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US Undocumented Population Drops Below 11 Million in 2014, with Continued Declines in the Mexican Undocumented Population

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Executive Summary

Undocumented immigration has been a significant political issue in recent years, and is likely to remain so throughout and beyond the presidential election year of 2016. One reason for the high and sustained level of interest in undocumented immigration is the widespread belief that the trend in the undocumented population is ever upward. This paper shows that this belief is mistaken and that, in fact, the undocumented population has been decreasing for more than a half a decade. Other findings of the paper that should inform the immigration debate are the growing naturalized citizen populations in almost every US state and the fact that, since 1980, the *legally resident* foreign-born population from Mexico has grown faster than the undocumented population from Mexico.

Introduction

This paper sets forth detailed estimates of the US undocumented population in 2014 by the Center for Migration Studies of New York (CMS). It reports that the total undocumented population declined in 2014, as it has done in each year since 2008. The population fell below 11 million for the first time since 2004. The Mexican-born undocumented population also continued its steady decline; the population has fallen by more than 600,000 since 2010.

This paper describes trends in the undocumented population over the past few years for selected countries of origin and states of residence. The annual estimates for 2010 to 2014 were derived by CMS based on statistics on the foreign-born population collected in the Census Bureau's American Community Survey (ACS),[1] as described in Warren (2014).

1 The ACS is an annual statistical survey covering approximately 1 percent of the total US population. The survey gathers information previously obtained in the decennial census — the ACS questionnaires are very similar to the 2000 Census long form. The survey provides detailed social and economic data for all states, as well as all cities, counties, metropolitan areas, and population groups of 100,000 people or more.

The estimates for years prior to 2010 are based on estimates published in the *International Migration Review* (Warren and Warren 2013). The sources of data and methodology are summarized at the end of the paper.

Major Findings

The paper finds that:

- The total US undocumented population continued to decline in 2014 and has fallen by more than a million since 2008;
- The undocumented population of the majority of US states declined after 2008; however, 11 states reached their maximum population in 2014, including Texas;
- With the exception of Alabama and possibly Georgia, restrictive state immigration laws in 2010-2011 had little impact on undocumented population trends;
- The Mexican-born undocumented population was about 600,000 smaller in 2014 than it was in 2010;
- About 250,000 fewer undocumented immigrants from Mexico lived in California in 2014 compared to 2010; and,
- From 1980 to 2014, the legally resident population from Mexico grew faster than the Mexican undocumented population.
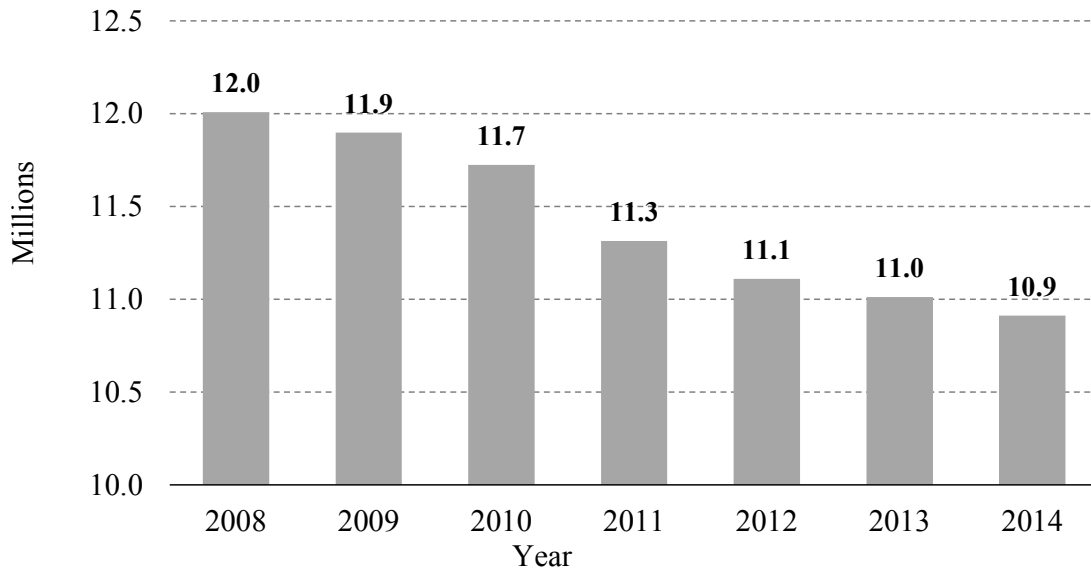
Population Trends

Total Population

The total undocumented population declined to about 10.9 million in 2014, reaching its lowest level since 2003. The population has fallen by more than a million since 2008 (Figure 1). Determining the specific reasons for the population changes described here is outside the scope of this report. Clearly, however, the sharp reduction in arrivals from Mexico in the past 10 years has played a significant role (see Figure 4 in Warren and Kerwin 2015, 86-87).

