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Houston Less Vulnerable Than Dallas-Fort Worth to Impact of Recession

By Bronwyn Brock

During the 1970's, Texas acquired the reputation of being one of the more prosperous states in the country. Not only was growth in its income and employment high, but the state appeared less susceptible to the forces that produced the economic recessions of the decade. Houston and Dallas-Fort Worth, the largest metropolitan areas in Texas, were major centers of the state's exceptional growth. Between 1962 and 1980, employment increased at an average annual rate of 5.4 percent in Houston and 4.8 percent in Dallas-Fort Worth. Employment growth in the nation as a whole averaged 2.8 percent over this period.

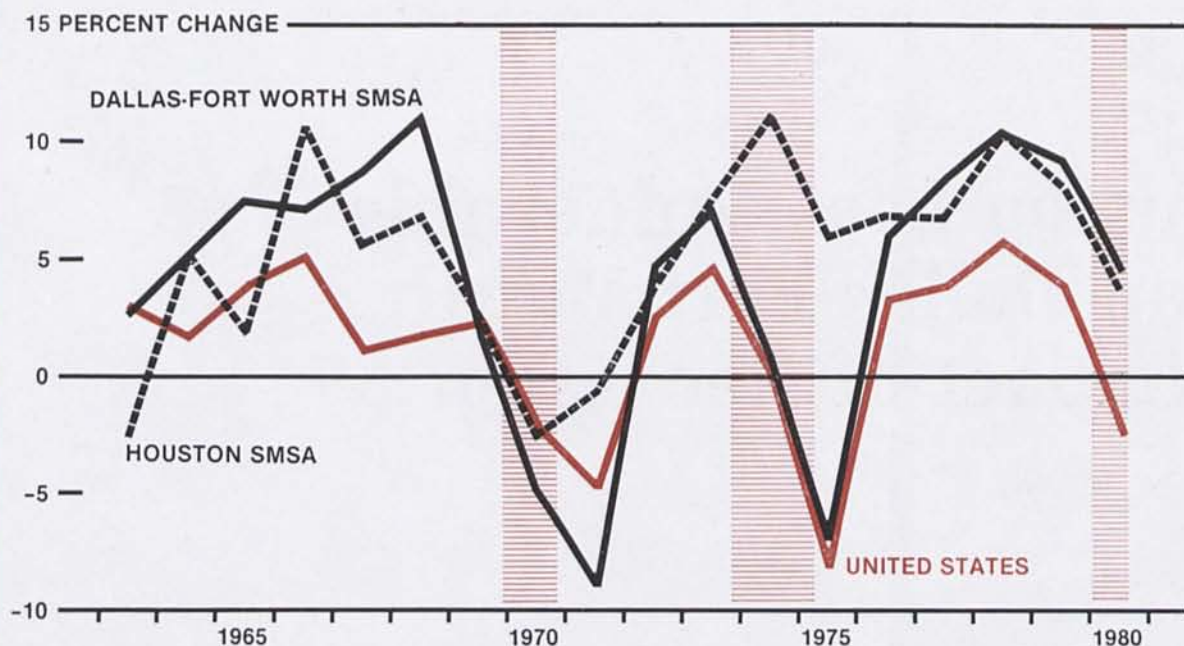
In each of the past five years, industrial growth in the two standard metropolitan statistical areas (SMSAs) has been about equal.¹ Over the past 20 years, however, such year-by-year matching of growth rates has been unusual. For goods-producing industries, larger employment declines in Dallas-Fort Worth during the major recessions of the 1970's accounted for much of the difference in the average growth rates of the two areas. In the 1969-

70 recession, employment in the goods-producing industries dropped 5 percent in Dallas-Fort Worth and 3 percent in Houston. The difference was even more pronounced in the 1973-75 slump, when employment in these industries fell 6 percent in Dallas-Fort Worth but rose 18 percent in Houston.

