



Corpus Christi and Coastal Bend Economic Pulse

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Dollars and Sense in Literacy, Education, and Innovation

By Jim Lee

This article takes a close look at the extent of literacy, education and innovative activity in determining the overall economic well-being of Corpus Christi. While evidence suggests only a weak relationship between literacy and wage earnings, the payoff is substantial for a high level of education attainment. For the Corpus Christi community, innovation capacity and innovative activity are the key factors of its competitiveness that drives future economic growth.

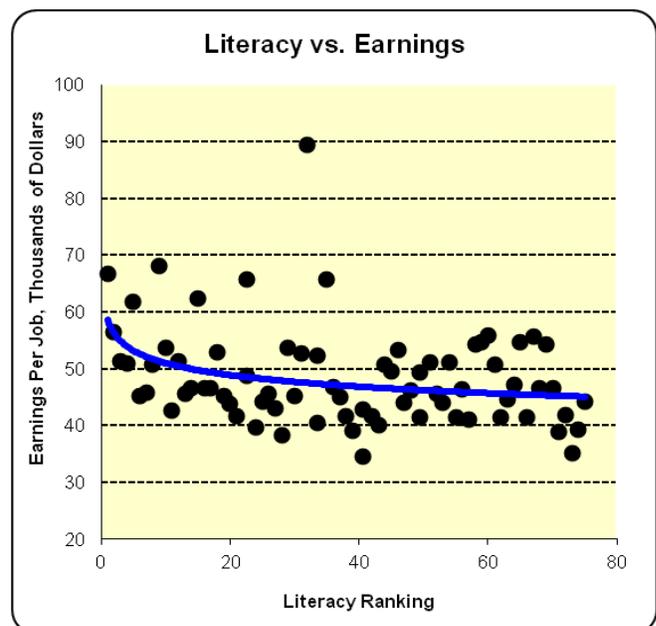
Corpus Christi's major newspaper, the *Caller Times*, recently reported the findings of a study that ranked Corpus Christi second to last in the level of literacy among U.S. cities. As for Corpus Christi, many cities with proportionally more immigrants also tend to fare poorly. Overall, the data suggest that the quality of literacy is essential to individuals' economic success and civic participation, and a community's overall quality of life.

This dimension of social health is also closely related to a community's economic health. A high-income community is likely to have a population with high educational attainment, which in turn has a positive impact on literacy. From this perspective, the relatively low literacy level among residents in South Texas can undermine this region's economic competitiveness.

Literacy and Economic Well-Being

Let's first look at the relationship between literacy and economic well-being. The graph to the right plots literacy rankings against average wages per job for the 75 cities included in the study reported by the *Caller Times*. The blue line captures the graphical relationship that best fits all data points. Although that best-fit line suggests that communities with a lower average income level are more likely to be less literate, this relationship seems quite weak. And this weak relationship underscores the role of government policies that go beyond the wealth and education of the local population. For instance, St. Louis and Cleveland rank the lowest 20 in average income but they are among the top 20 most literate cities. These cities have chosen to allocate more resources towards public libraries and schools.

Although its impact on literacy appears weak, wealth is closely related to education attainment. The levels of educational attainment are relatively low in South Texas. According to the 2010 Census, less than 20% of Corpus Christi residents at the age 25 or above have attained a bachelor's degree or higher. The current level of educational attainment in Corpus Christi not only trails the national average of about 30%, but it also represents little improvement from the level a decade ago. This may be inconceivable given the remarkable increases in student enrollment at Texas A&M University-Corpus Christi.



Corpus Christi Educational Attainment

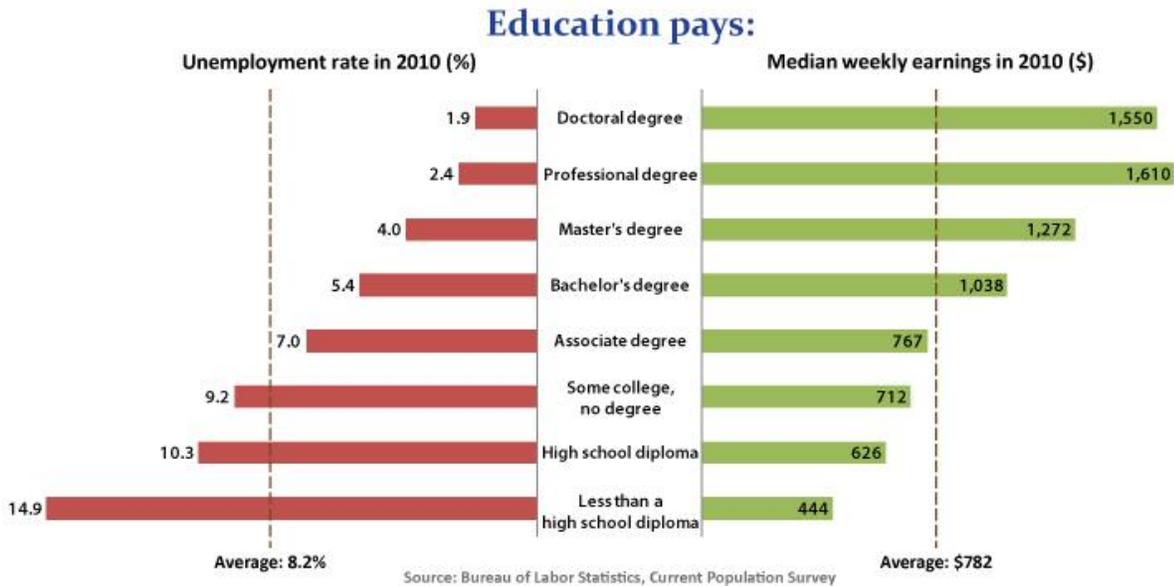
Highest Education Level:	Share of Population
Less than High School	21.6%
High School or equivalent	28.0%
Bachelor's Degree	12.5%
Graduate or Prof. Degree	6.9%