Figure 1 shows estimates of the total undocumented population from 2008 to 2014. The population has declined by an average of almost 200,000 each year since 2008. The pattern of decline for the total population is largely driven by the decline of undocumented residents from Mexico. However, undocumented populations from other nations contributed to the trend; indeed, as shown in a later section, undocumented populations from a majority of other countries declined in the 2010 to 2014 period[2] (Table 5).

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2 Estimates are available annually for 1990 to 2014 for each state and for the total US undocumented population; however, the country-by-country estimates are not available for years before 2010. That is why the discussion of changes by country of origin is limited to the 2010 to 2014 period.
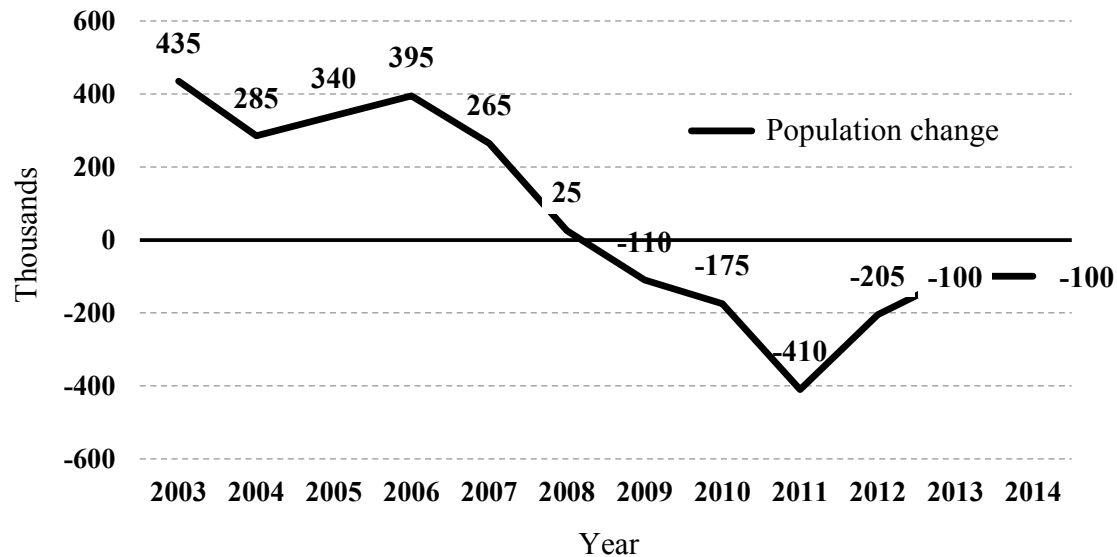
Figure 1. Total Undocumented Population: 2008 to 2014

Source: CMS 2016 analysis of ACS data (see text); Warren and Warren 2013.

Figure 2 shows the amount that the total undocumented population changed each year from 2003 to 2014. The sharp reduction in population growth began in 2007, well before the onset of the "Great Recession." The steady downward trend continued from 2006 to 2011 (Figure 2). The total undocumented population has declined in each of the past six years, although the rates of decline slowed from 2011 to 2014.

Figure 2. Annual Change in the Total Undocumented Population: 2003 to 2014

Source: CMS 2016 analysis of ACS data; Warren and Warren 2013.

State of Residence

Table 1 shows the 20 states with the largest number of undocumented residents in 2014. Estimates are shown for each year from 2010 to 2014 to demonstrate the consistency in the annual state-by-state estimates. Note the steady population decline in the states that lost the largest numbers from 2010 to 2014 — California, New York, and Illinois (Table 1). Of the 10 states with the highest undocumented populations in 2014, only Texas and Virginia gained undocumented residents from 2010 to 2014. Over that period, the gain for Texas and Virginia combined was 36,000; the other eight states in the top 10 lost a total of about 750,000.

