



Corpus Christi and Coastal Bend Economic Pulse

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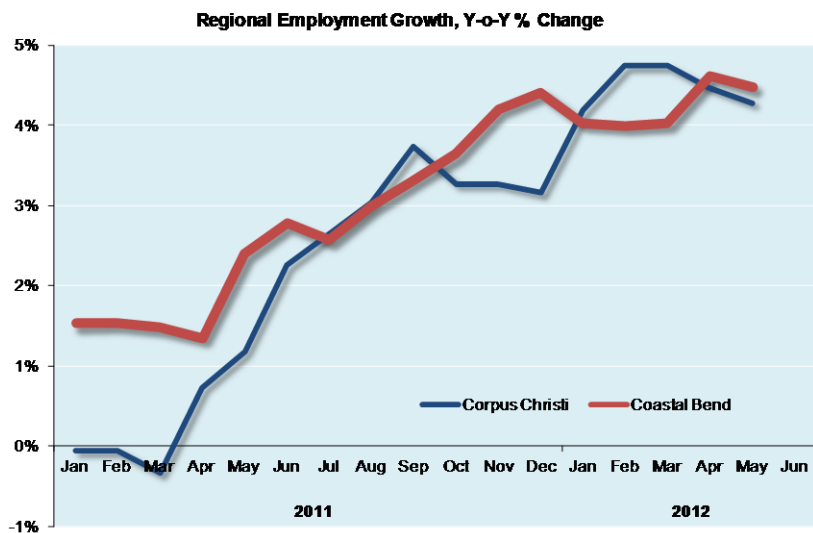
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Coastal Bend Regional Growth: How Much is Regional?

By Jim Lee

This article is the second part of the study series that looks at the extent to which the Eagle Ford Shale oil and gas drilling activity weighs on the local economies in the Coastal Bend. The extent of the impact depends on the relative economic strengths, or comparative advantages, of the local communities. Recent economic growth was rather uneven across counties. A shift-share analysis indicates that the regional economic impact of the Eagle Ford Shale is also widespread across different industries, reflecting the region's unique infrastructure and diversified workforce. For all industries together, local-specific factors accounted for more than one-third of regional employment growth in 2011.

South Texas is experiencing rapid economic growth. Since early 2011, employment in the Coastal Bend has expanded at an accelerated pace, reaching an average annual rate of 4.5% so far this year. The area's current employment growth is unprecedented by historical standards. Clearly, rapid development in the local economy is attributable to the oil and gas drilling activity in the Eagle Ford Shale region, which has garnered much public attention. To guide future planning for community leaders and other stakeholders, it is helpful to understand the current impact of the booming oil and gas industry on the local economy.



This article is the second part of the series that sheds light on the local economic activities associated with developments in the Eagle Ford Shale. There are a few questions this article attempts to address: What economic activities in the Coastal Bend area have been affected the most? What are the strengths of the Coastal Bend vis-à-vis other Texas regions in reaping the economic benefits of the Eagle Ford Shale development? How does the economic impact differ across the local communities in this region?

Even though only three out of the 12 counties that make up the Coastal Bend are part of the Eagle Ford Shale drilling area, the spillover effect of the booming oil and gas industry on various Coastal Bend communities is now apparent. The University of Texas at San Antonio (UTSA) has released a series of reports on the economic impact of the Eagle Ford Shale. In its last update released in May 2012, the study includes estimates for Nueces and San Patricio counties, in addition to the three Coastal Bend counties on the Eagle Ford Shale play—Bee, Live Oak and McMullen. In 2011, those three Coastal Bend counties together accounted for 13% of the total 1,649 oil and gas wells operating in the Eagle Ford Shale.

According to UTSA’s estimates for 2011, the Eagle Ford Shale generated a **total** employment impact of over 47,000 jobs on the its 20-county study area, which consists of the 14 counties of the Eagle Ford Shale drilling area and 6 surrounding counties. The table below lists the top 10 industries that generate the most jobs as a result of Eagle Ford drilling activity. Not surprisingly, topping the list are oil and gas drilling and extraction, along with their support activities. The list, however, also underscores the impact of the oil and gas production on a wide range of businesses, from food services and trade to legal and financial services.

In terms of absolute job numbers, however, the impact is much greater for other Coastal Bend communities, particularly those of the Corpus Christi metro area, than those counties of the Eagle Ford Shale. For Nueces and San Patricio counties together, the estimated impact was 4,397 jobs, according to the latest UTSA report.

