Institute for Public Policy and Business Research
The University of Kansas

U.S. AND KANSAS ECONOMIC FORECASTS FOR 1991

by
Norman Clifford
Director of the Kansas Econometric Model
Assistant Professor of Economics

January 1991

Report No. 182

Preface

The Institute for Public Policy and Business Research is pleased to present its 1991 economic forecast for the United States and Kansas. The forecast was generated with the Kansas Econometric Model and the Indiana University Econometric Model of the United States. This report includes an executive summary, an explanation of the assumptions used in making the forecasts, forecasts for the U.S. and Kansas economies for 1991, and an appendix with detailed quarter by quarter forecasts for each sector.

The forecast and this report were prepared by Professor Norman Clifford, director of the Kansas Econometric Model. The Kansas Econometric Model is a long-term project of the Institute; Professor Clifford, Professor Mohamed El-Hodiri, Dr. Gary Albrecht and Robert Glass, among others, have been instrumental in its development. Professor Donald Lien and David Rearden have been responsible for the development of a supporting ARIMA model.

Table of Contents

U.S. AND KANSAS ECONOMIC FORECASTS FOR 1991

Executive Summary

The National Economy

The U.S. economy will experience a recession in late 1990 and early 1991. An already weak economy will be shocked into a short period of negative growth as a result of higher imported oil prices that came about because of the crisis in the Persian gulf. The recession is expected to be relatively short and relatively mild; real GNP is expected to decline 1.3 percent during the fourth quarter of 1990 and another 0.3 percent during the first quarter of 1991. A weak recovery is expected to begin by as early as the second quarter of 1991, however growth will be less than 1.5 percent at annual rates throughout the rest of the year. The weakness of the recovery is attributable in part to a somewhat contractionary fiscal policy that is locked in as a result of the October budget compromise, as well as a monetary policy that will be guided more by a concern for inflation than any desire to stimulate a weak economy. As a result of the short recession and mild recovery, GNP will grow only about 0.3 percent in 1991.

The main strength of the economy in 1991 will be the export sector, although some growth will also be induced by increased consumer spending on services. Real U.S. exports are expected to grow a healthy 4.7 percent in 1991, stimulated by a weaker dollar and continued economic growth of our major trading partners. Although this growth rate is well below 1989's 11.0 percent rate, it compares favorably with the 5.4 percent growth in real exports in 1990. Consumer spending on services is expected to increase 3.1 percent in 1991. Unfortunately, this growth in consumer spending on services will not be repeated in other areas of consumer spending; real consumer spending on durable goods will decline 3.0 percent, while real consumer spending on nondurable goods will fall 1.1 percent.

Investment spending in general will be a very weak sector of the economy during 1991. Real purchases of new equipment are expected to decline 0.8 percent during the year, while purchases of new structures by businesses is expected to fall 1.2 percent. By far the weakest sector of the economy, however, will be residential investment, which is expected to decline 7.0 percent in 1991. Government purchases of goods and services are expected to remain about level in 1991, as state and local government purchases increase 1.7 percent and federal purchases, depressed by a 2.7 percent decrease in defense purchases, will decline 1.6 percent.

The recession and slow recovery of the national economy in 1991 will be reflected in the rate of national personal income growth. Nominal personal income will grow only 5.3 percent in 1991, compared with 6.2 percent growth in 1990 and 7.7 percent growth in 1989. The reduction in growth is even more dramatic if we adjust for inflation; real personal income will grow only 0.4 percent in 1991, compared to 1.0 percent in 1990 and 3.2 percent in 1989.

A big surge in inflation occurred during the third quarter of 1990 and will continue in the fourth quarter, as higher oil prices make their way through the economy. However, inflation should come down significantly during 1991, as oil prices begin to fall and a weaker economy exerts less upward pressure. On a quarterly basis, inflation should run at about 4 percent at annual rates, although measured on a year over year basis the 1991 rate will be above 5 percent, as 1991's average prices are pushed up by the high prices at the end of 1990. Medical care and motor fuel will see the biggest increases, followed closely by prices of services other than entertainment.

As the economy slows, the number of jobs will actually decline, so that there will be an increase in the unemployment rate, which will reach 6.7 percent by the end of the year. The 1991 unemployment rate will average 6.4 percent for the year, compared to 5.5 percent in 1990.

Interest rates are expected to remain fairly stable in 1991, with three-month treasury bill rates at 7.2 percent. Moody's AAA bond rate is expected to be about 9.5 percent, as is the prime rate charged by banks. While a slow economy would be expected to depress interest rates, a conservative monetary policy will tend to hold them up.

Table 1
The National Forecast--Summary

	1987	1988	1989	1990	1991
Real GNP (billions)	3853.7	4024.4	4117.7	4159.8	4171.1
Growth Rate	3.7	4.4	2.5	1.0	0.3
Rate of Inflation	3.7	4.1	4.8	5.7	5.4
Civilian Employment (millions)	112.5	115.1	117.3	118.0	117.5
Growth Rate	2.6	2.3	2.1	0.6	-0.4
Unemployment Rate	6.1	5.4	5.3	5.5	6.4
3-Month T-Bill Rate	5.8	6.7	8.1	7.6	7.2
Nominal Personal Income (billions)	3777.6	4064.5	4384.3	4654.4	4902.8
Growth Rate	7.1	7.6	7.7	6.2	5.3

The national forecast, which is summarized in Table 1, above, is based on the Indiana University Econometric Model of the United States. To arrive at our forecast, the following major assumptions were imposed on that model:

1. After averaging nearly $40 a barrel in the fourth quarter of 1990, imported oil prices will fall to $32 a barrel during the first quarter of 1991 and continue to decline gradually throughout the year, reaching $24 per barrel by the year's end. This assumption is consistent with a voluntary Iraqi pullout from Kuwait, or even a short war leading to the restoration of the government of Kuwait.

2. The foreign exchange value of the dollar will fall at a 4.8 percent annual rate.

3. The real growth of the United States' major trading partners in the OECD will average 3.0 percent during the forecast period.

4. The Federal reserve board will adopt an essentially neutral monetary policy during 1991, holding short-run interest rates virtually constant. The M2 measure of the money stock will grow at a 4.5 to 5.0 percent annual rate. The Fed's major emphasis will be guarding against inflation, rather than shoring up a weakening economy.

5. Fiscal policy will be dominated by the October budget compromise. There will be some increases in excise taxes and personal income taxes, as well as reductions in medicare, medicaid and veterans, benefits. In addition there will be some reduction in defense spending. As a result, real federal purchases will decline 1.6 percent. Real state and local government purchases will grow 1.7 percent.

The assumptions above lead to the most likely scenario in our opinion. However, some plausible alternate assumptions lead to a more pessimistic forecast; in particular, one might well argue that the growth rate of the OECD countries will be substantially less than 3 percent over the forecast period. In that case, the growth of U.S. exports would be less robust than in the more optimistic forecast, and the recession could be both longer and deeper. On the other hand, this could be offset if the Fed were to follow a looser monetary policy than we have posited and if the price of imported oil were to fall more quickly than we have assumed.

The Kansas Economy

The Kansas forecast is summarized in Table 2, below. It is based on the national forecast and the Kansas Econometric Model.

Relative to the two previous years, the Kansas economy will be much weaker in 1991. Employment growth in 1991 will be only 0.4 percent, compared to 1.0 percent in 1989 and 1.6 percent in 1990. Similarly, nonfarm wage and salary employment will grow only 0.4 percent, compared to 3.1 percent in 1989 and 2.0 percent in 1990. The same story is told by the unemployment rate, which will increase to 4.5 percent in 1991, from about 4 percent in the two previous years.

Among the major sectors of the Kansas economy, mining employment will grow moderately at 2.4 percent, while construction employment will fall dramatically by 5.5 percent as that sector is hit by the decline in the economy. Employment in durable goods manufacturing will decline 1.6 percent, although employment in the transportation equipment area, which accounts for about half of the employment in durable goods manufacturing in Kansas, is expected to grow 0.4 percent. Employment in nondurable goods manufacturing will grow 0.8 percent with employment in food and kindred products

Table 2
The Kansas Forecast--Summary

	1987	1988	1989	1990	1991
Civilian Labor					
Force (thousands)	1268.0	1282.0	1285.0	1306.4	1316.4
Growth Rate	2.6	1.1	0.2	1.7	0.8
Total Employment					
(thousands)	1205.0	1221.0	1233.0	1252.7	1257.5
Growth Rate	3.1	1.3	1.0	1.6	0.4
Wage and Salary					
Employment (thousands)	1005.0	1035.4	1067.5	1089.1	1093.8
Growth Rate	2.1	3.0	3.1	2.0	0.4
Unemployment Rate	5.0	4.7	4.0	4.1	4.5
Nominal Personal					
Income (thousands)	37029.3	39161.5	41454.0	43735.6	45722.4
	4.0	5.8	5.9	5.4	4.5

and in printing and publishing leading the way. Employment in transportation and public utilities will grow 0.5 percent, with railroad employment declining and employment in trucking and warehousing increasing. Employment in finance, insurance, and real estate will remain the same, although employment in both banking and insurance will fall. Service employment will increase 3.5 percent, down from 1990's 4.0 percent and 1989's 7.4 percent. Government employment will decline 1.3 percent, as federal government employment declines 3.4 percent and state and local government employment declines 1.0 percent.

Personal income will also grow slowly in Kansas in 1991 relative to its growth in 1989 and 1990; Personal income will grow 4.5 percent inn 1991, compared to 5.9 percent in 1989 and 5.5 percent in 1990. Again, if we adjust for inflation the comparison is even more dramatic; real Kansas personal income grew 1.5 percent in 1989, 0.3 percent in 1990, and is predicted to fall 0.4 percent in 1991.

This page was intentionally

left blank.

Introduction

An already weak U.S. economy will be forced into a relatively short, relatively mild recession by higher imported oil prices that occurred during the second half of 1990 as a result of the crisis in the Persian gulf. Although the recession is expected to last only about three quarters, the recovery will be slow due to constraints on fiscal policy imposed by the October budget compromise, as well as by a monetary policy that will continue to be determined by the Federal Reserve Board's concern about inflation. The Fed's neutral monetary policy will keep interest rates steady at about their level at the end of 1990.

Some strength in consumer spending on services, and continued strong growth of exports will prevent the recession from being too severe. Although the recovery should be under way by the second half of 1991, it will be sufficiently weak that employment will decline slowly throughout the year, leading to a steady increase in the unemployment rate throughout 1991. The unemployment rate will be about 6.7 percent by the final quarter of the year.

Although the oil price shock at the end of 1990 had severe short-run inflationary effects during that period, oil prices are projected to decline slightly throughout 1991, and such inflationary effects are not expected to persist. Inflation, as measured by the rate of change of the consumer price index, is expected to run at about a 4 percent annual rate throughout the year.

The Kansas economy will also feel the effects of the oil price shock in the form of a downturn in economic activity. Both employment and personal income are projected to grow much more slowly than they did in 1990. Employment will remain at about its 1990 level, while personal income adjusted for inflation will be slightly lower than it was in 1990. The Kansas unemployment rate will be about one-half a percentage point higher in 1991 than it was in the previous year.

These are the main features of the national and Kansas forecasts developed at the Institute for

Public Policy and Business Research and presented below.[1] The following major assumptions underlie the forecast:

1. After averaging nearly $40 a barrel in the fourth quarter of 1990, imported oil prices will fall to $32 a barrel during the first quarter of 1991 and continue to decline gradually throughout the year, reaching $24 per barrel by the year's end. This assumption is consistent with a voluntary Iraqi pullout from Kuwait, or even a short war leading to the restoration of the government of Kuwait.

2. The foreign exchange value of the dollar will fall at a 4.8 percent annual rate[2].

3. The real growth of the United States' major trading partners in the OECD[3] will average 3.0 percent during the forecast period.

4. The Federal reserve board will adopt an essentially neutral monetary policy during 1991, holding short-run interest rates virtually constant. The M2 measure of the money stock will grow at a 4.5 to 5.0 percent annual rate. The Fed's major emphasis will be guarding against inflation, rather than shoring up a weakening economy.

5. Fiscal policy will be dominated by the October budget compromise. There will be some increases in excise taxes and personal income taxes, as well as reductions in medicare, medicaid and veterans, benefits. In addition there will be some reduction in defense spending. As a result, real federal purchases will decline 1.6 percent. Real state and local government purchases will grow 1.7 percent.