Table 1. Estimated Undocumented Population, by State of Residence: 2010 to 2014

(Numbers in thousands)   ***Top 20 states in 2014, ranked by population in 2014***

State of Residence	Population estimates derived from ACS data					Change, 2010 to 2014	
	2010	2011	2012	2013	2014	Amount	Percent
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)=5-1*	*(7)=6/1*
US total	**11,725**	**11,315**	**11,110**	**11,012**	**10,912**	**-813**	**-7%**
California	2,916	2,824	2,764	2,667	2,598	-318	-11%
Texas	1,718	1,712	1,649	1,726	1,737	19	1%
New York	917	865	854	819	817	-99	-11%
Florida	786	754	726	703	711	-75	-9%
Illinois	594	546	541	531	455	-139	-23%
New Jersey	487	466	476	477	452	-35	-7%
Georgia	396	355	351	357	345	-51	-13%
North Carolina	335	321	343	326	322	-12	-4%
Arizona	299	277	283	285	277	-22	-7%
Virginia	251	252	249	261	269	17	7%
Washington	240	248	245	253	234	-6	-3%
Maryland	238	237	237	214	233	-5	-2%
Nevada	186	184	184	161	180	-6	-3%
Colorado	178	182	167	160	179	1	1%
Pennsylvania	151	141	154	150	158	7	4%
Massachusetts	171	147	144	141	147	-24	-14%
Oregon	130	121	109	127	121	-8	-6%
Tennessee	120	118	105	116	117	-4	-3%
Connecticut	117	116	112	117	114	-3	-3%
Michigan	97	94	97	94	109	11	12%
All other states	1,399	1,358	1,321	1,327	1,339	-60	-4%

Source: CMS 2016 analysis of ACS data

As shown in Table 1, the undocumented population in California dropped by 318,000 from 2010 to 2014. It is possible to determine which countries were most responsible for the decline in each state because the estimates are cross-tabulated by state of residence and country of origin. Much of the decline in the undocumented population in California occurred because of the drop in the number from Mexico; the number fell by about 250,000 from 2010 to 2014 (Table 2).

Table 2. Undocumented Residents in California: Countries or Areas That Had the Largest Declines from 2010 to 2014

(Numbers in thousands)

Country	Undocumented population living in California					Change, 2010 to 2014	
of Origin	2010	2011	2012	2013	2014	Amount	Percent
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)=5-1*	*(7)=6/1*
All countries	**2,916**	**2,824**	**2,764**	**2,667**	**2,598**	**-318**	**-11%**
Mexico	2,015	1,932	1,852	1,806	1,763	-252	-13%
Korea	69	75	71	62	54	-15	-22%
El Salvador	165	160	152	151	150	-15	-9%
Guatemala	127	123	135	125	113	-14	-11%
Philippines	109	117	106	100	100	-10	-9%
Vietnam	28	26	23	25	25	-3	-9%
All other countries	402	392	426	398	392	-10	-2%

Source: CMS 2016 analysis of ACS data.

Table 3 shows a similar decline in the undocumented population in New York from 2010 to 2014. The countries with the largest numerical declines were Mexico, Ecuador, and Jamaica (Table 3, column 6). The undocumented population from Poland, living in New York, experienced the largest percentage decline, with a decrease of 37 percent.

In the 2010-2011 period, legislation[3] was enacted in a number of states to reduce the undocumented resident population. The estimates presented here can be used to help assess the demographic impact of those legislative efforts on the undocumented population in each state.
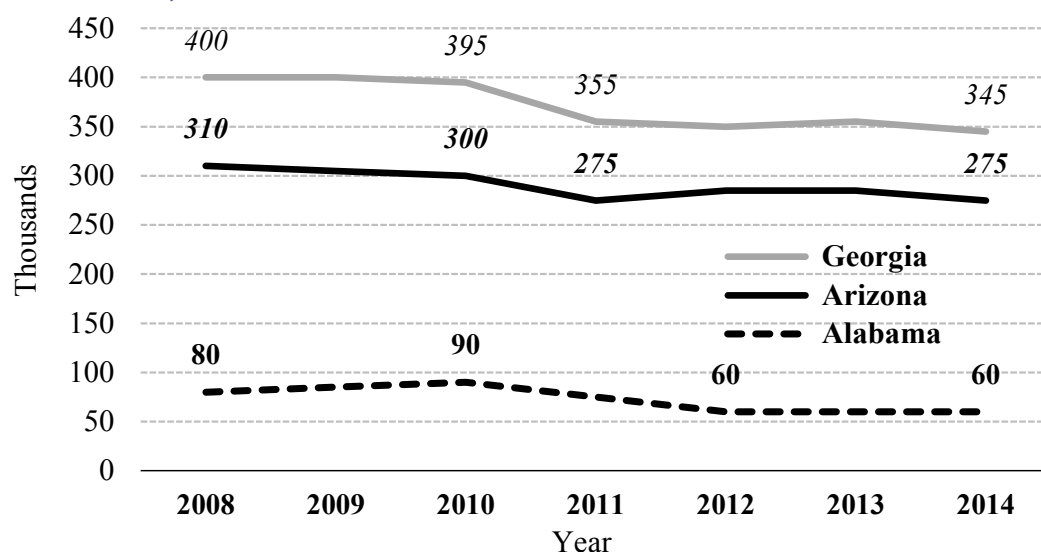
3 The Arizona law, enacted in April 2010, was the prototype for other states. *Support our Law Enforcement and Safe Neighboroods Act*, S.B. 1070, 49th Leg., 2nd Reg. Sess. (Ariz. 2009). Among many other provisions, the law required police officers to check the immigration status of anyone they lawfully stopped, arrested, or detained. An earlier Arizona law required businesses to use the E-Verify (electronic verification) system to check the legal status of workers. Omnibus state immigration enforcement bills were also passed in Georgia, Alabama, South Carolina, Indiana, and Utah.

