Federal Reserve Bank of Dallas

Business Review

Unemployment Rate–
Recent Trends Follow Movement in GNP Gap

Unemployment–
The Southwest Fares Better than the Nation

November 1972

Unemployment Rate–

Recent Trends Follow Movement in GNP Gap

The unemployment rate–the proportion of the nation's workers looking for jobs–is one of the most widely watched economic indicators. And yet, although employment draws constant attention in the formulation of economic policy, monetary and fiscal policy tools are designed basically to speed or slow the rate of change in business activity overall–usually by influencing private spending decisions. Outside of direct Government intervention in the labor market, such as special manpower programs, economic policy cannot directly affect the level of unemployment.

Demand for labor is a derived demand, its strength or weakness depending on demand for products. Strength in demand for goods and services is usually translated into a strong demand for labor. When product markets weaken, demand for labor usually weakens too. Determination to lower the unemployment rate–as was enunciated in the latest Economic Report of the President–calls for actions to stimulate business and, thereby, the derived demand for enough additional workers to lower the unemployment rate.

During the most recent business cycle, both monetary and fiscal policy turned more expansionary in 1970, when it became apparent that the economy had taken a downturn in late 1969. After reaching the trough of the recession in the fourth quarter of 1970, the economy began to grow steadily again in 1971. But while real economic growth continued into 1972, the unemployment rate seemed stuck. In the second quarter of this year–a full year and a half after the recession officially ended–the average unemployment rate was still 5.8 percent. That was only slightly lower than in the fourth quarter of 1970.

Unemployment and other trends

This sluggishness in the unemployment rate so long after the end of the recession contrasts sharply with experience in most recovery periods. In the three previous recovery periods since 1950–those following the recessions of 1953-54, 1957-58, and 1960-61–the unemployment rate dropped an average of 1.6 percentage points in the first six quarters after the recession trough. Failure of the unemployment rate to ease in the six quarters since the 1970 low in economic activity–and the fact that easing was

Definitions

Actual real GNP–gross national product. A quarterly estimate by the Department of Commerce, this series shows the nation's actual production of goods and services. To eliminate the effects of inflation–and thereby arrive at real GNP–the estimates are adjusted for price increases.

Potential full-employment real GNP–the goods and services the nation would produce if its resources were fully utilized. Estimated by the Council of Economic Advisers, this series reflects long-term trends in productivity and the labor force.

GNP gap–a measure of the difference between potential real GNP and actual real GNP.

Percent GNP gap–GNP gap as a percentage of potential real GNP.

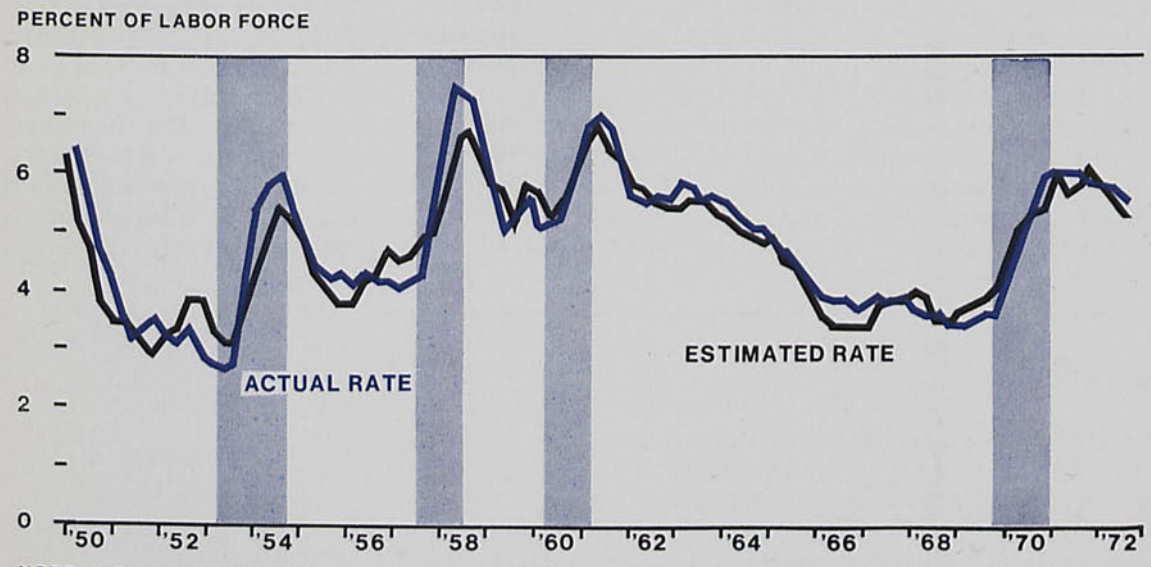
progressively less after previous recessions–raises the question of whether structural changes caused the unemployment rate to remain high even while the economy was on the upswing.

Examination of this latest recovery in the context of the historical relationship between the unemployment rate and growth in real output relative to its potential suggests that much of the failure to achieve a significant lowering of the unemployment rate has been due to the slow rate of real economic growth. Until very recently, real output was growing only about as fast as the economy's potential to produce. As a result, there was very little reduction in the pool of idle resources–particularly the pool of unemployed workers.

Two long-run trends creating opportunities for higher growth targets, nevertheless, work against lower unemployment rates. One is the increase in productivity. The other is the increase in the size of the labor force.

Since workers are hired only to meet market demand for the goods and services they produce and the average productivity of the labor force has been rising about 3 percent a year, an increase in demand for products of only about 3 percent a year can usually be met with the existing labor force. For employment to increase, the demand for final products must expand faster than the increase in productivity. Meanwhile, the labor supply is also increasing–at a rate varying with both the number of people turning 16 (the age at which people in the United States are counted as part of the population of labor-force age) and the

Unemployment rate estimated from GNP gap follows movement in actual unemployment rate



NOTE: 1. Estimated rate is from a regression equation where the unemployment rate was related to the percent GNP gap lagged one period.
2. Shaded areas show recessions as dated by the National Bureau of Economic Research.

SOURCES: U.S. Department of Labor
Federal Reserve Bank of Dallas

While movements in the GNP gap explain most changes in the unemployment rate, special factors can cause small deviations over short periods. In the past year, for example, the civilian labor force has grown rapidly as participation rates returned to their prerecession levels and further reductions were made in the armed forces. This bulging in the labor force probably helped hold the unemployment rate slightly higher than expected from the GNP gap in the second and third quarters. For a discussion of the labor force and employment growth over the past year, see "The Labor Market in an Expanding Economy," *Federal Reserve Bulletin*, September 1972.

Methodology

Least squares linear regression analysis was used to estimate the statistical relationship between the GNP gap and the unemployment rate. The dependent variable was the unemployment rate, with separate equations fitted to rates for the total civilian labor force, adult men, adult women, and teenagers. The independent variable in each equation was the percent GNP gap lagged one period. Data were quarterly observations from the first quarter of 1950 through the fourth quarter of 1971–88 observations.

Initial results showed a positive serial correlation in the residuals. Original data were, therefore, transformed on the assumption that the residuals were generated by a first-order autoregressive process. Equations reestimated with transformed variables contained no significant serial correlation.

The constant, restated in terms of values of the original variables, showed the unemployment rate to expect when the GNP gap was zero. Since both variables were expressed in percentage terms, the coefficient of the gap gave the percentage-point change in the unemployment rate associated with a 1 percentage-point change in the GNP gap.

