OFFICE OF THE STATE DEMOGRAPHER

Educational Attainment Projections of the Texas Civilian Workforce, 2011-2030

Produced by:

The Office of the State Demographer and the Texas State Data Center at the University of Texas at San Antonio

Authors: Helen You and Lloyd Potter

Released:

April 9, 2014

Technical Report: 14-001

Office of the State Demographer (OSD):

The Office of the State Demographer is charged with insuring the dissemination of demographic and related socioeconomic data in the State of Texas. The State Demographer monitors demographic and socioeconomic changes in the State in order to better inform the executive and legislative branches of Texas government. Special emphasis is placed on data that may be useful to policy makers in dealing with issues regarding the demand for state services. The State Demographer in Texas is the administrator for the TxSDC program.

Contact: Dr. Lloyd Potter or Dr. Lila Valencia at the Office of the State Demographer in Austin, Texas at (512) 463-8390 or state.demographer@osd.state.tx.us

Contributing Programs

Texas State Data Center (TxSDC):
The Texas State Data Center was initiated in 1979 to establish a state level liaison to the U.S. Bureau of the Census. The State Data Center program serves to make data available locally to the public through a network of state agencies, universities, libraries, and regional and local governments. In Texas, the Data Center network consists of the SDC Lead at the University of Texas at San Antonio, two coordinating agencies, seven state affiliates and twenty-five local affiliates.

Contact: Dr. Lloyd Potter, Cyndi Daley or Beverly Pecotte at the Texas State Data Center lead agency at (210) 458-6543 or txsdc@utsa.edu

Texas Population Estimates and Projections Program:
In the mid 1980's the Texas State Data Center program was expanded to meet a demand for more timely population estimates and projections for Texas. The Estimates Program in Texas provides annual population estimates for Texas places and counties. Estimates of county populations are also provided with age, sex and race/ethnicity detail. The Projections Program produces population projections for counties in Texas biennially with age, sex, and race/ethnicity detail. Current population projections are available for 2010 through 2050. The Texas Population Estimates and Projections Program is also a participating member of the Census Bureau's Federal and State Cooperative Program for Population Estimates (FSCPE) and the Federal and State Cooperative for Population Projections (FSCPP).

Contact: Dr. Lloyd Potter or Beverly Pecotte at the Texas Population Estimates and Projections Program at (210) 458-6530.

Institute for Demographic and Socioeconomic Research (IDSER):
Located at the University of Texas at San Antonio in the College of Public Policy, the Institute offers research and educational expertise related to Texas demographic and economic issues. The Institute staff examines the determinants and consequences of population change including such factors as the demand for private and public-sector goods and services; the impacts of income, poverty, tax revenues and consumer activities on socioeconomic structure; the number and types of households; and the consequences of industrial and public-sector development on population change, economic growth, public services, income and business activities.

Contact: Dr. Lloyd Potter or Pat Bramwell at the Institute for Demographic and Socioeconomic Research at (210) 458-6530 or idser@utsa.edu

OFFICE OF THE STATE DEMOGRAPHER

UTSA®

TEXAS STATE DATA CENTER

This report was prepared by Dr. Helen You and Dr. Lloyd Potter:

Helen You, a Research Scientist with the Institute for Demographic and Socioeconomic Research at the University of Texas at San Antonio created the Educational Attainment projections presented in this report. Dr. You may be contacted at helen.you@utsa.edu or (210) 458-6530.

Lloyd Potter is the State Demographer for Texas and serves as the director of the Institute for Demographic and Socioeconomic Research at the University of Texas at San Antonio as well as directing the Texas State Data Center and the Texas Population Estimates and Projections Program. Dr. Potter was appointed by Rick Perry to serve as the third State Demographer for Texas. Dr. Potter may be contacted at Lloyd.potter@utsa.edu or (210) 458-6530.

Special thanks go to the following staff for their input: *Lila Valencia, Beverly Pecotte, Alfredo Zavala,*
Institute for Demographic and Socioeconomic Research, 501 W. César E. Chávez Blvd., San Antonio, Texas 78207-4415

OFFICE OF THE STATE DEMOGRAPHER

Educational Attainment Projections of the Texas Civilian Workforce, 2011-2030

"Above all things I hope the education of the common people will be attended to; convinced that on their good sense we may rely with the most security for the preservation of a due degree of liberty."

Thomas Jefferson, December 20, 1787 to James Madison

Office of the State Demographer
P.O. Box 13455
Austin, Tx 78701
http://osd.state.tx.us
PH: (512) 463-8390
Fx: (512) 463-7632
Email: state.demographer@state.tx.us

This page intentionally left blank

Table of Contents

This page intentionally left blank

Executive Summary

The education of the future labor force is of crucial importance for the future economic vitality of Texas. While educational attainment in Texas improved for all groups during the past decade, significant disparities in educational attainment persist across race/ethnic groups. The projected population growth of Texas over the coming two decades will be driven by growth of the Hispanic population. Therefore, the future characteristics of the labor force in Texas will be determined largely by the educational attainment of young Hispanics as they age into the workforce. This emphasizes the importance of ensuring that we continue and perhaps accelerate the positive trends we have seen for Hispanic educational attainment in Texas.

This report presents two sets of projections for educational attainment for the civilian labor force in Texas. One assumes that current rates of educational attainment will prevail and the second assumes that recent trends in educational attainment will continue.

When we do not consider trends in educational attainment and hold educational attainment constant by race/ethnicity, sex, and age, the educational attainment of our future labor force is determined largely by population shifts by race/ethnicity, sex, and age. Under this assumption in Texas, the overall education levels of Texas' labor force will decline.

When we assume that trends in educational attainment over the past decade will continue, the outcome for the future educational attainment of the Texas labor force is more promising. Under this assumption we would see a declining percent of the labor force with high school degrees or less and an increasing percent of those with some college or more.

Educational attainment of the Texas labor force will be greatly affected by trends in demographic composition. Recognition of trends in educational attainment and education disparities will improve our understanding of what it will take to ensure the Texas labor force is prepared to meet the demands of our growing economy. In Texas, education investment must be targeted toward improving the educational attainment of young Hispanics. By ensuring that our labor force has the educational attainment needed to draw business and industry to Texas with jobs that require greater skills and education, we will ensure an economy that sustains a high quality of life for generations to come.

Educational Attainment Projections of the Texas Civilian Workforce, 2011-2030

Educational attainment in the United States has been tracked by the U.S. Census Bureau using decennial census questions since 1940 and Current Population Survey (CPS) data since 1947. Trends from these data show an increase in educational attainment levels for the population aged 25 and above. Current information from the American Community Survey supports those trends at the national level, but educational attainment varies among states.

