (TPG) took a balanced view of the economic costs and benefits of the undocumented workforce for Texas, considering factors such as the likely numbers of undocumented workers and concentration by industry, spillover effects as various supply chains and payrolls are affected, and relative differentials in skill levels and compensation associated with undocumented workers. On the cost side, expenses associated with the undocumented population were estimated based on available data regarding outlays by governmental entities.

## **TEXAS NEEDS THE WORKERS!!**

### **An Analysis of the Economic and Fiscal Impact of Undocumented Workers**

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The analysis uses appropriate modeling techniques to provide an assessment of the magnitude of the impact of the undocumented workforce as well as the economic dependency of various sectors on this source of labor, and updates an April 2008 TPG study of the issue. The potential effects of restrictive immigration policy, including the dynamic adjustments that would be set in motion by such a change, were also quantified.

**SUMMARY OF FINDINGS FROM THE PERRYMAN GROUP'S ANALYSIS:**

*The issues surrounding immigration are complicated (particularly in the case of the undocumented segment), but there is one incontrovertible fact:*

**TEXAS NEEDS THE WORKERS!!**

The Perryman Group took a balanced view of the economic benefits and costs of the undocumented workforce to Texas. The results indicate gains of millions of jobs and billions of dollars to taxing entities.

Undocumented Workforce Benefits to the Texas Economy			
	Total Expenditures	Output (Gross Product)	Permanent Jobs
<b>Direct Net Benefits</b> <i>(Based on the best available information regarding employment patterns of undocumented workers translated into overall measures of resulting output, income, and spending based on the coefficients of the impact assessment model used in this analysis. Fully adjusted for the wage and productivity characteristics of the relevant population.)</i>	<b>\$326.1 billion</b> (per year)	<b>\$144.7 billion</b> (per year)	<b>1.2 million</b>
<b>TOTAL Net Benefits</b> <b>(including multiplier effects)</b> <i>(Based on the total economic benefits of the undocumented workforce adjusted to net out costs such as education, social services, and health care.)</i>	<b>\$663.4 billion</b> (per year)	<b>\$290.3 billion</b> (per year)	<b>3.3 million</b>
Source: The Perryman Group			

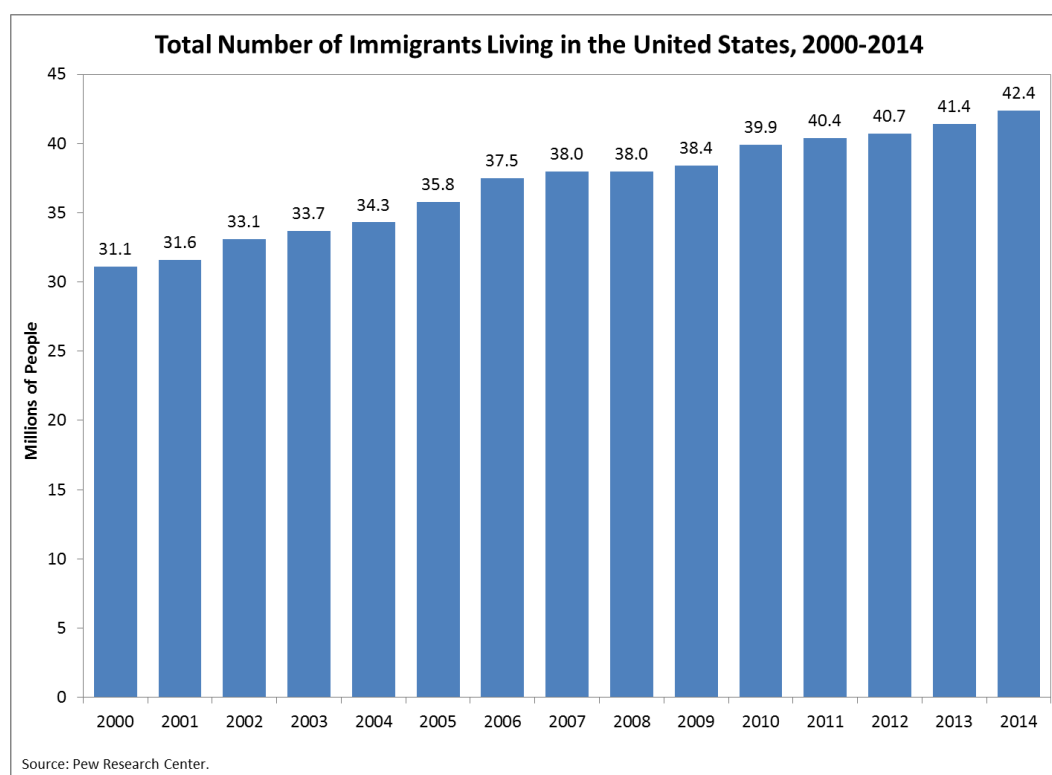
Subtracting the costs from the total fiscal benefits yields an estimate of the net fiscal effect of the undocumented population. The Perryman Group estimates that the total net fiscal effect of the Texas undocumented population includes benefits of **\$32.9 billion each year**, including

- **\$20.1 billion** to the federal government,
- **\$11.8 billion** to the State of Texas, and
- **\$0.9 billion** to local governments within Texas.

Restrictive immigration policy will cause substantial economic and fiscal losses, and optimal policy would be crafted to minimize these dislocations.

## Immigration Trends

Patterns in undocumented immigration and the undocumented workforce are linked to the larger question of immigration in general. Currently, more than one of every eight people living in the United States is an immigrant. The total has risen by about 11.3 million since 2000, to reach 42.4 million nationwide as of 2014.<sup>1</sup>



Immigrants comprised about 13.3% of the US population as of 2014, up from 6.2% in 1980.<sup>2</sup> In Texas, immigrants were about 16.5% of the population in 2013.<sup>3</sup> California, New York, and New Jersey have the highest percentages of immigrants, while California,

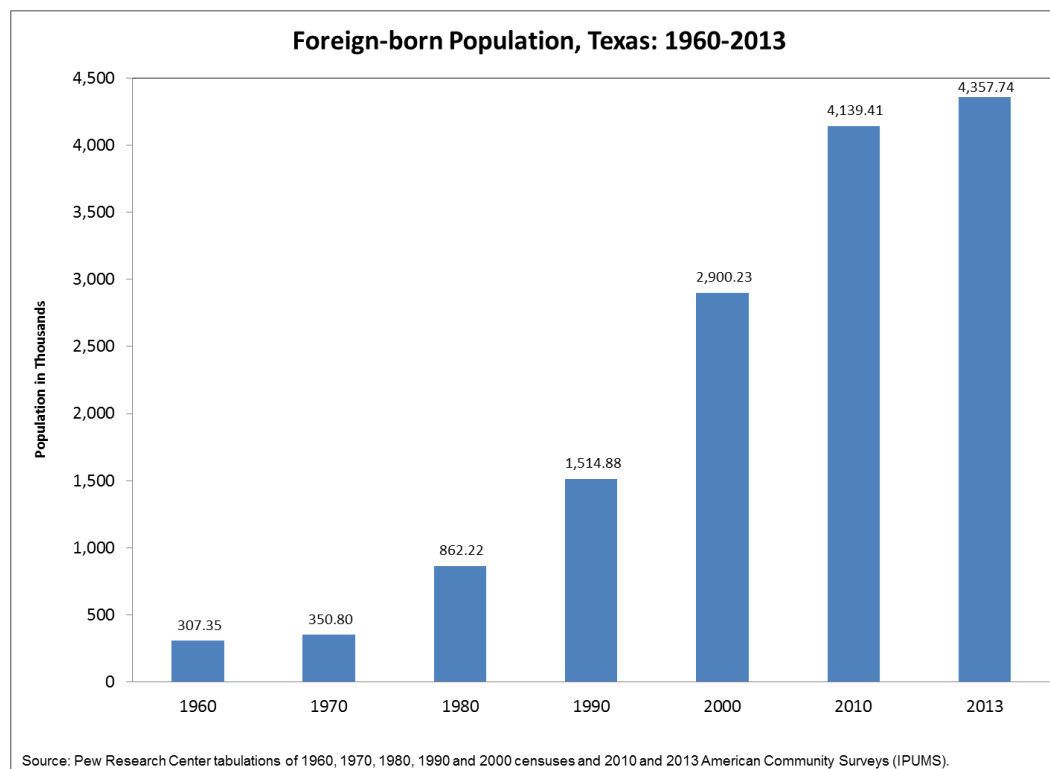
<sup>1</sup> Pew Research Center, <http://www.pewresearch.org/data-trend/society-and-demographics/immigrants/>.

<sup>2</sup> Pew Research Center, <http://www.pewresearch.org/data-trend/society-and-demographics/immigrants/>; Statistical Portrait of The Foreign-Born Population in The United States, Share of Foreign-born Population, by State: 1960-2013, Pew Research Center.

<sup>3</sup> Statistical Portrait of the Foreign-Born Population in the United States, Share of Foreign-born Population, by State: 1960-2013, Pew Research Center.

New York, and Texas dominate in terms of the greatest absolute number of immigrants.<sup>4</sup>

The foreign-born population in Texas has risen dramatically, up from an estimated 2.9 million in 2000 to almost 4.4 million in 2013.



