



Demographic Trends and Future Impacts on Freight Transportation

Freight 2055 Roundtable

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Slides Available at: <http://hobbycenter.rice.edu>
Go to "Presentations"



Meeting the Texas Challenge

- Slides Available at <http://hobbycenter.rice.edu/>
 - Go to: “Presentations”
- See also, “Data”
 - Current (2014) Estimates for Incorporated Places and Counties
 - Selected 2010 Census Data (Including 2000-2010 Change and 2000 Comparisons) for Counties and Places
- For background on *Changing Texas*, see:
<http://thetexaschallenge.com>



Major Categories of Impacts

- **Impacts on Demand**
 - **Freight transportation is a demand driven activity**
- **Impacts to Industry**
 - **Factors that inhibit or enhance delivery of freight from one point to another**



Major Demographic Trends

- **Population Growth**
- **Urbanization/
Regional Concentration**
- **Population Aging**
- **Racial/Ethnic Diversification**



population growth



Ten Largest States in the United States Ranked by Population Size in 2014

State	April 1, 2000	April 1, 2010	July 1, 2014	Change 2000-10		Change 2010-14	
				Numeric	%	Numeric	%
United States	281,421,906	308,745,538	318,857,056	27,323,632	9.7	10,111,518	3.3
California	33,871,648	37,253,956	38,802,500	3,382,308	10	1,548,544	4.2
Texas	20,851,820	25,145,561	26,956,958	4,293,741	20.6	1,811,397	7.2
Florida	15,982,378	18,801,310	19,893,297	2,818,932	17.6	1,091,987	5.8
New York	18,976,457	19,378,102	19,746,227	401,645	2.1	368,125	1.9
Illinois	12,419,293	12,830,632	12,880,580	411,339	3.3	49,948	0.4
Pennsylvania	12,281,054	12,702,379	12,787,209	421,325	3.4	84,830	0.7
Ohio	11,353,140	11,536,504	11,594,163	183,364	1.6	57,659	0.5
Georgia	8,186,453	9,687,653	10,097,343	1,501,200	18.3	409,690	4.2
North Carolina	8,049,313	9,535,483	9,943,964	1,486,170	18.5	408,481	4.3
Michigan	9,938,444	9,883,640	9,909,877	-54,804	-0.6	26,237	0.3

Source: U.S. Census Bureau.



Ten States in the United States with the Largest Numeric Population Increase, 2010-2014

State	April 1, 2000	April 1, 2010	July 1, 2014	Change 2000-10		Change 2010-14	
				Numeric	%	Numeric	%
United States	281,421,906	308,745,538	318,857,056	27,323,632	9.7	10,111,518	3.3
Texas	20,851,820	25,145,561	26,956,958	4,293,741	20.6	1,811,397	7.2
California	33,871,648	37,253,956	38,802,500	3,382,308	10.0	1,548,544	4.2
Florida	15,982,378	18,801,310	19,893,297	2,818,932	17.6	1,091,987	5.8
Georgia	8,186,453	9,687,653	10,097,343	1,501,200	18.3	409,690	4.2
North Carolina	8,049,313	9,535,483	9,943,964	1,486,170	18.5	408,481	4.3
New York	18,976,457	19,378,102	19,746,227	401,645	2.1	368,125	1.9
Arizona	5,130,632	6,392,017	6,731,484	1,261,385	24.6	339,467	5.3
Washington	5,894,121	6,724,540	7,061,530	830,419	14.1	336,990	5.0
Colorado	4,301,261	5,029,196	5,355,866	727,935	16.9	326,670	6.5
Virginia	7,078,515	8,001,024	8,326,289	922,509	13.0	325,265	4.1

Source: U.S. Census Bureau.

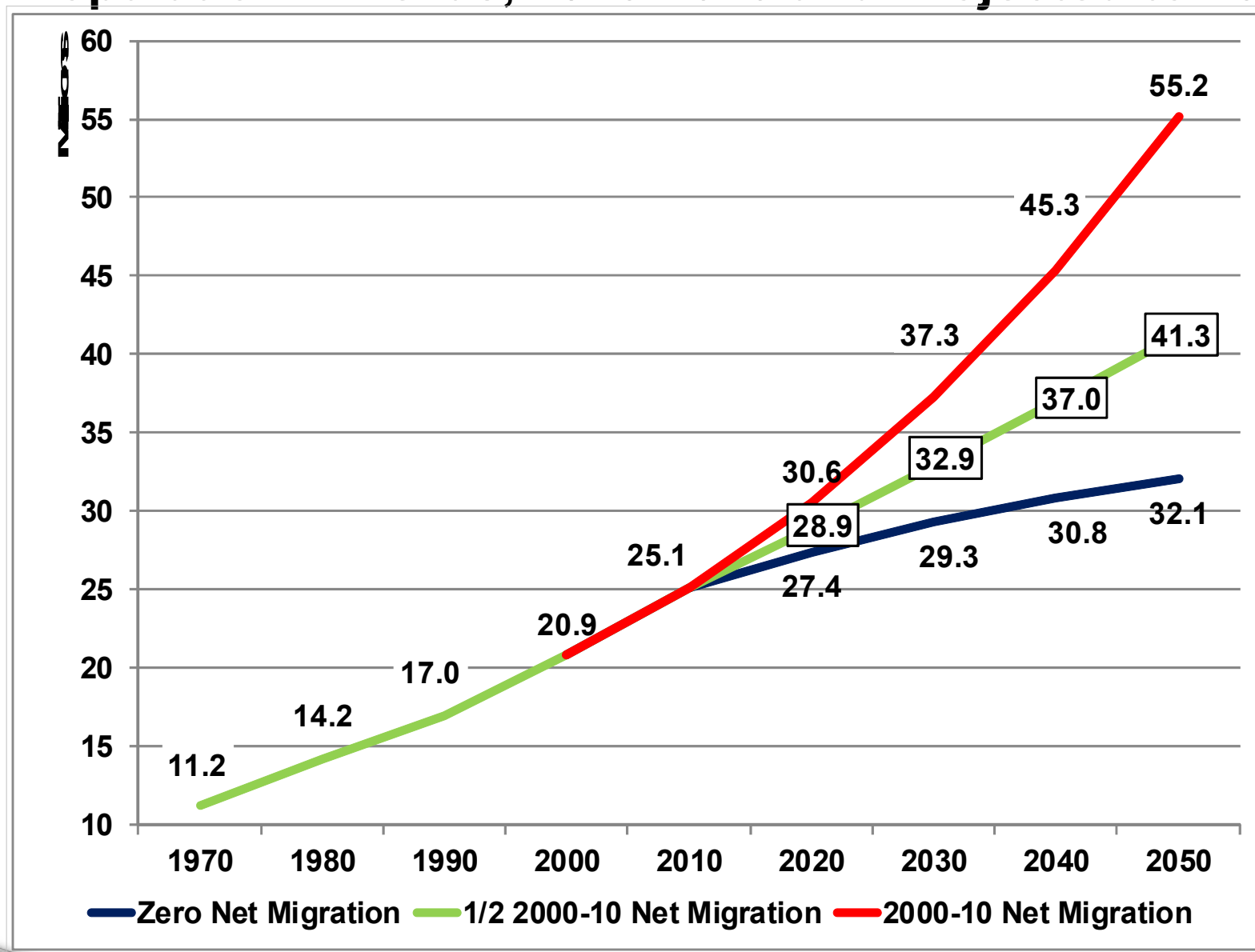


Ten States in the United States with the Largest Percentage Population Increase, 2010-2014

State	April 1, 2000	April 1, 2010	July 1, 2014	Change 2000-10		Change 2010-14	
				Numeric	%	Numeric	%
United States	281,421,906	308,745,538	318,857,056	27,323,632	9.7	10,111,518	3.3
North Dakota	642,200	672,591	739,482	30,391	4.7	66,891	9.9
Texas	20,851,820	25,145,561	26,956,958	4,293,741	20.6	1,811,397	7.2
Colorado	4,301,261	5,029,196	5,355,866	727,935	16.9	326,670	6.5
Utah	2,233,169	2,763,885	2,942,902	530,716	23.8	179,017	6.5
Florida	15,982,378	18,801,310	19,893,297	2,818,932	17.6	1,091,987	5.8
Arizona	5,130,632	6,392,017	6,731,484	1,261,385	24.6	339,467	5.3
Nevada	1,998,257	2,700,551	2,839,099	702,294	35.1	138,548	5.1
Washington	5,894,121	6,724,540	7,061,530	830,419	14.1	336,990	5.0
South Dakota	754,844	814,180	853,175	59,336	7.9	38,995	4.8
South Carolina	4,012,012	4,625,364	4,832,482	613,352	15.3	207,118	4.5

Source: U.S. Census

Population in Texas, 1970-2010 and Projected to 2050



Population, Licenses Drivers, Yearly Vehicle Miles of Travel, and Road Miles Needed, 2010-2050

Year	Population	Drivers	Drivers Per 1,000 Population	Yearly Vehicle Miles of Travel		Additional Road Miles Needed*
				Per Driver	Total (in Billions)	
2010	25,145,561	15,157,650	602.8	13,475	204.2	-
2020	30,583,311	18,625,949	609.0	13,075	243.5	71,218
2030	37,282,785	22,708,486	609.1	12,688	288.1	155,050
2040	45,316,711	27,403,007	604.7	12,446	341.1	251,448
2050	55,205,530	33,261,797	602.5	12,276	408.3	371,753

Source: Projections by the authors; and 2010 driver estimates and rates derived from U.S. Department of Transportation, Federal Highway Administration, Highway Statistics Series, 2009, 2010, and 2011; and U.S. Department of Transportation, Federal Highway Administration, National Household Travel Survey 2009; U.S. Department of Transportation, Federal Highway Administration, Office of Highway Policy Information, Highway Statistics Series, Highway Statistics 2011.

Includes all street, freeway, and highway miles.

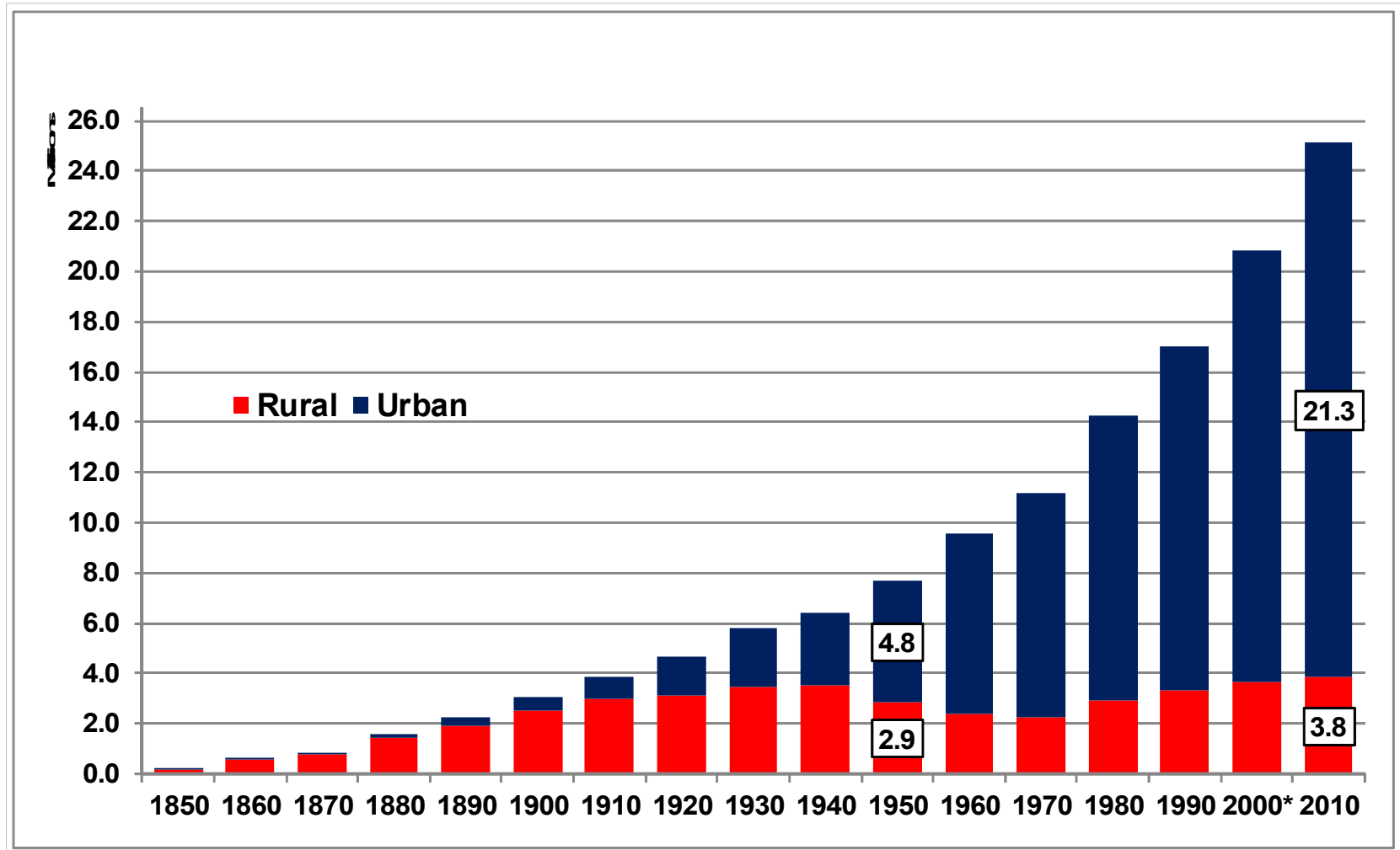
From: Changing Texas: Implications of Addressing or Ignoring the Texas Challenge



Urbanization/ regional concentration



Population Growth and Urbanization in Texas, 1850 - 2010

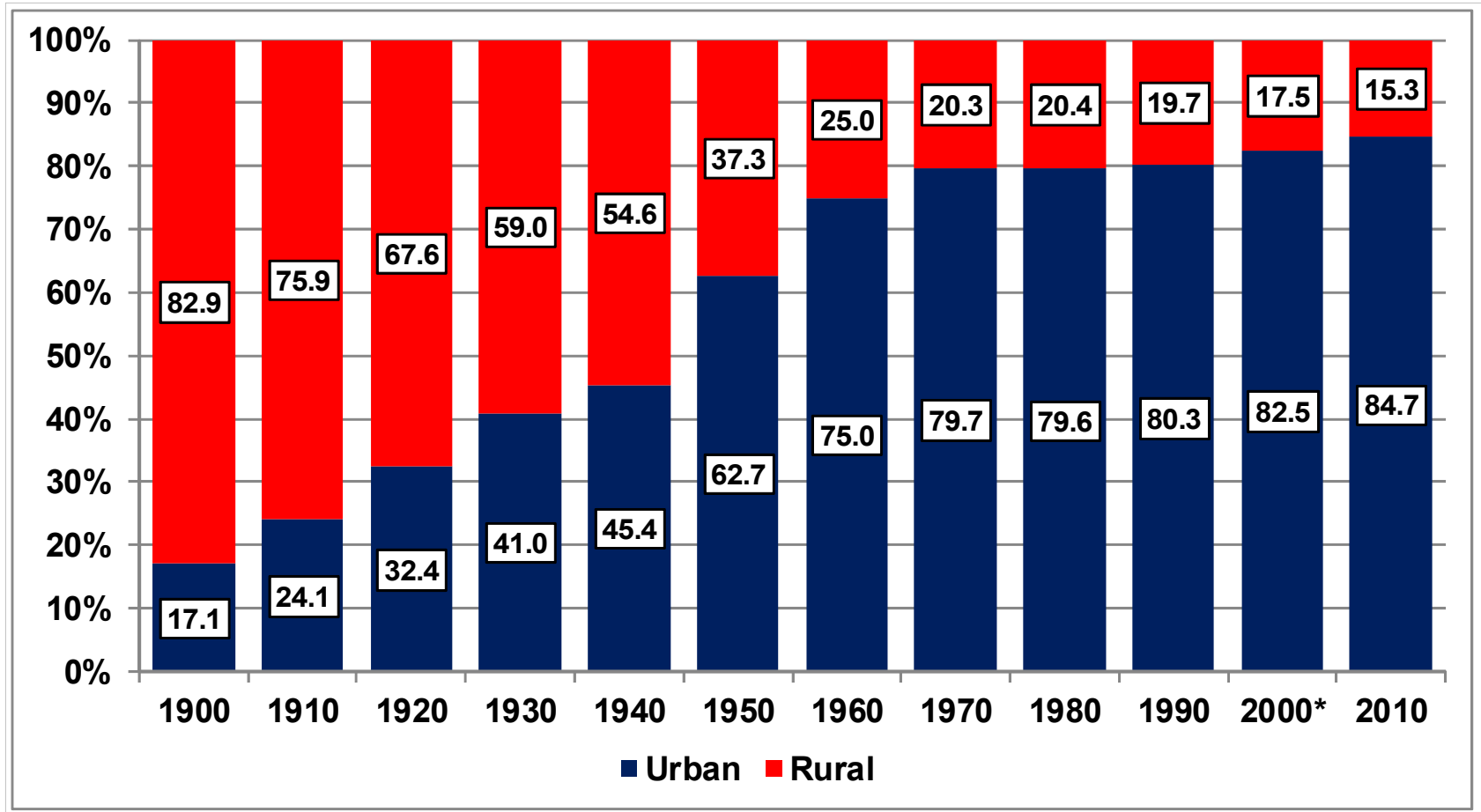


Source: U.S. Census

* Urban = Area of concentrated population equaling 2,500 or more. The Census Bureau began defining urban areas using new criteria beginning with the 2000 Census.



Change in Urban/Rural Population in Texas, 1900-2010

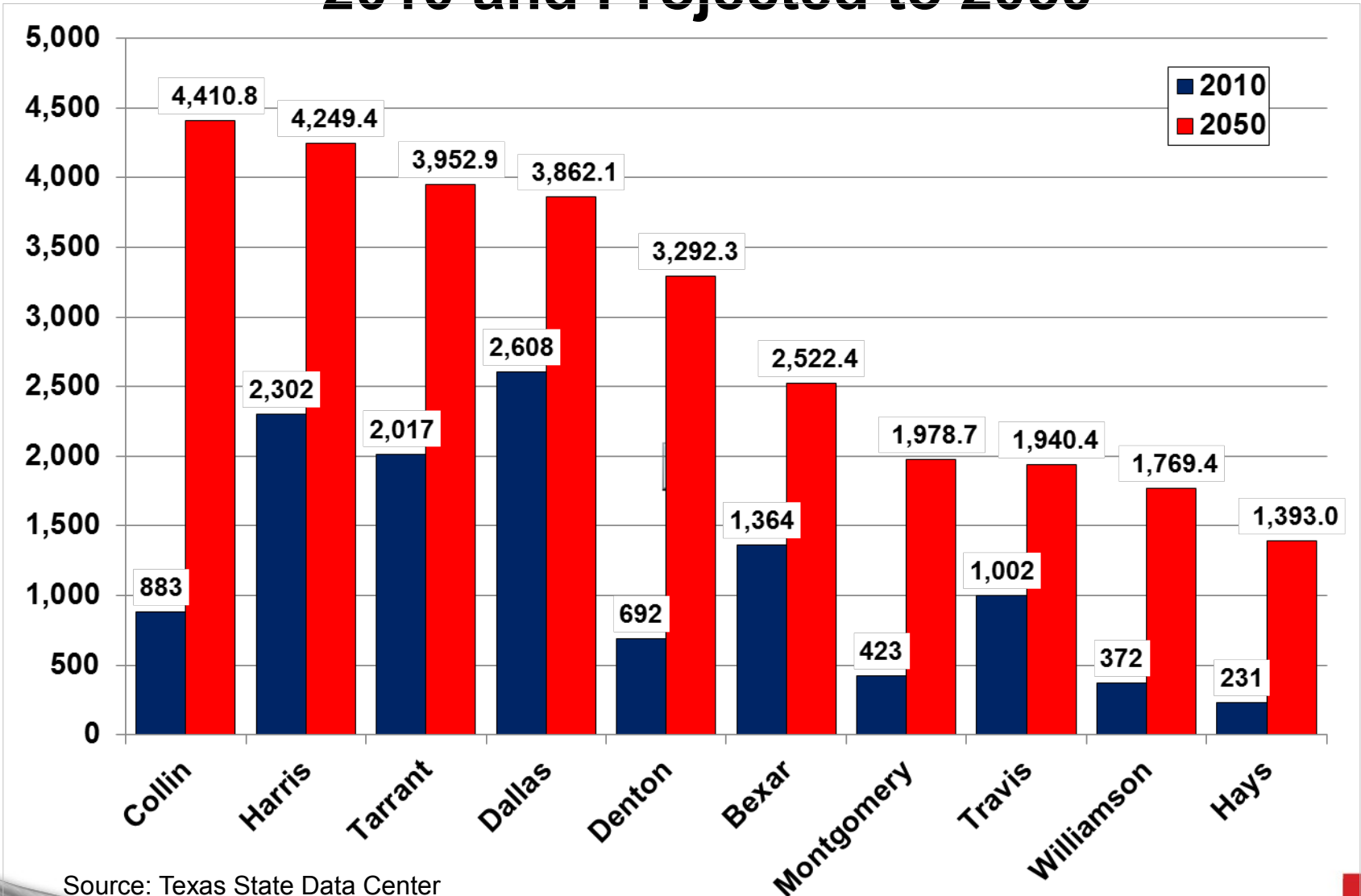


Source: U.S. Census

* The Census Bureau began defining urban areas using new criteria beginning with the 2000 Census.