Employment and the Education Attainment of the Labor Force

The education of the labor force is of crucial importance to economic vitality. The chance of being employed improves with increases in the level of education. Furthermore, historical data also suggest that people with higher education are less vulnerable to economic turmoil in terms of employment. Employment rates for Texas from 2001-2011 by four levels of educational attainment are illustrated in Figure 1. A positive correlation between education and employment rates is clear. While employment rates among all those in the labor force are between 92 percent to 95 percent in Texas during the past decade, the rate fluctuates between 90 percent to 94 percent among those with less than high-school education whereas for those with a bachelor's or higher, the rates have never fallen under 95%. In general, employment rates have decreased from 2001 to 2011, most likely due to the economic downturn experienced toward the end of the decade. But employment for those with higher educational attainment is relatively more stable than for those with less than high-school education.

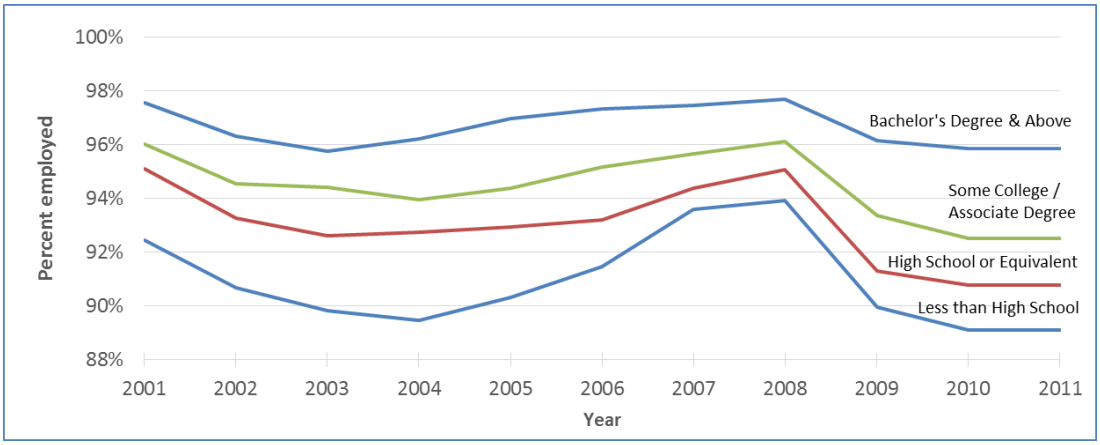

Figure 1
Employment Status of the Civilian Labor Force (ages 25-65) by Educational Attainment, Texas, 2001-2011
Source: U.S. Census Bureau, American Community Survey, Public Use Micro Sample, 2001-2011

The Texas Workforce Commission (TWC) produces projections of jobs by occupation and associated entry level typical educational requirements to the year 2020 (Labor Market & Career Information Department of the Texas Workforce Commission: http://www.tracer2.com/). To meet the need suggested by the TWC projections, Texas would be required to annually increase the educational attainment of the labor force by 1.7 percent for those with less than a high school diploma, 2.1 percent for those with a high school diploma or equivalent, 2.2 percent for those with college, certificate and associate degrees, 2.6 percent for those with a

bachelor's degree, and 2.5 percent for those with a graduate or professional degree. These projections of job growth by education requirements refer to typical educational requirements and may not be the best indicator of the actual forecasted demand for educational attainment of the civilian labor force. Some occupations have education requirements while others do not have exact education requirements. Thus, it is possible to overstate the need for a particular level of education in some occupations. Nonetheless, the question of whether or not current trends in educational attainment of the Texas labor force will match the needs of our future labor demands should be explored in more detail.

Historical Trends: Educational Attainment in Texas

As the resident population of the state of Texas has continued to grow, the proportion with high school and college degrees has increased over the last few decades. In 1940, the median years of school completed was 8.5 years for persons 25 years of age or older. It was only in 1980 that the median years of education exceeded 12 years (U.S. Census Bureau, decennial census reports 1962-2003). More recent data on educational attainment are available from the American Community Survey (ACS), which is an ongoing survey conducted by the U.S. Census Bureau of the general population.

The recent decade has seen the proportion of people without a high-school degree decrease steadily. When we divide the 25-64 year old population in Texas into five mutually exclusive educational attainment levels (see Figure 2), the proportions of people in all the categories above high school or equivalent have increased while all those with a high school diploma or lower have decreased.

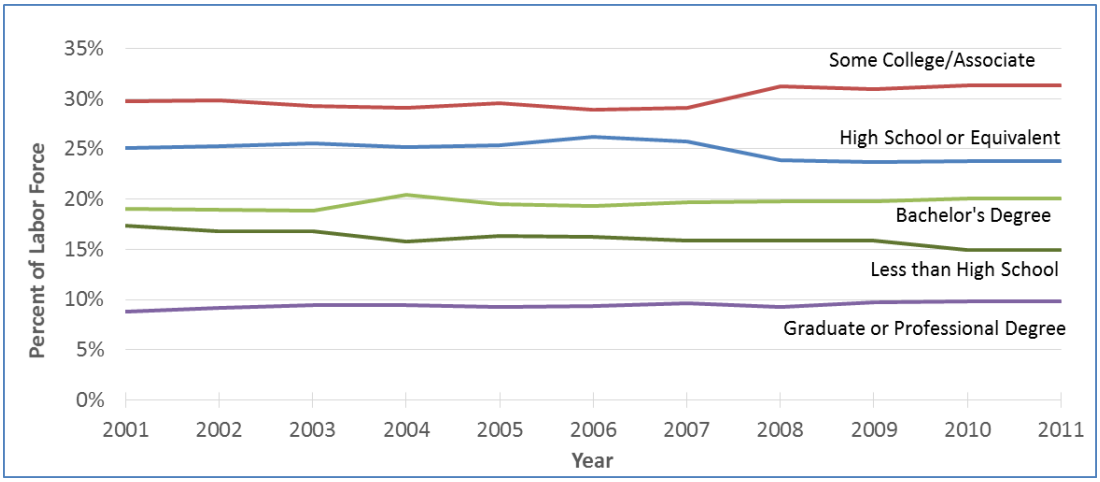

Figure 2
Percent of Civilian Labor Force (ages 25-64) by Educational Attainment, Texas, 2001-2011
Source: U.S. Census Bureau, American Community Survey, Public Use Micro Sample, 2001-2011

Compared to other U.S. states in 2012, Texas had 81.4 percent of persons aged 25 years of age or older with a high school degree or greater and was ranked 50th among all states (ACS 2012). By contrast, the four states with the highest percentages of adults with high school degrees and above were Montana (92.8 percent), Minnesota (92.5 percent), Alaska (92 percent), and New Hampshire (91.8 percent) (ACS 2012). In 2012, there were a total of 17 states where the high school and above educational attainment was at least 90 percent.

The percent of persons aged 25 years or older with a bachelor's degree or higher in Texas was 26.7 percent in 2012 (ACS 2012). Texas ranked 31st while California ranked 14th and Florida ranked 30th among other states on this measure of education. The states with the highest percent of their adult population with a bachelor's degree and higher were Massachusetts (39.3 percent), Colorado (37.5 percent), Connecticut (37.1 percent), and Maryland (36.9 percent) (ACS 2012).

