13 TEXAS INDEX

Texas Workforce Investment Council

The Mission of Texas Workforce Investment Council

Assisting the Governor and the Legislature with strategic planning for and evaluation of the Texas workforce development system to promote the development of a well-educated, highly skilled workforce for Texas.

Texas Index 2013

December 2013

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Introduction

Texas Workforce Investment Council and Texas' Workforce System

The Texas Workforce Investment Council (Council) was created in 1993 by the 73rd Texas Legislature. The Council is charged with promoting the development of a highly skilled and well-educated workforce for the state of Texas. The Council is also charged with assisting the Governor and the Legislature with strategic planning for and evaluation of the Texas workforce system (system).

The system comprises the workforce programs, services, and initiatives administered by eight state agencies, 28 local workforce development boards, community and technical colleges, and local adult education providers. System partners include:

Economic Development and Tourism
Texas Association of Workforce Boards
Texas Department of Criminal Justice
Texas Education Agency
Texas Health and Human Services Commission and its Department of Assistive and Rehabilitative Services
Texas Higher Education Coordinating Board
Texas Juvenile Justice Department
Texas Veterans Commission
Texas Workforce Commission

One of the key responsibilities of the Council is to work with its system partners to develop a strategic plan that focuses on the critical objectives that the workforce system must achieve over the next five-to-10 years. *Advancing Texas: Strategic Plan for the Texas Workforce System (FY2010-FY2015)* is posted on the Council's website at: **http://governor.state.tx.us/twic/work/**.

The system strategic plan for FY2010-FY2015 was presented for consideration and approval by the Council at its September 2009 quarterly meeting. The plan was approved by the Governor in October 2009. The strategic plan is devised on a six-year time frame to align with the Texas Strategic Planning and Performance Budgeting System. The plan lays out long term objectives (LTO), action plans, and performance measures that are to be achieved during the life of the plan. The LTO related to developing the Texas Index states:

> *Annually, the Council will produce a data set whereby system stakeholders can ascertain Texas' position relative to key indicators of competitiveness.*

Development of the Texas Index

The Texas Index was created to provide a series of indicators that give system stakeholders a snapshot of the state's general workforce, education, and economic health.

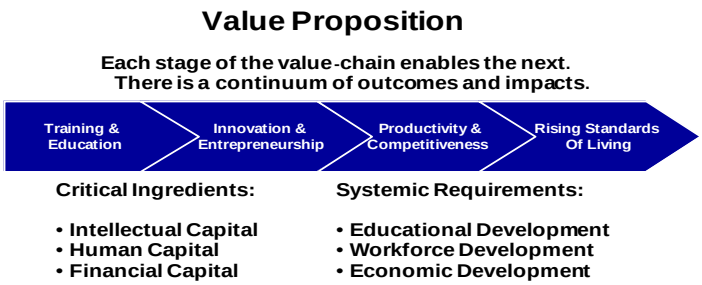
The *Texas Index 2013* (*Index*) is the eighth release, providing trend data for a series of 38 indicators across four domains:

- Training and Education (10)
- Research and Development (10)
- Market Composition and Characteristics (10)
- Participant Access and Contribution (8)

The foundation of the *Index* is a value proposition based on four critical, interrelated elements:

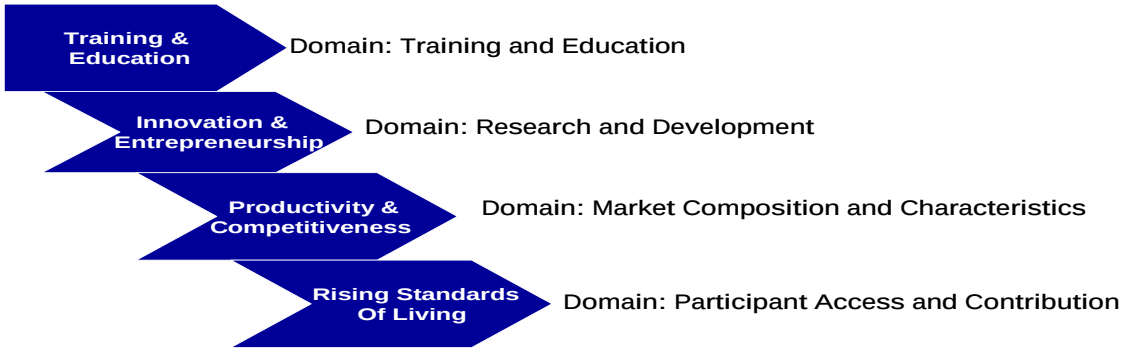
- Intellectual capital and the availability of a well-educated population are required to support innovation and commercialization.
- Human capital and the availability of a well-trained labor supply are required to support the business needs of employers and increases in worker productivity.
- Financial capital and the availability of funds to support both basic and applied research, product commercialization, and firm birth and growth, are required to ensure continued innovation and increased competitiveness in the global marketplace.
- An enhanced standard of living for Texans is related to the successful outcome of activities that support the first three value elements.

Value Proposition



Each of the four value-chain elements in the graphic represents one of the four domains in the *Index*. Like the value-chain elements, the indicators and data sets within each domain are related to and affected by indicators in the other domains. The included indicators provide a measure of Texas' performance and can be benchmarked against the U.S. average, competitor states, other countries, or Texas' longitudinal performance.

Within each domain, the *Index* establishes trends and comparisons to indicate the extent of change for each indicator. The elements of the value-chain are represented in the *Index* as:



The state's efforts to improve intellectual, human, and financial capital are paramount in building Texas' assets for the future. Decisions in the policy areas of education, workforce, and economic development all affect the value-chain. For example, a decision in the education arena may have an effect on economic development due to the interrelatedness of education, labor supply, and business growth.

System Evaluation and Growth Challenges

Most evaluation is conducted at the program level, typically developed around a series of input, output, and outcome measures. While providing valuable information about the relative success of various programs and their effectiveness for specific populations, program-level evaluation does not provide a complete evaluative picture. Therefore, the *Index* pulls together a series of indicators that attempt to look at interrelated elements of a complex system.

The landscape of efforts to promote economic growth continues to change, partly in recognition of the critical need for continued growth, sustainability, and diversification. Job growth in high-tech and knowledge-based industries is more likely in regions with ready access to a qualified workforce. Other key factors that indicate economic growth potential include strong performance related to venture capital availability, patent production, and higher levels of research and development.

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Indicator Report Card - 2013

Trend	Indicator	Value	Page
↑	Academic-Performed R&D Expenditure per $1,000 of GSP	$3.49	25
↑	Associate's Degrees Granted as a Percent of the 18- to 24-Year-Old Population	2.2%	13
↑	Average Annual Pay per Worker	$43,620	33
↑	Average Annual Unemployment Rate	6.8%	31
↑	Business Establishment Entry	52,857	37
↑	Business Establishment Exits	46,709	37
↑	Export Orientation	0.19%	35
↑	Exports per Capita	$10,158	35
↑	Gross State Product per Capita	$53,609	34
↑	Labor Productivity	$63.50	32
↑	Median Household Income	$49,392	43
↑	National Assessment of Educational Programs (NAEP) Test Scores - Math	101.60	18
↑	National Assessment of Educational Programs (NAEP) Test Scores - Science	101.41	18
↑	Number of Patents	8,929	20
↑	Per Capita Income	$41,471	40
↑	Percent of Bachelor's Degrees Granted in Science and Engineering	15.6%	15
↑	Percent of Graduate Degrees Granted in Science and Engineering	15.8%	17
↑	Percent of Population 25 Years and Older with a High School Diploma	81.1%	11
↑	Percent of Population Living Above 200 % of the Federal Poverty Threshold	61%	42
↑	Percent of Population Living Above the Federal Poverty Threshold	82.6%	42
↑	Residential High-Speed Internet Access	64.9%	45
↑	Science and Engineering Graduate and Postgraduate Students	41,798	16
↑	Total R&D Expenditure per $1,000 of GSP	$17.55	23
↑	Venture Capital per Capita	$35.84	21
→	Average Annual Amount of SBIC Funds Dispersed per $1,000 of GSP	$0.25	28
→	Bachelor's Degrees Granted as a Percent of the 18- to 24-Year-Old Population	4.1%	14
→	Homeownership Rate	64.3%	46
→	Industry R&D Expenditure per $1,000 of GSP	$13.41	24
→	Labor Force Participation Rate	65.2%	30
→	Median Home Value	$127,700	44
→	National Institutes of Health (NIH) Support to Texas Institutions per Capita	$41.32	26
→	National Science Foundation (NSF) Funding per Capita	$10.01	27
→	Per Capita Income Annual Average Growth Rate	4.7%	41
→	Percentage of Population Enrolled in Degree-Granting Institutions	6.0%	12
→	Venture Capital Invested as a Percentage of GSP	0.067%	22
→	Venture Capital Invested per $1,000 of GSP	$0.67	22
→	Workforce Educational Achievement	13.96	10
↓	Number of Technology Fast 500 Companies per 10,000 Business Establishments	0.44	36

Indicators and Analysis

Structure and Key

The report's narrative sections are intended to be concise. Each domain includes an introductory section with summary information and an overview of issues to be considered when reviewing the data and accompanying narrative.

Key	
	Positive change in last reporting cycle
	No significant change in last reporting cycle
	Negative change in last reporting cycle
	Data unavailable
	Watch alert

The summary includes general information about the number of indicators in the domain, as well as the number and percentage for the following:

- Trend – Each indicator is assigned one of four symbols to denote directional change in the last available reporting cycle. The percentage value for each trend symbol category is calculated based on the total number of indicators in the domain. The total of all percentages in the four symbol categories equals 100 percent.

  It is important to note that the directional arrows are used to indicate positive, non-significant, or negative change in the last reporting cycle, and not an increase or decrease in the actual numeric value. This is necessary to ensure commonality of assessment as, by definition, trend directions for a few of the indicators are counterintuitive in nature. For example, a decrease in the Percent of Population Living Above the Federal Poverty Threshold is a negative change, while a decrease in the Average Annual Unemployment Rate is a positive change.

- Watch alert – The  symbol is used to denote an indicator flagged to watch in the next reporting cycle. Reasons for flagging include: recurring negative change over multiple years; significant negative change in the most recent reporting cycle; legislative changes; anticipated modifications to reporting requirements or processes; or the indicator remains low on a comparative basis. The percentage value for indicators flagged for watch alert is calculated based on the total number of indicators in the domain.

In addition to the domain summary, brief narratives are provided for each indicator. In some cases, indicators are grouped to facilitate explanation or comparison across related indicators.

Data Notes

Included data – Data are presented for the most recent 10 years for which data are available. In some cases, 10 years of data— or 10 consecutive years — are not available for a variety of reasons, including: (1) data were not collected for a particular year; (2) testing did not occur; (3) the methodology changed; or (4) a primary data source contained fewer years of data.

Rounding convention – The data points contained in the graphs in this report are based on actual data source numeric values. Data values referenced in the *Index* narrative have been rounded to one or two decimal places based on the standard rounding convention: .001 to .004 has been rounded down to .00; .005 to .009 has been rounded up to the next highest hundredth.

Point in time – Many publicly available data sources continue to be updated for months and years after the initial data release. Typically, the updates are due to corrections or clarifications that result from contract report finalization or performance audits. Data are verified and updated, as applicable, during the *Index's* annual development stage. Therefore, due to these corrections, data in the *Index* may sometimes differ from the source data.

Comparative data – Where available for each indicator, state and international comparative data are provided. Generally, there are two state comparisons. The first is a time series graph that compares Texas and the U.S. with other large states. The second is a state ranking table that lists the four top-ranking states, followed by Texas, with the U.S. value listed at the bottom. Where Texas is listed as one of the top four states, the fifth-place state is also included.

Where data are available, an international comparison table lists the top three Organisation for Economic Co-operation and Development (OECD) countries* and two of the selected emerging economy countries, followed by the U.S. data. These selected emerging economy countries are Brazil, Russia, India, and China, commonly referred to as the "BRIC" countries. According to Goldman Sachs, by 2039 the combined BRIC economies could be larger than the combined economies of the U.S., Japan, the United Kingdom, Germany, France, and Italy. Brazil and China are steadily becoming more efficient economies by changing their political systems to embrace global capitalism. Goldman Sachs states that the BRIC countries will be dominant suppliers of manufactured goods and services by 2050 and, for this reason, these countries were chosen for tracking and comparative purposes. In some instances, international data may not be identical to the domestic data used, but it will provide an indication of the relative health of selected international countries compared to the U.S. regarding each indicator. Differences are discussed in the indicator analysis text.

The National Center for Educational Statistics (NCES) is the source for all educational data contained in the *Index*. NCES data are used for both Texas and state comparative data.

Population base-level data – The Texas population count is increasing, rising from 21.7 million in 2002 to 26.1 million in 2012. Over the same period, the nation's population increased from 307 million to 313.9 million. Projections from the Texas State Data Center indicate that the state's population (0.5 immigration scenario) is expected to exceed 37 million people by 2040, a 47.2 percent increase from 2010. Several significant changes are expected in population composition: increase in Hispanic population; substantial aging; and variable growth rates for regional and metropolitan areas.

GSP base-level data – As of the October 26, 2006, release, the U.S. Department of Commerce's Bureau of Economic Analysis (BEA) renamed the gross state product (GSP) series to gross domestic product (GDP) by state. GDP by state is considered the most comprehensive measure of state economic activity. It is the sum of all value added by industries within the state (i.e., employee compensation, taxes on production and imports, gross operating surplus). Because GDP refers to both state and national gross domestic product, state GDP will be referred to as GSP, its former working label, for the purposes of this publication.

Data normalization – For many of the indicators, data are normalized by common factors (e.g., per capita, per 1,000, percent of GSP) to assist in providing equivalent measurement of data from year to year. In addition, normalization helps to facilitate cross-indicator review, as well as global and national comparisons, where applicable.

* The OECD consists of 34 member countries. Twenty of these countries became members on December 14, 1960, when the convention establishing the organization was signed. The others have joined over the years. In 2010, the OECD added Chile, Estonia, Israel, and Slovenia to its membership. The organization offered enhanced engagement with a view to possible membership to Brazil, Russia, China, India, Indonesia, and South Africa. For the purposes of the *Index,* these countries will be referred to as non-members.

Source information – Sources for the data sets in the tables and graphs included in this publication are noted in the bibliography section. Detailed data tables, methodologies, and accompanying documentation are retained at the Council's office.

Data lag – Due to the nature of calculating some of the data sets, this edition of the *Index* contains the most recent data sets from 2009–2012. The 2013 *Index* presents a more comprehensive account of the post-recession recovery than the previous edition.

How to Read the Indicator Analysis

The purpose of the Indicator Analysis page is to describe and explain each indicator. Each indicator analysis page includes an explanation of why the indicator is important, in general, and the parameters and limitations of the data. Definitions of terminology and the identification of key institutions are also included in this section.

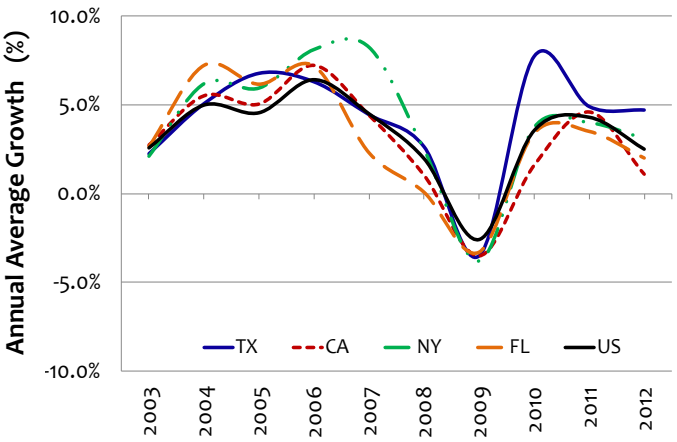
■ Paragraph one explains chart one. It contextualizes the Texas data series in the chart and interprets the trend for Texas over the displayed timeline. Comparisons are made between Texas and the U.S. average, as well as between Texas and other large states. The states chosen for comparison represent those states with populations and economies similar to Texas.

■ Paragraph two describes the table comparing Texas with other states in rank order to highlight Texas' comparative performance for the indicator. Where comparative data are available, the top-five states are listed followed by the bottom- ranked state for the indicator. If Texas does not rank within the top five, the top-four states will be listed followed by Texas and the last-ranked state. The U.S. average is also available for comparison. Text here explains the variables that may have influenced a state to be top ranked and discusses disparities between Texas and top-ranked states.

■ Paragraph three focuses on the international comparisons for Texas in relation to the indicator. The top three OECD countries for the indicator, two of the emerging BRIC competitor countries, and the U.S. are compared here. Text indicates where the U.S. stands compared to other countries, the factors involved that drive performance related to the indicator, and why these countries are performing well. The data listed are internationally comparative numbers, percentages, or dollar figures used by the OECD or other noted international organization. Data limitations are also noted on the indicator page.

The final paragraph is the "so what," or conclusion section. It ties the page together by stating why this indicator is important to the competitive position of Texas and where it falls in the value-proposition chain.

Per Capita Income Growth Rate



State Comparison

	Rank	2011-2012 (%)
North Dakota	1	13.4
South Dakota	2	5.0
Texas	3	4.7
Oklahoma	4	4.6
Iowa	9	4.1
Nevada	50	-2.1
United States		2.5

International Data

	OECD	Per Capita GNI 2010-2011 (%)
Chile	Member	22.6
Mexico	Member	18.1
Switzerland	Member	13.1
China	Non-Member	129.9
India	Non-Member	196.7
United States	Member	7.1

Source: *World Development Indicators*, World Bank, 2012

Domain 1 - Training and Education

The Training and Education domain includes 10 indicators that provide data about the training and education levels of Texans and the Texas workforce. General educational attainment data are included, as well as detailed information pertaining to science, mathematics, and engineering. Performance changed for the last available reporting cycle: seven of the indicators experienced a positive change (70 percent) and three indicators (30 percent) experienced no significant change. One indicator related to high school-level educational attainment that experienced no significant change was flagged with a watch alert for the next reporting cycle.

Domain 1 Summary			
Number of Indicators - 10			
		No.	%
	Positive change in last reporting cycle	7	70%
	No significant change in last reporting cycle	3	30%
	Negative change in last reporting cycle	0	0%
	Data unavailable	0	0%
	Watch alert	1	10%

Indicator	Page	Alert	Trend
Workforce Educational Achievement	10	-	
Percent of Population 25 Years and Older with a High School Diploma	11		
Percent of Population Enrolled in Degree-Granting Institutions	12	-	
Associate's Degrees Granted as a Percent of the 18- to 24-Year-Old Population	13	-	
Bachelor's Degrees Granted as a Percent of the 18- to 24-Year-Old Population	14	-	
Percent of Bachelor's Degrees Granted in Science and Engineering	15	-	
Science and Engineering Graduate and Postgraduate Students	16	-	
Percent of Graduate Degrees Granted in Science and Engineering	17	-	
NAEP Test Scores - Math	18	-	
NAEP Test Scores - Science	18	-	

Workforce Educational Achievement

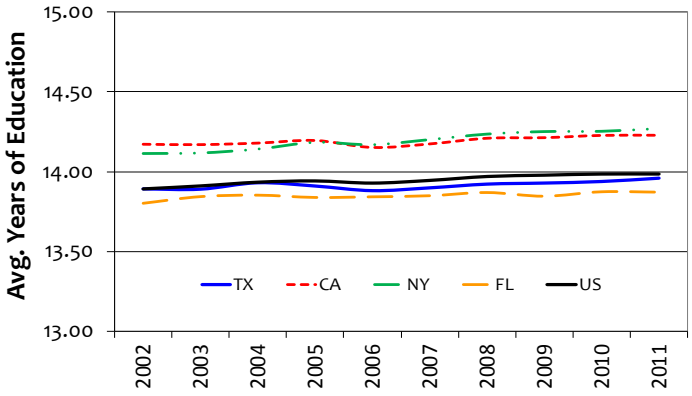
This indicator reflects the average level of education completed, in years, by the adult population 25 years and older. The calculation accounts for high school graduates (diploma or equivalency), completion of some college credit, and attainment of postsecondary degrees (i.e., associate's, bachelor's, graduate). A specific level of educational attainment is often viewed as a required credential for employment, and has been positively correlated to increased lifetime earnings of individuals.