Table 3. Undocumented Residents in New York: Countries or Areas That Had the Largest Declines from 2010 to 2014

(Numbers in thousands)

Country of Origin	Undocumented population living in New York					Change, 2010 to 2014	
	2010	2011	2012	2013	2014	Amount	Percent
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)=5-1*	*(7)=6/1*
All countries	**917**	**865**	**854**	**819**	**817**	**-99**	**-11%**
Mexico	202	192	173	180	178	-23	-12%
Ecuador	78	65	63	63	63	-15	-19%
Jamaica	41	32	34	31	31	-10	-25%
Haiti	20	18	18	16	13	-7	-34%
Poland	18	14	14	12	12	-7	-37%
Trinidad and Tobago	22	19	18	15	15	-6	-29%
All other countries	535	524	533	500	505	-30	-6%

Source: CMS 2016 analysis of ACS data.

Figure 3 shows trends in the size of the undocumented populations of Georgia, Arizona, and Alabama from 2008 to 2014. All three states experienced rapid population growth from 1990 to 2010 (Warren and Warren 2013). From 2010 to 2014, the undocumented population declined in each state. During that period, the population fell by about 45,000 in Georgia, 20,000 in Arizona, and 30,000 in Alabama (Figure 3). The drop of about 20,000 in Arizona from 2010 to 2014 is far below the speculative figure of 200,000 that has been reported.[4]

Figure 3. Undocumented Population Trends in Georgia, Arizona, and Alabama: 2008 to 2014

Source: CMS 2016 analysis of ACS data; Warren and Warren 2013.

4 For example, NBC Latino reported that "Arizona's undocumented population [went] down by 200,000 in a few years" (Nuño 2014).
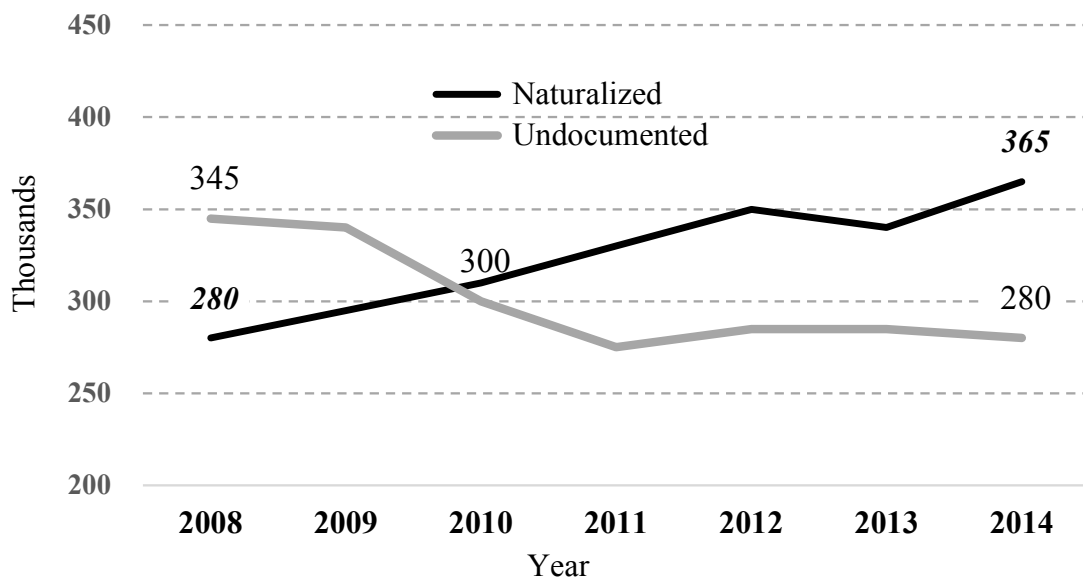
Based on the trends in the undocumented population in Georgia and Arizona (Figure 3), it does not appear that the legislation in those two states had a lasting impact on the size of either population. Population decline had already begun in both states before the laws were passed, and the population could have fallen to the 2014 levels even if the legislation had not been enacted.

