FEDERAL RESERVE BANK OF DALLAS HOUSTON BRANCH March 1999

Houston Business

A Perspective on the Houston Economy

Weak Commodity Prices Take Toll on Gulf Coast Economy

Some regions have proved more susceptible to the global slowdown than others. This is particularly true of recent economic performance along the Texas and Louisiana Gulf Coast.

Since the onset of global financial turmoil in mid-1997, U.S. economic growth has been shaped by two conflicting trends. One has been a slowdown in world economic growth that has brought about the collapse of a variety of commodity prices, including oil, cotton, coffee, copper, soybeans and gold. Slower growth of U.S. exports and a flood of cheap imports have acted as a brake on U.S. growth.

Running counter to this trend has been a significant decline in U.S. long-term interest rates, the result of the United States' serving as a safe haven from financial problems abroad, reduced inflationary expectations and Federal Reserve monetary policy. The 30-year Treasury bond, for example, yielded 6.5 percent in July 1997, briefly dipped under 5 percent in October 1998 and currently stands at 5.6 percent. Lower rates have been a powerful stimulus, joining rising income and gains from the stock market to fuel demand for housing, autos and other durable goods.

In the second half of 1998, the U.S. economy seemed to shrug off problems in the rest of the world. GDP grew in the third and fourth quarters at annual rates of 3.7 percent and 6.1 percent, respectively. Trade losses, measured by declining net exports, disappeared, while consumer spending and a revival of capital spending by business kept the economy roaring.

Economic growth does not occur evenly across the United States, however, and some regions have proved more susceptible to the global slowdown than others. This is particularly true of recent economic performance along the Texas and Louisiana Gulf Coast, where growth ran counter to national trends and slowed sharply in the second half of 1998. This is a commodity-driven region, tied to agriculture, oil, natural gas and petrochemicals.

DISTINCTIVE INDUSTRIAL STRUCTURE

The Texas and Louisiana Gulf Coast is one of the nation's most important industrial regions. Its industrial structure is distinctive, not just in comparison with the United States, but also with inland Texas and Louisiana cities. Table 1 shows how personal income was earned by industry in 1996 in 11 metropolitan areas on the Gulf Coast and 15 inland Texas and Louisiana cities. Values larger than 100 indicate unusual concentrations of economic activity in a region.

The values are location quotients, based on the distribution of income by industry. The location quotient is defined as $LQ_{ij} = (s_{ij}/s_{io}) \times 100$, where s_{ij} is the share of personal income earned in industry by inland or coastal region j, and s_{io} is the share of personal income earned in industry i throughout Texas and Louisiana. A value of 100 indicates that the share of industry i in region j is typical of Texas and Louisiana; a value greater than 100 indicates a larger than normal share.

The contrast between inland and coastal cities is predictable, but still striking. The Gulf Coast is strongly influenced by oil and gas, heavy construction, industrial machinery manufacturing, chemicals, oil refining, and pipeline and water transportation. The inland cities, in contrast, are wholesale trade and financial centers, with electrical machinery dominating the manufacturing sector.

Table 2 contrasts the 11 coastal cities' recent economic performance with that of the United States and of Texas and Louisiana as a whole, showing growth rates for wage and salary employment. Over the two years leading up to December 1998, total Gulf Coast employment outperformed the United States and trailed Texas and Louisiana by a narrow margin. However, by 1998—and especially during the last six months of 1998—the Gulf Coast lagged other regions, and total employment growth evaporated. The slowdown has not spared the two biggest cities on the Gulf Coast, Houston and New Orleans.

Table 2 shows that coastal mining employment, mostly oil and natural gas, has not fallen nearly as fast as inland areas. Offshore exploration in the Gulf of Mexico is mostly geared to natural gas, and this activity has held up much better than in oil basins. Coastal manufacturing employment in 1998 held up as well as in inland cities and better than across the United States because direct employment in capital-intensive chemicals and refining tends to be relatively stable over the business cycle.

CONSTRUCTION

The most striking difference in performance between the Gulf Coast economy and either the national or statewide economy is in construction. Over the second half of last year, construction employment grew at a 6.9-percent annual rate in the United States and at 4 percent in Texas and Louisiana, while on the Gulf Coast it declined by 1.7 percent. Although coastal construction has trailed throughout the last two years, the 1998 cool-off was dramatic.