Both California and New York led the nation's large states in years of educational achievement for the adult population at 14.23 and 14.27 respectively. The U.S. average remained level at 13.98. Florida trails the large states at 13.87, just under Texas at 13.96. According to the National Center for Education Statistics, differences in educational attainment by gender have shifted over the past few decades, with female attainment now greater than male attainment at each education level. In 1980, the percentages of males (85 percent) and females (86 percent) who had completed at least high school or equivalency were not measurably different, but in 2011, the percentage of females (91 percent) was higher than the percentage of males (87 percent) by four percentage points. The percentage of females (21 percent) who had attained at least a bachelor's degree was three points lower than the percentage of males (24 percent) in 1980, but in 2011 the percentage of females (36 percent) was eight points higher than the percentage of males (28 percent).

Massachusetts again led the country in educational achievement, followed by Maryland, Colorado, and Connecticut. Without an increase in the proportion of adults who hold a postsecondary degree or credential, states cannot successfully compete in today's global economy. By 2018, the U.S. will need 22 million new workers with college degrees—but will fall short of that number by at least three million postsecondary degrees, according to the Center on Education and the Workforce. At a time when every job is crucial, this shortfall could mean lost economic opportunity for millions of American workers. Community college certificates and degrees have great promise as a source of skills and credentials that can provide pathways into well-paying jobs.

Increasing the overall education level of the workforce is essential to ensuring economic growth. Texas must maintain its ability to compete in a global marketplace not only with other states but with other countries, which often have higher levels of overall educational attainment than the U.S. To ensure that Texas is not faced with potential labor shortfalls in fields where skilled individuals are most needed, it is critical that the state develops a large, well-educated labor force.

Educational Achievement



State Comparison		
	Rank	2011
Massachusetts	1	14.49
Maryland	2	14.40
Colorado	3	14.36
Connecticut	4	14.34
Texas	22	13.96
West Virginia	50	13.40
United States		13.98

"Fifty-six percent of all jobs in Texas (7.7 million jobs) will require some postsecondary training beyond high school in 2018."

- The Georgetown University Center on Education and the Workforce, 2012

Percent of Population 25 Years and Older with a High School Diploma

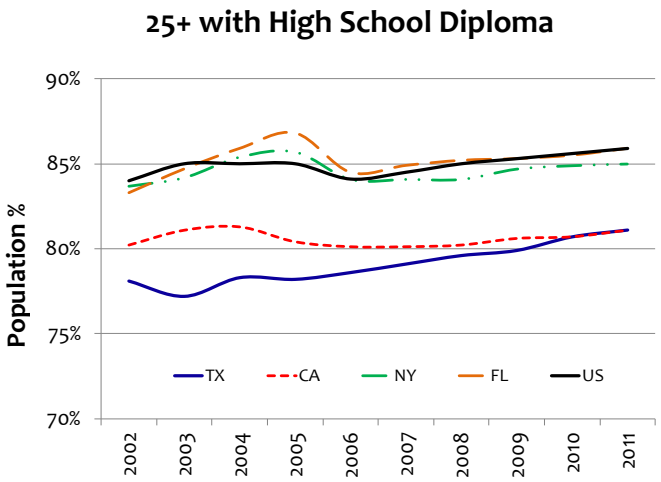
An educated workforce is considered to be a more productive workforce, with many employers viewing attainment of a high school diploma or equivalency as a basic credential indicating work-readiness. Individuals with high school credentials tend to have higher employment rates. This indicator is calculated annually by the U.S. Census Bureau's American Community Survey.

Among the large states, the percentage of Florida's population 25 and older with a high school diploma tied the U.S. average — 85.9 percent. New York's diploma rate rose slightly to 85 percent. California and Texas both had a diploma rate of 81.1 percent in 2011. Although Texas has increased its diploma rate steadily since 2005, it still lags other large states' high school completion performance. Therefore, the Texas percent of the population 25 and older with a high school diploma indicator will remain under a watch alert for the next reporting cycle.

Montana led the nation with the top high school diploma rate among the 25 and older population, increasing to 92.3 percent. Minnesota, Wyoming, Alaska, and Vermont ranked in the top five, each exceeding 91 percent high school equivalency for their respective adult populations. Thirty-two states ranked higher than the U.S. average. Despite percentage gains, Texas tied for last with California and Mississippi. According to another measure in a Texas Education Agency report, the Texas high school on-time graduation rate climbed to an all-time high, reaching 85.9 percent for the Class of 2011, which is 1.6 percentage points higher than the previous record set by the Class of 2010 — indicating a positive trend.

The OECD equivalent to high school education is termed upper secondary education. This indicator profiles the educational attainment of the adult population as captured through formal upper secondary educational qualifications. As such, it provides a proxy for the level of knowledge and skills in OECD countries. The U.S. (89 percent) remained among the top of OECD and emerging economies such as the BRIC countries. The Czech Republic maintained its top-ranked position with the greatest percentage of upper secondary-educated adults at 92 percent in 2010.

During these times of shrinking state budgets and in the wake of a national economic recession that profoundly affected those with the least education, increasing postsecondary education is a key strategy for strengthening the economy. The Georgetown University Center on Education and the Workforce reported that by 2018, new jobs in Texas requiring postsecondary education and training will grow by 1.3 million, while jobs for high school graduates and dropouts will grow by 915,000. Therefore, prioritizing high school completion and some postsecondary credential is a key strategy for economic growth.



State Comparison		
	Rank	**2011 (%)**
Montana	1	92.3
Minnesota	2	92.0
Wyoming	2	92.0
Alaska	3	91.8
Vermont	3	91.8
Texas	48	81.1
United States		85.9

International Data		
	OECD	**2010 (%)**
Czech Republic	Member	92
Poland	Member	89
Slovak Republic	Member	91
Brazil	Non-Member	41
Russian Federation	Non-Member	88
United States	Member	89

Source: OECD *Education at a Glance 2012* (Population Aged 25-64)

Percent of Population Enrolled in Degree-Granting Institutions

This indicator is calculated by dividing the total number of students enrolled in degree-granting institutions by the total state population. "Enrolled students" are defined as the total population enrolled in public and private degree-granting institutions, including public universities, independent senior colleges and universities, public community and state colleges, public technical colleges, independent junior colleges, and both public and independent health-related institutions.

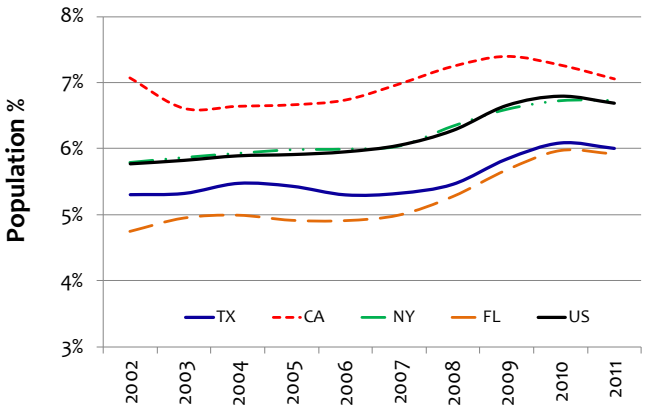
Student enrollment in degree-granting institutions as a percentage of the population decreased for each of the large states with the exception of New York, which remained steady at 6.7 percent in 2011. Of the U.S. population, 6.7 percent were enrolled in a degree program. This is the first decline after six years of growth when the percentage held steady at 5.9 percent. While Texas' enrollment decreased to six percent after three years of growth, it remained higher than Florida among the large states.

Arizona, the top-ranked state in this indicator, also ranked at the top in associate's degree attainment. Texas remained the 33rd-ranked state tied with Mississippi and North Carolina. A total of 22 states ranked higher than the declining national average. According to the U.S. Census Bureau, underlying demographic trends explain lower college enrollment rates. The clearest trend is that older students (25- to- 34-year-olds) are enrolling at lower rates than in recent years. Some of these individuals are returning to the workforce as the economy gradually recovers. Underemployed workers who sought to enhance their resumes when the recession hit, have now either completed school or are finding jobs. In addition, rising tuition costs have put college out of reach for some families. The National Center for Education Statistics reported that college costs ballooned by 35 percent from 2000 to 2010.

Finland again led the OECD countries in 2010 with 41.7 percent of the population aged 20-29 enrolled in tertiary degree programs (while this is not a direct equivalency with the U.S. data, it is presented as proxy data). Denmark and Greece closely followed Finland in this indicator. According to OECD's *Education at a Glance 2012*, tertiary attainment levels have increased considerably over the past 30 years. On average across OECD countries, 38 percent of 25- to 34-year-olds have a tertiary attainment, compared with 23 percent of 55- to 64-year-olds.

The 2013 *Closing the Gaps* annual progress report reflected data for the period 2000 to 2012. In the 12 years of *Closing the Gaps*, statewide participation increased by 540,506 students. That leaves the state with three years to close 5.8 percent of the 630,000-student gap in enrollment by 2015. By improving postsecondary attainment rates among adults, particularly those with low skills, Texas can increase individual talent while also meeting local industry demands.

Enrolled in Degree-Granting Institutions



State Comparison

	Rank	2011 (%)
Arizona	1	12.2
Iowa	2	12.1
Utah	3	9.3
West Virginia	4	8.7
Texas	33	6.0
Nevada	50	4.4
United States		6.7

International Data

	OECD	2010 (%)
Denmark	Member	38.4
Finland	Member	41.7
Greece	Member	40.3
Brazil	Non-Member	20.2
Russian Federation	Non-Member	20.0
United States	Member	25.5

Source: OECD *Education at a Glance 2012* (Percent of 20-29 year old Population)

Associate's Degrees Granted as a Percent of the 18- to 24-Year-Old Population

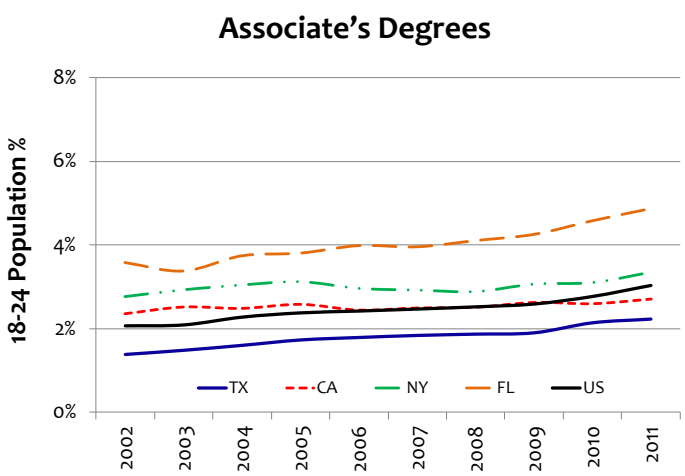
Many jobs require the acquisition of a formal degree as a requirement for employment. As with all of the education indicators, degree attainment correlates to increased earning potential and employment options, including preparation for advanced education. This indicator is calculated as a percentage of the 18- to 24-year-old population (including non-residents), the traditional age range for acquisition of an initial postsecondary degree.

Florida again led the large states in associate's degree attainment, increasing to 4.9 percent of the 18 - to 24-year-old population. New York increased to 3.4 percent and California increased to 2.7 percent. Attainment of associate's degrees in Texas increased to 2.2 percent. A postsecondary credential can substantially impact a student's lifetime earning potential. The U.S. Census Bureau reported that those with lower levels of attainment (associate's) may have higher earnings than some of those with higher levels (bachelor's), provided their degree is in a technical field. For instance, adults with an associate's degree in engineering earned an average of $4,800 per month, while bachelor's degree holders in arts and humanities earned $3,200.

Arizona led the nation with the highest associate's degree attainment at 9.2 percent of 18- to 24-year-olds. There were 18 states that ranked above the U.S. average of three percent. According to the Association for Career and Technical Education, global economic competition is increasing and the need to develop a workforce with advanced skills is critical. Career and technical education (CTE) is evolving and adapting its programs to meet the needs of business and industry. CTE-related credential holders may earn on average between $5,000 and $15,000 more per year than a person in other associate's degree areas. However, those with CTE credentials in high-demand fields such as healthcare can average almost $20,000 more a year in earnings.

Graduation from tertiary-type B programs (the OECD equivalent of a U.S. associate's degree) is a significant feature of the tertiary system in only a few countries. In 2010, an average of eight percent of all OECD graduates graduated from these programs. This proportion ranged between 11 percent and 26 percent in Australia, Germany, Ireland, Japan, New Zealand, Slovenia, Spain, Switzerland, Turkey, the United Kingdom, and the United States. However, in other countries, less than six percent of all graduates graduated from tertiary-type B programs.

Investment in human capital through postsecondary education that meets the needs of industries' high-demand skills leads to greater sustained income gains. A symbiotic relationship between education and industry can yield a stronger attachment to the labor force than short-term training or quick job placement assistance.



State Comparison		
	Rank	**2011 (%)**
Arizona	1	9.2
Iowa	2	6.2
Wyoming	3	5.6
Florida	4	4.9
Texas	39	2.2
Louisiana	50	1.5
United States		3.0

International Data		
	OECD	**2010 (%)**
Japan	Member	25
New Zealand	Member	26
Slovenia	Member	26
N/A	Non-Member	N/A
N/A	Non-Member	N/A
United States	Member	11

Source: OECD *Education at a Glance 2012* (Tertiary B Graduates as % of Population 19-25)

Bachelor's Degrees Granted as a Percent of the 18- to 24-Year-Old Population

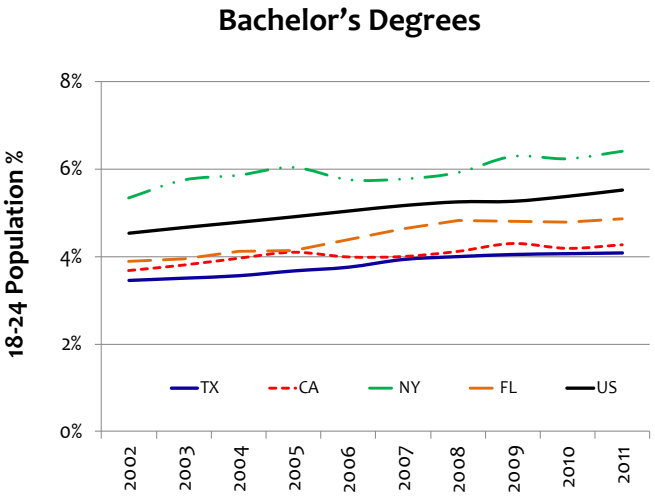
Many individuals seek a bachelor's degree as their first postsecondary credential. Bachelor's degree requirements may encompass most, if not all, of those required for a related associate's degree. This indicator is calculated as a percentage of the 18- to 24-year-old population (including non-residents), the traditional age range for acquisition of an initial postsecondary degree.

In 2011, New York remained on top of the large states and ahead of the U.S. with 6.4 percent of the typical graduating-aged population completing a bachelor's degree. California edged upward to 4.3 percent, yet remained below the national average of 5.5 percent. Florida increased to 4.9 percent— its highest bachelor's degree attainment rate since 2002. Texas remained unchanged at 4.1 percent.

Iowa led the nation in this indicator as the only state above the 11 percent mark. Vermont and Rhode Island's rankings round out the top three at 9.2 percent and nine percent respectively. Texas' position in the state ranking remained steady at 46th. The U.S. Census reported that bachelor's degree holders weathered the recent recession better than others. Individuals with a bachelor's degree had lower rates of unemployment in every month from January 2008 to December 2010 than those with less education. This period included all but one month of the recent recession, which began in December 2007 and ended in June 2009. According to the same U.S. Census report, the unemployment rate for high school dropouts reached a peak in January 2010 (17.6 percent) and February 2010 (17.9 percent). In February 2010, unemployment for people with a bachelor's degree was 5.9 percent.

According to the OECD, tertiary graduation rates indicate the capacity of a country to produce workers with advanced, specialized knowledge and skills. In OECD countries, strong incentives exist to obtain a tertiary qualification, including higher salaries and better employment prospects. Tertiary education varies widely in structure and scope among countries, and graduation rates are influenced both by the degree of access to these programs and the demand for higher skills. In recent years, the traditional notion of a tertiary student has changed with the influx of older students into tertiary education. In some OECD countries, it is common for tertiary students to have professional experience and be older than 30 years of age.

Adults with higher levels of education generally have higher labor force participation rates than adults with less education. The Bureau of Labor Statistics reported that 1.1 million 2011 college graduates, or 85.2 percent, were participating in the labor force in October 2011. The labor force participation rate for college graduates was only somewhat lower a year earlier, at 83.3 percent in October 2010.



State Comparison		
	Rank	**2011 (%)**
Iowa	1	11.7
Vermont	2	9.2
Rhode Island	3	9.0
Massachusetts	4	7.9
Texas	46	4.1
Alaska	50	2.3
United States		5.5

International Data		
	OECD	**2010 (%)**
Iceland	Member	60
Poland	Member	55
United Kingdom	Member	51
N/A	Non-Member	N/A
N/A	Non-Member	N/A
United States	Member	38

Source: OECD *Education at a Glance 2012* (Tertiary A Graduates as % of Population 19-25)

Percent of Bachelor's Degrees Granted in Science and Engineering

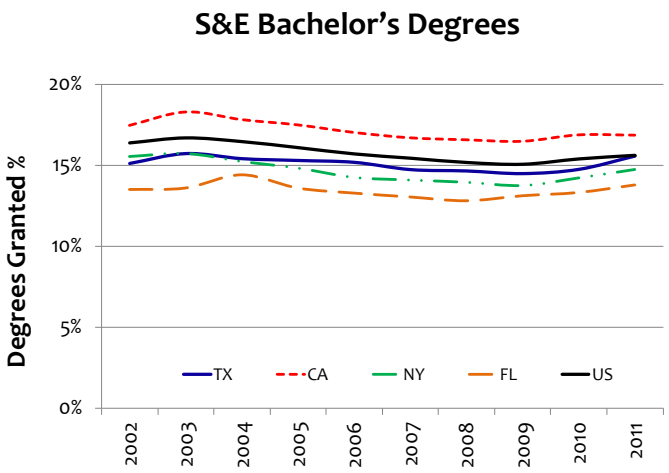
The importance of science and engineering (S&E) education is increasing, primarily due to the need for a larger labor supply for the growing number of knowledge-based, technology-intensive jobs. This indicator is calculated by dividing the total number of bachelor's degrees in S&E by the total number of bachelor's degrees awarded for the most current year available.

After increasing in 2010 to 16.9 percent, California remained unchanged in 2011 and was again the only large state with a percentage of bachelor's degrees in S&E above the U.S. average of 15.6 percent. All the large states and the nation as a whole increased in this indicator. New York rose to 14.7 percent, while Florida increased to 13.8 percent. Texas' percentage of S&E bachelor's degrees increased to 15.6 percent, the highest since 2003. The data trend for the nation indicates that S&E bachelor's degree attainment is slowly increasing.