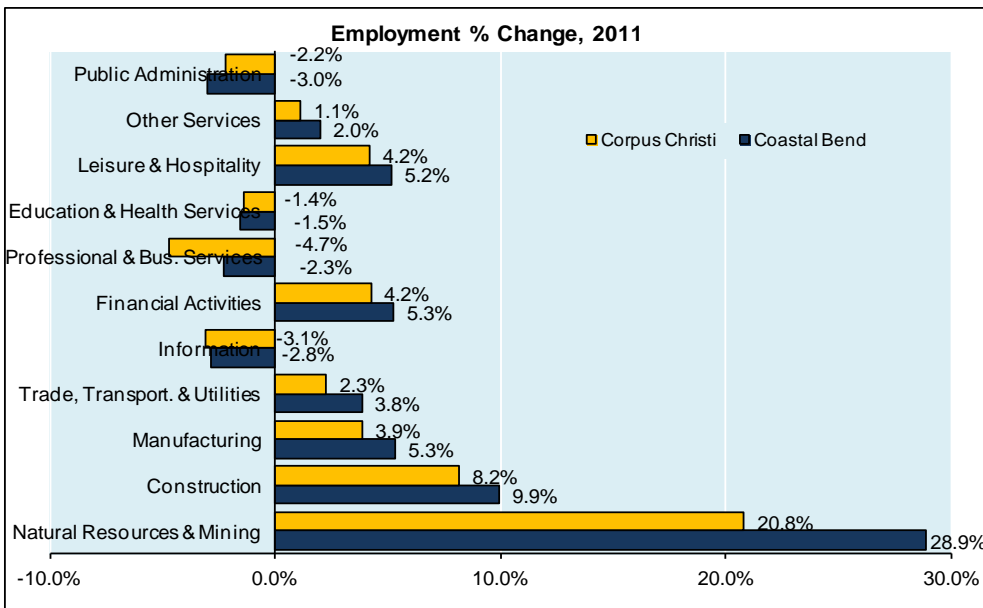
In 2011, Corpus Christi indeed added 3,304 jobs, or nearly 2%, while the Coastal Bend region gained 9,938 jobs, or 3.4%. By comparison, employment growth in 2011 was 1.8% statewide, and 0.9% nationwide.

Eagle Ford Shale Total Employment Impact Estimates for 2011

Industry:	Jobs	% of Impact
Drilling oil and gas wells	7,581	16%
Construction of other new nonresidential structures	5,099	11%
Extraction of oil and natural gas	2,407	5%
Support activities for oil and gas operations	2,169	5%
Food services and drinking places	1,759	4%
Truck transportation	1,050	2%
Non-depository credit intermediation	879	2%
Legal services	858	2%
Wholesale trade businesses	817	2%
Maintenance and repair of nonresidential structures	776	2%

Source: UTSA, May 2012.

Thriving Economic Sectors

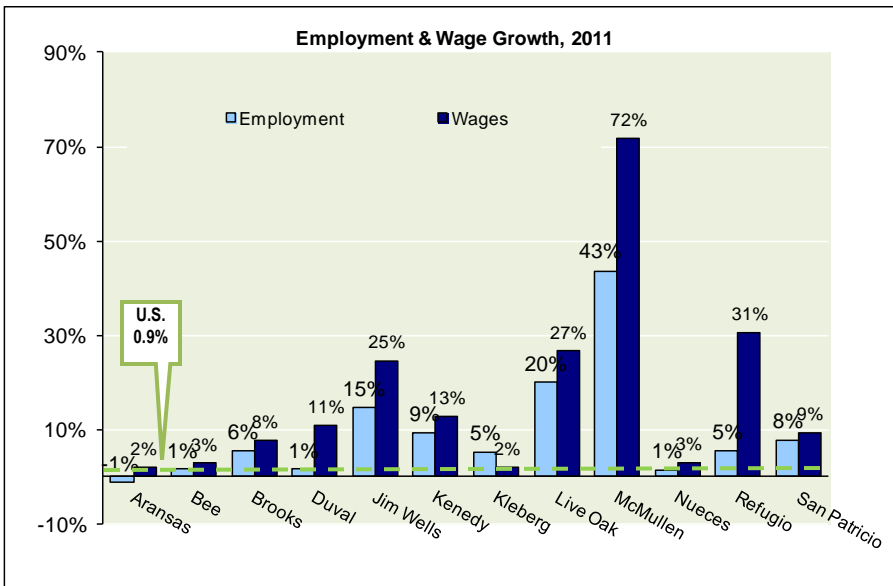


What has driven the observed employment growth in the Coastal Bend? The accompanying bar chart shows the percentage change of employment by sector in the Corpus Christi metro area as well as in the Coastal Bend as a whole during 2011. The mining sector, including oil and gas extraction, was the leader in job creation, followed by construction, hospitality and manufacturing. For most sectors, employment growth was stronger outside the Corpus Christi metro area than within the area.

What Has Driven Local Growth?

The column chart on the next page breaks down the regional employment growth rates by county. Reflecting the impact of the Eagle Ford Shale, McMullen and Live Oak counties added proportionally the most jobs in 2011. Bee County, which had only two operating gas wells, did not fare as well as Jim Wells County, which is south of Live Oak County. Jim Wells County has a workforce less than 15% of that in Nueces County, but it added the most jobs (2,553) among all Coastal Bend counties. For most counties, the growth rate of wage earnings outpaced the growth rate of employment, meaning that the newly created jobs tended to pay relatively more. Overall, the chart shows a considerable diversity in economic performance across Coastal Bend counties.