The relationship was much stronger for adult men and women than for teenagers. And the relationship for the entire labor force was even stronger. This suggests that some random fluctuations in unemployment of the various components offset one another, providing a closer fit between the total unemployment rate and the GNP gap than for the separate components.

The Chow Test was used to see if relationships were fairly stable over time–the period used being from 1950 through 1971. Relationships for the total unemployment rate and the unemployment rate for women were stable. Relationships for men and teenagers were not stable, however, for the whole period. At a given level of the GNP gap, the unemployment rate for men was lower in the 1960's than in the 1950's. The reverse was true for teenagers. These two shifts in component relationships tended to offset each other, however, helping to preserve the stability of the aggregate relationship between the total unemployment rate and the GNP gap.[1]

1. The classic paper on potential GNP and the GNP gap is "Potential GNP: Its Measurement and Significance" by Arthur M. Okun, *1962 Proceedings of the American Statistical Association.*

REGRESSION RESULTS OF RELATIONSHIPS BETWEEN UNEMPLOYMENT RATES AND PERCENT GNP GAP

Unemployment rate	Constant	Coefficient of percent GNP gap	$\bar{R}^2$	*SE*	*DW*	*F*-statistic[1]
Adult men	2.916	.275 (.026)	.56	.309	1.741	112.42
Adult women ...	4.005	.250 (.021)	.61	.297	1.801	135.08
Teenagers	11.961	.535 (.073)	.38	.796	2.039	53.40
Total	3.896	.308 (.019)	.75	.285	1.765	261.25

1. Each relationship significant at the 0.01 level

NOTE: $\bar{R}^2$ is the coefficient of determination adjusted for degrees of freedom.
SE is the standard error of the regression equation.
DW is the Durbin-Watson autocorrelation test statistic.
Figures in parentheses are standard errors of the regression coefficients.

GNP GAP AND UNEMPLOYMENT RATE

Period	Average of three business cycles, 1950-61[1]		Business cycle, 1969-72	
	Percent GNP gap	Unemployment rate	Percent GNP gap	Unemployment rate
Peak	2.2%	4.0%	1.8%	3.6%
Trough	7.7	6.7	6.8	5.9
Four quarters after the trough	3.2	4.9	6.2	5.9

1. Includes recessions in 1953-54, 1957-58, and 1960-61
SOURCES: Council of Economic Advisers
U.S. Department of Labor
Federal Reserve Bank of Dallas

number of people deciding to participate in the labor force.

For the unemployment rate to be reduced, demand for final products must increase not only faster than productivity but also fast enough to create jobs both for unemployed workers and for net additions to the labor force. And when both productivity and the civilian labor force are making sizable advances–as they were in 1971–demand for final products can increase, even substantially, without causing enough new hiring to make a significant reduction in the unemployment rate.

The gap and unemployment rate

These basic supply and demand forces operating on the labor market are reflected not only in the unemployment rate but also in a more generalized measure of economic performance–the GNP gap. This measure is the difference between the nation's production of goods and services (its gross national product) and what production would have been if resources had been fully used–meaning at an unemployment rate of about 4 percent. Being the difference between actual and potential production, the GNP gap–like the unemployment rate–is a measure of the extent to which available resources are underutilized.

Since both series measure slack in the economy, they are closely related–as experience since 1950 has shown. During recessions, when production dropped and the gap between actual and potential GNP widened, the unemployment rate rose. As demand and production picked up during recoveries, the gap narrowed–often declining sharply in the first few quarters after the recession–and the unemployment rate dropped.

Statistical analysis shows a fairly precise relationship between these two measures. Changes in the unemployment rate tend to lag slightly behind movements in the GNP gap. About three-fourths of the changes in the GNP gap since 1950 have been reflected in changes in the unemployment rate in the next quarter.

The unemployment rate followed in close, positive step, rising and falling as the GNP gap opened and closed. An increase in the GNP gap of 1 percent, for example, was usually followed in the next quarter by a rise in the unemployment rate of 0.3 percentage point. And a 3-percent increase in the gap was followed by a nearly 1 percentage-point increase in the unemployment rate. When the gap closed–actual performance in real GNP equaling the estimated potential performance–the unemployment rate averaged 3.9 percent, clearly within the range usually considered full employment.

RELATIONSHIP BETWEEN GNP GAP AND UNEMPLOYMENT RATE

Percent GNP gap	Expected unemployment rate one quarter later
–2.0%	3.3%
–1.0	3.6
.0	3.9
1.0	4.2
2.0	4.5
3.0	4.8
4.0	5.1
5.0	5.4
6.0	5.7
7.0	6.0
8.0	6.4

NOTE: Based on results of an equation, estimated from first quarter 1950-fourth quarter 1971 data, where the unemployment rate was regressed on values of the percent GNP gap lagged one period

While these, of course, were only average associations, they clearly indicate that the unemployment rate can be estimated, often quite accurately, from its association with the GNP gap. Movements in the unemployment rate have occasionally deviated from the pattern estimated from the gap–such as during military buildups and cutbacks. But the basic relationship between these two measures has remained close throughout the period since 1950. It also held for 1950-60 and for 1960-71, and with remarkable stability.

Link holds despite changes . . .

One reason for the continuity of the relationship is that estimates of potential GNP take into account changes in both the rate of increase in the size of the labor force and the rate of gain in productivity. When the potential growth of the labor force increases–whether from a faster rise in population or from

Unemployment rate and GNP gap move in same direction

NOTE: Shaded areas show recessions as dated by the National Bureau of Economic Research.
SOURCES: Council of Economic Advisers
U.S. Department of Commerce
U.S. Department of Labor
Federal Reserve Bank of Dallas

increased participation in the labor force–the growth rate of full-employment potential GNP is revised upward to reflect the change. The growth rate of potential GNP is also adjusted when the rate of productivity growth changes.

But because the estimate emphasizes long-run trends, adjustments are made only when it is clear that a major change has taken place. The rate of potential GNP growth has been revised upward only four times since 1950–and then primarily to reflect increases in the rate of growth in the labor force. This upward drift in the rate of potential growth–from 3.5 percent in the 1950's to 4.3 percent today–implies, of course, that the economy must expand faster to maintain full employment now than it did in the 1950's. But it also implies that the resources are available for the increased expansion.

Another reason for continuation of the close relationship between the GNP gap and the total unemployment rate is that the relationship has held for major components of the labor force. With the increase in population since World War II, the proportion of the labor force made up of young people has been on the rise. Also, the proportion made up of working women has been increasing.

But while teenagers (those age 16 through 19) and women (age 20 and over) have been rising relative to the proportion of men in the labor force, a significant positive relationship also holds between the unemployment rate for each of these components and the GNP gap. The strength of the relationships has varied somewhat between components, however, with unemployment rates for men and women staying more closely related to movements in the gap than the unemployment rate for teenagers.

Employment and unemployment figures for all three components hang primarily on the state of the general economy. As long as the GNP gap provides a fairly good picture of the economy overall, the relationship between the gap and the total unemployment rate is apt to hold.

. . . even in the latest cycle

The dependability of the relationship between the GNP gap and the unemployment rate provides a framework for studying changes in the unemployment rate during the 1969-72 business cycle. At the cyclical peak in the fourth quarter of 1969, the unemployment rate averaged 3.6 percent and the GNP gap was 1.8 percent of potential real GNP. At that point, the GNP gap was already beginning to widen and the unemployment rate, while still low, was beginning to edge upward. At the trough of the recession in the fourth quarter of 1970, the GNP gap had increased to 6.8 percent of potential real GNP and the unemployment rate averaged 5.9 percent.