The percentage of U.S. bachelor's degrees in S&E increased from 15.4 percent in 2010 to 15.6 percent in 2011. The bachelor's degree is the most prevalent S&E degree, accounting for about 70 percent of all S&E degrees awarded. S&E bachelor's degrees have consistently accounted for roughly one-third of all bachelor's degrees for at least the past 10 years. The number of S&E bachelor's degrees awarded rose steadily from 2007 to 2011, increasing by 13.9 percent. According to a National Science Foundation (NSF) report, the number of undergraduate degrees in S&E fields awarded by U.S. academic institutions has been increasing over the past two decades. These trends are expected to continue at least through 2019. Twenty-four states led by Alaska (21.4 percent) ranked higher than the nation in S&E degrees awarded in 2011. Texas ranked 25th, with 16,700 bachelor's degrees awarded in S&E, an 18.6 percent increase since 2007.

According to OECD's *Education at a Glance 2012*, Finland led the OECD nations in S&E tertiary-type A graduates at 50.2 percent in 2010. Rapid technological progress has also been transforming the needs of the global labor market. People with higher, or specific, skills are in strong demand, while low-skilled workers face a greater likelihood of unemployment. Therefore, when designing education policies, it is critical to understand the changing needs of employers and identify current and potential skills gaps and mismatches, as reported by the OECD.

The NSF states that S&E educational attainment of the U.S. population has long been among the highest in the world, but that other countries are catching up. The U.S. now lags behind several OECD nations in S&E bachelor's degree output. This could hinder the increased innovation needed to generate and implement new products and technologies that are valued in today's competitive markets.



State Comparison		
	Rank	**2011 (%)**
Alaska	1	21.4
Wyoming	2	20.8
Montana	3	19.7
Maryland	4	18.7
Texas	25	15.6
Iowa	50	10.8
United States		15.6

International Data		
	OECD	**2010 (%)**
Finland	Member	50.2
Korea	Member	46.4
Sweden	Member	40.7
Brazil	Non-Member	14.9
Russian Federation	Non-Member	25.2
United States	Member	19.1

Source: OECD *Education at a Glance 2012* (Tertiary A Graduates in S&E)

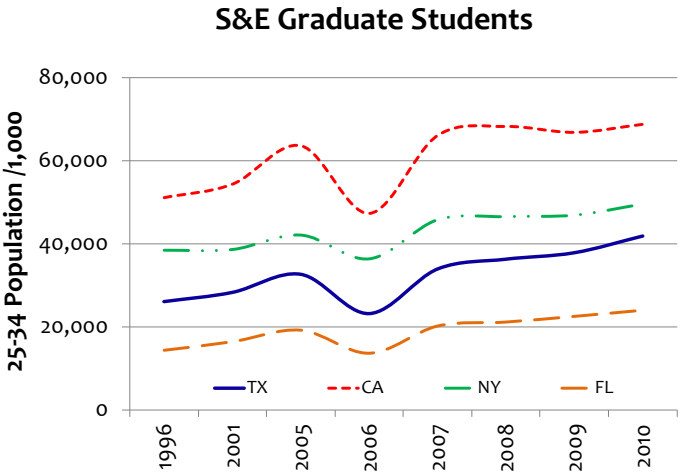
Science and Engineering Graduate and Postgraduate Students

Graduate students in the science and engineering (S&E) fields will lead the U.S. into a technology-based future. According to the National Science Foundation (NSF), the ratio of S&E graduate students to a state's 25- to 34-year-old population is a state's relative measure of its population with graduate training in S&E. Data on the S&E graduate students were collected by the NSF by surveying all public and private academic institutions in the U.S. that offer master's degree programs in S&E fields including physical, life, earth, ocean, atmospheric, computer, social sciences, mathematics, engineering, and psychology. The NSF calculates the number of graduate and postgraduate students through annual enrollments per 1,000 individuals of the 25- to 34-year-old population of the state.

California led the large states with 68,633 S&E graduate students in 2010, a decrease of 62 students from 2009. New York increased to 49,432 S&E graduate students, while Texas increased to 41,798, a 10.7 percent rise in S&E graduate students in 2010. Florida enrolled 23,971 S&E graduate students in 2010, an increase of 6.6 percent. According to the NSF, increases occurred in most major science fields, although the number of master's degrees awarded in engineering and computer sciences has dropped since 2004.

The number of S&E graduate students was highest in California, New York, and Texas between 2009 and 2010. The number of S&E graduate students in the nation increased by 8.4 percent from 522,511 to 566,532 during the same timeframe. According to the NSF, about 60 percent of all foreign graduate students in the United States in 2010 were enrolled in S&E fields, compared with 32 percent at the undergraduate level. Most of the growth in the number of foreign graduate students in S&E between 2009 and 2010 occurred in engineering and computer sciences. India and China were the countries of origin for nearly two-thirds of the foreign S&E graduates in the United States in 2010. Globalization of higher education continues to expand and the U.S. continues to attract the largest number of foreign students to its institutions of higher education.

Texas workers with advanced S&E credentials are needed to support the growing knowledge-based economy. As the Texas economy continues to become more global in scope, S&E workers with advanced training will be in demand to sustain a competitive advantage by creating new products and technologies. According to the RAND Corporation, there is a pressing need for continuous analysis of science and technology indicators to ensure that program decision makers are well informed of the S&E needs of tomorrow's workforce.



State Comparison		
	Rank	2010
California	1	68,633
New York	2	49,432
Texas	3	41,798
Illinois	4	26,750
Massachusetts	5	26,102
Vermont	50	655
United States		566,532

"Among fields that award large numbers of doctorates, the biggest increases between 2000 and 2009 were in engineering and biological sciences."

- Science and Engineering Indicators: 2012, National Science Foundation

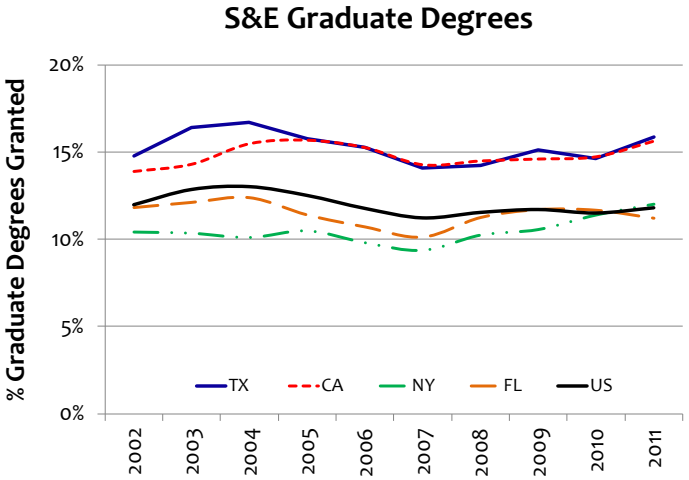
Percent of Graduate Degrees Granted in Science and Engineering

The National Science Foundation (NSF) collects data on science and engineering (S&E) graduate students by surveying all public and private academic institutions in the U.S. that offer master's degree programs. This indicator shows the extent to which a state's higher education programs in S&E contribute to graduate-level degree attainment. The S&E areas that are recognized are: natural science, computer science, mathematics, and engineering. Healthcare graduate degrees, social science, and psychology fields are not included in this indicator. This indicator is calculated by dividing the total number of graduate degrees in S&E by the total number of graduate degrees awarded for the most current year available.

Among the large states, graduate-level S&E degrees awarded in Texas and California both increased to nearly 16 percent in 2011. The percentage of S&E graduate degrees awarded in Texas was 15.8 percent of all graduate degrees, while California's percentage stood at 15.6. This is the fourth consecutive increase in this indicator for California. New York (12 percent) increased to above the national rate of 11.8 percent in 2011, while Florida fell below the nation at 11.2 percent.

Wyoming led the 27 states that ranked higher than the U.S. average for S&E graduate degrees awarded. Texas improved to the sixth-ranked state in 2011. Additional data from the NSF revealed that international student mobility expanded over the past two decades and countries are increasingly competing for foreign students. The U.S. remains the destination for the largest number of foreign graduate students worldwide, although its share of foreign students worldwide decreased from 24 percent in 2000 to 19 percent in 2008. Some countries expanded recruitment of foreign students as their own populations of college-aged students decreased, both to attract highly skilled workers and to increase revenue for colleges and universities. In addition to the United States, other countries that are among the top destinations for foreign students include the United Kingdom, Germany, and France. Furthermore, the proportion of women and minorities in S&E graduate education has been growing steadily but slowly. Nearly half of the S&E graduate degree earners in the United States in 2011 were women, with considerable field variation.

Advanced S&E degrees create a knowledge foundation that is conducive to training individuals as innovators and entrepreneurs. Competing in today's global economy requires advanced students to master the innovation thought processes taught in science, technology, engineering, and math (STEM) disciplines. A new workforce of problem solvers who are self-reliant and able to think logically is a critical foundation that drives innovation and generates economic activity.



State Comparison		
	Rank	**2011 (%)**
Wyoming	1	23.2
Maryland	2	18.9
New Jersey	3	18.5
South Dakota	4	16.8
Texas	6	15.8
Arizona	50	3.8
United States		11.8

"Competing in today's global economy requires advanced students to master the innovation thought processes taught in science, technology, engineering, and math (STEM) disciplines."

- Science and Engineering Indicators: 2012, National Science Foundation

NAEP Test Scores - Math
NAEP Test Scores - Science

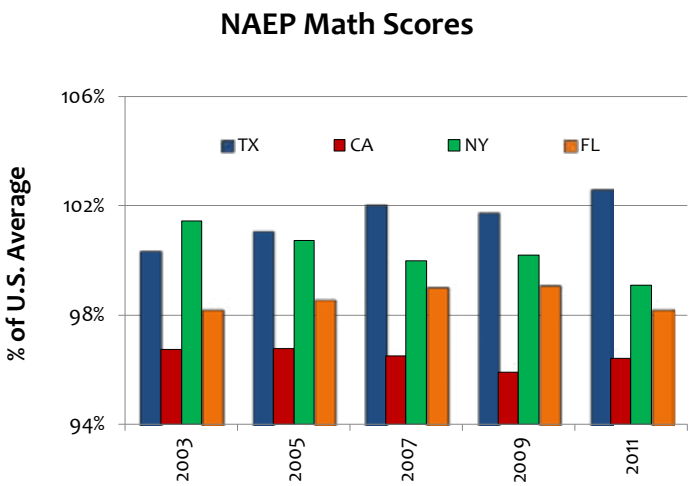
The National Assessment of Educational Progress (NAEP) tests are given in several subjects at grade levels four, eight, and 12 in public and non-public schools. Also known as the Nation's Report Card, the NAEP is required by law with responsibility for administration assigned to the National Center for Education Statistics (NCES). The NAEP tests are currently the only measure of student performance that is uniform across participating states. Comparative achievement is reported by a scale score. This score represents the numeric summary of what students know and can do in a particular subject.

Texas' 2011 NAEP math scores reflect an above average performance compared to the rest of the nation. Texas' students continue to outperform students in other large states. The average score for all states in the U.S. fell into the basic category for the 2011 math assessment according to the American Institutes for Research (AIR). Massachusetts recorded an indexed math score of 105.48, the highest in the nation. The 2011 indexed Texas math score of 101.60 remained level from 2009; however, the state gained in ranking from 25th to the 10th position.

NAEP science scores from 2011 revealed that 35 percent of Texas eighth-graders performed at a basic level, demonstrating a partial mastery of the knowledge and skills fundamental for proficient work in science. Thirty percent of students performed at or above the proficient level, and two percent demonstrated the knowledge and skills associated with the advanced level. North Dakota's indexed score of 108.80 is the highest in the nation, yet is still considered basic by AIR.

Comparable international data is not available. However, as a proxy, the Programme for International Student Assessment (PISA) is an internationally standardized assessment administered to up to 10,000 15-year-olds per country. PISA evaluates mathematics, reading, and science literacy as well as problem-solving skills. It is administered in 57 countries including the U.S. The countries that stand out with advanced scores are Canada, Finland, and Japan. These countries invest their resources in maintaining high quality science, technology, engineering, and math (STEM) education programs.

Scale scores provide an indicator of how well students are mastering math and science at the middle-school level. Math and science represent critical educational requirements for occupations and industries considered key to the state's future economic growth.



State Comparison

Math 2011 *		Rank	Science 2011 *	
Massachusetts	105.48	1	108.80	North Dakota
Minnesota	104.22	2	108.35	Montana
New Jersey	103.94	3	108.08	Vermont
Vermont	103.85	4	107.66	New Hampshire
Texas	101.60	10|28	101.41	**Texas**
Alabama	95.09	50	91.12	Mississippi

*Indexed to the U.S. average (Math 283 = 100; Science 151 = 100)

International Data

	OECD	Math 2009	Science 2009
Finland	Member	546	554
Korea	Member	541	538
Switzerland	Member	534	517
Brazil	Non-Member	386	405
Russian Federation	Non-Member	468	478
United States	Member	487	502

Source: PISA scores, OECD 2010

Domain 2 - Research and Development

The research and development (R&D) domain includes 10 indicators that describe the state of the Texas economy in areas such as patents, venture capital investment, and federal grant awards. Four of the 10 R&D indicators (40 percent) increased. While none of the R&D indicators declined during the last reporting cycle, the six remaining indicators registered no significant change.

Domain 2 Summary			
Number of Indicators - 10			
		No.	%
⬆	Positive change in last reporting cycle	4	40%
➡	No significant change in last reporting cycle	6	60%
⬇	Negative change in last reporting cycle	0	0%
●	Data unavailable	0	0%
⚑	Watch alert	0	0%

Indicator	Page	Alert	Trend
Number of Patents	20	-	⬆
Venture Capital per Capita	21	-	⬆
Venture Capital Invested as a Percentage of GSP	22	-	➡
Venture Capital Invested per $1,000 of GSP	22	-	➡
Total R&D Expenditure per $1,000 of GSP	23	-	⬆
Industry R&D Expenditure per $1,000 of GSP	24	-	➡
Academic-Performed R&D Expenditure per $1,000 of GSP	25	-	⬆
National Institutes of Health (NIH) Support to Texas Institutions per Capita	26	-	➡
National Science Foundation (NSF) Funding per Capita	27	-	➡
Average Annual Amount of Small Business Investment Company (SBIC) Funds Disbursed per $1,000 of GSP	28	-	➡

Number of Patents

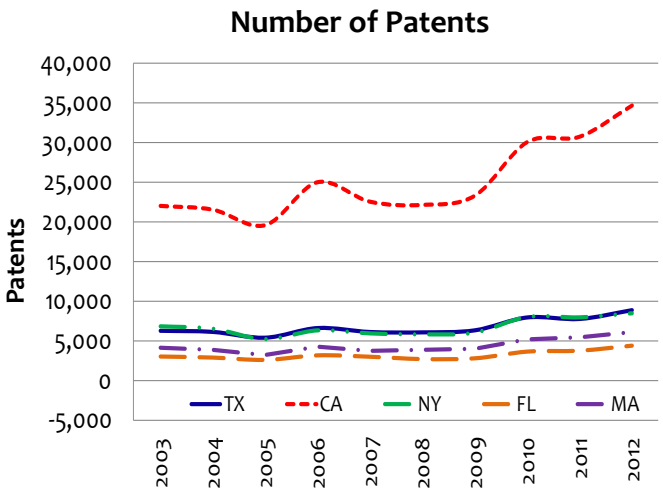
Patent counts are calculated by the U.S. Patent and Trade Office based on the number of patents and statutory invention registrations filed by Texas entities. The origin of a patent is determined by residence of the first-named inventor. In addition, many patents result from research conducted by academia, singularly or through collaborative ventures with industry. Given the lack of growth in research and development (R&D) funding support, demonstration of innovation becomes even more critical to support the growth of knowledge-based enterprises and industry clusters.

California continued to outperform other large states in the number of patent registrations in 2012. California's registered patents increased by 12.7 percent over the year to 34,659 — 25,730 more patents than Texas. Texas registered 8,929 patents in 2012, 13.9 percent more than the previous year. New York recorded 8,557 patents, an increase of 6.4 percent from 2011. Florida and Massachusetts both increased over the year to 4,453 and 6,119 respectively.

Technological advancement drives long-term productivity gains and eventually leads to higher standards of living. This pattern is reflected in the high volume of patents registered in California, Texas, New York, Illinois, and Massachusetts, all of which are regarded among the most innovative states in the nation. Total U.S. patents rose from 121,261 in 2011 to 134,187 in 2012 — a record-high number of patents according to the U.S. Patent and Trademark Office. The U.S. is not alone in the rising number of patents. The World Intellectual Property Organization (WIPO) and the European Patent Office also reported increases in patent production. The U.S., Japan, Korea, Germany, and China account for three quarters of the world patent production.

The latest WIPO patent statistics indicated that in 2011 Japan led the OECD countries in patent production with 238,323 patents followed by the U.S. (224,505), and Korea (94,720). The patent slowdown that occurred just after the recent global economic downturn has ended. Developing economies such as China have continued to see positive growth even during the challenging global economic conditions. China's economy has shifted focus, moving away from traditional agriculture and manufacturing toward research and development. China led the BRIC countries, as well as some economically established nations, in patent production in 2011.

Generation of ideas, that are then commercialized into new products and technologies, potentially increases business output and often, the ability to pay higher wages. Patent production, in part, demonstrates the ability of Texas' businesses to convert new ideas developed through applied research into real gains for the state's economy.



State Comparison

	Rank	2012
California	1	34,659
Texas	2	8,929
New York	3	8,557
Massachusetts	4	6,119
Washington	5	5,985
Alaska	50	46
United States		134,187

International Data

	OECD	2011
Canada	Member	20,762
Japan	Member	238,323
Korea	Member	94,720
China	Non-Member	172,113
Russian Federation	Non-Member	29,999
United States	Member	224,505

Source: World Intellectual Property Organization Patent Statistics, 2012

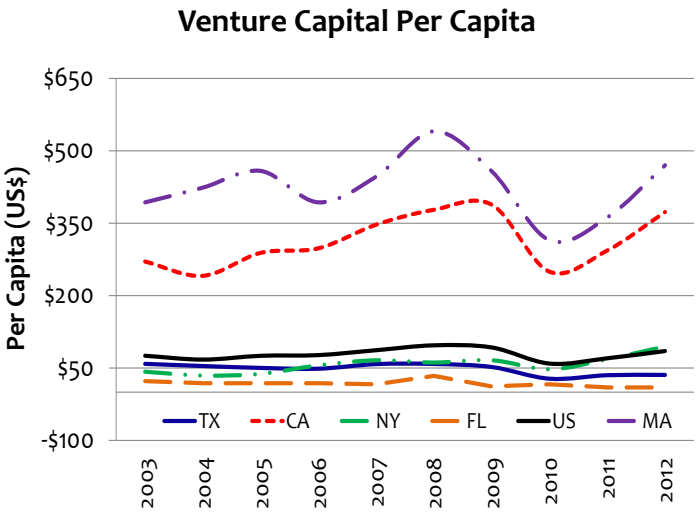
Venture Capital per Capita

Venture capital is private investment typically provided to immature, high-potential, growth companies with the intent of generating a healthy return. Venture capital firms often play a key role in both the start-up and expansion of growth industries, and in taking the company public at a later date. Higher levels of venture capital investment typically indicate the presence of investment opportunities, crucial for developing industries and entrepreneurial companies in a rapid-growth mode. This indicator is calculated by taking the total venture capital invested in the state and dividing by the state population.