Disparities in Educational Attainment

Educational attainment in Texas improved for all race/ethnic groups during the past decade. However, disparities in educational attainment persist across race/ethnic groups. Figure 3 shows the proportion of high school graduates and above in the civilian labor force (ages 25-64 years) by race/ethnicity from 2001 to 2011. All four major race/ethnic groups in Texas (non-Hispanic Whites, Non-Hispanic Blacks, Hispanics and non-Hispanic Other[1]) have seen an increase in the proportion of persons with high school and above. Notably the 2001-2011 rate of increase is fastest among the Hispanic population, at an average of 0.69 percent per year, followed by non-Hispanic Black, with an average of 0.53 percent increase per year. Non-Hispanic White and non-Hispanic Other experienced slower increases, 0.22 percent and 0.09 percent per year averages respectively. Figure 4 shows the trend in the proportion of the Texas population with bachelor's degree or higher by race/ethnic group. Again, an increase is seen among all four race/ethnic groups, although the rate of increase is the slowest among Hispanic and highest among non-Hispanic Other.

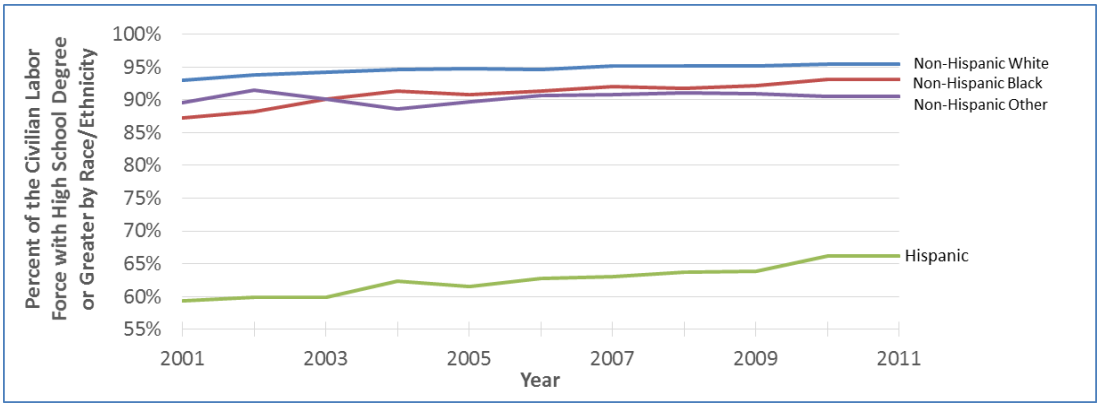

Figure 3
Percent of Civilian Labor Force (ages 25-64) with Educational Attainment of High School Graduate and Above by Race/ Ethnicity, Texas, 2001-2011
Source: U.S. Census Bureau, American Community Survey, Public Use Micro Sample, 2001-2011

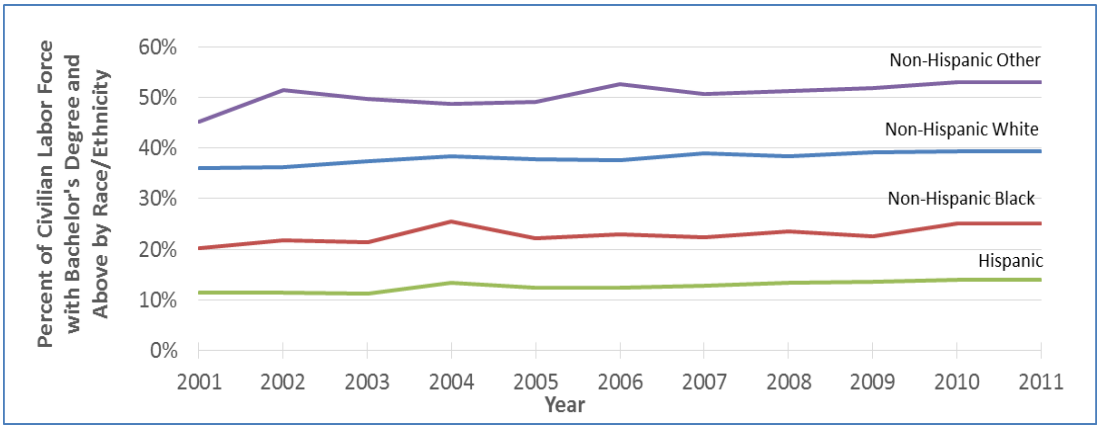

Figure 4
Percent of Civilian Labor Force (ages 25-64) with Educational Attainment of Bachelor's Degrees and Above by Race/ Ethnicity, Texas, 2001-2011
Source: U.S. Census Bureau, American Community Survey, Public Use Micro Sample, 2001-2011

[1]"non-Hispanic Other" is a grouping of the balance of race groups that are non-Hispanic with the majority race group in this category being persons of Asian descent in Texas.

Figure 5 shows the proportion of people with a high school education and above for two age groups ages 25 to 34 and ages 35 to 64. In 2001, the proportion with a high school or more education was substantially greater among the older group compared to the younger. In 2011, although the younger group (25-34 year olds) still have the lowest percentage, the differences between the two age groups are much smaller. Figure 6 shows the trend in the proportion of the Texas population with Bachelor's degree or higher by these age groups. The trends are much flatter, although there were significant improvements among the 25-34 age group. The percent with bachelor's degree attainment has increased from 24.3 percent to 27 percent among this group in the past decade. These age group specific trends suggest that subsequent cohorts of persons entering the civilian labor force (ages 25-64 years) are increasingly obtaining higher levels of education over time.

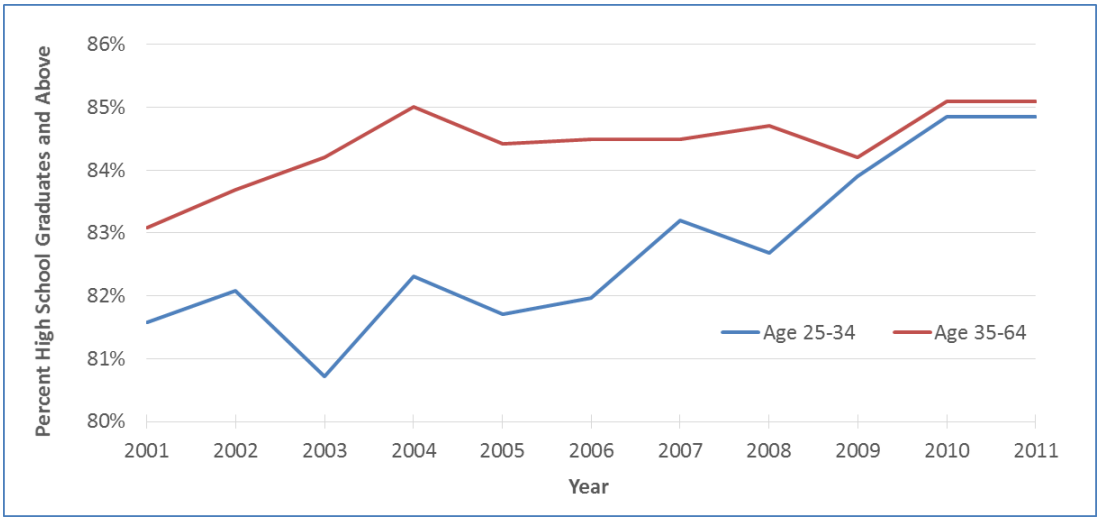

Figure 5
Trends of Educational Attainment for Civilian Labor Force (ages 25-64 years) by Age Group – Percent High School Graduates and Above, Texas, 2001-2011
Source: U.S. Census Bureau, American Community Survey, Public Use Micro Sample, 2001-2011

