

## CHAPTER 4

# The Economic Impact of Texas Community Colleges

In this chapter, the Comptroller's office uses a variety of economic analyses to demonstrate how community and technical college education benefits the state, individual students and local communities. In all cases, our analyses show that community or technical college education provides positive economic benefits.

Two newly prepared Comptroller estimates measure the economic impact of community and technical colleges on the total state economy. The first considers only impacts that bring money into Texas from out of state, including out-of-state tuition, federal grants to students and federal contracts with community colleges. *The Comptroller's office estimates that Texas community and technical colleges generate \$2.1 billion in such impacts annually.*

The second analyzes the economic impact resulting from the earnings of all Texans with associate degrees. *The Comptroller's office estimates this impact at \$10.1 billion annually.*

This chapter also uses several additional analytical methods to illustrate the benefits gained by individual students. For instance, a Texan with an associate degree can earn up to 4.9 times as much over five years as he or she would in a "baseline" alternative occupation not requiring higher education.

Similarly, the average Texan with an associate degree will break even on their educational investment just beyond the first year of post-graduation employment. Finally, the Comptroller estimates that associate degree graduates earn an average of 32 percent more than high school graduates.

As a result of these impacts, all Texas communities reap the benefits of community colleges. Some benefit directly, as local schools attract industry, provide jobs and train productive workers. Other communities without schools benefit indirectly, as

students trained elsewhere return home with new skills, knowledge and opportunities.

## Previous Comptroller Study

A 2005 report by the Texas Comptroller's office took a broad approach to estimating the economic impact of higher education spending in Texas, seeking not only to measure statewide economic

### Economic Impact Studies

*Economic impact analyses* estimate the direct and indirect effects on the economy associated with a given expenditure. Any increase in demand for a product triggers a series of expenditures on the part of firms that provide the "inputs" — the goods and services — needed to produce and sell that product to the consumer. In the case of a service such as higher education, however, economic impacts only tell part of the story.

Studies have been conducted in the past, to gauge the impact of one or more education institutions on a local or state economy. These impacts can include:

- college expenditures on supplies and services (such as office supplies or equipment repairs) and capital purchases (new buildings and major equipment);
- retail expenditures by faculty and staff members, from wages paid by the institution; and
- student retail expenditures for items such as housing, transportation and groceries.

An important consideration involves whether studies capture only "exogenous" effects — economic activity that brings money into Texas from *outside* the state — or include "endogenous" effects as well — activities that involve movements of money *within* the state. Estimates will vary depending upon such decisions.

impacts from all Texas colleges and universities, but statewide gains in earnings and productivity as well. While some studies emphasize earnings and the positive social benefits of higher education, the 2005 report focused on the impact of universities and community colleges on state economic output (see sidebar at end of chapter for literature review).

Figures from the Comptroller's 2005 report indicated that every dollar spent on community and technical colleges generates an additional \$2 in economic activity, for a total annual impact of \$633 million. Expenditure data used to estimate the economic impact included only out-of-state or "exogenous" expenditures from students, such as tuition and fees, books and supplies, room and board, transportation and personal expenses (see sidebar 4.1 for more on exogenous effects).<sup>1</sup>

The study excluded "endogenous" effects, such as salaries and wages paid by community colleges and in-state tuition, on the assumption that, in the absence of these colleges, the money would stay within Texas and be spent on other purposes. Although community college students can attend school outside Texas, the vast majority of them remain in-state, and due to budgetary constraints and other factors might not attend an out-of-state school.

This assumption provides for conservative estimates that measure the true community college impact on the state as a whole.

### The 2008 Estimates

The Comptroller's two new estimates are also limited to exogenous effects. The economic output multiplier, developed using IMPLAN software, indicates that every dollar from outside the state going toward a Texas community college education in 2006 generated an additional 95 cents in Texas industries that provide goods and services to these colleges, as well as industries that benefit indirectly from the activity.<sup>2</sup> Real estate exemplifies an industry that supports community college output: every dollar of educational services produced by a Texas community college generates an average of nearly 30 cents in spending on real estate.

To arrive at our estimate, the output multiplier was applied to federal grants and contracts awarded to community colleges and total receipts from out-of-state tuition and fees. We directly obtained federal grant and contract data from the Texas Higher Education Coordinating Board, while tuition and fee data consisted of a weighted average of THECB in-state and out-of-state per-student spending figures, multiplied by total community college enrollment.<sup>3</sup> We estimate a total impact of almost \$2.1 billion (**Exhibit 4-1**).

The marked difference with the 2005 Comptroller estimate of \$633 million can be attributed to factors including growth in enrollment, increases in student expenditures, a more accurate measure of average student costs and our inclusion of federal money.

### Simulation: Increased Community College Enrollment

For another perspective on the impact of community colleges, we ran a simulation with REMI software to gauge the reaction of the state economy to community college enrollment.