Massachusetts and California continue to lead the nation in procuring venture capital, when calculated on a per capita basis. Venture capital investment per capita in both states rose significantly in 2012. Massachusetts recorded $470 per capita, up 29.8, while California posted $373 in venture capital per capita, a 26.9 percent increase from 2011. Texas increased slightly to $36 per capita, while New York increased by nearly 40 percent to $95 per capita in 2012. Florida increased by 11 percent to $10 in venture capital per capita. The nation's venture capital per capita average increased to $86 in 2012—its second increase after a dip in 2009 and 2010 due to the recession.

Colorado and Washington are again ranked in the top four, following California in the second position and Massachusetts leading the nation. According to the Information Technology and Innovation Foundation, states at the top of this ranking generally have strong university science and engineering programs and an existing base of high-tech companies. Each of these elements can be the source of entrepreneurial start-ups or spin-offs. There is also considerable continuity over the last few years: four of the top-five states have been ranked within the top-eight states in 2002, 2007, and 2008. Texas' ranking remained unchanged in 2012. Six states were above the nation's venture capital per capita figure. According to the State Science and Technology Institute, U.S. venture capital investment per capita increased by 21.2 percent in 2012. This increase represents the third increase since the end of the recession in 2009.

To be successful, increased venture capital and research and development support must be leveraged. Data indicate that venture-capital-backed companies outperform non-ventured counterparts' employment growth and sales. Employment and growth translate into job creation at higher salaries, according to Global Insight's *Venture Impact*.



State Comparison		
	Rank	**2012 ($)**
Massachusetts	1	470.35
California	2	373.12
Washington	3	131.51
Colorado	4	113.15
Texas	18	35.84
Hawaii	47*	0.72
United States		85.61

*47th is the last-place ranking for this indicator

"Venture capital funding falls to 28.3 billion, while financing activity increases to 3,267 deals in 2012."

- CB Insights, 2012

Venture Capital Invested as a Percentage of GSP
Venture Capital Invested per $1,000 of GSP

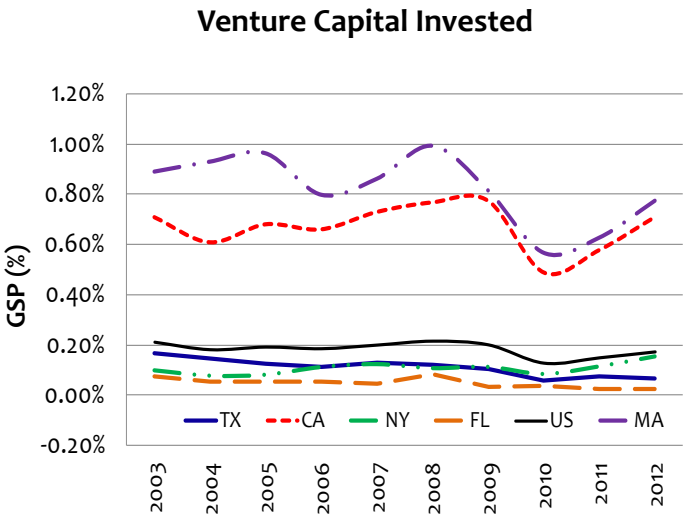
Venture capital (funds invested in new and unproven businesses) as a percent of GSP amounts to a small share of the overall capital markets, but its value goes beyond a simple dollar figure. Venture capital spurs growth at the critical early stages of a company's development. These indicators are calculated by dividing the total venture capital invested in Texas-based companies by the GSP, and then dividing by 1,000.

Massachusetts and California continued to outperform the other states in venture capital investment as a percentage of the GSP. Massachusetts led at 0.77 percent in 2012, up from 0.63 percent in 2011. California increased from 0.58 percent in 2011 to 0.71 percent in 2012. New York rose from 0.12 percent in 2011 to 0.16 in 2012. Although Texas (0.067 percent) was below the national figure of 0.17 percent, it outperformed Florida at 0.03 percent. Venture capital is vital to business start-ups and sustaining essential growth of companies in their early stages. The increased venture capital outlays indicate continued recovery from the recession.

Washington remained in the top-four states in venture capital invested as a percentage of GSP in 2012, while Utah moved into the top three. Texas moved up from 19th to 17th place. More than two-thirds of Texas venture capital investment occurs in the five largest metropolitan areas. According to the Dallas Federal Reserve Bank, biotechnology-focused investment drove the Texas increase, accounting for 52 percent of all funds invested, more than the usual range for biotech of one to 15 percent of total investments. Industrial and energy investment fell slightly from the second quarter but remained near the highest levels seen since 2008, likely driven by elevated oil prices. Texas' share of total U.S. venture capital rose to 8.6 percent, above its long-term average of about five percent. The only states receiving a greater share were perennial leaders Massachusetts and California.

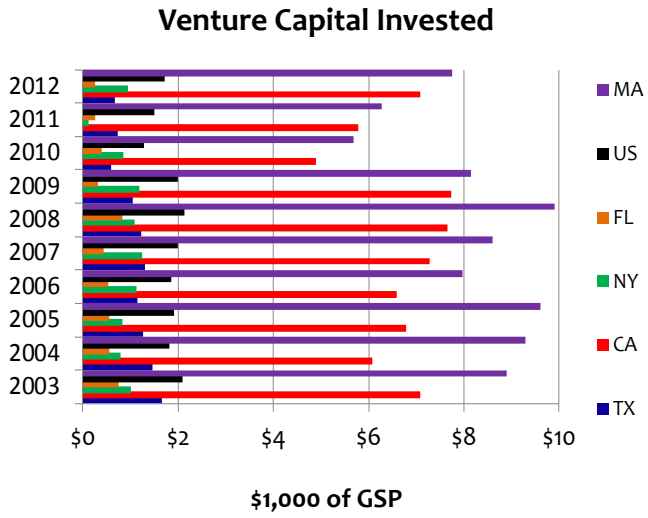
Another way of measuring venture capital is by dividing the total dollars invested by the GSP, further dividing by $1,000. Total U.S. venture capital invested per $1,000 of GSP in 2012 was $1.73, an increase from $1.50 the previous year. Texas totaled $0.67 while the top-ranked states (Massachusetts and California) led the nation with $7.75 and $7.08 per $1,000 GSP, respectively.

Venture capital is an important source of funding for new, fast-growing entrepreneurial companies. In effect, venture capitalists identify promising innovations and help bring them to the marketplace. Venture-backed companies are also a vital source of new and innovative concepts and ideas that will keep the Texas economy growing.



State Comparison		
	Rank	**2012 (% GSP)**
Massachusetts	1	0.774
California	2	0.708
Utah	3	0.244
Washington	4	0.241
Texas	17	0.067
Hawaii	47*	0.001
United States		0.173

*47th is the last-place ranking for this indicator



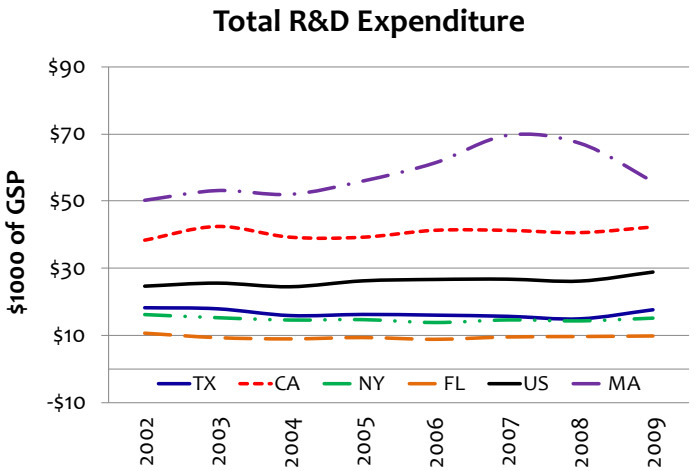
Total R&D Expenditure per $1,000 of GSP

Research and development (R&D) expenditure rates provide an indication of government and private sector efforts to obtain, or increase, competitive advantage in science and technology. Ongoing development of new products, production techniques, and technologies is important to sustaining a healthy, growing economy. This indicator is calculated by dividing total R&D expenditures (industry, academic, federally funded R&D centers, and non-profit performers) by GSP, and then dividing by 1,000.

Massachusetts again led the large states in R&D expenditure at $56 per $1,000 of GSP in 2009. California ($42) ranked second among the large states. Texas' total R&D expenditure per $1,000 of GSP increased to $18 in 2009, its first increase since 2005. Texas ranked below the U.S. average of $29, just ahead of New York ($14) and Florida ($10). According to the National Science Foundation (NSF), the computer and electronic product manufacturing industries performed 22 percent of the nation's total business R&D; however, the shares of this performance were larger in Massachusetts, Illinois, California, and Texas. These states have clearly defined regional centers of high-technology research and manufacturing, including Cambridge and Route 128 in Massachusetts; Champaign County, Illinois; Silicon Valley, California; and the Silicon Hills of Austin.

States with the highest total R&D to $1,000 of GSP ratio are New Mexico ($78), Maryland ($65), Washington ($57), and Massachusetts ($56) . New Mexico and Maryland are the location of several major government research facilities. Maryland is also the site of growing research universities. Washington is among the top university R&D performers in the nation. Massachusetts benefits from both leading research universities and thriving high-technology industries. While Texas ranked 29th in the nation, it was higher than other large states such as New York (ranked 32nd) and Florida (ranked 43rd). The NSF estimates that overall spending on R&D conducted in the U.S. was $403.8 billion (current dollars) in 2009, up from $373 billion in 2008.

Industry R&D, with its applied research approach, is clearly product-oriented, whereas academic R&D endeavors and funding generally focus on basic research. The challenges for Texas in this area are to (1) elevate basic research funding to levels sufficient to transform institutions of higher education in Texas into powerhouses in innovation and in attracting research faculty; and (2) stimulate applied research in Texas' academic environment, as supported by the Texas Emerging Technology Fund.



State Comparison		
	Rank	2009 ($)
New Mexico	1	78.20
Maryland	2	64.79
Washington	3	57.42
Massachusetts	4	55.89
Texas	29	17.55
Wyoming	50	3.76
United States		28.79

"In 2009, $5.80 billion in total federal R&D was obligated to Texas. Of the 2009 federal R&D obligations, ARRA accounted for $320.85 million."

- National Center for Science and Engineering Statistics, Survey of Federal Funds for Research and Development, 2012

Industry R&D Expenditure per $1,000 of GSP

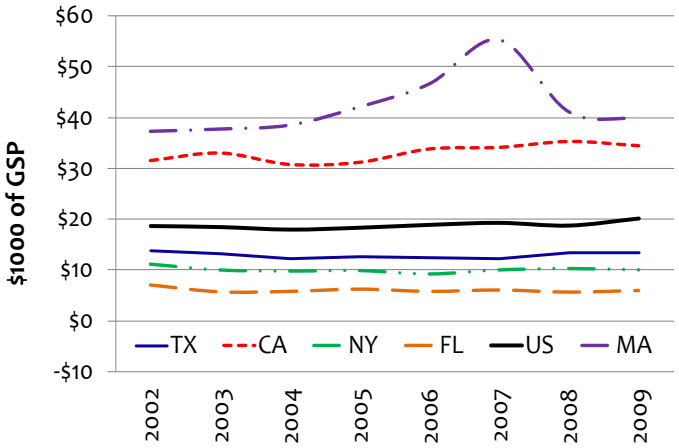
Industrial research and development (R&D) focuses on projects that are expected to yield new or improved products and services. Higher values in this indicator reveal that companies and industries within the state are investing heavily in their R&D activities. This indicator measures the emphasis private industry places on R&D. The indicator value is derived by dividing the total industry R&D expenditure dollars by the GSP, and then dividing by 1,000.

Industrial R&D investment in Massachusetts remained the highest among the large states, but continued a two-year trend and decreased to $40 per $1,000 of GSP. California followed in industrial R&D expenditures, decreasing to $34 in 2009. Texas remained unchanged at $13, above New York ($10) and Florida ($6). The U.S. posted a $20 investment average per $1,000 of GSP in 2009. The National Science Foundation (NSF) reported that companies spent $282 billion on R&D performed in the U.S. during 2009, compared with $267 billion in 2008.

The dollar figures in this ranking represent the amount of money spent by private industries on R&D calculated per $1,000 of GSP in the most recent data available. Ten states reported higher industry R&D investment than the national average of $20. Washington tops the 50-state ranking table trailed by Connecticut, Massachusetts, and New Jersey. Texas ranked at 26th. States with significant corporate R&D laboratory facilities or a large number of high-tech firms normally rank higher. According to the NSF, companies in non-manufacturing industries performed $82 billion of domestic R&D. The U.S. federal government was the chief source of outside funding for R&D across all industries. Of the $57 billion paid for by others, the federal government contributed $34 billion. Most of the funds ($29 billion) came from the Department of Defense. Aerospace products and parts and professional, scientific, and technical services received about three-quarters of federal government R&D funding.

R&D yields product innovations, adds to the knowledge base of industry, and is a key driver of economic growth. The computer and electronic product manufacturing industries performed nearly a quarter of the nation's total business R&D, but the shares of this performance were larger in Massachusetts, Illinois, California, and Texas. These clearly defined regional centers of high-technology research and manufacturing will drive innovation leading to business start-ups, expansions, and jobs.

Industry R&D Investment



State Comparison		
	Rank	**2009 ($)**
Washington	1	48.97
Connecticut	2	48.27
Massachusetts	3	39.79
New Jersey	4	38.47
Texas	26	13.41
Wyoming	50	1.25
United States		20.13

"There was a nationwide decline in business funding for R&D from 2008 to 2009 (from $259 billion in 2008 to $247 billion in 2009). Federal funding from the American Recovery and Reinvestment Act (ARRA) partially compensated for this decline."

- National Science Board companion report, R&D, Innovation, and the S&E Workforce, 2012

Academic-Performed R&D Expenditure per $1,000 of GSP

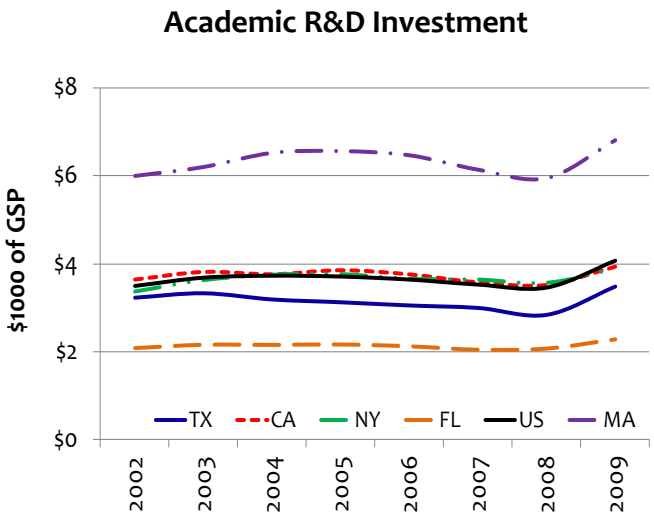
Academic research and development (R&D) focuses on basic research rather than industrial R&D, and is less product oriented. Academic R&D can be the foundation for future economic development. High values in this indicator reflect an academic R&D funding system that can successfully compete for federal, state, and industry dollars. This indicator measures the academic research performed by the state relative to the size of the state's output. It is calculated by dividing the total number of academic-performed R&D expenditures by the GSP, and then dividing by 1,000.

Massachusetts significantly outpaced the large states in academic R&D expenditures. The nearly $7 per $1,000 of GSP in 2009 was an increase of 14.3 percent from 2008. These expenditures in both California and New York increased in 2009 to $3.93 and $3.89, respectively. Although Texas saw annual declines in academic R&D since 2003, the state rebounded in 2009 increasing its share by 22.8 percent to $3.49. Texas performed below the national average of $4.06; however, the state remains ahead of Florida's academic-performed R&D expenditure per $1,000 of GSP of $2.28.

Maryland topped the 50-state ranking for academic R&D, due mainly to expenditures by Johns Hopkins University. The university supports the Department of Defense (DOD), the National Science Foundation (NSF), the National Institutes of Health (NIH), and the National Aeronautics and Space Administration (NASA). Johns Hopkins University performed $1.85 billion in medical, science, and engineering research in 2008, making it the leading U.S. academic institution in R&D spending for the 31st year in a row, according to NSF.

Despite the nation's performance, the U.S. lags 13 other countries in the support businesses provide to academic researchers. Countries such as China, Korea, and the United Kingdom are significantly outperforming the U.S. According to the Information Technology & Innovation Foundation, Korea ranks number one on the *World Academic Summit Innovation Index*. Businesses invest an average of $97,900 per scholar in that country for R&D work on their behalf. In the U.S., businesses are providing only $25,800 per academic researcher.

Universities play an important role in Texas' overall R&D effort, especially by contributing to the generation of new knowledge and ideas through basic research. Texas universities and research institutions are national and global leaders in R&D in many industries—electronics, medical, biotechnology, aerospace, advanced materials, and energy. By pairing industry with university researchers, Texas can capitalize on commercialization opportunities. The Emerging Technology Fund assists companies and universities to accelerate the transformation of innovative ideas into commercial products or services.



State Comparison		
	Rank	**2009 ($)**
Maryland	1	10.64
Massachusetts	2	6.80
North Dakota	3	5.88
New Mexico	4	5.85
Texas	30	3.49
Nevada	50	1.45
United States		4.06

"Total academic bioscience research and development expenditures have grown by 23 percent since 2004 and reached $2.45 billion in 2009."

- Battelle, State Biosciences Initiatives, 2010

National Institutes of Health (NIH) Support to Texas Institutions per Capita

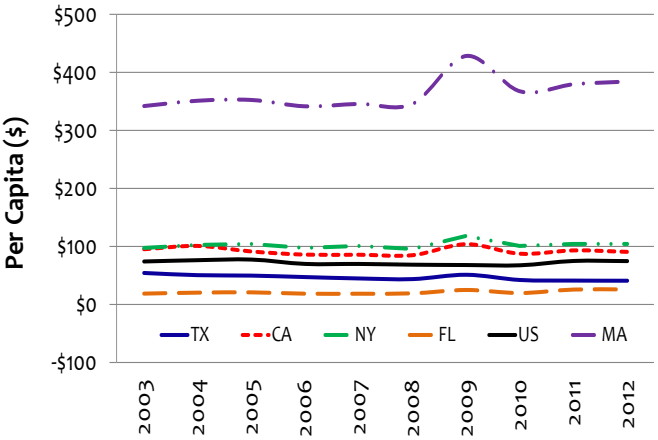
As a part of the U.S. Department of Health and Human Services, the National Institutes of Health (NIH) is the primary federal agency conducting and supporting medical research nationally and globally. It provides financial support to researchers, annually investing over $28 billion in medical research. Primarily through competitive grants, NIH supports research at hospitals, universities, and medical schools. This indicator is calculated by dividing the total NIH support by the population.

Massachusetts again led the large states in receiving $385 per capita of NIH support in 2012. California's NIH funding declined to $91 per capita, a total of $3.47 billion in total funding dollars. New York remained unchanged in its NIH support at $105 per capita. California and New York both exceeded the U.S. per capita value of $75. Florida acquired $26 per capita and Texas remained level at $41 per capita. According to the NIH, Texas ranked second nationally in 2012 for the total number of clinical trials conducted in the state, with more than 14,000 studies under way. More than half of the clinical trials conducted in Texas targeted the nation's six most debilitating chronic diseases: asthma, heart disease, stroke, cancer, diabetes, and mental illness.