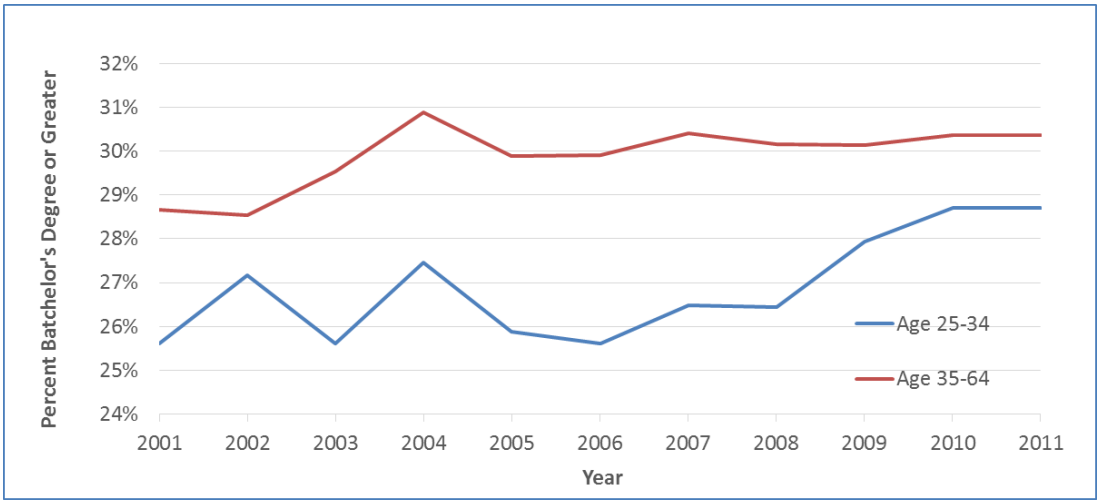

Figure 6
Trends of Educational Attainment for the Civilian Labor Force by Age Groups – Percent with Bachelor's Degree or Greater, Texas, 2001-2011
Source: U.S. Census Bureau, American Community Survey, Public Use Micro Sample, 2001-2011

Population Projections for Texas

The projected population growth of Texas over the coming two decades will be driven by growth of the Hispanic population. Figure 7 illustrates this point by demonstrating race/ethnic specific projected populations in Texas using the 0.5 migration scenario.[2] This figure highlights the influence that the level of educational attainment of the Hispanic population will have on the future educational attainment of the Texas labor force simply as a function of numbers.

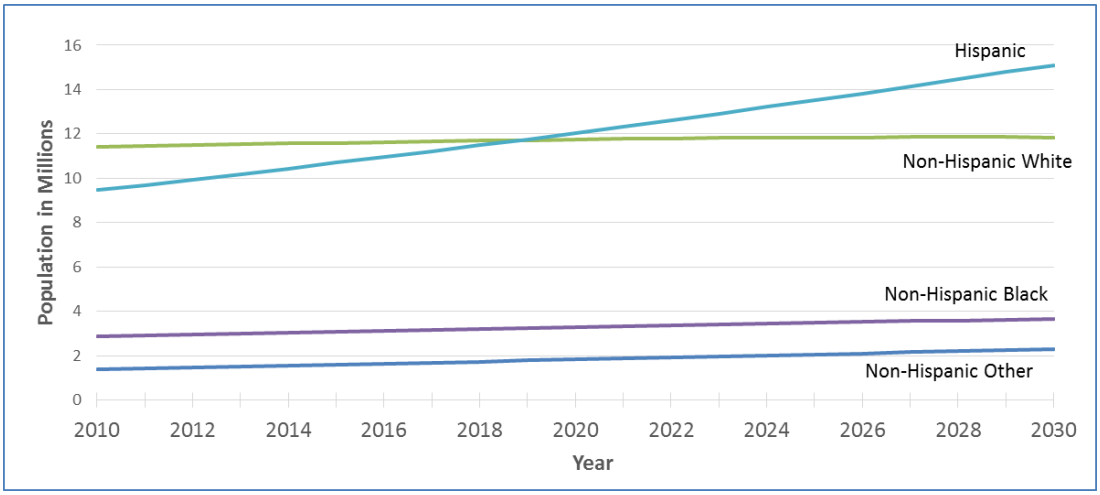

Figure 7
Projected Texas Population by Race/Ethnicity, 0.5 Migration Scenario, 2010-2030
Source: Texas State Data Center, 2012 Vintage Population Projections

The age structure of Texas' population by sex and race/ethnicity is represented in Figure 8. Here, the non-Hispanic White population (the innermost dark shaded group) is "top heavy" with the baby boom cohort. As the baby boom cohort ages into retirement, there will be declining representation of non-Hispanic Whites in the labor force. Conversely, the Hispanic population is more "bottom heavy" as a result of its younger age