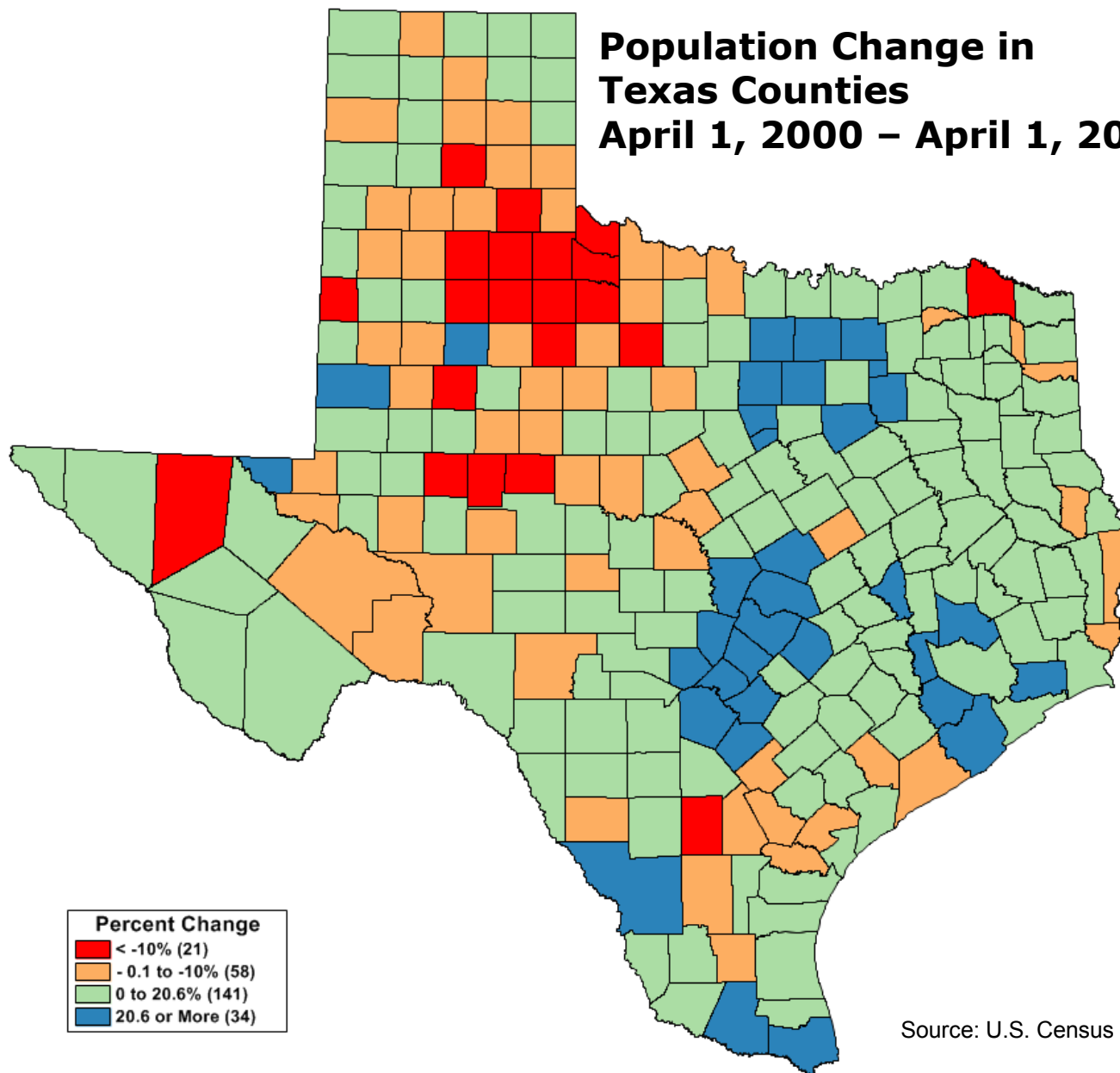


Population Density of Selected Counties, 2010 and Projected to 2050



Source: Texas State Data Center

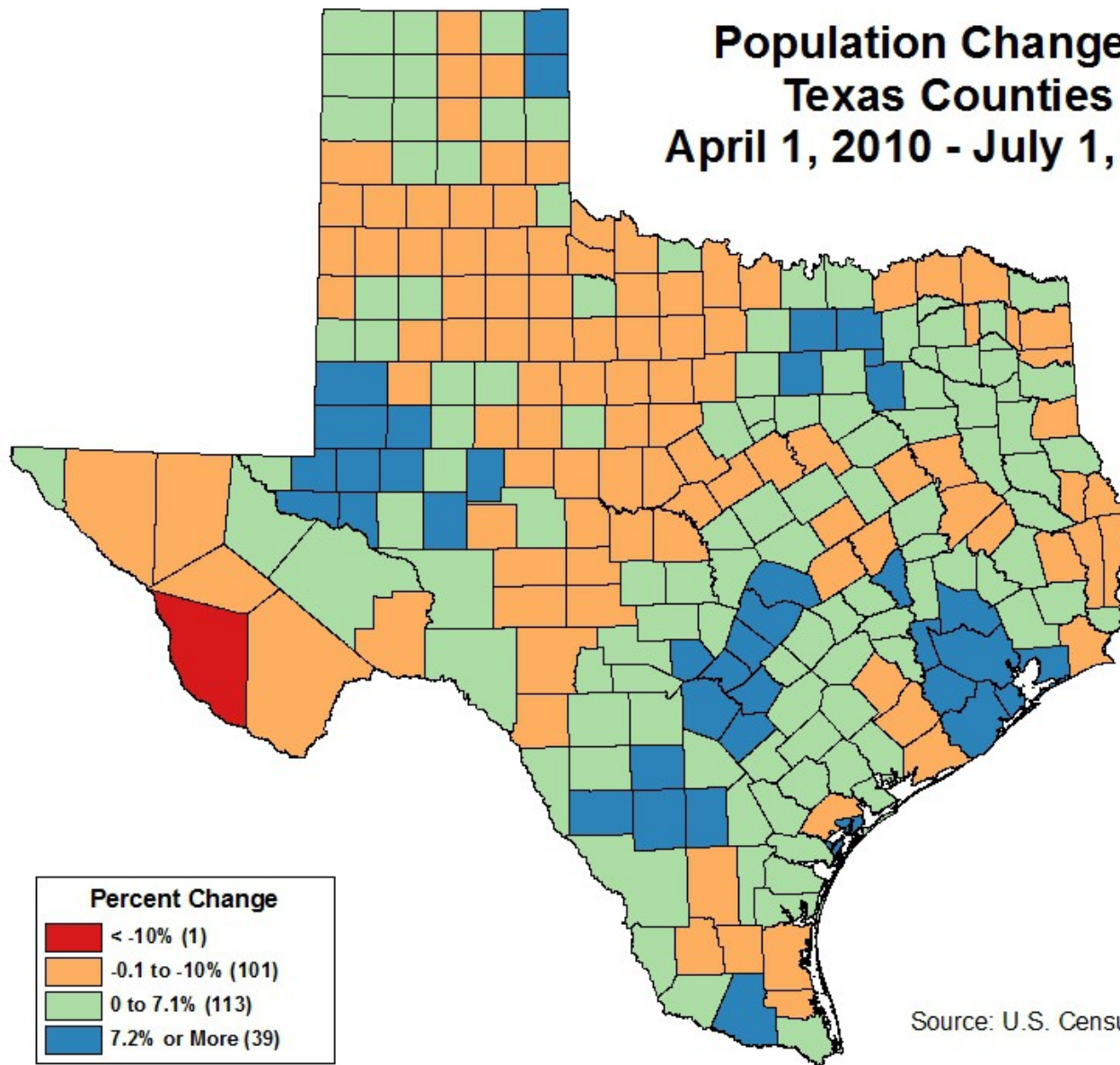
Population Change in Texas Counties April 1, 2000 – April 1, 2010



Source: U.S. Census Bureau.



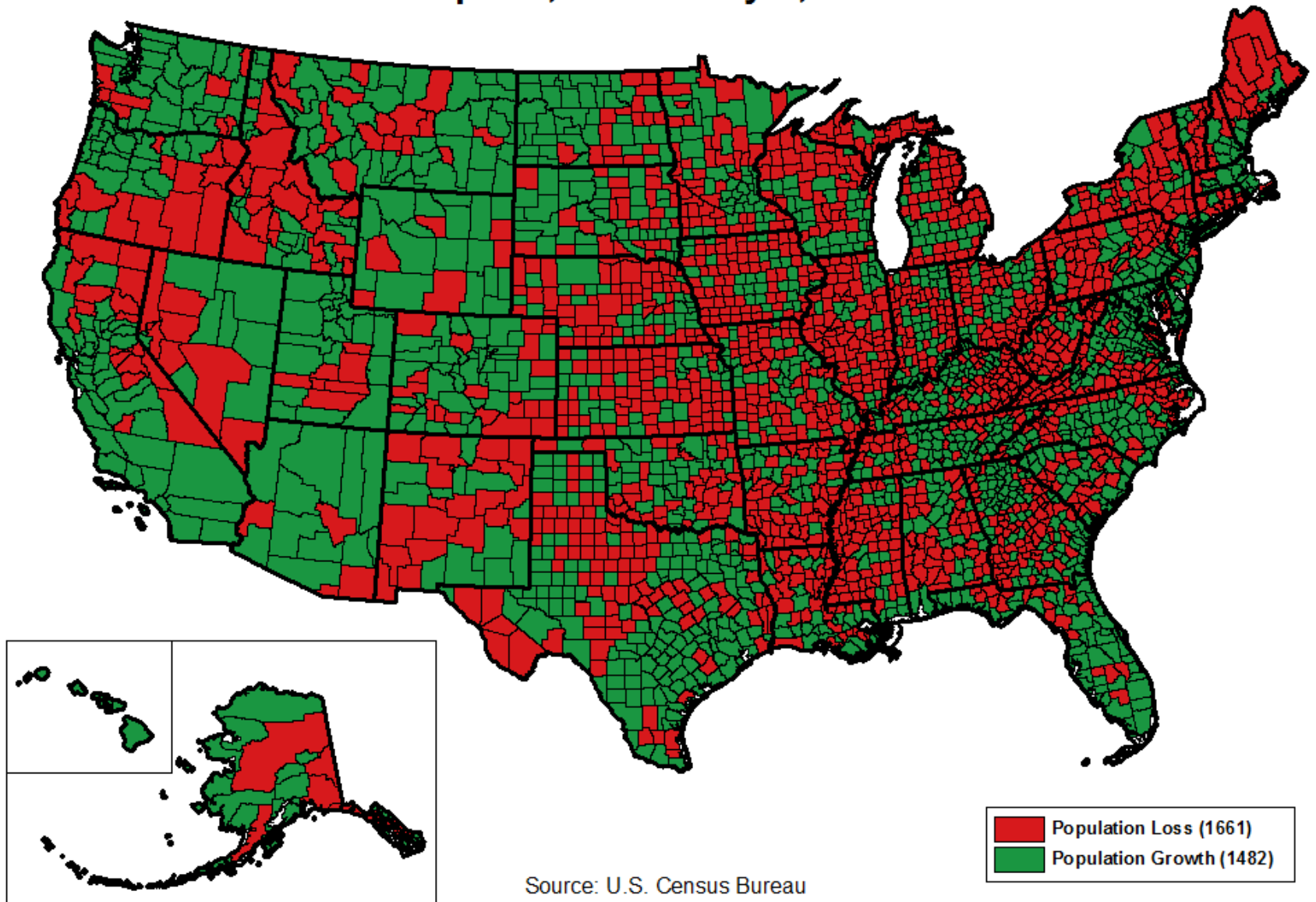
Population Change in Texas Counties April 1, 2010 - July 1, 2014



Source: U.S. Census Bureau



Population Change in United States Counties April 1, 2010 - July 1, 2014

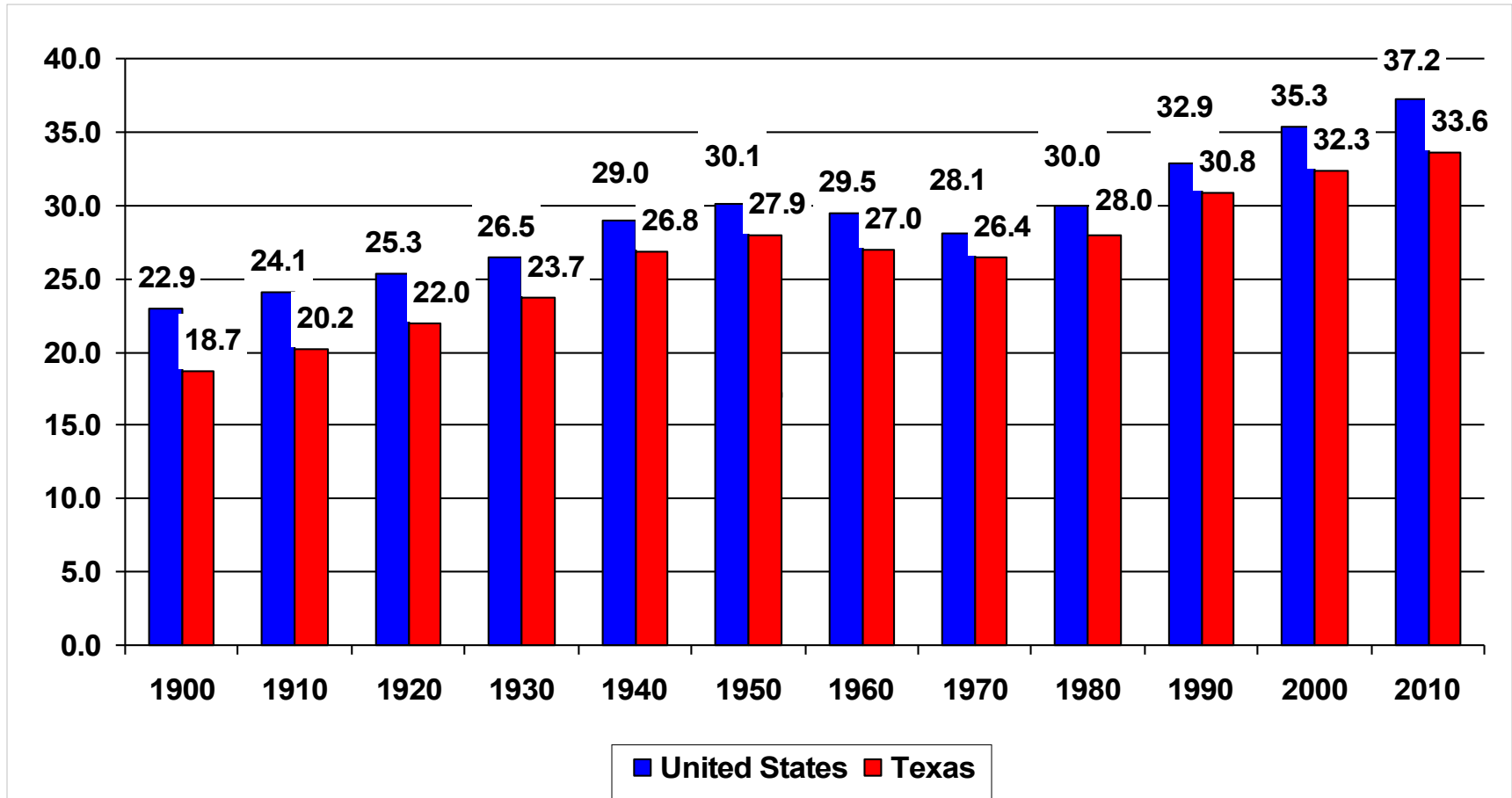




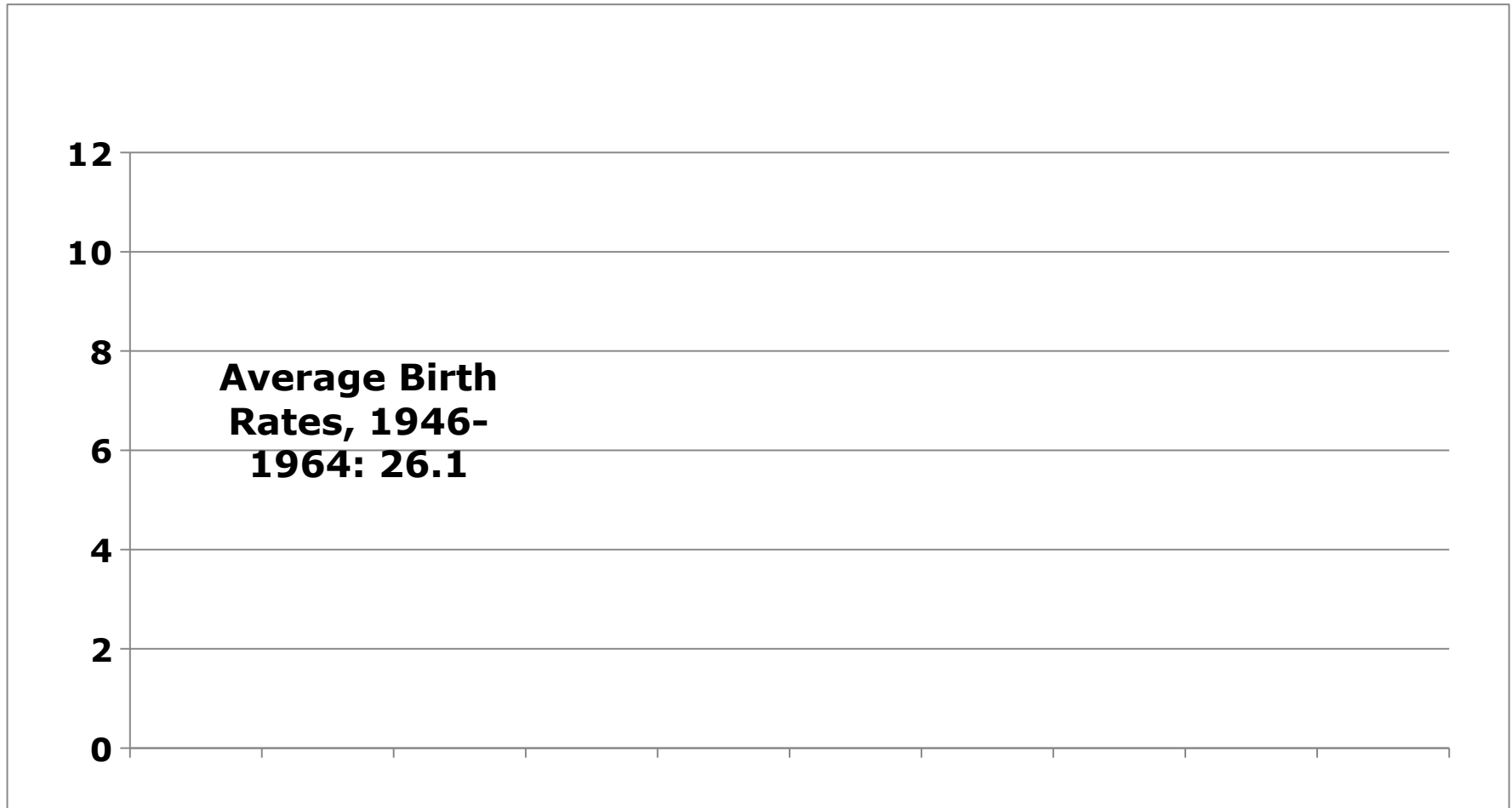
Population aging



Median Age in the United States and Texas, 1900-2010



Texas Crude Birth and Crude Death Rates, 1942 - 2010

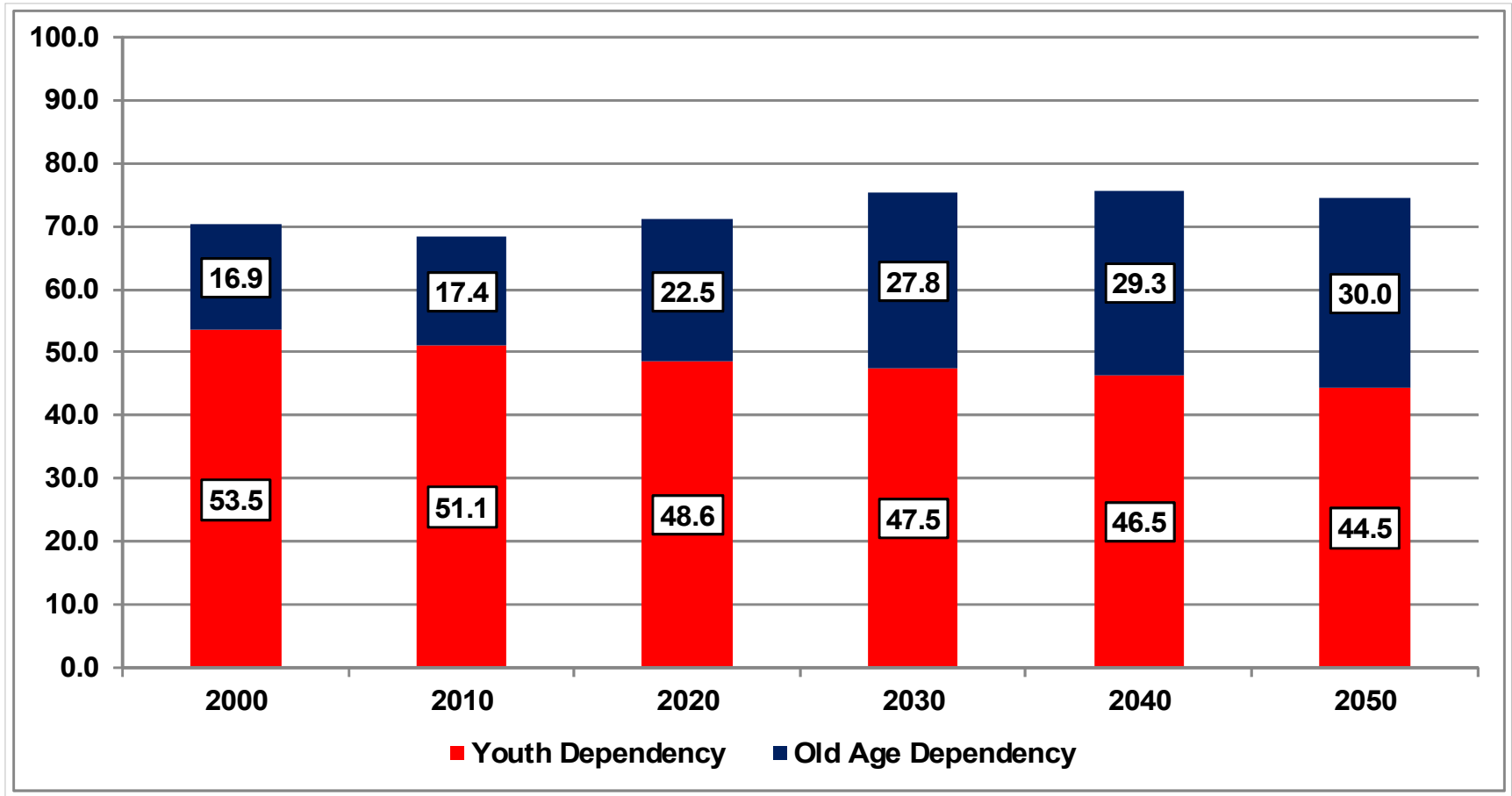


Births and deaths per 1,000 Texas residents

Source: 2010 Texas Vital Statistics Annual Report, Texas Department of State Health Services



Youth, Old-Age, and Total Dependency Ratios for Texas, 2000-2050



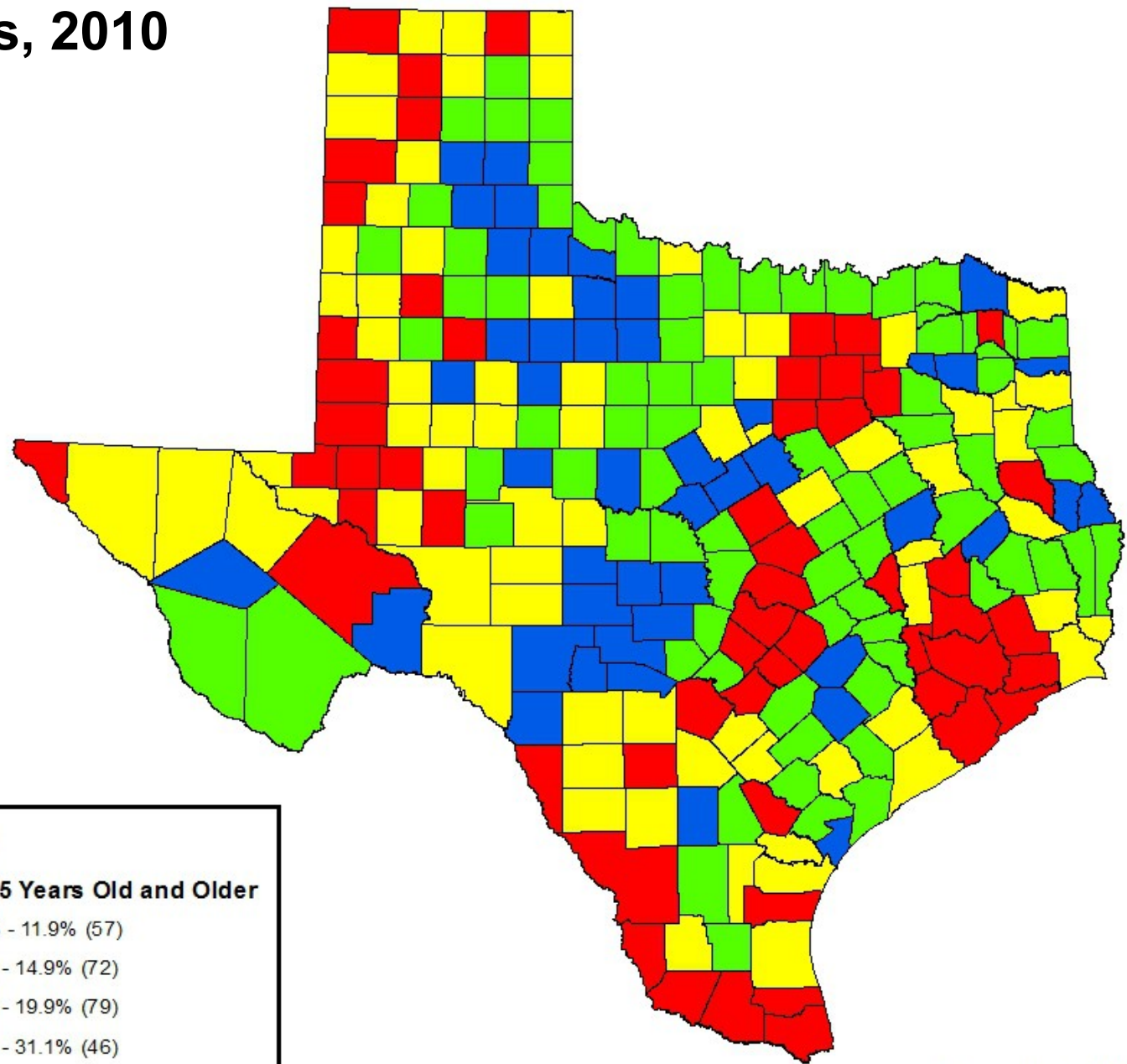
Total Dependency: $\left(\frac{((\text{Population 65 and Older} + \text{Population} < 20))}{(\text{Population 20-64})} \right) * 100$