## **CHARACTERISTICS OF THE TEXAS IMMIGRANT POPULATION**

Immigrants in Texas tend to be employed at a slightly higher rate than the native-born population, but generally earn less. For Texas households headed by immigrants, 2014 median household income was \$42,189, which is approximately 75% of native-born household median income (\$56,432).<sup>5</sup> At the same time, immigrant households were on

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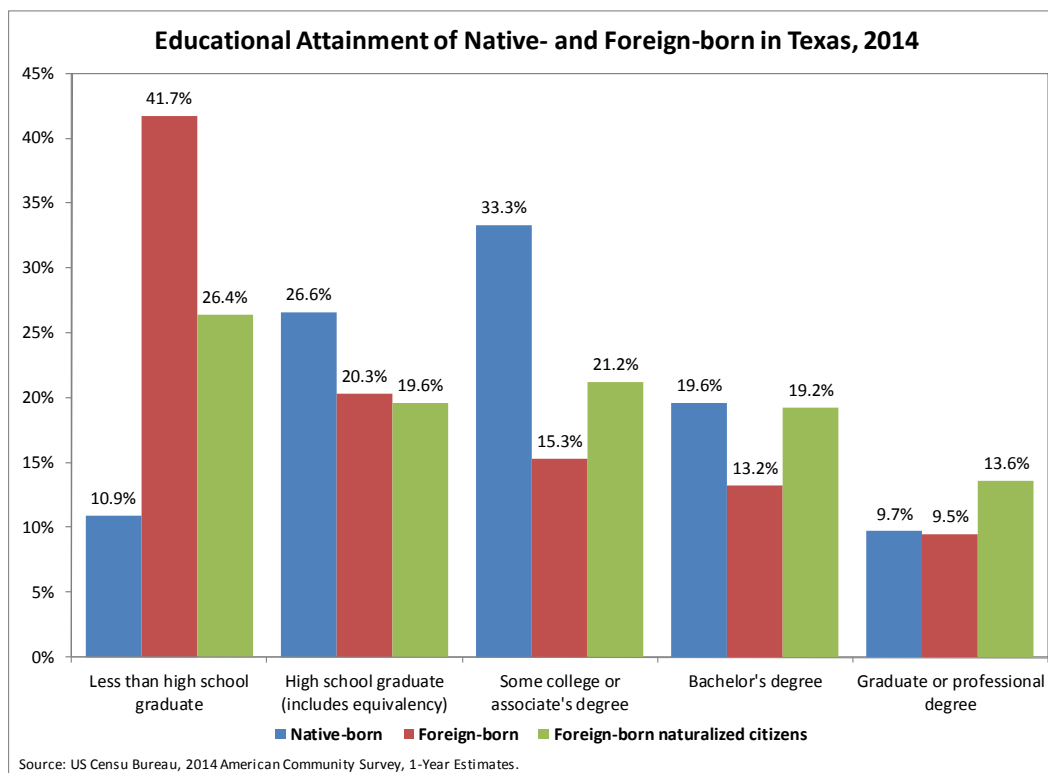
<sup>4</sup> Statistical Portrait of the Foreign-Born Population in the United States, 1960-2013, Foreign-born Population, by State: 1960-2013, Pew Research Center.

<sup>5</sup> US Census Bureau, 2014 American Community Survey 1-Year Estimates.

average 34% larger than native households (3.57 persons compared to 2.66 persons) resulting in an even lower per-capita median income for immigrants.<sup>6</sup>

One factor in the lower incomes is a higher concentration among immigrants in lesser-skilled, lower-paying jobs due to lower average education levels. Of adult immigrants in Texas, 41.7% do not have a high school diploma compared to only 10.9% of the native-born population.<sup>7</sup> However, there are notable differences in education levels among segments of the immigrant population, and the proportion of immigrants with college degrees is comparable to native-born Texans. In fact, about 9.5% of total immigrants and 13.6% of foreign-born naturalized citizens hold graduate or professional degrees, thus contributing to professional and scientific industries as well as health care delivery.<sup>8</sup>

*About 9.5% of total immigrants and 13.6% of foreign-born naturalized citizens in Texas hold graduate or professional degrees.*



<sup>6</sup> US Census Bureau, 2014 American Community Survey 1-Year Estimates.

<sup>7</sup> US Census Bureau, 2014 American Community Survey 1-Year Estimates.

<sup>8</sup> US Census Bureau, 2014 American Community Survey 1-Year Estimates.

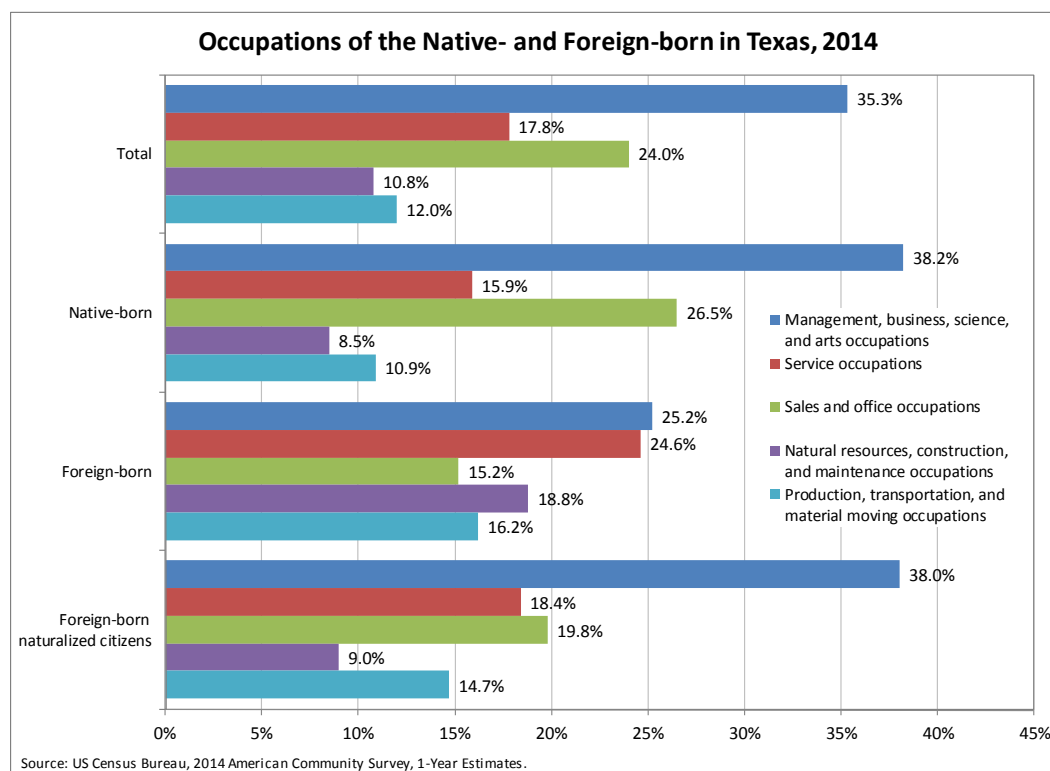


## TEXAS NEEDS THE WORKERS!!

### An Analysis of the Economic and Fiscal Impact of Undocumented Workers



Among native-born workers in Texas, a large majority (38.2%) work in management, business, science, and arts occupations or sales and office occupations (26.5%). Foreign-born workers also tend to concentrate in service occupations (24.6%) and management, business, science and arts occupations (25.2%). The segment of foreign-born workers who are naturalized citizens, however, follows the trend of native-born workers, primarily holding occupations in the management, business, science, and arts fields (38%) or the sales and office occupations (19.8%).