The National Economy

Higher oil prices as a result of Iraq's invasion of Kuwait will prove to be a shock of sufficient magnitude to push an already weak U.S. economy into a short, moderate recession. As Figure 1 indicates, the U.S. economy, after exhibiting a surprising 1.8 percent real growth rate during the third quarter of 1990, will actually experience a 1.3 percent reduction in output during the fourth quarter of 1990 and a further small reduction in the first quarter of 1991. Technically, this episode of two consecutive quarters of negative real growth would constitute a recession, though it would be mild relative to other postwar recessions. Although our forecast calls for a recovery beginning in the second quarter of 1990, also shown in Figure 1, the pace of the recovery will be slow with the annual rate of growth increasing to just above

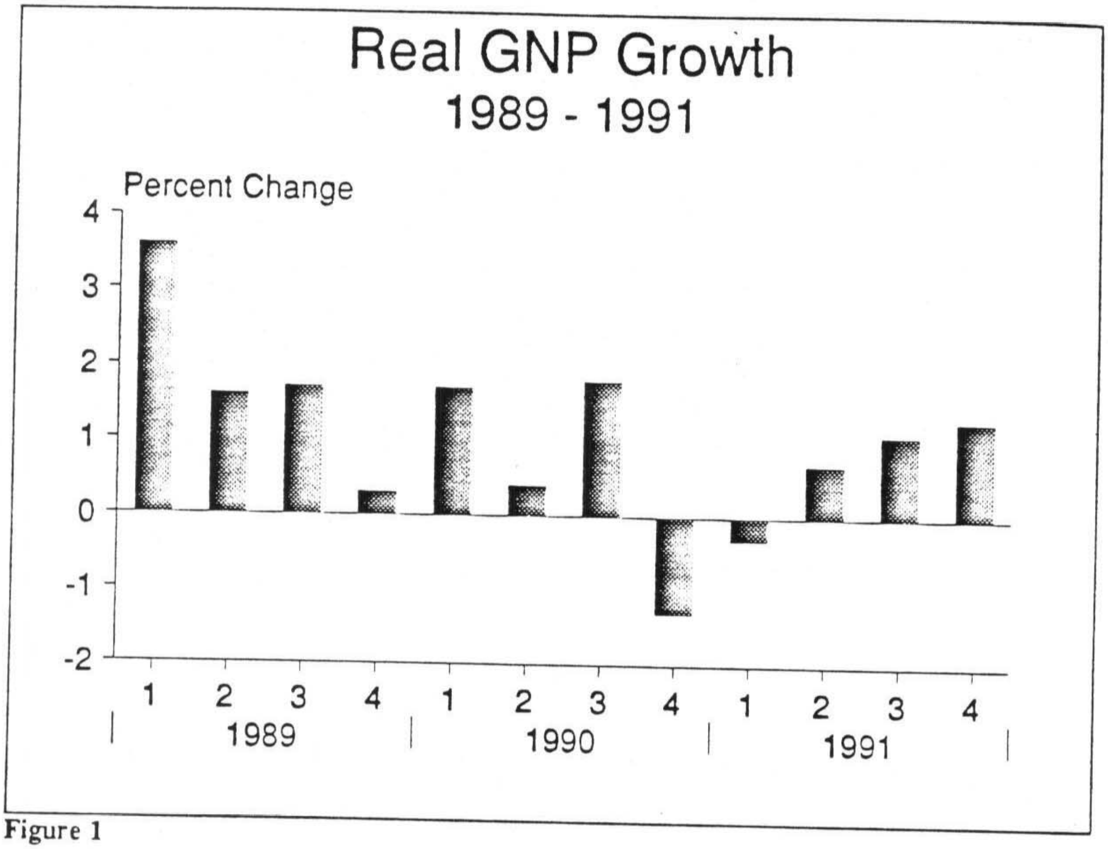

Figure 1

1 percent in the fourth quarter of 1991. Restrictive fiscal policy locked in by the budget deficit agreement and monetary policy that will continue to focus on inflation will prevent the recovery from being stronger.

In spite of the measured real growth in the third quarter of 1990, one could argue that the national economy was already in a recession during that period, so that the duration of the forecasted recession is actually three quarters. Third quarter 1990 growth occurred in spite of an increase in imported oil prices to over $30 per barrel, and was more than accounted for by growth in consumption spending and business fixed investment. The growth in consumption spending was confined to two areas, new automobiles and electricity and gas. The increased spending on new automobiles appears to have been a response by consumers to new dealer incentives that went into effect during the period; the increased spending on electricity and gas seems to have been in response to warmer than usual summer weather. Business fixed investment spending continued in a pattern of alternate increase and decline that it has exhibited since the third quarter of 1989. Thus, third quarter growth appears to have been the result of special factors, rather than any underlying strength of the economy.

The two sectors of the economy that keep the recession in our forecast from being worse are exports and consumer spending. As Figure 2 shows, export growth was the fastest growing sector of the economy during the six quarter period that began in the first quarter of 1989. GNP growth averaged nearly 2 percent a year during that period, while growth in exports averaged nearly 8 percent per year.

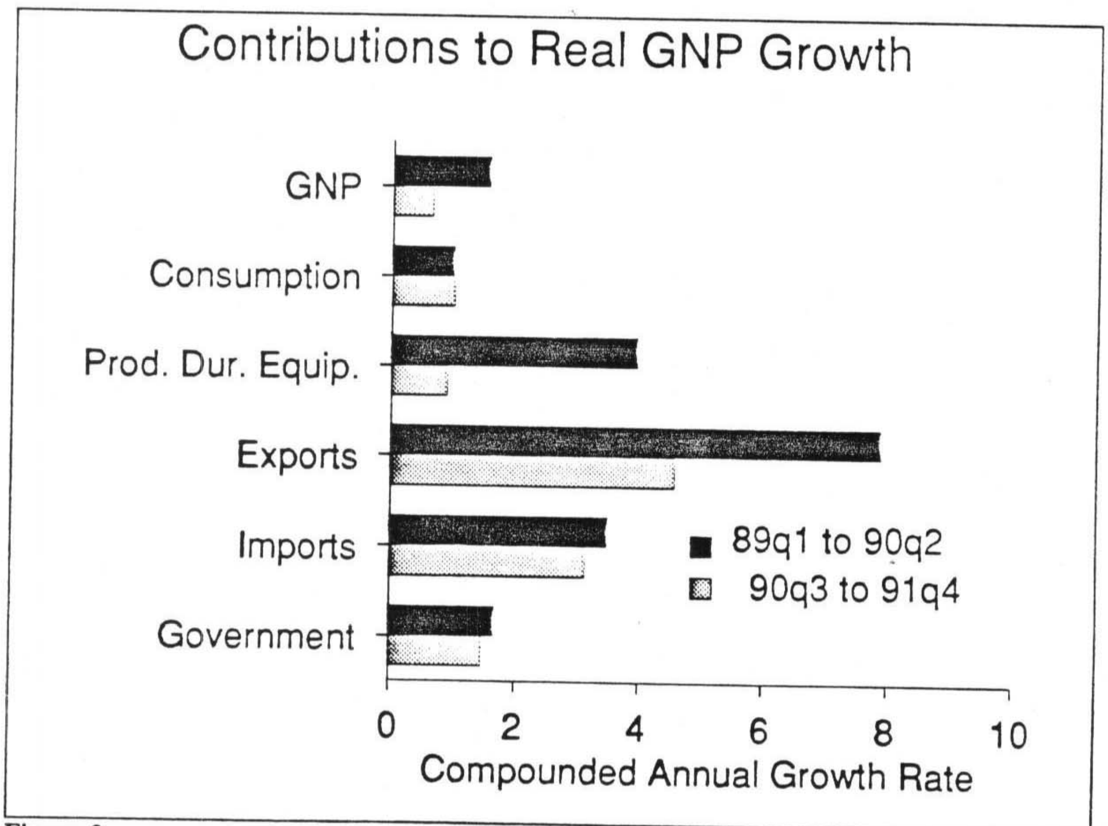

Figure 2

During the six quarters consisting of the third quarter of 1990 and the five quarters of our forecast, GNP growth averages less than 1 percent a year, but export growth still averages nearly 5 percent a year. Two reasons for this strong growth of exports are our assumptions that the exchange rate of the dollar will fall nearly 5 percent and that the economies of our major trading partners will remain strong over the forecast period.

The fact that consumption spending will not weaken appreciably over the forecast period also prevents the recession from being worse. Although consumption growth is not forecast to be particularly strong, at just over 1 percent annually for the forecast period, that is almost precisely the annual rate of growth form this sector over the six quarters that began with the first quarter of 1989. Thus, even though the growth of consumer spending is expected to be very modest over the forecast period, the fact that, unlike all the other sectors, it will not decline greatly, and the fact that it is by far the largest sector of the economy, mean that it is acting as a counterweight against a deeper recession.

Although consumption spending is expected to grow at nearly the same rate over the forecast period as it did over the previous six quarters, the forecasted growth is expected to be much less balanced than it was over the previous period. For example, in 1989, real consumption of durable goods grew 2.3 percent, real consumption of nondurable goods grew 1.2 percent, and real consumption of services grew 2.4 percent. Thus, 1989's 1.9 percent growth in consumer spending was spread fairly uniformly across durable goods, nondurable goods, and services. The forecast for 1991 is for consumption of durable goods to decline 3 percent, consumption of nondurable goods to decline 1 percent, and consumption of services to increase 3.1 percent. Thus, all the growth in consumer spending in the 1991 forecast is concentrated in spending on services.

The forecasted decline in real consumer spending on durable goods in 1991 is centered around automobiles; purchases of new cars are expected to decline nearly 9 percent. On the other hand, purchases of household furnishings and equipment, a major portion of durable goods spending, is expected to increase 0.7 percent. The decline in nondurable goods expenditures, however, is expected to be more general, with spending in every major subcategory declining. Spending on food will show the smallest drop, declining 0.4 percent. Spending on gasoline and oil will fall 1.3 percent, while purchases of clothing and shoes will fall 1.5 percent. Spending on fuel oil and coal will exhibit the largest plunge, falling 3.6 percent. Among services, spending on electricity and gas will jump 6.3 percent.

The sector of the economy that is expected to experience the biggest decline in performance is investment in producers' durable equipment. As can be seen in Figure 2, investment in producers' durable equipment was one of the engines of economic growth in 1989 and early 1990, with growth in spending in this category averaging above 4 percent annually during the period. During the forecast period, however, spending on new equipment by businesses is expected to grow just over 1 percent annually. Business investment in structures is also expected to be weak. While such investment remained essentially level in 1989 and 1990, it is expected to decline 1.2 percent in 1991. By far the weakest area of the economy, however, will be residential investment. This category of investment declined at about 4 percent per year in both 1989 and 1990, and is forecasted to decline 7 percent in 1991.

The last major sector of the economy, government purchases of goods and services, will grow only slightly more slowly during the third quarter of 1990 and the forecast period than it did during 1989 and early 1990. However, for 1991 alone, growth of government purchases of goods and services will average only 0.3 percent growth, thus contributing little to economic recovery. A decline in federal defense purchases of 2.7 percent will be only slightly more than offset by a 1.7 percent growth in both federal nondefense purchases and state and local government purchases.

The recession and slow recovery of the economy in late 1990 and early 1991 will be reflected in personal income growth. The forecasted quarterly pattern of nominal personal income growth is illustrated in Figure 3. In annual terms nominal personal income grew 7.7 percent in 1989, 6.2 percent in 1990 and is forecasted to grow only 5.3 percent in 1990. If we correct for inflation, the decline in growth is even more pronounced; real personal income grew 3.2 percent in 1989, 1.0 percent in 1990 and is forecasted to grow only 0.4 percent in 1991.

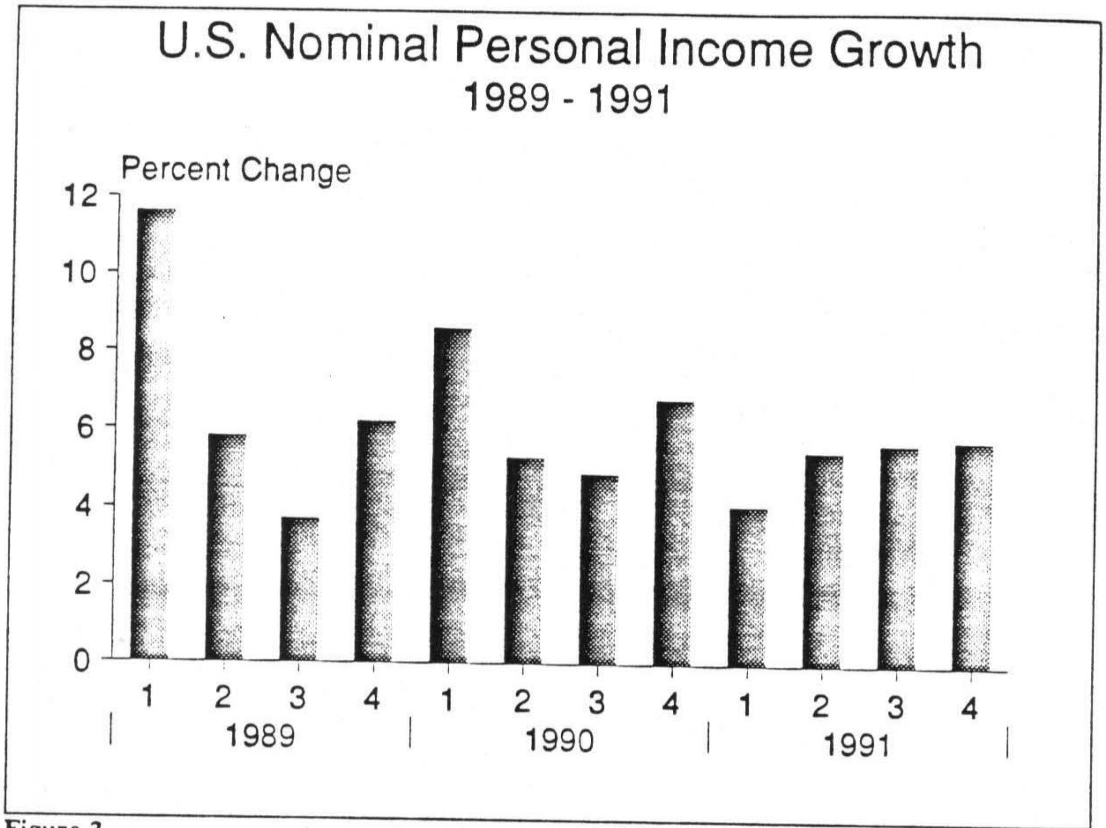

Figure 3

A large part of the reduction in the rate of growth in personal income can be attributed to reduced growth in interest income; net interest income grew nearly 20 percent in 1989 as interest rates rose, but grew only 5 percent in 1990 and is projected to grow only 1.6 percent in 1991. The major source of personal income, wages and salaries, grew 5.9 percent in 1989, 5.4 percent in 1990, and is expected to grow 4.8 percent in 1991. Profits of unincorporated businesses, including farms, grew 7.1 percent in 1989, 6.6 percent in 1990, and are expected to grow 6.5 percent in 1990. Finally, corporate profits after taxes grew 1.0 percent in 1990 and are projected to grow 4.7 percent in 1991. However, dividends paid by these corporations grew 8.5 percent in 1990 and 8.0 percent in 1991. As a result, undistributed corporate profits fell by $8.7 billion in 1990 and are projected to fall by another $2.5 billion in 1991. As a result of this slower rate of accumulation of retained earnings, corporations have a smaller stock of in-house funding for investment; this situation contributes to the lagging rate of investment spending that was noted above.