Old Age Dependency: $\left(\frac{(\text{Population 65 and Older})}{(\text{Population 20-64})} \right) * 100$

Youth Dependency: $\left(\frac{(\text{Population} < 20)}{(\text{Population 20-64})} \right) * 100$



Percent of Persons 65 Years of Age and Older in Texas Counties, 2010

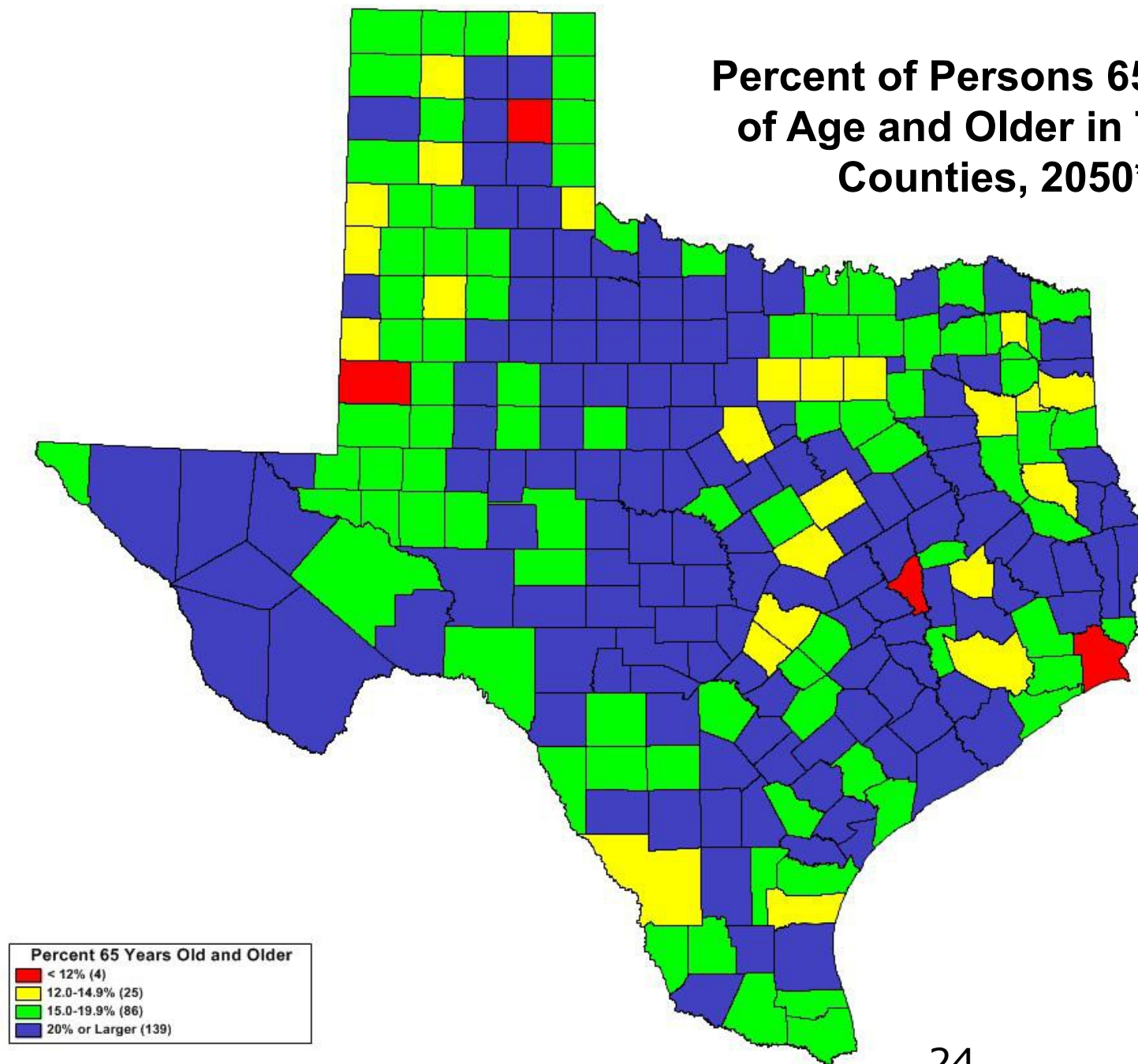


Legend

Percent 65 Years Old and Older

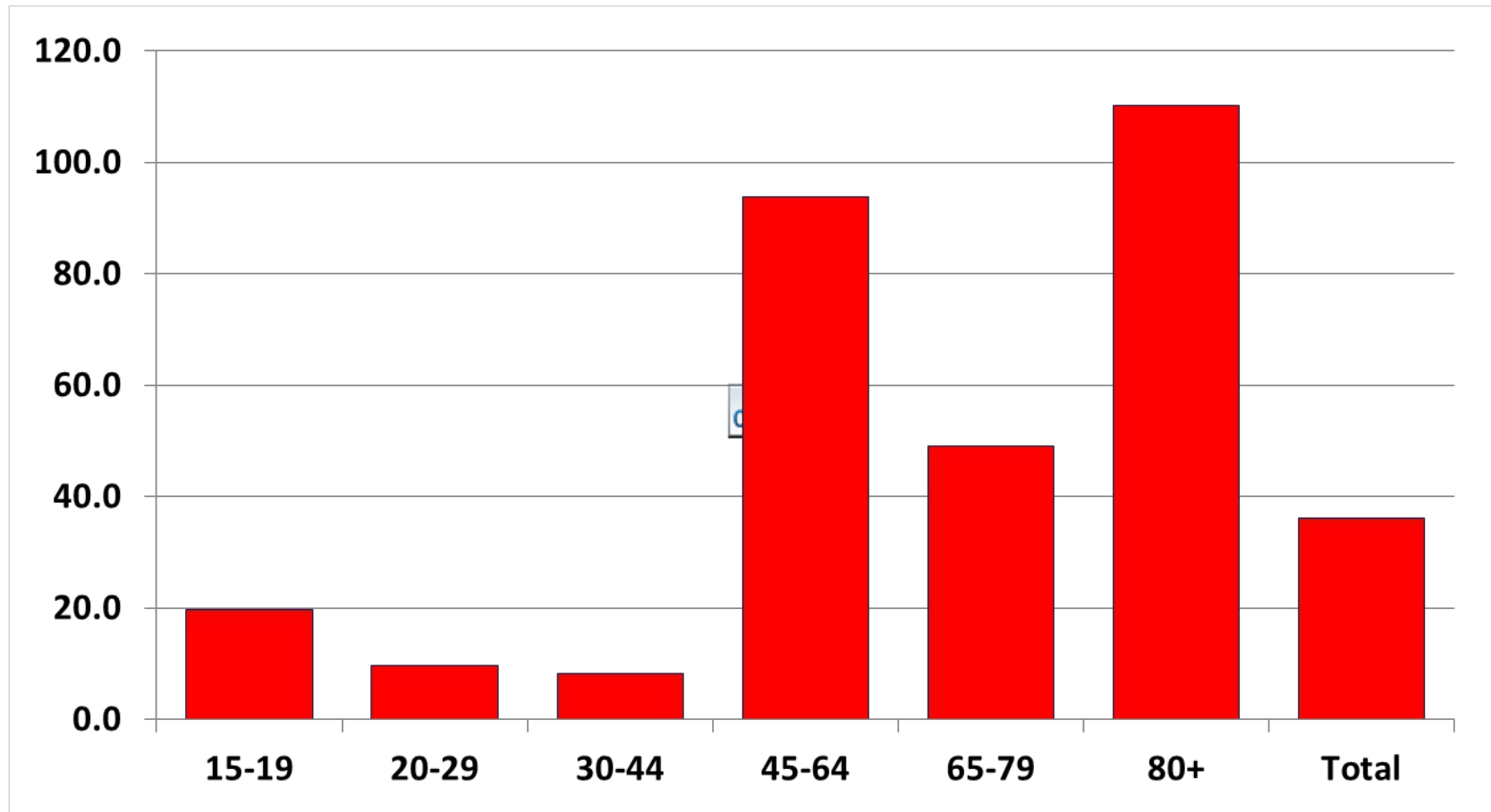
Red	6.9% - 11.9% (57)
Yellow	12% - 14.9% (72)
Green	15% - 19.9% (79)
Blue	20% - 31.1% (46)

Percent of Persons 65 Years of Age and Older in Texas Counties, 2050*



* Assuming rates of net migration equal to 2000-2010

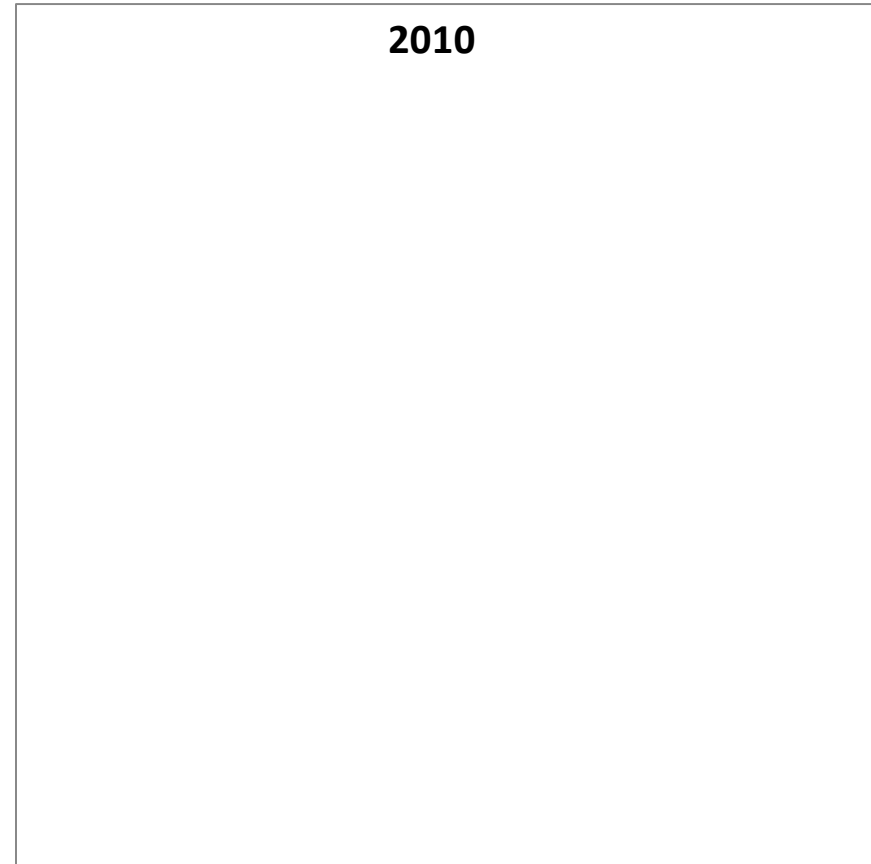
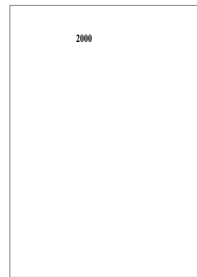
Percentage Change in Licensed Drivers in Texas by Age, 1990-2010



Racial/ethnic diversification



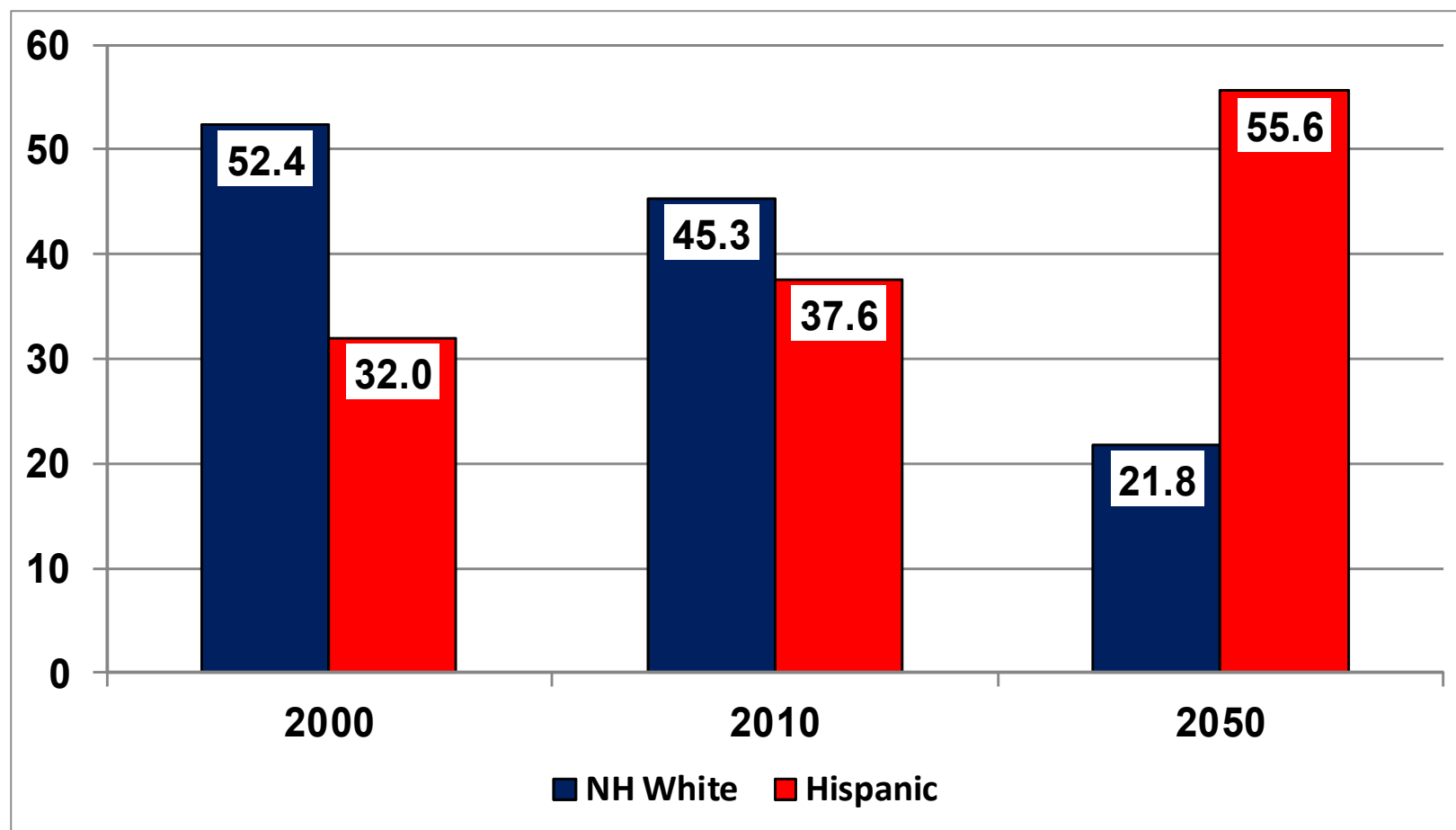
Race/Ethnicity as a Percent of the Total Population in Texas, 2000 and 2010



Source: U.S. Census Bureau, 2000 and 2010 Census



NH White and Hispanic Populations as a Percent of the Total Population in 2000, 2010, and Projected in 2050



Note: 2000 and 2010 Census counts derived from U.S. Census PL 94-171 Data for respective year. Anglo includes non-Hispanic White alone (not in combination with any other race). Hispanic include all persons identifying themselves as Hispanic or Latino. The proportions in 2050 are derived from the Hobby Center for the Study of Texas 1.0 Migration Projection Scenario.



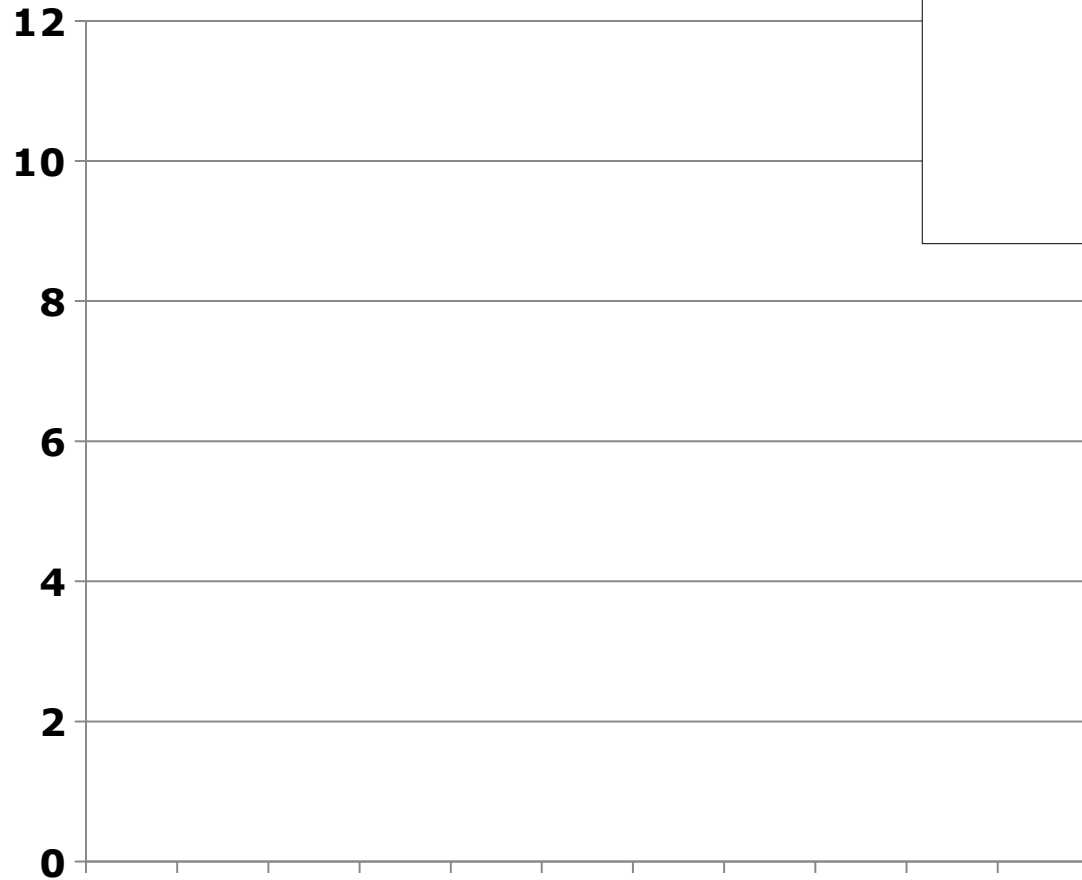
Percent of the Population Age 25 and Older in the United States and Texas with Less Than High School Diploma/GED by Race/Ethnicity, 2010



Percent of the Population Age 25 and Older in the United States and Texas with Bachelor, Professional, or Graduate Degree by Race/Ethnicity, 2010



Median Household Income, Family Income, and Per Capita Income by Race/Ethnicity for Texas, 2010



Source: U.S. Census Bureau, American Community Survey, 2006-2010



Mean Household Income in 2010 and Projected for 2050 Under Alternative Assumptions of Socioeconomic Closure Between Minority and NonHispanic White Households



Mean Consumer Expenditures in 2010 and Projected for 2050 Under Alternative Assumptions of Socioeconomic Closure Between Minority and NonHispanic White Households



Aggregate Consumer Expenditures (in \$Billions) in 2010 and Projected for 2050 Under Alternative Assumptions of Socioeconomic Closure Between Minority and NonHispanic White Households

Billions

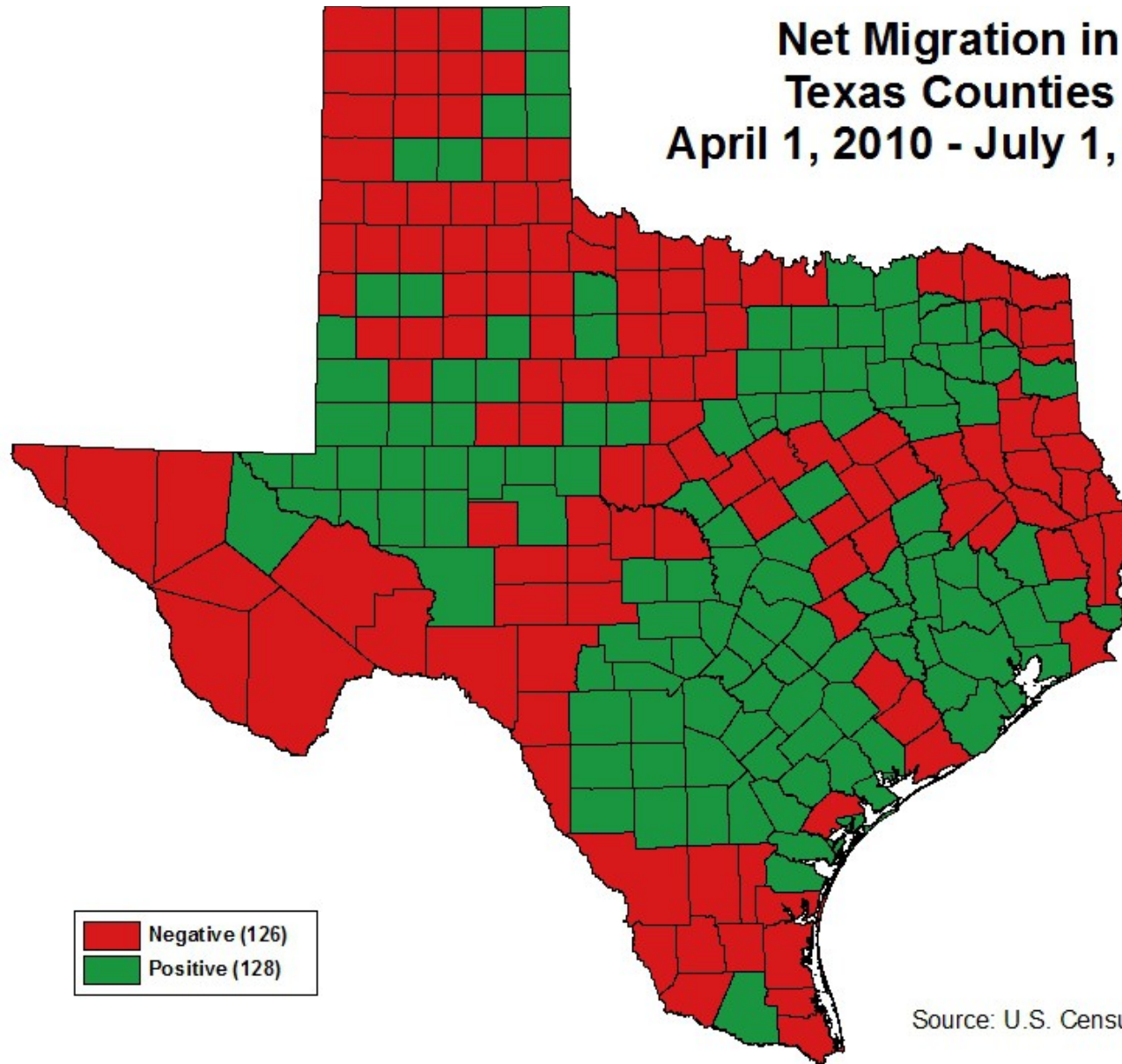


Components of Population Change for Texas, April 1, 2010 – July 1, 2014

Total Change: 1,811,397



Net Migration in Texas Counties April 1, 2010 - July 1, 2014



Source: U.S. Census Bureau



Twenty MSAs with the Largest Numeric Change, 2010 - 2014

Place	Population			Change 2013-2014		Change 2010-2014	
	2010	2013	2014	Numeric	%	Numeric	%
Houston-The Woodlands-Sugar Land, TX	5,920,416	6,333,809	6,490,180	156,371	2.5	569,764	9.6
Dallas-Fort Worth-Arlington, TX	6,426,214	6,823,113	6,954,330	131,217	1.9	528,116	8.2
New York-Newark-Jersey City, NY-NJ-PA	19,567,410	20,002,086	20,092,883	90,797	0.5	525,473	2.7
Los Angeles-Long Beach-Anaheim, CA	12,828,837	13,175,849	13,262,220	86,371	0.7	433,383	3.4
Washington-Arlington-Alexandria, DC-VA-MD-WV	5,636,232	5,967,176	6,033,737	66,561	1.1	397,505	7.1
Miami-Fort Lauderdale-West Palm Beach, FL	5,564,635	5,863,458	5,929,819	66,361	1.1	365,184	6.6
Atlanta-Sandy Springs-Roswell, GA	5,286,728	5,525,432	5,614,323	88,891	1.6	327,595	6.2
Phoenix-Mesa-Scottsdale, AZ	4,192,887	4,404,129	4,489,109	84,980	1.9	296,222	7.1
San Francisco-Oakland-Hayward, CA	4,335,391	4,529,654	4,594,060	64,406	1.4	258,669	6.0
Seattle-Tacoma-Bellevue, WA	3,439,809	3,613,621	3,671,478	57,857	1.6	231,669	6.7
Austin-Round Rock, TX	1,716,289	1,885,803	1,943,299	57,496	3.0	227,010	13.2
Riverside-San Bernardino-Ontario, CA	4,224,851	4,390,262	4,441,890	51,628	1.2	217,039	5.1
Denver-Aurora-Lakewood, CO	2,543,482	2,699,750	2,754,258	54,508	2.0	210,776	8.3
Orlando-Kissimmee-Sanford, FL	2,134,411	2,271,083	2,321,418	50,335	2.2	187,007	8.8