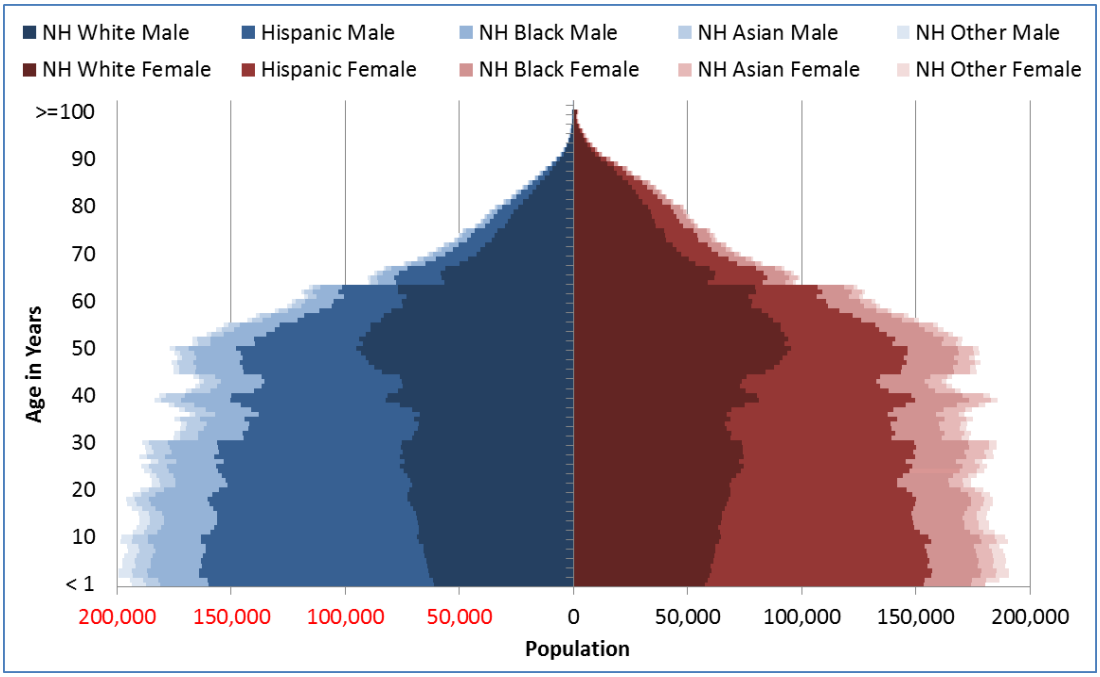

Figure 8
Texas Population Pyramid by Race/Ethnicity, 2010
Source: U.S. Census Bureau, 2010 Census, SF1

[2] Migration scenarios are described in the methods section.

structure and slightly higher fertility rates. The result of this is that our current and future labor force will be shaped by the numbers and characteristics of Hispanics as they enter the labor force. Essentially, the future characteristics of the labor force will be determined largely by the educational attainment of young Hispanics as they age into the workforce. This emphasizes the importance of ensuring that we continue and perhaps accelerate the positive trends we have seen for Hispanic educational attainment in Texas. The education of the future labor force is of crucial importance for the future economic vitality of Texas. While the projection of educational attainment for the labor force will be greatly affected by future trends in demographic composition, recognition of the recent trends in educational attainment and the acknowledgement of education disparities will certainly improve our understanding of the future education of the Texas labor force.

Methods

To project the future educational attainment of the Texas civilian labor force (CLF), we must first project the composition rates of educational attainment for each race/ethnic, age, and sex group[3]. The projected rates are then applied to the 2010 Texas State Data Center projections of the civilian labor force. Projections of the civilian labor force are produced with two migration scenarios. For projections of CLF educational attainment, we utilized the migration scenario representing half of the migration to Texas between 2000 and 2010 (0.5 scenario). This is a more moderate migration scenario than using the 2000-2010 scenario (1.0 scenario). However we found that the two scenarios were similar when we compared results for projections of educational attainment. Therefore, we opted to present the more conservative scenario (0.5 migration scenario).

Two Assumptions of Trends in Educational Attainment

We produced projections of the CLF educational attainment in Texas by using two educational attainment scenarios. One scenario assumes that the educational attainment rates by age, sex, and race/ethnicity remain at the 2011 level into the future. The 2009-2011 ACS three-year PUMS data were used to obtain the baseline rates of educational attainment for each race/ethnic, age, and sex group.

The second assumption takes into consideration the improvement in educational attainment seen during the past ten years in Texas. The ACS one-year PUMS data from 2001 to 2011 were used to build a multinomial model to predict future educational attainment. The predictors include year of data collected and demographic variables such as age, sex, and race/ethnicity. To account for the variations in trends among different groups, we also included interaction factors between year and age, year and sex, and year and race/ethnicity.

We categorized educational attainment into five mutually exclusive categories. These categories are: “Less than High School”, “High School Graduate or Equivalent”, “Some College or Associate Degree”, “Bachelor’s Degree”, and “Graduate or Professional Degree.” We grouped the population into four mutually exclusive race/ethnic groups: Non-Hispanic White, non-Hispanic Black, Hispanic, and non-Hispanic Other. We

[3] For this report, the civilian labor force is limited to those aged 25-64 years of age.

included the CLF aged 25 to 64 in our projection and separated them into two age groups: 25-34 and 35-64. After obtaining the two sets of educational attainment rates based on the two assumptions, we applied them to the projected population based on the 0.5 migration scenario. This resulted in two sets of projections for educational attainment in Texas which are presented below.

Results

The projected rates for the five educational attainment categories from year 2011 through year 2030 under the constant education assumption for the 0.5 migration scenario are presented in Figure 9. If educational attainment rates stay constant at the current level, Texas will see an increase in the proportion of people with less than a high school education and a decrease in the proportions of people with some college and bachelor's degrees, although the trends in other education categories remain relatively flat.

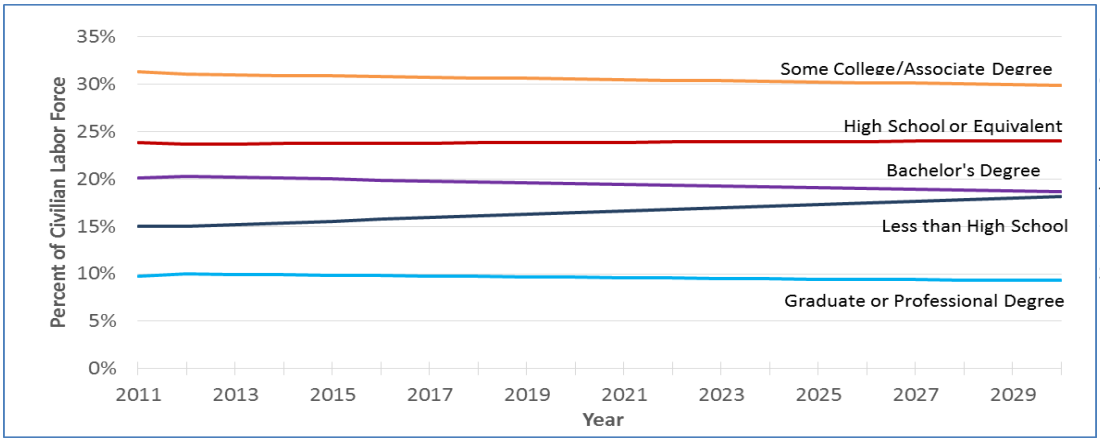

Figure 9
Projected Constant Rates of Educational Attainment for the Civilian Labor Force (ages 25-64), Texas, 2011-2030 Source: Texas State Data Center, 2012 Vintage Population Projections, 0.5 Migration Scenario

Figure 10 illustrates projected rates for the five educational attainment categories for year 2011 through year 2030 under the 0.5 migration scenario, assuming that the education trends in the past decade in Texas continue into the future. Contrary to the constant rate assumption, the proportions of both people with less than high school and high school graduates or equivalent will decrease, whereas the proportions in the other three education categories above high school will increase. Under this assumption, Texas would continue to see improvements in educational attainment despite changes in the projected population composition. We are presenting only the 0.5 migration scenario, although we observed that the improvements are slightly better in most cases under the 1.0 migration scenario.