What explains the varying growth rates of different local industries? This question can be answered with a shift-share analysis, which divides employment growth in local industries into three exclusive components: national, industry, and local-specific factors. The national factor refers to the contribution of overall growth in the national economy to local employment growth. The industry-specific factor captures the change in a local industry that is attributable to the change of that industry nationally. The local-specific factor reflects the extent to which factors unique to the local area contribute to the employment change of a particular local industry.



The third employment factor points to industries in the local area that outperform the corresponding industries nationwide. This is also the key to identifying a region’s economic strengths or comparative advantages.

In a shift-share analysis, the change of local employment in industry *i* from period *t-1* to period *t* is the sum of three components: [NATIONAL FACTOR] + [INDUSTRY FACTOR] + [LOCAL FACTOR]. Next, we can express local employment in industry *i* during period *t* as $LOCAL_t^i$, the corresponding nationwide employment in industry *i* as US_t^i , and total employment in the U.S. as US_t . The formulas for the

three shift-share components can then be written as: $NATIONAL\ FACTOR = LOCAL_{t-1}^i \times (US_t / US_{t-1})$, $INDUSTRY\ FACTOR = LOCAL_{t-1}^i \times (US_t^i / US_{t-1}^i) - [NATIONAL\ FACTOR]$, and $LOCAL\ FACTOR = LOCAL_t^i / LOCAL_{t-1}^i - (US_t^i / US_{t-1}^i)$. Considering all industries together (including both leading and lagging industries), local factors accounted for 35% of job growth in the Coastal Bend in 2011, national factors another 50%, and industry-specific factors the rest of 15%.

The table below shows those local industries that outperformed their counterparts at the national level in 2011. All industries on the list have a ratio greater than one in the fifth column, which shows the local employment growth rates of individual industries divided by the corresponding industry growth rates nationwide. The fifth to seventh columns show the respective shares of the national, industry, and local-specific factors for employment growth in the Coastal Bend. Those components sum up to 100%. Clearly, local factors tend to contribute the most to the recent growth of those local industries. The majority of those industries have also been identified by UTSA as those mostly affected by the Eagle Ford Shale drilling activity. Notably, developments in the region accounted for over 80% of expansion in truck, pipeline and other ground transportation in 2011.

Shift-Share Analysis for Coastal Bend Employment Growth in 2011

Industry	Local Change		Local/ National	National Share	Industry Share	Local Share	Hourly Wage
	Jobs	%					
Mining							
Oil and Gas Extraction	145	10%	1.3	13%	67%	20%	\$35.5
Mining (except Oil and Gas)	27	13%	2.6	11%	26%	63%	\$23.2
Support Activities for Mining	3258	41%	2.1	3%	44%	53%	\$40.1
Manufacturing							
Fabricated Metal Product Manufacturing	157	12%	2.5	11%	29%	59%	\$23.2
Machinery Manufacturing	151	20%	3.0	7%	26%	67%	\$29.7
Transportation Equipment Manufacturing	83	11%	2.3	12%	31%	57%	\$24.3
Trade, Transportation and Utilities							
Merchant Wholesalers Durable Goods	260	6%	3.3	22%	8%	70%	\$28.2
Electronic Markets and Agents/Brokers	62	25%	7.1	5%	8%	85%	\$23.6
Motor Vehicle and Parts Dealers	186	6%	1.9	24%	30%	47%	\$20.4
Nonstore Retailers	9	7%	2.0	22%	33%	44%	\$14.4
Truck Transportation	480	22%	5.8	6%	11%	83%	\$23.4
Transit and Ground Transportation	249	73%	21.9	2%	3%	96%	\$14.0
Pipeline Transportation	106	38%	16.0	4%	3%	93%	\$41.9
Warehousing and Storage	50	14%	4.7	10%	12%	78%	\$28.0
Financial Activities							
Financial Investment	16	4%	1.7	31%	25%	44%	\$44.6
Education & Health Services							
Ambulatory Health Care Services	817	4%	1.5	32%	36%	32%	\$15.5
Leisure and Hospitality							
Accommodation	103	3%	1.4	41%	31%	28%	\$9.2
Food Services and Drinking Places	908	4%	1.8	31%	25%	44%	\$6.9
Other Services							
Repair and Maintenance	230	10%	3.8	13%	13%	74%	\$19.8

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Economic Pulse

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(continued)

According to the shift-share analysis, exceptional growth occurred in industries of almost all broad economic sectors, except construction and information. This reflects the diversity of the regional economy and its workforce. In particular, the oil and gas production boom has spurred demand for ground transportation as well as additional production activity at the area's refineries and port facilities. While the manufacturing sector has long experienced a declining trend, the Eagle Ford Shale has revived the manufacturing of machinery and transportation equipment in support of the growing oil and gas industry. The last column of the shift-share table lists the average hourly wage rates by industry. With a few exceptions, jobs in those fast growing industries also tended to pay better than the area-wide average of \$19.70.

Oil and Gas Wells in 2011

	Gas	Oil	Total
Bee	2	0	2
Live Oak	26	58	84
McMullen	52	80	132
Coastal Bend Total	90	138	218
Eagle Ford Total	656	993	1,649
% Regional Total	12%	14%	13%

Source: UTSA, May 2012.