Twenty MSAs with the Largest Percentage Change, 2010 - 2014

Place	Population			Change 2013-2014		Change 2010-2014	
	2010	2013	2014	Numeric	%	Numeric	%
The Villages, FL	93,420	108,483	114,350	5,867	5.4	20,930	22.4
Midland, TX	141,671	157,240	161,290	4,050	2.6	19,619	13.8
Austin-Round Rock, TX	1,716,289	1,885,803	1,943,299	57,496	3.0	227,010	13.2
Odessa, TX	137,130	149,522	153,904	4,382	2.9	16,774	12.2
Myrtle Beach-Conway-North Myrtle Beach, SC-NC	376,722	404,789	417,668	12,879	3.2	40,946	10.9
Bismarck, ND	114,778	123,993	126,597	2,604	2.1	11,819	10.3
Raleigh, NC	1,130,490	1,215,299	1,242,974	27,675	2.3	112,484	10.0
Auburn-Opelika, AL	140,247	151,708	154,255	2,547	1.7	14,008	10.0
St. George, UT	138,115	147,719	151,948	4,229	2.9	13,833	10.0
Cape Coral-Fort Myers, FL	618,754	661,336	679,513	18,177	2.7	60,759	9.8
Greeley, CO	252,825	270,560	277,670	7,110	2.6	24,845	9.8
Daphne-Fairhope-Foley, AL	182,265	195,443	200,111	4,668	2.4	17,846	9.8
Houston-The Woodlands-Sugar Land, TX	5,920,416	6,333,809	6,490,180	156,371	2.5	569,764	9.6
Charleston-North Charleston, SC	664,607	712,081	727,689	15,608	2.2	63,082	9.5
Crestview-Fort Walton Beach-Destin, FL	235,865	253,309	258,042	4,732	1.9	22,177	9.4

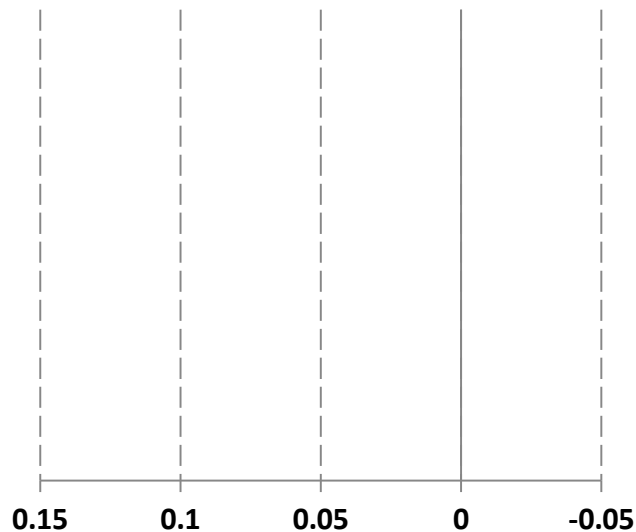
Twenty Places with the Largest Numeric Change, 2010 - 2014

Place	Population			Change 2013-2014		Change 2010-2014	
	2010	2013	2014	Numeric	%	Numeric	%
New York, NY	8,175,133	8,438,379	8,491,079	52,700	0.6	315,946	3.9
Houston, TX	2,099,451	2,203,806	2,239,558	35,752	1.6	140,107	6.7
Los Angeles, CA	3,792,621	3,897,940	3,928,864	30,924	0.8	136,243	3.6
Austin, TX	790,390	887,124	912,791	25,667	2.9	122,401	15.5
San Antonio, TX	1,327,407	1,411,766	1,436,697	24,931	1.8	109,290	8.2
Phoenix, AZ	1,445,632	1,512,442	1,537,058	24,616	1.6	91,426	6.3
Dallas, TX	1,197,816	1,260,725	1,281,047	20,322	1.6	83,231	6.9
Charlotte, NC	731,424	793,951	809,958	16,007	2.0	78,534	10.7
San Diego, CA	1,307,402	1,359,844	1,381,069	21,225	1.6	73,667	5.6
Fort Worth, TX	741,206	794,055	812,238	18,183	2.3	71,032	9.6
San Jose, CA	945,942	1,003,821	1,015,785	11,964	1.2	69,843	7.4
Denver, CO	600,158	648,401	663,862	15,461	2.4	63,704	10.6
Seattle, WA	608,660	653,404	668,342	14,938	2.3	59,682	9.8
Washington, DC	601,723	649,111	658,893	9,782	1.5	57,170	9.5



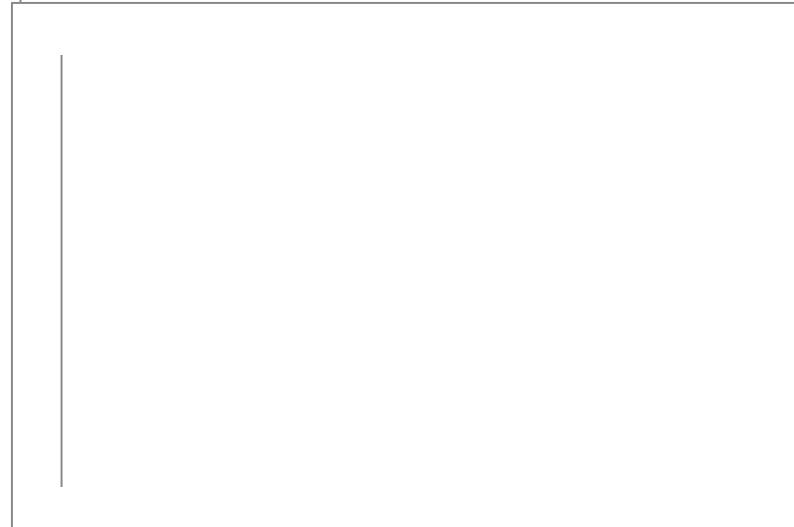
Education Pays

Unemployment Rate



Overall Unemployment Rate: 7.6%

Median Weekly Earnings



Median: \$827

Source: U.S. Department of Labor, Bureau of Labor Statistics, June 2013/first quarter 2013



Educational Attainment for the Texas Population Age 25 and Older by Race/Ethnicity, 2010

Race Ethnicity	Population Age 25 and Older	Less than high school	High school diploma	Some college or associates degree	Bachelor or more
Non-Hispanic White	8,099,053	8.0	25.3	32.6	34.1
Black	1,788,223	13.9	30.3	36.2	19.6
Hispanic*	5,063,779	40.4	25.8	22.2	11.6
Asian	639,967	14.4	15.2	18.6	51.8
Total Population	15,772,122	19.3	25.6	29.2	25.9

Source: U.S. Census, American Community Survey, 2010.

Note: Due to size, some groups are excluded.

*Includes Hispanic persons of all races.



Population, Population Change, and Proportion of the Total Population by Race/Ethnicity for Texas, 2000 and 2010

Race/Ethnicity*	Population		Population Change			Percent of Total Population	
	2000	2010	Numeric	Percent	Percent of Total Change	2000	2010
NH White	10,933,313	11,397,345	464,032	4.2	10.8	52.4	45.3
Hispanic (All Races)	6,669,666	9,460,921	2,791,255	41.8	65.0	32.0	37.6
NH Black	2,364,255	2,886,825	522,570	22.1	12.2	11.3	11.5
NH Asian	554,445	948,426	393,981	71.1	9.2	2.7	3.8
NH Other	330,141	452,044	121,903	36.9	2.8	1.6	1.8
Total	20,851,820	25,145,561	4,293,741	20.6	100.0	100.0	100.0

*Hispanic includes persons of all races. All other race/ethnicity categories shown here are Non-Hispanic. Non-Hispanic Other includes persons identifying themselves as Non-Hispanic American Indian or Alaska Native, Non-Hispanic Native Hawaiian or Pacific Islander, Non-Hispanic Some Other Race, or Non-Hispanic and a combination of two or more races.

Source: U.S. Census 2000 and 2010, P.L. 94-171.

Prepared by the Hobby Center for the Study of Texas at Rice University <http://HobbyCenter.Rice.edu>



Population, Population Change, and Proportion of the Population Under 18 Years by Race/Ethnicity for Texas, 2000 and 2010

Race/Ethnicity*	Population		Population Change			Percent of Total Population	
	2000	2010	Numeric	Percent	Percent of Total Change	2000	2010
NH White	2,507,147	2,322,661	-184,486	-7.4	-18.8	42.6	33.8
Hispanic (All Races)	2,386,765	3,317,777	931,012	39.0	95.1	40.5	48.3
NH Black	732,807	810,543	77,736	10.6	7.9	12.4	11.8
NH Asian	139,226	231,458	92,232	66.2	9.4	2.4	3.4
NH Other	120,814	183,385	62,571	51.8	6.4	2.1	2.7
Total	5,886,759	6,865,824	979,065	16.6	100.0	100.0	100.0

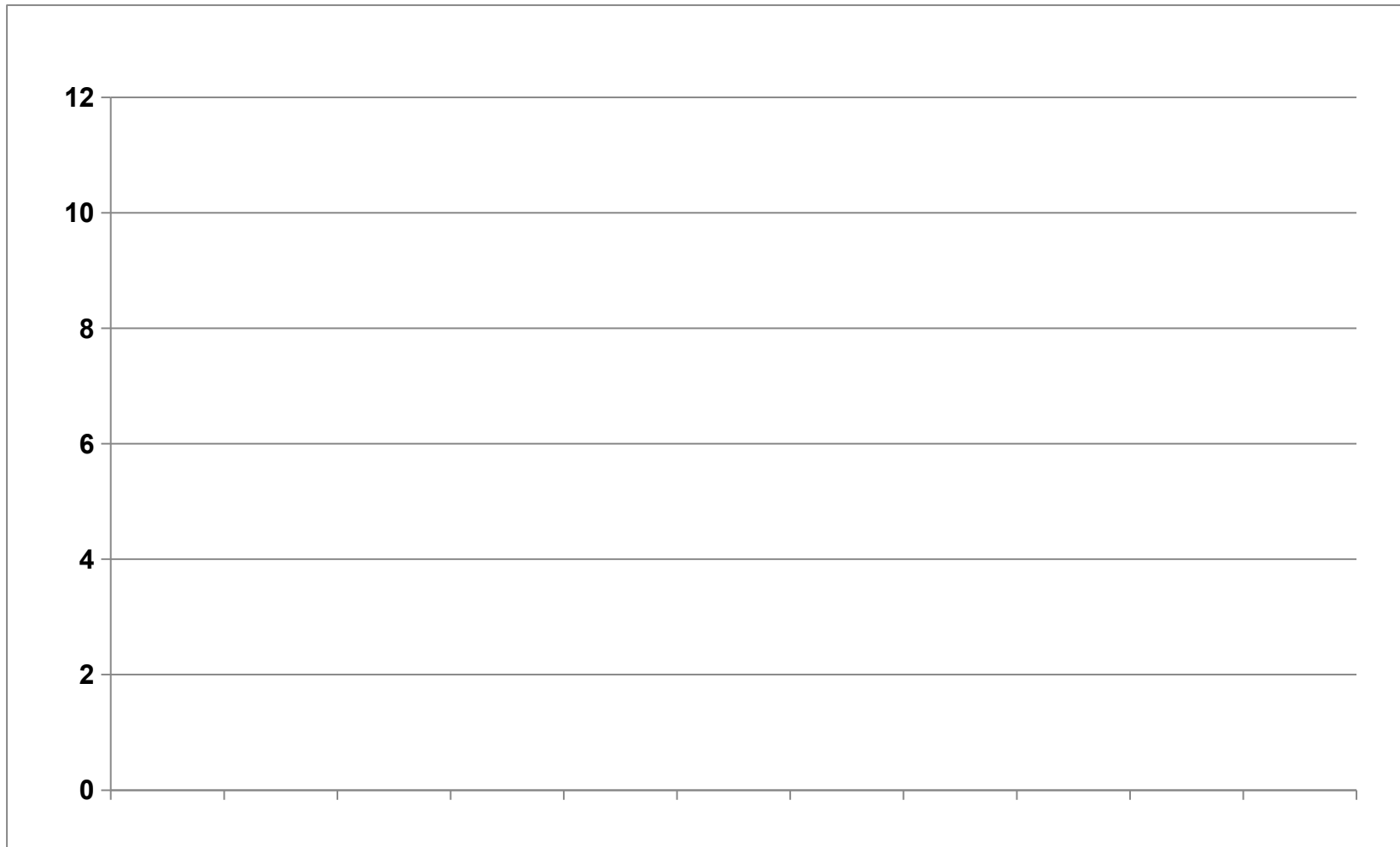
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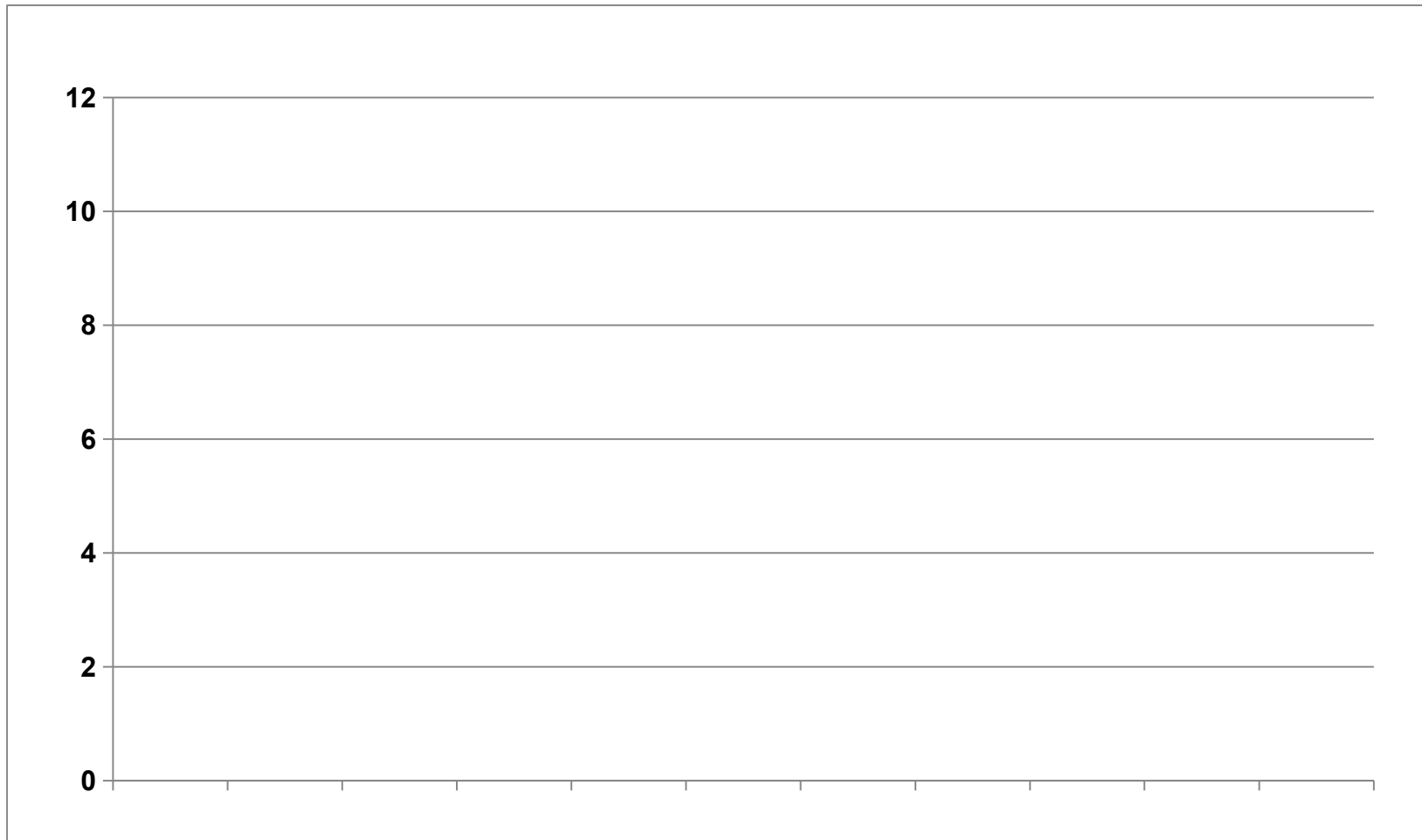
Numeric Change in Population (in Thousands) by Race/Ethnicity for Texas, 2000-2010



Proportion of Total Population Change in Texas by Race/Ethnicity, 2000-2010



Numeric Change in Texas Child (<18) Population (in Thousands) by Race/Ethnicity, 2000-2010



Proportion of Change in Texas Child (<18) Population by Race/Ethnicity, 2000-2010



Population, Population Change, and Proportion of the Total Population by Race/Ethnicity for State of Texas, 2010-2013

Race/Ethnicity 2	Population		Change 2010 - 2013 ¹			Percent of Total Population	
	2010	2013	Numeric	Percent	Percent of Total Change	2010	2013
NH White	11,428,638	11,648,258	219,620	1.9	16.9	45.4	44.0
NH Black	2,899,884	3,089,995	190,111	6.6	14.6	11.5	11.7
Hispanic	9,460,921	10,153,145	692,224	7.3	53.1	37.6	38.4
NH Asian	960,543	1,105,009	144,466	15.0	11.1	3.8	4.2
NH Other ³	395,575	451,786	56,211	14.2	4.3	1.7	1.7
Total	25,145,561	26,448,193	1,302,632	5.2	100.0	100.0	100.0

Source: U.S. Census Bureau, Population Estimates, Vintage 2013.

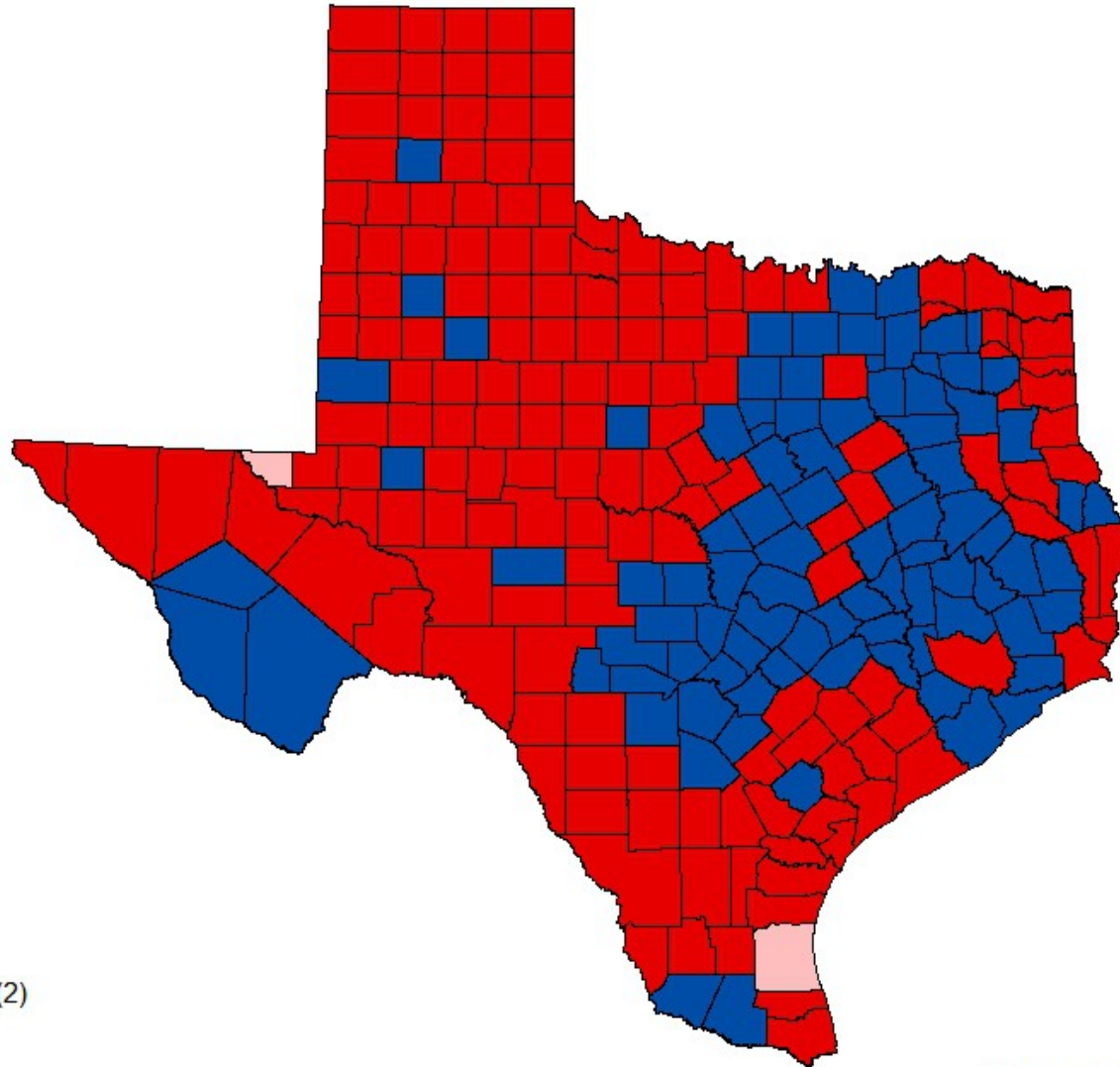
¹139 months change from April 1, 2010 to July 1, 2013.