Coastal construction behaves much differently from that of inland cities because of the large number of petrochemical and refining plants on the coast. Figure 1 compares construction employment from 1969 to 1998 in 11

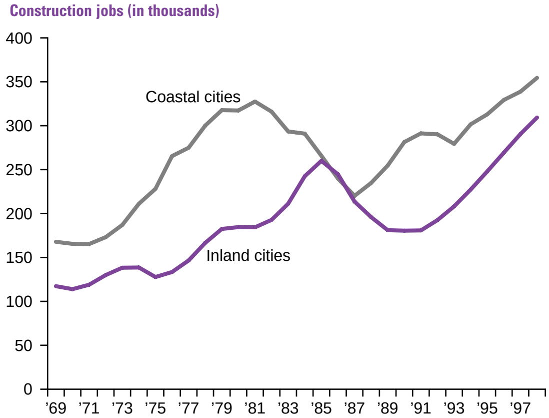
Table 1
Concentration of Economic Activity on the Gulf Coast

	Location quotients	
	Coastal	Inland
Agricultural services	69.7	43.6
Mining	152.0	48.1
Oil and gas	136.1	44.6
Construction	118.3	84.9
Heavy construction	166.3	48.7
Manufacturing	103.7	107.5
Durables	69.4	137.8
Industrial machinery	113.2	114.2
Electrical machinery	18.8	208.3
Nondurables	139.7	66.3
Chemicals	189.8	45.5
Refining	217.3	18.6
TCPU	102.8	96.8
Water transportation	220.3	1.4
Pipeline	115.7	6.2
Wholesale trade	98.6	115.2
Retail trade	85.6	103.2
FIRE	88.3	124.3
Services	104.5	103.9
Government	79.9	89.5

NOTES:
1. The 11 metro areas examined along the Gulf Coast are Baton Rouge, Beaumont–Port Arthur–Orange, Brazoria, Corpus Christi, Galveston, Houma–Thibodeaux, Houston, Lafayette, Lake Charles, New Orleans and Victoria.
2. The 15 inland cities are Abilene, Alexandria, Austin, Bryan–College Station, Dallas, Fort Worth–Arlington, Killeen–Temple, Longview–Marshall, Monroe, Sherman, Shreveport, Texarkana, Tyler, Waco and Wichita Falls.
3. TCPU is transportation, communications and public utilities; FIRE is finance, insurance and real estate.

SOURCE: U.S. Department of Commerce Bureau of Economic Analysis Regional Economic Information System.

Figure 1
Construction Employment in Coastal and Inland Cities from 1969 to 1998*



* See Table 1, notes 1 and 2 for listings of coastal and inland cities.

SOURCE: U.S. Department of Commerce Bureau of Economic Anaylsis Regional Economic Information System.

Texas and Louisana coastal cities with that of 15 inland cities. The combined population of these cities, coastal versus inland, was within 5 percent throughout the 29-year period covered in the figure. Construction employment, however, averaged 39.5 percent higher in the coastal cities than in the inland cities over the period and has ranged from 99 percent higher in 1976 to 2 percent lower in 1986. The difference between coastal and inland construction employment has shrunk every year since 1991, from 61 percent to 15 percent in 1998.

Refinery and petrochemical plant construction and maintenance greatly influence both the growth and cyclical behavior of coastal construction. In recent years, heavy construction on the Gulf Coast has been shaped by a huge boom in petrochemicals that peaked in 1991 and another expansion round that peaked in 1996. The trend in announced new projects has been downward since 1996, although particular cities such as Baton Rouge and Beaumont continue to benefit from large expansions, either planned or underway.

Table 2 shows employment growth rates for a combination of five downstream cities that are dominated by chemicals and refining, with relatively little oil exploration or services. Construction was flat in these cities in 1998 and declined sharply in the second half. An inability to export, surplus capacity and poor profits are expected to keep Gulf Coast chemical and refining construction flat or declining for the next one or two years.