The distribution of employment across the durable goods manufacturing industries in these two SMSAs explains much of the performance of their economies in the recessions of the 1970's. In Dallas-Fort Worth the electric and electronic equipment industry and the transportation equipment industry are the two largest employers in durable goods manufacturing. The decline in Federal purchases of defense goods produced by these industries was a major factor in the steep fall in employment in the Dallas-Fort Worth area in the 1969-70 recession. Most firms in Houston's two largest durable goods manufacturing industries, nonelectrical machinery and fabricated metal products, are suppliers to the oil and gas industries. The drilling boom stimulated by rises in oil prices, following the OPEC (Organization of Petroleum Exporting Countries) embargo, supported employment growth in the Houston area in the economic recession of 1973-75. The relatively large proportion of employment in mining, which includes oil and gas exploration and production, also boosted the Houston economy in this period.

1. As designated by the U.S. Bureau of the Census, the Dallas-Fort Worth SMSA includes Dallas and Tarrant Counties plus Collin, Denton, Ellis, Hood, Johnson, Kaufman, Parker, Rockwall, and Wise Counties. The Houston SMSA includes Harris County plus Brazoria, Fort Bend, Liberty, Montgomery, and Waller Counties.

Total Employment in Goods-Producing Industries



NOTE: Shaded areas indicate economic recessions as dated by the National Bureau of Economic Research.

SOURCES: North Central Texas Council of Governments.
 U.S. Department of Commerce, Bureau of Economic Analysis.
 U.S. Department of Commerce, Bureau of the Census.
 U.S. Department of Labor, Bureau of Labor Statistics.

Defense industries in Dallas-Fort Worth expanded in the 1960's . . .

The national economy began and ended the 1960's in recession. The intervening years were marked by high rates of growth for output and employment. In the last half of the decade, the stimulus of rising Federal expenditures for defense plus high levels of capital investment by business led to full utilization of the country's productive capacity and labor resources.

The growth of employment in Dallas-Fort Worth in the 1960's was centered in manufacturing. The number of workers in manufacturing in this SMSA rose 61 percent in 1962-69. Federal purchases of defense supplies stimulated much of this growth. In 1967 the Federal Government purchased one-third of the output of the manufacturing sector in the North Central Texas region, which includes the Dallas-Fort Worth SMSA. The industries most affected were transportation equipment and elec-

tric and electronic equipment. During the 1960's, these two industries accounted for about 7 percent and 5 percent, respectively, of total nonagricultural employment in Dallas-Fort Worth. Most of the workers in the transportation equipment industry group in the area were employed in the aircraft, aircraft engines, and ordnance industries. The Federal Government purchased 99 percent of the output of these industries and 21 percent of the output of the electric-electronic equipment industry.

The growth in manufacturing employment in the Houston SMSA in 1962-69 was about half that in the Dallas-Fort Worth SMSA. The largest employment increases were in nonelectrical machinery and fabricated metals. Each industry employed about 3 percent of the total nonagricultural work force in Houston in the 1960's. The percentage increases in employment in the transportation equipment and electric-electronic equipment industries

were large in the Houston area but have less significance in light of the fact that the industries accounted for less than one-half of 1 percent of total nonagricultural employment.

The percentage increases in the number of workers in contract construction in the Houston and Dallas-Fort Worth SMSAs were comparable. But the growth of contract construction employment was significantly more stable in Dallas-Fort Worth. Contract construction employment in this area increased an average of almost 5 percent a year between 1962 and 1969 and declined only once—less than 1 percent from 1964 to 1965. Contract construction in Houston was strong enough for the industry to add workers at a rate averaging over 5 percent a year between 1962 and 1969, despite significant declines in three years in the period. Between 1962 and 1969, Houston added almost 9,000 more construction workers than Dallas-Fort Worth.

... and contracted sharply in the 1969-70 recession

The early 1970's marked a turning point for the U.S. economy, characterized by a redirection of resources away from defense expenditures. Simultaneously, the Federal Government was attempting to slow the inflation generated in the last half of the 1960's. The 1969-70 period represented the end of a long rise in business investment in plants and equipment and the beginning of a period of strong growth in residential construction. Expenditures on consumer goods rose steadily through this recession, helping to dampen the decline and contributing to the recovery.

The decline in the proportion of Federal expenditures allocated to defense contributed heavily to the drop in the nation's manufacturing employment. Decreases in the Federal Government's purchases of armaments resulted in adjustments throughout the nation in the local labor markets of many areas where there was a concentration of defense-related production. Two-thirds of the employment affected by the Government's purchases of defense goods was in the aircraft and ordnance industries.