²Hispanic includes persons of all races who identify as Hispanic. All other race/ethnic categories shown here are NonHispanic.

³NonHispanic Other includes persons identifying themselves as NonHispanic Native Hawaiian or Pacific Islander, NonHispanic American Indian or Alaska Native, NonHispanic Some Other Race, or NonHispanic and a combination of two or more races.



Counties Classified by Population Change in the Anglo (non-Hispanic White) Population, 2000-2010



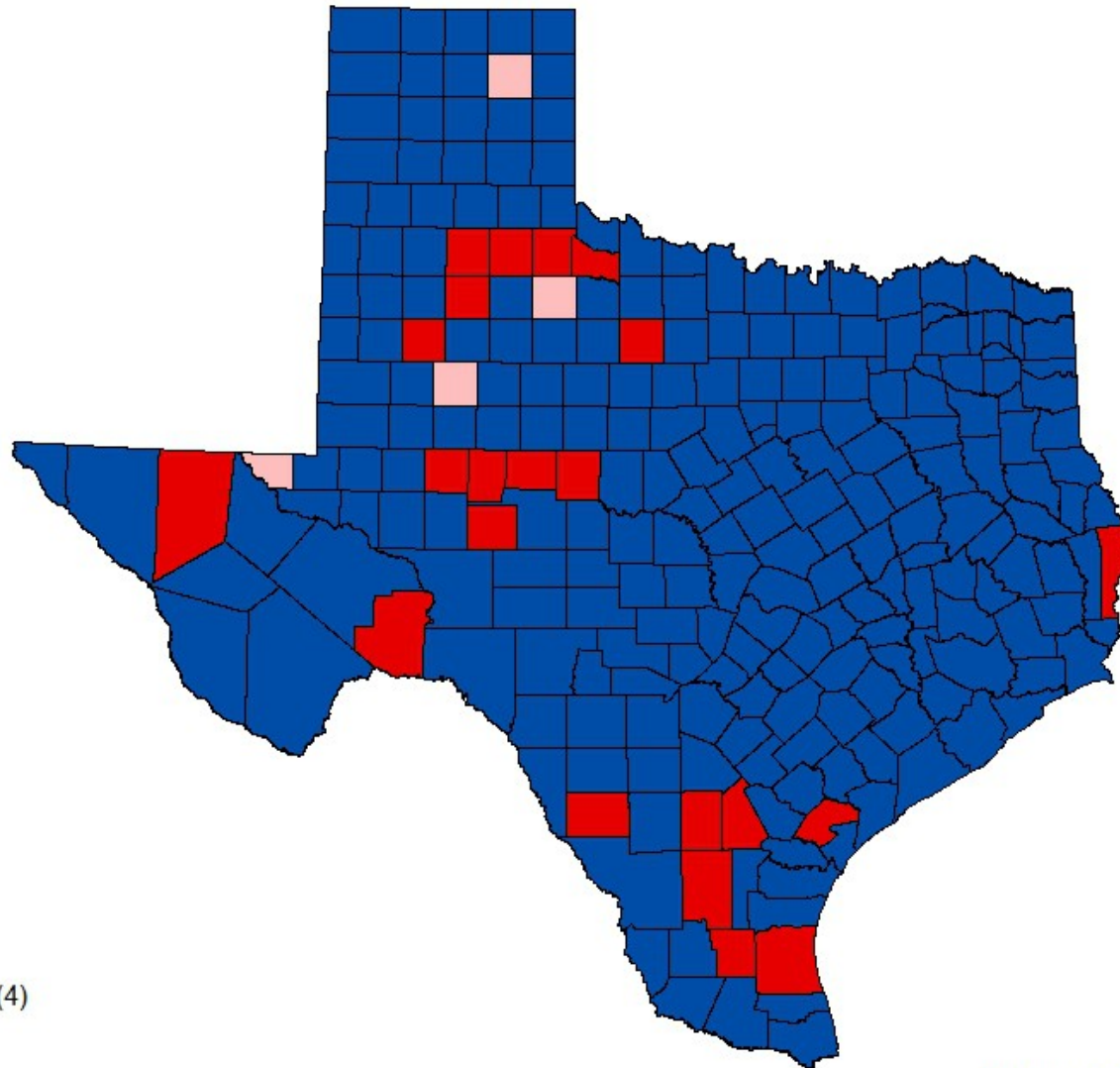
County Type

- < 100 Persons (2)
- Decline (161)
- Growth (91)

Source: U.S. Census 2010, PL 94-171.



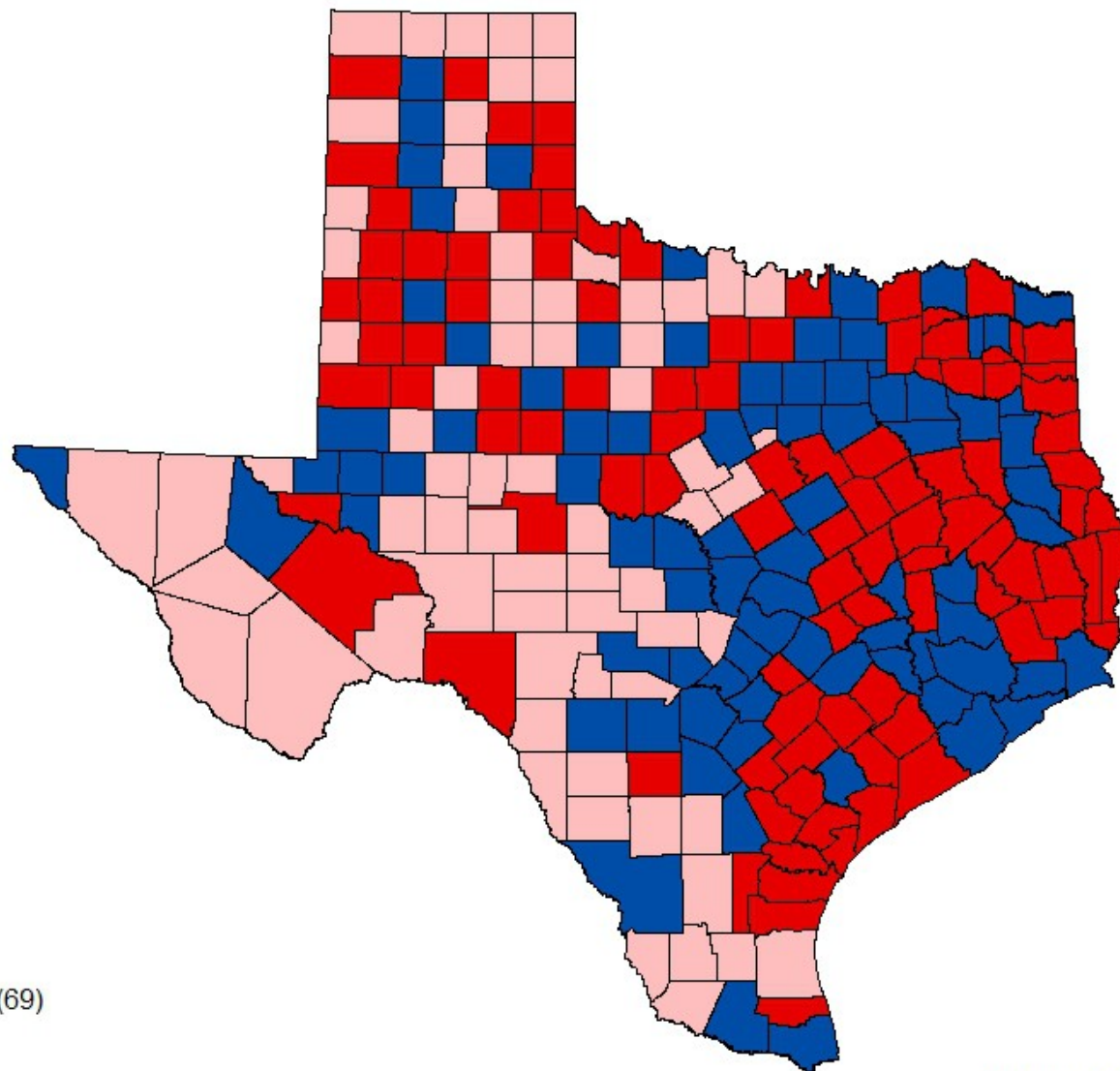
Counties Classified by Population Change in the Hispanic Population, 2000-2010



Source: U.S. Census 2010, PL 94-171.



Counties Classified by Population Change in the non-Hispanic Black Population, 2000-2010

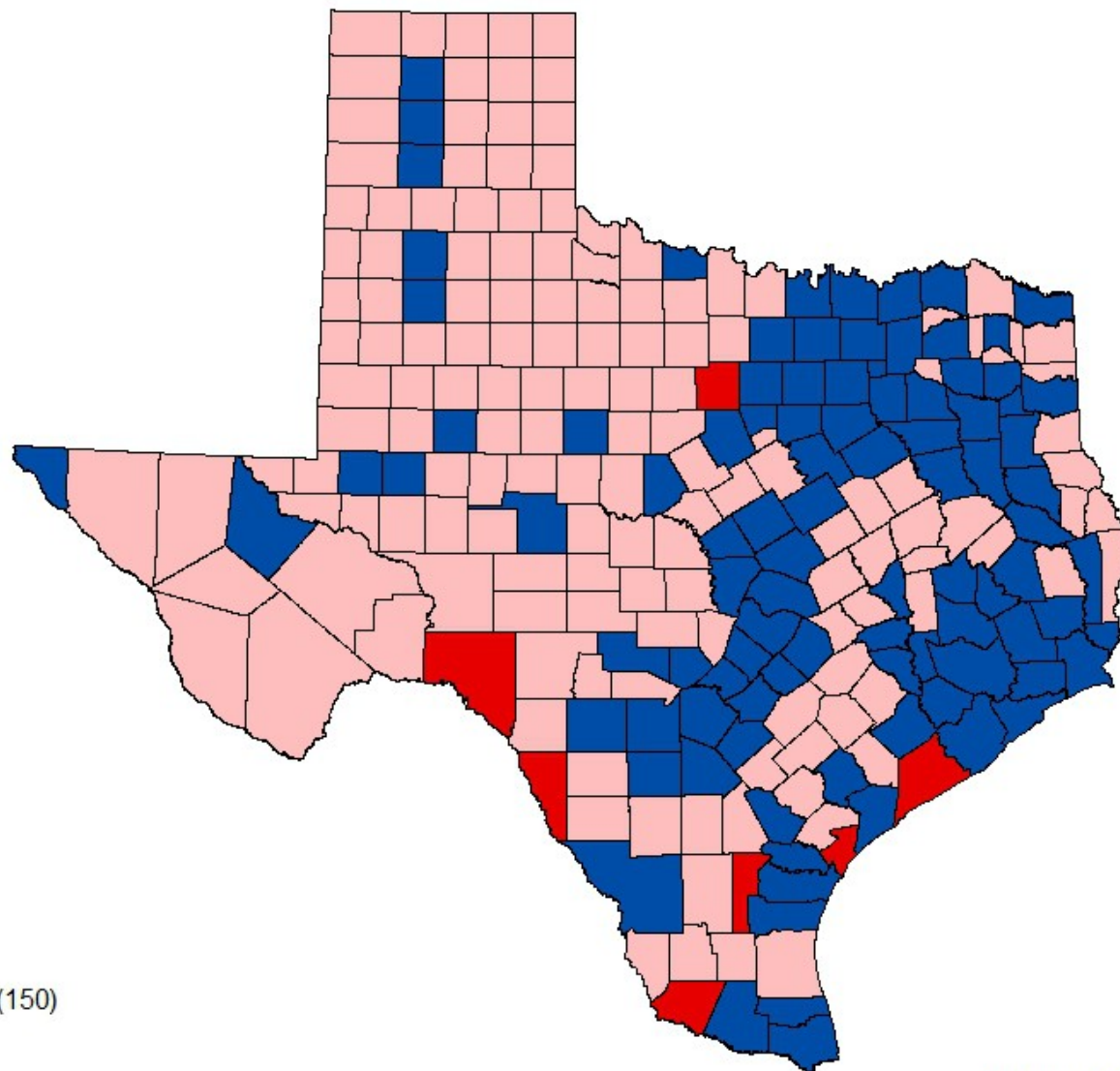


County Type

- < 100 Persons (69)
- Decline (102)
- Growth (83)

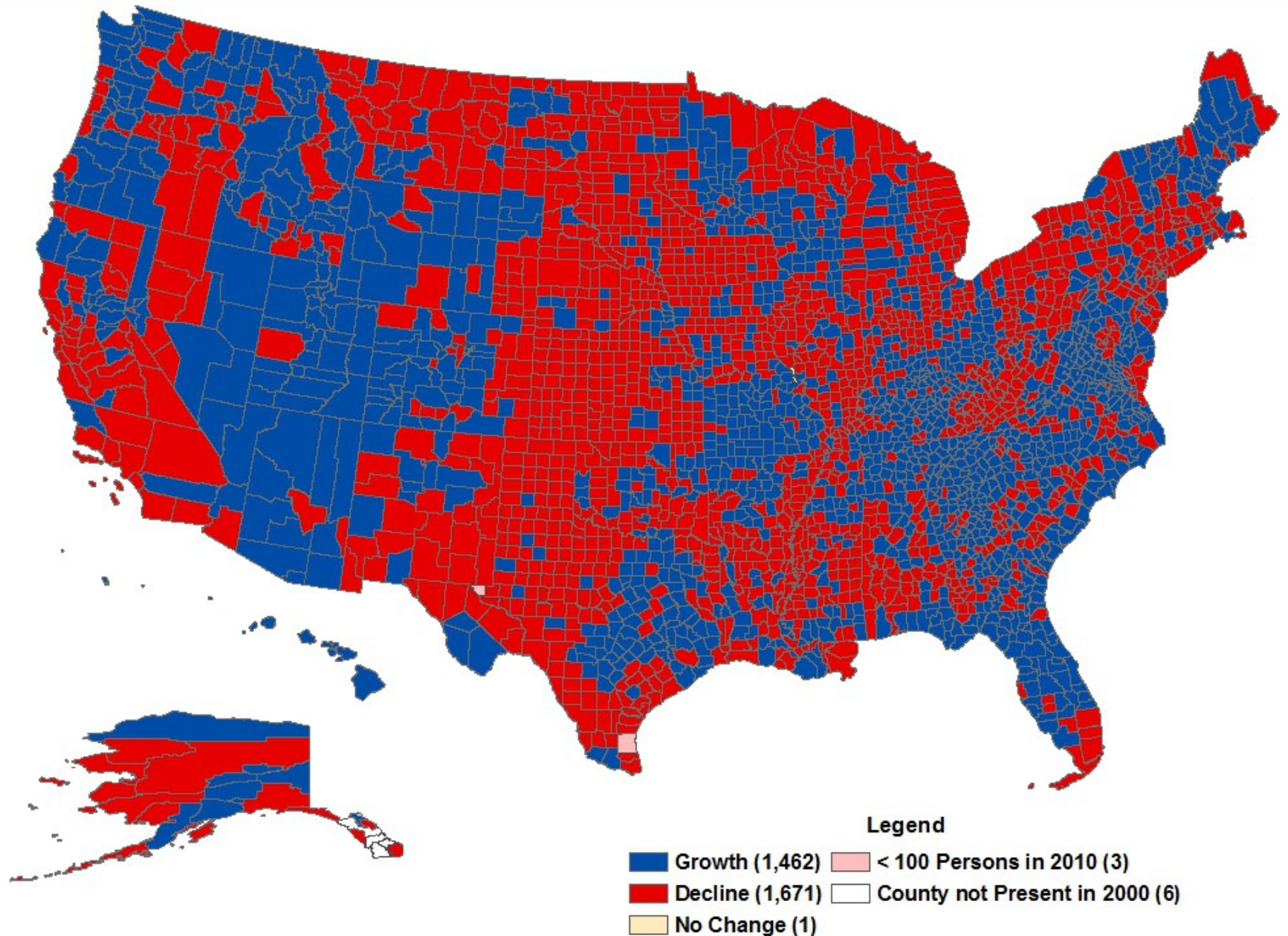
Source: U.S. Census 2010, PL 94-171.

Counties Classified by Population Change in the non-Hispanic Asian Population, 2000-2010

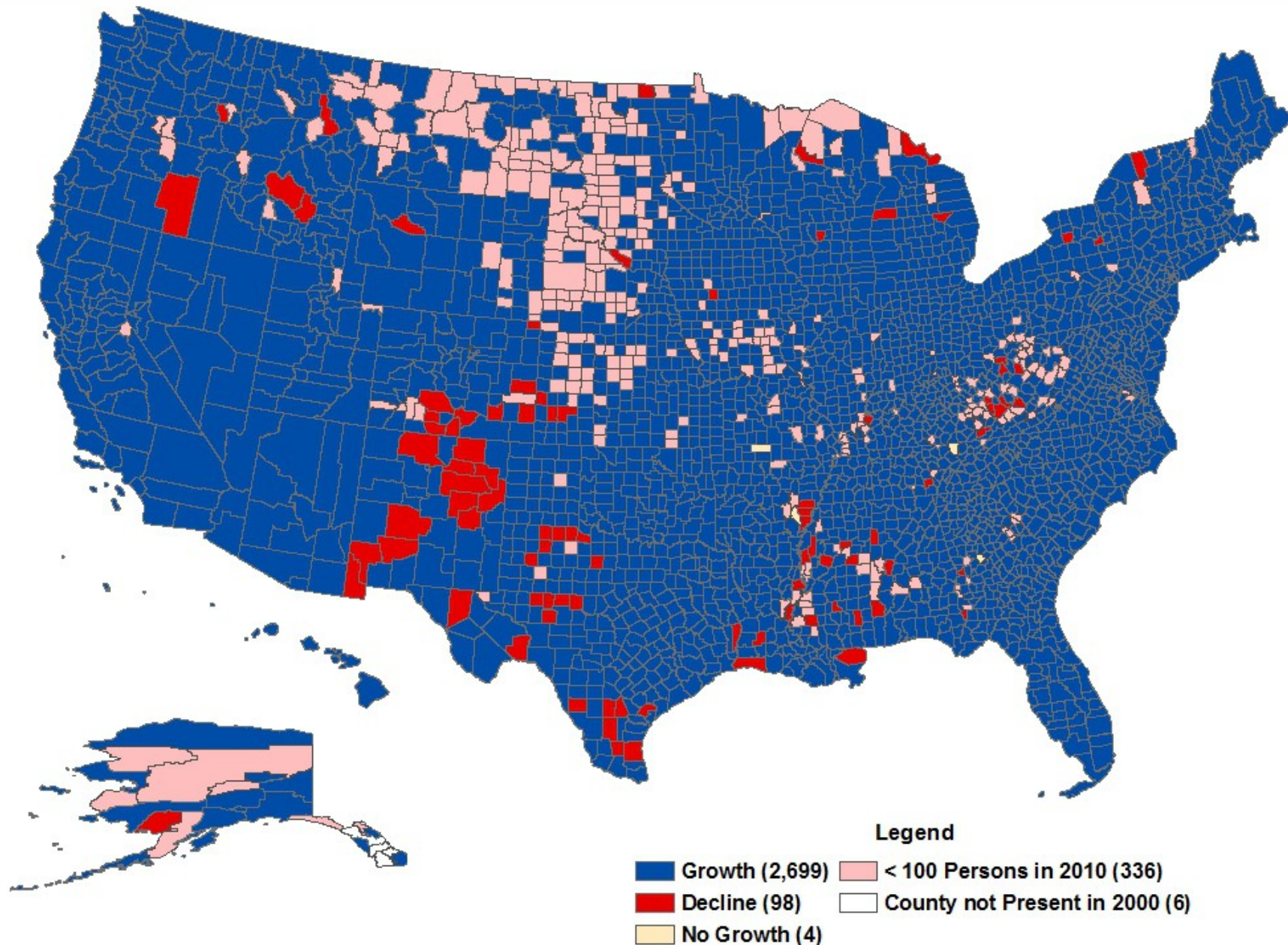


Source: U.S. Census 2010, PL 94-171.

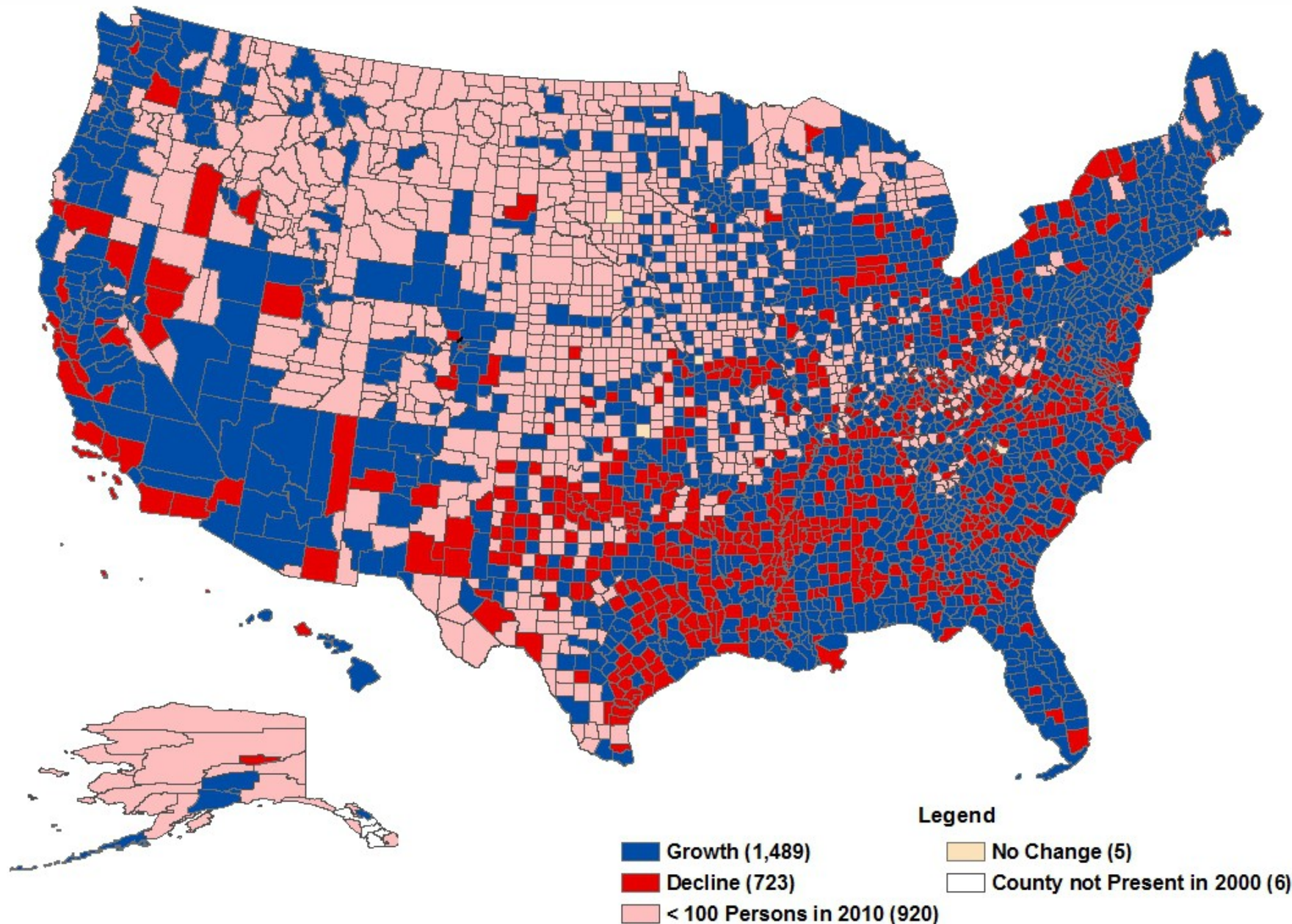
Counties Classified by Population Change in the Non-Hispanic White Population, 2000-2010