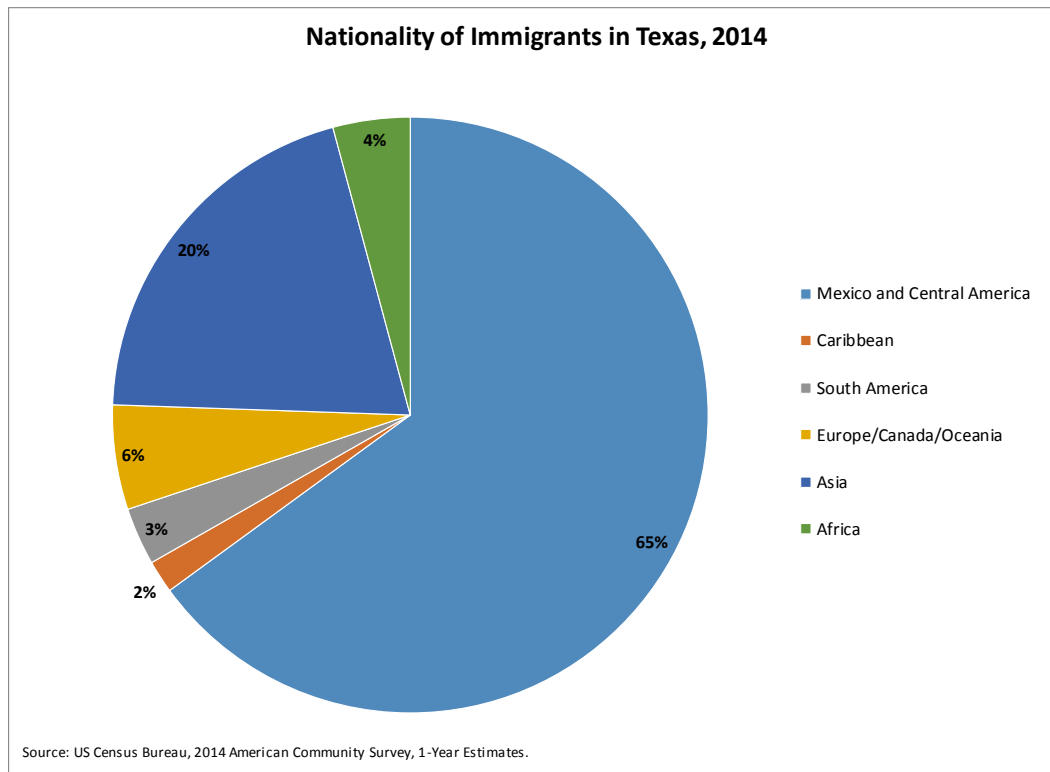


Of the approximate 4.5 million immigrants estimated to live in Texas in 2014, about 65% are from Mexico and Central America, with another 20% from Asia. The number of immigrants from Mexico is estimated to be over 2.5 million, while other countries from Central America with significant populations in Texas include El Salvador (over 199,000) and Honduras (almost 103,000).<sup>9</sup>

<sup>9</sup>US Census Bureau, 2014 American Community Survey 1-Year Estimates.

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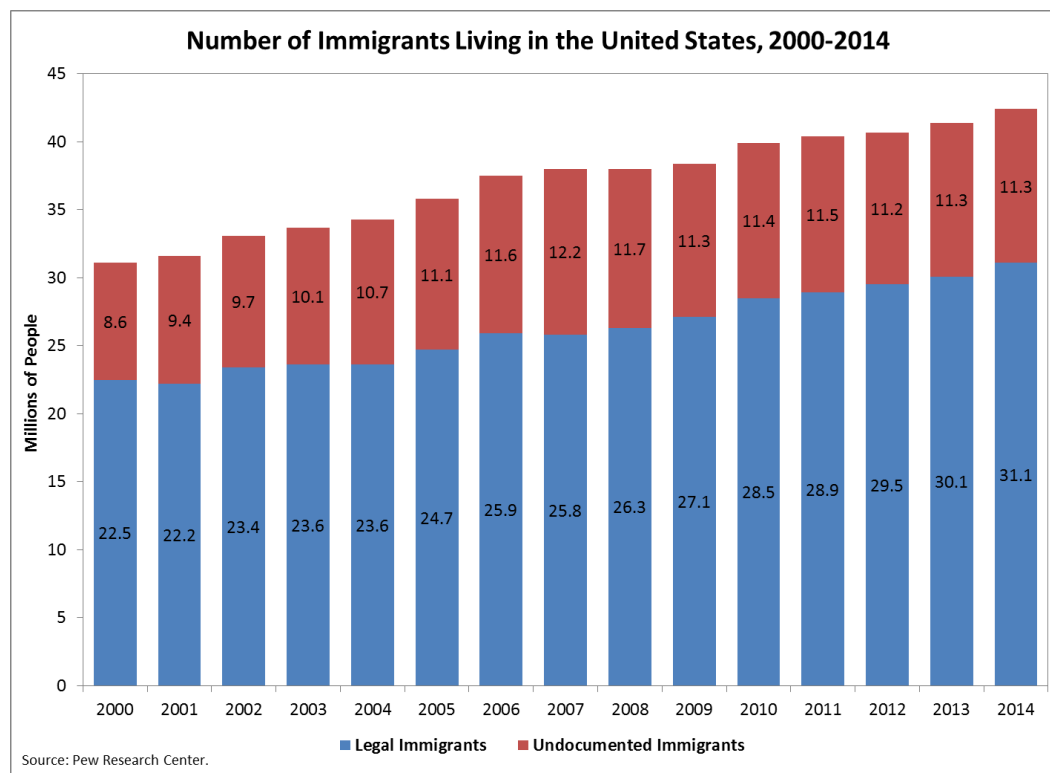
## An Analysis of the Economic and Fiscal Impact of Undocumented Workers



## Undocumented Immigration

Analysis of undocumented immigration and the undocumented workforce is complicated by a lack of detailed data. However, several thorough investigations of the issue have been conducted, and available information from well-respected organizations has been compiled. While there is some variation across studies due to such factors as methodological differences, the major findings are relatively consistent.

The Pew Research Center estimates that there are currently at least 11.3 million undocumented immigrants living in the United States, up from 8.6 million in 2000. Undocumented immigrants comprise a large component of the workforce in some industries and geographic areas. However, debate as to the costs and benefits of these undocumented residents is heated.

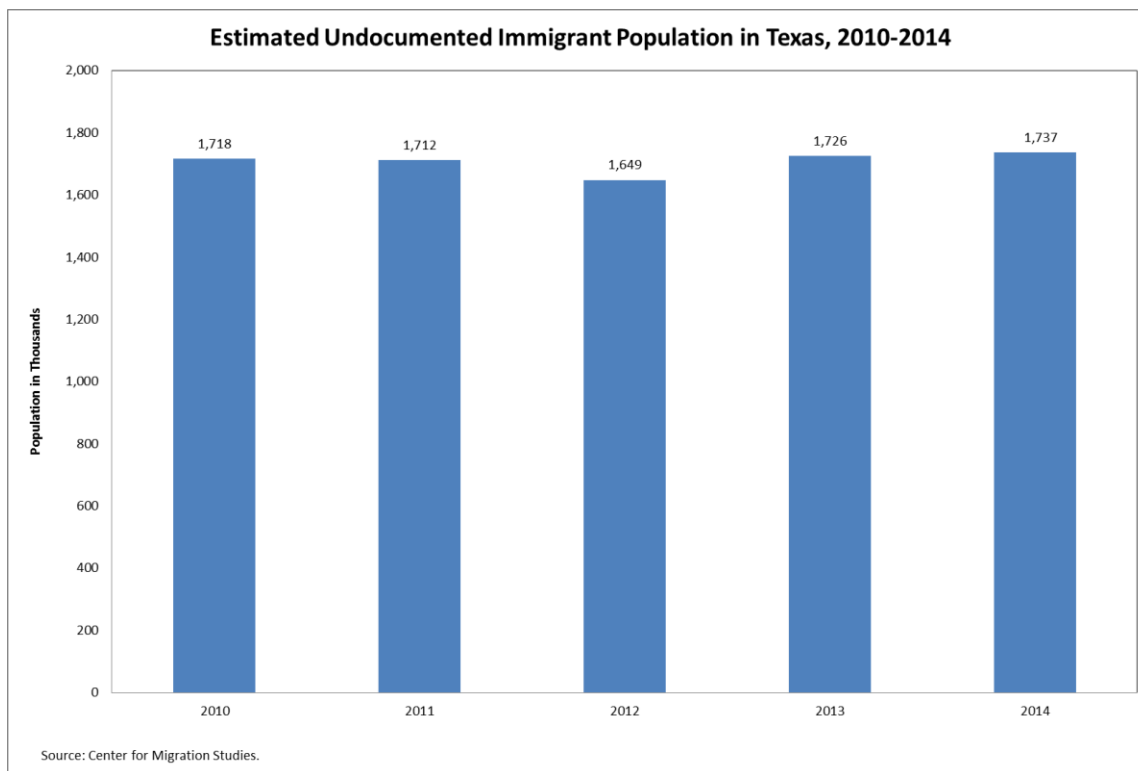


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### An Analysis of the Economic and Fiscal Impact of Undocumented Workers



In Texas, a recently released study from The Center for Migration Studies estimates that the undocumented immigrant population exceeds 1.7 million.<sup>10</sup> Over the past several years, the number of undocumented immigrants in the state has remained fairly stable, with fluctuations linked to overall economic conditions.