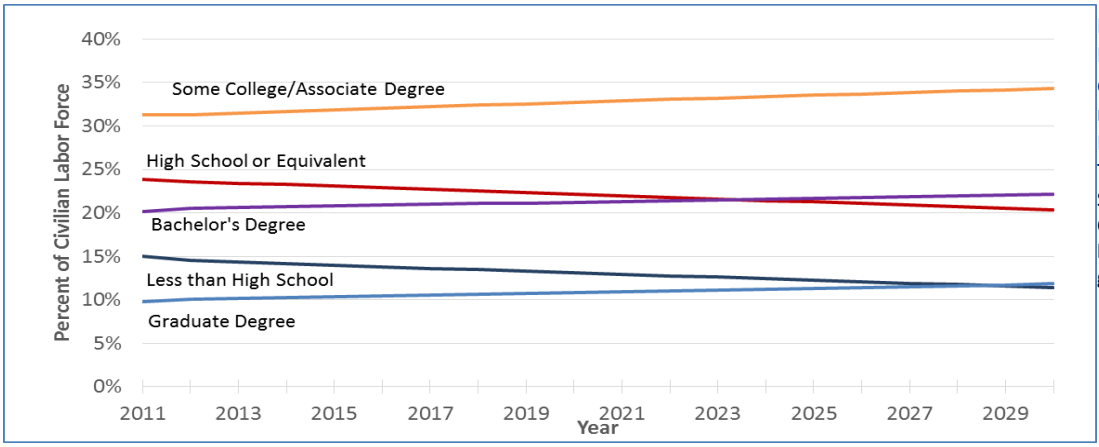

Figure 10
Projected Trended Rates of Educational Attainment for the Civilian Labor Force (ages 25-64), Texas, 2011-2030
Source: Texas State Data Center, 2012 Vintage Population Projections, 0.5 Migration Scenario

To examine the future of education changes more closely, we compare them at two points in time, 2011 and 2030. Figure 11 shows the estimated percent of the civilian labor force (CLF) in 2011 and projected to 2030 under the two educational attainment assumptions. For the groups with less than high school and high school or equivalent, we see that the percent of the labor force in these categories will increase under the assumption that educational attainment remains constant by age, race/ethnicity, and sex. However, when we assume the continuation of recent trends in educational attainment, the percent of the labor force in these two educational attainment categories declines. When we examine the groups with some college or Associates degrees, Bachelor's degrees and graduate or professional degrees, we see declines under the constant scenario and increases under the trended scenario. Thus, if educational attainment rates remain constant, the projected Texas labor force will shift toward being less educated as a result of the projected population changes. However, if trends in patterns of educational attainment from last decade continue, the labor force will shift toward being more educated.

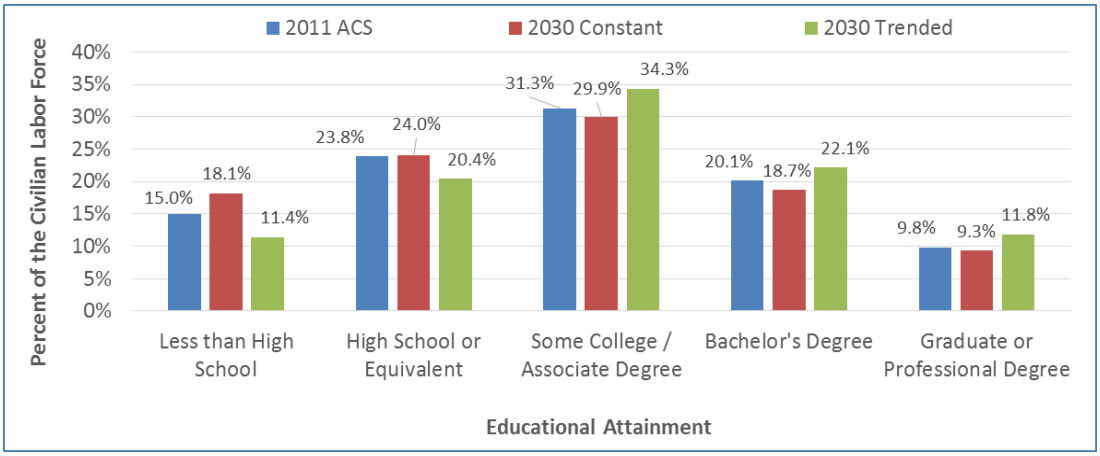

Figure 11
Percent of the Civilian Labor Force (ages 25-64) by Educational Attainment for 2011, 2030 Using Constant Rates, and 2030 Using Trended Rates, Texas
Source: Texas State Data Center, 2012 Vintage Population Projections, 0.5 Migration Scenario

Estimates of educational attainment in 2011 suggest that the Hispanic portion of the labor force is disproportionately over-represented in the lower levels of education and underrepresented at higher levels (see Figures 3 and 4). Projecting the educational attainment of the labor force under the constant rate assumption suggests this ethnic disparity would become greater with increased numbers of persons at lower levels of educational attainment (see Figure 12). The shifts in educational attainment observed under this assumption are being driven by the projected changes in the racial/ethnic composition of Texas' population and the continuation of the race/ethnic specific educational attainment rates observed in 2011.

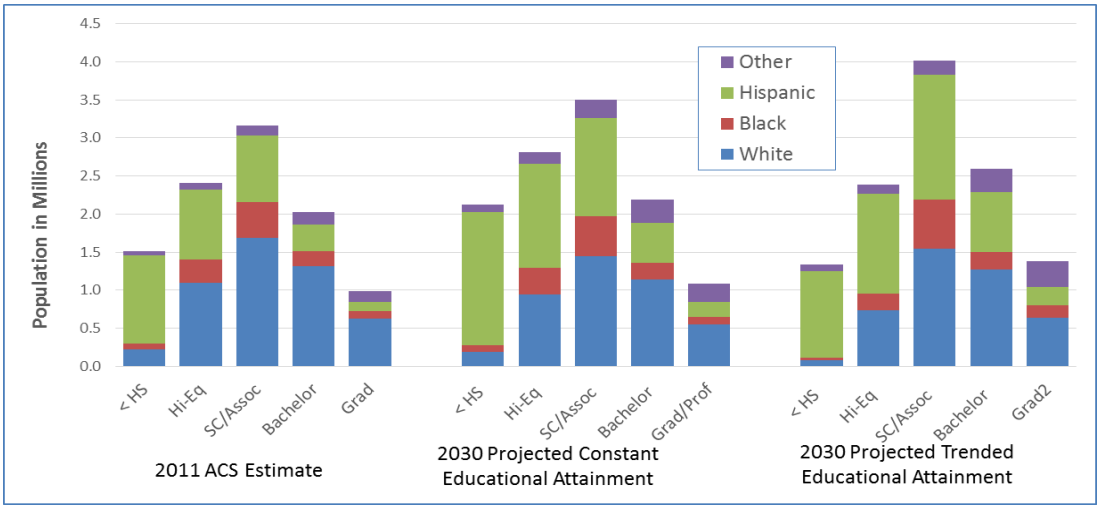

Figure 12
Educational Attainment of the Civilian Labor Force (ages 25-64) by Race/Ethnicity in 2011, and Projected for 2030 Using Constant Rates and Using Trended Rates of Educational Attainment, Texas
Sources: U.S. Census Bureau, American Community Survey, 2011 1-year PUMS Texas State Data Center, 2012 Vintage Population Projections, 0.5 Migration Scenario

Projecting the educational attainment of the CLF under the trended educational attainment scenario suggests that while there will be fewer Hispanics in the lower levels of educational attainment, Hispanics will continue to numerically dominate these levels. Under the trended projection, there are fewer persons in the labor force with lower levels of education and increasing numbers with higher levels. The Hispanic labor force will become more represented in all of the educational attainment groups above Less than High School with noticeable growth in the numbers in the Some College/Associate Degree and the Bachelor's Degree categories.