Dallas-Fort Worth was one of the areas in which the adjustment was particularly large. In 1970-71, employment fell 26 percent in the transportation equipment industry in Dallas-Fort Worth and 14 percent in the electric-electronic equipment industry. The declines in these two industry groups were major factors in the 11-percent drop in manufac-

turing employment, and they produced significant changes in the distribution of employment across goods-producing industries. The proportion of employment in such industries that was accounted for by workers in the transportation equipment industry fell from 24 percent in 1969 to 14 percent in 1972. For the electric-electronic equipment industry the share of goods-producing employment remained about the same in these two years, but some of the workers shifted from military projects to consumer and business applications.

The effect of this recession on Houston was mild in comparison. Manufacturing employment declined only 1 percent, and durable goods employment declined 3 percent. The distribution of employment across goods-producing industries changed little over the 1969-72 period.²

Houston boomed in the 1973-75 recession

The recession of 1973-75 followed the OPEC oil embargo imposed from November 1973 to March 1974. Record-high interest rates, disintermediation at thrift institutions, and the worst decline in residential construction in 30 years contributed to a 9-percent decline in industrial production between 1974 and 1975. The national unemployment rate climbed from 4.9 percent in 1973 to 8.5 percent in 1975. Consumer price inflation rose sharply also, increasing from 6.2 percent in 1973 to 11.0 percent in 1974 before decreasing in 1975. Inventories as a percentage of sales by manufacturers, retailers, and wholesalers set record highs in 1974 after demand dropped.

A major adjustment in the nation's use of energy also began at this time. Sharply higher prices for imported oil, along with price controls and mandatory allocation programs applied to domestic oil, ultimately reduced the amount of oil used. Consumers, businesses, and governments decreased purchases of energy and energy-related products as real incomes declined. The impact on the nation's transportation equipment industry was par-

2. There are problems with the comparability of employment data for the SMSAs. The U.S. Department of Labor did not collect employment data for the Dallas-Fort Worth and Houston SMSAs until 1970. Employment data before 1970 for the two areas have been estimated by the North Central Texas Council of Governments. Moreover, data on employment in individual manufacturing industries in Dallas-Fort Worth in 1970 and 1971 are not available from the Department of Labor and have been interpolated by the author for this article.

**PERCENTAGE DISTRIBUTION OF EMPLOYMENT
IN GOODS-PRODUCING INDUSTRIES**

Industry	Dallas-Fort Worth SMSA		Houston SMSA	
	1968	1980	1968	1980
Mining	3.2	5.8	12.6	17.0
Contract construction	14.1	19.9	27.7	30.7
Manufacturing	82.7	74.3	59.7	52.4
Lumber and wood products6	1.8	1.1	.6
Furniture and fixtures	1.8	1.3	.9	.3
Stone, clay, and glass products	1.9	2.4	2.5	1.8
Primary metal industries	1.3	1.3	3.8	2.8
Fabricated metal products	4.6	6.3	7.8	7.7
Machinery, except electrical	7.3	9.9	9.8	11.8
Electric and electronic equipment	16.1	14.5	1.6	3.4
Transportation equipment	23.5	11.6	1.2	1.4
Food and kindred products	7.1	5.1	5.4	2.8
Apparel and other textile products	4.8	3.9	.6	.4
Paper and allied products	2.2	2.0	1.5	.9
Printing and publishing	3.7	5.2	3.2	3.2
Chemicals and allied products	1.7	2.5	9.0	7.5
Petroleum and coal products	*	*	5.1	3.4
Rubber and miscellaneous plastics products	1.4	2.5	n.a.	1.4
Other manufacturing	4.5	4.0	6.1	3.1

* Less than .05.

n.a.—Not available.

NOTE: Details may not add to totals because of rounding.

SOURCES: North Central Texas Council of Governments.

U.S. Department of Commerce, Bureau of the Census.

U.S. Department of Labor, Bureau of Labor Statistics.

ticularly severe. Production in this industry, which includes motor vehicles and parts, fell at an annual rate of 38 percent from November 1973 to March 1974. Output of the electric and natural gas utilities fell at an annual rate of 13 percent in the same period.