More than 80 percent of NIH's total annual budget directly funds research that is performed outside of the NIH campus at non-governmental facilities across the country. This research is done by 325,000 scientists at more than 3,000 institutions across all 50 states. The value of NIH state awards ranged widely in 2012, from $3.47 billion (California) to $4.5 million (West Virginia). Seven states received more than $1 billion in research dollars via the regular NIH budget including Massachusetts, Maryland, Pennsylvania, North Carolina, New York, California, and Texas. Maryland's $1.5 billion in NIH grants trailed only Massachusetts in the 50-state per capita ranking for 2012. Texas increased its NIH support in 2011 by receiving $1.08 billion, moving up to 27th in the national ranking. NIH economic activity supported several hundred thousand jobs across the nation. According to a report published by United for Medical Research, NIH's investment led to the creation of 484,939 quality jobs, produced $69.2 billion in new economic activity across the country, and allowed 15 states to experience job growth of 10,000 jobs or more.

A multitude of important health and medical discoveries result from research supported by the NIH. The NIH translates research results into interventions and communicates research findings to patients and their families, healthcare providers, and the general public. NIH research funds are critical to Texas institutions to support medical research.

NIH Support per Capita



State Comparison		
	Rank	2012 ($)
Massachusetts	1	385.46
Maryland	2	253.60
Rhode Island	3	142.47
Washington	4	133.03
Texas	27	41.32
West Virginia	50	2.42
United States		75.15

"Texas has been a leader in clinical trials conducted by biopharmaceutical companies in collaboration with the state's clinical research centers, university medical schools, and hospitals over the last 13 years."

- Pharmaceutical Research and Manufacturers of America, 2012

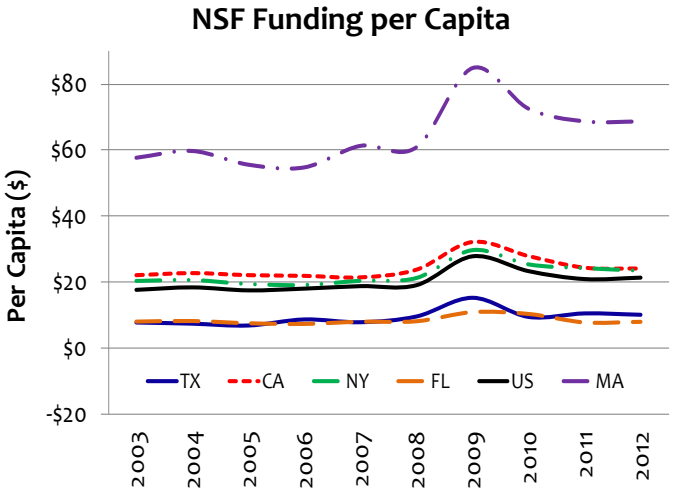
National Science Foundation (NSF) Funding per Capita

The National Science Foundation (NSF), established by Congress in 1950 as an independent federal agency, is the funding source for approximately 20 percent of all federally supported basic research conducted by U.S. colleges and universities. The NSF's fiscal year 2012 investment was $7.76 billion to advance the spectrum of research and education in science and engineering. These NSF investments in new knowledge and talent development are vital to advance scientific discovery and to ensure that America remains a global leader in science and technology. This indicator is calculated by dividing the total NSF funding by the population.

Still leading the large states, Massachusetts' share of this funding decreased for the second consecutive year in 2012 to $68.80 per capita ($457 million awarded) in NSF funding. It was followed by California at $24.19 per capita ($920 million awarded), and New York at $23 per capita ($459 million awarded). Texas and Florida continued to receive less than the national average of NSF funding at $10 and $8 per capita, respectively. NSF funding awarded to Texas institutions decreased from $267 million in 2011 to $260 million in 2012, of which 96.2 percent was awarded to higher education institutions.

Overall, 18 states received more NSF funding per capita than the national average of $21 in 2012. Colorado was the top-ranked state and was awarded $365 million, $70 per capita in 2012. To be at the forefront of R&D, states must successfully transition from traditional manufacturing to new high-tech fields such as biotechnology, clean energy, information technology, and advanced manufacturing. Middle-skill jobs play a central role in the science, technology, engineering, and math industries (STEM). According to the NSF, programs such as the NSF's Advanced Technological Education (ATE) seek to strengthen the skills of technicians whose work is vitally important to the nation's prosperity and sustainability. ATE centers and projects promote collaborations between two-year institutions and industry that ensure a technical workforce prepared to meet the needs of growing high-tech industries and attract R&D investment.

According to the U.S. Department of Labor, the challenge facing the STEM workforce pipeline is developing the supply and quality of the earners of sub-baccalaureate degrees and certificates. High levels of NSF funding for research and development efforts can indicate the presence of a strong postsecondary educational system that includes ATE centers and programs that develop the supply of technicians. This research funding, in turn, produces an environment conducive to supporting high-tech start-ups and expansion efforts.



State Comparison		
	Rank	2012 ($)
Colorado	1	70.31
Massachusetts	2	68.80
Alaska	3	47.76
Maryland	4	42.61
Texas	40	10.01
Nevada	50	4.59
United States		21.34

"Preserving the relationship between our university research and industry applications is crucial to maintaining our nation's competitive edge."

- Rex Tillerson, Chairman and CEO of Exxon Mobil Corp., 2012

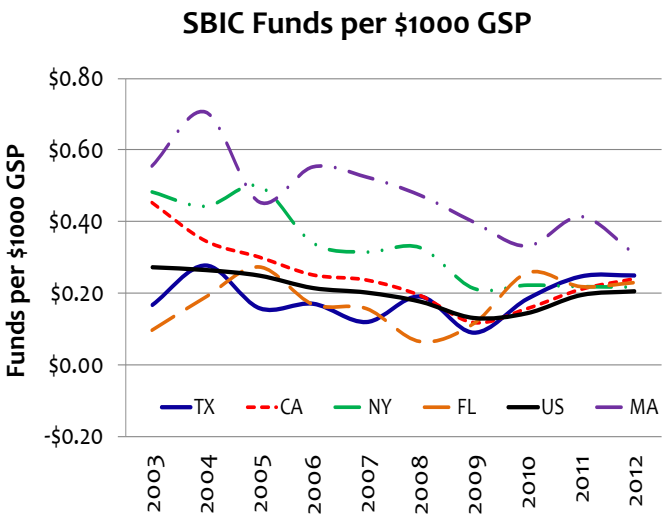
Average Annual Amount of Small Business Investment Company (SBIC) Funds Disbursed per $1,000 of GSP

The Small Business Investment Company (SBIC) program is a part of the U.S. Small Business Administration. Created in 1958, the SBIC program is designed to help fill the gap between the availability of venture capital and the needs of small businesses for start-up or growth. This indicator represents the amount of SBIC funds disbursed, normalized by $1,000 of GSP. The SBIC program does not target specific industries. However, with a 10-year obligation timeline, it is not necessarily a viable option for all business strategies.

California experienced its third consecutive increase in SBIC funds per $1,000 of GSP since 2010 — registering at $0.24 in 2012. Massachusetts declined from $0.41 in 2011 to $0.31 in 2012. New York remained unchanged at $0.22, while Florida's SBIC funding increased to $0.23 in 2012. Texas held steady at $0.25 in 2012. Texas' SBIC funding high point in the last eight years was in 2002 when it stood at $0.28. Nevertheless, the Small Business and Entrepreneurship Council named Texas one of the best states for small businesses, based on the state's low tax environment. Small businesses are supported by Texas' reasonable regulatory environment and its skilled and educated workforce. The Kauffman Foundation ranked Texas yet again as a top state for small business friendliness, giving the state an "A" grade in every category of the study.

Eighteen states surpassed the U.S. average of $0.21 in SBIC funds per $1,000 of GSP. Vermont, the top state in this ranking, gained $13.2 million in SBIC funds in 2012. A positive correlation can be drawn between the top-ranking states for this indicator and venture capital indicators. States that excel in securing venture capital dollars also succeed in securing SBIC funds. Minnesota garnered $110.3 million in SBIC funding. Georgia procured $135 million. Texas secured $348.6 million in SBIC funds for 2012. According to the National Federation of Independent Businesses, a research foundation that reports small business economic trends, job creation plans increased to levels not seen since 2007. In addition, the frequency of reported capital outlays rose in 2012. The U.S. Small Business Administration reports that the small business sector is growing rapidly. While corporate America has been "downsizing," the rate of establishment of small business "start-ups" has grown, while small business failures have declined. The number of small businesses in the U.S. has increased 49 percent since 1982. Since 1990, as big business has eliminated four million jobs, small businesses added eight million new jobs.

Venture capital inflow through vehicles such as SBIC investing is a key driver to increasing the contribution that small business and its workforce make to the GSP. Texas will need to improve its SBIC allotments in proportion to its share of national GSP to help support the positive effect of small businesses on the state's economy.



State Comparison		
	Rank	**2012 ($)**
Vermont	1	0.48
Minnesota	2	0.37
Georgia	3	0.31
Massachusetts	3	0.31
Texas	12	0.25
Idaho	45	0.003
United States		0.21

"The 600,000-plus franchised small businesses in the U.S. account for 40 percent of all retail sales and provide jobs for some 8 million people."

- U.S. Small Business Administration, 2012

Domain 3 - Market Composition and Characteristics

The 10 indicators in this domain provide information about the state's workforce and employers. Data elements include employment-related indicators such as labor force participation, unemployment, gross state product, and Texas export information. Texas normally performs well within this domain and these indicators show how the state excelled during post-recession recovery. An impressive 80 percent of these indicators showed a positive change during the reporting cycle, while one indicator declined and another incurred no significant change.

Domain 3 Summary			
Number of Indicators - 10			
		No.	%
↑	Positive change in last reporting cycle	8	80%
→	No significant change in last reporting cycle	1	10%
↓	Negative change in last reporting cycle	1	10%
●	Data unavailable	0	0%
⚑	Watch alert	0	0%

Indicator	Page	Alert	Trend
Labor Force Participation Rate	30	-	→
Average Annual Unemployment Rate	31	-	↑
Labor Productivity	32	-	↑
Average Annual Pay per Worker	33	-	↑
Gross State Product per Capita	34	-	↑
Exports per Capita	35	-	↑
Export Orientation	35	-	↑
Number of Technology Fast 500 Companies per 10,000 Business Establishments	36	-	↓
Business Establishment Entry	37	-	↑
Business Establishment Exits	37	-	↑

Labor Force Participation Rate

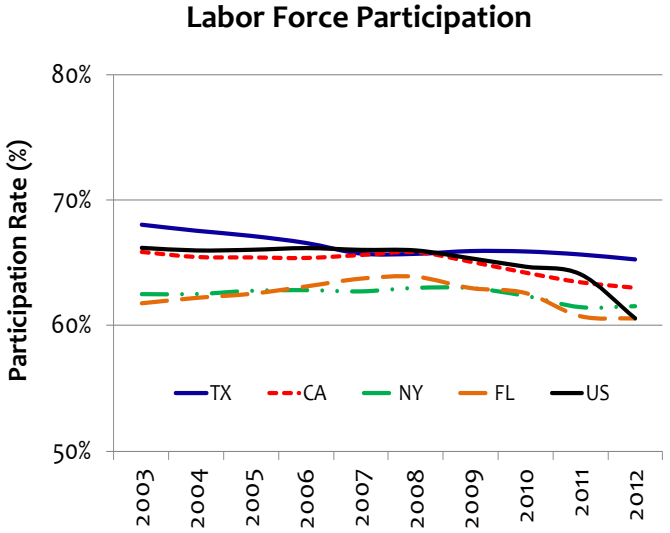
The labor force participation rate is determined by calculating the civilian labor force as a percent of the civilian non-institutional population. It is a basic indicator of the availability of workers. However, an available worker is not necessarily the right match for a given employer, occupation, or job. As noted in the Training and Education section, employer preferences related to applicant skill sets and educational backgrounds should be considered, particularly as the state focuses on the growth of technology-based jobs.

The nation as a whole experienced a reduction of labor force participation in 2012; however, each of the large states remained relatively unchanged. The Texas labor force participation rate stood steady at 65.2 percent compared to the national decline to 60.6 percent. California remained at 63.0 percent. New York and Florida held at 61.6 percent and 60.6 percent respectively. According to the Perryman Group, employment statistics show that, in 2012, job creation in Texas fared better than the rest of the country. Texas remains well-positioned to outperform the U.S. economy for the foreseeable future. Growth is stemming from longtime sources of business activity, as well as emerging industries. The outlook for the state calls for moderate growth.

Nebraska led all other states in labor force participation. The non-farm job count is up by over 6,400 compared to 2011. The three industries in Nebraska showing the largest gains over last year are education and health services, mining and construction, and manufacturing. Texas improved to 20th in the state ranking for this indicator. According to the Perryman Group, with both resurgence in established oil fields and discovery of new fields, the energy sector is likely to remain an important source of stimulus for the Texas economy. Activity has increased notably over the past several years, particularly in oil and shale exploration. The rig count, for example, has roughly tripled in the number operating from just three years ago. The statewide total stands at 1,800, with 82 percent of rigs drilling for oil. Thousands of jobs have been added, pushing unemployment rates in affected areas below four percent. The state has also added significant numbers of jobs in professional and business services; trade, transportation, and utilities; and construction.

OECD labor force data indicate that there were no major changes in participation rate trends during the economic crisis. The labor force participation rate rose in six OECD member countries in 2011. The OECD's participation rate leaders are the smaller, wealthier, and more efficient economies such as Luxembourg and New Zealand, as well as the large wealthy economy in Canada.

Texas has weathered the recession better than other states and is well-placed to accelerate job growth. As baby boomers retire and the global market opens the doors for competition, it will be imperative to attract, train, and retain workers for the jobs of the future.



State Comparison

	Rank	2012 (%)
Nebraska	1	72.3
North Dakota	2	71.9
Minnesota	3	70.9
South Dakota	4	70.5
Texas	20	65.2
West Virginia	50	54.1
United States		60.6

International Data

	OECD	2011 (%)
Canada	Member	54.4
Luxembourg	Member	75.2
New Zealand	Member	54.0
Brazil	Non-Member	70.7
China	Non-Member	73.7
United States	Member	49.7

Source: OECD Statistical Extracts, 2013

Average Annual Unemployment Rate

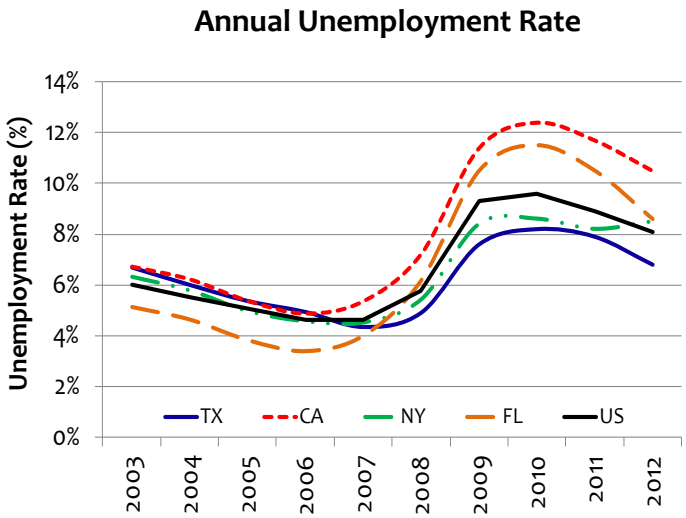
This indicator represents the number of unemployed individuals as a percent of the Texas labor force. Based on the Bureau of Labor Statistics' (BLS) definitions, this includes individuals that were not working but were waiting to be recalled to a job following a temporary layoff. The indicator does not include individuals who were never in the labor force or who stopped seeking work.

The U.S. unemployment rate continued to improve, dropping from 8.9 percent in 2011 to 8.1 percent in 2012. Among the large states, the Texas unemployment rate fell to 6.8 percent, while New York's unemployment rate rose to 8.5 percent. Unemployment rates were higher in both California and Florida than the national average. The unemployment rate is a lagging indicator of the health of the economy and is normally the last labor market indicator to rebound during a recovery. Robust job creation continues in Texas, and the state's unemployment rate remains below other states and the national average by more than one percent. The Federal Reserve Bank of Dallas reported that the state exceeded its long-term growth projection and was stronger than most other states, illustrated by an employment increase of 3.1 percent in 2012.

Twenty-nine states reported unemployment rates of seven percent or more in 2012, according to the BLS. Since normal unemployment rates range within five to seven percent, these reports suggest that many states are still in recovery from the recession. The extreme exceptions in 2012 were North Dakota, which posted the lowest unemployment rate at 3.1 percent, followed by Nebraska (3.9 percent), and South Dakota (4.4 percent). North Dakota registered the lowest jobless rate among states for the fourth consecutive year. An oil boom in the western part of the state has turned North Dakota into the nation's second-largest producer of crude, after Texas, and led to a surge in demand for workers in recent years.

Norway surpassed all countries in the OECD, mainly due to a high employment-to-population ratio and a low number of unemployed (3.3 percent unemployment rate). Korea had similar attributes and registered an unemployment rate of 3.4 percent. However, due to the effects of the global financial crisis, the rise in unemployment continued in OECD countries. OECD reports that 44.1 million people were unemployed leading into 2011, when the average unemployment rate for OECD countries was 8.3 percent, including partner non-member BRIC countries.

Changes in the unemployment rate influence the Texas economy and its citizens in significant ways. A lower unemployment rate has positive effects, including job advancement; increases in discretionary spending; financial opportunities for individuals and households; and employment growth.



State Comparison		
	Rank	2012 (%)
North Dakota	1	3.1
Nebraska	2	3.9
South Dakota	3	4.4
Vermont	4	5.0
Texas	18	6.8
Nevada	50	11.1
United States		8.1

International Data		
	OECD	2011 (%)
Austria	Member	4.1
Korea	Member	3.4
Norway	Member	3.3
Brazil	Non-Member	6.0
China	Non-Member	6.6
United States	Member	9.0

Source: OECD Statistics Standardized Unemployment Rates

Labor Productivity

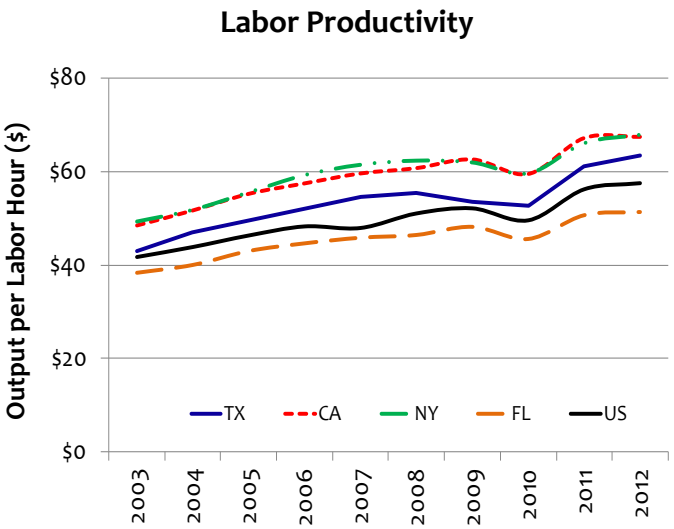
Labor productivity measures the ratio of output per hour as determined by GSP divided by the total hours worked by the Texas workforce. From a business standpoint, increases in productivity indicate economic health driven by decreased costs, rising profits, development of innovative production methods, and the ability to better compete in national and global markets. For the labor force, productivity growth may also indicate wage and salary increases.