This pattern was similar to that in previous recessions. But at both the peak and the trough, the unemployment rate and the GNP gap

were slightly lower than the average for the other three business cycles since 1950. And there was a sharp contrast in the recovery period.

The average GNP gap for the trough quarters of the three previous recessions was 7.7 percent of potential real GNP, and the average unemployment rate was 6.7 percent. Four quarters after the trough, the average gap had been reduced substantially–to 3.2 percent–and the unemployment rate had dropped to 4.9 percent. In these other recoveries, real GNP expanded considerably faster than the economy's potential, narrowing the GNP gap. And the gain was reflected in a significant reduction in the unemployment rate.

But recovery from the most recent recession was entirely different. In the first year of the current recovery–from the fourth quarter of 1970 to the fourth quarter of 1971–no significant change was made in the GNP gap and the unemployment rate remained unchanged. In the fourth quarter of 1970–the trough quarter–the GNP gap was at 6.8 percent of the potential and the unemployment rate was 5.9 percent. Four quarters later, the GNP gap was 6.2 percent and the unemployment rate still held at 5.9 percent.

While the economy had picked up, actually trimming the GNP gap slightly, the recovery was decidedly weak compared with other recent cycles–too weak to reduce the unemployment rate. A narrowing in the GNP gap of only 0.6 percentage point was simply not enough to reduce the rate of joblessness.

This most recent recession came after a long, vigorous expansion that had reduced the unemployment rate–eventually to 3.5 percent. But actual output had been driven higher than the estimated potential. And with inflationary pressures building rapidly, monetary and fiscal steps were taken to slow the expansion. By the end of 1969, restrictive policies had slowed the economy but policy makers were still cautious about restimulating business activity. Inflation had simply not tapered off as expected.

To keep a brake on rising prices, monetary and fiscal authorities followed a conservative expansionary policy, maintaining some excess resources. And as a result, the economy responded with only a moderate recovery–real GNP growing only about 5.0 percent from the fourth quarter of 1970 to the fourth quarter of 1971. With no more growth than this, the unemployment rate was bound to remain high.

Faster recovery shows results

Fiscal authorities took a sharp turn in August 1971, instituting measures designed to add new stimulus to the economy while dealing directly with persistent inflation and balance-of-payments deficits. Wage and price controls were applied. Tax incentives were provided to encourage purchases of automobiles and capital equipment. And the dollar, allowed at first to float in world markets, was eventually devalued. Meanwhile, although the quarterly rate of growth of the money stock varied, monetary authorities continued their expansionary policy.

The economy gradually responded. Growth in real GNP picked up in the first half of 1972, reaching a seasonally adjusted annual rate of more than 9 percent in the second quarter. With this rapid growth in output, the GNP gap narrowed from 6.2 percent in the fourth quarter of 1971 to 4.6 percent in the second quarter of 1972.

As growth of the economy improved relative to its potential, employment began expanding faster than the labor force and the unemployment rate finally started trending downward. While still averaging 5.8 percent in the first and second quarters of 1972, the rate dropped to an average of 5.5 percent in the third quarter, again reflecting the expected lagged relationship between the GNP gap and the unemployment rate.

The extent of the narrowing in the GNP gap in the second quarter–and the almost certain knowledge that this narrowing continued in the third quarter–suggests that if the momentum of the recovery continues, a further drop in the unemployment rate can probably be expected in the fourth quarter.

As the unemployment rate declines, policy makers will again face the problem of choosing between alternative objectives. Rapid growth in GNP relative to its potential would doubtlessly reduce the unemployment rate still further. But growth too fast could also contribute to inflationary pressures. Their choice of a target growth path, then, will depend not only on movements in prices and unemployment but also on trade-offs between them.

–Leonard G. Bower

Unemployment–

The Southwest Fares Better than the Nation

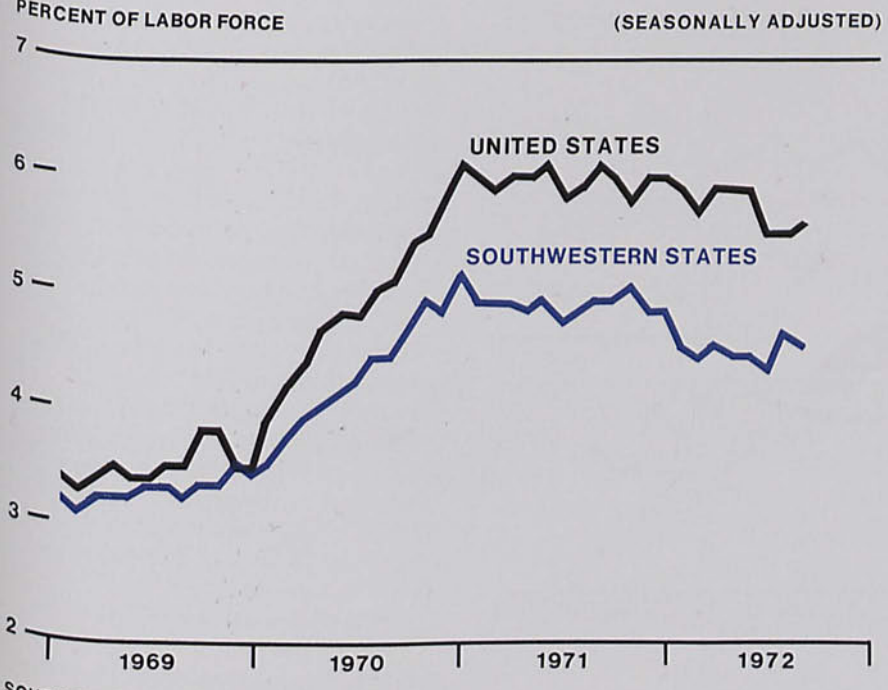
Unemployment in the five southwestern states averaged only slightly more than 3 percent of the labor force in 1969. But with the recession beginning late that year, the unemployment rate in these states began rising and by the end of 1970 had reached a recession peak of 5.1 percent. And while the economy has been recovering for more than a year and a half, the region's jobless rate has been slow to respond, remaining about 1 percentage point higher than at the beginning of the recession.

Still, compared with the nation as a whole, the region has fared quite well. At 4.5 percent in August, the unemployment rate for the five-state area was about 1 percentage point less than the national average–a margin that has remained fairly constant since the end of 1970.

Much of the lower unemployment in the Southwest reflects the composition of its industries. Regions with heavy concentrations of manufacturing–especially of durable goods–tend to be more sensitive to business cycles than other regions. And as a result, slumps in general business conditions usually push their unemployment rates much higher. But only about 14 percent of the workers in the Southwest depend on manufacturing for their livelihood, compared with some 23 percent of the nation's workers. And less than 8 percent of the region's workers are employed in the production of durable goods, compared with 13 percent in the nation.