In our simulation, enrollment is assumed to increase by 10 percent in one year and maintain that enrollment level for another 24 years, holding constant all other economic factors except taxes. We assumed that community colleges must meet the difference between additional spending and revenues by raising property taxes. All areas of

EXHIBIT 4-1

### Estimated Economic Impact of Texas Community Colleges on the State Economy, 2006

Source	Impact (Millions \$)
Federal grants & contracts	\$836.50
Tuition & books	223.60
Total out-of-state money	1,060.10
<b>Economic impact</b>	<b>2,067.20</b>

Note: Economic output multiplier = 1.95.  
Sources: Texas Higher Education Coordinating Board and Texas Comptroller of Public Accounts.

spending were included, including the costs of instruction, research costs and plant maintenance. Revenues were assumed to include only tuition and fees, representing variable costs charged directly to each additional student. Revenues that require state or federal appropriation were excluded, as well as investment and other income.

In all, the simulation indicated that community colleges would spend an additional \$340.2 million to educate 10 percent more students, and would receive an additional \$293.6 million in revenues, leaving a shortfall of \$46.6 million to come from property tax.

**Exhibit 4-2** shows an increase in state employment of more than 13,000 workers in the first year, with steady increases throughout the period.

**Exhibit 4-3** shows similar trends, with increases in gross state product, personal income and output. Personal income represents all income received by Texans from all sources (less taxes), while output represents all production and consumption of goods and services in Texas.

Gross state product represents output less the goods and services used to produce final products.

The simulation accounts for future changes in wages and productivity resulting from increases in the level of work force education, and is constrained by population projections. In other words, the simulation adjusts wages according to supply and demand, and in industries with similar skill requirements, takes jobs from industries with low demand to meet higher demand in other industries.

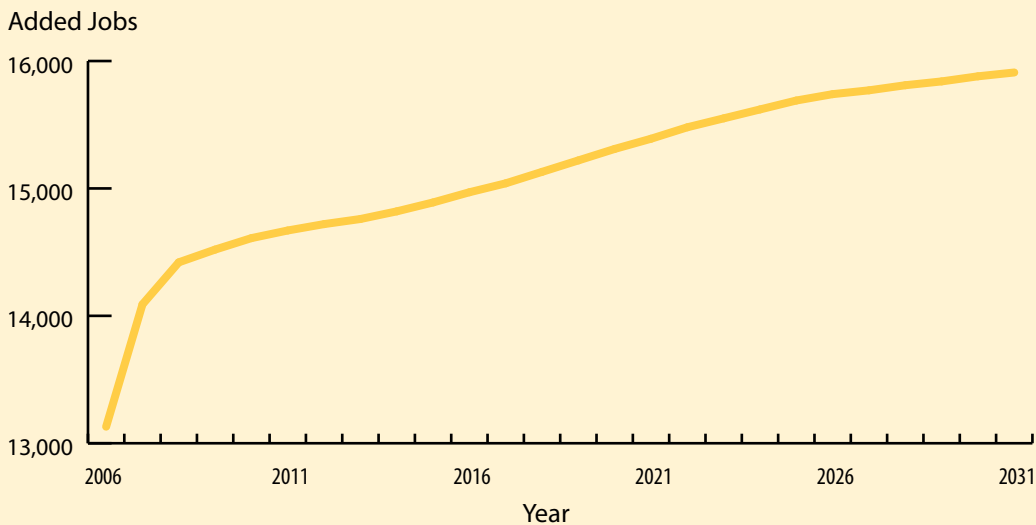
**Earnings and Economic Returns**

The Comptroller also examined the returns to individuals holding a two-year college degree.

Students pursuing an associate degree face upfront costs for tuition as well as foregone earnings while in college. The decision to obtain a degree represents a tradeoff between higher future earnings with a temporary cash flow reduction, versus continuous earnings from staying in the work force instead of going to school.

EXHIBIT 4-2

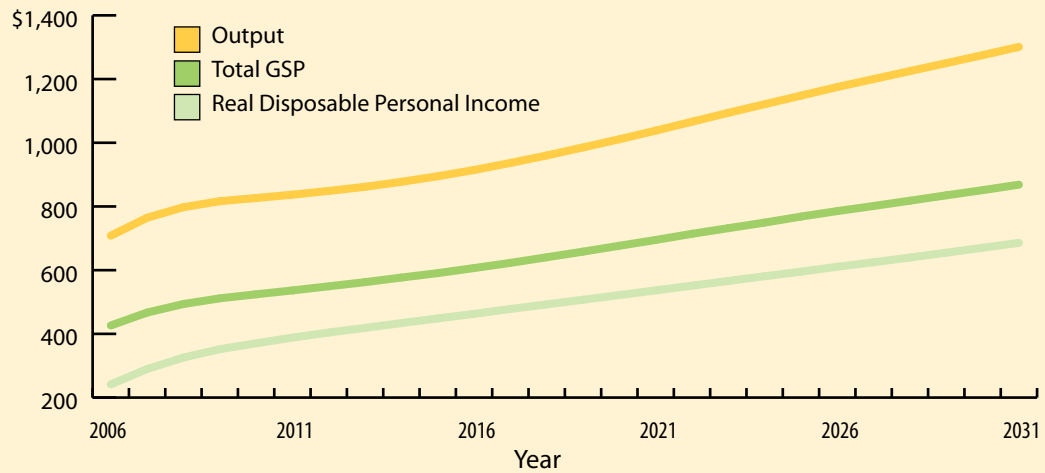
Simulated State Employment Impact From a 10 Percent Increase in Texas Community College Enrollment



Sources: Texas Higher Education Coordinating Board and Texas Comptroller of Public Accounts.

