



## Economic Pulse

### Payoffs of Advanced Training and Resource Curse

by Jim Lee

#### ABSTRACT:

In recent years, the unemployment rate of local residents with some advanced training or an associate's degree has been below the unemployment rate for a bachelor's degree. The relative payoff of postsecondary education less than a four-year college degree is heightened by recent growth in shale oil and gas production across South Texas. Such anomalies in the local labor market reflect the so-called resource curse concerning the impact of an oil boom on the local community.

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The payoff of postsecondary education beyond high school is well recognized: Individuals with a college degree or professional training typically earn more throughout their lifetimes than those with only high school education or less. Highly educated or well-trained individuals also tend to have a better quality of life as they have a wider choice of employment opportunity. Because they are generally more competitive in the labor market, they are also less likely to face long-term unemployment. For these reasons, a city with a more educated workforce tends to experience stronger long-term economic growth.

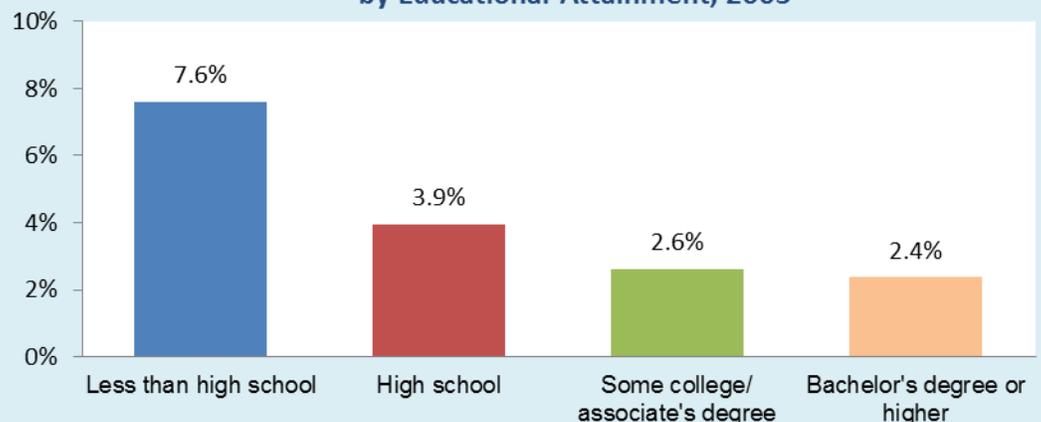
The positive impact of a higher level of education on a job seeker's job prospect has been historically true for Corpus Christi and the nation as a whole. **Chart 1** shows the unemployment rates of Corpus Christi resi-

dents aged 25 to 64 by educational attainment, according to the U.S. Census' 2005 *American Community Survey*. In 2005, the city's unemployment rate was 5.6%, on a par with the nationwide unemployment rate of 5.4%.

#### Unemployment by Education Level

Disparities among the four population groups are striking. The average unemployment rate for local residents with less than high school education was 7.6%, nearly twice as high as their counterparts with a high-school diploma. The unemployment rate reduced further to about 2.5%—less than half of Corpus Christi's overall unemployment—for college graduates as well as those with an associate degree. These local labor market data confirm that college education can significantly reduce the risk of being unemployed for a typical resident.

Chart 1: Corpus Christi Unemployment Rates by Educational Attainment, 2005



Source: 2005 American Community Survey.

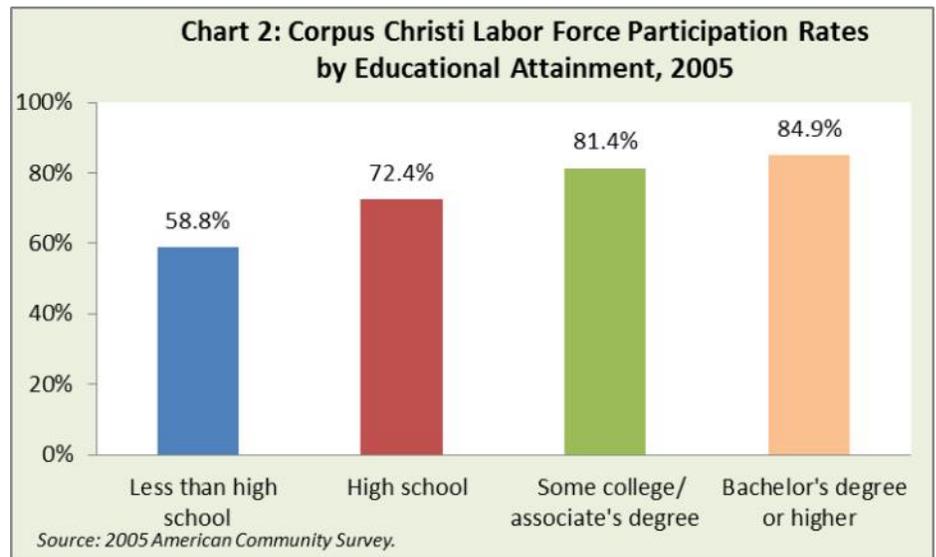
## Labor Force Participation

Education also benefits society as a whole with better utilization of available resources, particularly labor resources. Because people who are more educated are more employable, they are also more likely to enter and stay in the labor force. People do not belong to the labor force include those who do not actively seek employment, such as homemakers and students. The labor force participation rate is the share of the labor force in a particular adult population group.

