

Institute for Public Policy and Business Research  
The University of Kansas

**U.S. AND KANSAS ECONOMIC FORECASTS FOR 1991**

**MIDYEAR UPDATE**

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## Preface

The Institute for Public Policy and Business Research is pleased to present this midyear update of 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. Although the Institute's official forecast for 1992 will be released in December of this year, this midyear update contains preliminary forecasts of some of the major economic variables for both Kansas and the nation.

The forecast and this report were prepared by Norman Clifford, Research Fellow and 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.

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## Executive Summary

### The National Economy

The U.S. economy entered a recession sometime during the third quarter of 1990. Although output grew 1.4 percent during the quarter, most sectors experienced weakening growth or contraction. Output declined 1.6 percent in the fourth quarter of the year; consumer spending alone fell by 3.4 percent. The major causes of the decline appear to have been a large increase in imported oil prices coupled with a growing concern about the situation in the Middle East. Nevertheless, aggregate demand as measured by final sales actually grew during the quarter, due to an impressive performance by net exports and increases in government spending. However the growth in demand was not sufficient to offset a significant inventory reduction by firms. GNP dropped a further 2.8 percent in the first quarter of 1991, as firms reduced spending on plant and equipment and continued to reduce inventories. Consumption spending, residential investment spending, and, surprisingly, government spending all fell during the quarter. Modest improvements in net exports could not offset these declines, and final sales as well as output declined.

The forecast is for the recession to end sometime during the third quarter of 1991, making it about average in terms of depth and duration. The recovery will not be especially strong, however, particularly in the early stages. The beginning of the recovery in the second quarter will be driven by increases in consumer spending; however both residential and nonresidential spending will fall by over 5 percent during the quarter. Net exports will decline slightly, as mild export growth will be exceeded by increases in imports due to increased consumer spending. Government spending will be essentially unchanged from the previous quarter.

The recovery should continue throughout the remainder of 1991, with output growing just over 2 percent per year during that period. The average level of GNP for all of 1991 will be less than 0.1 percent higher than it was in 1990. Modest increases in consumer spending and reduced rates of inventory



reduction by firms will contribute most to the recovery during the last half of the year. Residential and nonresidential investment spending will also begin to recover during the last half of the year, with residential investment growing over 9 percent and nonresidential investment growing 3.4 percent.

**Table 1**  
**The National Forecast--Summary**

	1988	1989	1990	1991	1992
Real GNP (billions)	4016.8	4117.7	4157.3	4158.9	4263.7
Growth Rate	4.5	2.5	1.0	0.0	2.5
Rate of Inflation	4.1	4.8	5.4	4.6	4.1
Civilian Employment (millions)	115.0	117.3	117.9	117.2	118.3
Growth Rate	2.3	2.1	0.5	-0.6	0.9
Unemployment Rate	5.5	5.3	5.5	6.8	6.9
Wage and Salary <sup>1</sup> Employment (millions)	105.5	108.4	110.0	109.3	111.1
Growth Rate	2.2	2.2	2.9	-0.6	1.6
3-Month T-Bill Rate	6.7	8.1	7.5	5.8	6.2
Nominal Personal Income (billions)	4070.8	4384.3	4645.5	4812.6	5104.9
Growth Rate	8.1	7.7	6.0	3.6	6.1

Personal income growth was also affected by the recession. Personal income is expected to grow only 3.6 percent in 1991, compared to nearly 8 percent in 1988 and 1989, and 6 percent in 1990. Adjusted for inflation, personal income is expected to decline 0.4 percent. Nonfarm employment will decline 0.6 percent in 1991, although there will be some positive growth in employment during the second half of the year. The unemployment rate for 1991 will jump to 6.8 percent, 1.3 percentage points higher than it was in 1990. On a more positive note, inflation will be lower in 1991 as a result of weak demand and reduced imported oil prices. The rate of inflation for 1991 is expected to be 4.6 percent, nearly a full

percentage point less than it was in 1990. The biggest price increases will occur in medical care, where prices will increase 8 percent. Transportation costs will go up 4.6 percent, food and beverage prices will increase 3.4 percent, and housing costs will go up 4.4 percent. Weak demand and a slight relaxation of constraints on money supply growth by the Fed will prevent interest rates from rising much during the year. Short-run rates as measured by the interest rate on three-month treasury bills will average 5.8 percent compared to 7.5 percent during 1990.

The recovery can be put into perspective by noting that most areas of output, income, and employment will not return to their pre-recession levels until sometime in the fourth quarter of 1991. Although the institute's forecast for 1992 will appear in December, we have included a preliminary forecast of the major economic aggregates in order to get a further gauge of the recovery. This preliminary forecast has the recovery gaining a bit in strength during 1992, with GNP growth for the year at 2.5 percent. Employment growth will also be stronger in 1992, with nonfarm employment growing 1.6 percent, but the unemployment rate will remain just under 7 percent. Price increases will be moderate, with inflation averaging 4.1 percent for the year. Interest rates will increase slightly, as exhibited by the slightly less than one half percentage point increase in the rate on three-month treasury bills. Personal income will grow 6.1 percent, 2.7 percent after adjusting for inflation.