New York had the highest labor productivity output among the large states at $67.87 per labor hour in 2012, nearly equal to California's $67.34. Florida was the only large state with labor productivity below the national average of $57.43. Florida produced $51.37 of output per labor hour in 2012, up only 1.4 percent from 2011. Texas' labor productivity increased to $63.50 in 2012. This is an increase of 47.6 percent over a 10-year span.

Seventeen states ranked higher than the national average in the 2012 level of GSP per hour worked. New York, California, and Texas remained the only large states within the top 10, while other states such as Alaska, Delaware, and Connecticut constituted the top three. U.S. productivity continued to grow in 2012 reflecting increases of 3.7 percent in output and 1.4 percent in hours worked, according to a Bureau of Labor Statistics report. The Conference Board, a business research group that publishes widely tracked economic indicators, determined that growth in productivity will remain slow as gross domestic product growth remains slow and the labor market gradually recovers.

The global slowdown in economic growth has had an impact on the world's productivity performance, as lower investment and less innovation make workers less productive. Global output-per-worker growth dropped off to 1.8 percent in 2012, which was last seen during the 2007 to 2009 recession and in the 2002 to 2003 recession. In 2012, output per hour worked was $63.27 in the U.S. as measured by purchasing-power parity (allowing international comparison). The Conference Board reported that among mature economies, the U.S., European countries, and Japan have seen labor productivity growth slowing, as uncertainties prevented businesses from investing more rapidly to bring new products and services to market. Emerging economies, including China, India, and Brazil have also experienced slowing productivity growth.

Research indicates productivity shifts among sectors and industries reflect recent events and economic conditions, as well as the long-term structural shifts taking place in the economy. Notable in the structural category are the declining importance of goods-producing sectors versus service-providing sectors, and the growth in technological progress (gains in efficiency), as reported by the Federal Reserve Bank of Dallas.



State Comparison		
	Rank	**2012 ($)**
Alaska	1	78.22
Delaware	2	78.20
Connecticut	3	68.04
New York	4	67.87
Texas	9	63.50
Maine	50	44.38
United States		57.43

International Data		
	OECD	**2012 (US$)**
Belgium	Member	61.85
Luxembourg	Member	74.95
Norway	Member	74.88
N/A	Non-Member	N/A
N/A	Non-Member	N/A
United States	Member	63.27

Source: The Conference Board Total Economy Database, January 2013

Average Annual Pay per Worker

Higher wage levels are often correlated with higher job quality and standard of living. In addition, higher wages may increase employers' options when seeking to attract or retain qualified workers. Higher wage levels are increasingly important given Texas' goal of business and job growth in the high-tech and knowledge-based industry sectors. The average annual pay per worker is the total pay of Texas employees measured quarterly and annualized through the Occupational Employment Statistics survey.

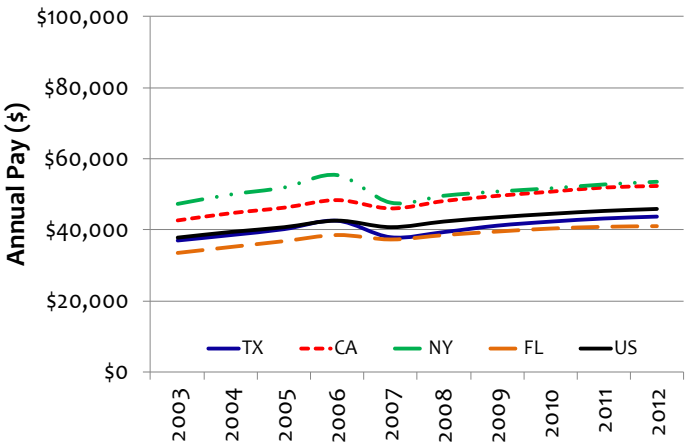
The average annual pay per worker increased for all of the large states and the nation in 2012, nearing pre-recession levels. New York and California both registered an average annual worker pay above $52,000, which exceeded the U.S. average of $45,790. Both Texas ($43,620) and Florida ($40,930) continued to trend upward. Texas' annual pay per worker increased by 6.1 percent since the end of the recession in 2009, while Florida increased by 3.8 percent. This is Texas' fifth consecutive annual average pay-per-worker increase since 2007.

The top wage-earning states remained constant throughout the economic recession recovery. Massachusetts, Connecticut, New York, and Maryland reported the highest annual average pay per worker. According to the occupational employment and wages report from the Bureau of Labor Statistics, of the 10 largest occupations in the private sector, seven had annual mean wages below $30,000. Among the largest occupations in the private sector, general and operations managers ($115,930) and registered nurses ($68,070) had the highest annual mean wages. Industries with the highest annual mean wages in 2012 included three from the finance and insurance sector —securities and commodity exchanges ($98,670), other financial investment activities ($95,190), and securities and commodity contracts intermediation and brokerage ($94,760). Other high-paying industries included oil and gas extraction ($92,270) and software publishers ($91,050).

Switzerland and Norway led OECD countries as the top wage economies of 2011. The strong link between industry and trade with foreign countries and the achievements of the services industry are the keys to Switzerland's high economic results. In 2011, related service occupations drove Switzerland's wages up to $81,475 in the wake of a global financial crisis. Norwegian wealth comes from a rich endowment of natural resources. Norway's hourly productivity levels, as well as the average wage of $74,512, were among the highest in the OECD in 2011. The U.S. wages, as measured by the OECD, increased by 3.5 percent to $54,450.

In general, the greater the disposable income afforded through increases in the average annual pay, the more increased spending on goods and services across the economy. This increase in consumption can improve gross state product, economic growth, and job creation.

Annual Average Pay per Worker



State Comparison		
	Rank	**2012 ($)**
Massachusetts	1	55,600
Connecticut	2	53,760
New York	3	53,580
Maryland	4	52,360
Texas	22	43,620
Mississippi	50	35,310
United States		45,790

International Data		
	OECD	**2011 (US$)**
Australia	Member	74,512
Norway	Member	81,475
Switzerland	Member	93,235
N/A	Non-Member	N/A
N/A	Non-Member	N/A
United States	Member	54,450

Source: OECD Employment Outlook Statistical Annex, 2012

Gross State Product per Capita

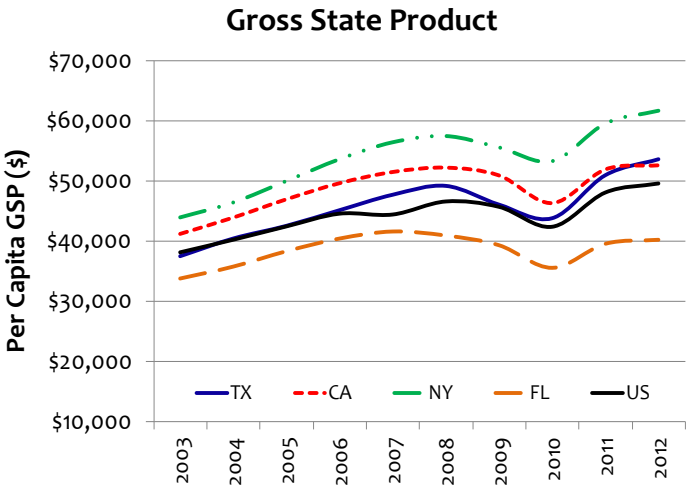
Gross state Product (GSP) is typically considered to be the most comprehensive measure of a state's overall economic activity. It is estimated as the sum of three components: employee compensation; taxes on production and imports; and gross operating surplus. For this indicator, GSP is presented on a per capita basis, providing a measure of the resources available to a country or state relative to the size of its population.

Among the large states, Texas' GSP per capita increased by 5.2 percent over the past two years to $53,609 in 2012, surpassing pre-recession levels. In 2012, Texas remained above the national average of $49,587. New York increased to $61,624 per capita in 2012, while California expanded from $51,974 to $52,653. Florida trails the large states with a GSP per capita of $40,222, as the only large state below the national average. Texas outperformed New York over the decade to become the nation's second-largest economy, according to data released by the Bureau of Economic Analysis (BEA). Texas' GSP notched one of the largest increases in size in a half-century, surpassing one trillion dollars in annual economic output. According to the Bureau of Labor Statistics, Texas' $1.397 billion 2012 GSP represented a 68.9 percent increase since 2003.

Delaware's per capita GSP of $71,949 was the highest in the nation, 45.1 percent above the national average. On the opposite end of the rank, Mississippi's per capita GSP of $34,001 was the lowest in the nation, 45.8 percent below the national average. According to the BEA, durable-goods manufacturing, finance and insurance, and wholesale trade services were the leading contributors to U.S. economic growth in 2012.

Luxembourg ranks as the top OECD-member country in gross domestic product (GDP) per capita. Emerging economies such as Brazil, China, India, and the Russian Federation are among the top 10 countries with rising GDP per capita and reserve holdings. These large reserve holdings can help economies recover from the global financial crisis and strengthen the confidence of investors. While the U.S. trails Luxembourg in GDP per capita, the U.S. maintains the highest overall GDP of the OECD countries at nearly $15.685 billion in 2012.

GSP growth indicates a strong economy. Texas should continue to focus on the factors that promote this growth, such as higher savings rates (especially for long-term growth), high rates of private investment, a low rate of inflation, relatively low government deficits, flexible labor markets, and a low level of regulation.



State Comparison		
	Rank	**2012 ($)**
Delaware	1	71,949
Alaska	2	70,899
Wyoming	3	66,657
North Dakota	4	65,772
Texas	15	53,609
Mississippi	50	34,001
United States		49,587

International Data		
	OECD	**2010 (US$)**
Luxembourg	Member	86,269
Norway	Member	57,259
Switzerland	Member	48,657
China	Non-Member	7,519
India	Non-Member	3,339
United States	Member	46,588

Source: *OECD Factbook, 2012*

Exports per Capita
Export Orientation

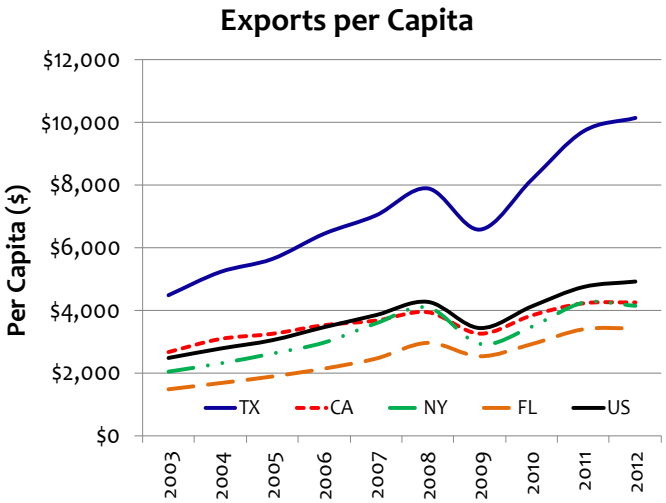
A strong export sector is generally viewed as a favorable indication of the ability to compete in both national and global markets. Economies that are more open tend to be more productive, and stronger exports are seen during robust economic times. Export data is reported with two indicators: (1) a per capita basis; and (2) through export orientation as a percentage of Texas GSP. Per capita exports indicate the total state exports, divided by the Texas population.

Texas ranked as the number one exporting state for the 11th year in a row ($265 billion in terms of volume), according to 2012 annual trade data released by the U.S. Department of Commerce. Texas exports per capita have expanded by 54.4 percent since the end of the recession in 2009. Notwithstanding the global financial crisis, Texas' exports per capita grew by 19 percent from 2010 to 2011 and again expanded by 4.4 percent in 2012. The state's top export recipients were Mexico, Canada, China, Brazil, and the Netherlands, which respectively imported $94.8 billion, $23.7 billion, $10.3 billion, $10.0 billion, and $9.5 billion in Texas-manufactured goods. Additionally, Texas' top exporting industries in 2012 were petroleum and coal products, chemicals, computer and electronic products, non-electrical machinery, and transportation equipment.

While Texas ranked first in total exports in the nation, the state ranked third in exports as a proportion of the population; Louisiana held this number one spot in 2012. Exports per capita in Louisiana at $13,667 again led the nation, nearly three times greater than the national average. Louisiana exceeded Texas by $3,509 per capita, based on its continued exports of oil and gas equipment, machinery parts, consumer goods, and food products. The value of U.S. exports per capita increased by 3.6 percent to $4,924 in 2012.

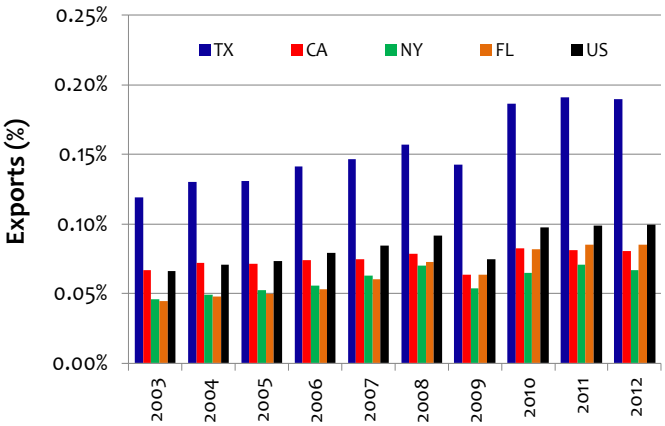
Export orientation can be defined in terms of a trade openness ratio expressed as a percentage of GSP. The U.S. surge, aided by an increase in global demand and a falling dollar value, was largely driven by a significant increase in sales to the nation's North American Free Trade Agreement partners, Mexico and Canada. Demand for Texas exports also rose in Asia, Latin America, and Europe. In addition, the higher price of oil, relative to natural gas, has made chemical production competitive in the U.S., fueling high demand for chemical exports. As its trading partners' economies strengthened, Texas continued to see export gains in 2012 as reported by the Dallas Federal Reserve Bank.

Technology exports have become increasingly important in today's economy. Increasing export orientation, and its contribution to the state's GSP, is desirable. More goods exported by Texas businesses represent more capital investment, higher wages, and additional job creation.



State Comparison

	Rank	2012 Exports per Capita ($)
Louisiana	1	13,667
Washington	2	10,964
Texas	3	10,158
Utah	4	6,744
Vermont	5	6,613
Hawaii	50	526
United States		4,924



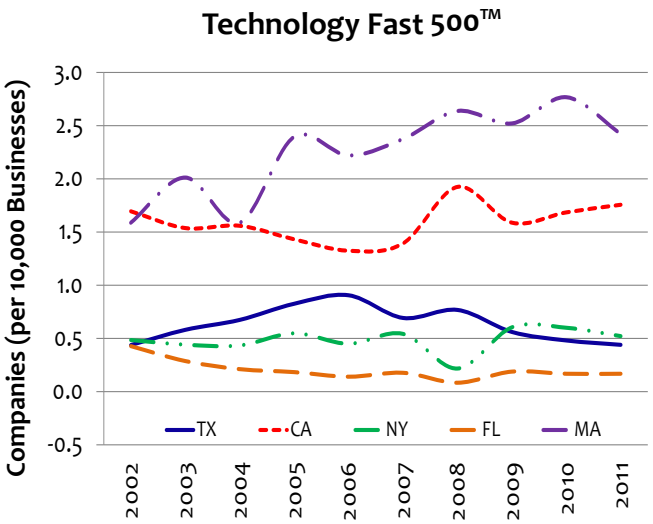
Number of Technology Fast 500 Companies per 10,000 Business Establishments

The Technology Fast 500 (Tech Fast 500) North America is one of three industry rankings, accompanied by Asia Pacific 500, and EMEA 500 (Europe, Middle East, and Africa), created by Deloitte to recognize the 500 fastest-growing technology companies in each region. The Tech Fast 500 comprises public and private companies in all areas of technology including the internet, biotechnology, medical/scientific, and computers/hardware. To be considered, a company must: (1) own proprietary technology that contributes to a significant portion of the company's operating revenues, and (2) devote a significant proportion of revenues to research and development of technology. Other factors are that companies must be headquartered in North America; have been in business a minimum of five years; and have base operating revenues of at least $50,000 USD, with current year operating revenues of at least $5 million USD.

Tech Fast 500 data are presented per 10,000 established businesses. The ratio of Tech Fast 500 companies in Texas fell slightly from 0.48 in 2010 to 0.44 in 2011. This drop equals the lowest ratio of Tech Fast 500 companies in Texas since 2002. Still, Texas had the fifth-largest number of Tech Fast 500 companies in the U.S. totaling 23 companies in 2011. Massachusetts (2.42) and California (1.75) led the nation in 2011, while New York and Florida stood at 0.52 and 0.16 Tech Fast 500 companies per 10,000 business establishments, respectively.

There were a greater number of Tech Fast 500 companies in Massachusetts than in any other state in 2011. The Deloitte Tech Fast 500 list for 2011 announced that Massachusetts boasts 41 companies. The Tech Fast 500 ranks the fastest-growing technology, media, telecommunications, and life sciences companies in North America. Companies were selected based on percentage of revenue growth from 2006 to 2010. California, Maryland, and Washington were also top-ranked states in 2011, averaging over 1.3 Tech Fast 500 companies per 10,000 businesses. California and the New York Tri-State area (New Jersey, New York, and Connecticut combined) were among the top technology centers in the nation in 2011.

The Tech Fast 500 is the preeminent technology awards program in the U.S. and Canada, with 2011 being its 17th anniversary. As defined by Deloitte, "combining technological innovation, entrepreneurship, and rapid growth, Tech Fast 500 companies—large, small, public, and private—span a variety of industry sectors, and are leaders in hardware, software, telecom, semiconductors, life sciences, and emerging areas, such as clean technology." The Tech Fast 500 program recognizes the work of these companies, making the Tech Fast 500 a list of the elite. Texas benefits greatly from these companies by attracting talented professionals to the state, as well as creating an environment in which other businesses can thrive.



State Comparison		
	Rank	**2011**
Massachusetts	1	2.42
California	2	1.75
Maryland	3	1.35
Washington	4	1.33
Texas	14	0.44
Ohio	32*	0.04

* 32nd is the last-ranked state; 18 states listed no Technology Fast 500™ companies

"Texas had the fifth-largest number of Technology Fast 500 companies in the U.S. totalling 23 companies in 2011."

- Deloitte, *Fast 500 Highlights & Trends 2012*

Business Establishment Entry

Business Establishment Exits

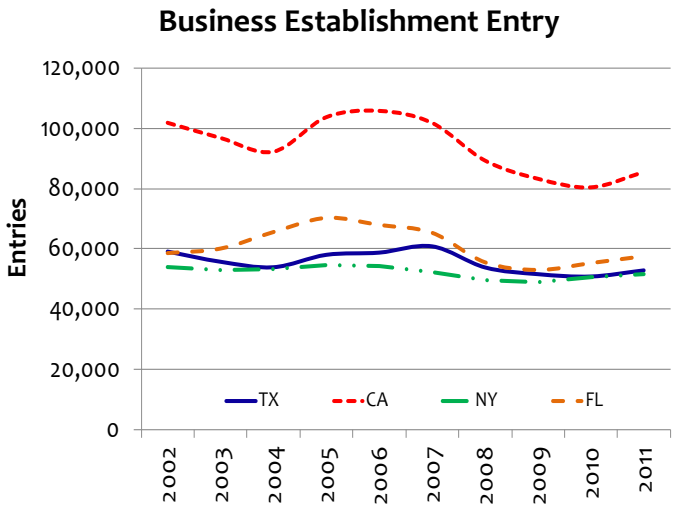
Business establishment entry and exits are components of the business dynamics statistics (BDS) of the Center for Economic Studies of the U.S. Census Bureau. One feature of the BDS is that business start-ups and closings can be tracked on a comprehensive basis for U.S. private, non-agricultural businesses. BDS includes the number of business entry and exits from 1977 to 2011 for all 50 states.