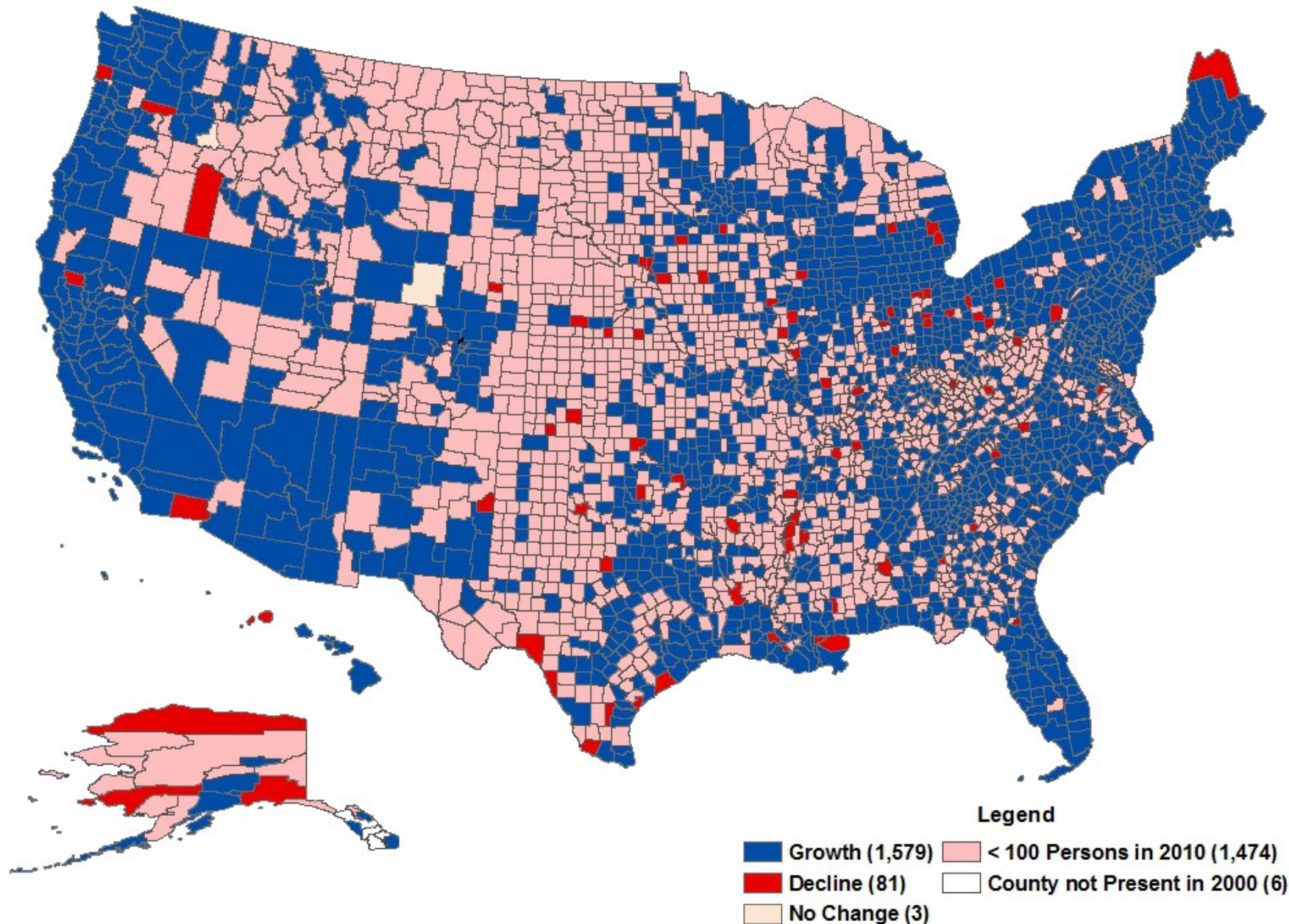
Counties Classified by Population Change in the Hispanic Population, 2000-2010



Counties Classified by Population Change in the Non-Hispanic Black Population, 2000-2010



Counties Classified by Population Change in the Non-Hispanic Asian Population, 2000-2010



NonHispanic White Population as a Percent of the Total Population in Selected Metropolitan Statistical Areas in Texas in 2000 and 2010



NonHispanic White Child (<18) Population as a Percent of the Total Childhood Population in Selected Metropolitan Statistical Areas in Texas in 2000 and 2010



Hispanic Population as a Percent of the Total Population in Selected Metropolitan Statistical Areas in Texas in 2000 and 2010



Hispanic Child (<18) Population as a Percent of the Total Child Population in Selected Metropolitan Statistical Areas in Texas in 2000 and 2010



Population in Texas by Race/Ethnicity in 2010 and Projections of the Population in Texas by Race/Ethnicity from 2020 to 2050 Under Alternative Assumptions of Age and Race/Ethnicity-Specific Rates of Net Migration

Year	NH1 White	NH Black	Hispanic	NH Asian & Other2	Total
Assuming Zero Net Migration					
2010	11,397,345	2,886,825	9,460,921	1,400,470	25,145,561
2020	11,576,595	3,122,637	11,137,672	1,536,693	27,373,597
2030	11,501,020	3,280,941	12,869,753	1,638,249	29,289,963
2040	11,182,576	3,355,500	14,570,851	1,714,232	30,823,159
2050	10,766,622	3,366,528	16,191,150	1,728,206	32,052,506
Assuming Net Migration Equal to One-Half of 2000-2010					
2010	11,397,345	2,886,825	9,460,921	1,400,470	25,145,561
2020	11,752,530	3,295,198	12,031,059	1,825,130	28,903,917
2030	11,850,180	3,658,997	15,082,058	2,309,763	32,900,998
2040	11,676,157	3,951,909	18,489,803	2,881,525	36,999,394
2050	11,376,576	4,182,155	22,268,390	3,483,178	41,310,299
Assuming Net Migration Equal to 2000-2010					
2010	11,397,345	2,886,825	9,460,921	1,400,470	25,145,561
2020	11,931,815	3,477,928	13,003,159	2,170,409	30,583,311
2030	12,211,664	4,080,453	17,702,132	3,288,536	37,282,785
2040	12,194,151	4,653,725	23,514,974	4,953,861	45,316,711
2050	12,024,913	5,195,861	30,701,208	7,283,548	55,205,530

1NH refers to Non-Hispanic; values shown are only for the non-Hispanic persons in each race category. Hispanic includes Hispanics of all races.

2NH Asian & Other category includes non-Hispanic persons who identify themselves as belonging to two or more race groups.

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Year	NH1 White	NH Black	Hispanic	NH Asian & Other2	Total
Assuming Zero Net Migration (Scenario 0.0)					
2010	45.3	11.5	37.6	5.6	100.0
2020	42.3	11.4	40.7	5.6	100.0
2030	39.3	11.2	43.9	5.6	100.0
2040	36.3	10.9	47.2	5.6	100.0
2050	33.6	10.5	50.5	5.4	100.0
Assuming Net Migration Equal to One-Half of 2000-2010 (Scenario 0.5)					
2010	45.3	11.5	37.6	5.6	100.0
2020	40.7	11.4	41.6	6.3	100.0
2030	36.0	11.1	45.8	7.1	100.0
2040	31.6	10.7	50.0	7.7	100.0
2050	27.5	10.2	53.9	8.4	100.0
Assuming Net Migration Equal to 2000-2010 (Scenario 1.0)					
2010	45.3	11.5	37.6	5.6	100.0
2020	39.0	11.4	42.5	7.1	100.0
2030	32.8	10.9	47.5	8.8	100.0
2040	26.9	10.3	51.9	10.9	100.0
2050	21.8	9.4	55.6	13.2	100.0

a 1NH refers to Non-Hispanic; values shown are only for the non-Hispanic persons in each race category. Hispanic includes Hispanics of all races.

2NH Asian & Other category includes non-Hispanic persons who identify themselves as belonging to two or more race groups.

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Percent Change for Selected Time Periods Under Alternative Scenarios of Age and Race/Ethnicity-Specific Net Migration for the State of Texas

<i>Period</i>	<i>NH1 White</i>	<i>NH Black</i>	<i>Hispanic</i>	<i>NH Asian & Other2</i>	<i>Total</i>
Assuming Zero Net Migration (Scenario 0.0)					
2010-2020	1.6	8.2	17.7	9.7	8.9
2020-2030	-0.7	5.1	15.6	6.6	7.0
2030-2040	-2.8	2.3	13.2	4.6	5.2
2040-2050	-3.7	0.3	11.1	0.8	4.0
2010-2050	-5.5	16.6	71.1	23.4	27.5
Assuming Net Migration Equal to One-Half of 2000-2010 (Scenario 0.5)					
2010-2020	3.1	14.1	27.2	30.3	14.9
2020-2030	0.8	11.0	25.4	26.6	13.8
2030-2040	-1.5	8.0	22.6	24.8	12.5
2040-2050	-2.6	5.8	20.4	20.9	11.7
2010-2050	-0.2	44.9	135.4	148.7	64.3
Assuming Net Migration Equal to 2000-2010 (Scenario 1.0)					
2010-2020	4.7	20.5	37.4	55.0	21.6
2020-2030	2.3	17.3	36.1	51.5	21.9
2030-2040	-0.1	14.0	32.8	50.6	21.5
2040-2050	-1.4	11.6	30.6	47.0	21.8
2010-2050	5.5	80.0	224.5	420.1	119.5

1NH refers to Non-Hispanic; values shown are only for the non-Hispanic persons in each race category. Hispanic includes Hispanics of all races.

2NH Asian & Other category includes non-Hispanic persons who identify themselves as belonging to two or more race groups.



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<i>Race/Ethnicity</i>	<i>Number</i>	<i>Percent</i>
Assuming Zero Net Migration (Scenario 0.0)		
NH1 White	-630,723	-9.1
NH Black	479,703	6.9
Hispanic	6,730,229	97.4
NH Asian & Other2	327,736	4.8
Total	6,906,945	100.0
Assuming Net Migration Equal to One-Half of 2000-2010 (Scenario 0.5)		
NH White	-20,769	-0.1
NH Black	1,295,330	8.0
Hispanic	12,807,469	79.2
NH Asian & Other	2,082,708	12.9
Total	16,164,738	100.0
Assuming Net Migration Equal to 2000-2010 (Scenario 1.0)		
NH White	627,568	2.1
NH Black	2,309,036	7.7
Hispanic	21,240,287	70.7
NH Asian & Other	5,883,078	19.5
Total	30,059,969	100.0

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1NH refers to Non-Hispanic; values shown are only for the non-Hispanic persons in each race category. Hispanic includes Hispanics of all races.

2NH Asian & Other category includes non-Hispanic persons who identify themselves as belonging to two or more race groups.

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Total Public School Students by Race/Ethnicity in the 10 Largest School Districts in Texas, 2000-2001 and 2014-2015

District(County) School Year	White	African American	Hispanic	Asian/ Pacific Islander	Native American	Total Enroll- ment
Houston ISD (Harris)						
2000-2001	10.0	32.1	54.9	2.9	0.1	208,462
2014-2015	8.3	24.9	62.0	4.6	0.2	215,225
Dallas ISD (Dallas)						
2000-2001	7.8	35.9	54.5	1.4	0.4	161,548
2014-2015	4.5	21.5	71.9	1.8	0.3	170,253
Cypress-Fairbanks ISD (Harris)						
2000-2001	58.5	10.0	23.4	7.9	0.2	63,497
2014-2015	27.5	16.5	44.0	11.3	0.7	113,023
Northside ISD (Bexar)						
2000-2001	36.7	6.6	54.3	2.2	0.2	63,739
2014-2015	19.2	6.3	68.3	6.1	0.1	103,606
Austin ISD (Travis)						
2000-2001	33.7	15.7	47.8	2.5	0.3	77,816
2014-2015	25.9	8.0	59.5	6.4	0.2	84,564
Fort Worth ISD (Tarrant)						
2000-2001	21.4	30.9	45.4	2.1	0.2	79,661
2014-2015	22.9	11.0	62.7	3.2	0.2	85,975
Fort Bend ISD (Fort Bend)						
2000-2001	37.8	28.0	18.1	16.0	0.1	53,999
2014-2015	17.9	28.7	26.6	26.4	0.4	72,152
North East ISD (Bexar)						
2000-2001	49.1	9.4	38.8	2.5	0.2	62,325
2014-2015	28.1	7.2	57.5	6.9	0.3	67,971
Arlington ISD (Tarrant)						
2000-2001	47.3	21.3	24.0	6.8	0.6	58,866
2014-2015	22.0	24.5	44.5	8.5	0.5	63,882
EL Paso ISD (El Paso)						
2000-2001	15.2	4.8	78.5	1.2	0.3	62,325
2014-2015	10.0	3.8	83.1	2.9	0.2	60,852

Source: Data compiled from Texas Education Agency, Academic Excellence Indicator System (AEIS) District Profiles

A note on Hispanic growth



Hispanic Population in Texas by Origin and Citizenship Status

Hispanic Population:
9.9 Million

Source: U.S. Census, 2012
American Community Survey



Hispanic Population Aged 18 and Older in Texas by Origin and Citizenship Status



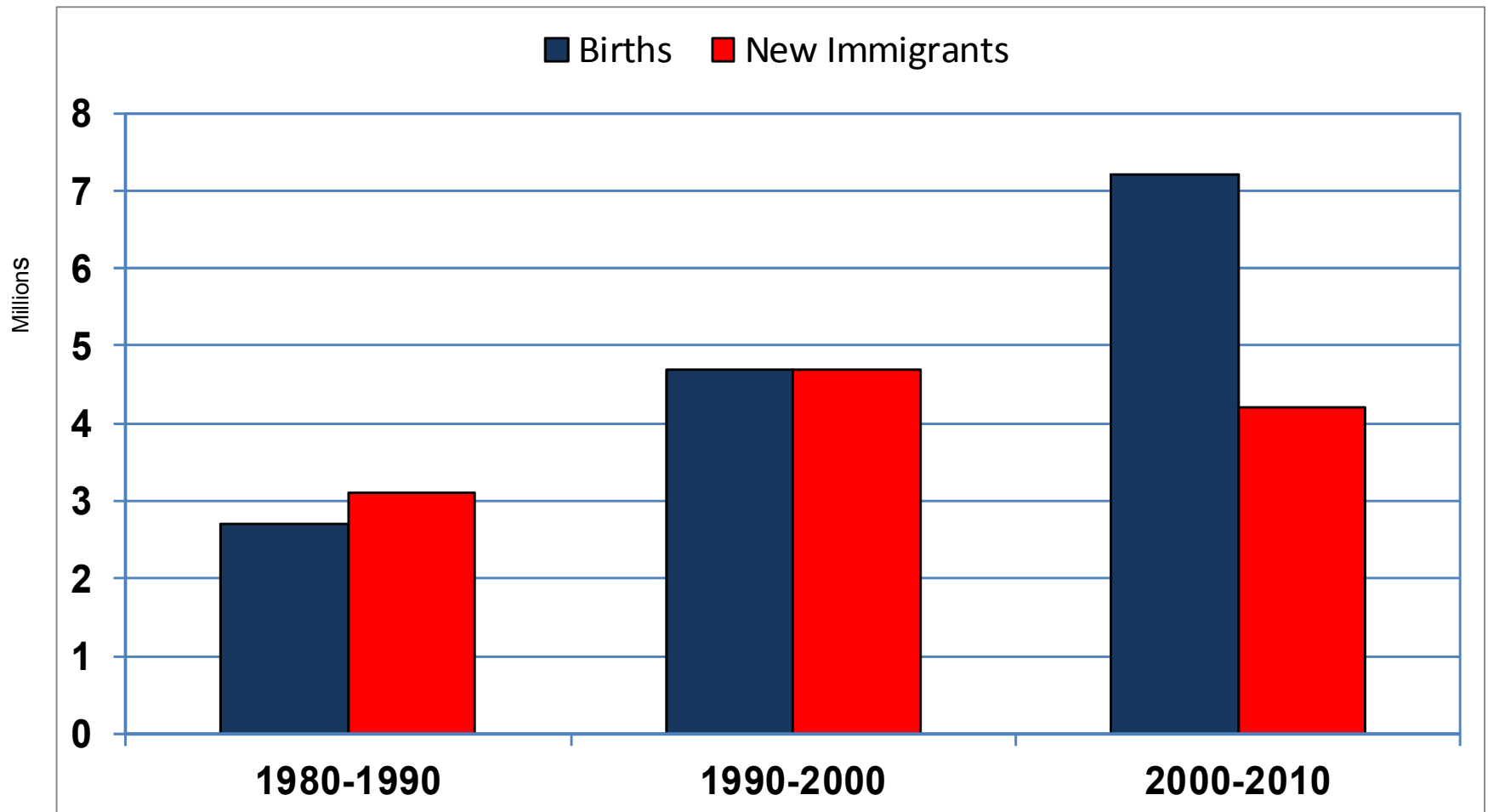
Hispanic Population Under Age 18 in Texas by Origin and Citizenship Status

Hispanic Population
< Age 18: 3.4 Million

Source: U.S. Census, 2012
American Community Survey



Mexican-American Population Growth in the United States, 1980-2010

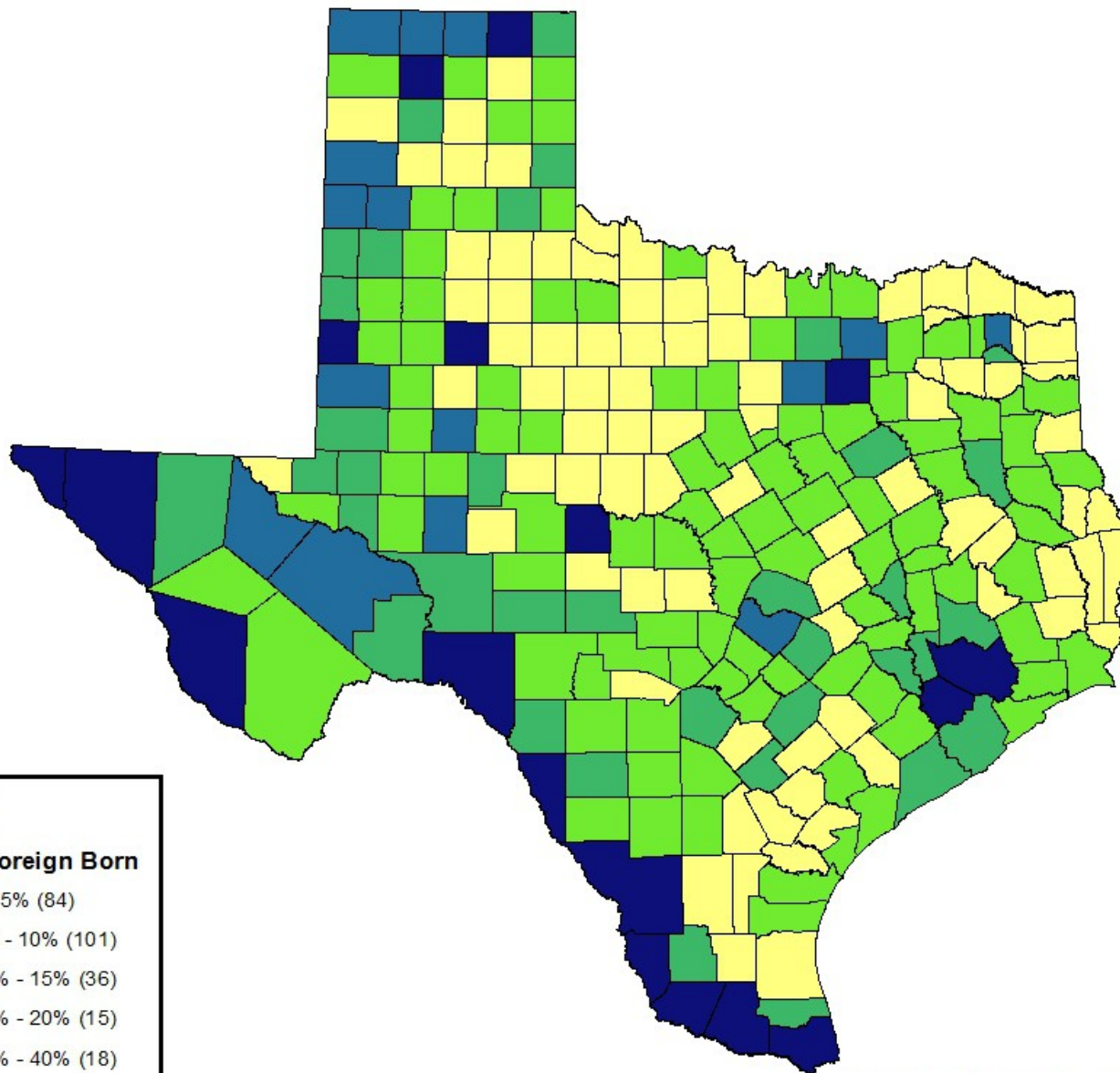


Note: Deaths in are not included in the figure

Source: Pew Hispanic Center, 2011 (based upon tabulations of Current Population Survey and U.S. Census Integrated Public Use Microdata Samples).