The decline in the undocumented population in Arizona in recent years has been accompanied by a steady *increase* in the number of naturalized citizens (Figure 4). From 2008 to 2014, the undocumented population in Arizona dropped by 65,000, and the naturalized citizen population increased by 85,000.

The trends for 2008 to 2014 shown for Arizona in Figure 4 — a steady decline in the undocumented population accompanied by a steady increase in the naturalized population — is a pattern that is repeated for nearly every state.[5] Although the trends regarding these populations could be unrelated, the intersecting lines might well portend future political changes.

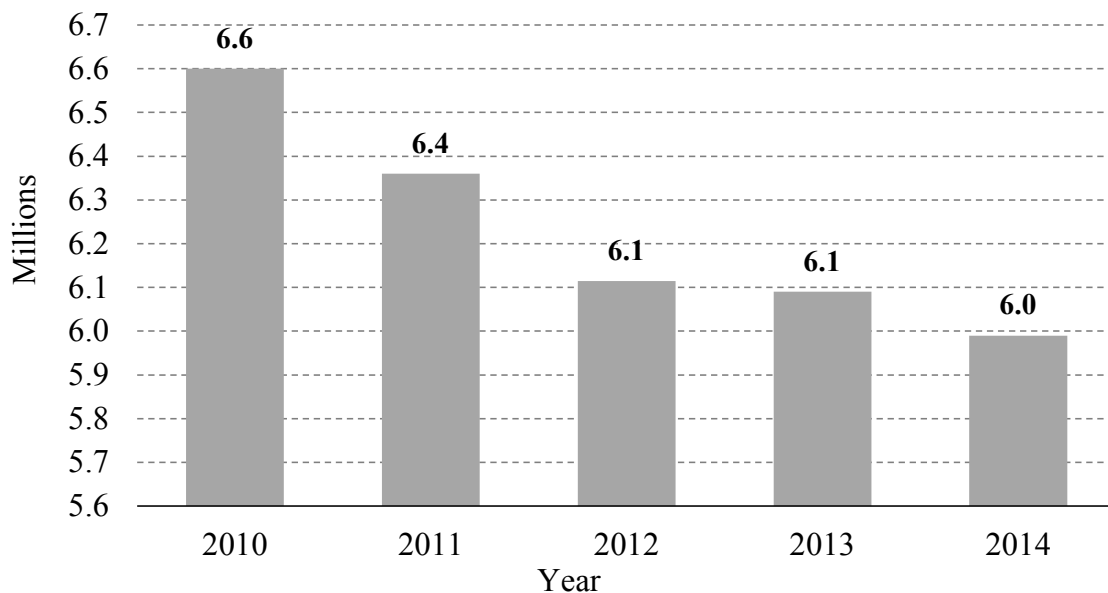## Figure 4. Trends in the Undocumented and in the Naturalized Populations in Arizona: 2008 to 2014

Source: CMS 2016 analysis of ACS data; Warren and Warren 2013.

5 Data from the ACS shows that the total naturalized population increased steadily from 16.3 million in 2008 to 20.0 million in 2014, an increase of 22 percent. Over this period, the naturalized population increased by 10 percent or more in all but three states (Arkansas, 5%; West Virginia, 8%; and Vermont, -12%). For Georgia, Arizona, and Alabama (see Figure 3), the naturalized populations increased by 35 percent, 30 percent, and 25 percent, respectively, from 2008 to 2014.

Country of Origin

The undocumented population from Mexico dropped to 6.0 million in 2014, falling by about 100,000 compared to 2013 (Figure 5). The undocumented population from Mexico declined in 26 states and increased in 24. The largest declines were in California (-42,000), Illinois (-41,000), and Texas (-33,000) (Table 4). The states with the largest *increases* in the undocumented population from Mexico in 2014 were Florida (24,000) and Michigan (12,000), followed by Utah, Nevada, and Arkansas, with increases of 11,000 each.

Figure 5. Undocumented Population from Mexico: 2010 to 2014

Source: CMS 2016 analysis of ACS data.

The 2014 decline in the undocumented population from Mexico continues a trend of half a decade. Since 2010, the total undocumented population from Mexico has declined by about 612,000, or 9 percent. Although the estimates in Table 4 contain sampling variability, the numbers establish that, in many of the larger states, the undocumented population from Mexico declined from 2010 to 2014 substantially more than the national average of 9 percent. For example, the number of undocumented residents from Mexico living in California dropped by about 250,000, or 13 percent, from 2010 to 2014. Other states with substantial decreases in undocumented residents from Mexico in the same period included Illinois (-21%), Georgia (-15%), and New Jersey (-14%) (Table 4).