A slower growth of personal income coupled with an increase in the growth of personal taxes leads to a decrease in the rate of growth of disposable income; corrected for inflation, disposable income grew 2.4 percent in 1989, 0.9 percent in 1990, and is projected to remain flat in 1991. With real personal consumption growth averaging 1.2 percent in 1990 and 0.7 percent in 1991, we find a reduction in the personal savings rate, from 4.6 percent in 1989 to 4.4 percent in 1990 to 3.8 percent in 1991.

Figure 4 illustrates the quarterly forecast of the rate of inflation as measured by the rate of change of the consumer price index for all urban consumers. The big surge of inflation occurs during the second

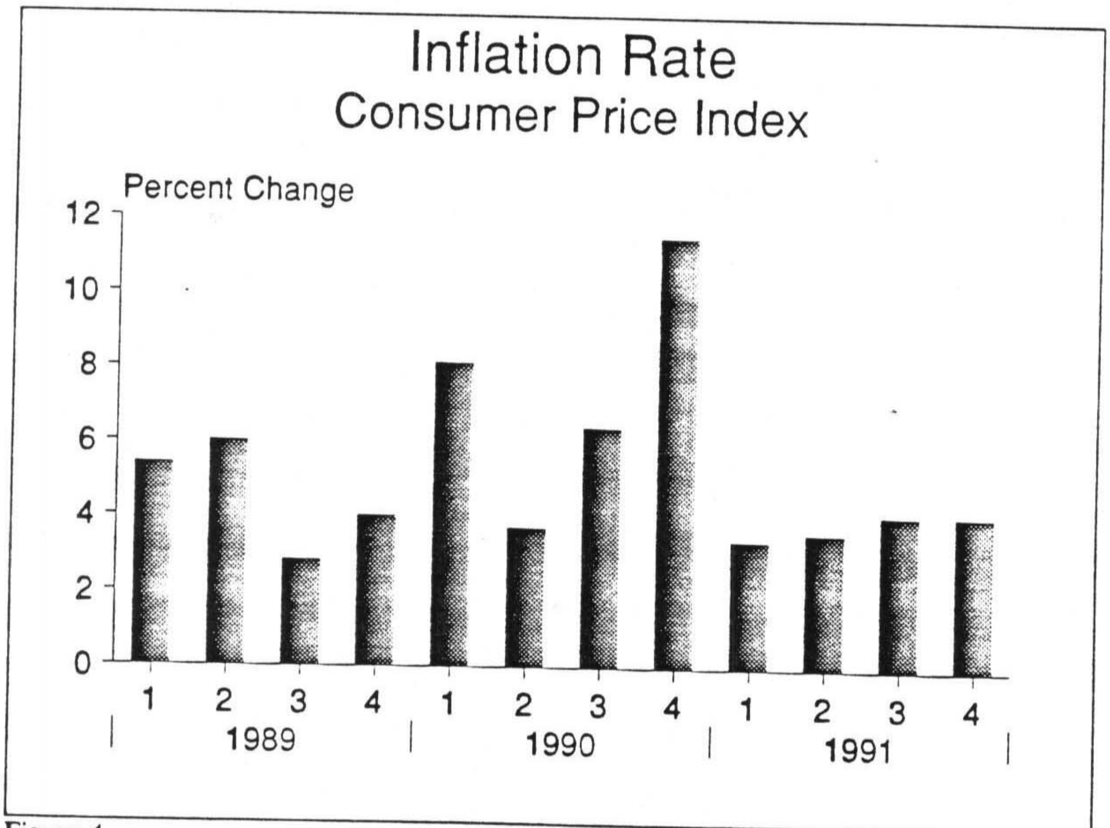

Figure 4

half of 1990, as the increase in imported oil prices works its way through the economy. However, our assumption of declining oil prices in 1991 and a very slowly recovering economy leads to a fairly rapid dissipation of these inflationary forces, with moderate inflation rates projected for 1991. The rate of inflation for the full year of 1991 is expected to be 5.4 percent, as the very high levels of the index reached at the end of 1990 are carried throughout the year.

Food and beverage prices, which are expected to increase 5.3 percent in 1991, will increase at about the same rate as the general price level. Prices of apparel will increase less quickly than the overall average, at 4.9 percent, as will housing costs at 5.0 percent. Housing cost increases are driven by a 6.2 percent increase in the cost of shelter, while the fuel and utilities component at 1.8 percent and the household furnishings and equipment component at 2.3 percent will increase only modestly. Transportation costs are also expected to increase less than the overall price level at 4.9 percent. While new car prices are expected to increase only 1.0 percent, the transportation index is driven up significantly by a projected 15.7 percent increase in the cost of motor fuels. The cost of medical care is expected to increase 8.8 percent. Entertainment prices are forecasted to increase modestly at 1.7 percent, but the prices of services other than entertainment are projected to increase a hefty 7.5 percent.

Figure 5 illustrates the forecast of the rate of growth of the civilian labor force and employment for the national economy. The figure also adds weight to the earlier argument that the economy was essentially already in a recession during the third quarter of 1990; during that quarter total employment declined nearly 1.5 percent. Also related to that argument, total employment by place of work declined in July, August, September, and October; furthermore, real disposable income also declined in July and August. This pattern of at least three consecutive months of employment decline and two consecutive months of real disposable income decline is one that has been observed in all five recessions since 1959, and has never been observed in a recovery during that period.

The forecast in Figure 5 shows employment declining gradually throughout 1991, along with

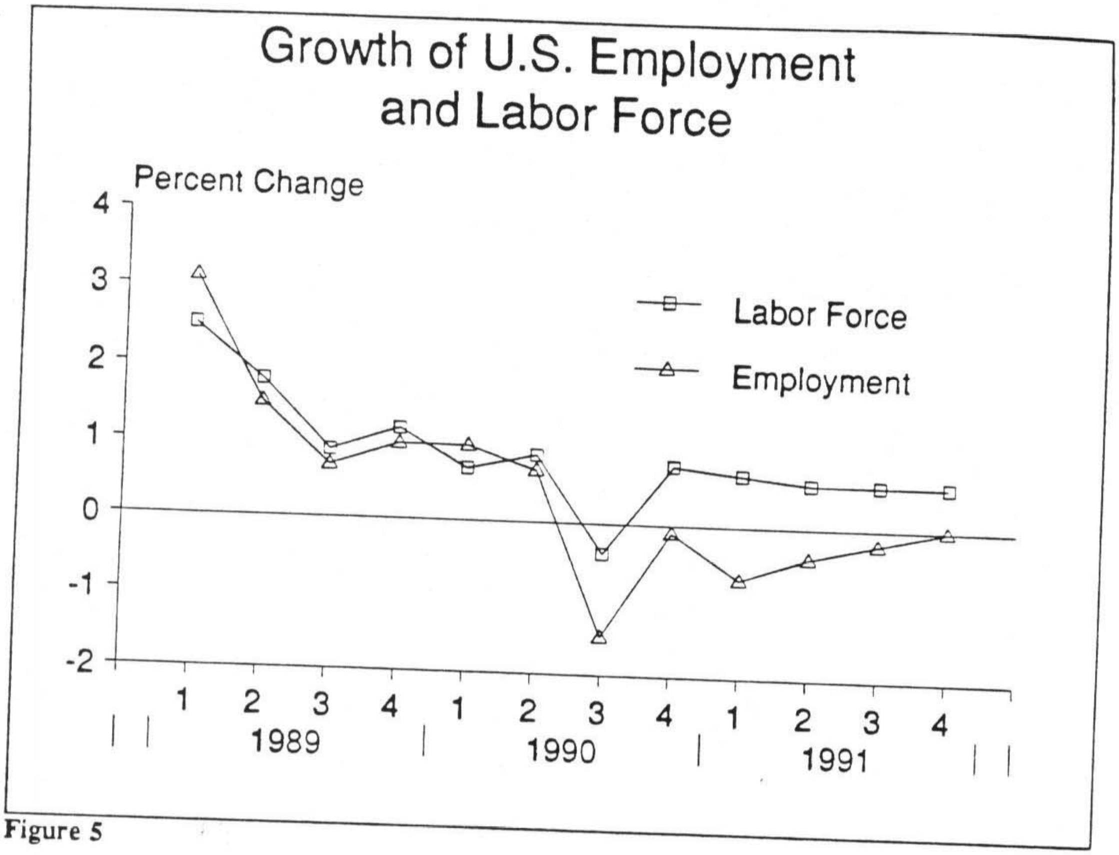

Figure 5

moderate growth in the civilian labor force. Thus, we should expect to see the unemployment rate, which stood at 5.4 percent in the second quarter of 1990, increase throughout the year, ending 1991 at about 6.7 percent. The average for the year will be 6.4 percent, compared to 5.5 percent in 1990 and 5.3 percent in 1989.

Figure 6 illustrates the quarterly interest rate forecasts for 1991 for three interest rates; three-month treasury bills, the prime rate charged by banks, and Moody's AAA bonds. After falling throughout most of 1989 and 1990, the three-month treasury bill rate and the prime rate are expected to level off in 1991 at 7.2 and 9.5 percent respectively. Moody's AAA bond rate, which increased throughout the early part of 1990, is expected to level off in 1991 at about 9.5 percent. Although a slower economy would be expected to lower interest rates, the inflation fighting bias of the Fed's monetary policy will offset this

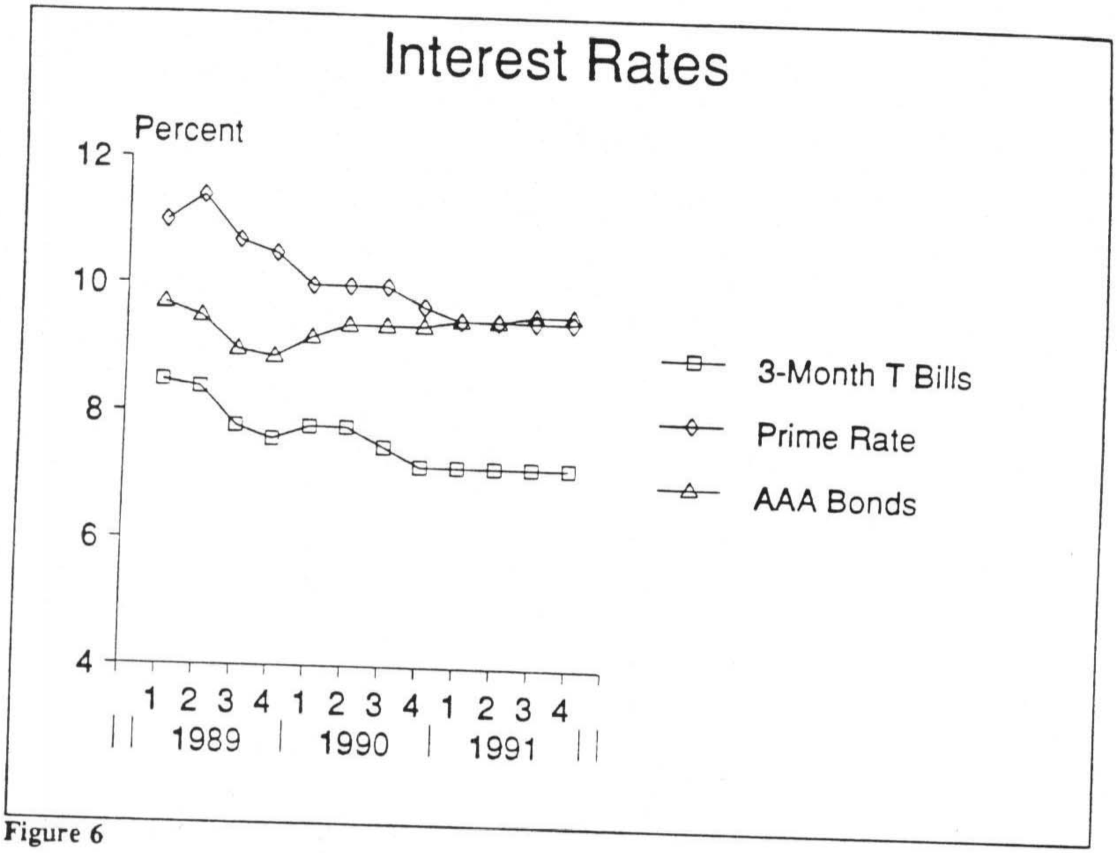

Figure 6

tendency for interest rates to fall.