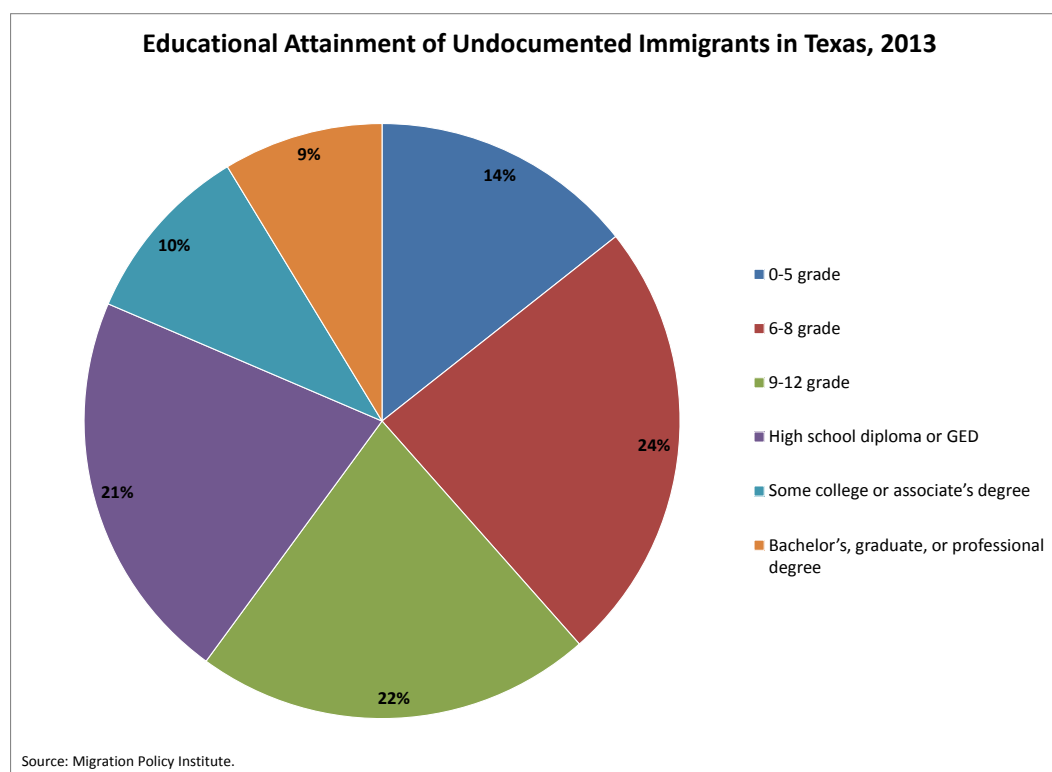
As with immigrants as a whole, the vast majority of undocumented immigrants in Texas come from Mexico (78% as of 2013, according to the Migration Policy Institute<sup>11</sup>) although recent reports suggest the numbers from Mexico entering the US have been

<sup>10</sup> Warren, Robert, US Undocumented Population Drops Below 11 Million in 2014, with Continued Declines in the Mexican Undocumented Population, Journal on Migration and Human Security, Center for Migration Studies January 2016.

<sup>11</sup> Note that the Migration Policy Institute's 2013 estimates of the size of the total undocumented population in Texas are somewhat lower than those of the Center for Migration Studies or the Pew Research Center. However, the Migration Policy Institute study provided additional insights into the characteristics of the undocumented population which are reported herein.

declining.<sup>12</sup> El Salvador and Honduras were the countries with the next highest numbers of undocumented immigrants in Texas in 2013.<sup>13</sup>

Of undocumented adult immigrants in 2013, 60% did not have a high school diploma.<sup>14</sup> However, an estimated 21% had a high school diploma or GED; approximately 10% had some college or an associate's degree; and 9% held a bachelor's, graduate, or professional degree.<sup>15</sup> School enrollment for ages 3-17 is approximately 91% within the undocumented immigrant population.<sup>16</sup>



<sup>12</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/undocumented-immigrant-population/state/TX>; Warren, Robert, US Undocumented Population Drops Below 11 Million in 2014, with Continued Declines in the Mexican Undocumented Population, Journal on Migration and Human Security, Center for Migration Studies January 2016.

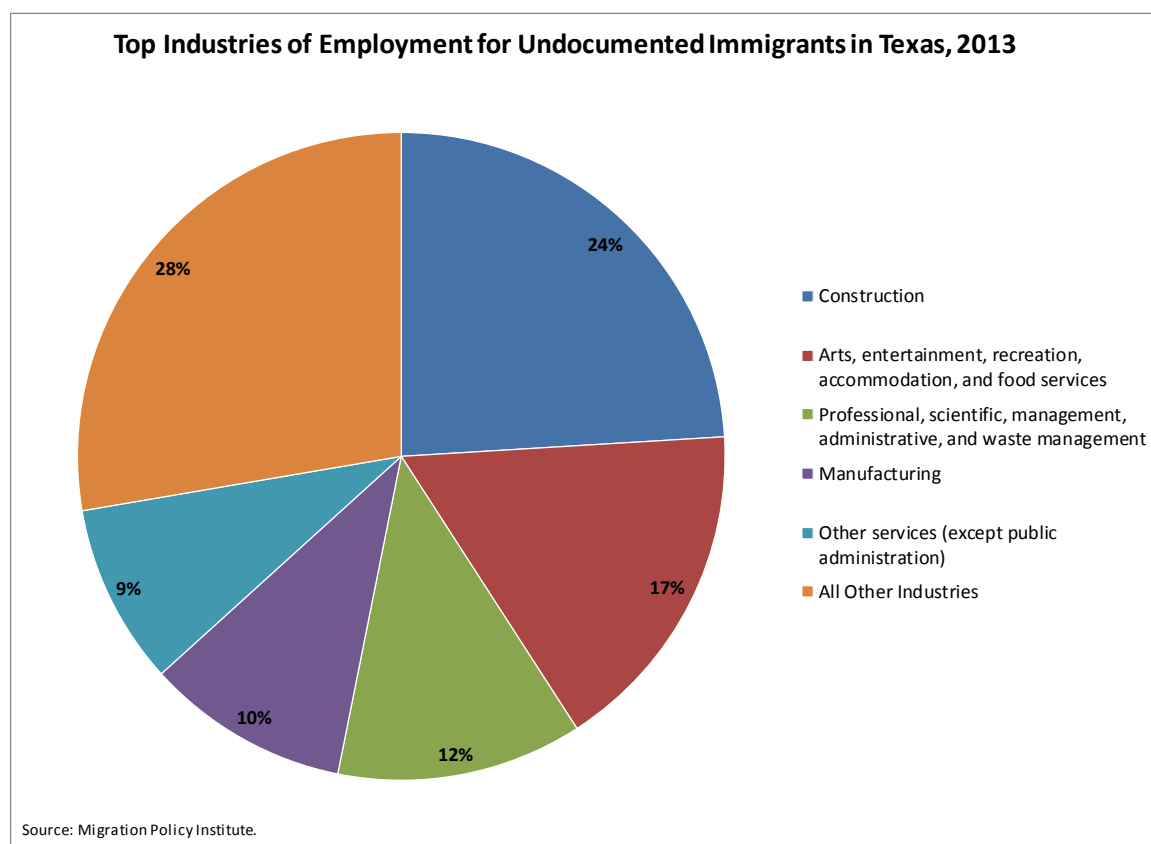
<sup>13</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/undocumented-immigrant-population/state/TX>.

<sup>14</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/undocumented-immigrant-population/state/TX>.

<sup>15</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/undocumented-immigrant-population/state/TX>.

<sup>16</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/undocumented-immigrant-population/state/TX>.

The labor force participation rate among undocumented immigrants in Texas is approximately 68%, while the unemployment rate is 8.6%.<sup>17</sup> The two primary industries that undocumented workers are employed in are construction (24%) and the arts, entertainment, recreation, accommodation, and food services (17%) industries.<sup>18</sup> Although the industry is often discussed in debates regarding immigration, the number of agricultural workers is a small percentage of the total. However, because agriculture is also a relatively small part of the overall workforce at present, these workers make up a substantial portion of overall farm labor.



<sup>17</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/unauthorized-immigrant-population/state/TX>.

<sup>18</sup> Profile of the Unauthorized Population: Texas, Migration Policy Institute, <http://www.migrationpolicy.org/data/unauthorized-immigrant-population/state/TX>.

## Economic Benefits and Costs of the Undocumented Workforce

Undocumented immigrants are an important component of the workforce and, thus, economic activity. As an initial phase of this analysis, The Perryman Group measured the direct contribution of the undocumented workforce by industry. Total net economic benefits were then quantified.

### NET DIRECT ECONOMIC BENEFITS OF THE UNDOCUMENTED WORKFORCE

The Perryman Group utilized available data related to the employment patterns of the undocumented workforce as a starting point for this phase of the analysis. These estimates were then allocated to various industries based on the best available information regarding employment patterns and translated into overall measures of resulting output, income, and spending based on the coefficients of the impact assessment model used in this analysis. They were fully adjusted for the wage and productivity characteristics of the relevant population in order to quantify benefits (see the Appendices for a more detailed discussion).

The net direct economic benefits of undocumented workers in Texas were found to include almost **\$326.1 billion** in total expenditures and **\$144.7 billion** in output (gross product) each year as well as **1.2 million** jobs.