EXHIBIT 4-3

Simulated Increase in Texas Gross State Product (GSP), Personal Income and Output From a 10 Percent Increase in Community College Enrollment (Amounts in Millions, Constant 2000 Dollars)



Sources: Texas Higher Education Coordinating Board and Texas Comptroller of Public Accounts.

EXHIBIT 4-4

Texas Wage Projections and Returns on Investment\* (Assuming 2.5 Percent Annual Growth from Entry Level)

	2008	2009	2010	2011	2012	5yr Sum	Return on Investment**
Registered nurses	\$43,749	\$44,843	\$45,964	\$47,113	\$48,291	\$229,959	4.5
Computer support specialists	27,330	28,013	28,714	29,431	30,167	143,655	2.0
Paralegals and legal assistants	31,305	32,088	32,890	33,712	34,555	164,549	2.6
Electrical and electronic engineering technicians	35,323	36,206	37,111	38,039	38,990	185,669	3.2
Radiologic technologists and technicians	35,078	35,955	36,854	37,775	38,720	184,381	3.2
Medical and clinical laboratory technicians	23,447	24,033	24,634	25,250	25,881	123,245	1.4
Civil engineering technicians	18,181	18,636	19,101	19,579	20,068	95,565	0.6
Computer specialists, all other	46,295	47,452	48,639	49,855	51,101	243,342	4.9
Medical records and health info technicians	19,845	20,341	20,850	21,371	21,905	104,312	0.9
Dental hygienists	44,903	46,026	47,176	48,356	49,565	236,025	4.7
Retail salespersons	14,219	14,574	14,939	15,312	15,695	74,740	N/A

\*Current occupational earnings figures are a three-year average of earnings modeled according to U.S. Bureau of Labor Statistics methods using Texas Workforce Commission data.

\*\*Ratio of the five-year return on a dollar invested today, accounting for costs and earnings.

Sources: U.S. Bureau of Labor Statistics and Texas Workforce Commission.

Our analysis shows that, over a five-year period, the economic return to workers with an associate degree exceeds those available in occupations requiring only a high school diploma or less.

**Exhibit 4-4** shows our analysis of the 10 most common occupations requiring an associate degree compared with retail sales. TWC reports that retail sales work is the fastest-growing occupation that does not require postsecondary education; for the purpose of this comparison, retail sales serves as the “baseline” occupation.<sup>4</sup> Our analysis begins with average entry-level earnings and projects data over five years, assuming a 2.5 percent growth in yearly earnings.

The estimates account for total educational outlays; total three-year income after completing the degree; and the total two-year opportunity cost of lost earnings. These figures are compared against total foregone earnings to create a return on investment (ROI) ratio. ROIs are expressed in terms of the five-year return on a single dollar invested in an associate degree.

The occupational category “other computer specialist” has the highest return on investment, at 4.9 times the baseline earnings, while civil engineering technicians return the least, at 0.6 times the baseline earnings.

It is important to note that by choosing retail sales as the baseline occupation, wage comparisons may seem dramatic, given the generally low-wage nature of these positions. The baseline was chosen, however, to illustrate a real-world dilemma: the growing retail sales industry offers an immediate work alternative to education after high school.

A further analysis draws on “net present value” (NPV) measurements from the 2005 Comptroller report. Net present value figures were then used to estimate the economic impact of higher earnings resulting from associate degree training in Texas.

We used TWC wage data to estimate the average NPV of earnings for a Texan with an associate degree. Median wage data for all occupations that require an associate degree were weighted by the number of degree holders and averaged.

### Net Present Value

Finance and investment professionals often use *net present value (NPV)* analysis to determine the worthiness of investment projects. Net present value represents future income in terms of today’s dollars. If the net present value of an investment is positive, investors consider it worthwhile; if the net present value is negative, the investment should not be undertaken. Given that higher education is an investment of time and money, the net present value of future earnings from education adds a broader view of its economic impact.

The weighted average of occupations only requiring on-the-job training was subtracted from associate degree wages, and education costs were removed as well. This difference was discounted by 6 percent annually to account for inflation and the opportunity cost of a risk-free investment, and compounded for 45 years, the assumed career span.<sup>5</sup>

The Comptroller’s current estimates of net present value exceed the figures from the 2005 Comptroller report due to rising tuition costs, expanding community college enrollment and stronger demand for associate degree training.

The career earnings of an average Texan with an associate degree are represented by a net present value of more than \$125,000. Using this figure, the current analysis followed the 2005 report’s estimate of total impact on the Texas economy from earnings gains. The method takes the NPV figure and applies a ratio of earnings to gross state product, arriving at a state economic impact of nearly \$10.1 billion (**Exhibit 4-5**).

For another perspective, **Exhibit 4-6** shows aggregate cumulative earnings of three groups of individuals — those with associate degrees, those with a retail sales occupation requiring no secondary education, and those with four-year college degrees. This analysis uses a weighted average of the “top 10” associate degree occupations, referring to the 10 most common associate degree occupations. Similarly, we use a weighted average for the 10 most common bachelor degree occupations.<sup>6</sup>

The decision to obtain a degree represents a tradeoff between higher future earnings with a temporary cash flow reduction, versus continuous earnings from staying in the work force instead of going to school.