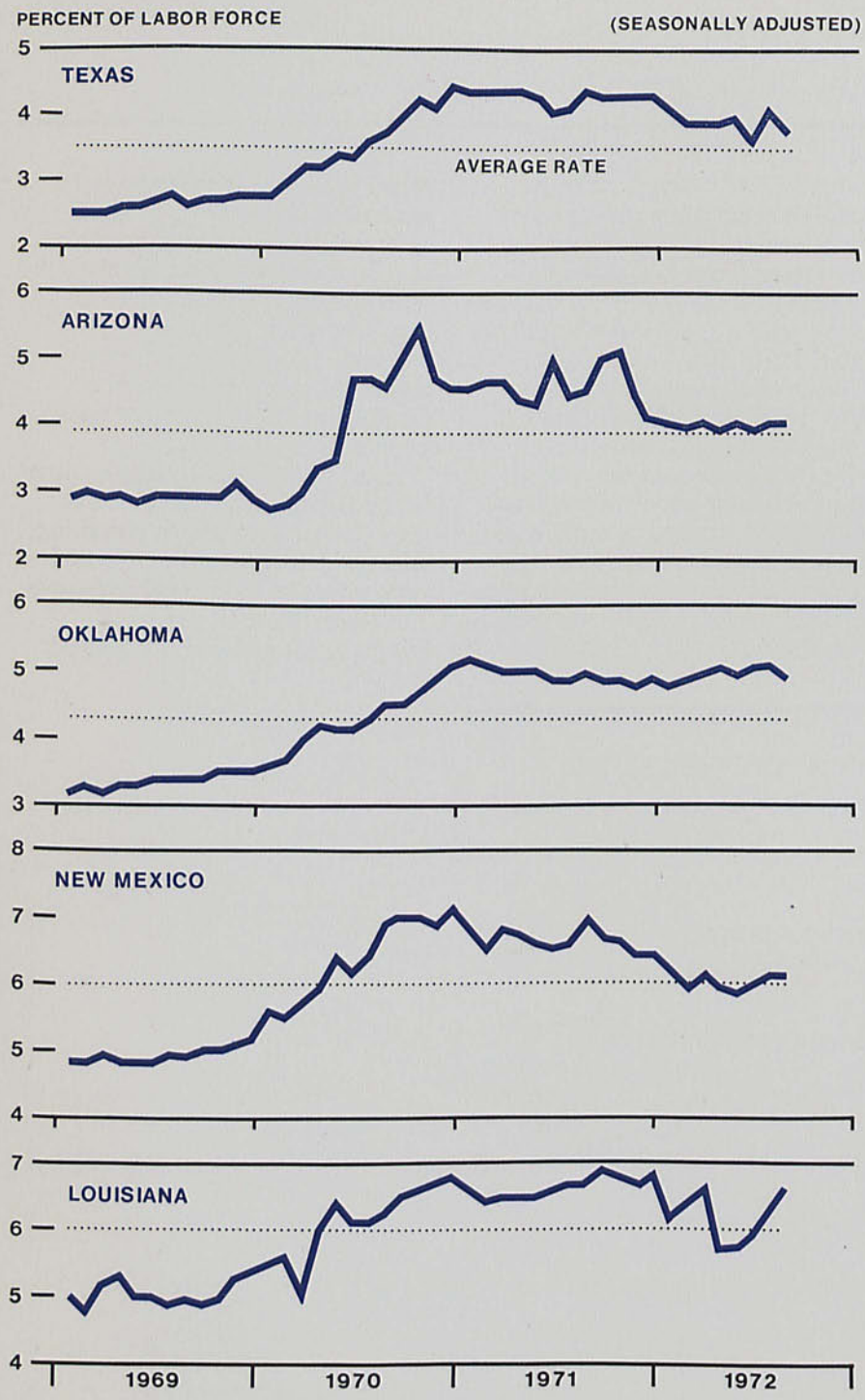
Further stability of employment in the Southwest is derived from the relative importance of mining and agriculture–neither of which is very sensitive to cyclical pressures. Together, these two industry groups account for about a tenth

Unemployment in Southwest stays below rate for the nation . . .



SOURCES: State employment agencies
U.S. Department of Labor
Federal Reserve Bank of Dallas

. . . but with wide differences from state to state . . .



SOURCES: State employment agencies
Federal Reserve Bank of Dallas

of the jobs in the southwestern states–a proportion twice as great as for the nation as a whole. The proportion of the total work force employed in agriculture is half again greater in the Southwest. And the proportion in mining (primarily oil and gas production) is nearly four times greater.

States within the region have fairly similar industry compositions. Less than 15 percent of the work force in each of these states is employed in manufacturing, for example. And with the exception of Oklahoma, which has an unusually large agricultural base, about 5 percent of the workers in each state are employed in agriculture.

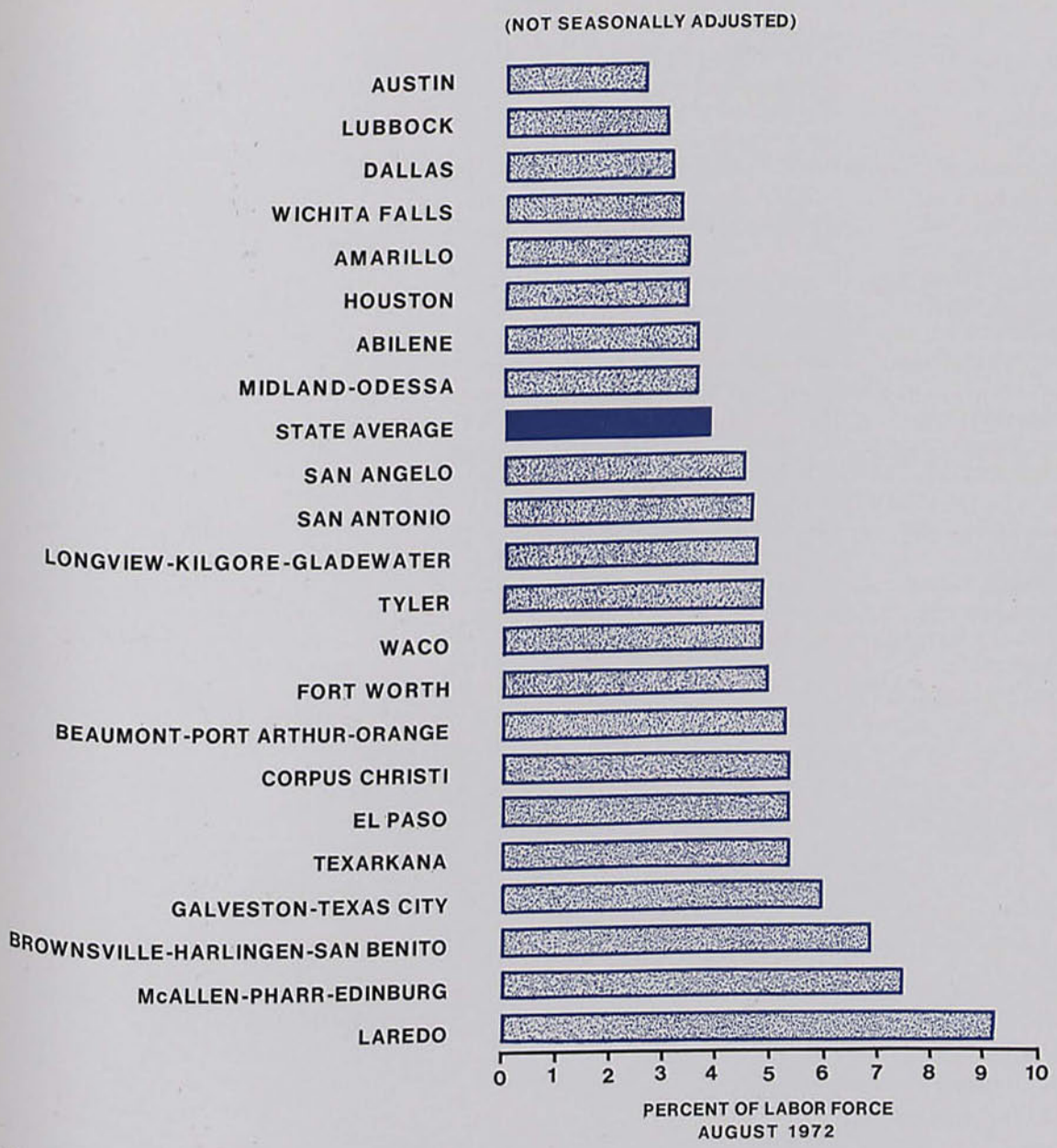
As would be expected, therefore, recent movements in the unemployment rates for these states have been fairly similar. Rates generally rose about 2 percentage points during the recession, reaching peaks around the end of 1970. They then began to edge downward but in August were still within 1 percentage point of their recession peaks.