Of the top 15 states of residence of undocumented immigrants from Mexico, *none* increased from 2010 to 2014, and only four states lost less than 5 percent of their Mexican undocumented population: Florida (no change), Texas (-2%), Nevada (-4%), and New Mexico (-4%) (Table 4). Within states, decline was not as steady as it was nationally. For

example, in Georgia, the undocumented population from Mexico fell by 33,000 in just one year — 2010 to 2011 — but the numbers for Georgia held steady from 2011 to 2014 (Table 4).

Table 4. Top 15 States of Residence of Undocumented Residents from Mexico: 2010 to 2014

(Numbers in thousands)

State of Residence	Annual population estimates, derived from ACS data					Change, 2010-2014	
	2010	2011	2012	2013	2014	Amount	Pct.
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)=(5)-(1)*	*(7)=6/1*
Total from Mexico	**6,602**	**6,362**	**6,114**	**6,088**	**5,990**	**-612**	**-9%**
California	2,015	1,932	1,852	1,806	1,763	-252	-13%
Texas	1,329	1,319	1,252	1,329	1,296	-33	-2%
Illinois	397	391	385	357	315	-82	-21%
Arizona	261	240	242	240	239	-22	-8%
North Carolina	219	202	224	199	206	-13	-6%
Georgia	239	206	198	210	203	-36	-15%
New York	202	192	173	180	178	-23	-12%
Florida	177	200	165	153	177	z	z
Washington	151	152	161	150	139	-11	-8%
Colorado	143	143	133	125	134	-9	-6%
Nevada	134	133	133	117	128	-6	-4%
New Jersey	108	97	91	98	93	-16	-14%
Oregon	101	92	88	99	91	-10	-10%
New Mexico	75	74	61	74	72	-3	-4%
Oklahoma	78	67	72	73	71	-7	-9%
All other states	973	920	886	877	884	-89	-9%

Source: CMS 2016 analysis of ACS data.　　　　　　　　　　z zero or rounds to zero

Table 5 shows estimates of the undocumented population from each area of the world and from selected countries. The population from many of the areas and countries shown in Table 5 declined from 2010 to 2014, but other areas showed small increases. As noted, the population from Mexico declined by 9 percent. The largest declines, by area, were for the Caribbean (-9%), South America (-22%), Europe (-18%), and Oceania (-10%). The population from Central America increased by 5 percent. Populations from Africa and Asia showed smaller increases, of 3 percent and 1 percent, respectively.

Sixteen of the countries shown in Table 5 lost undocumented population from 2010 to 2014, and the population from 10 countries increased. In addition to Mexico, the five countries (four of them in South America) that declined the most were Brazil (-47,000), Ecuador (-41,000), Colombia (-38,000), Korea (-37,000), and Peru (-24,000). The population from four countries grew by 20,000 or more from 2010 to 2014: Honduras (36,000), Guatemala (32,000), India (26,000), and China (21,000) (Table 5, column 6).

Table 5. Estimated Undocumented Population from Selected Areas: 2010 to 2014

(Numbers in thousands)

Area/country	Annual population estimates, derived from ACS data					Change, 2010-2014	
	2010	2011	2012	2013	2014	Amount	Pct.
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)=(5)-(1)*	*(7)=6/1*
US total	**11,725**	**11,315**	**11,110**	**11,012**	**10,912**	**-813**	**-7%**
Mexico	6,602	6,362	6,114	6,088	5,990	-612	-9%
Central America	**1,505**	**1,493**	**1,517**	**1,519**	**1,581**	**76**	**5%**
El Salvador	614	607	601	588	631	17	3%
Guatemala	467	491	491	518	499	32	7%
Honduras	313	296	312	324	349	36	11%
Nicaragua	75	65	76	55	62	-13	-17%
Other Central America	36	35	37	35	39	3	10%
Caribbean	**499**	**485**	**508**	**481**	**455**	**-44**	**-9%**
Dominican Republic	179	173	195	194	179	-1	z
Haiti	133	131	139	122	123	-9	-7%
Jamaica	102	104	100	104	95	-8	-8%
Trinidad and Tobago	45	41	37	30	31	-14	-32%
Other Caribbean	39	36	38	31	28	-11	-29%
South America	**818**	**713**	**675**	**677**	**637**	**-181**	**-22%**
Ecuador	173	151	134	144	132	-41	-24%
Colombia	168	146	144	133	130	-38	-23%
Peru	124	108	107	109	100	-24	-19%
Brazil	142	120	100	108	95	-47	-33%
Venezuela	65	63	62	57	61	-5	-7%
Other South America	146	124	128	125	120	-26	-18%
Europe	**372**	**337**	**323**	**307**	**303**	**-69**	**-18%**
Poland	93	73	70	66	57	-36	-38%
Russia	40	45	39	37	36	-4	-10%
Ukraine	35	33	34	30	31	-5	-13%
Other Europe	204	186	181	174	179	-24	-12%
Asia	**1,559**	**1,572**	**1,597**	**1,551**	**1,572**	**13**	**1%**
India	366	381	405	401	392	26	7%
China	294	287	309	305	315	21	7%
Philippines	246	266	260	246	235	-11	-5%
Korea	206	203	198	187	169	-37	-18%
Vietnam	111	104	108	113	119	9	8%
Pakistan	55	50	52	50	55	z	z
Other Asia	282	279	265	249	287	5	2%