The Kansas Economy

The performance of the Kansas economy, like that of the national economy, will be muted in 1991. Employment[4] growth for 1991 will be only 0.4 percent, compared to 1.0 percent in 1989 and 1.6 percent in 1990. Nonfarm wage and salary employment, for which the data are more reliable, will grow only 0.4 percent in 1991, compared to 3.1 percent in 1989 and 2.0 percent in 1990. Thus, in terms of employment growth, the forecast for the Kansas economy is for a very subdued year relative to the previous two years. The same story is told by a closely related indicator, the unemployment rate; the Kansas unemployment rate, which has hovered right at 4 percent for two years, is forecast to jump to 4.5

percent in 1991, as the slowing economy fails to create enough jobs to keep pace with moderate growth of the labor force. If we look at personal income, we see a similar picture; personal income growth was 5.9 percent in 1989, dropped to 5.5 percent in 1990, and will fall to only 4.5 percent in 1991. Corrected for inflation these rates become 1.5 percent, 0.3 percent, and -0.4 percent respectively. Thus the Kansas forecast is for a very slow economy in 1991.

Employment in most sectors of the Kansas economy will mirror the overall slowdown, although some sectors and subsectors will buck the trend. The forecasted employment for the major sectors of the state's economy is shown in Table 3. The mining sector, which showed some growth in 1990 stimulated in part by the big jump in oil prices in the second half of the year, will show some continued but modest growth in 1991; as oil prices decline gradually during the year, neither their level nor expectations of their future level will be sufficiently high to generate a great deal of new activity. Likewise, employment in construction, which rebounded somewhat in 1990, will fall 5.5 percent in 1991. The failure of interest rates to drop further will be one factor in construction's decline. Another will be the recessionary

Table 3
Kansas Employment Growth by Sector

	1989	1990	1991
Mining	-10.0	4.8	2.4
Construction	-2.7	4.2	-5.5
Durable Goods Manufacturing	2.2	-0.5	-1.6
Nondurable Goods Manufacturing	1.0	2.0	0.8
Transportation and Utilities	3.0	0.9	0.5
Wholesale and Retail Trade	2.5	1.7	0.7
Finance, Insurance, and Real Estate	0.7	1.9	0.0
Services	7.4	4.0	3.5
Government	3.2	1.4	-1.3
Farm	3.1	14.9	-1.5

character of the economy; construction is usually one of the hardest hit sectors when there is an economic slowdown.

The 0.8 percent employment growth in nondurable goods manufacturing, although it will exceed the economy wide average of 0.3 percent, will still be significantly below the 2.0 percent growth experienced in this sector in 1990. The growth of employment in nondurable goods will be driven by employment growth in two of that sector's major subsectors; employment in food and kindred products will grow 3.0 percent in 1991, actually exceeding its 1990 growth rate of 2.3 percent, while employment in printing and publishing, while not matching its 1990 growth rate of 4.5 percent, will still exhibit a healthy 2.8 percent increase. Employment in these two sectors accounts for about two-thirds of total nondurable goods manufacturing employment. Among some of the smaller subsectors of nondurable goods manufacturing, employment in manufacturing of apparel will decline 4.4 percent, after growing 2.4 percent in 1990; employment in chemicals and allied products will decline 2.7 percent following a 2.3 percent decline in 1990; and employment in manufacturing of petroleum and coal products will decline 3.5 percent after growing 0.7 percent in 1990. The decline in the latter two areas can be directly attributed to higher raw materials costs associated with higher oil prices.

After two years of decline, employment in durable goods manufacturing will have returned to a point near its 1988 level, wiping out almost all of the 2.2 percent gain that it made in 1989. With the notable exception of the transportation equipment sector, whose employment will grow 0.4 percent in 1991 following a 0.9 percent decline in 1990, the 1.6 percent decline in employment in durable goods manufacturing comes from declines across all subsectors. Employment in stone, glass, and clay will decline 0.7 percent after growing 1.5 percent in 1990; employment in primary metals will decline 1.2 percent following a 0.1 percent decline in 1990; employment in fabricated metals will decline 2.5 percent as it did in 1990; and employment in manufacturing of machinery, including electrical, will fall 4.1 percent after increasing 1.7 percent in 1990. Manufacturing of transportation equipment accounts for nearly half of all employment in durable goods manufacturing in Kansas, while manufacturing of machinery, including electrical, accounts for about one-fourth of durable goods manufacturing employment.

The 0.5 percent rate of growth in transportation and public utilities employment is affected by a more than 7 percent decline in railroad employment and a 1 percent increase in trucking and warehousing. The slower economy is also reflected in the much slower growth of employment in wholesale and retail trade. Employment in wholesale trade will grow only 0.2 percent in 1991 after growing 1.7 percent in 1990, while employment in retail trade will grow 0.9 percent after growing 1.6 percent in 1990. Retail trade employment will decline somewhat in general merchandise stores, auto dealers and gas stations, and apparel and accessory stores, but will increase in food stores and other areas of retail trade.

Finance, insurance and real estate employment will remain flat, in spite of 1.5 percent employment

Table 4
Kansas Personal Income Breakdown
Growth Rates

	1989	1990	1991
Personal Income	5.9	5.5	4.5
Wages and Salaries	4.8	4.8	4.0
Nonfarm Proprietors' Income	5.6	4.2	3.9
Farm Proprietors' Income	-33.5	13.3	0.1
Dividends , Interest, and Rents	13.7	5.6	4.5
Personal Contributions to Social Insurance	9.3	6.7	5.1
Transfer Payments	8.4	8.3	7.5
Other Labor Income	6.9	5.5	4.4

decreases in both banking and insurance. Service employment will experience increases in hotels and lodging, personal services, and most other areas, although growth rates will be lower than in the recent past. The decrease in government employment will come at both the federal and state and local levels; federal government employment will fall 3.4 percent after falling 1.5 percent in 1990, while state and local government employment will fall 1.0 percent after increasing 1.9 percent in 1990.

Table 4 shows the breakdown of the Kansas personal income forecast. All of the categories reflect the slowdown in personal income growth. Wage and salary growth and other labor income growth are both projected to be about 1 percentage point below their 1990 growth rates, reflecting in part the much slower growth of employment forecasted for 1991. Dividend, interest, and rent income is likewise expected to grow about 1 percent slower in 1990, due to slow economic growth and the projected stability of interest rates over the forecast period.

Conclusion

The evidence is strong that higher oil prices due to the Persian gulf crisis pushed an already weak U.S. economy into a recession during the latter half of 1990, and that the recession will last at least through the first quarter of 1991. A recovery that can be expected to begin in the middle of 1991 will be weak due to constraints on fiscal policy imposed by the October budget compromise and self-imposed constraints on monetary policy by a Federal reserve Board that continues to place the fight against inflation at the top of its list of priorities.

There are good reasons to believe that the U.S. economy can avoid a long, deep recession at this time. First of all, the oil price shock, while severe, is still milder than earlier shocks. Furthermore, there are many reasons to expect the effects of a restriction on the flow of oil worldwide to be less severe than in earlier episodes of oil price increases. The U.S. and the other major oil importing nations now have much larger inventories of oil than they did in earlier crises. The U.S. and other major oil producing nations are much more energy efficient than they were during earlier oil price shocks; for example, the ratio of real output to energy input in the U.S has increased more than 50 percent since 1973. Inflation is lower now than it was during earlier oil shock episodes, and the central bank is more alert to the dangers of inflation. Finally, the world economy is now in a much better position than it was to withstand shocks. Thus, a good argument can be made that the effects of the dramatic increase in oil prices that occurred during last half of 1990 will not be of a sufficient magnitude to push the U.S. economy into a deep recession.

There are also reasons other than the above argument that the impact of higher oil prices may not be too severe to expect that any recession will be relatively mild at this time. First, the U.S. economy currently has a fairly low inventory to sales ratio. Thus, one of the major factors in deepening recessions once they begin, the tendency of firms to cut back production even more than sales in order to reduce inventories, should be largely absent from this recession. Second, manufacturing is already lean; there will be much less incentive for firms to take the opportunity of reduced demand to eliminate existing inefficiencies by laying off workers than there would be otherwise. Third, exports continue to be a strong sector of the economy. Finally, construction and housing were already at a low level, so there is good reason to think that the level of activity in this sector will not fall as far as it otherwise would have.

There are, however, some caveats to the scenario described above. Obviously, a war in the gulf that impaired Saudi Arabia's ability to produce could drive oil prices significantly higher in the short run. In the event of such an occurrence, one would expect the recession to be much more severe than the one that we described above, although not necessarily much longer. Secondly, one should at least make note of the fact that a severe recession would place an extreme strain on an already stressed financial system, and a partially incapacitated financial system would detract from the economy's ability to avoid a deep recession. Finally, slow growth of the European Economic Community could mean that U.S. export growth will not be as strong as indicated in our forecast, and thus that the recovery will be even weaker than we have indicated.

Notes

1. The forecasts for the national economy are produced by the Econometric Model of the United States developed at the Center for Econometric Model Research at the University of Indiana, using assumptions generated at the Institute. The directors of the CEMR are R. Jeffery Green and Morton J. Marcus. The Kansas forecasts are produced by the Kansas Econometric Model, which is a product of the Institute for Public Policy and Business Research.

2. Trade weighted average of the dollar's exchange rate.

3. Organization for Economic Cooperation and Development. Member nations are Australia, Austria, Belgium, Canada, Denmark, Finland, France, West Germany, Greece, Holland, Iceland, Ireland, Italy, Japan, Luxembourg, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United Kingdom, and the United States.

4. Employment refers to total number of Kansas residents employed in civilian (including nonmilitary government) jobs. Nonfarm wage and salary employment refers to to//tal nonfarm civilian (including nonmilitary government) jobs in Kansas. Thus, to go from nonfarm wage and salary employment to employment, one must correct for farm employment, Kansans who have more than one job, Kansans who work out of state, and non-Kansas residents who work in Kansas.

This page was intentionally

left blank.

APPENDIX

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 02JAN91 A1

GNP AS EXPENDITURE - 1982 DOLLARS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Gross National Product	4150.6	4155.1	4173.6	4160.0	4156.6	4163.9	4175.5	4188.5	4159.8	4171.1
Percent Change From Last Qtr (AR)	1.7	0.4	1.8	-1.3	-0.3	0.7	1.1	1.3	1.0	0.3
US: Personal Consumption Expend.	2677.3	2678.8	2702.7	2697.4	2696.8	2704.2	2711.4	2719.6	2689.1	2708.0
Percent Change From Last Qtr (AR)	1.1	0.2	3.6	-0.8	-0.1	1.1	1.1	1.2	1.2	0.7
US: Per. Con. Exp.-Durables	437.6	426.8	430.0	421.8	416.9	416.9	415.9	415.4	429.1	416.3
Percent Change From Last Qtr (AR)	14.4	-9.5	3.0	-7.4	-4.6	-0.1	-0.9	-0.5	0.3	-3.0
US: PCE-Nondurables	915.6	911.2	915.0	910.2	906.2	903.9	902.3	901.0	913.0	903.3
Percent Change From Last Qtr (AR)	-3.2	-1.9	1.7	-2.1	-1.8	-1.0	-0.7	-0.6	-0.7	-1.1
US: PCE-Services	1324.2	1340.8	1357.7	1365.4	1373.7	1383.4	1393.2	1403.2	1347.0	1388.4
Percent Change From Last Qtr (AR)	0.1	5.1	5.1	2.3	2.5	2.9	2.9	2.9	2.9	3.1
US: Fixed Nonresidential Invest.	514.6	508.4	517.6	517.5	513.9	511.2	508.6	506.5	514.5	510.0
Percent Change From Last Qtr (AR)	5.0	-4.7	7.4	-0.1	-2.7	-2.1	-2.1	-1.6	1.7	-0.9
US: Producers Durable Equipment	390.8	387.5	395.2	393.7	390.9	389.3	387.9	387.2	391.8	388.8
Percent Change From Last Qtr (AR)	5.7	-3.3	8.2	-1.5	-2.8	-1.6	-1.4	-0.8	2.1	-0.8
US: Investment in Structures	123.8	120.9	122.4	123.8	123.1	122.0	120.7	119.3	122.7	121.2
Percent Change From Last Qtr (AR)	2.3	-9.0	5.1	4.7	-2.5	-3.5	-4.2	-4.4	0.3	-1.2
US: Residential Investment	188.3	182.8	175.3	170.6	168.3	166.9	166.0	165.5	179.2	166.7
Percent Change From Last Qtr (AR)	15.1	-11.2	-15.4	-10.3	-5.2	-3.5	-2.1	-1.2	-4.2	-7.0