But the average levels of unemployment have been quite different. Since the start of 1969, the unemployment rates in Texas and Arizona have averaged less than 4 percent–well below the 5-percent national average. The rate in Oklahoma has averaged 4.3 percent. But rates in Louisiana and New Mexico have averaged 6 percent.

Unemployment rates have also varied widely within states. In Texas, for example, where the outlook for jobs has been especially bright, local pockets of high unemployment still persist. Much of the below-average unemployment in this state, in fact, has been centered in comparatively few cities.

Of the 22 cities for which the Texas Employment Commission regularly publishes unemployment figures, only eight had unemployment rates in August that were less than the state average. Two of these were Dallas and Houston.

. . . and even within a state, as for example, Texas



SOURCE: Texas Employment Commission

Since these two largest cities account for more than a third of the state's labor force, their low jobless rates held down the state average. By contrast, many of the higher than average unemployment rates were in cities with labor forces too small to make a significant difference in the state average. Laredo, for example, with an unemployment rate in August of more than 9 percent, accounts for less than 1 percent of the state's potential workers.

Again, these local differences partly reflect differences in the composition of industries. Dallas and Houston are both manufacturing centers. But Dallas also depends heavily on finance and trade, both of which continued to grow during the recession. And Houston had a broad enough base to weather the downturn–especially since much of its manufactured output supports the still rapidly growing petroleum indus-

try. Also, unlike Dallas, where manufacturing is essentially labor-intensive, manufacturing in Houston is mainly capital-intensive. As a result, cutbacks in Houston had less effect on total employment in the area.

The remarkably low rate of unemployment in Austin–low even for business peaks in industrial areas–is due mainly to the virtual independence of this local economy from cyclical movements. With very little nonservice industry, employment in Austin has long been based on government operations, including operation of the state-supported university. Employment at the state capital has further expanded in recent years with the location of major federal installations in the Austin area.

Outside Dallas, Houston, and Austin, unemployment rates in Texas have generally been lowest in West Texas and highest in South Texas, especially along the border.

There were also wide differences in other areas of the Southwest. All three of the other major cities in the Eleventh District outside Texas had unemployment rates in August lower than the average for their states. In Tucson, the rate was 3.7 percent, compared with 4.1 percent for Arizona. In Monroe and Shreveport, the rates were 5.3 percent and 5.8 percent, respectively, compared with 6.6 percent for Louisiana.

Local differences in unemployment rates are, of course, due to many factors. Some tend to keep unemployment down even during a recession. And some tend to hold it up even during a recovery. But despite these differences–especially in factors influencing growth in employment and labor forces–most areas should see some improvement in their labor markets as the recovery continues.

New member banks

The First National Bank of Round Rock, Round Rock, 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 29, 1972, as a member of the Federal Reserve System. The new member bank has capital of $200,000, surplus of $150,000, and undivided profits of $150,000. The officers are: Tom W. Miller, Chairman of the Board; Jay C. Sloan, President; and Bobbie M. Sutton, Cashier.

The Chevy Chase National Bank, Austin, Texas, a newly organized institution located in the territory served by the San Antonio Branch of the Federal Reserve Bank of Dallas, opened for business October 18, 1972, as a member of the Federal Reserve System. The new member bank has capital of $200,000, surplus of $200,000, and undivided profits of $200,000. The officers are: Larry E. Temple, Chairman of the Board; Charles Jobe, President; and J. Frank Murrow, Vice President and Cashier.

New par banks

The First State Bank, Dime Box, Texas, an insured nonmember bank located in the territory served by the Houston Branch of the Federal Reserve Bank of Dallas, was added to the Par List on October 1, 1972. The officers are: Riney A. Spacek, President; Michael G. Murphy, Vice President; Frank Riske, Second Vice President; Mrs. Gladys Nimtz, Cashier; and Mrs. Jean Bay, Assistant Cashier.

The Iredell State Bank, Iredell, Texas, an insured nonmember bank located in the territory served by the Head Office of the Federal Reserve Bank of Dallas, was added to the Par List on October 1, 1972. The officers are: T. L. Chapman, President; Mrs. Murlene Smith, Cashier; and Mrs. Neva Blue, Assistant Cashier.

Federal Reserve Bank of Dallas
November 1972

Statistical Supplement to the Business Review

Credit at weekly reporting banks in the Eleventh District rose sharply in the five weeks ended October 25. Substantially more than usual for that time of year, the rise in total credit was due primarily to a sharp increase in deposit inflows that easily allowed banks to accommodate a greater than usual expansion in demand for loans.

Business and real estate loans accounted for most of the advance in total loans. Consumer borrowing rose about in line with comparable periods in other recent years. And security loans and loans to financial institutions other than banks were slightly weaker.

Banks made sizable increases in their holdings of municipal issues. Reductions in their holdings of Government securities, however, left investments only slightly more than five weeks before.

Although the sharp rise in deposits resulted mainly from increased inflows of demand deposits, time and savings deposits were also up sharply, largely reflecting a rapid expansion in large negotiable CD's outstanding. With the increase in deposits, banks reduced their net borrowings from nondeposit sources. Borrowings in the commercial paper market were up moderately. But this rise was more than offset by a reduction in Eurodollar borrowings.

Seasonally adjusted total employment in the five southwestern states rose sharply in September, reaching a record level 0.6 percent higher than in August. The number of workers unemployed continued to decline, dropping 1.5 percent from August and 7.2 percent from September 1971.

Except for mining, all categories of nonfarm employment showed both month-to-month and year-to-year increases. The largest gains over August were in construction (2.0 percent), government (1.5 percent), and durable manufacturing (1.1 percent). Employment in mining remained the same as a month before and only slightly higher than a year before.

Agricultural production in the five states of the Eleventh District has been running slightly ahead of last year. Livestock production has lagged all year. But, on the strength of cotton, crop production through August was about 16 percent ahead of a year before. The drouth in 1971 brought reductions in cow herds. A sharp downturn in production of sheep and hogs and a slowing in the marketing of fed cattle also contributed to the lag in livestock production. The gap has been narrowing, however. By year-end, livestock production could match the output last year.

Cotton is being harvested throughout the District. The crop is expected to total 5.7 million bales in these five states–42 percent more than last year. The citrus harvest is just beginning in Texas, where the forecast is for a 15-percent larger crop than last year. Arizona also expects some increase in citrus production.

Because of record marketings in August, the number of cattle on feed in these states was down slightly on September 1. Texas produced 208.6 million pounds of red meat in August–13 percent more than a month before and 15 percent more than a year before. Although the gain was due primarily to increased beef production, lamb and mutton production also increased slightly. In Arizona, the slaughter was 18 percent greater than in July.