Table 5. (*Continued*) Estimated Undocumented Population from Selected Areas: 2010 to 2014

(Numbers in thousands)

| Area/country | Annual population estimates, derived from ACS data | | | | | Change, 2010-2014 | |
| | 2010 | 2011 | 2012 | 2013 | 2014 | Amount | Pct. |
	(1)	*(2)*	*(3)*	*(4)*	*(5)*	*(6)=(5)-(1)*	*(7)=6/1*
Africa	**300**	**285**	**303**	**323**	**308**	**8**	**3%**
Ethiopia	37	28	37	40	38	2	4%
Ghana	25	37	33	35	34	9	35%
Nigeria	27	37	35	34	32	5	19%
Kenya	22	27	29	28	26	5	21%
Other Africa	189	156	168	186	177	-12	-6%
Oceania	**23**	**22**	**25**	**19**	**21**	**-2**	**-10%**
All other	**48**	**46**	**48**	**47**	**44**	**-4**	**-7%**

Source: CMS 2016 analysis of ACS data.   z zero or rounds to zero.

An examination of the estimates for three countries that had large declines in population from 2010 to 2014 showed the following:

- The total undocumented population from Poland fell from 93,000 in 2010 to 57,000 in 2014, a drop of 38 percent (Table 5). The undocumented Polish population fell by about 19,000 (46%) in Illinois and by 16,000 in the New York-New Jersey-Connecticut area.
- The total undocumented population from Brazil fell by a third from 2010 to 2014, from 142,000 to 95,000 (Table 5). The largest percent declines were in Massachusetts (-52%), Florida (-41%), and New Jersey (-38%).
- From 2010 to 2014, the total undocumented population from Colombia declined by 38,000 (23%); in Florida alone, the population from Colombia fell by 25,000 (38%).

Mexico's Share of the Population

In preparing the estimates presented in this report, CMS first estimated the number of undocumented residents who were *counted* in the 2014 ACS. For Mexico, that number is 5.6 million, which is about 55 percent of the 10.2 million undocumented residents counted in the 2014 ACS (Table 6). Mexico's percentage of the total undocumented population counted in 2014 is the same as Mexico's share of undocumented residents — 55 percent — counted in the 1980 Census (Warren and Passel 1987).

During the 1980 to 2014 period, Mexico's share of the total naturalized population doubled from 8 percent to 16 percent (Table 6). During the same period, the percentage of legally resident noncitizens from Mexico also doubled, from 12 to 24 percent (Table 6, column 3). As a result of these increases in the number of legal immigrants from Mexico from 1980 to 2014, the foreign-born population from Mexico increased from 17 to 28 percent of the total foreign-born population.

As shown in Table 6, the total number of *legal residents*[6] from Mexico increased from 1,062,000 in 1980 to 6,070,000 in 2014. At the same time, the count of undocumented residents from Mexico increased from 1,131,000 to 5,640,000. Thus, over this 34-year period, the legally resident population increased by 5.0 million while the undocumented population increased by 4.5 million. In summary, from 1980 to 2014 Mexico's percentage of the legally resident population doubled while its share of the undocumented population remained unchanged.

Table 6. Foreign-born Population Counted in the 2014 ACS and in the 1980 Census, by Legal Status, from All Countries and from Mexico

(Numbers in thousands)

Year counted and area of origin	Total foreign-born (1)	Naturalized (2)	Legal noncitizens (3)=(1)-(2)-(4)	Undocumented (4)
Counted in the 2014 ACS				
All countries	42,210	19,960	12,060	10,190
From Mexico	11,710	3,130	2,940	5,640
Percent from Mexico	28%	16%	24%	55%
Counted in the 1980 Census				
All countries	13,196	6,488	4,651	2,057
From Mexico	2,193	520	542	1,131
Percent from Mexico	17%	8%	12%	55%

Source: For 2014, from CMS 2016 analysis of ACS data. For 1980, from 1980 Census, see Warren and Passel (1987).