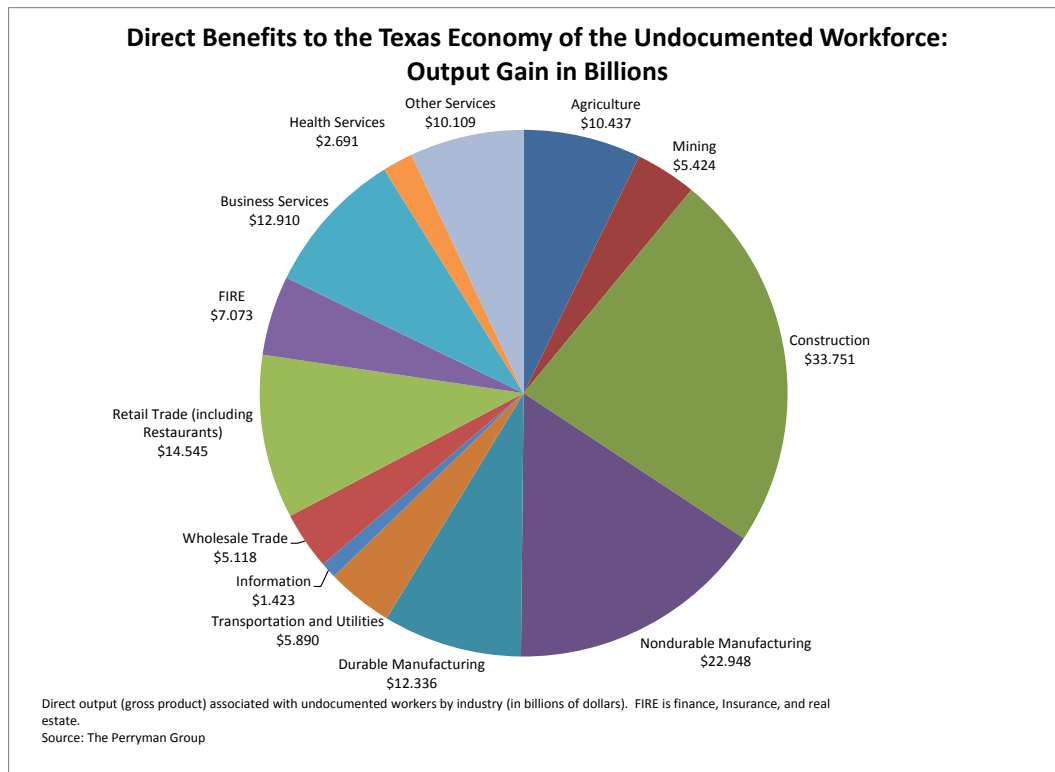
<b>Net Direct Economic Benefits for the Texas Economy of Undocumented Workers</b> <i>(Dollar Amounts in Billions of 2015 Dollars)</i>	
Total Expenditures	<b>\$326.057</b>
Gross Product	<b>\$144.654</b>
Personal Income	<b>\$90.550</b>
Wages & Salaries	<b>\$56.450</b>
Retail Sales	<b>\$18.920</b>
Employment (Permanent Jobs)	<b>1,206,779</b>
Note: These direct benefits were quantified based on the best available information regarding employment patterns and translated into overall measures of resulting output, income, and spending based on the coefficients of the impact assessment model used in this analysis. They were fully adjusted for the wage and productivity characteristics of the relevant population. Source: The Perryman Group	

Effects by industry are depicted in the graph below, with further detail in the Appendices.



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## An Analysis of the Economic and Fiscal Impact of Undocumented Workers



## Measuring Economic Effects of the Undocumented Workforce

The direct economic contribution of the undocumented workforce generates multiplier effects across a spectrum of industries. These multiplier effects were measured using The Perryman Group's input-output assessment model (the US Multi-Regional Impact Assessment System), which is described in further detail in the Appendices to this report. The system has been consistently maintained and updated since it was developed by the firm some 30 years ago, and has been used in hundreds of analyses for clients ranging from major corporations to government agencies. It uses a variety of data (from surveys, industry information, and other sources) to describe the various goods and services (known as resources or inputs) required to produce another good/service. This process allows for estimation of the total economic impact (including multiplier effects) of the undocumented workforce, and the model used reflects the specific industrial composition and characteristics of the Texas economy. The model is also linked to a system for quantifying the tax effects associated with the gains business activity such as increases in retail sales taxes and property taxes. In addition, The Perryman Group analyzed costs associated with the undocumented workforce including social services, health care, and education for dependent children. These costs were subtracted from total economic benefits quantified to obtain an estimate of net effects. The likely economic cost of restrictive immigration policy was also examined. This segment of the analysis assumed that immigration policy was enacted which resulted in a net reduction in undocumented workers of about 35% (after sufficient time for dynamic adjustments and substitution), thus reducing the economic benefits stemming from this segment of the labor force.

Economic effects are quantified for key measures of business activity:

- **Total expenditures** (or total spending) measure the dollars changing hands as a result of the economic stimulus.
- **Gross product** (or output) is production of goods and services that will come about in each area as a result of the activity. This measure is parallel to the gross domestic product numbers commonly reported by various media outlets and is a subset of total expenditures.
- **Personal income** is dollars that end up in the hands of people in the area; the vast majority of this aggregate derives from the earnings of employees, but payments such as interest and rents are also included.
- **Wages & Salaries** is a subset of personal income which is comprised of earnings of employees only.
- **Job gains** are expressed as permanent jobs for ongoing operational effects.

Industry-level detail is provided in the Appendices. Monetary values were quantified on a constant (2015) dollar basis. See the Appendices to this report for additional information regarding the methods and assumptions used in this analysis.

## TOTAL NET ECONOMIC BENEFITS OF THE UNDOCUMENTED WORKFORCE

As noted, the direct economic activity stemming from the undocumented workforce generates multiplier effects through the economy, which were measured by The Perryman Group. Costs involved with undocumented workers such as health care, education, social services, and law enforcement were then subtracted to obtain a measure of the net economic benefits associated with the undocumented workforce.

The total net economic benefits of undocumented workers in Texas are estimated to include **\$663.4 billion** in total expenditures and almost **\$290.3 billion** in output (gross product) each year, as well as more than **3.3 million** jobs when indirect and induced effects are considered.

*The total net economic benefits of undocumented workers in Texas are estimated to include **\$663.4 billion** in total expenditures and almost **\$290.3 billion** in output (gross product) each year, as well as more than **3.3 million** jobs.*

### **Total Net Economic Benefits for the Texas Economy of Undocumented Workers Benefits (including Multiplier Effects and Fully Adjusted to Reflect Associated Costs)**

*(Dollar Amounts in Billions of 2015 Dollars)*

Total Expenditures	<b>\$663.435</b>
Gross Product	<b>\$290.276</b>
Personal Income	<b>\$180.665</b>
Wages & Salaries	<b>\$133.166</b>
Retail Sales	<b>\$77.029</b>
Employment (Permanent Jobs)	<b>3,308,365</b>

Note: Based on the total economic benefits of the undocumented workforce adjusted to net out costs such as education, social services, and health care.

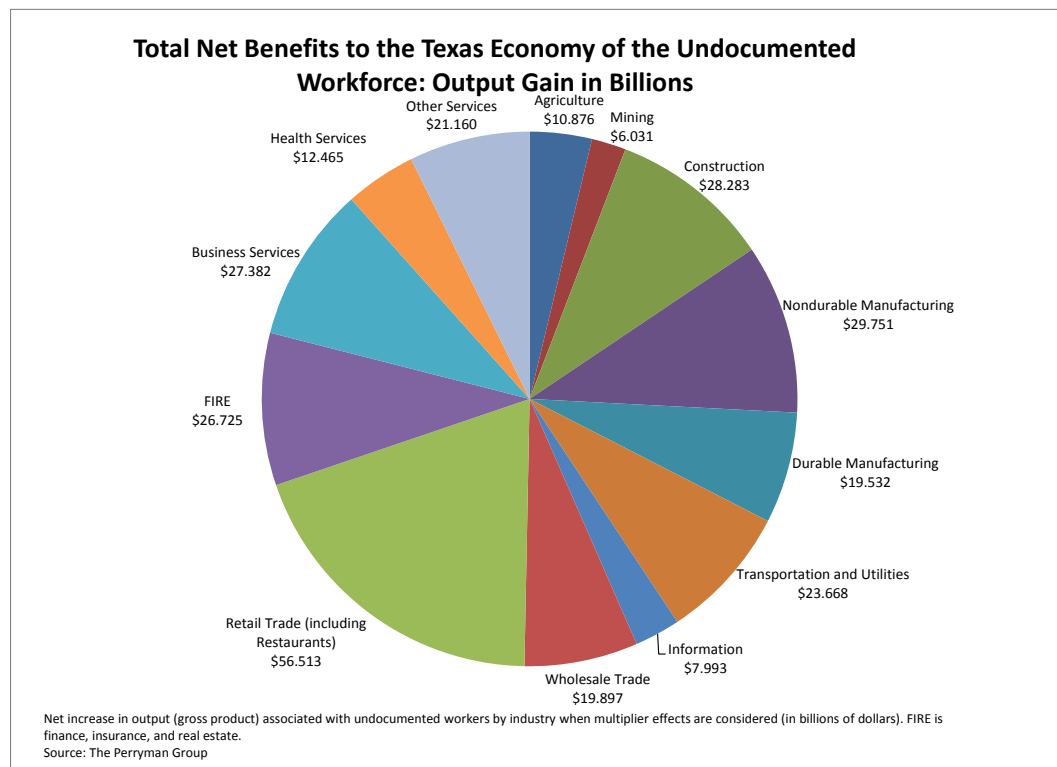
Source: The Perryman Group

## TEXAS NEEDS THE WORKERS!!

### An Analysis of the Economic and Fiscal Impact of Undocumented Workers

It should be noted that these effects represent approximately 17% of GDP in Texas and 25% of employment. These results reflect the facts that (1) about 11.5% of all private sector workers in Texas are presently undocumented and (2) many of them work in export-oriented industries.