Source: 2010 Census for Population 25 years old or above.

Why has there been little progress in educational attainment locally, despite a remarkable 36% increase in student enrollment at the local university over the past decade? This dilemma is commonly interpreted as a brain drain issue. Most of the enrollment growth at Texas A&M University-Corpus Christi has been generated by students from outside of South Texas. Between 2001 and 2011, the total enrollment among Corpus Christi residents only increased from 4,327 to 5,025. Today local residents make up about half of the university's student body. However, less than half (46%) its graduates continue to stay in the area after graduation. As a result of this brain drain phenomenon, the overall educational attainment of the local population has never improved.

Beyond Education

While the ability to read and basic education by themselves are key ingredients of the quality of life, higher education and skill training beyond K-12 promote a better quality of life through making more satisfying and productive work lives. Hence, a college degree reaps huge payoffs. According to a 2011 report by the Census Bureau, a bachelor's degree adds over \$700,000 to a typical individual's work life. Last year, Texas A&M University-Corpus Christi alone awarded 1,335 bachelor's degrees, boosting those graduates' earning power by a total of nearly \$1 million.



Currently, about 8,900 alumni of the university's alumni live and work in Corpus Christi. This translates into a boost of over \$190 million per year in wage earnings within the community as a result of investment in this institution. Another local higher education institution, Del Mar College, generated a similar impact by awarding nearly 1,500 associate degrees and certificates.

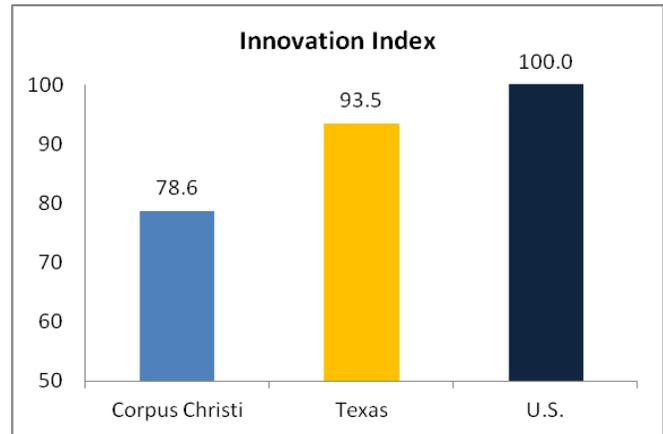
From Education to Innovation

While higher education helps to cultivate a productive workforce and elevate the standard of living for a community, economic development and growth in developed countries have been increasingly driven by innovation, which goes beyond education. In line with the arguments of economist Joseph Schumpeter and recently Michael Porter at Harvard University, continual innovation is paramount for any business or region to succeed economically. Similarly, Paul Romer at New York University argues that technological change is the driver for economic growth at the national level. Innovation differs from invention in that innovation refers to the use of a new idea or product, whereas invention refers more directly to the creation of the idea or product itself.

The economic significance of innovation on today's economy is widely recognized by economists and government officials. The high-tech company Apple has become the world's most valuable company not because of its volume of production. Apple has never made any of its iPods, iPhones or iPads. Instead the company boasts its innovative ideas and better product designs, thanks largely to its founder Steve Jobs. Similarly, much of the economic success in Silicon Valley and Austin is attributable to development in innovative activity and technological change.