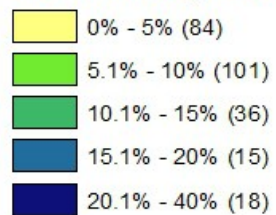


Foreign Born as a Percent of the Total Population, 2006-2010



Legend

Percent Foreign Born



Source: U.S. Census, American Community Survey, 2006-10

Country of Birth of the Unauthorized Immigrant Population in the United States: January 2000 and 2011

2000

Total: 8.5 million

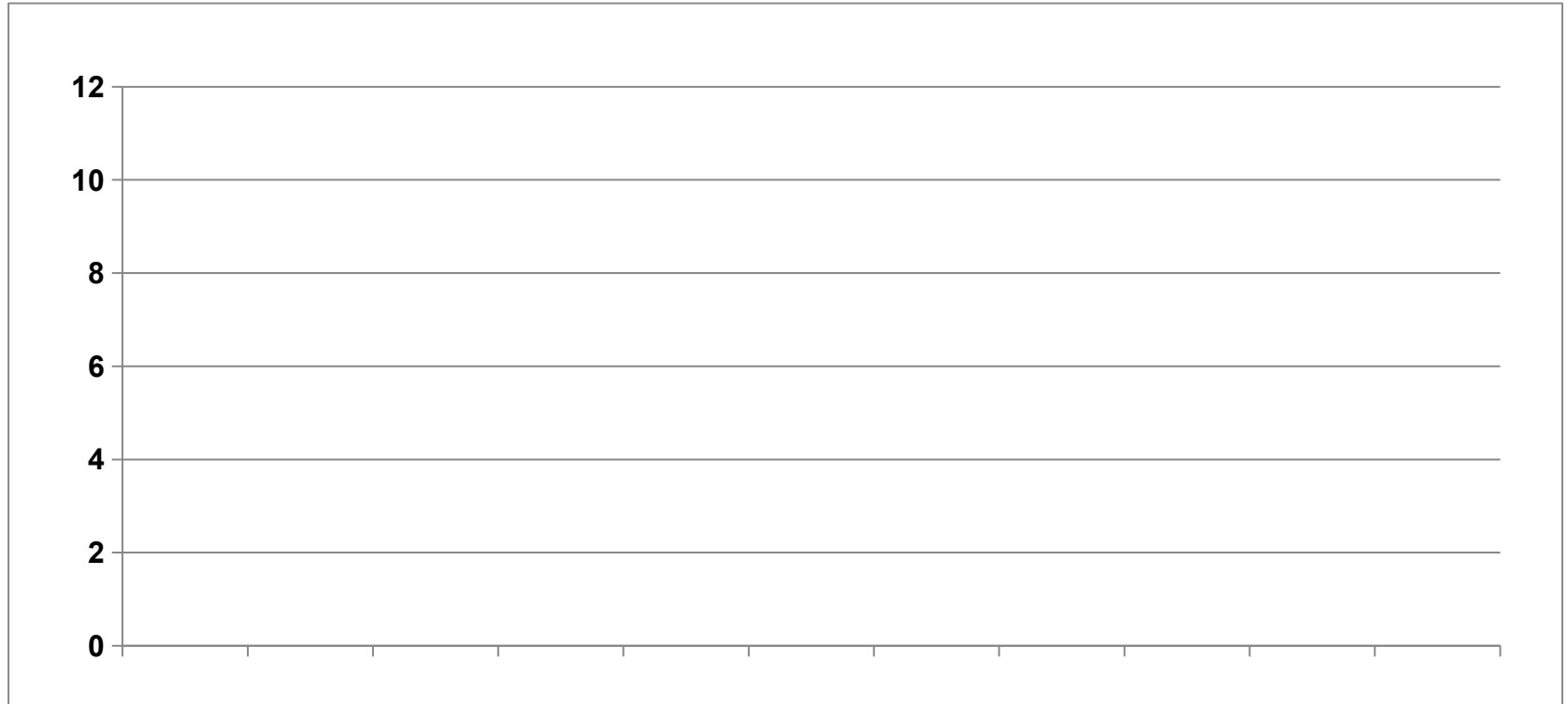
2011

Total: 11.5 million

Source: Homeland Security



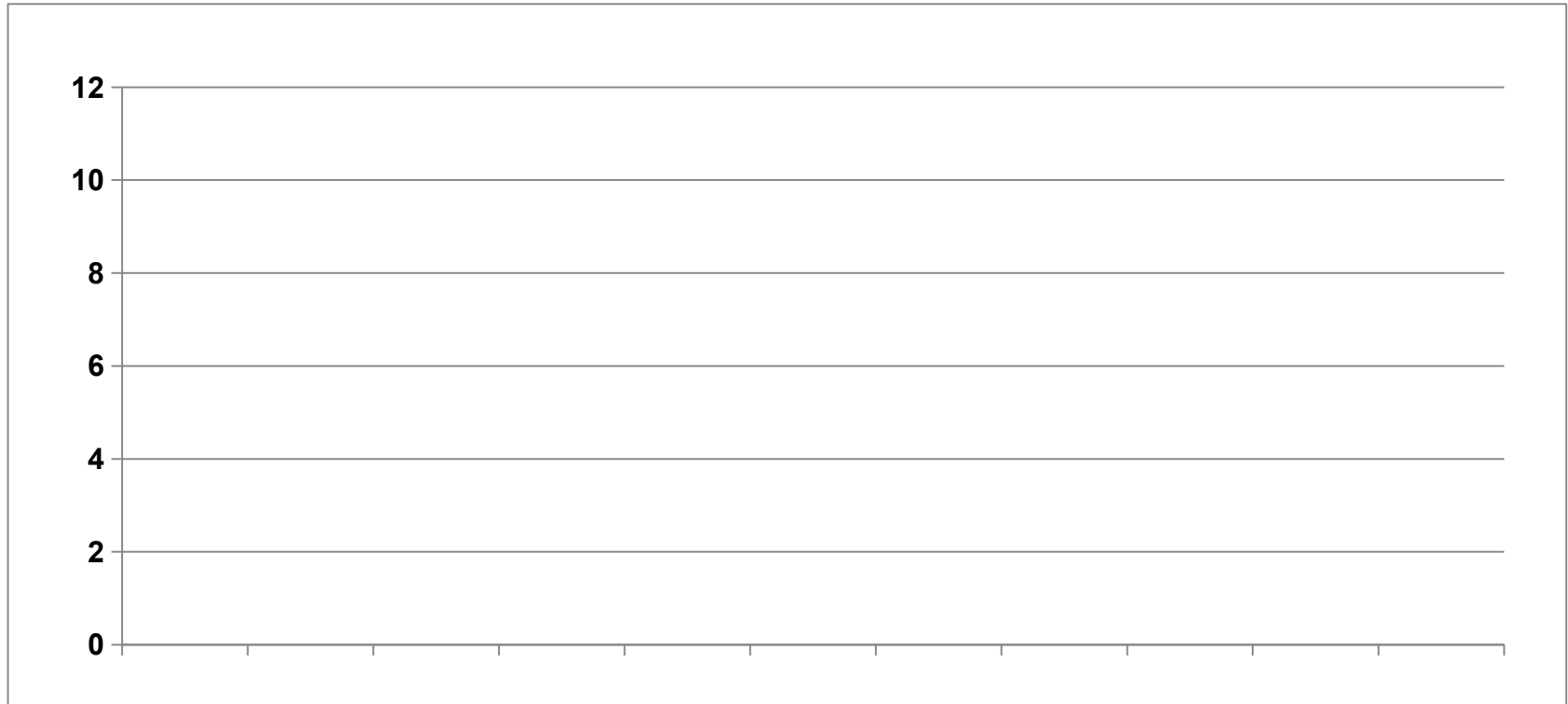
Estimates of the Unauthorized Immigrant Population in the United States, 2000-2012



Source: Passel, Jeffrey, D'Vera Cohn, and Anna Gonzalez-Barrera, "Population Decline of Unauthorized Immigrants Stalls, May Have Reversed," Pew Hispanic Center, September 23, 2013



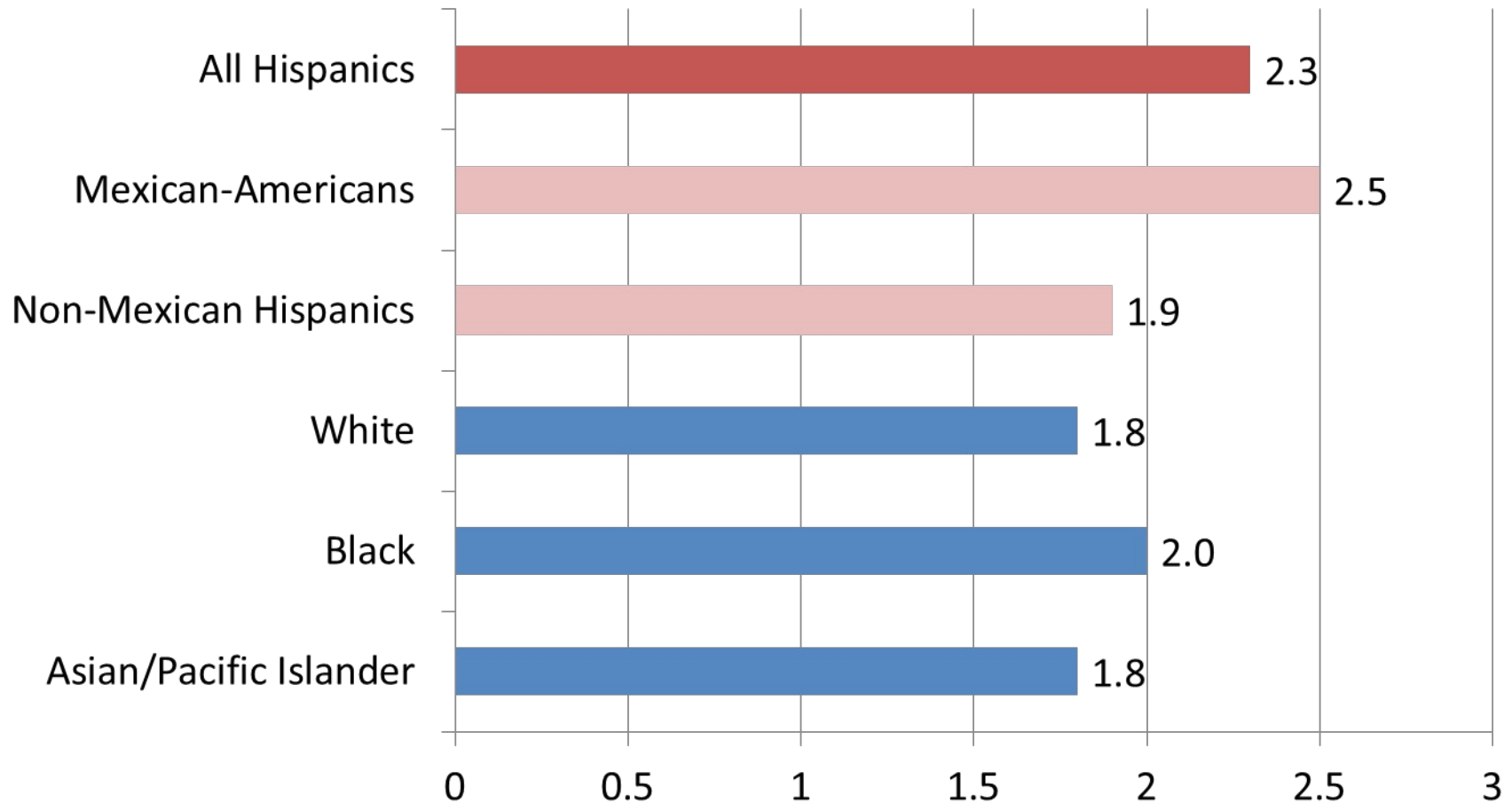
Estimates of the Unauthorized Immigrant Population in Texas, 2000-2012



Source: Passel, Jeffrey, D'Vera Cohn, and Anna Gonzalez-Barrera, "Population Decline of Unauthorized Immigrants Stalls, May Have Reversed," Pew Hispanic Center, September 23, 2013



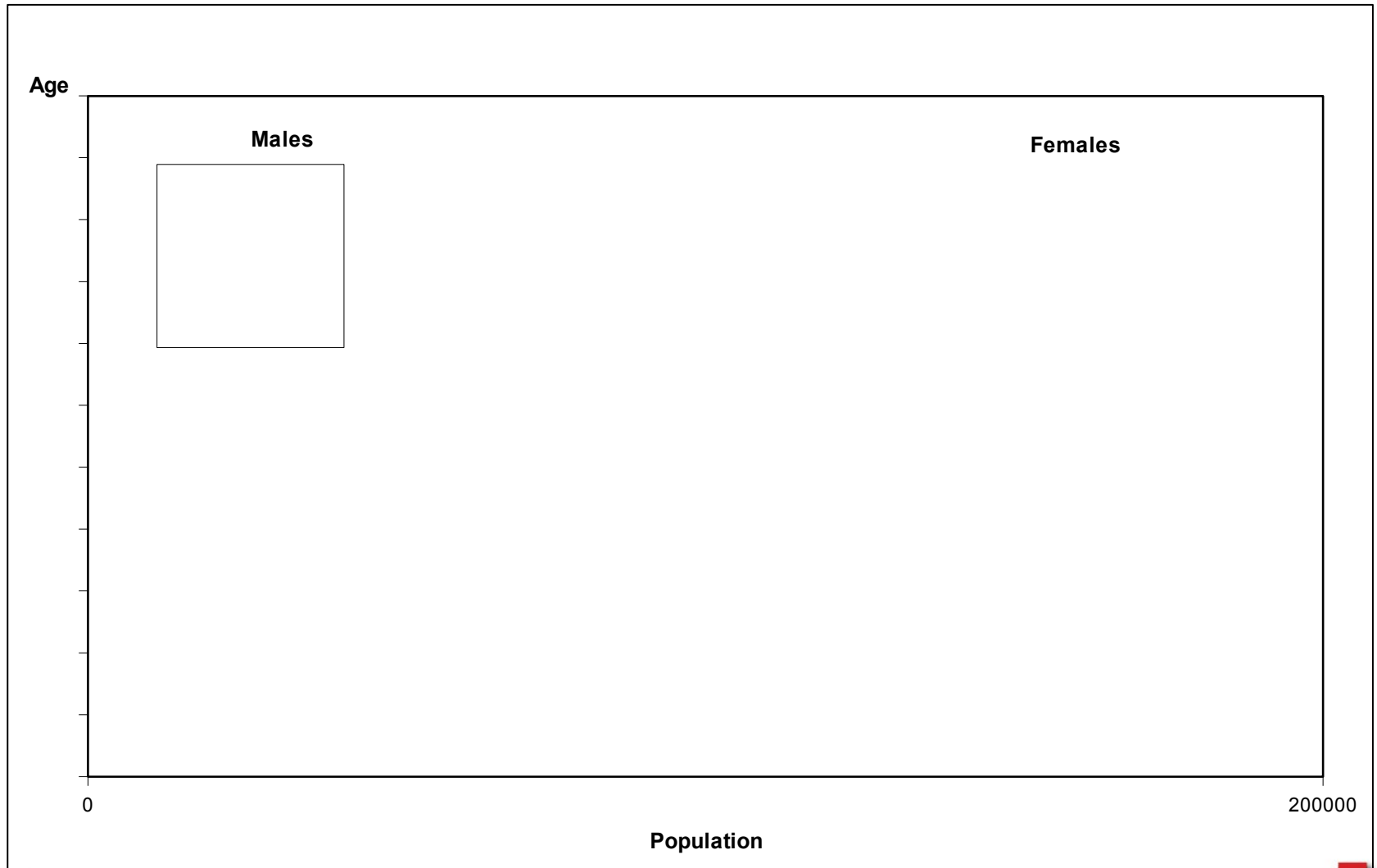
Children Ever Born by Race/Ethnicity Among Women Ages 40 to 44, 2008



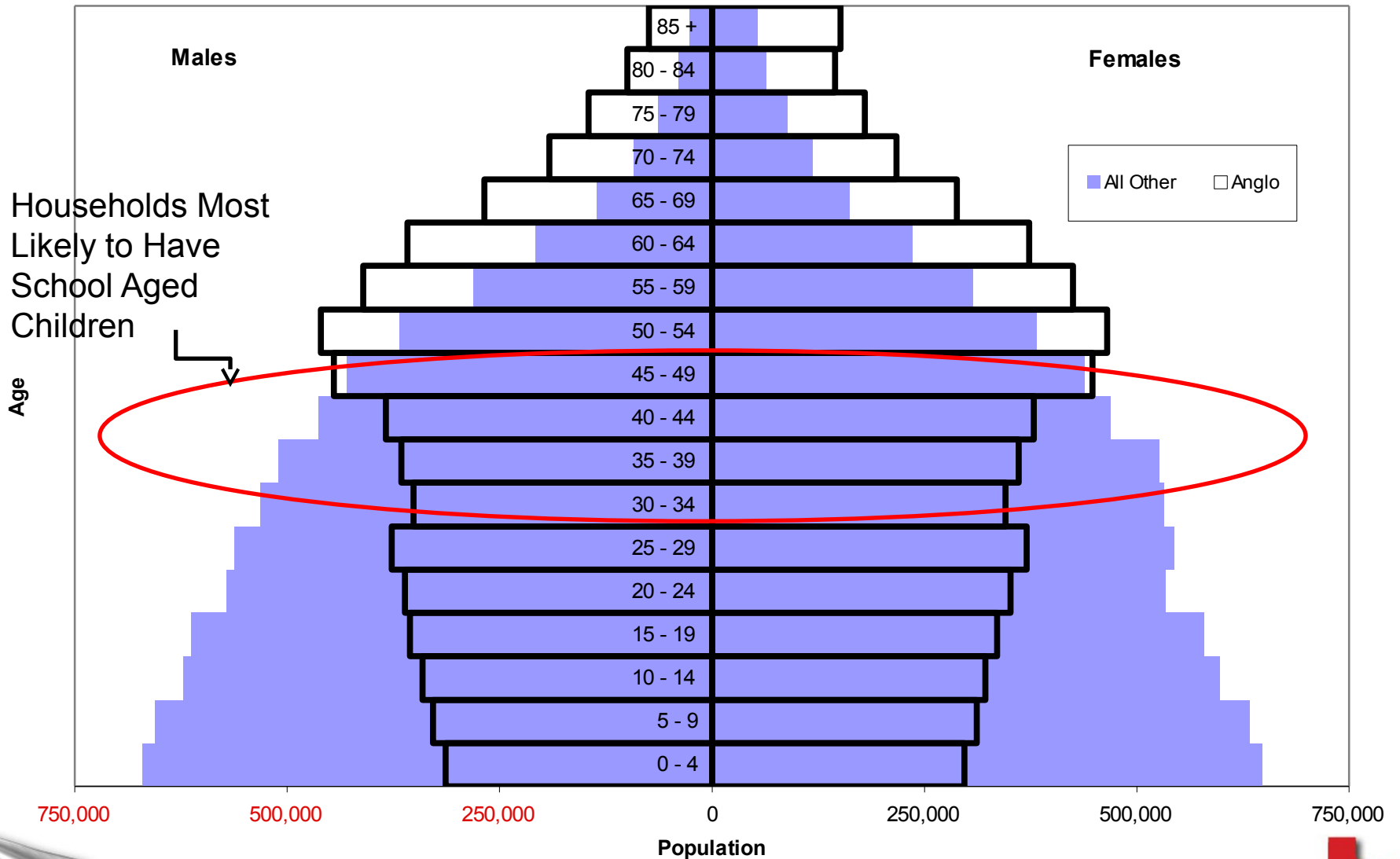
Source: Pew Hispanic Center tabulations of the 2006 and 2010 Current Population Survey June Supplements.



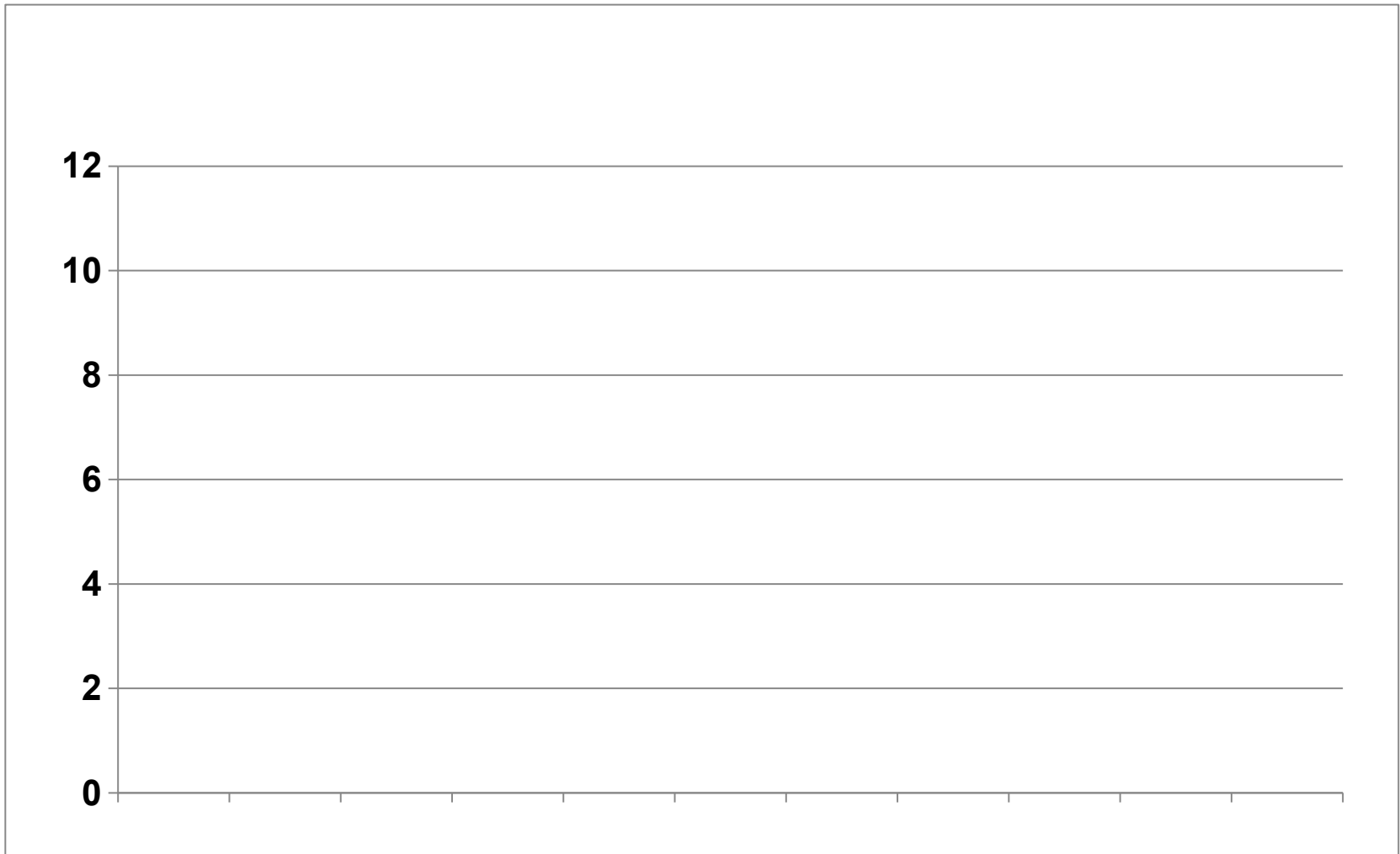
Texas Age Distribution by Race/Ethnicity and Sex



Texas Age Distribution April 1, 2010 Anglo and All Other

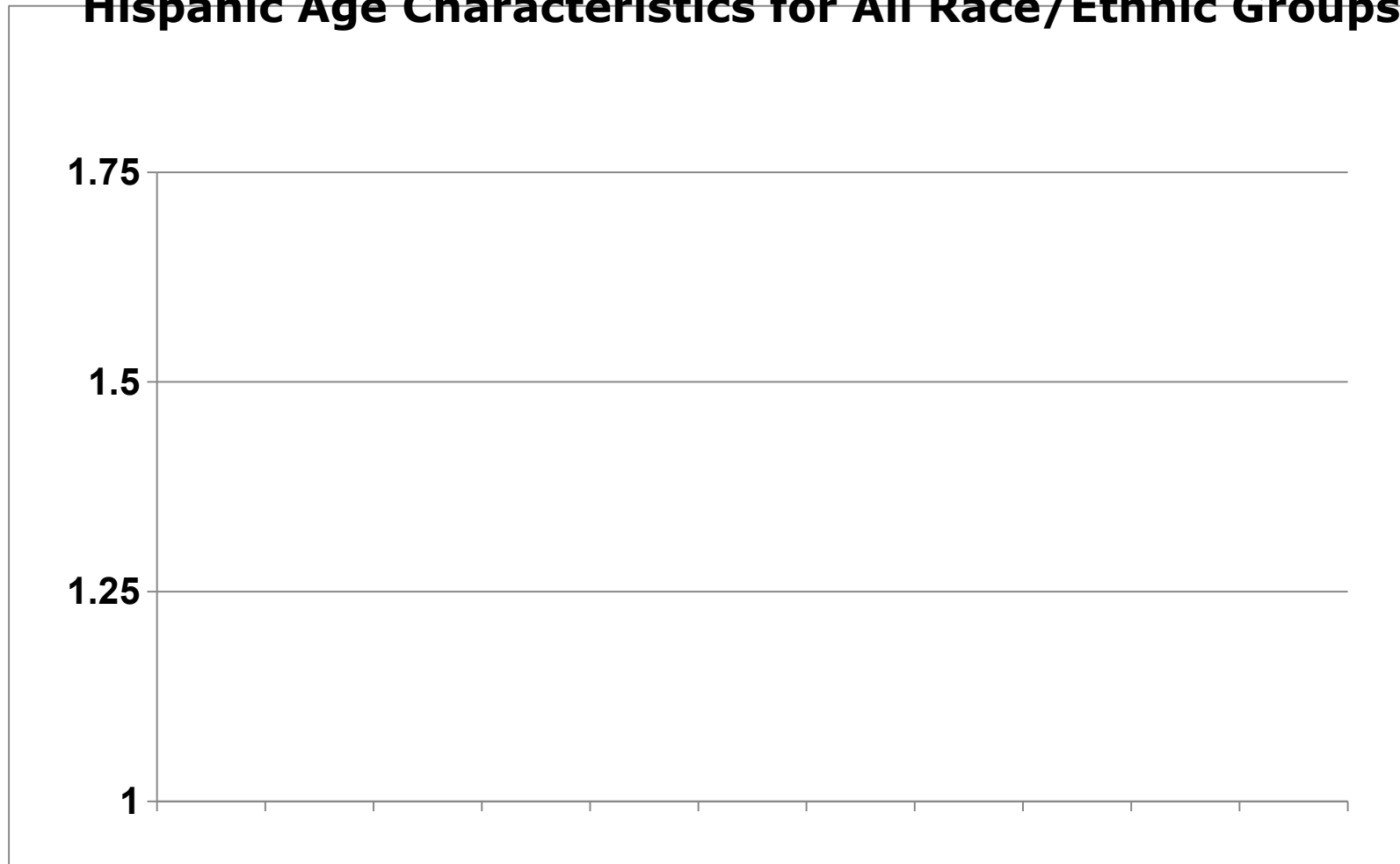


NH White and Hispanic Births in 2010 Compared to Alternative Scenarios Assuming Hispanic Births or Hispanic Age Characteristics for Both Groups



Birth data and rates from Texas Dept. of State Health Services and National Center for Health Statistics.