EXHIBIT 4-5

Texas Discounted Earnings Gains from Associate Degrees, 2008

Avg Graduates 2005-07	In-State Percentage	Net Present Value Earnings Gain/Worker	Employment Percentage	Total Earnings Gain (millions \$)	Impact on State Economy (millions \$)
57,596	94.1%	\$125,546	75.7%	\$5,151	\$10,058

Sources: Texas Workforce Commission, Texas Higher Education Coordinating Board and Texas Comptroller of Public Accounts.

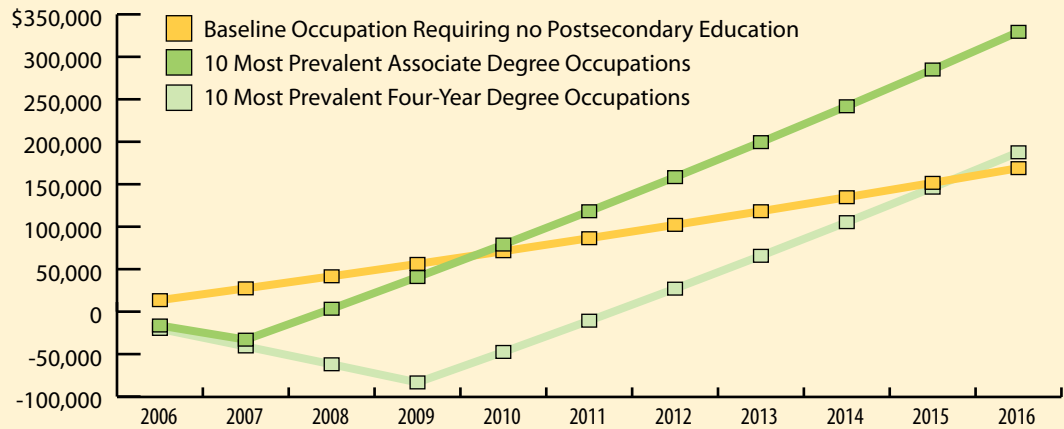
This analysis uses current earnings data from the wage projections above and assumes that the associate-degree cohort entering school in 2006 will finish in two years and enter the labor force in 2008. Because students that attend an associate or bachelor's program give up a full-time position to do so, this analysis considers forgone earnings, the forgone salary being that of a baseline retail position. Potential earnings forgone combined with tuition, fees, books and supplies expenses result in a cost to the associate student of \$19,042 in 2006 and \$19,380 in 2007, for a total cost of \$38,422 for both years. Comparatively, however, a four-year college student bears a much higher cost: on average, a college student bears \$77,904 in combined forgone earnings and education expenses over the course of a four-year program.

On average, a Texan who enters a 2006 associate degree program in a top 10 occupational field breaks even on his or her educational investment during the first year of employment. The associate degree holder achieves the cumulative earnings of a Texan with no secondary education during the third year of employment. Furthermore, an individual holding an associate degree enjoys greater cumulative earnings than his or her four-year college counterpart immediately upon graduation. Even in 2016, eight years after graduation, cumulative associate degree holder earnings continue to exceed cumulative earnings of four-year graduates.

Exhibit 4-7 compares lifetime earnings by level of educational attainment. On average, workers with at least some college earn more than those

EXHIBIT 4-6

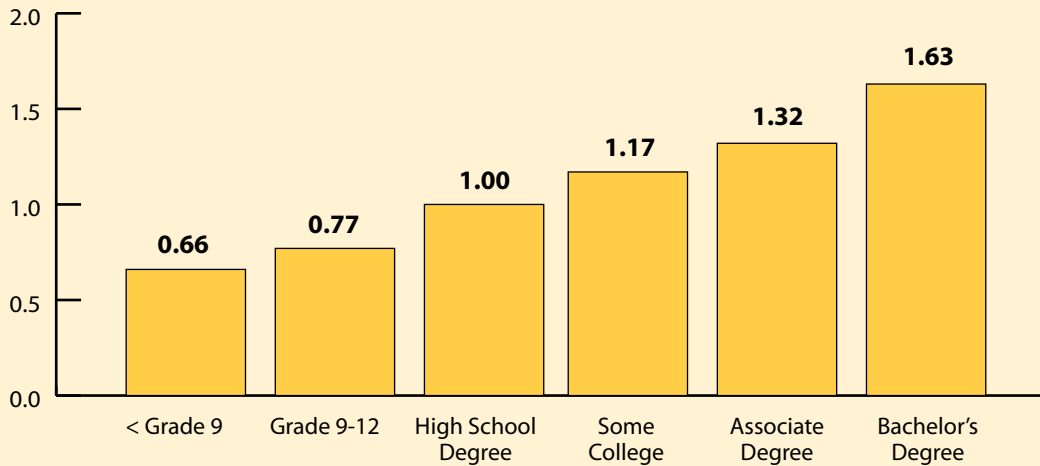
Cumulative Per Capita Earnings, Weighted Averages



Sources: Texas Workforce Commission, College for Texans, Texas Higher Education Coordinating Board and Texas Comptroller of Public Accounts.

EXHIBIT 4-7

Expected Lifetime Earnings Relative to High School Graduates,  
by Educational Level  
(Lifetime Earnings of a High School Graduate = 1.00)



Source: U.S. Census Bureau.