Conclusion and Discussion

We produced two sets of projections for educational attainment for the civilian labor force in Texas. One assumed that current rates of educational attainment will prevail and the second assumed that recent trends in educational attainment will continue.

When we do not consider trends in educational attainment and hold educational attainment constant by race/ethnicity, sex, and age, the educational attainment of the future Texas labor force is determined largely by population shifts by race/ethnicity, sex, and age. Under this assumption in Texas, the rapid growth of the Hispanic population will be the driving factor shaping the educational attainment of our future labor force. The current Hispanic labor force in Texas is much more likely to have lower levels of educational attainment than the non-Hispanic White population. Therefore, as the Hispanic population in Texas grows and maintains current levels of educational attainment, the overall education levels of the Texas labor force will decline. This paints a gloomy picture for the types of jobs that Texas will attract in the future and foretells of potential for higher rates of unemployment and poverty. This picture is contrary to the Texas we currently love and the Texas that we dream about.

If we assume that improvement trends in educational attainment over the past decade will continue, the outcome for the future educational attainment of the Texas labor force is more promising. Among persons of Hispanic descent, we will see a declining percent of the labor force without high school degrees and an increasing percent of those with some college or more. Under this assumption, we are likely to see increases in higher skilled and higher paid jobs being drawn to Texas. Correspondingly, we would expect to see lower rates of unemployment and poverty and higher median household incomes across the state.

The challenge that Texas faces is to maintain or accelerate recent improvements in educational attainment among Hispanics in the state. The data used in projecting educational attainment here are from persons who were old enough to graduate from high school in 2004. In Texas, this was a time when the investment in education was growing and policies were being enacted to facilitate some elements of fiscal parity across school districts. Coming through the recession, Texas has pulled back funding of many civic functions including education. The effects of these shifts in funding are not represented in these projections of educational attainment. However, when we examine more current trends in high school completion, it appears as though Texas is continuing to move toward improving the educational attainment of the labor force. What we do not know yet is if the increasing rates of high school completion are consistent with the trends we have observed from last decade or if these trends are enough to carry us to a higher skilled, higher paid labor force. If these rates are not enough and if Texas' momentum to improve the educational attainment of the labor force has waned, we are indeed looking at being a state with increasing poverty and unemployment. On the

other hand, if we are able to accelerate the projected educational attainment of the labor force, we may improve our economic well-being more quickly. However, it is also possible that increasing the educational attainment of our labor force more quickly than the rate at which we produce higher skilled, higher paid jobs, could result in higher rates of underemployment. More likely than not, the negative effects of having an over educated workforce would be less significant than those associated with having an under educated workforce.

The projections of educational attainment presented here may inform the decisions of policymakers about the relative importance of investing in the educational attainment of our future labor force. Such an investment must be targeted toward improving the quality of education with particular focus on the education of young Hispanics. This may require additional resources to ensure that public school teachers entering the workforce have been trained well and meet rigorous standards. It also may require identifying and implementing efforts to improve the quality and effectiveness of teaching and to improve the effectiveness of administrators to lead change toward effective teaching. Finally, access to higher education as a function of costs may continue to limit the abilities of low and middle income families to send their children to college.

The well-being of our state is tied closely to the well-being of the growing Hispanic population. If we fail to facilitate higher rates of educational completion among Hispanics in Texas, toward equivalence with non -Hispanic Whites, we will potentially fail our commitment to support a strong, healthy, prosperous, and proud Texas.

Beyond overall improvement in the socioeconomic status of Texans, perhaps the most compelling reasons for improving the educational attainment of the Texas labor force are the outcomes associated with a better educated population. Improved educational attainment will likely result in improvements in health, reductions in demand for social and health services, increases in the percent of the population with health insurance, increases in retail revenue, higher property values, and associated increases in state and local tax revenues. Thus, improving the educational attainment of our labor force is likely to produce significant social and economic benefits for all Texans.

By ensuring that our labor force has the educational attainment needed to draw business and industry to Texas with jobs that require greater skills and education, we will ensure an economy that sustains a high quality of life for generations to come.

"Now let us see what the present primary schools cost us, on the supposition that all the children of 10. 11. and 12. years old are, as they ought to be, at school: and, if they are not, so much the work is the system; for they will be untaught, and their ignorance and vices will, in future life cost us much dearer in their consequences, than it would have done, in their correction, by a good education."

Thomas Jefferson, January 14, 1818 to Joseph C. Cabell.

Limitations

In our projections of future educational attainment in Texas, we take into consideration education trends in the past decade in Texas as well as the projected changes in the major demographic factors in the future. We recognize that a host of demographic, socio-economic, and policy factors can affect the future education of Texas but cannot be included in our projections due to data limitations and the length and scope of this report.

In our report, we base our empirical data on the American Community Survey one year PUMS, which is a sample survey with its own margin of error. To account for different trends or different rates of trends among different demographic groups and education categories, we break them down to subgroups, some of which result in smaller sample sizes. The smaller the sample size, the larger the margin of sampling error. Because estimates used in this report are for the state of Texas, margins of error for all categories tended to be small. Nonetheless, we suggest that the readers understand that in interpreting the results, especially from small subgroups, the accuracy of the estimates, and thus projections, may be limited.

References

Texas State Data Center. 2012. Projections of the Population of Texas and Counties in Texas by Age, Sex, and Race/Ethnicity for 2010-2050. San Antonio, Tx: Texas State Data Center.

Texas Workforce Commission. Labor Market and Career Information (LMCI) Department. http://www.tracer2.com

U.S. Census Bureau. 2011. 2010 Census Summary File 1. [machine-readable data files] Washington, DC: U.S. Census Bureau.

U.S. Census Bureau. 2002-2012 (annual releases). American Community Survey Public Use Microdata Sample (PUMS) – Single-year files for 2001 through 2011 [machine-readable data files]. Washington, DC: U.S. Census Bureau.

U.S. Census Bureau. 2012. 2009-2011 American Community Survey Public Use Microdata Sample (PUMS) – Three-year File [machine-readable data files]. Washington, DC: U.S. Census Bureau.