Due to a sharp break in cotton prices, the index of prices received by Texas farmers and ranchers fell 2 percent in the month ended September 15. Most other prices held, and some strengthened slightly. Despite this drop, however, the index was still 13 percent higher than a year earlier.

Receipts from farm marketings also continued well ahead of last year. Through August, the five-state total for marketings was $4.3 billion–17 percent more than in the first eight months last year.

Department store sales in the Eleventh District were 15 percent greater in the four weeks ended October 28 than in the corresponding period last year. Cumulative sales through that date were 11 percent greater than in the comparable period a year before.

Registrations of new passenger automobiles in Dallas, Fort Worth, Houston, and San Antonio dropped 15 percent in September to a level 1 percent lower than a year earlier. Cumulative registrations for the first nine months of the year were, nevertheless, 12 percent ahead of the same period a year earlier.

The seasonally adjusted Texas industrial production index, fully recovered from a slight decline indicated by revision of July data, reached another record high in September. At 133.5 percent of its 1967 base, the index was 1.6 percent higher than in August and 7.3 percent higher than a year earlier.

(*Continued on back page*)

CONDITION STATISTICS OF WEEKLY REPORTING COMMERCIAL BANKS

Eleventh Federal Reserve District

(Thousand dollars)

ASSETS	Oct. 25, 1972	Sept. 20, 1972	Oct. 27, 1971
Federal funds sold and securities purchased under agreements to resell	736,011	914,050	486,353
Other loans and discounts, gross	8,330,164	8,183,490	7,033,190
Commercial and industrial loans	3,672,596	3,635,246	3,225,233
Agricultural loans, excluding CCC certificates of interest	204,911	193,508	128,374
Loans to brokers and dealers for purchasing or carrying:			
U.S. Government securities	1,323	1,166	512
Other securities	78,716	85,227	56,083
Other loans for purchasing or carrying:			
U.S. Government securities	6,658	6,429	6,184
Other securities	455,406	454,692	444,688
Loans to nonbank financial institutions:			
Sales finance, personal finance, factors, and other business credit companies	145,310	131,919	126,438
Other	676,471	686,753	502,803
Real estate loans	1,130,216	1,092,046	873,424
Loans to domestic commercial banks	20,434	16,120	18,676
Loans to foreign banks	30,728	30,846	34,751
Consumer instalment loans	931,375	925,273	799,032
Loans to foreign governments, official institutions, central banks, and international institutions	0	0	0
Other loans	976,020	924,265	816,992
Total investments	3,706,754	3,647,053	3,198,583
Total U.S. Government securities	967,462	1,000,772	1,001,335
Treasury bills	141,695	166,736	77,591
Treasury certificates of indebtedness	0	0	0
Treasury notes and U.S. Government bonds maturing:			
Within 1 year	126,522	135,193	153,989
1 year to 5 years	501,947	492,360	642,574
After 5 years	197,298	206,483	127,181
Obligations of states and political subdivisions:			
Tax warrants and short-term notes and bills	210,595	142,818	117,393
All other	2,284,870	2,253,818	1,923,565
Other bonds, corporate stocks, and securities:			
Certificates representing participations in federal agency loans	14,973	15,004	19,537
All other (including corporate stocks)	228,854	234,641	136,753
Cash items in process of collection	1,592,679	1,445,180	1,432,270
Reserves with Federal Reserve Bank	1,054,258	926,969	1,111,524
Currency and coin	114,042	104,447	99,036
Balances with banks in the United States	480,253	400,564	425,722
Balances with banks in foreign countries	12,868	12,354	12,365
Other assets (including investments in subsidiaries not consolidated)	632,831	606,350	483,441
TOTAL ASSETS	16,659,860	16,240,457	14,282,484

LIABILITIES	Oct. 25, 1972	Sept. 20, 1972	Oct. 27, 1971
Total deposits	12,745,139	12,438,720	11,219,524
Total demand deposits	6,986,678	6,800,275	6,403,442
Individuals, partnerships, and corporations	4,976,566	4,738,032	4,562,579
States and political subdivisions	399,254	374,337	250,216
U.S. Government	129,453	264,431	136,214
Banks in the United States	1,342,919	1,302,538	1,323,629
Foreign:			
Governments, official institutions, central banks, and international institutions	2,675	3,336	3,359
Commercial banks	40,532	36,370	31,200
Certified and officers' checks, etc.	95,279	81,231	96,245
Total time and savings deposits	5,758,461	5,638,445	4,816,082
Individuals, partnerships, and corporations:			
Savings deposits	1,199,654	1,194,620	1,069,793
Other time deposits	3,034,432	2,942,334	2,641,117
States and political subdivisions	1,385,663	1,370,267	1,011,033
U.S. Government (including postal savings)	22,405	22,945	13,559
Banks in the United States	101,707	93,779	57,180
Foreign:			
Governments, official institutions, central banks, and international institutions	13,500	13,400	22,300
Commercial banks	1,100	1,100	1,100
Federal funds purchased and securities sold under agreements to repurchase	1,917,597	1,953,034	1,355,209
Other liabilities for borrowed money	229,332	100,236	108,244
Other liabilities	452,220	449,724	360,515
Reserves on loans	141,276	139,681	120,883
Reserves on securities	17,806	19,159	35,003
Total capital accounts	1,156,490	1,139,903	1,083,106
TOTAL LIABILITIES, RESERVES, AND CAPITAL ACCOUNTS	16,659,860	16,240,457	14,282,484

RESERVE POSITIONS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Thousand dollars)

Item	4 weeks ended Oct. 4, 1972	5 weeks ended Sept. 6, 1972	5 weeks ended Oct. 6, 1971
RESERVE CITY BANKS			
Total reserves held	916,850	917,589	848,695
With Federal Reserve Bank	851,042	852,995	791,066
Currency and coin	65,808	64,594	57,629
Required reserves	936,978	918,036	847,075
Excess reserves	—20,128	—447	1,620
Borrowings	14,985	0	15,275
Free reserves	—35,113	—447	—13,655
COUNTRY BANKS			
Total reserves held	1,001,006	991,849	886,034
With Federal Reserve Bank	785,549	783,263	688,101
Currency and coin	215,457	208,586	197,933
Required reserves	985,955	972,712	868,771
Excess reserves	15,051	19,137	17,263
Borrowings	2,220	3,092	703
Free reserves	12,831	16,045	16,560
ALL MEMBER BANKS			
Total reserves held	1,917,856	1,909,438	1,734,729
With Federal Reserve Bank	1,636,591	1,636,258	1,479,167
Currency and coin	281,265	273,180	255,562
Required reserves	1,922,933	1,890,748	1,715,846
Excess reserves	—5,077	18,690	18,883
Borrowings	17,205	3,092	15,978
Free reserves	—22,282	15,598	2,905

CONDITION STATISTICS OF ALL MEMBER BANKS

Eleventh Federal Reserve District

(Million dollars)