On average, a Texan who enters a 2006 associate degree program in a top 10 occupational field breaks even on his or her educational investment during the first year of employment.

with a high school degree only, and workers with an associate degree earn even more, averaging 32 percent more in career earnings than workers with a high school degree only.<sup>7</sup>

### Implications of Educational Attainment

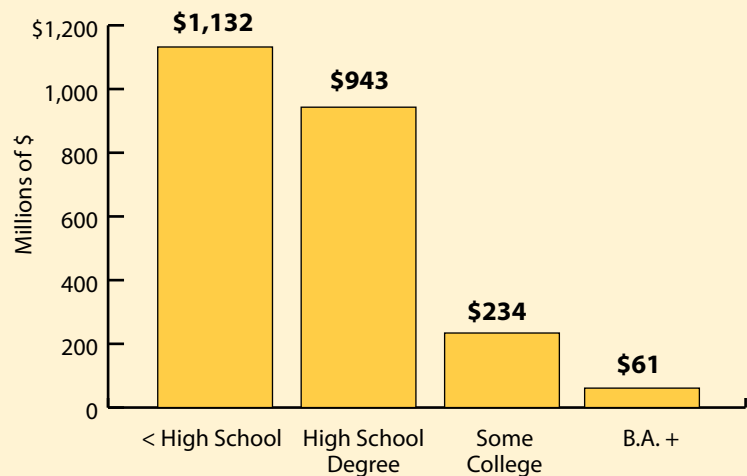
The positive effects of educational attainment extend beyond earnings and returns on investment. Higher education leads to social benefits that reduce the public economic burden all Texans face.

As students complete more years of education, for instance, their likelihood of criminal activity decreases, leading to lower incarceration rates and less state spending on criminal justice (Exhibit 4-8).

Data from the College Board and the Texas Legislative Budget Board show an estimated annual state expenditure of nearly \$2.4 billion on incarceration. Of this amount, an estimated 87 percent or \$2.1 billion is attributable to inmates with a high school degree or less.<sup>8</sup>

EXHIBIT 4-8

Annual Texas Incarceration Expenditure  
by Inmate Education Level



Sources: The College Board and Texas Legislative Budget Board.

Furthermore, College Board data also show that persons with at least some higher education are roughly three times less likely to currently be incarcerated. The likelihood of incarceration is highest among those who never finish high school, resulting in part from lack of employment opportunities and weaker job skills.

Higher levels of educational attainment bring more employment opportunities and are associated with lower unemployment. In 2007, nationwide unemployment was highest among people without a high school degree, at 7.1 percent (**Exhibit 4-9**). The likelihood of unemployment decreases with advancing education levels; those with a high school diploma had a 2007 unemployment rate of 4.4 percent, while just 3 percent of persons with associate degrees were unemployed.<sup>9</sup>

Labor force participation provides a broader view of the labor market, with unemployment representing a subset of the labor force. Labor force participation consists of all employed and unemployed workers (**Exhibit 4-10**).

The labor force participation rate shows the labor force as a percentage of the civilian population.

People in this population who are not in the labor force include retired individuals and those not employed or seeking work; the population excludes those who are incarcerated or institutionalized as well as members of the armed forces.<sup>10</sup>

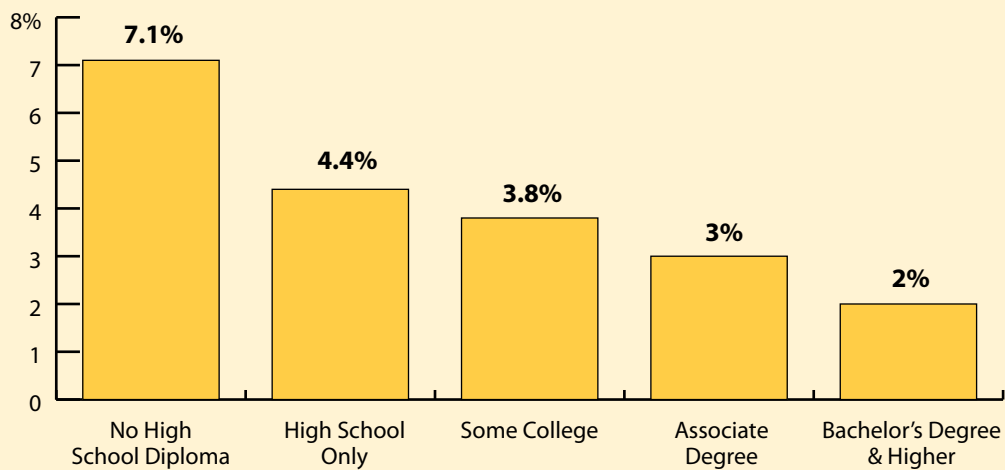
In 2006, 86 percent of Americans aged 25 to 64 and holding college degrees were in the work force, compared to 77 percent of those who had only completed high school and 64 percent of those who had not completed high school. People with associate degrees fared almost as well as those with a four-year degree, with 84 percent of them aged 25 to 64 participating in the U.S. work force.<sup>11</sup>

Persons with college degrees or advanced degrees earn far more than those who lack a high school diploma. In 2007, U.S. men with a graduate or professional degree earned an average of more than \$54,600 more than those without a high school diploma, and men with a bachelor's degree earned more than \$34,000 more annually.