Effects by industry are depicted in the graph below, with further detail in the Appendices.



## Fiscal Implications for Federal, State, and Local Governments

As noted, a key issue in ongoing policy debate related to undocumented immigrants is the fiscal effects for federal, state, and local government entities. The Perryman Group examined fiscal issues from both the benefit and the cost perspectives.

Undocumented workers pay taxes through various mechanisms such as retail sales. The Perryman Group estimates that undocumented workers in Texas generate direct taxes to federal, State of Texas, and local governments within the state totaling **\$13.5 billion** per year. Note that these amounts are adjusted for the estimated compliance levels with regard to income taxes and other levies typically paid through payroll withholding.

In addition, the increase in economic activity associated with these workers generates additional fiscal revenues. The undocumented workforce in Texas generates an estimated **\$32.2 billion** per year in indirect and induced taxes.

The total tax effect of the undocumented workforce in Texas includes estimated overall (direct, indirect, and induced) gains of **\$45.7 billion** per year, including \$23.2 billion to the federal government, \$15.0 billion to the State of Texas, and \$7.6 billion to local entities within the state.

*The total revenue effect of the undocumented workforce in Texas includes estimated overall (direct, indirect, and induced) gains of **\$45.7 billion** per year, including \$23.2 billion to the federal government, \$15.0 billion to the State of Texas, and \$7.6 billion to local entities within the state.*

There are costs associated with the undocumented population which accrue to government entities such as education, social services, and health care. The Perryman Group measured these costs based on the best available information from various sources (including the Congressional Budget Office) and includes both the costs associated with the children of undocumented workers who were born in the US and

the allocated incremental expenses associated with the general provision of public services (such as police and fire protection).<sup>19</sup>

The amounts were updated to reflect current prices and population estimates. The total cost of the Texas undocumented population is estimated to be **\$12.8 billion** per year, including \$3.0 billion to the federal government, \$3.1 billion to the State of Texas, and \$6.7 billion to local entities within the state.

Subtracting the cost from the total fiscal benefit yields an estimate of the net fiscal effect of the undocumented population. The Perryman Group estimates that the total net fiscal effect of the Texas undocumented population includes benefits of **\$32.9 billion**, including \$20.1 billion to the federal government, \$11.8 billion to the State of Texas, and \$0.9 billion to local governments within Texas.

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<sup>19</sup> The Impact of Unauthorized Immigrants on the Budgets of State and Local Governments, Congress of the United States, Congressional Budget Office, December 2007.  
Martin, Jack and Eric A. Ruark, The Fiscal Burden of Illegal Immigration on United States Taxpayers, The Federation for American Immigration Reform, July 2010, revised February 2011.  
New Americans in Texas: The Political and Economic Power of Immigrants, Latinos, and Asians in the Lone Star State, American Immigration Council, January 2015.  
US Census Bureau, 2013 Census of Governments: Finance – Surveys of State and Local Government Finances.

<b>Fiscal Benefits and Costs of Undocumented Immigrants in Texas</b> <i>(Dollar amounts in billions.)</i>				
	Federal	State of Texas	Local Governments within Texas	TOTAL
<b>Direct Tax Receipts</b> <i>(Includes taxes paid by undocumented workers such as retail sales tax, income tax, property tax, and other levies.)</i>	\$6.855	\$4.202	\$2.480	<b>\$13.538</b>
<b>Indirect and Induced Tax Receipts</b> <i>(Includes tax effects on indirect and induced economic activity such as retail sales taxes, income tax, property tax, and other levies.)</i>	\$16.311	\$10.775	\$5.124	<b>\$32.210</b>
<b>Total Tax Effect</b> <i>(Includes direct taxes paid as well as tax receipts associated with indirect and induced effects.)</i>	\$23.166	\$14.978	\$7.604	<b>\$45.748</b>
<b>Costs</b> <i>(Includes all costs associated with undocumented workers and their dependents such as social services, health care, education, and other government services.)</i>	\$(3.033)	\$(3.132)	\$(6.685)	<b>\$(12.849)</b>
<b>TOTAL NET EFFECT</b>	<b>\$20.133</b>	<b>\$11.846</b>	<b>\$0.920</b>	<b>\$32.899</b>
* Rows and columns may not sum to totals due to rounding. Source: The Perryman Group				

It should be noted, however, that many local governmental entities likely experience a net deficit from the presence of undocumented workers. This phenomenon occurs because much of the revenue is derived from sales taxes, which primarily flow to cities, while many of the expenses are incurred by school districts and public health care facilities, which typically rely on property taxes for much of their revenue. The overall fiscal surplus is quite substantial and certainly would permit intergovernmental transfers to eliminate any shortfalls, but this is an issue that should be addressed in future policy discussions.

## Public Policy Implications and the Cost of Restrictive Immigration Policy

One of the purposes of this analysis is to provide an economic framework to help in shaping the public policy debate in a reasonable manner. Clearly, the undocumented workforce in Texas generates substantial economic activity. Moreover, the fiscal effects are decidedly positive, even with costs are considered (although there are some allocation issues that merit attention).

While there are many issues relevant to the immigration policy debate, it is important to consider the potential economic cost of restrictive immigration policy. In order to illustrate these potential costs, The Perryman Group conducted a simulation of the potential effects of a restrictive immigration policy. The scenario did not assume the extreme and impractical measures proposed by some groups, but rather reflected a program that would restrict entry, have more enforcement mechanisms, and not provide a sensible approach to obtaining needed labor resources. For comparative purposes, the scenario was conducted relative to the size of the Texas economy in 2015, but was conducted on a dynamic basis to allow time for the market to adjust to the reduced level of resources. Based on these postulates, it was found that the pool of labor now available through undocumented workers would be reduced by about 35%.

The adjustment process which would be required in this scenario would be disruptive, resulting in potential fallout ranging from failing farms due to unharvested crops to an inability to complete construction projects in a timely manner. Tourism would also likely be affected, as significant numbers of undocumented worker jobs fall within accommodations and food services industries. With a reduction in the undocumented workforce, economic activity would also be reduced across a spectrum of industries.

*The Perryman Group estimates that when multiplier effects are considered, the economic cost of restrictive immigration policy includes **\$101.8 billion** in foregone total expenditures and almost **\$54.8 billion** in gross product each year as well as a loss of more than **417,000 jobs** in Texas.*



## **ECONOMIC COST OF RESTRICTIVE IMMIGRATION POLICY**

A restrictive immigration policy of the type described above would have significant detrimental effects on the Texas economy. The Perryman Group estimates that when multiplier effects are considered, the economic cost of restrictive immigration policy includes **\$104.8 billion** in total expenditures and almost **\$54.8 billion** in gross product each year as well as a loss of almost **418,000** jobs in Texas. Obviously, more extreme measures would bring correspondingly greater disruptions.

<b>Total Net Economic Cost (including Multiplier Effects) for the Texas Economy of Restrictive Immigration Policy</b> <i>(Dollar Amounts in Billions of 2015 Dollars)</i>	
Total Expenditures	<b>\$(104.811)</b>
Gross Product	<b>\$(54.751)</b>
Personal Income	<b>\$(33.471)</b>
Wages & Salaries	<b>\$(22.051)</b>
Retail Sales	<b>\$(14.630)</b>
Employment (Permanent Jobs)	<b>(417,815)</b>
Note: Based on immigration policy that would restrict entry, have more enforcement mechanisms, and not provide a sensible approach to obtaining needed labor resources, resulting in a reduction in the pool of labor now available through undocumented workers of about 35%. Source: The Perryman Group	

## Conclusion

For a number of years, immigration and undocumented immigration have been the subject of heated debate. Unfortunately, there are no simple answers, because of the many complex elements of the issue. While immigration policy is important to national security and other priorities, there are also economic considerations.

The Perryman Group estimates that the total net economic benefits of undocumented workers in Texas include **\$663.4 billion** in total expenditures and almost **\$290.3 billion** in output (gross product) each year as well as more than **3.3 million** jobs.

These estimates fully reflect the costs of the undocumented population such as education, social services, and health care.

Fiscal benefits are also substantial. Even when costs of social services provided to the undocumented population by government entities are considered, the benefits include an estimated **\$32.9 billion** with \$20.1 billion to the federal government, \$11.8 billion to the State of Texas, and \$0.9 billion to local governments within Texas (although the allocation across units of government is not uniform).

Immigration policy is a source of controversy, with complex issues and no solutions that simultaneously please all stakeholders. While there are many considerations, the fact is that undocumented workers in Texas generate millions of jobs and billions in tax revenue. Restrictive immigration policy will cause substantial economic and fiscal losses, and optimal policy would be crafted to minimize these dislocations. In short, **TEXAS NEEDS THE WORKERS!!**

*Undocumented workers in Texas lead to economic benefits including than **3.3 million** jobs and net fiscal benefits of an estimated **\$32.9 billion**, including \$20.1 billion to the federal government, \$11.8 billion to the State of Texas, and \$0.9 billion to local governments within Texas.*

## Appendix A

## About The Perryman Group

The Perryman Group (TPG) is an economic research and analysis firm based in Waco, Texas. The firm has more than 30 years of experience in assessing the economic impact of corporate expansions, regulatory changes, real estate developments, public policy initiatives, and myriad other factors affecting business activity. TPG has conducted hundreds of impact analyses for local areas, regions, and states throughout the United States. Impact studies have been performed for hundreds of clients including many of the largest corporations in the world, governmental entities at all levels, educational institutions, major health care systems, utilities, and economic development organizations.