Business start-ups modestly continued to be established in the large states. Decreases resulting from the recession were reversed from 2009 to 2011; however, pre-recession levels of business establishment entry have not been met. California added 83,344 businesses in 2009. In 2011 that number increased to 85,584, a 2.7 percent rise. Florida gained 4,600 business start-ups to meet the 2011 level of 57,550. Texas added 52,857 businesses in 2011, a 2.4 percent rise and the state's second consecutive increase since the recession ended in 2009. In addition, Texas added more jobs than any other state during the recession and continues to grow steadily today. New York's number of business start-ups increased by 5.6 percent since the recessionary period, with 51,661 in 2011.

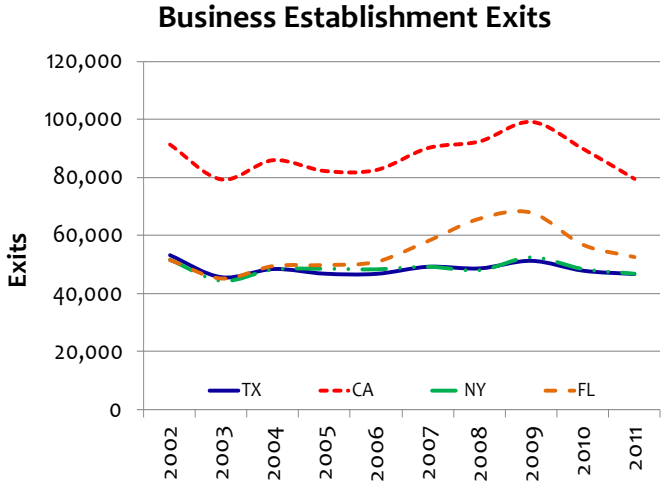
The U.S. listed 682,171 business start-ups and 659,452 business closings in 2011. According to BDS, data showed a sluggish pace of growth in job creation from existing firms, as well as start-ups, since the recession. Despite this, in 2011 Texas ranked third among all 50 states in business entries, and is the leading global destination for foreign direct investment (FDI). Since 2008, Texas was selected as the destination for one of every four foreign oil, gas, and mining projects launched in the U.S., and one of every nine foreign industrial machinery projects launched in the U.S. The top two Texas cities for foreign investment were Houston and Dallas, capturing 34 percent and 14 percent of the state's investment projects, respectively.

California also led the large states in business closings, at 79,435 in 2011. Florida's shutdowns were curtailed post recession from 67,935 in 2009 to 52,491 in 2011. Texas and New York mirrored each other in firm closings, falling well below 50,000 since 2009. Since the recession, the U.S. went from a negative (-5.1 percent) annual average net job creation rate to a positive (2.4 percent) net job creation rate. This increase highlights the importance of new business entry for job creation in the U.S. economy.

Texas leads the states in employment gains. The state is also the nation's leader in fostering an economic climate that creates jobs, promotes innovation, and opens the door to business opportunities. Fiscal policies, including low taxes, fair courts, and predictable regulations, keep Texas the top destination to live, work, grow a business, and raise a family.



State Comparison		
	Rank	**2011 (Entries)**
California	1	85,584
Florida	2	57,550
Texas	3	52,857
New York	4	51,661
Illinois	5	25,214
Vermont	50	1,607
United States		682,171



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Domain 4 - Participant Access and Contribution

The Participant Access and Contribution domain comprises eight indicators of citizens' economic status and self-sufficiency, including traditional income and poverty indicators. Household access to computer technology is considered, as well as the level of homeownership. Five indicators in this domain, including per capita income and residential high-speed internet access, incurred a positive change in the last reporting cycle reflecting improvement in Texans' general economic health. Poverty indicators rebounded over the year as a result of job growth due to rises in business owner confidence in the state's economic climate, an influx of business relocation to Texas, and a surge of start-up companies. Homeownership and median home value remained affected by the recession. However, these indicators remained steady despite the nation's slow economic recovery.

Domain 4 Summary			
Number of Indicators - 8			
		No.	%
↑	Positive change in last reporting cycle	5	63%
→	No significant change in last reporting cycle	3	37%
↓	Negative change in last reporting cycle	0	0%
●	Data unavailable	0	0%
⚑	Watch alert	0	0%

Indicator	Page	Alert	Trend
Per Capita Income	40	-	↑
Per Capita Income Annual Average Growth Rate	41	-	→
Percent of Population Living Above the Federal Poverty Threshold	42	-	↑
Percent of Population Living Above 200% of the Federal Poverty Threshold	42	-	↑
Median Household Income	43	-	↑
Median Home Value	44	-	→
Residential High-Speed Internet Access	45	-	↑
Homeownership Rate	46	-	→

Per Capita Income

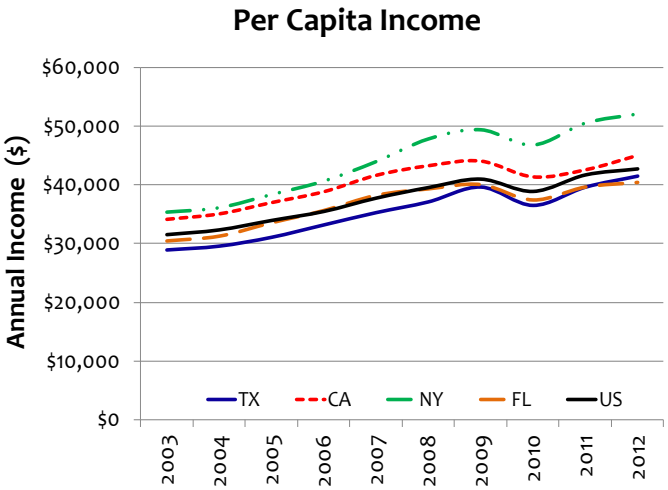
Per capita income represents the annual, total personal income of Texas residents, divided by the Texas population. Data have been normalized for comparative purposes, representing all Texans rather than just those who work. Traditionally, personal income includes wage earnings, rental income, personal dividend and interest income, and personal current transfer receipts (e.g., unemployment insurance, Medicare/Medicaid).

Per capita income increased in 2012 among the large states. The continued improvement in labor market conditions was manifested by payroll growth during the year. Texas income rose to $41,471 per capita, falling just below the national average of $42,693. Florida recorded a per capita income increase to $40,344. New York ($52,095) and California ($44,980) increased and remain above the national per capita income level.

In the fourth quarter of 2012, average state personal income growth accelerated to 1.9 percent from 0.6 percent in the third quarter, the fastest pace since the first quarter of 2011, according to estimates released by the U.S. Bureau of Economic Analysis. State per capita personal income ranged from $33,073 to $58,908. Texas gained ground in the 50-state ranking, rising from 26th to 25th in 2012. Texas remained among the middle-ranked states, ahead of Florida and Louisiana. Fourth-quarter earnings in the finance industry were also boosted by accelerated bonus payments or other irregular pay in anticipation of tax rate changes. Finance earnings grew 10.5 percent in New York, 7.9 percent in Connecticut, and 6.4 percent in New Jersey, states where the finance industry is particularly prominent.

Luxembourg leads the OECD member countries with a per capita gross national income (GNI) of $64,100. Luxembourg's GNI per capita has been at the top of the OECD ranking for several years now, well ahead of other countries. The 90,000-strong labor force commuting across the border everyday from Germany, France, Belgium, and the Netherlands, often to work in lucrative financial services, explains Luxembourg's large lead in GNI. Developing economies such as China and India are expected to continue to grow exponentially faster than higher-income economies due to their large economic expansion. China is poised to position itself among the upper-middle income economies by 2020, according to World Bank standards.

Per capita income is linked to and affected by fluctuations in the economy. Innovative economies with competitive industries typically display a higher per capita income. Investing in productive skills and technical knowledge to train and educate workers and produce entrepreneurial activity is critical for success in the global economy.



State Comparison

	Rank	2012 ($)
Connecticut	1	58,908
Massachusetts	2	54,687
New Jersey	3	53,628
New York	4	52,095
Texas	25	41,471
Mississippi	50	33,073
United States		42,693

International Data

	OECD	Per Capita GNI 2011 (US$)
Luxembourg	Member	64,100
Norway	Member	61,450
Switzerland	Member	52,530
China	Non-Member	8,390
India	Non-Member	3,620
United States	Member	48,820

Source: *World Development Indicators*, World Bank, 2012

Per Capita Income Annual Average Growth Rate

The annual average growth rate of personal income is an indicator that measures the individual's earnings and fluctuations over time. Personal income is the income received by all persons from all sources. It is measured before the deduction of personal income taxes and other personal taxes and is reported in current dollars, according to the U.S. Bureau of Economic Analysis (BEA).

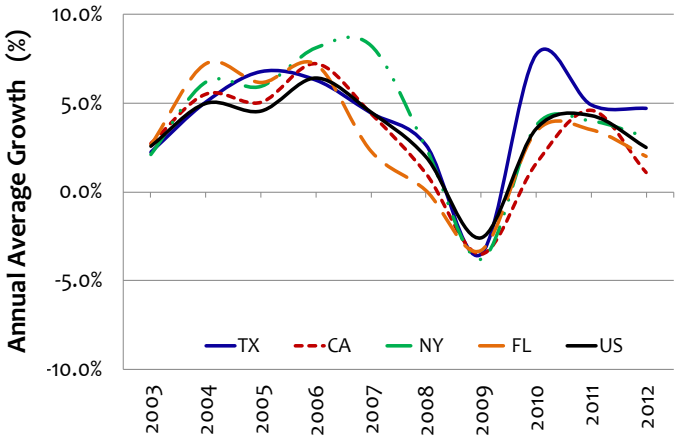
In 2012, the per capita income annual average growth rate was lower for each of the large states, as well as the nation, compared to 2011. Texas outpaced the other large states and the nation with a steady growth rate of 4.7 percent. Job creation and payroll increases in Texas are reflected in this indicator. The national average grew by 2.5 percent, while California's per capita income decreased by 1.1 percent, partially due to the effects of its high unemployment rate. Florida remained below the national average at 2.0 percent, while New York slipped to 3.1 percent over the year.

South Dakota's small decline in the rate of its personal income growth was due to the effect of last year's drought on farm income. The drought also had relatively strong adverse effects in Nebraska, Kansas, and Iowa, all of which had below average total personal income growth in 2012, according to the BEA. For the fifth time in the last six years, North Dakota had the fastest personal income growth of all states. In 2012, mining (including oil and gas extraction) and construction accounted for 43 percent of private nonfarm earnings growth in North Dakota. Twenty-four states posted per capita income growth rates higher than the national average. Arizona and Nevada remain at the bottom of the income growth ranking.

Chile is the OECD country with the largest growth in gross national income (GNI) per capita, with a 22.6 percent increase in 2011. Mexico and Switzerland followed with 18.1 percent and 13.1 percent growth rates, respectively. BRIC countries are currently experiencing tremendous growth rates in GNI. In 2011, growth rates were nearly eight times more than that of some of the more established OECD economies. According to the OECD Development Centre, "the developing world's emerging middle class is a critical economic and social factor because of its potential as an engine of growth, particularly in China and India." However, global economic instability continues to cause irregular growth cycles.

In order for Texas to continue its growth in per capita income, it must focus on educating career-ready graduates. Doing so will create a highly trained and globally competitive workforce to support the jobs of the future. A strong workforce is the foundation on which to increase competitiveness and spur innovation, which will lead to job creation and income growth for Texans.

Per Capita Income Growth Rate



State Comparison

	Rank	2011-2012 (%)
North Dakota	1	13.4
South Dakota	2	5.0
Texas	3	4.7
Oklahoma	4	4.6
Iowa	9	4.1
Nevada	50	-2.1
United States		2.5

International Data

	OECD	Per Capita GNI 2010-2011 (%)
Chile	Member	22.6
Mexico	Member	18.1
Switzerland	Member	13.1
China	Non-Member	129.9
India	Non-Member	196.7
United States	Member	7.1

Source: *World Development Indicators*, World Bank, 2012

Percent of Population Living Above the Federal Poverty Threshold
Percent of Population Living Above 200% of the Federal Poverty Threshold

As basic measures of economic self-sufficiency, these indicators are calculated by setting the total Texas population at 100 percent. The percentage of population living below the federal poverty threshold is subtracted. The formula is repeated by subtracting those living below the poverty threshold multiplied by two, which is equal to 200 percent below the federal poverty threshold. Note: the poverty level used in this indicator is for a family of four; the poverty threshold for a family of four in 2011 was $23,021.

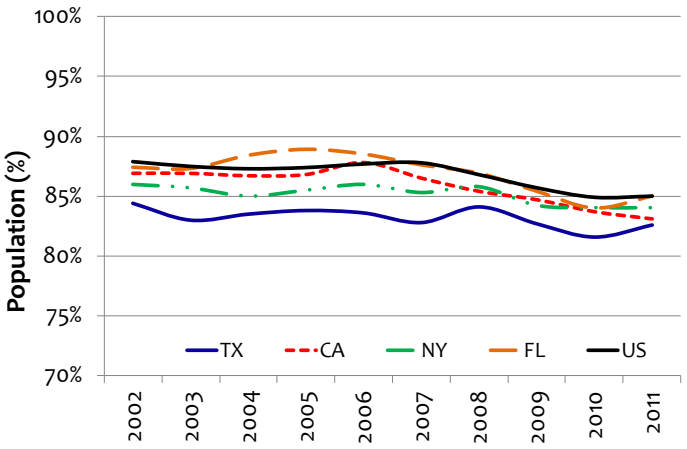
There were slightly fewer Americans living in poverty in 2011 than in 2010. For the most part, the percentage of those living above the federal poverty level in the U.S. remained relatively steady, rising from 84.9 percent to 85 percent — not a statistically significant increase. According to U.S. Census Bureau's American Community Survey (ACS), about 48.5 million people out of the total U.S. population had income below the poverty level. Between 2010 and 2011, the number of people with income below the poverty level increased by 2.2 million. The number of Texans living above the poverty threshold rose from 81.6 percent in 2010 to 82.6 percent in 2011.

There was a considerable decline in the number of persons in America living 200 percent above the poverty threshold in 2011. There were 202.4 million people or 65.6 percent of the U.S. population living above 200 percent of the federal poverty threshold in 2011. Poverty rates were lower in 2011 than in 2010 for six groups: Hispanics, males, the foreign-born, noncitizens, people living in the South, and people living inside metropolitan statistical areas but outside principal cities, according to the U.S. Census Bureau. Poverty remained unchanged in the U.S. in 2011. While still below the national average, the percentage of Texans living above the 200 percent poverty level increased, while in the other large states it declined.

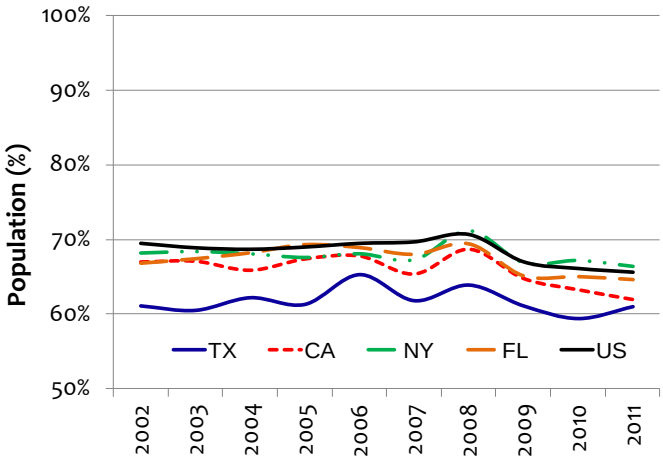
Texas improved in 2011 by ranking 44th in the percent of population living above 100 percent of the federal poverty threshold. New Hampshire continued to lead the nation with the lowest level of poverty. New Hampshire's population living above the poverty threshold and 200 percent above the threshold stood at 92.4 percent and 80.2 percent, respectively. Maryland and North Dakota ranked in the top three for both indicators.

These basic measures of poverty incidence may serve as indicators of Texas' economic health and in this cycle of the *Index* showed signs of recovery from the effects of the recession. Higher rates of poverty are typically correlated with a number of factors for Texans, including high unemployment; lower educational participation; and lower educational completion rates.

Population Living Above Poverty Threshold



Population Living Above 200% of the Poverty Threshold



State Comparison

2011 (100%)		Rank	2011 (200%)	
NH	92.4	1	80.2	NH
MD	90.7	2	77.2	MD
ND	90.1	3|2	77.2	ND
MN	90.0	4	76.1	CT
TX	82.6	44|41	61.0	**TX**
NM	77.8	50	58.1	AK
US	85.0		65.6	US

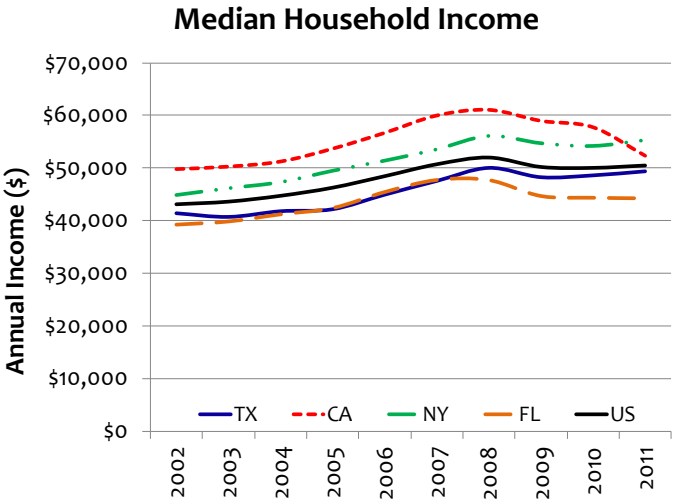
Median Household Income

Median household income divides households into two equal segments. The median is the midpoint with one half of households earning less than the median household income and the other half earning more. Median income is considered to be a better indicator of middle wealth than the average household income as it is not dramatically affected by unusually high or low values. *The Index* uses the median household income estimates generated through the U.S. Census Bureau's American Community Survey (ACS) for reporting annual statistics that are comparable at the state level.

The ACS reported that the median household income in America was $50,502 in 2011. However, the Census Bureau also collects median income data from the Current Population Survey and the Annual Social and Economic Supplement that are slightly different from the ACS numbers. These data resources were used in the Bureau's Income and Poverty report in 2012, which noted the real median household income was 8.1 percent lower than in 2007, the year before the most recent recession, and was 8.9 percent lower than the median household income peak that occurred in 1999. Comparatively, among the large states, California and New York posted median incomes above both the U.S. and Texas. Florida's household income level remained below Texas' as it fell to a five-year low of $44,299. Texas' median household income, at $49,392, rose 2.5 percent since the recession ended in 2009.