Difference Between Reported Births in 2010 and Alternative Scenarios Assuming Hispanic Births or Hispanic Age Characteristics for All Race/Ethnic Groups



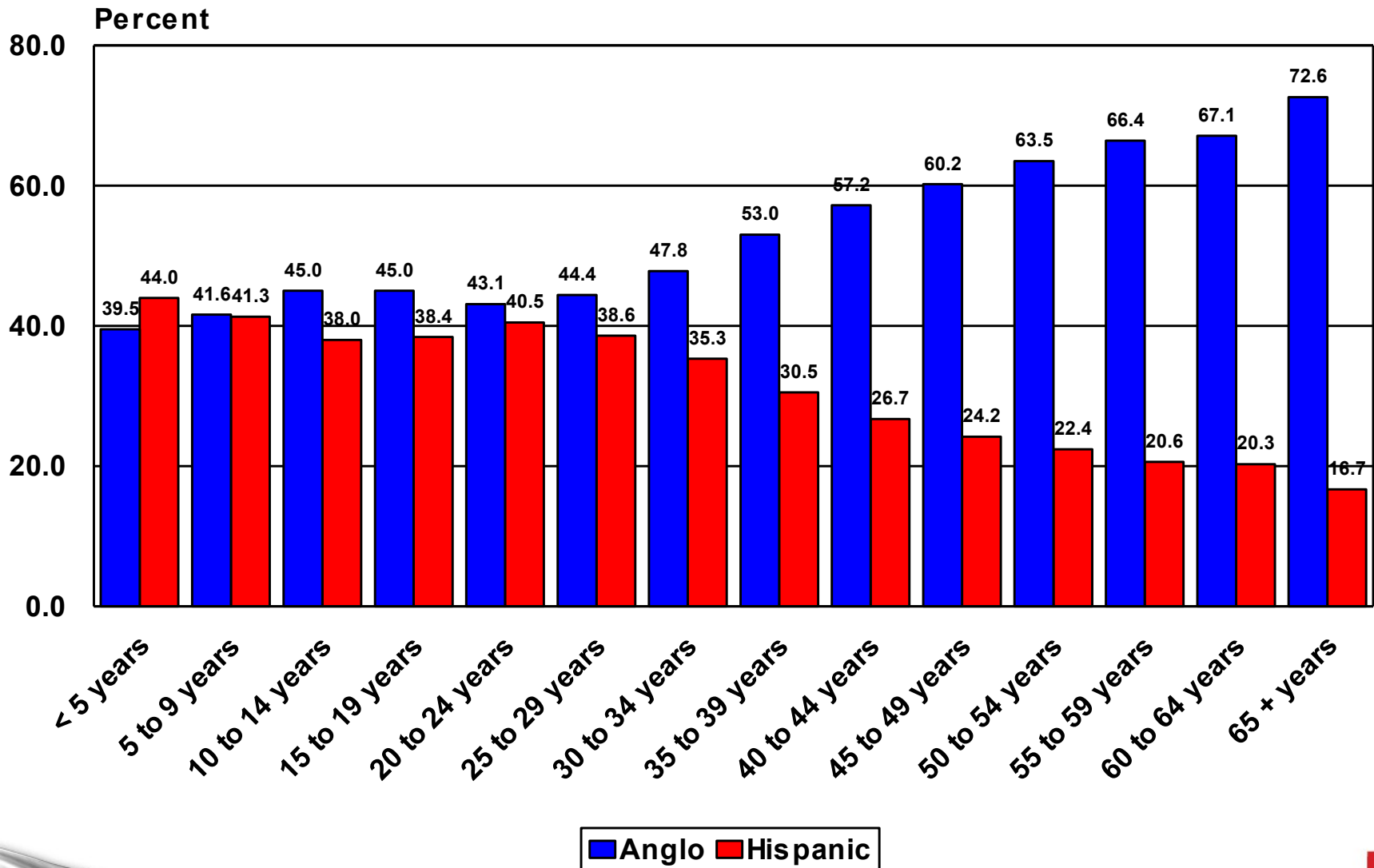
Birth data and rates from Texas Dept. of State Health Services and National Center for Health Statistics. Estimates for other groups, including race/ethnicity not identified, are not reported here but are included in the total.



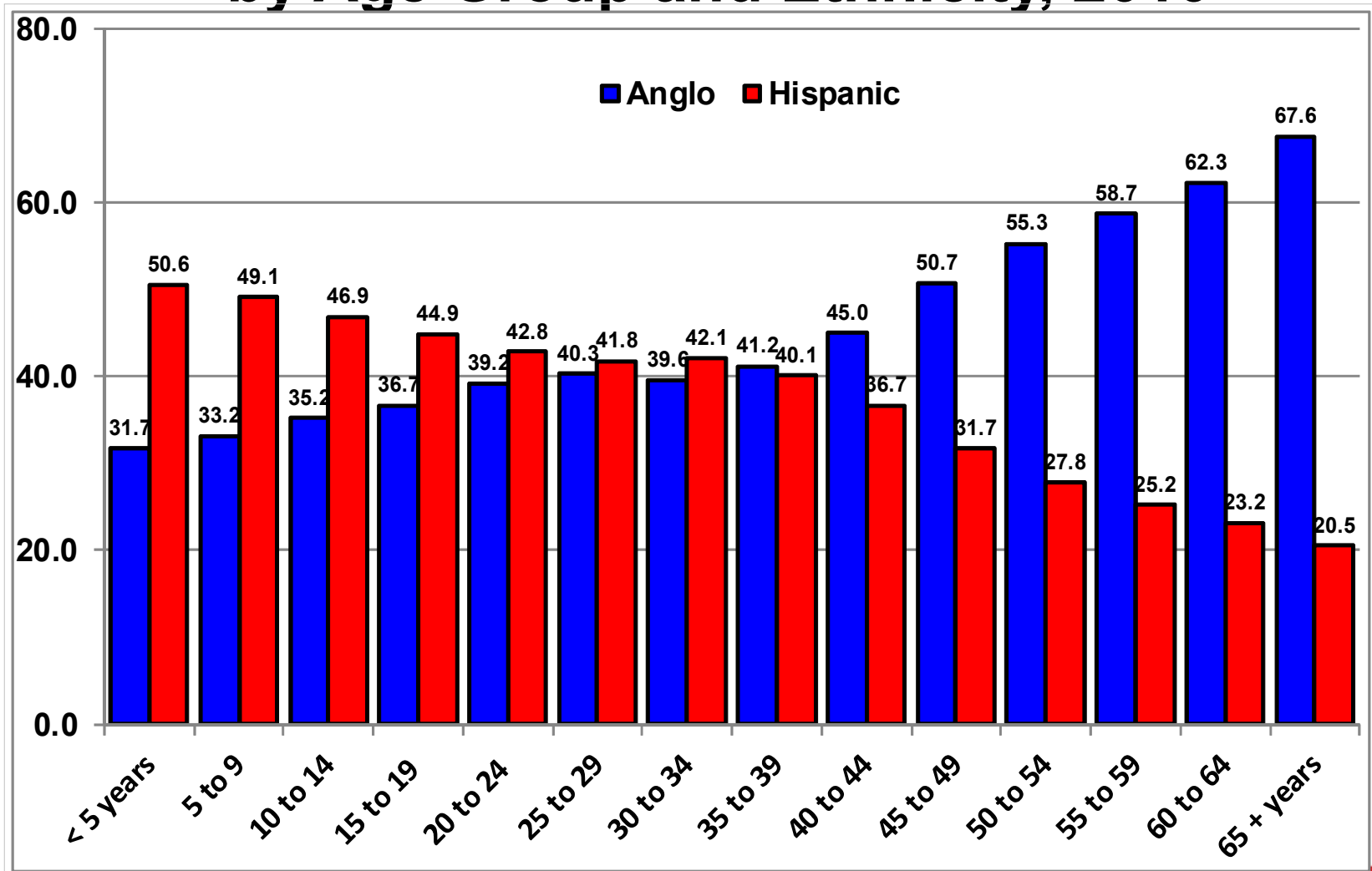
agE Structure and demographic diversity



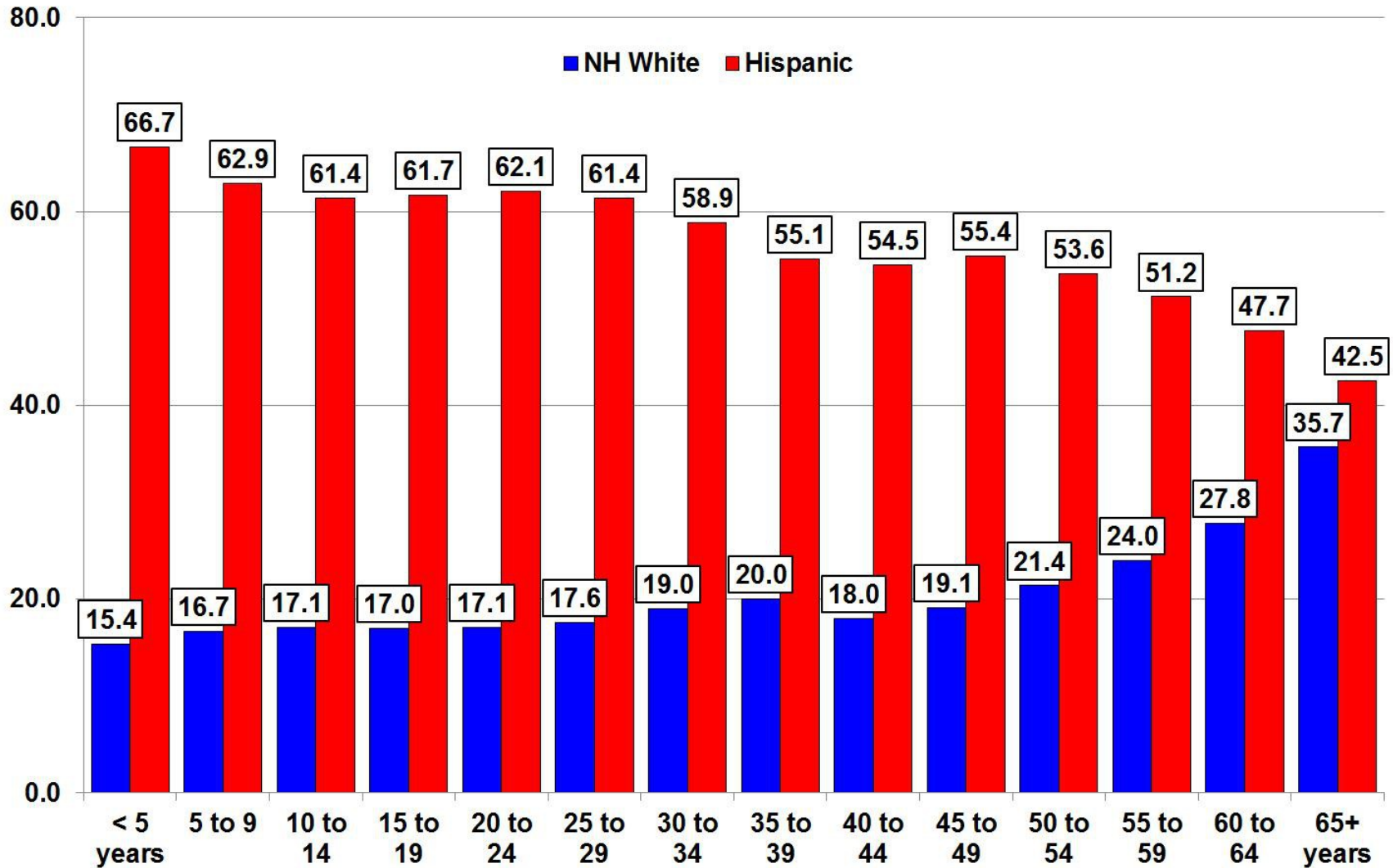
Percent of Texas Population by Age Group and Ethnicity, 2000



Percent of Texas Population by Age Group and Ethnicity, 2010



Percent of Texas Population by Age Group and Ethnicity, 2050

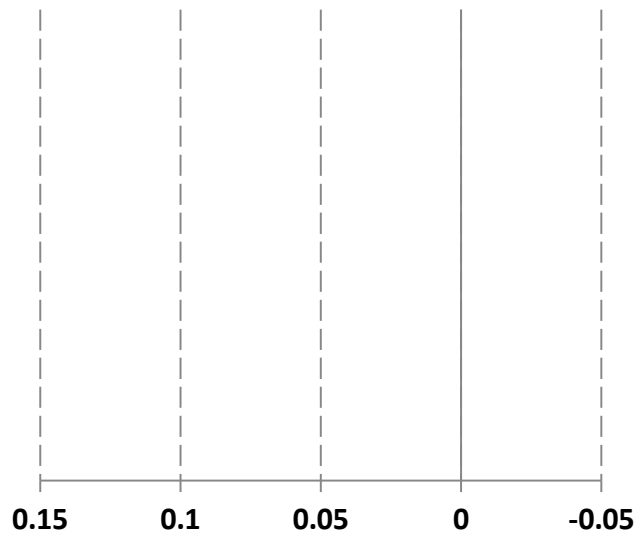


The challenge



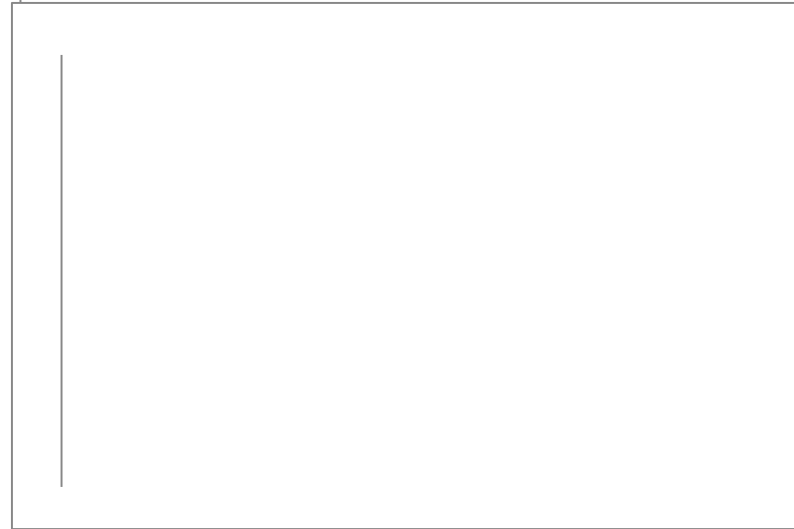
Education Pays

Unemployment Rate



Overall Unemployment Rate: 7.6%

Median Weekly Earnings



Median: \$827

Source: U.S. Department of Labor, Bureau of Labor Statistics, June 2013/first quarter 2013



Educational Attainment for the Texas Population Age 25 and Older by Race/Ethnicity, 2010

Race Ethnicity	Population Age 25 and Older	Less than high school	High school diploma	Some college or associates degree	Bachelor or more
Non-Hispanic White	8,099,053	8.0	25.3	32.6	34.1
Black	1,788,223	13.9	30.3	36.2	19.6
Hispanic*	5,063,779	40.4	25.8	22.2	11.6
Asian	639,967	14.4	15.2	18.6	51.8
Total Population	15,772,122	19.3	25.6	29.2	25.9

Source: U.S. Census, American Community Survey, 2010.

Note: Due to size, some groups are excluded.

*Includes Hispanic persons of all races.



Mean Household Income by Race/Ethnicity, Educational Attainment, and Occupation In Texas in 2010

Occupations	Less Than High School	High School /GED	Bachelor's Degree	Graduate/ Prof Degree
NH White				
Managerial & Professional	\$ 72,446	\$ 84,504	\$ 120,792	\$ 149,819
Technical, Sales, & Admin.	52,930	64,179	112,843	130,471
Precision Prod., Craft, & Repairers	55,079	68,247	94,875	119,057
Operatives and Laborers	48,819	61,211	77,581	89,720
Total	50,533	64,975	114,698	144,714
NH Black				
Managerial & Professional	\$ 47,483	\$ 52,186	\$ 84,758	\$ 99,073
Technical, Sales, & Admin.	33,980	43,933	75,416	80,852
Precision Prod., Craft, & Repairers	42,767	53,192	82,885	69,805
Operatives and Laborers	37,811	46,296	66,181	63,707
Total	31,072	42,465	78,933	94,490
Hispanic				
Managerial & Professional	\$ 52,178	\$ 61,992	\$ 88,036	\$ 116,400
Technical, Sales, & Admin.	40,131	50,127	81,005	91,155
Precision Prod., Craft, & Repairers	42,302	51,527	63,695	63,345
Operatives and Laborers	41,273	47,455	54,282	57,806
Total	38,221	47,760	81,548	108,473
NH Asian & Other				
Managerial & Professional	\$ 84,172	\$ 73,016	\$ 103,737	\$ 130,603
Technical, Sales, & Admin.	52,764	60,719	86,039	105,469
Precision Prod., Craft, & Repairers	54,594	63,451	70,778	92,041
Operatives and Laborers	47,939	49,015	60,895	65,074
Total	50,815	55,496	93,474	123,035

Source: Ruggles et al. 2010; U.S. Census Bureau, American Community Survey 2010 Public Use Microdata Sample, 2011.

Percent of Population 25 Years of Age and Older in Texas Who Are High School Graduates and Higher or College Graduates and Higher by Race/Ethnicity, 1990-2010

Educational Attainment Level					Total
	NH White*	NH Black	Hispanic	NH Asian & Other	
1990					
High School and Higher	81.5	66.2	44.6	79.1	72.1
College and Higher	25.2	12.0	7.3	41.3	20.3
2000					
High School and Higher	87.2	75.8	49.3	80.7	75.7
College and Higher	30.0	15.3	8.9	47.8	23.2
2010					
High School and Higher	92.0	86.4	59.6	87.1	80.7
College and Higher	34.1	19.7	11.6	46.0	25.9

* NH refers to Non-Hispanic; values for categories labeled NH are only for the Non-Hispanic persons in each race category. Hispanic includes Hispanics of all races.

Source: U.S. Census Bureau, 2010 American Community Survey, Census 2000, Summary File 3, Census of Population and Housing, 1990: Summary Tape File 3, 2012, 2002, 1990, 1991.



Comparisons of Educational Attainment by Selected Race/Ethnic Characteristics and Foreign Born Status for the Population Age 25 and Over in Texas, 2010

Source: American Community Survey, 2010

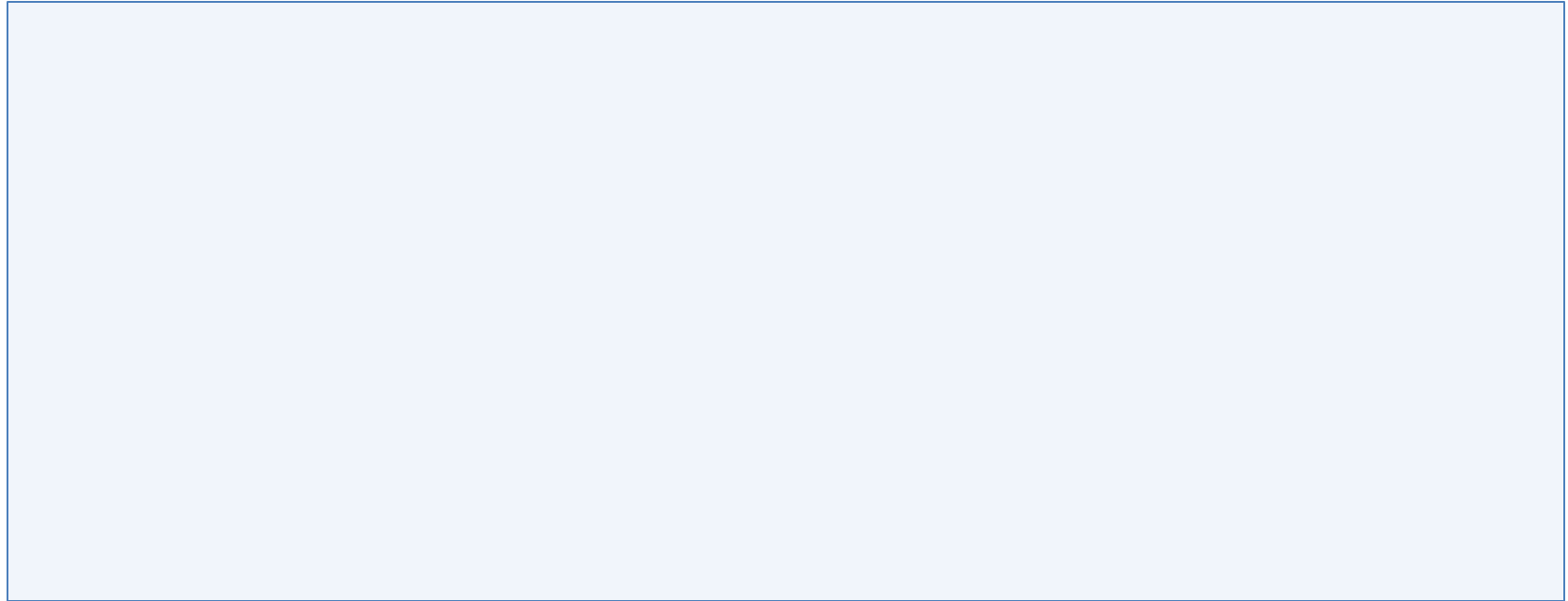


Percent of All Households in Poverty in 2010 and Projected for 2050 Under Alternative Assumptions of Socioeconomic Closure Between Minority and NonHispanic White Households



Percent Change in Socioeconomic Resources Compared to Percent Change in Households, 2010 - 2050

Household Change: 127.6%



Per Capita Income in 2010 and Projected for 2050 Under Alternative Assumptions of Socioeconomic Closure Between Minority and NonHispanic White Households



Aggregate State Tax Revenues (in \$Billions) in 2010 and Projected for 2050 Under Alternative Assumptions of Socioeconomic Closure Between Minority and NonHispanic White Households

Billions



Advice to new legislators:

**Spend every nickel you can on education.
Every nickel you don't spend now will cost
dollars in the future for welfare and prisons.
Then go home. Please don't pass any more
laws.**

--Former Lt. Governor William P. Hobby, Jr.



Recommended Links/Readings

U.S. Census Bureau (
www.census.gov):

The American Community Survey

Mike Cline

**Associate Director,
Hobby Center for the Study of Texas**

***Changing Texas: Implications of
Addressing or Ignoring the Texas Challenge***
<http://thetexaschallenge.com/>

**For copies of the presentation and
additional data for your area go to:
<http://hobbycenter.rice.edu>**

**Phone: 713-348-5396
E-mail: mec6@rice.edu**