Table 2
Annualized Employment Growth Rates, December 1996–December 1998

	Total	Mining	Construction	Manufacturing	TCPU	Trade	FIRE	Services	Government
United States									
6 Month	2.2	–8.0	6.9	–2.4	2.8	4.5	3.4	3.4	2.1
1 Year	2.3	–6.3	5.9	–1.2	2.8	2.1	3.6	3.6	1.7
2 Year	2.5	–2.4	5.2	.1	2.7	2.1	3.3	4.3	1.5
Texas and Louisiana									
6 Month	1.5	–6.6	4.0	.1	2.2	.9	1.8	2.8	1.7
1 Year	2.4	–3.5	5.3	0	4.3	2.0	3.0	3.5	1.8
2 Year	3.2	1.2	5.5	1.1	4.7	2.4	3.5	5.0	1.8
Gulf Coast									
6 Month	0	–2.6	–1.7	.1	.7	.8	1.3	1.3	3.0
1 Year	2.1	0.3	4.4	1.8	3.8	4.6	3.1	4.4	2.5
2 Year	2.9	3.0	3.9	2.6	3.9	3.4	3.1	4.9	2.3
Houston and New Orleans									
6 Month	–.5	–1.6	1.3	–.5	–.1	0	1.9	1.0	3.3
1 Year	2.1	1.9	6.7	2.1	3.9	5.3	4.2	5.0	2.8
2 Year	3.0	2.9	4.7	3.4	4.2	3.6	3.9	5.4	2.5
Five downstream cities									
6 Month	1.3	–3.8	–6.9	1.3	4.1	3.2	–.8	1.0	3.3
1 Year	2.0	.2	0	1.7	2.1	3.2	.7	1.9	1.9
2 Year	2.3	2.2	1.2	1.3	.4	3.2	1.5	3.5	1.3

NOTES:
1. See Table 1, notes 1 and 3 for Gulf Coast cities and definitions.
2. Downstream cities are Beaumont, Brazoria, Corpus Christi, Baton Rouge and Lake Charles.
3. Employment data for 1997 and early 1998 are subject to revision in March 1999, but the percentage changes reported for the last six months of 1998 should remain unchanged.

SOURCE: Bureau of Labor Statistics.

Beige Book responses point to little recent change in the Houston economy. Except for respondents in energy, chemicals and agriculture, the overall picture remains positive. Job growth data show the Houston economy cooling quickly, but it has leveled off at such an altitude that conditions still look great to most Houstonians.

RETAIL SALES

Retailers remain upbeat, reporting increases over last year. Furniture and home appliances show the strongest sales, and sporting goods have sold well because the weather has been good for outside activities. Clothing generally was strong, except for slow sales in some women's apparel lines.

OIL AND NATURAL GAS PRICES

Crude oil prices stayed between $11 and $13 over the past six weeks, with little news to move the market beyond the weather and Iraqi tensions. Heating oil prices were hit hard in mid-February by very high inventories, continued warm weather and the approaching end of the heating season. These low product prices dragged down refiners' profit margins from already low levels and prompted several refiners to pull capacity off-line until profits improve. Both gasoline and heating oil prices moved up by 2 to 3 cents per gallon in response to these output reductions.

Natural gas prices are soft for reasons similar to those for heating oil—high inventories and the approaching spring. Gas prices have declined slowly over the past six weeks, from $1.85 to $1.65 per thousand cubic feet.

OIL SERVICES AND MACHINERY

The U.S. rig count has fallen in 15 of the last 16 weeks and now stands 63 rigs below the previous all-time low of 596 set in 1992. Baker Hughes is forecasting that U.S. drilling will fall below 500 working rigs before it stabilizes. Every region of the world except Latin America and the Middle East is now at an all-time low drilling level.

Oil-service activity continues to fall along with the rig count, and oil and gas machinery manufacturing is falling even faster. Stacked rigs provide a quick and easy source of spare parts for those rigs that are still at work. Layoffs are widespread.

PETROCHEMICALS

1999 opened with a flurry of announced price increases and some inventory tightening, but these actions do not signal a fundamental change in the industry outlook. As an example, ethylene inventories fell sharply, operators tried to raise prices and margins improved by 1 or 2 cents. However, this improvement was driven by efforts to control high inventories and some extended maintenance outages; oversupply is expected to resume in the second quarter and continue into 2000.

BANKING AND FINANCE

The first two months of 1999 have been good ones for local bankers, with auto sales, home equity refinancing and deposit growth showing strength. Credit quality and delinquency rates remain stable. Respondents are upbeat about the economy except for the energy situation and some problems in agriculture.

REAL ESTATE

New home sales remain at historically high levels but continue to cool off relative to 1997 and 1998 levels. Existing home sales are still very strong, driven partly by employee relocations as energy companies consolidate operations into Houston. There is no inventory of new homes on the ground, since builders remain in a catch-up phase with past sales; the inventory of existing homes through the multiple listing services is very low.

Looking forward, slower job growth in 1999 will mean some pain for class A apartments, which will be overbuilt, and for some class B apartments, which will have to compete with incentives offered by class A owners. Office rents have already leveled off, and layoffs and reductions could put modest downward pressure on office rents this year.

For more information, contact Bill Gilmer at (713) 652-1546 or bill.gilmer@dal.frb.org.

For a copy of this publication, write to Bill Gilmer, Houston Branch,
Federal Reserve Bank of Dallas, P.O. Box 2578, Houston, TX 77252.

This publication is available on the Internet at www.dallasfed.org.