**Chart 2** compares the labor force participation rates of the Corpus Christi population with different education levels. The overall labor force participation rate of Corpus Christi residents was 76 percent in 2005, slightly lower than the national average of 78 percent. As for the unemployment status, participation in the labor force varied widely among residents with different levels of educational attainment. Nearly 85 percent of local college graduates were employed or looking for work, as compared to less than 60 percent for people with less than a high school education. This relationship between labor force participation and educational attainment also holds at the national level, highlighting the positive impact of higher education to society in terms of resource utilization as well as its citizens' quality of life.

## Anomaly or New Trend?

Yet an anomaly appears to have developed in the local labor market during recent years. The overall unemployment rate of Corpus Christi in 2013 was 5.5 percent, compared with 7.0 percent nationwide. The much lower unemployment level locally was a result of relatively strong employment and economic growth in South Texas and much of the state since 2011, while the nation as a whole has continued to struggle with a so-called jobless recovery following the 2007-2009 recession.



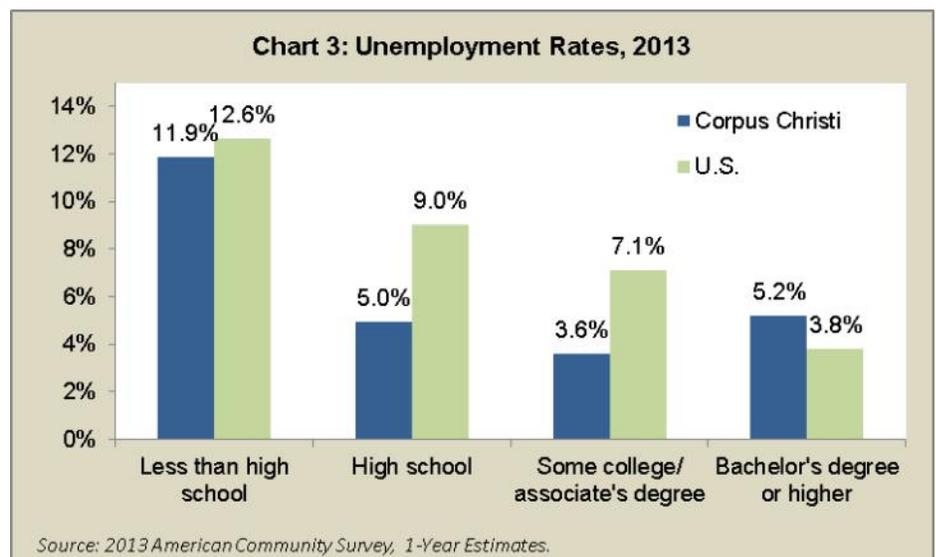
The impact of shale oil and gas production on the Texas economy is obvious. Corpus Christi has benefited from the drilling activity in the Eagle Ford Shale formation and the expanding local oil and gas industry. Employment in the local oil and gas extraction and support activities grew more than 15 percent in 2013, about five times as much as the 3 percent growth in overall local employment.

While the city of Corpus Christi enjoyed an overall unemployment rate 2.5 percentage points below the national average, local residents with a college degree faced a more bleak employment outlook than their counterparts in other parts of the nation. **Chart 3** compares the local unemployment rates with the U.S. averages for 2013. As for the other charts, the data are broken down by educational

attainment levels. While the national data reveal a pattern similar to that in **Chart 1**, the relationship between educational attainment and unemployment appears to have broken down.

In 2013, Corpus Christi residents with less than a high school education faced a double-digit unemployment rate as high as that for their counterparts in the rest of the nation. However, unemployment among local high school graduates at 5 percent was lower than the level faced by local college graduates. Local residents with an associate's degree faced the lowest unemployment rate of 3.6 percent, which was even lower than the corresponding rate for college graduates in the rest of the nation.

Are those 2013 data a historical aberration or the making of a new trend? **Chart 4** plots the trends of



corresponding local unemployment rates since 2007. The annual data are based on *American Community Surveys'* 3-year average estimates. According to the chart, the unemployment rates of the local labor force of different education levels moved in the same direction before 2011. Since then, the unemployment rate of local residents with a bachelor's degree or higher has continued to rise, while

no more than the equivalent of an associate's degree.