In Texas, the differential was even greater. Men with a graduate or professional degree earned an average of nearly \$56,600 more annually than

EXHIBIT 4-9

U.S. Unemployment Rates by Educational Attainment, 2007

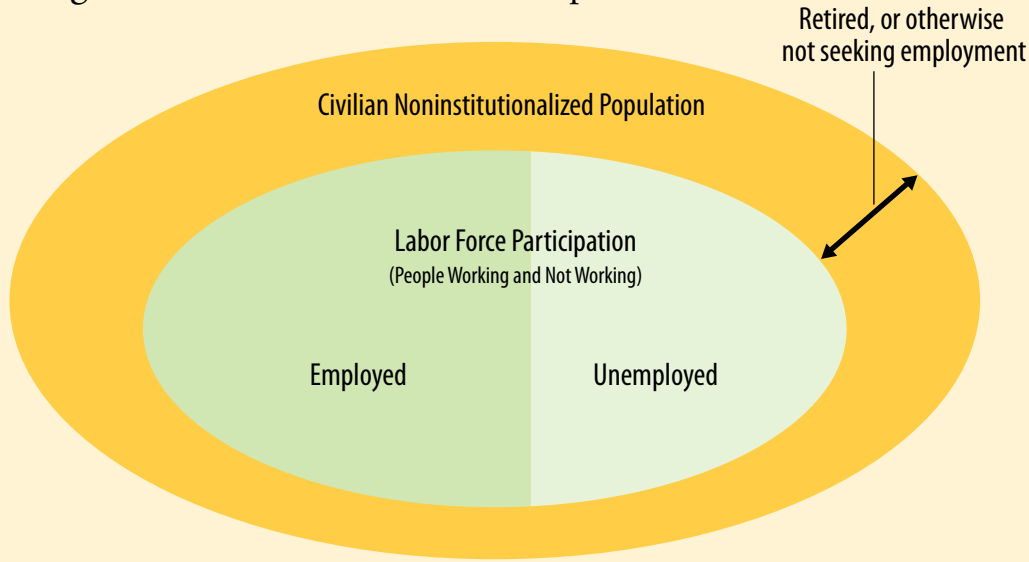


Source: U.S. Bureau of Labor Statistics.



EXHIBIT 4-10

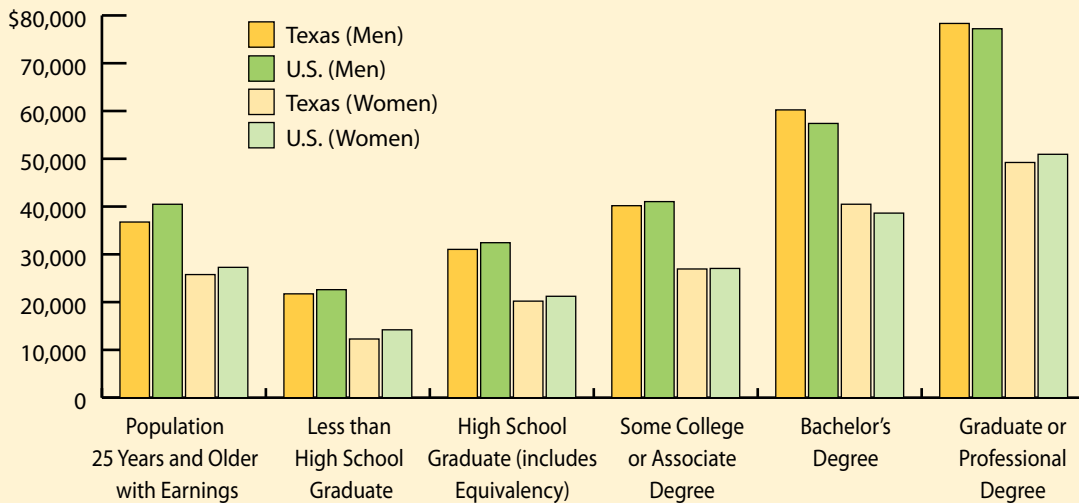
Diagram of Labor Force Relationships



Source: Texas Comptroller of Public Accounts.

EXHIBIT 4-11

Texas and U.S. Median Earnings by Educational Attainment, 2007



Source: U.S. Census Bureau, Income, Earnings, and Poverty Data from the 2007 American Community Survey (Washington, D.C., August 2007).

those without a high school diploma, and a man with a bachelor's degree earned \$38,500 more.

Women with advanced degrees in the U.S. as a whole and in Texas earned nearly \$37,000 more than their counterparts without a high school diploma.

U.S. male high school graduates, in turn, earned about \$9,800 more than those without a diploma in 2007; Texas males earned \$9,300 more. U.S. women high school graduates made about \$7,000 more; Texas women made \$7,900 more (**Exhibit 4-11**).<sup>12</sup>

These analyses clearly demonstrate that increasing the number of postsecondary degrees and certificates awarded has significant positive economic effects on society as well as the individual.

Chapter 2 of this report made it apparent that Texas needs more educated workers, and that the state has far too many students who fail to continue their education past high school. The next chapter will examine some of the reasons for this pattern.