Other results of the OPEC oil embargo and the sharp rise in oil prices included increased exploration for domestic energy supplies and investment in energy-producing industries. (The tax-paid f.o.b. cost per barrel of Saudi Arabian light crude oil, a common reference for world crude oil prices, almost doubled between January and October 1973 and quadrupled by January 1974.) The number of oil and gas wells drilled annually in the United States—which reached a low of 26,077 in 1971, after peaking at 58,418 in 1956—increased 28 percent from 1973 to 1974 to a total of 33,470.

A significant proportion of the domestic drilling sparked by the rise in oil prices occurred in Texas, which supplies one-third of the crude oil and natural gas produced in the United States and contains one-third of all oil and gas wells drilled. The number of drilling applications received by the Texas Railroad Commission rose 43 percent from

1973 to 1974 to 15,490. The number of active rigs in Texas increased almost 300 percent to 590.

Houston is an international center for the production of equipment used in oil and gas drilling, and economic activity in the area expanded while the rest of the country was undergoing a contraction. Mainly because of the demand for oil field equipment, manufacturing employment—particularly in the fabricated metals, nonelectrical machinery, and transportation equipment industries—increased in Houston during the 1973-75 recession. (Most of the transportation equipment made there is manufactured to meet the needs of the oil and gas industries for special hauling and handling equipment and specially designed vessels to service offshore drilling rigs.) Other sectors of Houston's economy benefited from the growth of employment in mining and manufacturing. In contract construction, for example, employment increased 30 percent.

The experience of the Dallas-Fort Worth area, where employment declined, was more like that of the rest of the nation. Contract construction was hardest hit, and employment in this industry fell far more in Dallas-Fort Worth than nationwide.

The decline in total manufacturing employment was moderate compared with the decline in the 1969-70 recession. On the other hand, employment in the transportation equipment industry increased for the first time since the end of the Vietnam War. Mining employment rose almost as much proportionally as in Houston, but the national drilling boom had much less impact on Dallas-Fort Worth, where mining employed only 1 percent of the nonagricultural workers.

Looking ahead

Production of military hardware remains an important source of income in Dallas-Fort Worth, but the dependence of area manufacturers on contracts with the U.S. Department of Defense has not returned to the level reached in the late 1960's. The transportation equipment industry now employs a smaller share of workers in the area's goods-producing sector, and most local firms in the transportation equipment and electric-electronic equipment industries have diversified their product lines to include substantial proportions of goods for private industry. But the United States is in the early stages of rebuilding its Armed Forces, and this could push the area's defense suppliers into greater prominence again. The projected increases in U.S. defense spending have not yet

led local manufacturers to plan major additions to capacity, but the possibility that some will ultimately do so cannot be dismissed.

While the Dallas-Fort Worth economy has been diversifying, the Houston economy has become more closely tied to oil and gas activities. The mining, fabricated metals, and nonelectrical machinery industry groups now employ a much larger proportion of workers in Houston's goods-producing sector. Thus, the growth in the Houston economy is likely to continue to display a relatively high degree of independence from some forces that have produced fluctuations in economic activity nationally. This is not to imply, however, that Houston will be unaffected by these forces, for its growth in employment in goods-producing industries has been slowing along with the nation's since 1978.

Predicting how individual areas will fare in the economic fluctuations of the future must be done cautiously, even when all sectors of the local economies have been investigated fully. This article has provided only a brief look at segments of the complex economies of Houston and Dallas-Fort Worth. The most that can safely be said at this point, then, is that the growth paths of these two areas are likely to diverge again in the future, and suppliers to the defense and petroleum industries will play major roles.

New Member Bank

Citizens National Bank of Killeen, Killeen, Texas, a newly organized institution located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business September 3, 1981, as a member of the Federal Reserve System. The new member bank opened with capital of \$1,250,000 and surplus of \$1,250,000. The officers are: Roy J. Smith, President and Interim Chairman of the Board; W. L. Smith, Executive Vice President; E. P. Hardaway, Vice President and Cashier; Murl H. Hennigan, Vice President and Compliance Officer; Roy Van Sickle, Officer and Security Guard; James Bales, Assistant Cashier; Tanya Gibson, Assistant Cashier; Jann Secrest, Assistant Cashier; and Nancy Mather, Assistant Cashier.