The 2011 ACS median household income estimates ranged from $36,919 to $70,004. Twenty-three states posted a higher median household income than the U.S. median, with eight states surpassing the $60,000 mark. The Census Bureau noted a trend in household income data based on residence throughout the nation between 2010 and 2011. Between 2010 and 2011, households residing inside metropolitan areas experienced a 2.2 percent decline in median income, while the change in the income of households outside of metropolitan areas was not statistically significant. For households inside principal cities (Office of Management and Budget, statistical area with a population of at least 10,000), income declined by 3.7 percent, while the change in income for households outside principal cities was not statistically significant. In 2011, households within metropolitan areas but outside principal cities had the highest median income ($57,277), while households outside metropolitan areas had the lowest ($40,527).

Median household income is a direct measurement of prosperity. However, real gains in household income can be very difficult. For example, since 1980, U.S. gross domestic product per capita has increased by 73.2 percent, while median household income has only increased by 17.2 percent, according to the U.S. Census Bureau.



State Comparison		
	Rank	**2011 ($)**
Maryland	1	70,004
Alaska	2	67,825
New Jersey	3	67,458
Connecticut	4	65,753
Texas	25	49,392
Mississippi	50	36,919
United States		50,502

"In addition to the statewide efforts to attract new business activity, virtually every community across the state has its own entities working to ensure future prosperity."

- Perryman Group, *The Perryman Report and Texas Letter, July/August 2013*

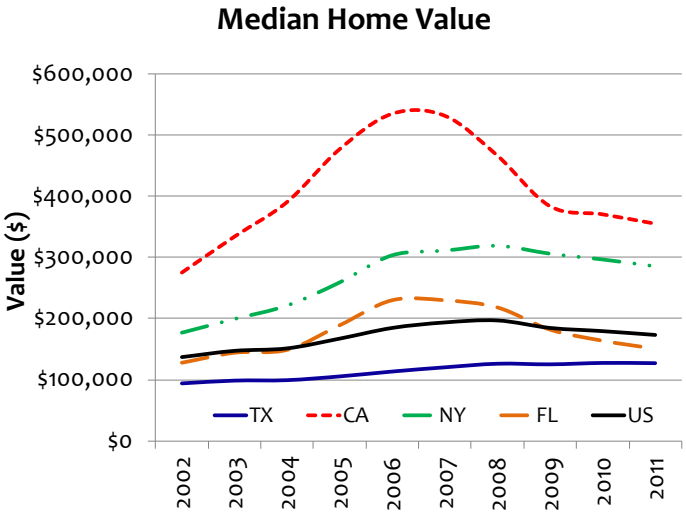
Median Home Value

The median home value is the price that is midway between the least expensive and most expensive home sold in an area during a given period of time. During that time, half the buyers bought homes that cost more than the median price and half bought homes for less than the median price. The median home value is one of the more commonly used measurements to compare real estate prices in different markets, areas, and periods. It is less biased than the average or mean value since it is not as heavily influenced by the top two percent of homes sold.

California remained the leader among the large states in home valuation with the median home value at $355,600 in 2011. However, this is a decline by 4.1 percent from the previous year, indicating a high inventory of homes. Florida also declined by eight percent to $151,000 in 2011. New York's residence values dropped in 2011 by 3.8 percent resulting in a median home value of $285,300. In 2011, the U.S. median home value declined by 3.5 percent to $173,600. Texas' median home value remained relatively unchanged at $127,700.

The top-five states with high housing values were Hawaii, California, Massachusetts, New Jersey, and Maryland incurring median home values ranging from $287,100 to $487,400. Twenty-one states posted a median home value that exceeded the national average. Texas moved down two positions since 2010, from 38th to 40th in 2011. U.S. housing demand continued to slump in 2011 as the national unemployment rate remained near 8.1 percent. According to the Federal Housing Finance Agency's home price index (HPI), U.S. home prices rose in the third quarter of 2011. The HPI, calculated using home sales price information from Fannie Mae- and Freddie Mac-acquired mortgages, was 0.2 percent higher on a seasonally adjusted basis in the third quarter than in the second quarter. Over the past year, seasonally adjusted home prices fell 3.7 percent from the third quarter of 2010 to the third quarter of 2011. Comparatively, the HPI for Texas fell by just 1.7 percent for the same period. Both Texas single-family housing construction permits and Texas housing starts increased at the end of 2011, while home inventories edged down signaling a tighter market and future price increases.

Historically, changes in median home value measure changes in market activity. The Texas housing industry faced another difficult year in 2011. However, Texas residential market data showed signs of decreasing inventories. Texas' housing sector remained relatively healthy compared to the national average. Texas metro markets are better positioned to thrive than many other parts of the country when housing demand completely recovers.



State Comparison		
	Rank	**2011($)**
Hawaii	1	487,400
California	2	355,600
Massachusetts	3	326,300
New Jersey	4	324,900
Texas	40	127,700
West Virginia	50	99,300
United States		173,600

"Despite declining housing values, eight-in-ten Americans see a home as the best long-term investment that the average person can make."

- Pew Research Center, *Home Sweet Home. Still., April 2011*

Residential High-Speed Internet Access

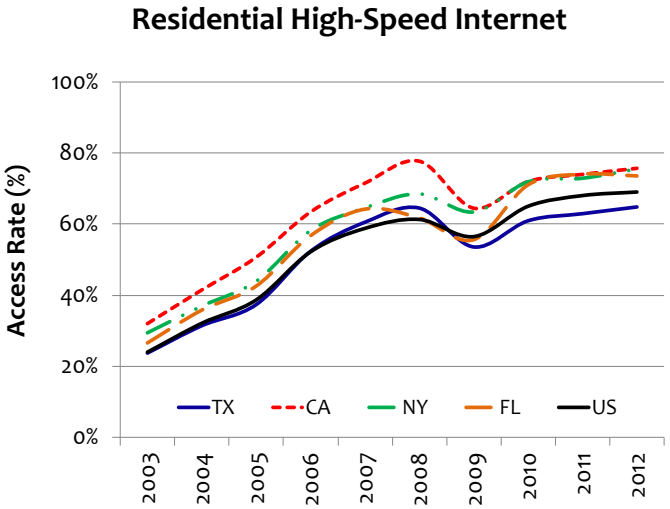
High-speed internet access allows for easier exchange of data over transmission lines and can provide important educational resources and other data tools to both rural and more populated areas that might otherwise be underserved. Twice a year, broadband providers are required to report to the Federal Communications Commission (FCC) basic information about their service offerings and types of customers. The usage percentage is based on these data, divided by occupied housing unit estimates from the U.S. Census Bureau. The FCC has collected basic service information from broadband providers on a semiannual basis since 2000.

Residential high-speed internet access continues to recover after being affected post-recession by consumer reductions in discretionary expenses in 2009. The percentage of broadband lines in Texas (64.9 percent) remained below the U.S. (69 percent) in 2012. California led the large states at 75.7 percent followed by New York at 75.6 percent and Florida at 73.5 percent.

Nearly 117.5 million or 69 percent of households in America subscribed to high-speed internet access in 2012. This is a 45 percentage point increase since 2003, when only 26 percent of the nation's residences subscribed to a high-speed internet provider. The Pew Research Center's Internet & American Life Project reported adult online social networking has seen substantial growth since 2005. Today, 72 percent of adults use social networking sites when online. Although younger adults continue to be the most likely social media users, one of the more striking stories about the social networking population has been the growth among older internet users in recent years. Individuals aged 65 and older have roughly tripled their presence on the internet at social networking sites in the last four years — from 13 percent in 2009 to 43 percent in 2012.

The U.S. remained below a select handful of smaller developed nations in personal computer broadband access per 100 users at 27.7 percent, while the Netherlands, Norway, and Switzerland each rose to nearly 40 percent. Government policies and regulations are creating competitive information and communication technology (ICT) markets, and increasing access to ICT services to people everywhere. Innovative use of ICT services are changing people's lives and providing new opportunities in developing economies such as Brazil and China.

Broadband access provides Texans with the technical capability to access a wide range of resources, services, and products, and is an important tool for expanding both educational and economic opportunities for consumers — especially in remote locations. High-speed internet access also allows Texans to take advantage of distance learning opportunities such as college courses and continuing or senior education programs.



State Comparison		
	Rank	**2012** (%)
Hawaii	1	84.6
New Jersey	2	81.6
New Hampshire	3	81.1
Massachusetts	4	80.7
Texas	36	64.9
Mississippi	50	49.8
United States		69.0

International Data		
	OECD	**2010** (per 100 people)
Netherlands	Member	38.1
Norway	Member	35.3
Switzerland	Member	37.2
Brazil	Non-Member	6.8
China	Non-Member	9.4
United States	Member	27.7

Source: *World Development Indicators, World Bank*, 2012

Homeownership Rate

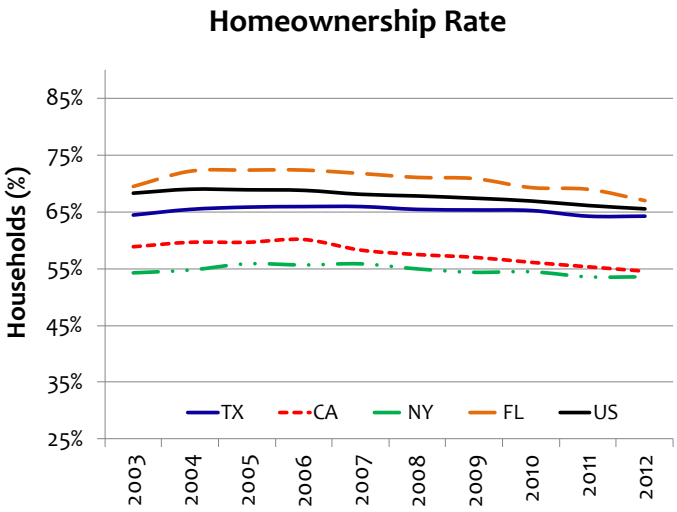
According to the Joint Center for Housing Studies of Harvard University, homeownership can contribute to life satisfaction. The act of buying a home symbolizes that the owner has achieved a certain socioeconomic status. The homeownership rate is computed by dividing the number of households that are owned by the total number of households (occupied housing units) and expressed as a percentage. This rate is calculated each year by the Housing Economic Statistics Division of the U.S. Census Bureau.

Florida leads the large states in homeownership with a rate of 67 percent; however, this year marks the sixth straight decline since 2006. Florida's homeownership rate is still positioned above the national average and other large states, reflecting the state's older median age and historically affordable home prices. Texas' 64.3 percent homeownership rate remained unchanged and fared better than California (54.5 percent) and New York (53.6 percent) over the year.

"The U.S. homeownership rate dropped to 65.5 percent from 66 percent in the fourth quarter and fell a full percentage point from a year earlier," reported the U.S. Census Bureau in 2012. That is the lowest level since the first quarter of 1997, and down from a record 69.2 percent in June 2004. Among the higher ranked states were West Virginia at 75.8 percent followed by Michigan, New Hampshire, and Mississippi, each exceeding 74 percent. Mounting foreclosures are displacing borrowers, while a lack of inventory has kept home sales from accelerating amid record affordability, the National Association of Realtors reported. Although house prices and mortgage rates fell to levels that made buying preferable to renting, ongoing difficulty in obtaining mortgage credit prevented many households from taking advantage. Texas' ranking improved to 42nd from 44th even though its rate remained unchanged in 2012.

According to a report by the OECD, cross-country differences in homeownership rates may also reflect differences in the tax treatment of housing. The wedge between the market interest rate and the debt financing cost of housing provides one indicator of the extent to which the tax system favors owner-occupied housing with respect to debt financing. While this simplified measure is imperfect, it nevertheless serves as a useful indicator since households generally finance their house purchase with debt. Among the non-OECD countries such as China, unique policies were instituted involving funding and affordable housing, placing it at the top of the homeownership ranking both in the OECD and affiliate countries.

A high percentage of homeownership normally reflects a thriving economy. New home purchases can be directly correlated to increases in earnings indicators, such as per capita income and median household income.



State Comparison		
	Rank	**2012 (%)**
West Virginia	1	75.8
Michigan	2	74.8
New Hampshire	2	74.8
Mississippi	4	74.2
Texas	42	64.3
New York	50	53.6
United States		65.5

International Data		
	OECD	**2004 (%)**
Ireland	Member	81.4
Greece	Member	73.2
Spain	Member	83.2
Brazil	Non-Member	74
China	Non-Member	88
United States	Member	68.7

Source: *World Development Indicators*, World Bank, 2012

Summary

The *Texas Index 2013 (Index)* provides system stakeholders with an indication of the state's general workforce, education, and economic health.

Trend lines for the 38 indicators show the following changes in the most recent reporting cycle:

- Positive change – 24 of 38 indicators (63%)
- No significant change – 13 of 38 indicators (34%)
- Negative change – 1 of 38 indicators (3%)
- Data unavailable – 0 of 38 indicators (0%)

The *Index* displays a comprehensive view of the state's recovery from the recession to date. Texas managed better than most states. Signs of an economy in full recovery are prevalent in the data over the last reporting cycle. Areas in training and education, research and development (R&D), and market composition thrive, as the majority of indicators in these domains reflect a positive change. In addition, participant access indicators also show progress indicating that prosperity in the state is on the rise, as the national recession appears further in the rear view mirror. A total of 63 percent of the participant access and contribution indicators recorded a positive change, while 37 percent recorded no significant change over the *Index* reporting cycle.

The Percent of Population 25 Years and Older with a High School Diploma indicator is flagged with a watch alert and deserves continued observation. This educational attainment indicator is critical to a knowledge-based economy—the innovation and the commercialization of ideas to the market creating job opportunities—and increased earnings for Texans.

The *Index* data show that Texas is doing comparatively well, and continues to invest in the future of its residents. Texas successfully attracted business and created jobs, through both the recession and recovery periods. The unemployment rate remained slightly elevated due to natural growth in the workforce and the return of previously discouraged job seekers to those counted as unemployed. However, the Texas unemployment rate is still more than one percent lower than the U.S. average. There is room for improvement in the areas of educational attainment and workforce educational achievement. The Texas Workforce Investment Council (Council) is dedicated to addressing the need to increase enrollment and for completion of post-secondary education, particularly within the area of middle-skill occupations. Skilled workers in these occupations are highly sought-after by employers. The Council is currently inviting employers, partner agencies, and stakeholders to inform members of workforce trends, barriers, and opportunities leading into the next strategic plan for the state workforce system. Additionally, the state's 2013 *Closing the Gaps* annual progress report showed that Texas continued to add more students to higher education in fall 2012. The state had nearly 540,500 more students in 2012 than in 2000, shrinking the student gap needed to achieve the 2015 goal of 630,000 students.

While there continues to be improvement, there are a number of indicators to note:

- Although the labor force participation rate remained relatively unchanged, labor productivity, the average annual unemployment rate, and the average pay per worker improved.
- Despite rising per capita income and median household income, the median home value and homeownership rate remained unchanged. However, the population living above the federal poverty level remained below the national average, showing positive movement.
- The amount of venture capital invested in the state's new businesses remained unchanged. However, the influx of new business establishments rose, and an increase in Texas exports helped to improve the GSP.
- In spite of a small decline in ranking of the number of Technology Fast 500 companies, Texas is still tied with Washington state with the fourth-most Technology Fast 500 companies in the nation.

Four indicators reversed their negative trend from the last *Index* reporting cycle, including academic-performed R&D expenditures per $1,000 of GSP; percent of population living above the federal poverty level; percent of population living above 200 percent of the federal poverty level; and residential high-speed internet access. This positive movement reveals an investment in the funding of training and education, which builds the pool of highly skilled human capital to benefit employers. Working Texans benefit through increased earnings, which are prevalent in the improvement of poverty rates, and increased residential high-speed internet purchases. Increased funding for R&D, growth in venture capital investment, and financing for business establishment entry and expansion will provide more growth in businesses and job creation.

Texas' performance across the four domains is positive but somewhat mixed. The indicators reveal that Texas rebounded more quickly than most states from the recession. According to a Brookings Institute report, Texas leads the nation in job creation with Austin, Houston, Dallas, San Antonio, and McAllen creating more jobs now than before the recession. According to the report, Austin saw the highest percentage increase in jobs of any city in the nation. Current policies have helped keep the state's economy comparatively strong. Texas performed exceptionally well in indicators such as labor productivity, per capita income annual average growth rate, exports, and patent production. The Texas economy continues to receive national recognition. Texas has taken the top spot in Site Selection magazine's annual ranking of the most competitive states in 2012. Texas was awarded Site Selection's 2012 Governor's Cup for the most new and expanded corporate facilities announced over the year. Texas dominates Forbes' "America's Fastest Growing Cities" list. Austin topped the list for the third year in a row, followed by Houston (#2), Dallas (#3), and San Antonio (#9). According to Forbes, robust labor markets, unemployment rates well below the national average, no state income tax, a business-friendly regulatory environment, and strong population inflows all contributed to Texas towns' high ranking.

Building on these successes will be instrumental for Texas to continue to thrive in the global economy. The *Index* shows that Texas has several opportunities for improvement. Indicators in the R&D domain can be strengthened, including industry R&D expenditures and National Science Foundation (NSF) funding. As noted in the training and education domain, Texas' high school diploma attainment performance must improve. A workforce rich in science, technology, engineering, and mathematics (the STEM disciplines) will drive the state's innovation and competitiveness by generating new ideas and creating new companies and industries. Postsecondary educational preparation of students in the STEM disciplines stimulates innovation and increases the state's competitive advantage.

In today's global economy, it is imperative that students remain in school and graduate college- and career-ready. A report by Georgetown University's Center on Education and the Workplace, *Recovery: Job Growth and Education Requirements Through 2020,* July 2013, pg. 15, shows that the U.S. labor market increasingly demands a more educated workforce. "By 2020, fewer jobs will be available to people with less than high school or only a high school diploma. Jobs will increase for those with associate's degrees or better but flatten out overall at the highest educational attainment." The percentages of jobs by educational attainment are anticipated to be: 35 percent of the job openings will require at least a bachelor's degree, 30 percent of the job openings will require some college or an associate's degree, and 36 percent of the job openings will not require education beyond high school. Career and technical education (CTE) is at the forefront of preparing students to be college- and career-ready by equipping students with core academic skills, employability skills, and job-specific technical skills related to career pathways.

The state's efforts to improve intellectual, human, and financial capital remain vital to building assets for the future. Several key state initiatives continue to address the need to sustain and grow a dynamic economy. All system partners play an important role through their mandated economic, educational, and workforce development responsibilities. Each must continue to work individually and collectively to develop an integrated workforce system that meets the needs of employers and citizens today and in the future. Continued areas of emphasis are:

- Early college high school (ECHS) and dual credit initiatives in CTE are timely. New programs, particularly those with emphasis in the STEM fields, must be designed to ensure that a well-trained labor supply is available for current jobs with advancing skill requirements, as well as for new jobs.

- Collaboration between industry and two-year educational institutions to promote middle-skills jobs, to strengthen the skills of technicians, will be vital.

- Business expansion and job creation must continue to be supported including, efforts aimed at maintaining an employer-friendly environment, the use of the Texas Emerging Technology Fund to aid in R&D and commercialization of emerging technologies, and the use of the Texas Enterprise Fund on projects that offer significant projected job creation and capital investment.

- Innovation and entrepreneurial activity must be encouraged and new ideas rewarded by funding innovative programs that will increase Texas' global economic competitiveness.

The *Texas Index* is produced annually for distribution to the Council, the Governor, policy makers, workforce system partners, and stakeholders.

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Texas Workforce Investment Council

System Partners

Economic Development and Tourism
Texas Department of Criminal Justice
Texas Education Agency
Texas Health and Human Services Commission
Texas Higher Education Coordinating Board
Texas Juvenile Justice Department
Texas Veterans Commission
Texas Workforce Commission

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