Note: These are *counts* (no adjustments for undercount).

Conclusion

This paper reports that the US undocumented population decreased each year from 2009 to 2014, including during the period of economic recovery after the "Great Recession." The undocumented Mexican population continued to decline; it has fallen by more than 600,000 since 2010.

Diverse commentators will speculate on why these trends have occurred, what they portend for the vitality and well-being of the nation, and whether they lend support to status quo policies, more intensive enforcement, or other changes in immigration policy. In earlier work, the author has argued for a path to legal status for a shrinking undocumented population with long tenure and extensive equitable ties in the United States (Warren and Kerwin 2015, 100). In any event, the paper rebuts claims of a growing undocumented population and speculation that the undocumented population would steeply increase as a

6 The number of legal residents is the sum of columns 2 and column 3 in Table 6; that is, naturalized citizens plus legally resident noncitizens.

result of the nation's economic recovery. It also describes trends — like the steadily falling number of undocumented residents nationally, the growing rate of legally resident foreign-born persons from some nations, and the growing proportion of naturalized citizens in almost every US state — that all sides in the immigration debate should welcome.

Appendix A. Data Sources and Methodology

The following is a brief description of the methodology that CMS used to derive detailed annual estimates of the undocumented population for 2010 to 2014. As Table A-1 shows, the initial focus was on the estimates for 2010; the procedures used to derive the estimates for each year after that are straightforward.

The estimation began with the reported characteristics of non-US citizens (henceforth, noncitizens) in the micro data of the ACS in 2010. For the estimation procedure, the three relevant data items from the survey are country of birth, citizenship, and year of entry. Noncitizens who entered the United States before 1982 are excluded because (1) pre-1982 entrants could have legalized under the Immigration Reform and Control Act of 1986 and (2) those who did not do so have had about 30 years in which to leave the undocumented resident population.[7]

The methodology involved three major steps: (1) applying a series of edits, referred to here as "logical edits,"[8] to identify as many legal residents as possible based on responses in the survey; (2) deriving separate population controls, for 145 countries or areas, for undocumented residents in 2010; and (3) using those population controls to make final selections of individual respondents in the ACS to be classified as undocumented residents. Table A-1 shows the specific steps followed to select sample data for undocumented immigrants from Brazil who were counted in the ACS each year from 2010 to 2014. The same set of procedures were followed for each of the 145 countries or areas. A more detailed description of the data sources and methods is available in Warren (2014).

The final step in the methodology was to adjust the estimates for under-enumeration. The most recent entrants were assumed to have the highest undercount rates (about 12%), and the undercount rate drops steadily with length of residence, falling to 2 percent for those who entered in 1982. The estimated undercount rate for the entire population is approximately 7.5 percent.

7 Undocumented residents can leave that population in four ways — they can adjust to legal status, be removed from the United States, leave the United States voluntarily, or die.

8 The term logical edit refers to the process of determining probable legal status by examining survey data; respondents were assigned to the legal category if they worked in occupations that generally require legal status, were legal temporary migrants, were immediate relatives of US citizens, received public benefits, such as Medicare and (in some cases) Medicaid, were from countries where most arrivals would be refugees, or were age 60 or older at entry. This method was developed by Passel and Clark (1998), extended by Passel, Van Hook and Bean (2004), and refined by Passel and others in recent years at the Pew Hispanic Center.

Table A-1. Specific Steps Used by CMS to Derive Annual Estimates for Brazil: 2010 to 2014

Estimation of the population in 2010		
1	240,436	Noncitizens, entered 1982 to 2010, from 2010 ACS
2	95,308	Determined by the logical edits to be legal residents
3=1-2	145,128	Remainder after the logical edits
4	130,000	Independent population total
5=4/3x100	89.5%	Percent of population control
6	129,916	Estimated number counted in 2010 ACS. (89.5% of the cases in item 3 are selected randomly)
Estimation of the population in 2011		
7	220,795	Noncitizens, entered 1982 to 2011, from 2011 ACS
8	96,888	Determined by the logical edits to be legal residents
9=7-8	123,907	Remainder after the logical edits
10	89.5%	Percent to be selected (from item 5 above)
11=9x10	110,897	Estimated number counted in 2011 ACS (89.5% of the cases in item 9 are selected randomly)
Estimation of the population in 2012, 2013, and 2014		
12		Repeat steps 7 through 11, using the appropriate annual ACS data

Source: CMS 2016 analysis of ACS data.

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