“Fed Quotes”

Brief Excerpts from Recent Federal Reserve Speeches, Statements, Publications, Etc.

“We must not lose sight of the fundamental cause of our current predicament: the buildup of inflation and inflationary pressures over many years. A lasting resolution of our economic problems generally, and the interest rate problem in particular, will be found *only* in success in the battle against inflation. Should we be diverted from that objective, our economic and financial problems will only be aggravated.

“The fact is we can now begin to see significant signs of progress in the fight on inflation. The various measures of prices this year have all shown somewhat slower rates of increase than in the preceding two years. While some sectors of the economy are indeed under heavy pressure, the overall level of economic activity is higher, and the rate of price increases lower, than almost all economic forecasters thought probable at the beginning of the year.

“Under the circumstances, it may be frustrating to observe the skepticism and doubts reflected in the recent performance of many financial markets. I believe that skepticism will be proved unwarranted. But what is important in that connection is not my belief or yours, but whether we persevere in policies and actions to justify confidence.”

Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System (Before the Committee on the Budget, U.S. Senate, September 16, 1981)

“What can be done—and done consistent with our short and longer-run objectives—is to provide assurance that the Federal fiscal position is indeed clearly on the track toward balance. On the spending side of the fiscal equation, the Congress and the Administration have begun an effort unprecedented in my Washington experience to scale back the growth of Federal outlays. At the same time, it is evident that, given the size of the tax reduction, the spending cuts made so far—large as they may be in historical perspective—have been only a ‘downpayment’ on those needed to bring expenditures into alignment with the receipts side of the budget. . . .

“Failure to carry through on efforts to slow the growth of Federal expenditures in amounts commensurate with the need would leave us with the reality and prospect of large deficits in relation to our savings potential, with its inevitable implications for financial markets and for sectors of the economy dependent on credit.”

Paul A. Volcker, Chairman, Board of Governors of the Federal Reserve System (Before the Committee on the Budget, U.S. Senate, September 16, 1981)

Regulatory Briefs and Announcements

Examination Council Proposes Uniform Accounting Guideline

The Federal Financial Institutions Examination Council is proposing a uniform accounting guideline for adoption by the three Federal bank supervisory agencies (the Board of Governors of the Federal Reserve System, the Federal Deposit Insurance Corporation, and the Office of the Comptroller of the Currency). The guideline would require the use of accrual accounting by all insured commercial banks and state-chartered mutual savings banks for the maintenance of their accounts and for the preparation of the reports of condition and income they file with the agencies.

The proposed guideline, if adopted, would be implemented in two stages. Banks with assets of \$10 million or more would be required to institute accrual accounting prior to January 1, 1983, and banks with assets of less than \$10 million would be required to institute accrual accounting prior to January 1, 1985. However, banks choosing to report Trust Department income on a cash basis could do so.

Board Issues Interpretation on Interest Rate Futures Contracts

The Board of Governors of the Federal Reserve System has issued an interpretation that affects state member banks and bank holding companies choosing to engage in transactions in futures contracts involving domestic bank certificates of deposit (CDs).

The interpretation states that state member banks and bank holding companies intending to take positions in interest rate futures contracts specifying delivery of CDs issued by domestic banks should do so in accordance with requirements of relevant Board policy statements governing futures and forward contracts on U.S. Government and agency securities.

Questions relating to interest rate futures contracts involving state member banks may be directed to Marvin C. McCoy, (214) 651-6657. For bank holding companies, questions may be directed to Robert D. Hankins, (214) 651-6120.

New Nonmember Bank

First Bank of Natchitoches and Trust Co., Natchitoches, Louisiana, a newly organized nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, opened for business September 1, 1981.

Now Available

Recently issued Federal Reserve circulars, speeches, statements to Congress, publications, etc., may be obtained by contacting the Department of Communications, Financial and Community Affairs, Federal Reserve Bank of Dallas, Station K, Dallas, Texas 75222, unless indicated otherwise. Requests for circulars should specify the circular numbers.

Circulars

Reserve Requirements of Depository Institutions (Regulation D): Reminder of Change in Transitional Adjustment Percentage for Reserve Requirement Computations (Member Banks and Selected Former Member Banks). 1 p. Circular No. 81-177 (September 1, 1981).