### Other Economic Impact Resources

In addition to the 2005 Comptroller report, a number of other studies estimated the economic impact of higher education in Texas. Some examined the impacts of individual schools on local communities, while others looked at statewide impacts.

Recent Texas-specific studies include:

- *Sam Houston State University (SHSU)*: In 2005, SHSU conducted a study to assess its economic impact on the local economy, based on a survey of spending patterns answered by full-time faculty, staff and students. The study concluded that every dollar they spend generates an estimated additional 70 cents of economic activity in the local economy.<sup>13</sup>
- *Tarleton State University (TSU)*: A 2000 study of TSU's economic impact on Erath County evaluated the expenditures of faculty, staff and students as well as expenditures by visitors to the university and TSU retirees living in the county, and the university's operating and capital expenditures. It found that every dollar spent by TSU and affiliated persons generates an additional 48 cents of economic activity in the county.<sup>14</sup>
- *University of Texas System*: In 2005, the Institute for Economic Development at the University of Texas at San Antonio published an economic study of the impact of UT administration and its 15 component institutions. The study focused on the following spending categories:
  - operational expenses of component institutions;
  - capital purchases and construction;
  - faculty and staff expenditures;
  - student spending in local economies; and
  - health centers' impacts.

In fiscal 2004, spending in these categories totaled \$8.7 billion, with an estimated economic impact of \$12.8 billion. This means that every dollar of initial spending by each component institution and persons associated with it produced an additional 47 cents of economic activity within each institution's vicinity.<sup>15</sup>

Note that these studies focused primarily on expenditures by institutions and affiliated persons, and examined universities rather than community and technical colleges.

Other studies have considered impacts such as the additional income earned by persons who receive degrees from the institution. Among these, CC Benefits Inc. conducted a study for the Texas Association of Community Colleges. Results from the study indicated that taxpayers receive a 15.9 percent return in economic output for every state dollar invested, with the state recovering all its money 8.2 years after investment. It also evaluated "net present value" returns to students, with community college education returning \$9.05 in net present value for every dollar invested.

The study also noted that knowledge and skills obtained by community college students help communities attract new industries and allow existing firms to become more competitive and productive.<sup>16</sup>

## Endnotes

- <sup>1</sup> Texas Comptroller of Public Accounts, *Special Report: The Impact of the State Higher Education System on the Texas Economy* (Austin, Texas, February 2005), <http://www.window.state.tx.us/specialrpt/highered05>. (Last visited October 1, 2008.)
- <sup>2</sup> Model from IMPLAN software, 2003.
- <sup>3</sup> Texas Higher Education Coordinating Board, “College Costs — 2008-2009 — Community Colleges,” <http://www.collegefortexans.com/paying/collegcosts.cfm?Type=1&Level=2> (last visited October 13, 2008); Texas Higher Education Coordinating Board, “Fall 2007 Enrollment Detail,” [http://www.txhighereddata.org/Interactive/Accountability/CC\\_Participation\\_Detail.cfm?FICE=445566&Load\\_Year=2007](http://www.txhighereddata.org/Interactive/Accountability/CC_Participation_Detail.cfm?FICE=445566&Load_Year=2007) (last visited October 13, 2008); Texas Higher Education Coordinating Board, *Texas Enrollment By Geographic Source, Public 2-Year College*, <http://www.txhighereddata.org/approot/dwprod rpt/enrmenu.htm>. (Last visited October 13, 2008); and Texas Higher Education Coordinating Board, “Community College Annual Financial Reports, FY 2006.” (Unpublished report.)
- <sup>4</sup> Texas Education Agency, “Achieve Texas,” p. 1; and Texas Education Agency, *Achieve Texas Implementation Guide*, (Austin, Texas, 2006), pp.3-4, <http://www.achievetexas.org/Implementation.htm>. (Last visited November 24, 2008.)
- <sup>5</sup> Texas Education Agency, *Achieve Texas Implementation Guide*, p. 4.
- <sup>6</sup> U.S. Census Bureau, “PINC-03: Educational Attainment – People 25 Years Old and Over, by Total Money Earnings in 2005, Work Experience in 2005, Age, Race, Hispanic Origin, and Sex,” [http://pubdb3.census.gov/macro/032006/perinc/new03\\_001.htm](http://pubdb3.census.gov/macro/032006/perinc/new03_001.htm) (last visited November 20, 2008); and U.S. Department of Education, Office of the Secretary, *Meeting the Challenge of a Changing World: Strengthening Education for the 21st Century*, (Washington, D.C., 2006), p. 4, [http://www.doleta.gov/wired/files/Meeting\\_The\\_Challenge\\_of\\_a\\_Changing\\_World.pdf](http://www.doleta.gov/wired/files/Meeting_The_Challenge_of_a_Changing_World.pdf). (Last visited November 24, 2008.)
- <sup>7</sup> Texas Education Agency, “Frequently Asked Questions about Dual Credit,” pp. 1-3, [http://www.tea.state.tx.us/gted/Dual\\_Credit\\_QA61907.pdf](http://www.tea.state.tx.us/gted/Dual_Credit_QA61907.pdf). (Last visited November 19, 2008.)
- <sup>8</sup> Estimates derived from The College Board, *Education Pays* (New York, New York, 2005), p. 20, [http://www.collegeboard.com/prod\\_downloads/press/cost04/EducationPays2004.pdf](http://www.collegeboard.com/prod_downloads/press/cost04/EducationPays2004.pdf) (last visited October 1, 2008); and Texas Legislative Budget Board, *Criminal Justice Uniform Cost Report, Fiscal Years 2004-2006* (Austin, Texas, January 2007), p. 3, [http://www.lbb.state.tx.us/PubSafety\\_CrimJustice/2\\_Current\\_Corr\\_Pop\\_Indicators/Uniform\\_Cost\\_Report\\_tables.pdf](http://www.lbb.state.tx.us/PubSafety_CrimJustice/2_Current_Corr_Pop_Indicators/Uniform_Cost_Report_tables.pdf). (Last visited November 14, 2008.)
- <sup>9</sup> U.S. Bureau of Labor Statistics, *Current Population Survey* (Washington, D.C., September 2008), table 7, <http://www.bls.gov/cps/cpsaat7.pdf>. (Last visited October 1, 2008.)
- <sup>10</sup> BLS glossary for Labor Force definitions, <http://www.bls.gov/bls/glossary.htm#C>.
- <sup>11</sup> U.S. Department of Education, National Center for Education Statistics, *Digest of Education Statistics 2007* (Washington, D.C., 2008), p. 547, <http://nces.ed.gov/pub2008/2008022.pdf>. (Last visited October 3, 2008.)
- <sup>12</sup> U.S. Census Bureau, *Income, Earnings, and Poverty Data from the 2007 American Community Survey* (Washington, D.C., August 2007), pp. 15-16, <http://www.census.gov/prod/2008pubs/acs-09.pdf>. (Last visited October 3, 2008.)
- <sup>13</sup> Sam Houston State University, *The Economic Impact of Sam Houston State University, 2005* (Huntsville, Texas), [http://www.shsu.edu/~coba/cbr/documents/2005economicimpactstudyfinalreport\\_001.pdf](http://www.shsu.edu/~coba/cbr/documents/2005economicimpactstudyfinalreport_001.pdf). (Last visited October 1, 2008.)
- <sup>14</sup> Tarleton State University, *Economic Impact of Tarleton State University*, by S. Hussain Jafri, Jay Dudley and David Buland (Stephenville, Texas, May 9, 2000), <http://www.tarleton.edu/main/economic.pdf>. (Last visited October 1, 2008.)
- <sup>15</sup> University of Texas at San Antonio, Institute for Economic Development, *Economic Impact Study: A Study of the Economic Impact of The University of Texas System* (San Antonio, Texas, 2005), <http://www.utsystem.edu/news/2005/EcoImpact-FullReport030905.pdf>. (Last visited October 1, 2008.)
- <sup>16</sup> Texas Association of Community Colleges, *Community Colleges Working for Texas: The Socioeconomic Benefits Generated by 50 Community College Districts in Texas*, by Kjell A. Christophersen and M. Henry Robison, CC Benefits Inc. (Austin, Texas, June 2002), p. 47, <http://www.tacc.org/pdf/ExecSummaryFinal.pdf>. (Last visited October 1, 2008.)