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Change in Bus. Inventories	-2.2	9.5	7.8	0.7	-1.1	-3.1	-1.7	-0.3	3.9	-1.5
US: Change in Farm Inventories	6.0	-2.1	-0.4	0.0	0.0	0.0	0.0	0.0	0.9	0.0
US: Change in Nonfarm Inv.	-8.2	11.6	8.2	0.7	-1.1	-3.1	-1.7	-0.3	3.1	-1.5
US: Net Exports	-35.4	-44.6	-52.5	-47.7	-41.9	-36.0	-29.7	-23.4	-45.1	-32.8
Percent Change From Last Qtr (AR)	-70.2	152.0	92.0	-31.7	-40.8	-45.4	-53.3	-61.5	-16.7	-27.3
US: Total Exports	628.1	620.1	622.0	631.3	640.7	649.9	659.1	668.2	625.4	654.5
Percent Change From Last Qtr (AR)	11.2	-5.0	1.2	6.1	6.0	5.9	5.8	5.6	5.4	4.7
US: Total Imports	663.5	664.7	674.5	679.1	682.5	685.9	688.9	691.7	670.4	687.2
Percent Change From Last Qtr (AR)	2.5	0.7	6.0	2.7	2.1	2.0	1.7	1.6	3.6	2.5
US: Total Government Purchases	807.9	820.2	822.8	821.6	820.4	820.7	821.0	820.7	818.1	820.7
Percent Change From Last Qtr (AR)	2.9	6.2	1.3	-0.6	-0.6	0.2	0.2	-0.1	2.5	0.3
US: Fed. Govt. Purchases	333.0	345.9	345.6	341.1	338.2	336.8	335.4	333.4	341.4	335.9
Percent Change From Last Qtr (AR)	0.4	16.4	-0.3	-5.1	-3.4	-1.6	-1.6	-2.4	1.9	-1.6
US: Fed. Defense Purchases	254.4	256.5	256.8	254.6	251.7	249.8	247.9	245.4	255.6	248.7
Percent Change From Last Qtr (AR)	-1.7	3.3	0.5	-3.4	-4.5	-3.0	-3.0	-4.0	-0.3	-2.7
US: Fed. Nondefense Purchases	78.6	89.4	88.8	86.5	86.5	87.0	87.5	88.0	85.8	87.3
Percent Change From Last Qtr (AR)	7.5	67.4	-2.7	-10.0	0.0	2.3	2.3	2.3	9.1	1.7
US: State and Local Govt. Purch.	475.0	474.3	477.2	480.5	482.2	483.9	485.6	487.3	476.7	484.8
Percent Change From Last Qtr (AR)	4.8	-0.6	2.5	2.8	1.4	1.4	1.4	1.4	2.9	1.7

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

GNP AS EXPENDITURE - CURRENT DOLLARS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Gross National Product	5375.4	5443.3	5514.4	5569.2	5638.0	5705.8	5778.0	5853.7	5475.6	5743.9
Percent Change From Last Qtr (AR)	6.7	5.1	5.3	4.0	5.0	4.9	5.2	5.3	5.3	4.9
US: Personal Consumption Expend.	3588.1	3622.7	3700.6	3777.7	3811.1	3854.9	3901.8	3951.3	3672.3	3879.8
Percent Change From Last Qtr (AR)	8.2	3.9	8.9	8.6	3.6	4.7	5.0	5.2	6.4	5.7
US: Per. Con. Exp.-Durables	492.1	478.4	483.1	475.1	471.4	472.3	471.9	472.0	482.2	471.9
Percent Change From Last Qtr (AR)	19.0	-10.7	4.0	-6.4	-3.1	0.7	-0.4	0.1	1.6	-2.1
US: PCE-Nondurables	1174.7	1179.0	1202.8	1244.9	1253.1	1260.5	1271.3	1282.4	1200.3	1266.8
Percent Change From Last Qtr (AR)	9.3	1.5	8.3	14.7	2.7	2.4	3.5	3.5	6.2	5.5
US: PCE-Services	1921.3	1965.3	2014.7	2057.7	2086.5	2122.1	2158.6	2196.9	1989.8	2141.0
Percent Change From Last Qtr (AR)	4.9	9.5	10.4	8.8	5.7	7.0	7.1	7.3	7.8	7.6
US: Fixed Nonresidential Invest.	523.1	516.5	530.1	536.1	537.8	538.3	538.4	539.2	526.5	538.4
Percent Change From Last Qtr (AR)	9.1	-5.0	11.0	4.6	1.2	0.4	0.1	0.5	2.8	2.3
US: Producers Durable Equipment	374.3	369.3	379.9	382.5	383.4	384.3	385.1	386.6	376.5	384.9
Percent Change From Last Qtr (AR)	11.0	-5.2	12.0	2.7	1.0	0.9	0.9	1.5	2.9	2.2
US: Investment in Structures	148.8	147.2	150.2	153.7	154.3	154.0	153.3	152.6	150.0	153.5
Percent Change From Last Qtr (AR)	4.7	-4.2	8.4	9.6	1.8	-0.9	-1.8	-1.9	2.6	2.4
US: Residential Investment	235.9	229.1	220.8	216.5	215.2	214.0	213.6	213.6	225.6	214.1
Percent Change From Last Qtr (AR)	18.9	-11.0	-13.7	-7.6	-2.4	-2.1	-0.9	0.1	-2.4	-5.1

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 02JAN91 A4

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Change in Bus. Inventories	-11.8	13.4	8.8	0.7	-2.2	-5.0	-3.1	-1.3	2.8	-2.9
US: Change in Farm Inventories	5.3	0.5	1.0	0.0	0.0	0.0	0.0	0.0	1.7	0.0
US: Change in Nonfarm Inv.	-17.0	13.0	7.8	0.7	-2.2	-5.0	-3.1	-1.3	1.1	-2.9
US: **Net Exports**	-30.0	-24.9	-49.2	-78.8	-55.8	-43.4	-35.0	-26.6	-45.7	-40.2
Percent Change From Last Qtr (AR)	-47.8	-52.5	1424.3	557.3	-74.9	-63.2	-57.9	-66.7	-0.8	-12.1
US: Total Exports	661.3	659.7	662.6	685.9	692.7	699.7	707.9	715.9	667.4	704.1
Percent Change From Last Qtr (AR)	12.0	-1.0	1.8	14.8	4.0	4.1	4.7	4.6	6.6	5.5
US: Total Imports	691.3	684.6	711.8	764.7	748.5	743.2	742.9	742.5	713.1	744.3
Percent Change From Last Qtr (AR)	8.0	-3.8	16.9	33.2	-8.2	-2.8	-0.2	-0.2	6.1	4.4
US: Total Government Purchases	1070.1	1086.4	1103.4	1117.1	1131.9	1146.9	1162.3	1177.6	1094.2	1154.7
Percent Change From Last Qtr (AR)	10.7	6.2	6.4	5.0	5.4	5.4	5.5	5.4	6.7	5.5
US: Fed. Govt. Purchases	410.6	421.9	425.4	423.4	424.1	424.9	425.6	425.5	420.3	425.0
Percent Change From Last Qtr (AR)	11.1	11.5	3.4	-1.9	0.7	0.8	0.7	-0.0	5.1	1.1
US: Fed. Defense Purchases	307.2	309.6	311.1	311.9	311.6	311.5	311.2	310.1	310.0	311.1
Percent Change From Last Qtr (AR)	11.1	3.2	2.0	1.1	-0.4	-0.2	-0.4	-1.3	3.0	0.4
US: Fed. Nondefense Purchases	103.4	112.3	114.3	111.4	112.4	113.4	114.4	115.4	110.4	113.9
Percent Change From Last Qtr (AR)	11.2	39.1	7.3	-9.7	3.6	3.5	3.6	3.6	11.6	3.2
US: State and Local Govt. Purch.	659.6	664.6	678.0	693.7	707.9	722.0	736.7	752.0	674.0	729.7
Percent Change From Last Qtr (AR)	10.5	3.1	8.3	9.6	8.4	8.2	8.4	8.6	7.7	8.3

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 02JAN91 A5

RELATION OF GNP, NNP, NAT. INCOME & PERS. INCOME

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Gross National Product	5375.4	5443.3	5514.4	5569.2	5638.0	5705.8	5778.0	5853.7	5475.6	5743.9
Percent Change From Last Qtr (AR)	6.7	5.1	5.3	4.0	5.0	4.9	5.2	5.3	5.3	4.9
US: Cap. Cons. Allow. with Adj.	567.0	571.1	578.7	583.8	589.0	592.5	595.6	598.8	575.2	594.0
Percent Change From Last Qtr (AR)	-3.8	2.9	5.4	3.6	3.6	2.3	2.1	2.2	3.7	3.3
US: Cap. Cons. Allow w/o Adj.	538.6	539.3	540.7	547.8	551.0	552.5	553.6	555.8	541.6	553.2
Percent Change From Last Qtr (AR)	-4.1	0.5	1.0	5.4	2.4	1.0	0.8	1.6	-0.0	2.1
US: Cap. Cons. Adjustment, Total	-28.4	-31.8	-38.0	-36.0	-38.0	-40.0	-42.0	-43.0	-33.5	-40.8
Percent Change From Last Qtr (AR)	2.9	57.2	103.9	-19.4	24.1	22.8	21.6	9.9	167.3	21.5
US: Net National Product	4808.4	4872.2	4935.7	4985.4	5049.0	5113.3	5182.3	5254.9	4900.4	5149.9
Percent Change From Last Qtr (AR)	8.0	5.4	5.3	4.1	5.2	5.2	5.5	5.7	5.5	5.1
US: Indirect Business Taxes	431.7	433.0	444.7	456.8	484.7	496.3	508.2	520.4	441.6	502.4
Percent Change From Last Qtr (AR)	10.0	1.2	11.3	11.3	26.8	9.9	9.9	10.0	6.7	13.8
US: Business Transfer Payments	34.1	34.7	35.4	36.0	36.5	37.1	37.7	38.3	35.0	37.4
Percent Change From Last Qtr (AR)	8.7	7.2	8.3	6.6	6.4	6.5	6.6	6.7	8.2	6.8
US: Statistical Discrepency	0.7	-3.2	-3.2	0.0	0.0	0.0	0.0	0.0	-1.4	0.0
US: Sub. less Cur. Sur.-Gov. E.	8.4	3.6	-7.5	1.1	0.6	0.1	-0.4	-0.9	1.4	-0.1
Percent Change From Last Qtr (AR)	21153.3	-96.6	1783.8	-100.0	-91.1	-99.9	25500.0	2462.9	-77.7	-110.7
US: National Income	4350.3	4411.3	4451.3	4493.7	4528.3	4580.0	4636.0	4695.2	4426.7	4609.9
Percent Change From Last Qtr (AR)	8.0	5.7	3.7	3.9	3.1	4.6	5.0	5.2	4.8	4.1

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast

02JAN91 A6

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Corp. Prof. w. IVA + CCADJ	296.8	306.6	300.8	291.8	278.7	285.2	292.4	300.4	299.0	289.2
Percent Change From Last Qtr (AR)	8.4	13.9	-7.4	-11.4	-16.8	9.7	10.5	11.3	-4.0	-3.3
US: Net Interest	463.6	466.2	468.9	470.8	472.4	473.8	475.3	477.0	467.4	474.6
Percent Change From Last Qtr (AR)	1.7	2.3	2.3	1.6	1.4	1.2	1.3	1.4	5.0	1.6
US: Cont. to Soc. Ins.-Total	498.9	503.9	511.3	514.0	527.2	530.4	534.0	537.9	507.0	532.4
Percent Change From Last Qtr (AR)	12.7	4.1	6.0	2.2	10.6	2.5	2.7	3.0	6.4	5.0
US: Wage Accruals less Disburs.	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
US: Govt. Trans. to Pers.-Total	646.8	652.0	660.7	682.3	687.6	703.2	718.1	732.8	660.4	710.4
Percent Change From Last Qtr (AR)	16.6	3.3	5.4	13.7	3.2	9.3	8.8	8.4	9.3	7.6
US: Personal Interest Income	670.5	678.0	686.4	692.7	698.9	705.0	711.3	717.8	681.9	708.2
Percent Change From Last Qtr (AR)	3.4	4.5	5.0	3.7	3.6	3.5	3.6	3.7	6.0	3.9
US: Personal Dividend Income	120.5	122.9	124.9	127.2	129.5	131.7	134.0	136.4	123.9	132.9
Percent Change From Last Qtr (AR)	8.0	8.2	6.7	7.6	7.3	7.0	7.4	7.3	8.3	7.3
US: Personal Income	4562.8	4622.2	4677.7	4754.9	4802.7	4867.6	4935.5	5005.4	4654.4	4902.8
Percent Change From Last Qtr (AR)	8.6	5.3	4.9	6.8	4.1	5.5	5.7	5.8	6.2	5.3