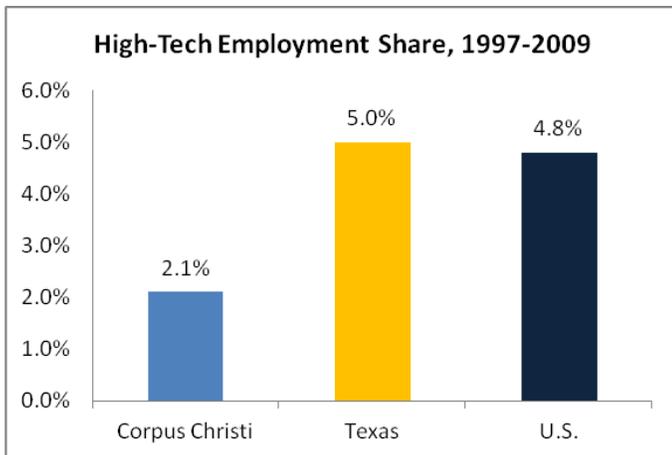
Regional Innovative Capacity

How does Corpus Christi stack up in innovation? To address this question, let's take a look at the Innovation Index that Indiana University has developed as a project funded by the U.S. Economic Development Administration. This index provides some perspective on a region's innovation capacity and how well its economy translates its innovative capacity into productive activity. The key dimensions of the index are measures of human capital (education, knowledge-based and tech occupations, etc.), economic dynamics (broadband density, business turnover and business size, etc.), and employment characteristics (growth in tech jobs and patents, etc.). The Innovation Index for Corpus Christi is 78.6 in 2011. As compared to the reading of 93.5 for the state of Texas and the national benchmark of 100, Corpus Christi fares poorly in this measure of innovation capacity.

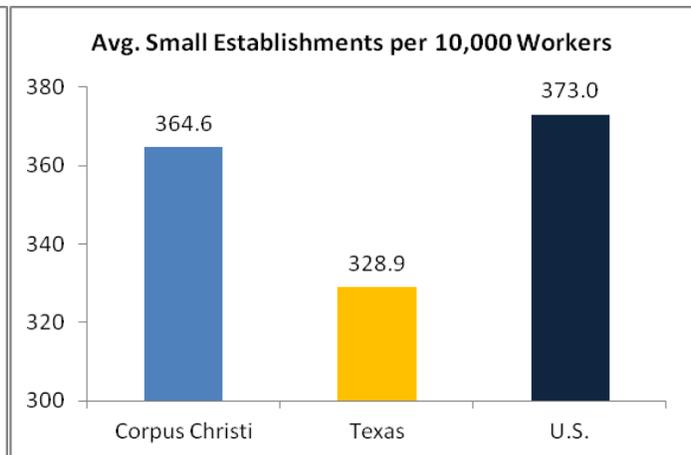


The research team for developing the Innovation Index database has also identified the following characteristics that have significant impacts on output per worker as a measure of regional competitiveness:

1. Percent of population with some college or an associate's degree
2. Change in high-tech employment share
3. Average small establishments per 10,000 workers
4. Population growth rate for ages 25-44



Source: Indiana Business Research Center.



Source: Indiana Business Research Center.

High-tech employment, which tends to require a college degree, represents a highly skilled and specialized workforce that involves in innovative activity. The share of local employment in the high-tech category is 2.1 percent, which is less than half of the state or national average. As with the national average, the share of local high-tech employment has declined over time.

The presence of small businesses is another factor for innovative activity. Small businesses with fewer than 20 employees tend to be more flexible and adaptive to new ideas and technology than large corporations. The share of small businesses in Corpus Christi is comparable to the national average.

Finally, a high population growth rate for younger working age individuals suggests that a region is attractive to new residents, who are likely to add to the innovative base and to launch new businesses. Along with a net out-migration of local residents, the share of young adult population in Coropus Chrsiti reduced by 1.1 percent between 1997 and 2009, as compared to a 0.9 percent increase for Texas.

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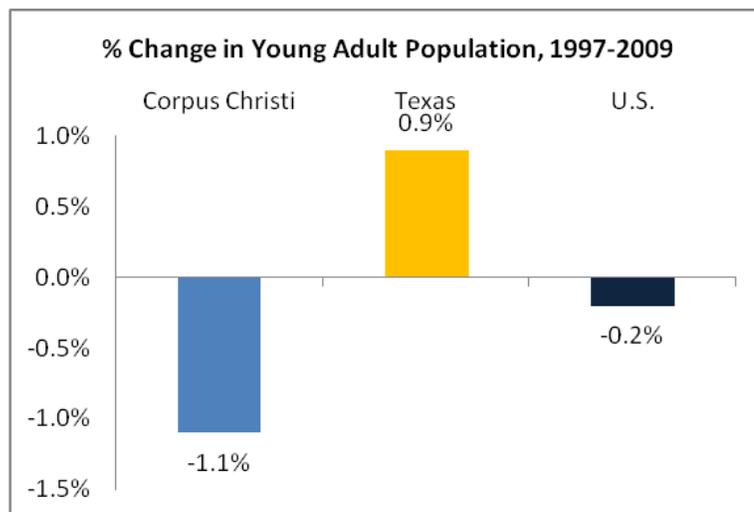
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(cont'd)



Source: Indiana Business Research Center.

Those comparative data can help community leaders to find ways to build economic prosperity for the region. As a case in point, given the emphasis of innovation in determining regional competitiveness, the City of Corpus Christi and the University together established the Coastal Bend Business Innovation Center in 2009. This center has become an incubator for nearly 30 small startups, most of which involve in technology or knowledge-based industries.