## Real People, Real Stories

### Mary Peña

Mary Peña is a single parent with three children. When Mary she lost a \$9 per hour job, she was forced to move in with her elderly parents. She worked at several minimum-wage jobs and couldn't make ends meet even while receiving food stamps and Medicaid for her kids.

In 1997, Mary decided that she would never accomplish much for her kids unless she went back to school to fulfill her lifelong dream of becoming a nurse. She took a part-time job while taking prerequisite courses for the nursing program.

In 2000, Mary heard about Project VIDA, a workforce initiative serving the Valley area. Project VIDA helped her with tuition, fees, books at South Texas College, uniforms and gasoline, and helped her obtain child care assistance.

In 2003, Mary graduated the program and went to work at Rio Grande Regional in the ICU department at a starting wage of \$17 per hour with full benefits. This was the first time that Mary was able to provide her children with health insurance without government assistance. Soon, Mary was able to purchase her own home and two vehicles.

Two years later, she went to work at a local home health agency at an annual salary of \$137,000.

*Special thanks to Mary Peña and the Industrial Areas Foundation for sharing this success story.*

## Real People, Real Stories

### Billy Jack Weaver

Billy Jack Weaver turned an Associate of Applied Science degree in air conditioning and refrigeration technology into a rewarding career with Texas' leading residential air-conditioning company.

"Texas State Technical College (TSTC) at Harlingen taught me everything from the ground up — from basic electricity to the psychometric chart for studying air, its properties and moisture content, so we can analyze the relationship of temperature, pressure and humidity," he said.

Billy Jack, a Rio Hondo native, graduated from TSTC in April 2008, but didn't get to attend commencement — because he had started work three days earlier. After a two-week internship for Comfort Experts in Dallas-Fort Worth, the company assigned him to a service truck. In May, Weaver recorded \$91,686 in sales and earned the company's top sales award. His annual base salary received a boost from the \$50,000 range to about \$68,000; his May paycheck totaled about \$8,000.

He credits TSTC for preparing him to become a success. "TSTC has quality instructors who turn out a high-quality product," he said. Billy Jack called his instructors "down to earth," adding, "They aren't arrogant and they gave me support. I thank them for bringing company representatives on campus to meet with us and give us this opportunity."

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