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast

DISPOSITION OF PERSONAL INCOME - CURRENT DOLLARS 02JAN91 A7

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Personal Income	4562.8	4622.2	4677.7	4754.9	4802.7	4867.6	4935.5	5005.4	4654.4	4902.8
Percent Change From Last Qtr (AR)	8.6	5.3	4.9	6.8	4.1	5.5	5.7	5.8	6.2	5.3
US: Wage and Salary Disburse.	2651.6	2696.3	2733.3	2762.4	2791.5	2822.9	2856.9	2892.8	2710.9	2841.0
Percent Change From Last Qtr (AR)	6.1	6.9	5.6	4.3	4.3	4.6	4.9	5.1	5.3	4.8
US: Other Labor Income	252.8	256.4	260.0	263.4	266.8	270.5	274.3	278.4	258.2	272.5
Percent Change From Last Qtr (AR)	8.8	5.8	5.7	5.4	5.3	5.5	5.8	6.0	6.7	5.6
US: Total Proprietors Inc.	404.0	401.7	398.0	413.5	419.7	426.6	434.0	441.5	404.3	430.5
Percent Change From Last Qtr (AR)	25.5	-2.3	-3.6	16.6	6.1	6.8	7.1	7.1	6.6	6.5
US: Farm Proprietors Inc.	57.4	51.0	42.8	53.0	53.9	54.8	55.7	56.6	51.0	55.3
Percent Change From Last Qtr (AR)	148.9	-37.7	-50.4	134.4	7.2	7.0	6.9	6.0	5.0	8.3
US: Nonfarm Proprietors Inc.	346.6	350.8	355.2	360.6	365.8	371.8	378.3	385.0	353.3	375.2
Percent Change From Last Qtr (AR)	13.2	4.9	5.1	6.2	5.9	6.7	7.1	7.3	6.8	6.2
US: Rental Income of Persons	5.5	4.3	7.6	7.7	7.8	7.9	8.0	8.1	6.3	7.9
Percent Change From Last Qtr (AR)	223.8	-62.6	875.8	5.0	5.0	5.0	5.0	5.0	-23.7	26.4
US: Personal Interest Income	670.5	678.0	686.4	692.7	698.9	705.0	711.3	717.8	681.9	708.2
Percent Change From Last Qtr (AR)	3.4	4.5	5.0	3.7	3.6	3.5	3.6	3.7	6.0	3.9
US: Personal Dividend Income	120.5	122.9	124.9	127.2	129.5	131.7	134.0	136.4	123.9	132.9
Percent Change From Last Qtr (AR)	8.0	8.2	6.7	7.6	7.3	7.0	7.4	7.3	8.3	7.3
US: Total Transfer Payments	680.9	686.7	696.0	718.3	724.2	740.3	755.8	771.1	695.5	747.9
Percent Change From Last Qtr (AR)	16.1	3.5	5.5	13.4	3.3	9.2	8.7	8.3	9.2	7.5

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Tot. Pers. Tax + Nontax Pay	675.1	696.5	709.0	722.9	736.6	748.7	759.9	771.5	700.9	754.1
Percent Change From Last Qtr (AR)	3.3	13.3	7.4	8.1	7.8	6.7	6.1	6.3	6.4	7.6
US: Disposable Personal Income	3887.7	3925.7	3968.6	4032.0	4066.1	4118.9	4175.7	4233.9	3953.5	4148.7
Percent Change From Last Qtr (AR)	9.6	4.0	4.4	6.5	3.4	5.3	5.6	5.7	6.1	4.9
US: Personal Consumption Expend.	3588.1	3622.7	3700.6	3777.7	3811.1	3854.9	3901.8	3951.3	3672.3	3879.8
Percent Change From Last Qtr (AR)	8.2	3.9	8.9	8.6	3.6	4.7	5.0	5.2	6.4	5.7
US: Int. Paid by Cons. to Bus.	107.4	107.5	107.9	109.1	110.2	111.5	112.8	114.1	108.0	112.2
Percent Change From Last Qtr (AR)	6.6	0.4	1.5	4.4	4.4	4.6	4.8	4.8	5.7	3.9
US: Pers. Trans. Pay. to For.	0.9	0.4	0.7	1.0	1.0	1.0	1.0	1.0	0.7	1.0
Percent Change From Last Qtr (AR)	-68.4	-96.1	837.9	316.5	0.0	0.0	0.0	0.0	-47.4	33.3
US: Personal Saving	191.3	195.1	159.4	144.2	143.8	151.5	160.0	167.5	172.5	155.7
Percent Change From Last Qtr (AR)	45.8	8.2	-55.4	-33.0	-1.1	23.1	24.5	20.0	0.4	-9.7
US: Disposable Personal Income	2900.9	2902.8	2898.4	2878.7	2877.3	2889.4	2901.7	2914.2	2895.2	2895.7
Percent Change From Last Qtr (AR)	2.5	0.3	-0.6	-2.7	-0.2	1.7	1.7	1.7	0.9	0.0
US: YSAV as a Percent of YPD	4.9	5.0	4.0	3.6	3.5	3.7	3.8	4.0	4.4	3.8

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

NATIONAL INCOME - CURRENT DOLLARS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: National Income	4350.3	4411.3	4451.3	4493.7	4528.3	4580.0	4636.0	4695.2	4426.7	4609.9
Percent Change From Last Qtr (AR)	8.0	5.7	3.7	3.9	3.1	4.6	5.0	5.2	4.8	4.1
US: Wages and Salaries	2651.6	2696.3	2733.3	2762.4	2791.5	2822.9	2856.9	2892.8	2710.9	2841.0
Percent Change From Last Qtr (AR)	6.1	6.9	5.6	4.3	4.3	4.6	4.9	5.1	5.3	4.8
US: W. and S.-Govt. + Govt. Ent.	497.1	505.7	511.3	517.8	525.1	532.6	540.2	548.0	508.0	536.5
Percent Change From Last Qtr (AR)	8.8	7.1	4.5	5.2	5.8	5.8	5.9	5.9	6.6	5.6
US: W. and S.-Other	2154.5	2190.6	2222.0	2244.6	2266.4	2290.3	2316.7	2344.8	2202.9	2304.5
Percent Change From Last Qtr (AR)	5.5	6.9	5.9	4.1	3.9	4.3	4.7	4.9	5.1	4.6
US: Supplements to w. and s.	528.8	536.1	542.8	547.5	558.2	563.6	569.4	575.5	538.8	566.7
Percent Change From Last Qtr (AR)	10.4	5.6	5.1	3.5	8.1	3.9	4.2	4.4	6.5	5.2
US: Emp. Cont. to Soc. Ins.	276.0	279.7	282.7	284.1	291.4	293.1	295.0	297.2	280.6	294.2
Percent Change From Last Qtr (AR)	11.8	5.5	4.4	2.0	10.7	2.4	2.6	2.9	6.3	4.8
US: Other Labor Income	252.8	256.4	260.0	263.4	266.8	270.5	274.3	278.4	258.2	272.5
Percent Change From Last Qtr (AR)	8.8	5.8	5.7	5.4	5.3	5.5	5.8	6.0	6.7	5.6
US: Total Proprietors Inc.	404.0	401.7	398.0	413.5	419.7	426.6	434.0	441.5	404.3	430.5
Percent Change From Last Qtr (AR)	25.5	-2.3	-3.6	16.6	6.1	6.8	7.1	7.1	6.6	6.5
US: Farm Proprietors Inc.	57.4	51.0	42.8	53.0	53.9	54.8	55.7	56.6	51.0	55.3
Percent Change From Last Qtr (AR)	148.9	-37.7	-50.4	134.4	7.2	7.0	6.9	6.0	5.0	8.3
US: Nonfarm Proprietors Inc.	346.6	350.8	355.2	360.6	365.8	371.8	378.3	385.0	353.3	375.2
Percent Change From Last Qtr (AR)	13.2	4.9	5.1	6.2	5.9	6.7	7.1	7.3	6.8	6.2

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 02JAN91 A10

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Rental Income of Persons	5.5	4.3	7.6	7.7	7.8	7.9	8.0	8.1	6.3	7.9
Percent Change From Last Qtr (AR)	223.8	-62.6	875.8	5.0	5.0	5.0	5.0	5.0	-23.7	26.[illegible]
US: Corp. Prof. w. IVA + CCADJ	296.8	306.6	300.8	291.8	278.7	285.2	292.4	300.4	299.0	289.2
Percent Change From Last Qtr (AR)	8.4	13.9	-7.4	-11.4	-16.8	9.7	10.5	11.3	-4.0	-3.3
US: Net Interest	463.6	466.2	468.9	470.8	472.4	473.8	475.3	477.0	467.4	474.6
Percent Change From Last Qtr (AR)	1.7	2.3	2.3	1.6	1.4	1.2	1.3	1.4	5.0	1.6
US: Corp. Prof. before Taxe	296.9	299.3	329.1	329.1	321.2	328.8	339.9	351.5	313.6	335.3
Percent Change From Last Qtr (AR)	10.2	3.3	46.2	-0.0	-9.2	9.8	14.2	14.4	1.9	6.9
US: Profits Tax Liability	129.9	133.1	146.4	147.4	146.0	150.1	154.9	159.8	139.2	152.7
Percent Change From Last Qtr (AR)	22.4	10.2	46.2	2.8	-3.6	11.7	13.5	13.3	3.0	9.7
US: Corp. Prof. after Taxes	167.1	166.1	182.7	181.7	175.2	178.7	184.9	191.6	174.4	182.6
Percent Change From Last Qtr (AR)	1.9	-2.4	46.5	-2.3	-13.6	8.2	14.8	15.3	1.0	4.7
US: Dividends-Total	130.3	133.0	135.1	137.8	140.5	143.2	146.0	149.0	134.0	144.7
Percent Change From Last Qtr (AR)	8.4	8.5	6.5	8.2	8.0	8.0	8.1	8.2	8.6	7.9
US: Undistribured Corp. Prof.	36.8	33.2	47.6	43.9	34.7	35.4	38.9	42.7	40.4	37.9
Percent Change From Last Qtr (AR)	-17.4	-33.8	324.3	-28.0	-61.0	8.9	44.9	45.0	-17.8	-6.1
US: Inventory Valuation Adj.	-11.4	-0.5	-30.6	-38.7	-40.4	-37.9	-38.2	-39.0	-20.3	-38.8
Percent Change From Last Qtr (AR)	-61.8	-100.01402831979		155.2	18.5	-22.5	3.3	8.4	-6.4	91.4
US: Corp. Cap. Cons. Adj.	11.3	7.7	2.3	1.4	-2.2	-5.7	-9.3	-12.2	5.7	-7.3
Percent Change From Last Qtr (AR)	-72.5	-78.4	-99.2	-85.5	428.9	4892.0	594.4	195.5	-77.7	-229.1
US: Net Interest	463.6	466.2	468.9	470.8	472.4	473.8	475.3	477.0	467.4	474.6
Percent Change From Last Qtr (AR)	1.7	2.3	2.3	1.6	1.4	1.2	1.3	1.4	5.0	1.6

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 02JAN91 All

PRICE DEFLATORS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: CPI-All items	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.4	1.3	1.4
Percent Change From Last Qtr (AR)	8.1	3.7	6.4	11.4	3.4	3.6	4.1	4.1	5.7	5.4
US: Implicit Deflator - GNP	1.3	1.3	1.3	1.3	1.4	1.4	1.4	1.4	1.3	1.4
Percent Change From Last Qtr (AR)	4.9	4.7	3.5	5.4	5.4	4.2	4.0	4.0	4.2	4.6
US: Implicit Deflator - C	1.3	1.4	1.4	1.4	1.4	1.4	1.4	1.5	1.4	1.4
Percent Change From Last Qtr (AR)	7.0	3.7	5.1	9.5	3.6	3.5	3.8	3.9	5.2	4.9
US: Implicit Deflator - IOIL	0.6	0.5	0.6	1.1	0.9	0.8	0.7	0.7	0.7	0.8
Percent Change From Last Qtr (AR)	48.2	-56.6	164.7	799.1	-59.0	-41.4	-25.4	-27.6	32.5	6.3