Item	Sept. 27, 1972	Aug. 30, 1972	Sept. 29, 1971
ASSETS			
Loans and discounts, gross	16,182	16,033	14,050
U.S. Government obligations	2,326	2,310	2,293
Other securities	5,255	5,228	4,368
Reserves with Federal Reserve Bank	1,459	1,501	1,522
Cash in vault	313	314	288
Balances with banks in the United States	1,207	1,190	1,206
Balances with banks in foreign countries[e]	15	16	12
Cash items in process of collection	1,655	1,514	1,371
Other assets[e]	1,208	1,180	978
TOTAL ASSETS[e]	29,620	29,286	26,088
LIABILITIES AND CAPITAL ACCOUNTS			
Demand deposits of banks	1,683	1,689	1,696
Other demand deposits	10,851	10,557	9,704
Time deposits	11,540	11,498	9,826
Total deposits	24,074	23,744	21,226
Borrowings	2,054	2,094	1,788
Other liabilities[e]	1,501	1,467	1,177
Total capital accounts[e]	1,991	1,981	1,897
TOTAL LIABILITIES AND CAPITAL ACCOUNTS[e]	29,620	29,286	26,088

e—Estimated

CONDITION OF THE FEDERAL RESERVE BANK OF DALLAS

(Thousand dollars)

Item	Oct. 25, 1972	Sept. 20, 1972	Oct. 27, 1971
Total gold certificate reserves	253,152	258,294	538,687
Discounts for member banks	156,944	37,500	78,395
Other discounts and advances	0	0	0
U.S. Government securities	3,268,104	3,197,050	3,128,476
Total earning assets	3,425,048	3,234,550	3,206,871
Member bank reserve deposits	1,723,166	1,624,810	1,716,543
Federal Reserve notes in actual circulation	2,195,733	2,177,107	2,081,632

BANK DEBITS, END-OF-MONTH DEPOSITS, AND DEPOSIT TURNOVER

SMSA's in Eleventh Federal Reserve District

(Dollar amounts in thousands, seasonally adjusted)

Standard metropolitan statistical area	DEBITS TO DEMAND DEPOSIT ACCOUNTS[1]				DEMAND DEPOSITS[1]			
		Percent change				Annual rate of turnover		
	September 1972 (Annual-rate basis)	September 1972 from August 1972	September 1972 from September 1971	9 months, 1972 from 1971	September 30, 1972	September 1972	August 1972	September 1971
ARIZONA: Tucson	$10,085,808	—2%	29%	26%	$302,302	32.6	32.6	27.5
LOUISIANA: Monroe	4,187,916	—3	24	19	118,085	36.1	38.1	33.2
Shreveport	14,904,996	4	13	16	299,887	50.4	47.1	47.7
NEW MEXICO: Roswell[2]	902,460	—3	—14	0	43,276	20.9	21.0	25.2
TEXAS: Abilene	2,663,760	—1	16	13	121,453	22.0	21.7	20.9
Amarillo	8,256,264	3	18	18	201,281	42.6	42.6	40.6
Austin	13,188,744	4	17	17	424,249	31.3	29.3	32.7
Beaumont-Port Arthur-Orange	6,720,792	—6	2	3	269,466	25.2	26.6	25.4
Brownsville-Harlingen-San Benito	2,495,112	—2	33	21	102,221	24.4	25.6	22.1
Bryan-College Station	1,335,386	—16	11	23	51,742	25.8	30.2	26.3
Corpus Christi	7,238,964	—3	14	15	264,299	27.0	28.0	23.9
Corsicana[2]	512,196	—8	16	3	35,716	14.3	15.2	13.3
Dallas	155,247,852	—1	7	11	2,706,461	55.9	56.2	60.2
El Paso	10,093,284	—5	7	15	310,053	33.4	35.5	34.7
Fort Worth	27,985,056	—8	1	6	781,448	35.9	38.1	39.0
Galveston-Texas City	3,075,360	—9	—9	0	133,381	23.8	26.9	28.8
Houston	140,181,960	—4	13	21	3,140,620	45.5	46.6	45.1
Laredo	1,271,124	3	19	11	51,107	24.7	24.5	25.0
Lubbock	5,403,552	—3	—5	8	184,060	28.3	28.6	30.8
McAllen-Pharr-Edinburg	2,471,808	—3	36	32	133,520	18.2	18.5	16.7
Midland	2,152,860	—11	—5	6	154,814	14.4	16.3	16.0
Odessa	1,872,156	2	6	10	104,182	17.7	17.3	18.1
San Angelo	1,673,304	1	17	13	78,608	21.3	21.1	19.1
San Antonio	22,887,168	—1	6	7	831,955	27.6	27.8	29.0
Sherman-Denison	1,229,844	—9	5	10	75,043	16.3	17.7	16.6
Texarkana (Texas-Arkansas)	1,754,232	—3	9	14	83,660	21.2	21.2	21.5
Tyler	3,159,120	1	27	16	116,787	27.3	26.6	23.3
Waco	3,854,364	—16	10	16	140,107	26.7	30.6	26.0
Wichita Falls	3,000,336	4	13	13	132,821	22.7	21.8	21.2
Total—29 centers	$459,805,778	—3%	10%	14%	$11,392,604	40.4	41.1	41.2

1. Deposits of individuals, partnerships, and corporations and of states and political subdivisions
2. County basis

BUILDING PERMITS

Area	NUMBER		VALUATION (Dollar amounts in thousands)				
					Percent change		
					Sept. 1972 from		9 months, 1972 from 1971
	Sept. 1972	9 mos. 1972	September 1972	9 mos. 1972	Aug. 1972	Sept. 1971	
ARIZONA							
Tucson	599	6,661	$10,898	$141,232	63%	68%	105%
LOUISIANA							
Monroe-West Monroe	66	886	3,147	21,422	216	142	42
Shreveport	420	4,252	3,856	46,174	—40	—87	—36
TEXAS							
Abilene	76	637	537	13,897	—80	—72	39
Amarillo	129	1,544	1,583	23,758	—64	—75	—4
Austin	535	5,019	24,764	193,122	27	—30	41
Beaumont	187	1,896	4,578	23,033	290	45	51
Brownsville	103	948	776	10,837	—50	—58	29
Corpus Christi	349	3,591	3,947	49,556	—37	—55	—3
Dallas	1,400	15,224	18,618	310,687	—25	—50	28
Denison	20	298	163	2,444	—49	109	2
El Paso	509	5,241	13,409	135,421	46	—13	46
Fort Worth	411	3,812	10,642	67,605	36	—33	—31
Galveston	74	673	1,841	10,005	257	1,327	15
Houston	2,894	32,637	35,856	482,606	—35	8	—1
Laredo	80	475	1,881	12,165	199	304	95
Lubbock	190	1,710	9,073	46,792	111	211	1
Midland	66	862	355	16,012	—91	9	91
Odessa	84	823	934	21,580	—61	79	245
Port Arthur	94	827	287	4,614	—38	—77	—14
San Angelo	78	621	846	6,704	—18	67	—27
San Antonio	1,371	13,662	19,584	177,075	—24	66	90
Sherman	30	418	980	6,176	147	137	32
Texarkana	45	482	530	5,948	43	135	—12
Waco	171	1,968	3,034	28,922	—18	27	48
Wichita Falls	65	743	577	11,960	—79	—80	—31
Total—26 cities	10,046	105,910	$172,696	$1,869,747	—11%	—21%	20%

VALUE OF CONSTRUCTION CONTRACTS

(Million dollars)

Area and type	September 1972	August 1972	July 1972	January—September	
				1972	1971r
FIVE SOUTHWESTERN STATES[1]	960	1,149	817	8,879	6,852
Residential building	526	635	468	4,500	3,388
Nonresidential building	266	246	219	2,350	2,052
Nonbuilding construction	169	268	129	2,029	1,412
UNITED STATES	8,197	8,875	8,067	69,713	60,882
Residential building	4,135	4,671	3,864	34,384	25,635
Nonresidential building	2,378	2,458	2,461	20,419	19,477
Nonbuilding construction	1,684	1,746	1,741	14,910	15,769