U.S. Census Bureau. 2003. 2000 Census of Population and Housing: Summary Social, Economic and Housing Characteristics. Texas. PCH-2-45. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census. 1993. 1990 Census of Population: Social and Economic Characteristics, Texas-Section 1. CP-2-45. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census. 1983. 1980 Census of Population: Detailed Population Characteristics, Part 45, Texas-Section 1. PC80-1-D45. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census. 1973. Census of Population: 1970 Vol. 1 Characteristics of the Population, Part 45, Texas-Section 1. Washington, D.C.: U.S. Government Printing Office.

U.S. Bureau of the Census. 1962. U.S. Census of Population: 1960. General Social and Economic Characteristics, Texas. PC(1)-45C. Washington, D.C.: U.S. Government Printing Office.

APPENDIX

Table 0-1 Estimated and Constant Projected Percent Distribution of Educational Attainment of the Civilian Labor Force (ages 25-64), Texas, 2011-2030

	2011	2015	2020	2025	2030
Less than High School	15.0%	15.6%	16.5%	17.3%	18.1%
High School or Equivalent	23.8%	23.7%	23.9%	23.9%	24.0%
Some College/ Associate Degree	31.3%	30.9%	30.5%	30.2%	29.9%
Bachelor's Degree	20.1%	20.0%	19.5%	19.0%	18.7%
Graduate or Professional Degree	9.8%	9.8%	9.6%	9.4%	9.3%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Sources: Texas State Data Center, 2012 Vintage Population Projections, .5 Migration Scenario U.S. Census Bureau, American Community Survey, 2011 1-year PUMS					

Table 0-2 Estimated and Trended Projected Percent Distribution of Educational Attainment of the Civilian Labor Force (ages 25-64), Texas, 2011-2030

	2011	2015	2020	2025	2030
Less than High School	15.0%	14.0%	13.1%	12.2%	11.4%
High School or Equivalent	23.8%	23.1%	22.2%	21.3%	20.4%
Some College/ Associate Degree	31.3%	31.8%	32.7%	33.6%	34.3%
Bachelor's Degree	20.1%	20.8%	21.2%	21.7%	22.1%
Graduate or Professional Degree	9.8%	10.3%	10.8%	11.3%	11.8%
Total	100.0%	100.0%	100.0%	100.0%	100.0%
Sources: Texas State Data Center, 2012 Vintage Population Projections, .5 Migration Scenario U.S. Census Bureau, American Community Survey, 2011 1-year PUMS					

Table 0-3 Estimated and Projected Educational Attainment of the Civilian Labor Force (ages 25-64) Using Constant Rates of Educational Attainment by Race/Ethnicity, Texas, 2011-2030

	2011	2015	2020	2025	2030
Non-Hispanic White					
Less than High School	4.5%	4.5%	4.5%	4.5%	4.5%
High School or Equivalent	22.1%	22.0%	22.0%	22.0%	22.0%
Some College/Assoc. Degree	34.1%	33.9%	33.9%	33.9%	33.9%
Bachelor's Degree	26.5%	26.8%	26.7%	26.7%	26.7%
Graduate Degree	12.8%	12.9%	12.9%	12.9%	12.9%
Total	100%	100%	100%	100%	100%
Non-Hispanic Black					
Less than High School	6.8%	7.0%	7.0%	7.0%	7.0%
High School or Equivalent	27.4%	27.5%	27.5%	27.6%	27.6%
Some College/Assoc. Degree	40.7%	40.9%	40.9%	40.9%	40.8%
Bachelor's Degree	17.2%	16.9%	16.9%	16.9%	16.8%
Graduate Degree	7.9%	7.7%	7.7%	7.7%	7.7%
Total	100%	100%	100%	100%	100%
Hispanic					
Less than High School	33.7%	34.0%	34.1%	34.1%	34.1%
High School or Equivalent	26.7%	26.7%	26.7%	26.7%	26.7%
Some College/Assoc. Degree	25.6%	25.2%	25.2%	25.2%	25.2%
Bachelor's Degree	10.2%	10.3%	10.3%	10.3%	10.3%
Graduate Degree	3.7%	3.8%	3.8%	3.8%	3.8%
Total	100%	100%	100%	100%	100%
Non-Hispanic Other					
Less than High School	9.5%	9.2%	9.3%	9.3%	9.2%
High School or Equivalent	14.9%	14.9%	15.0%	15.0%	14.9%
Some College/Assoc. Degree	22.5%	23.3%	23.3%	23.3%	23.3%
Bachelor's Degree	29.3%	29.1%	28.9%	28.9%	29.0%
Graduate Degree	23.8%	23.5%	23.4%	23.5%	23.5%
Total	100%	100%	100%	100%	100%

Sources: Texas State Data Center, 2012 Vintage Population Projections, .5 Migration Scenario
U.S. Census Bureau, American Community Survey, 2011 1-year PUMS

Table 0-4 Estimated and Projected Educational Attainment of the Civilian Labor Force (ages 25-64) Using Trended Rates of Educational Attainment by Race/Ethnicity, Texas, 2011-2030

	2011	2015	2020	2025	2030
Non-Hispanic White					
Less than High School	4.5%	3.7%	3.0%	2.5%	2.0%
High School or Equivalent	22.1%	20.8%	19.5%	18.3%	17.1%
Some College/Assoc. Degree	34.1%	34.7%	35.2%	35.7%	36.0%
Bachelor's Degree	26.5%	27.5%	28.4%	29.2%	29.8%
Graduate Degree	12.8%	13.3%	13.8%	14.4%	15.0%
Total	100%	100%	100%	100%	100%
Non-Hispanic Black					
Less than High School	6.8%	5.2%	3.8%	2.7%	2.0%
High School or Equivalent	27.4%	25.6%	22.7%	19.9%	17.4%
Some College/Assoc. Degree	40.7%	43.4%	46.3%	48.7%	50.7%
Bachelor's Degree	17.2%	17.2%	17.4%	17.5%	17.3%
Graduate Degree	7.9%	8.7%	9.9%	11.2%	12.7%
Total	100%	100%	100%	100%	100%
Hispanic					
Less than High School	33.7%	31.2%	28.1%	25.1%	22.3%
High School or Equivalent	26.7%	26.9%	26.6%	26.2%	25.6%
Some College/Assoc. Degree	25.6%	26.6%	28.5%	30.3%	32.1%
Bachelor's Degree	10.2%	11.3%	12.6%	14.0%	15.4%
Graduate Degree	3.7%	3.9%	4.2%	4.4%	4.7%
Total	100%	100%	100%	100%	100%
Non-Hispanic Other					
Less than High School	9.5%	8.8%	8.4%	8.0%	7.5%
High School or Equivalent	14.9%	14.6%	13.7%	12.7%	11.8%
Some College/Assoc. Degree	22.5%	21.3%	20.2%	19.1%	18.1%
Bachelor's Degree	29.3%	29.5%	29.6%	29.6%	29.5%
Graduate Degree	23.8%	25.7%	28.1%	30.5%	33.1%
Total	100%	100%	100%	100%	100%

Sources: Texas State Data Center, 2012 Vintage Population Projections, .5 Migration Scenario
U.S. Census Bureau, American Community Survey, 2011 1-year PUMS