Federal Financial Institutions Examination Council: Proposed Accounting Guidelines. 8 pp. Circular No. 81-178 (September 2, 1981).

Amendments to Regulation J [Collection of Checks and Other Items and Transfer of Funds]. 7 pp. Circular No. 81-179 (September 2, 1981).

All Savers Certificate. 28 pp. Circular No. 81-181 (September 15, 1981).

Bulletin 15: Net Settlement Arrangements. 11 pp. Circular No. 81-183 (September 17, 1981).

Iranian Assets Control Regulations: Amendment. 3 pp. Circular No. 81-185 (September 17, 1981).

Regulation Q—Interest on Deposits: Final NOW Account Eligibility Rules. 8 pp. Circular No. 81-186 (September 24, 1981).

Regulation E Official Staff Commentary: Electronic Fund Transfers. 6 pp. Circular No. 81-188 (September 25, 1981).

All Savers Certificates: Questions and Answers. 9 pp. Circular No. 81-189 (September 28, 1981).

Information Directories for Securities and Noncash Collection Pricing. 6 pp. Circular No. 81-190 (September 28, 1981).

Election of Directors: Report of Nominations—Voting Procedures. 14 pp. Circular No. 81-191 (September 30, 1981).

Policy Statement: Forward Placement or Delayed Delivery Contracts and Interest Rate Futures Contracts. 4 pp. Circular No. 81-192 (September 30, 1981).

Speeches and Statements

Statement by **Paul A. Volcker** before the **Committee on the Budget**, U.S. Senate. 11 pp., including tables. September 16, 1981.

Statement by **Frederick H. Schultz** before the **Committee on Small Business**, U.S. Senate. 6 pp. September 23, 1981.

Statement by **Henry C. Wallich** before the **Commerce, Consumer, and Monetary Affairs Subcommittee** of the Committee on Government Operations, U.S. House of Representatives. 24 pp., including statistical annex and tables. September 23, 1981.

Remarks by **Henry C. Wallich** ("International Lending and

the Role of Bank Supervisory Cooperation") at the **International Conference of Banking Supervisors**, Washington, D.C. 12 pp. September 24, 1981.

Remarks by **Paul A. Volcker** ("No Time for Backsliding") before the **National Press Club**, Washington, D.C. 12 pp. September 25, 1981.

Statement by **Frederick H. Schultz** before the **Domestic Monetary Policy Subcommittee** of the Committee on Banking, Finance and Urban Affairs, U.S. House of Representatives. 3 pp. September 29, 1981.

Pamphlets, Brochures, and Reports

Series on services available from the Federal Reserve Bank of Dallas and its branches. Published by the Federal Reserve Bank of Dallas. (Each booklet, other than the first, explains a service and how the service may be used by depository institutions. All booklets list individuals at the four offices to contact for additional information.)

- **Pricing and Billing of Services.** (Describes the pricing principles and determinants used by the Board of Governors of the Federal Reserve System, billing options and procedures, and clearing balance administration) 7 pp. June 1981.

- **Loan.** (Describes the types of borrowing available to depository institutions, the discount window loan process, and the criteria for appropriate borrowing) 8 pp. June 1981.

- **Wire Transfer of Funds.** (Describes the history of the wire transfer service and the methods used to initiate wire transfer transactions) 8 pp. June 1981.

- **Net Settlement.** (Describes the net settlement process and the procedures involved in net settlement transactions) 5 pp. June 1981.

- **Checks.** (Describes check clearing systems, Federal Reserve check processing, and sorting options available to depositing institutions) 16 pp. June 1981.

- **Automated Clearinghouse.** (Describes ACH operations and the processing of ACH deposits) 8 pp. June 1981.

The Monetary Control Act of 1980. Published by the Board of Governors of the Federal Reserve System. (A pamphlet summarizing the principal provisions and requirements of the legislation. Fifth in a series on the structure of the Federal Reserve System) 7 pp. June 1981.

The Arithmetic of Interest Rates. Published by the Federal Reserve Bank of New York. (A booklet explaining how consumers can calculate interest rates, with specific reference to Treasury securities, home mortgages, and installment loans) 33 pp. 1981.