Dr. M. Ray Perryman, founder and President of the firm, developed the US Multi-Regional Impact Assessment System (used in this study) in the early 1980s and has consistently maintained, expanded, and updated it since that time. The model has been used in hundreds of diverse applications and has an excellent reputation for reliability. A major study developed using the relevant model was recently published in The Journal of Medical Economics.

The Perryman Group has analyzed the economic and fiscal effects of various types of taxes, policy changes, and economic stimuli on hundreds of occasions over the past 30 years. These assessments include effects of corporate locations and expansions, regulatory and other policy changes, benefits payments, legislative initiatives, tax reform, judicial reform, and many others. The firm has also examined issues related to immigration and the undocumented workforce on many occasions, including a comprehensive analysis of the effects on the US and each state prior to the most recent recession.

## Methods Used

### Economic Impact Assessment

The basic modeling technique employed in this study is known as dynamic input-output analysis. This methodology essentially uses extensive survey data, industry information, and a variety of corroborative source materials to create a matrix describing the various goods and services (known as resources or inputs) required to produce one unit (a dollar's worth) of output for a given sector. Once the base information is compiled, it can be mathematically simulated to generate evaluations of the magnitude of successive rounds of activity involved in the overall production process.

There are two essential steps in conducting an input-output analysis once the system is operational. The first major endeavor is to accurately define the levels of direct activity to be evaluated.

In this instance, the direct effect of the undocumented workforce was quantified based on the best available estimates of undocumented workers from reliable sources, including appropriate adjustments for the Census undercount and recent population patterns. The workers were allocated across detailed industrial categories using current employment and occupational data. Other measures of direct effects (expenditures, gross product, personal income, and wages and salaries) were simulated using the direct coefficients of the model described below, with differentials in income and productivity being fully implemented. Once the direct activity was quantified, the next phase of the analysis involved the simulation of the firm's US Multi-Regional Impact Assessment System (USMRIAS) which was developed and is maintained by The Perryman Group.

In order to quantify the economic benefits of the undocumented workforce on a net basis, The Perryman Group also analyzed the costs of the undocumented population. These costs include social services, education, health care, and other public services. Once the total costs were quantified, they were subtracted from the total economic benefits to obtain an estimate of the net economic benefits. A simulation of the effects of a potential restrictive policy was also conducted, as described within the report.

The USMRIAS has been used in hundreds of diverse applications across the country and has an excellent reputation for accuracy and credibility. The system used in the current simulations reflects the unique industrial structure and characteristics of the Texas economy.

The USMRIAS is somewhat similar in format to the Input-Output Model of the United States and the Regional Input-Output Modeling System, both of which are maintained by the US Department of Commerce. The model developed by TPG, however, incorporates several important enhancements and

## TEXAS NEEDS THE WORKERS!!

### An Analysis of the Economic and Fiscal Impact of Undocumented Workers

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refinements. Specifically, the expanded system includes (1) comprehensive 500-sector coverage for any county, multi-county, or urban region; (2) calculation of both total expenditures and value-added by industry and region; (3) direct estimation of expenditures for multiple basic input choices (expenditures, output, income, or employment); (4) extensive parameter localization; (5) price adjustments for real and nominal assessments by sectors and areas; (6) measurement of the induced impacts associated with payrolls and consumer spending; (7) embedded modules to estimate multi-sectoral direct spending effects; (8) estimation of retail spending activity by consumers; and (9) comprehensive linkage and integration capabilities with a wide variety of econometric, real estate, occupational, and fiscal impact models. The model has been thoroughly tested for reasonableness and historical reliability.

The impact assessment (input-output) process essentially estimates the amounts of all types of goods and services required to produce one unit (a dollar's worth) of a specific type of output. For purposes of illustrating the nature of the system, it is useful to think of inputs and outputs in dollar (rather than physical) terms. As an example, the construction of a new building will require specific dollar amounts of lumber, glass, concrete, hand tools, architectural services, interior design services, paint, plumbing, and numerous other elements. Each of these suppliers must, in turn, purchase additional dollar amounts of inputs. This process continues through multiple rounds of production, thus generating subsequent increments to business activity. The initial process of building the facility is known as the direct effect. The ensuing transactions in the output chain constitute the indirect effect.

Another pattern that arises in response to any direct economic activity comes from the payroll dollars received by employees at each stage of the production cycle. As workers are compensated, they use some of their income for taxes, savings, and purchases from external markets. A substantial portion, however, is spent locally on food, clothing, health care services, utilities, housing, recreation, and other items. Typical purchasing patterns in the relevant areas are obtained from the ACCRA Cost of Living Index, a privately compiled inter-regional measure which has been widely used for several decades, and the Consumer Expenditure Survey of the US Department of Labor. These initial outlays by area residents generate further secondary activity as local providers acquire inputs to meet this consumer demand. These consumer spending impacts are known as the *induced effect*. The USMRIAS is designed to provide realistic, yet conservative, estimates of these phenomena.

Sources for information used in this process include the Bureau of the Census, the Bureau of Labor Statistics, the Regional Economic Information System of the US Department of Commerce, and other public and private sources. The pricing data are compiled from the US Department of Labor and the US Department of Commerce. The verification and testing procedures make use of extensive public and private sources.

Impacts were measured in 2015 dollars to eliminate the effects of inflation.

The USMRIAS generates estimates of the effect on several measures of business activity. The most comprehensive measure of economic activity used in this study is **Total Expenditures**. This measure

## TEXAS NEEDS THE WORKERS!!

### An Analysis of the Economic and Fiscal Impact of Undocumented Workers

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incorporates every dollar that changes hands in any transaction. For example, suppose a farmer sells wheat to a miller for \$0.50; the miller then sells flour to a baker for \$0.75; the baker, in turn, sells bread to a customer for \$1.25. The Total Expenditures recorded in this instance would be \$2.50, that is, \$0.50 + \$0.75 + \$1.25. This measure is quite broad, but is useful in that (1) it reflects the overall interplay of all industries in the economy, and (2) some key fiscal variables such as sales taxes are linked to aggregate spending.

A second measure of business activity frequently employed in this analysis is that of **Gross Product**, the most commonly reported statistic regarding national economic performance. It is defined as the value of all final goods produced in a given region for a specific period of time. Stated differently, it captures the amount of value-added (gross area product) over intermediate goods and services at each stage of the production process, that is, it eliminates the double counting in the Total Expenditures concept. Using the example above, the Gross Product is \$1.25 (the value of the bread) rather than \$2.50. Alternatively, it may be viewed as the sum of the value-added by the farmer, \$0.50; the miller, \$0.25 (\$0.75 - \$0.50); and the baker, \$0.50 (\$1.25 - \$0.75). The total value-added is, therefore, \$1.25, which is equivalent to the final value of the bread. In many industries, the primary component of value-added is the wage and salary payments to employees.

The third gauge of economic activity used in this evaluation is **Personal Income**. As the name implies, Personal Income is simply the income received by individuals, whether in the form of wages, salaries, interest, dividends, proprietors' profits, or other sources. It may thus be viewed as the segment of overall impacts which flows directly to the citizenry. The **Wage and Salary** segment of personal income was also reported separately.

The fourth measure, **Retail Sales**, represents the component of Total Expenditures which occurs in retail outlets (general merchandise stores, automobile dealers and service stations, building materials stores, food stores, drugstores, restaurants, and so forth). Retail Sales is a commonly used measure of consumer activity.

The final aggregate used is **Permanent Jobs and Person-Years of Employment**. The Person-Years of Employment measure reveals the full-time equivalent jobs generated by an activity. It should be noted that, unlike the dollar values described above, Permanent Jobs is a "stock" rather than a "flow." In other words, if an area produces \$1 million in output in 2014 and \$1 million in 2015, it is appropriate to say that \$2 million was achieved in the 2014-2015 period. If the same area has 100 people working in 2014 and 100 in 2015, it only has 100 Permanent Jobs. When a flow of jobs is measured, such as in a construction project or a cumulative assessment over multiple years, it is appropriate to measure employment in Person-Years (a person working for a year). This concept is distinct from Permanent Jobs, which anticipates that the relevant positions will be maintained on a continuing basis.

## **Fiscal Impact Assessment**

The Perryman Group measured the tax effects of the undocumented workforce in Texas. These taxes stem from (1) direct taxes paid by undocumented residents and (2) indirect tax effects associated with economic benefits of the undocumented workforce.

The **direct tax effects** are based on simulations of the direct activity through the fiscal system noted below. The amounts actually paid by the undocumented workers were compared to other reliable estimates for reasonableness.