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast

EMPLOYMENT 02JAN91 A12

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Civilian Labor Force	124.6	124.9	124.8	125.1	125.3	125.5	125.7	125.8	124.8	125.6
Percent Change From Last Qtr (AR)	0.7	0.9	-0.4	0.8	0.7	0.6	0.6	0.6	0.8	0.6
US: Civilian Employment	118.1	118.3	117.8	117.8	117.6	117.5	117.4	117.4	118.0	117.5
Percent Change From Last Qtr (AR)	1.0	0.7	-1.5	-0.1	-0.7	-0.4	-0.2	-0.0	0.6	-0.4
US: Unemployment	6.5	6.6	7.0	7.2	7.7	8.0	8.2	8.4	6.8	8.1
Percent Change From Last Qtr (AR)	-4.9	5.1	22.1	17.3	24.6	17.9	12.6	9.7	4.9	17.9
US: Unemployment Rate-Total	5.3	5.3	5.6	5.8	6.1	6.4	6.5	6.7	5.5	6.4
US: Tot. Nonfarm Empl.	109.9	110.5	110.7	110.7	110.7	110.7	110.9	111.1	110.4	110.9
Percent Change From Last Qtr (AR)	2.6	2.3	0.4	0.0	0.0	0.3	0.6	0.7	1.9	0.4
US: Total Govt. Empl.	18.1	18.4	18.4	18.4	18.4	18.4	18.5	18.5	18.3	18.5
Percent Change From Last Qtr (AR)	3.7	8.4	-1.4	-0.3	0.9	0.9	1.0	1.0	3.0	0.8
US: Fed. Govt. Empl.	3.0	3.3	3.1	3.0	2.9	2.9	2.9	2.9	3.1	2.9
Percent Change From Last Qtr (AR)	6.8	36.8	-22.7	-14.6	-1.3	-1.4	-0.7	-0.7	3.2	-4.9
US: S & L Govt. Empl.	15.0	15.2	15.3	15.4	15.4	15.5	15.5	15.6	15.2	15.5
Percent Change From Last Qtr (AR)	3.0	3.2	3.7	2.8	1.3	1.3	1.3	1.3	3.0	2.0
US: Output Per Namhour-Pr. Nonag.	18.9	18.8	18.9	18.8	18.8	18.8	18.8	18.8	18.9	18.8
Percent Change From Last Qtr (AR)	-1.1	-1.6	1.3	-1.3	-0.4	0.1	-0.1	-0.4	-0.8	-0.3

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

FINANCIAL AND GOVERNMENT BUDGET DEFECIT

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: M1 Money Supply	800.3	807.4	816.1	820.7	829.0	837.6	846.6	855.9	811.1	842.3
Percent Change From Last Qtr (AR)	4.9	3.6	4.4	2.3	4.1	4.2	4.4	4.5	3.5	3.8
US: M2 Money Supply	3252.5	3275.6	3301.2	3335.0	3371.0	3414.0	3457.0	3500.0	3291.1	3435.5
Percent Change From Last Qtr (AR)	6.5	2.9	3.2	4.2	4.4	5.2	5.1	5.1	5.2	4.4
US: 3-Month T-Bill Rate	7.8	7.8	7.5	7.2	7.2	7.2	7.2	7.2	7.6	7.2
Percent Change From Last Qtr (AR)	6.6	0.5	-13.4	-14.4	1.1	-1.4	0.5	2.0	-6.9	-4.4
US: Prime Rate Charged By Banks	10.0	10.0	10.0	9.7	9.5	9.5	9.5	9.5	9.9	9.5
Percent Change From Last Qtr (AR)	-16.5	-1.5	0.0	-12.8	-4.9	-2.9	-0.9	0.8	-8.7	-4.5
US: Moodys AAA Corp. Bond Rate	9.2	9.4	9.4	9.4	9.5	9.5	9.5	9.6	9.3	9.5
Percent Change From Last Qtr (AR)	14.4	9.1	0.3	-0.2	2.6	1.8	2.0	2.2	1.0	1.9
US: Federal Govt. Surplus	-168.3	-166.0	-139.7	-155.1	-123.3	-126.5	-127.5	-126.9	-157.3	-126.0
Percent Change From Last Qtr (AR)	58.1	-5.4	-49.8	51.8	-60.1	10.8	3.5	-1.9	17.1	-19.9

US forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Indiana Econometric Model of the United States.

EMPLOYMENT

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Civilian Labor Force	1285.4	1314.4	1322.4	1303.4	1294.3	1323.8	1328.1	1319.5	1306.4	1316.4
Percent Change From One Year Ago	1.7	1.2	1.9	1.8	0.7	0.7	0.4	1.2	1.7	0.8
KS EMP: Employed	1231.8	1266.4	1267.4	1245.2	1229.9	1271.3	1268.7	1260.1	1252.7	1257.5
Percent Change From One Year Ago	2.1	1.6	1.5	1.1	-0.2	0.4	0.1	1.2	1.6	0.4
KS EMP: Unemployed	53.6	48.0	55.0	58.3	64.4	52.5	59.4	59.4	53.7	58.9
Percent Change From One Year Ago	-6.9	-8.4	11.0	20.1	20.1	9.4	7.9	1.9	3.3	9.7
KS EMP: Unemployment Rate	4.2	3.6	4.2	4.5	5.0	4.0	4.5	4.5	4.1	4.5
Percent Change From One Year Ago	-8.1	-9.9	9.6	16.6	19.4	9.1	7.3	0.7	1.5	9.0
KS EMP: Adj. for Res. & Self Emp.	94.3	100.2	99.0	86.6	93.8	97.7	100.1	93.0	95.0	96.2
Percent Change From One Year Ago	-17.5	-10.5	-13.0	4.0	-0.5	-2.5	1.1	7.4	-10.2	1.2
KS EMP: Farm	60.7	71.3	80.9	61.5	57.1	74.2	78.8	60.2	68.6	67.6
Percent Change From One Year Ago	24.3	17.6	19.2	0.1	-5.9	4.1	-2.6	-2.1	14.9	-1.5
KS EMP: Total Non-farm Wage & Salary	1076.8	1095.0	1087.5	1097.1	1079.0	1099.4	1089.8	1106.9	1089.1	1093.8
Percent Change From One Year Ago	3.3	2.0	1.9	1.0	0.2	0.4	0.2	0.9	2.0	0.4
KS EMP: Mining	9.4	9.8	9.9	10.1	9.5	10.0	10.2	10.3	9.8	10.0
Percent Change From One Year Ago	1.8	4.6	4.2	8.6	1.1	2.1	3.4	2.0	4.8	2.4

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Oil & Gas Extraction	8.2	8.4	8.5	8.8	8.3	8.7	8.9	9.1	8.5	8.7
Percent Change From One Year Ago	0.8	4.1	4.1	9.2	1.8	3.3	4.4	2.8	4.6	3.1
KS EMP: Mining Residual	1.2	1.4	1.4	1.3	1.2	1.3	1.4	1.3	1.3	1.3
Percent Change From One Year Ago	9.1	7.7	5.0	4.7	-3.8	-4.9	-3.0	-3.2	6.5	-3.7
KS EMP: Construction	38.7	43.5	45.3	41.3	34.6	41.1	43.3	40.4	42.2	39.8
Percent Change From One Year Ago	10.4	5.8	3.3	-1.7	-10.4	-5.5	-4.4	-2.2	4.2	-5.5
KS EMP: Non-durable Goods	76.8	77.4	77.5	77.0	77.0	78.2	78.3	77.7	77.2	77.8
Percent Change From One Year Ago	2.4	1.2	2.6	2.0	0.2	1.1	1.1	0.9	2.0	0.8
KS EMP: Food & Kindred	27.1	27.1	27.8	27.9	27.5	28.1	28.8	28.8	27.5	28.3
Percent Change From One Year Ago	0.6	1.1	4.1	3.3	1.6	3.7	3.3	3.4	2.3	3.0
KS EMP: Apparel	3.7	3.6	3.7	3.6	3.5	3.5	3.5	3.4	3.6	3.5
Percent Change From One Year Ago	11.1	0.9	0.0	-1.5	-5.2	-2.0	-5.2	-5.3	2.4	-4.4
KS EMP: Printing & Publishing	20.7	21.0	20.6	20.7	21.5	21.7	21.1	21.0	20.8	21.3
Percent Change From One Year Ago	6.0	3.4	4.0	4.4	3.9	3.3	2.3	1.7	4.5	2.8
KS EMP: Chemicals & Allied Prod.	7.7	7.7	7.7	7.5	7.5	7.5	7.5	7.3	7.6	7.4
Percent Change From One Year Ago	-2.5	-3.0	-0.9	-2.9	-2.5	-2.0	-2.9	-3.3	-2.3	-2.7
KS EMP: Petroleum & Coal	11.9	12.0	11.8	11.5	11.2	11.5	11.6	11.3	11.8	11.4
Percent Change From One Year Ago	1.4	0.6	0.3	0.4	-6.0	-4.6	-1.6	-1.7	0.7	-3.5
KS EMP: Non-durables Residual	5.8	6.0	5.9	5.9	5.9	5.9	5.9	5.9	5.9	5.9
Percent Change From One Year Ago	2.4	0.6	1.7	-1.1	0.9	-0.9	0.6	0.2	0.9	0.2

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Durable Goods	107.4	109.0	108.5	109.1	107.4	107.2	106.1	106.4	108.5	106.8
Percent Change From One Year Ago	-0.8	0.0	-0.9	-0.2	-0.0	-1.6	-2.2	-2.5	-0.5	-1.6
KS EMP: Stone Glass Clay	6.1	6.6	6.6	6.5	6.1	6.4	6.6	6.4	6.4	6.4
Percent Change From One Year Ago	1.1	3.1	-1.0	3.0	0.6	-2.3	-0.3	-0.8	1.5	-0.7
KS EMP: Primary Metals	3.1	3.0	3.0	3.1	3.0	3.0	3.0	3.0	3.0	3.0
Percent Change From One Year Ago	2.2	0.0	-1.1	-1.4	-0.9	1.1	-1.5	-3.3	-0.1	-1.2
KS EMP: Fabricated Metals	10.7	10.9	10.7	10.6	10.4	10.5	10.5	10.4	10.7	10.5
Percent Change From One Year Ago	-5.9	-4.1	-0.6	1.1	-2.7	-3.5	-1.6	-2.4	-2.5	-2.5
KS EMP: Machinery, Incl. Electrical	29.0	29.1	29.0	28.9	28.7	28.1	27.5	27.1	29.0	27.8
Percent Change From One Year Ago	3.3	2.2	1.0	0.4	-1.1	-3.4	-5.4	-6.4	1.7	-4.1
KS EMP: Transportation Equipment	48.6	49.1	48.9	50.1	49.6	49.2	48.7	50.0	49.2	49.4
Percent Change From One Year Ago	-1.5	0.1	-1.9	-0.5	2.2	0.2	-0.5	-0.3	-0.9	0.4
KS EMP: Durables Residual	10.0	10.2	10.2	9.9	9.5	9.8	9.9	9.6	10.1	9.7
Percent Change From One Year Ago	-4.8	-3.8	-1.9	-3.4	-5.4	-3.8	-3.6	-2.5	-3.5	-3.8
KS EMP: Transportation & Utilities	66.0	66.4	67.0	66.9	65.8	67.0	67.4	67.5	66.6	66.9
Percent Change From One Year Ago	1.5	0.4	1.1	0.5	-0.3	0.9	0.5	0.9	0.9	0.5
KS EMP: Railroads	8.2	8.1	7.9	7.7	7.4	7.4	7.4	7.3	8.0	7.4
Percent Change From One Year Ago	-6.1	-7.9	-7.5	-7.9	-9.2	-8.6	-5.4	-5.4	-7.3	-7.2
KS EMP: Trucking & Warehousing	22.9	23.2	23.8	23.5	22.6	23.6	24.1	23.9	23.4	23.6
Percent Change From One Year Ago	3.2	1.0	2.7	0.8	-1.2	1.8	1.2	1.7	1.9	0.9

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Electric Gas & Sanitary Serv	12.6	12.6	12.7	12.5	12.5	12.6	12.8	12.6	12.6	12.6
Percent Change From One Year Ago	0.0	0.3	-1.0	-2.2	-1.2	-0.1	1.1	1.1	-0.7	0.2
KS EMP: Trans. & Utilities Residual	22.3	22.4	22.7	23.2	23.2	23.3	23.0	23.7	22.6	23.3
Percent Change From One Year Ago	3.9	3.2	4.0	4.9	4.4	4.0	1.6	2.2	4.0	3.1
KS EMP: Wholesale Trade	70.0	70.8	71.4	70.1	70.0	71.2	71.4	70.2	70.6	70.7
Percent Change From One Year Ago	2.6	1.2	2.4	0.8	-0.0	0.6	0.1	0.1	1.7	0.2
KS EMP: Retail Trade	197.6	200.1	201.5	204.2	198.0	202.0	203.5	206.8	200.8	202.6
Percent Change From One Year Ago	3.5	1.5	0.9	0.7	0.2	1.0	1.0	1.2	1.6	0.9
KS EMP: Gen. Merchandise Stores	28.1	27.8	28.3	30.0	27.6	27.3	27.4	29.3	28.5	27.9
Percent Change From One Year Ago	5.0	2.5	1.2	-0.5	-1.8	-1.9	-3.0	-2.3	2.0	-2.2
KS EMP: Food Stores	28.6	28.5	28.6	29.0	28.7	28.8	29.1	29.5	28.7	29.0
Percent Change From One Year Ago	2.8	1.3	0.7	0.6	0.2	1.0	1.5	1.4	1.3	1.0
KS EMP: Auto. Dealers & Gas Stations	24.1	24.3	24.4	24.1	23.8	24.2	24.3	24.0	24.2	24.1
Percent Change From One Year Ago	-0.6	-1.2	-0.4	-0.9	-1.3	-0.3	-0.5	-0.4	-0.8	-0.6
KS EMP: Apparel & Accessory Stores	11.3	10.8	10.5	11.1	10.5	10.5	10.6	11.2	10.9	10.7
Percent Change From One Year Ago	3.3	-3.9	-8.2	-8.9	-6.9	-2.9	0.8	0.7	-4.6	-2.1
KS EMP: Retail Trade Residual	105.4	108.6	109.6	110.0	107.4	111.2	112.1	112.8	108.4	110.9
Percent Change From One Year Ago	4.3	2.5	2.1	2.5	1.9	2.4	2.2	2.6	2.8	2.3
KS EMP: Finance, Insurance, R.E.	58.9	59.6	59.7	58.8	58.5	59.4	59.9	59.1	59.2	59.2
Percent Change From One Year Ago	2.7	2.5	1.9	0.6	-0.7	-0.3	0.4	0.6	1.9	-0.0