1. Arizona, Louisiana, New Mexico, Oklahoma, and Texas
r—Revised
NOTE: Details may not add to totals because of rounding.
SOURCE: F. W. Dodge Division, McGraw-Hill Information Systems Company

GROSS DEMAND AND TIME DEPOSITS OF MEMBER BANKS

Eleventh Federal Reserve District

(Averages of daily figures. Million dollars)

Date	GROSS DEMAND DEPOSITS			TIME DEPOSITS		
	Total	Reserve city banks	Country banks	Total	Reserve city banks	Country banks
1970: September	10,658	4,885	5,773	8,088	3,162	4,926
1971: September	11,571	5,311	6,260	9,735	3,769	5,966
1972: April	12,407	5,676	6,731	10,938	4,180	6,758
May	12,268	5,652	6,616	11,075	4,262	6,813
June	12,320	5,689	6,631	11,233	4,323	6,910
July	12,468	5,708	6,760	11,304	4,365	6,939
August	12,420	5,608	6,812	11,441	4,473	6,968
September	12,619	5,722	6,897	11,492	4,468	7,024

DAILY AVERAGE PRODUCTION OF CRUDE OIL

(Thousand barrels)

Area	September 1972	August 1972	September 1971r	Percent change from August 1972	Percent change from September 1971
FOUR SOUTHWESTERN STATES	7,043.5	7,042.7	6,545.9	0.0	7.6%
Louisiana	2,619.8	2,608.9	2,458.9	.4	6.5
New Mexico	296.5	310.0	298.9	—4.4	—.8
Oklahoma	563.6	564.5	592.7	—.2	—4.9
Texas	3,563.6	3,559.3	3,195.4	.1	11.5
Gulf Coast	735.3	731.7	605.6	.5	21.4
West Texas	1,731.4	1,727.5	1,604.0	.2	7.9
East Texas (proper)	250.4	249.8	175.1	.2	43.0
Panhandle	66.9	67.1	71.1	—.3	—5.9
Rest of state	779.6	783.2	739.6	—.5	5.4
UNITED STATES	9,624.9	9,622.9	9,199.4	.0	4.6%

r—Revised
SOURCES: American Petroleum Institute
U.S. Bureau of Mines
Federal Reserve Bank of Dallas

INDUSTRIAL PRODUCTION

(Seasonally adjusted indexes, 1967 = 100)

Area and type of index	September 1972p	August 1972	July 1972	September 1971
TEXAS				
Total industrial production	133.7	131.5	130.6r	124.6
Manufacturing	135.9	133.7	131.8r	126.7
Durable	143.9	142.2	142.3	134.8
Nondurable	130.2	127.5	124.2r	120.8
Mining	120.8	120.6	120.6r	114.0
Utilities	161.9	153.1	158.5r	145.6
UNITED STATES				
Total industrial production	115.2	114.5	113.7	107.1
Manufacturing	114.1	113.4	113.0	105.7
Durable	108.3	107.8	107.5r	99.3
Nondurable	122.5	121.5	121.0r	115.1
Mining	108.1	106.5	107.3r	105.9
Utilities	142.4	141.7	142.4r	134.0

p—Preliminary
r—Revised
SOURCES: Board of Governors of the Federal Reserve System
Federal Reserve Bank of Dallas

LABOR FORCE, EMPLOYMENT, AND UNEMPLOYMENT

Five Southwestern States[1]

(Seasonally adjusted)

Item	Thousands of persons: September 1972p	August 1972	September 1971r	Percent change Sept. 1972 from: Aug. 1972	Sept. 1971
Civilian labor force	8,544.0	8,500.4	8,292.8	0.5%	3.0%
Total employment	8,172.3	8,122.9	7,892.2	.6	3.5
Total unemployment	371.7	377.5	400.6	—1.5	—7.2
Unemployment rate	4.4%	4.4%	4.8%	[2].0	—.4
Total nonagricultural wage and salary employment	6,671.3	6,617.4	6,410.6	.8	4.1
Manufacturing	1,160.2	1,149.7	1,125.8	.9	3.1
Durable	631.6	624.5	608.8	1.1	3.7
Nondurable	528.6	525.2	517.0	.6	2.2
Nonmanufacturing	5,511.1	5,467.7	5,284.8	.8	4.3
Mining	226.7	226.6	226.0	.0	.3
Construction	441.6	432.8	405.6	2.0	8.9
Transportation and public utilities	457.1	454.9	449.0	.5	1.8
Trade	1,581.5	1,575.5	1,516.8	.4	4.3
Finance	356.7	354.2	339.1	.7	5.2
Service	1,080.4	1,077.0	1,035.8	.3	4.3
Government	1,367.1	1,346.7	1,312.6	1.5	4.2

1. Arizona, Louisiana, New Mexico, Oklahoma, and Texas
2. Actual change
p—Preliminary
r—Revised
NOTE: Details may not add to totals because of rounding.
SOURCES: State employment agencies
Federal Reserve Bank of Dallas (seasonal adjustment)

CROP PRODUCTION

(Thousand bushels)

Crop	TEXAS: 1972, estimated Oct. 1	1971	1970	FIVE SOUTHWESTERN STATES[1]: 1972, estimated Oct.1	1971	1970
Cotton[2]	3,931	2,614	3,209r	5,743	4,053	4,556r
Corn	35,000	43,056	33,232r	45,469	53,925	44,395r
Winter wheat	44,000	31,416	54,408	151,998	117,715	169,069r
Oats	9,720	5,994	29,032	16,065	11,574	38,304
Barley	1,980	1,320	4,224	19,036	23,138	33,954
Rye	630	378	566	1,790	1,158	1,502
Rice[3]	21,996	22,932	21,015r	41,870	42,768	41,412r
Sorghum grain	341,600	303,004	329,616	400,395	370,197	386,051
Flaxseed	165	70	1,125	165	70	1,125
Hay[4]	4,588	4,114	4,037	10,698	10,220	9,811
Peanuts[5]	434,720	366,795	429,930	679,220	602,315	640,196
Irish potatoes[3]	3,529	3,299	4,593	6,845	6,810	8,096r
Sweet potatoes[3]	938	788	1,040	4,263	3,763	4,820r
Pecans[5]	65,000	24,000	38,000	87,000	75,200	69,700
Soybeans	5,670	2,781	4,424	47,411	43,743	45,413

1. Arizona, Louisiana, New Mexico, Oklahoma, and Texas
2. Thousand bales
3. Thousand hundredweight
4. Thousand tons
5. Thousand pounds
r—Revised
SOURCE: U.S. Department of Agriculture

All manufacturing industries showed increases over a year before, and most showed increases over a month before. Production of both durable and nondurable goods was higher than in August. The biggest month-to-month advance was in petroleum refining, up 6.9 percent. Production of furniture and fixtures was up 3.1 percent, and output of primary metals was up 2.1 percent. Other increases in manufacturing were more moderate. There were few declines, however, and they were small. The largest drop was in the production of paper and allied products, down 1.0 percent.

Mining continued at the pace set in August. Slight increases in the production of crude oil and natural gas were largely offset by a slight decline in the production of natural gas liquids.

Utilities, with a 5.7-percent increase over August, reached a record level in September. This advance pushed utility distribution 11.2 percent higher than in September last year.