In order to measure **indirect tax effects**, The Perryman Group utilized its Fiscal Impact Assessment System, which is linked to the firm's US Multi-Regional Impact Assessment System previously described. Tax increases are based on gains stemming from incremental taxable retail sales and incremental property taxes. While these are the major sources of fiscal stimulus, there are others ranging from increased licenses and fees to enhanced franchise tax collections, severance taxes to the State, occupancy taxes from increased travel, and numerous other sources. The Perryman Group's model uses empirical evidence of the linkages between economic activity and tax collections, and the specific tax structure of the study area is incorporated.

Another element of the fiscal assessment involved estimating the costs to various government entities associated with the undocumented population. In order to estimate these costs, The Perryman Group used the best available estimates from various sources (including the Congressional Budget Office), with updates to capture the most recent undocumented population estimates. This segment of the analysis accounted for direct services (including those for the children of undocumented residents who were born in the US), as well as indirect allocations for other services (such as public safety).



## **Detailed Sectoral Results**

<b>The Net Direct Impact of Undocumented Workers on Business Activity in Texas</b> <b>(Based on Size of the Texas Economy in 2015)</b>					
<b>Sector</b>	<b>Total Expenditures</b>	<b>Gross Product</b>	<b>Personal Income</b>	<b>Wages &amp; Salaries</b>	<b>Employment</b>
	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(Permanent Jobs)</i>
Agriculture	\$27,741,210,063	\$10,436,704,427	\$5,188,755,240	\$1,704,282,695	48,271
Mining	\$13,514,782,856	\$5,424,108,353	\$2,010,791,105	\$710,835,920	8,331
Construction	\$62,032,901,588	\$33,750,801,108	\$26,322,462,020	\$14,267,348,361	265,491
Nondurable Manufacturing	\$96,392,192,011	\$22,947,829,554	\$9,669,303,149	\$5,700,656,799	104,473
Durable Manufacturing	\$31,323,608,299	\$12,336,385,903	\$8,604,072,851	\$6,735,166,978	76,543
Transportation and Utilities	\$12,664,583,316	\$5,889,699,352	\$3,767,770,221	\$2,258,165,473	44,792
Information	\$2,120,811,971	\$1,422,886,111	\$694,172,227	\$525,484,018	6,969
Wholesale Trade	\$6,438,117,335	\$5,117,757,602	\$3,001,572,482	\$2,296,641,062	24,136
Retail Trade	\$18,920,319,057	\$14,544,949,555	\$8,479,383,848	\$6,204,345,759	265,491
Finance, Insurance, and Real Estate	\$18,059,399,946	\$7,073,291,001	\$2,370,601,289	\$1,612,121,218	21,217
Business Services	\$17,174,176,866	\$12,909,708,111	\$11,047,728,750	\$8,380,923,714	135,709
Health Services	\$3,174,955,583	\$2,690,546,344	\$2,216,874,720	\$1,554,663,453	35,251
Other Services	\$16,499,564,276	\$10,109,223,169	\$7,176,600,474	\$4,499,549,819	170,104
<b>TOTAL</b>	<b>\$326,056,623,169</b>	<b>\$144,653,890,590</b>	<b>\$90,550,088,375</b>	<b>\$56,450,185,269</b>	<b>1,206,779</b>
Note: These direct benefits were quantified based on the best available information regarding employment patterns and translated into overall measures of resulting output, income, and spending based on the coefficients of the impact assessment model used in this analysis. They were fully adjusted for the wage and productivity characteristics of the relevant population. Source: US Multi-Regional Impact Assessment System, The Perryman Group					

**TEXAS NEEDS THE WORKERS!!**  
**An Analysis of the Economic and Fiscal Impact of Undocumented Workers**



**The Net Total Impact (including Multiplier Effects) of Undocumented Workers on Business Activity in Texas**  
**(Based on Size of the Texas Economy in 2015)**

<b>Sector</b>	<b>Total Expenditures</b>	<b>Gross Product</b>	<b>Personal Income</b>	<b>Wages &amp; Salaries</b>	<b>Employment</b>
	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(Permanent Jobs)</i>
Agriculture	\$40,422,719,937	\$10,875,678,443	\$7,236,494,860	\$2,994,847,325	117,779
Mining	\$26,994,747,920	\$6,031,370,749	\$2,871,687,450	\$1,444,105,643	19,078
Construction	\$59,097,704,385	\$28,283,420,424	\$23,307,299,991	\$15,987,323,173	336,769
Nondurable Manufacturing	\$123,657,016,766	\$29,751,437,275	\$13,705,777,619	\$11,099,551,193	280,030
Durable Manufacturing	\$49,656,360,948	\$19,532,120,247	\$12,212,410,765	\$10,113,891,782	192,585
Transportation and Utilities	\$54,163,645,146	\$23,667,909,307	\$14,172,202,280	\$9,784,362,096	174,364
Information	\$13,055,354,869	\$7,992,542,098	\$3,476,598,814	\$2,443,748,400	34,974
Wholesale Trade	\$29,404,823,425	\$19,896,604,412	\$11,472,559,315	\$9,939,590,916	134,019
Retail Trade	\$77,028,567,505	\$56,513,372,512	\$32,631,108,018	\$26,655,867,470	1,065,170
Finance, Insurance, and Real Estate	\$87,116,353,401	\$26,725,206,733	\$9,951,880,976	\$6,986,792,114	104,974
Business Services	\$43,920,708,870	\$27,382,026,014	\$22,336,716,839	\$16,786,785,968	279,536
Health Services	\$18,014,586,924	\$12,464,695,101	\$10,539,015,161	\$8,047,031,456	179,069
Other Services	\$40,902,170,668	\$21,159,714,253	\$16,750,837,932	\$10,882,266,932	390,019
<b>TOTAL</b>	<b>\$663,434,760,762</b>	<b>\$290,276,097,569</b>	<b>\$180,664,590,022</b>	<b>\$133,166,164,469</b>	<b>3,308,365</b>

Note: Based on the total economic benefits of the undocumented workforce adjusted to net out costs such as education, social services, and health care.

Source: US Multi-Regional Impact Assessment System, The Perryman Group

**TEXAS NEEDS THE WORKERS!!**  
**An Analysis of the Economic and Fiscal Impact of Undocumented Workers**



<b>The Dynamic Effects of Significantly Restricting Undocumented Workers on Business Activity in Texas</b> <b>(Based on Size of the Texas Economy in 2015)</b>					
<b>Sector</b>	<b>Total Expenditures</b>	<b>Gross Product</b>	<b>Personal Income</b>	<b>Wages &amp; Salaries</b>	<b>Employment</b>
	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(2015 Dollars)</i>	<i>(Permanent Jobs)</i>
Agriculture	(\$5,927,566,884)	(\$1,896,666,562)	(\$1,240,288,361)	(\$406,865,535)	(10,916)
Mining	(\$1,918,054,540)	(\$736,527,386)	(\$365,647,342)	(\$197,738,672)	(2,054)
Construction	(\$8,023,088,588)	(\$4,977,375,853)	(\$4,062,539,509)	(\$2,201,984,995)	(37,686)
Nondurable Manufacturing	(\$19,424,217,696)	(\$5,587,670,803)	(\$2,491,557,999)	(\$1,635,997,594)	(30,595)
Durable Manufacturing	(\$7,967,757,310)	(\$3,559,674,934)	(\$2,210,875,148)	(\$1,735,360,949)	(20,866)
Transportation and Utilities	(\$7,327,857,832)	(\$3,924,838,496)	(\$2,269,782,824)	(\$1,349,899,131)	(19,833)
Information	(\$1,942,910,492)	(\$1,328,917,407)	(\$569,755,742)	(\$432,091,676)	(3,600)
Wholesale Trade	(\$5,203,866,384)	(\$4,094,195,155)	(\$2,317,440,703)	(\$1,773,180,394)	(15,517)
Retail Trade	(\$14,630,275,049)	(\$12,297,443,359)	(\$6,969,554,173)	(\$5,036,647,862)	(141,499)
Finance, Insurance, and Real Estate	(\$15,586,311,546)	(\$4,628,688,225)	(\$1,610,604,710)	(\$1,135,921,986)	(11,874)
Business Services	(\$5,802,479,427)	(\$4,270,159,999)	(\$3,443,877,383)	(\$2,612,561,757)	(31,729)
Health Services	(\$2,861,012,051)	(\$2,370,016,620)	(\$1,967,109,363)	(\$1,379,506,477)	(24,071)
Other Services	(\$8,195,675,615)	(\$5,078,737,140)	(\$3,952,073,391)	(\$2,152,795,878)	(67,575)
<b>TOTAL</b>	<b>(\$104,811,073,415)</b>	<b>(\$54,750,911,940)</b>	<b>(\$33,471,106,649)</b>	<b>(\$22,050,552,908)</b>	<b>(417,815)</b>
Note: Based on immigration policy that would restrict entry, have more enforcement mechanisms, and not provide a sensible approach to obtaining needed labor resources, resulting in a reduction in the pool of labor now available through undocumented workers of about 35%. Source: US Multi-Regional Impact Assessment System, The Perryman Group					