As the recent oil boom has increasingly attracted the local workforce to oil and gas production activities, some other local industries, such as bus transportation, have begun to face labor shortages. As a result, the wages for those industries have also risen along with those in the oil and gas industry. **Table 1** lists the median

the nation stems from employees who had not completed a high school education. Relative to the nation, college degree holders in Corpus Christi are not faring as well as local residents with some college or an associate's degree. Local residents with a bachelor's degree or higher earned 7 percent to 8 percent less their counterparts in the rest of the nation. With the lowest unemployment rate, associate's degree holders earned as much as the national average.

### Resource Curse

The latest local labor market data reveal the *relative* economic benefits of advanced training for professional or craft skills, or an associate's degree. While how long the return on those types of postsecondary training relative to a bachelor's degree will last remains to be seen, the local employment conditions observed recently would likely continue as long as the Eagle Ford Shale activity continues. Put differently, the competitive advantage of advanced training less than a college degree would diminish with the end of the current oil boom.

Either way, the recent anomalies are signs of the making of what economists refer to as a "resource curse": When increases in oil and gas production raise the wages of low or semi-skilled workers more than those of highly skilled workers, there is less incentive for local residents to invest in education. Moreover, while many job positions are probably filled by migrant workers as opposed to local residents, the environmental impacts of oil and gas extraction may cause highly skilled workers—who are more likely to demand more environmental

their counterparts with less education have faced declining unemployment. The job prospects for high school graduates have improved the most. Their average unemployment rate reduced from over 10 percent in 2010 to below 5 percent by 2013.

### Labor Market Anomalies

What accounts for such extraordinary labor market conditions locally? One obvious interpretation stems from the recent development in the regional shale oil and gas production, which has spurred employment in oil fields as well as oil and gas support services, such as truck and pipeline transportation, and construction. The majority of those newly created jobs in the area do not require a college degree, but rather craft or other skills training beyond high school. Some jobs, such as construction laborers, require no skills at all. It is well publicized in the media that oilfield workers today earn as much as six-figure annual incomes. Many of those jobs require training

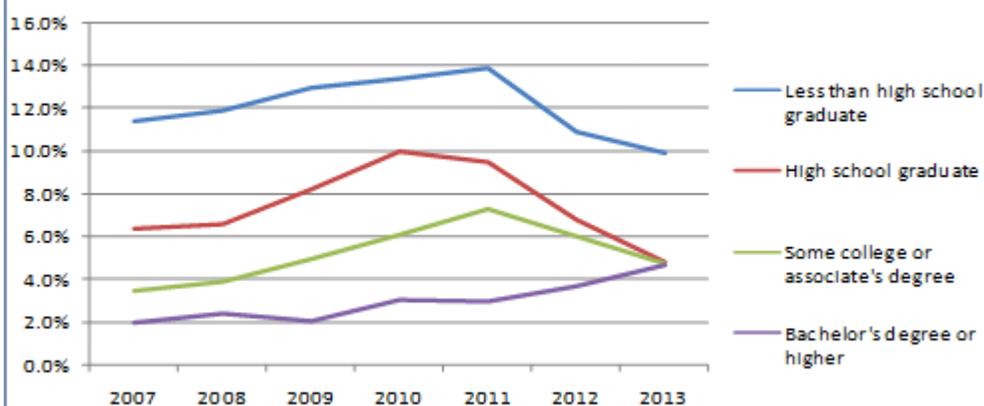
earnings of Corpus Christi residents in 2013 by educational attainment. The return on higher education remains obvious: Earnings tended to be higher for individuals with a higher education level. A bachelor's degree would bring a lifetime total of nearly \$1 million in the so-called wage premium. A typical resident with a graduate or professional degree would earn another \$600,000 more.

The median earnings of Corpus Christi residents were 14 percent below the median earnings nationwide. Much of this local income gap with

	<b>Corpus Christi</b>	<b>% of US</b>
<b>Population 25 years and over</b>	<b>\$30,731</b>	<b>86%</b>
Less than high school graduate	\$17,164	85%
High school graduate	\$25,784	94%
Some college or associate's degree	\$32,033	99%
Bachelor's degree	\$46,566	93%
Graduate or professional degree	\$60,487	92%

Source: 2013 American Community Survey 1-Year Estimates.

**Chart 4: Corpus Christi Unemployment Trends By Educational Attainment**



Source: American Community Survey, 3-Year Estimates, various issues; Peter Kwass Consulting.



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6300 Ocean Drive, Unit 5808

Texas A&M University-Corpus Christi  
Texas, USA 78412