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Banking	25.0	25.1	25.0	24.7	24.6	24.6	24.7	24.3	24.9	24.6
Percent Change From One Year Ago	1.2	0.5	-0.1	-1.1	-1.6	-1.8	-1.2	-1.4	0.1	-1.5
KS EMP: Insurance	13.0	13.0	12.9	12.8	12.6	12.7	12.8	12.8	12.9	12.7
Percent Change From One Year Ago	1.6	1.3	0.0	-1.6	-3.2	-2.4	-1.0	0.4	0.3	-1.6
KS EMP: F.I.R.E. Residual	20.9	21.5	21.8	21.4	21.3	22.1	22.4	22.0	21.4	22.0
Percent Change From One Year Ago	5.2	5.6	5.5	4.0	1.9	2.7	3.0	3.0	5.1	2.7
KS EMP: Services	234.8	240.5	242.6	243.3	242.9	249.5	250.9	251.9	240.3	248.8
Percent Change From One Year Ago	5.7	4.0	3.0	3.6	3.5	3.7	3.4	3.5	4.0	3.5
KS EMP: Hotels & Lodging	9.3	9.8	10.1	9.9	9.6	10.3	10.7	10.4	9.8	10.2
Percent Change From One Year Ago	3.7	0.7	2.4	3.1	2.9	4.6	5.8	4.6	2.4	4.5
KS EMP: Personal Services	11.6	11.7	11.4	11.5	12.1	11.8	11.5	11.6	11.6	11.7
Percent Change From One Year Ago	-0.6	5.7	6.2	9.3	4.3	1.0	0.6	0.6	5.0	1.6
KS EMP: Services Residual	213.9	219.0	221.1	221.8	221.3	227.4	228.7	229.9	219.0	226.8
Percent Change From One Year Ago	6.1	4.1	2.9	3.3	3.4	3.8	3.4	3.7	4.1	3.6
KS EMP: Federal Gov.	29.4	29.4	29.1	28.5	28.0	28.4	28.2	27.8	29.1	28.1
Percent Change From One Year Ago	0.2	-1.5	-1.1	-3.5	-4.8	-3.3	-2.9	-2.4	-1.5	-3.4
KS EMP: State & Local Gov.	187.9	188.5	175.1	187.7	187.3	185.3	170.5	188.7	184.8	183.0
Percent Change From One Year Ago	3.1	1.8	3.2	-0.5	-0.3	-1.7	-2.6	0.5	1.9	-1.0

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

HOURS AND WAGES

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS HRS/WK: Food & Kindred Products	39.1	42.1	42.2	41.1	40.8	41.1	41.5	40.6	41.1	41.0
Percent Change From One Year Ago	1.0	4.3	1.0	2.4	4.4	-2.3	-1.6	-1.4	2.2	-0.3
KS HRS/WK: Apparel&Other Fin. Prod.	36.5	36.6	36.8	36.4	35.9	36.3	36.4	36.1	36.6	36.2
Percent Change From One Year Ago	0.4	-0.8	-2.3	-4.0	-1.6	-0.8	-1.1	-0.8	-1.7	-1.1
KS HRS/WK: Pet. Refining & Rel. Ind.	40.4	40.2	39.7	39.4	39.0	39.9	40.3	40.4	39.9	39.9
Percent Change From One Year Ago	-7.8	-5.3	0.6	-3.1	-3.3	-0.7	1.6	2.6	-4.0	0.0
KS HRS/WK: Fabricated Metal Products	36.4	37.5	38.5	38.1	37.1	37.5	37.5	37.3	37.6	37.4
Percent Change From One Year Ago	-2.6	1.4	6.7	1.7	2.0	0.1	-2.8	-2.1	1.8	-0.7
KS HRS/WK: Machinery, Incl. Elec.	40.7	40.0	39.4	40.0	39.6	39.6	38.9	39.9	40.0	39.5
Percent Change From One Year Ago	-2.1	-1.5	-3.5	-4.5	-2.6	-0.9	-1.2	-0.3	-2.9	-1.3
KS HRS/WK: Transportation Equipment	41.1	40.9	41.5	41.7	40.2	40.1	39.9	41.1	41.3	40.3
Percent Change From One Year Ago	-2.3	-2.5	0.6	22.3	-2.2	-1.9	-3.8	-1.5	3.6	-2.4
KS WAGE/HR: Food & Kindred Products	9.0	9.3	9.4	9.5	9.5	9.5	9.5	9.5	9.3	9.5
Percent Change From One Year Ago	-3.3	0.1	-0.2	2.9	5.6	2.1	0.9	-0.2	-0.1	2.0
KS WAGE/HR: Apparel&Other Fin. Prod.	5.6	5.8	5.8	5.9	6.0	6.0	6.1	6.1	5.8	6.0
Percent Change From One Year Ago	0.3	4.0	4.1	6.5	6.7	3.7	4.1	2.9	3.7	4.3
KS WAGE/HR: Pet. Refining & Rel. Ind	11.7	11.3	11.1	11.1	10.9	10.6	10.3	10.1	11.3	10.5
Percent Change From One Year Ago	-4.2	-6.5	-8.5	-9.1	-7.2	-6.3	-6.4	-8.3	-7.1	-7.0
KS WAGE/HR: Fabricated Metal Product	8.6	8.9	8.8	9.0	9.1	9.1	9.2	9.3	8.8	9.2
Percent Change From One Year Ago	0.4	3.3	2.6	3.7	5.2	2.6	4.7	3.3	2.5	3.9
KS WAGE/HR: Machinery, Incl. Elec.	9.7	9.6	9.9	10.0	10.0	10.0	10.1	10.1	9.8	10.1
Percent Change From One Year Ago	-0.0	-0.6	1.5	2.2	3.1	4.4	2.1	0.7	0.8	2.6
KS WAGE/HR: Transportation Equipment	13.6	13.7	13.7	14.2	14.2	14.3	14.5	14.8	13.8	14.4
Percent Change From One Year Ago	2.8	6.6	3.5	8.3	4.8	4.5	5.8	3.9	5.3	4.8

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

WAGE BILLS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS WG BILL: Total Wages & Salaries	22710.0	22975.0	23230.9	23614.1	23605.5	23966.7	24196.3	24438.0	23132.5	24051.6
Percent Change From One Year Ago	4.4	4.4	5.1	5.3	3.9	4.3	4.2	3.5	4.8	4.0
KS WG BILL: Farm Wages & Salaries	153.0	156.0	157.6	158.4	159.6	160.8	162.1	163.1	156.3	161.4
Percent Change From One Year Ago	0.0	2.0	3.7	4.2	4.3	3.1	2.9	3.0	2.5	3.3
KS WG BILL: Agricultural Services	90.0	90.0	88.0	86.9	86.8	87.6	88.5	89.4	88.7	88.1
Percent Change From One Year Ago	8.4	2.3	-5.4	-7.5	-3.6	-2.6	0.6	2.9	-0.9	-0.7
KS WG BILL: Mining	235.0	241.0	232.3	249.1	240.1	249.2	249.5	258.7	239.4	249.4
Percent Change From One Year Ago	4.4	10.0	3.2	5.6	2.2	3.4	7.4	3.8	5.8	4.2
KS WG BILL: Construction	951.0	921.0	944.6	906.0	852.7	912.0	937.2	919.0	930.7	905.2
Percent Change From One Year Ago	3.9	1.8	2.7	-2.7	-10.3	-1.0	-0.8	1.4	1.4	-2.7
KS WG BILL: Durable Goods	3006.0	3050.0	3080.6	3187.9	3096.7	3112.8	3107.0	3185.1	3081.1	3125.4
Percent Change From One Year Ago	3.0	0.9	2.7	8.8	3.0	2.1	0.9	-0.1	3.8	1.4
KS WG BILL: Nondurable Goods	1759.0	1788.0	1797.8	1810.7	1824.5	1848.5	1855.6	1848.1	1788.9	1844.2
Percent Change From One Year Ago	1.6	2.2	3.4	3.6	3.7	3.4	3.2	2.1	2.7	3.1

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 Kansas Forecast 02JAN91 A21

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS WG BILL: Trans. & Public Utilities	1882.0	1911.0	1862.7	1874.6	1851.2	1849.8	1844.5	1849.1	1882.6	1848.7
Percent Change From One Year Ago	-2.1	-2.8	-3.9	-5.7	-1.6	-3.2	-1.0	-1.4	-3.6	-1.8
KS WG BILL: Wholesale Trade	1872.0	1884.0	1924.6	1960.4	1982.8	2024.2	2049.0	2060.0	1910.2	2029.0
Percent Change From One Year Ago	7.3	8.8	10.2	11.3	5.9	7.4	6.5	5.1	9.4	6.2
KS WG BILL: Retail Trade	2299.0	2318.0	2370.0	2420.2	2447.4	2473.5	2502.3	2528.8	2351.8	2488.0
Percent Change From One Year Ago	5.5	5.9	6.2	8.6	6.5	6.7	5.6	4.5	6.6	5.8
KS WG BILL: Finance, Insurance, & R.E	1368.0	1397.0	1394.7	1385.7	1387.3	1399.4	1408.7	1403.2	1386.4	1399.6
Percent Change From One Year Ago	0.1	2.9	2.9	2.1	1.4	0.2	1.0	1.3	2.0	1.0
KS WG BILL: Services	4275.0	4388.0	4539.3	4690.7	4748.2	4872.6	4974.2	5055.6	4473.2	4912.7
Percent Change From One Year Ago	8.8	10.1	11.8	12.1	11.1	11.0	9.6	7.8	10.7	9.8
KS WG BILL: Govt. & Govt. Enterprises	4818.0	4832.0	4838.7	4883.4	4928.3	4976.4	5017.6	5077.6	4843.0	5000.0
Percent Change From One Year Ago	5.0	4.1	4.0	1.6	2.3	3.0	3.7	4.0	3.6	3.2

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.

PERSONAL INCOME

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS PERS INC: Total Personal Income	43076.0	43363.0	43660.7	44842.8	44741.3	45457.3	45974.0	46717.1	43735.6	45722.4
Percent Change From One Year Ago	5.9	4.7	6.2	5.2	3.9	4.8	5.3	4.2	5.5	4.5
KS PERS INC: Real Personal Income	32141.6	32064.7	31887.2	32016.3	31660.7	31888.4	31948.2	32155.1	32027.4	31913.1
Percent Change From One Year Ago	1.1	0.3	1.0	-1.0	-1.5	-0.5	0.2	0.4	0.3	-0.4
KS PERS INC: Farm Proprietors Income	1084.0	948.0	731.9	1171.4	921.9	964.1	934.4	1117.4	983.8	984.5
Percent Change From One Year Ago	14.8	-9.9	140.0	-0.1	-14.9	1.7	27.7	-4.6	13.3	0.1
KS PERS INC: Non-farm Proprietors Inc	3546.0	3560.0	3574.5	3603.5	3637.0	3683.4	3733.6	3786.0	3571.0	3710.0
Percent Change From One Year Ago	4.0	4.6	4.5	3.6	2.6	3.5	4.5	5.1	4.2	3.9
KS PERS INC: Dividends Interest & Ren	8031.0	8097.0	8231.3	8318.6	8405.5	8490.5	8579.6	8670.5	8169.5	8536.5
Percent Change From One Year Ago	8.7	5.4	4.7	3.8	4.7	4.9	4.2	4.2	5.6	4.5
KS PERS INC: Adj. For Residence	1189.0	1210.0	1242.4	1265.7	1283.6	1300.8	1319.8	1338.9	1226.8	1310.8
Percent Change From One Year Ago	3.0	4.1	3.2	6.3	8.0	7.5	6.2	5.8	4.2	6.8
KS PERS INC: Pers. Cont. For Soc. Ins	2006.0	2012.0	2041.1	2050.3	2110.8	2123.4	2137.8	2153.8	2027.3	2131.5
Percent Change From One Year Ago	7.8	6.3	6.9	5.8	5.2	5.5	4.7	5.1	6.7	5.1
KS PERS INC: Transfer Payments	6259.0	6299.0	6382.1	6588.0	6642.7	6792.2	6936.6	7078.4	6382.0	6862.5
Percent Change From One Year Ago	9.0	8.0	7.6	8.7	6.1	7.8	8.7	7.4	8.3	7.5
KS PERS INC: Other Labor Income	2264.0	2285.0	2308.7	2331.7	2355.9	2382.9	2411.7	2441.8	2297.3	2398.1
Percent Change From One Year Ago	6.5	5.3	5.6	4.7	4.1	4.3	4.5	4.7	5.5	4.4

Kansas forecasts were generated using assumptions determined by the Institute for Public Policy and Business Research and operationalized through the Kansas Econometric Model.