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. Oil prices will climb gradually in the early summer and then stabilize for the remainder of the year. For all of 1991, oil prices will average 2.9 percent below the average for all of 1990, although this 1991 average will be about 40 percent below the average of imported oil prices in the peak fourth quarter of 1990.

2. The Fed will relax its hold on money supply growth slightly, with M2 growing at a 5.2 percent annual rate throughout the rest of the year, somewhat above its first quarter growth of 3.6 percent.

3. In spite of a decline in domestic interest rates and an increase in foreign rates, the dollar has appreciated sharply since February. The forecast is based on the assumption that the exchange rate will

remain at its early May level throughout the forecast period. Given the assumption of a relatively strong dollar and the fact that the outlook for our trading partners is for only modest growth, the forecast is based on the assumption that U.S. exports will grow only 3.9 percent in 1991.

4. As a result of the fact that the cost of the war in the Persian Gulf came in lower than expected, and the fact that much of the cost was covered by the allies, defense spending is assumed to decrease at a 10 percent annual rate throughout the last three quarters of 1991.

### **The Kansas Economy**

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

The Kansas economy also felt some effects of the recession during the last half of 1990, although it does not appear to have been hit as hard as the nation as a whole. Nonfarm employment grew only about 1.2 percent in the fourth quarter of 1990 compared to 2.2 percent during the first three quarters. The unemployment rate during the last half of 1990 was 0.6 of a percentage point higher than during the last half of 1989. Personal income exclusive of farm proprietors' income and adjusted for inflation fell 2.8 percent in the fourth quarter after growing at a 1.4 percent annual rate during the first three quarters. The trend continued in the first quarter of 1991 as nonfarm employment grew only 1.1 percent and the unemployment rate was 0.8 of a percentage point higher than in the first quarter of the previous year.

The recovery should begin sometime during the second quarter in Kansas, although it will be of modest proportions. Nonfarm wage and salary employment will grow 0.7 percent for all of 1991, but this rate of employment growth will not be sufficient to keep the unemployment rate from rising. The unemployment rate will average 4.8 percent for the year compared to 4.4 percent for all of 1990. Personal income will grow 4.3 percent in 1991, down from 7.3 percent in 1990. Exclusive of farm proprietors' income and adjusted for inflation, personal income will grow only 0.4 percent in 1991.

Sectors that will experience above average employment growth are mining (2.1 percent), construction (1.9 percent), nondurable goods manufacturing (1.3 percent), transportation and public utilities (2.3 percent), and services (2.4 percent). Experiencing below average employment growth will be durable

goods manufacturing (-2.6 percent), wholesale and retail trade (-0.4 percent), and farming (0.0 percent). Sectors whose employment growth will be at about the state average are government (0.7 percent) and finance insurance and real estate (0.8 percent).

According to our preliminary forecast, Kansas will continue to grow, although modestly, in 1992. Nonfarm employment will grow about 1.0 percent, while the unemployment rate will drop slightly to 4.6 percent. Nominal personal income will grow 5.1 percent in 1992. Adjusted for inflation, personal income will grow 1.7 percent.

**Table 2**  
**The Kansas Forecast--Summary**

	1988	1989	1990	1991	1992
Civilian Labor Force (thousands)	1282.0	1285.0	1300.0	1314.6	1322.9
Growth Rate	1.1	0.2	1.2	1.1	0.6
Total Employment (thousands)	1221.0	1233.0	1243.0	1251.3	1261.8
Growth Rate	1.3	1.0	0.8	0.7	0.8
Wage and Salary <sup>2</sup> Employment (thousands)	1035.4	1064.2	1084.7	1092.0	1103.0
Growth Rate	3.0	2.8	1.9	0.7	1.0
Unemployment Rate	4.7	4.1	4.4	4.8	4.6
Nominal Personal Income (millions)	39177.8	41511.5	44561.3	46496.8	48881.2
Growth Rate	5.8	6.0	7.3	4.3	5.1
Real Personal Income (millions)	31536.6	31966.6	32671.2	32788.9	33338.7
Growth Rate	1.8	1.4	2.2	0.4	1.7

## Introduction

Sometime during the third quarter of 1990 the U.S. economy entered a recession which continued through the fourth quarter of that year and all of the first quarter of 1991. Output declined significantly in both those quarters, consumer spending dropped sharply in the final quarter of 1990, while business expenditures on plant and equipment remained flat. These declines, however, were more than covered by a \$38 billion increase in net exports-- exports grew significantly while imports declined through reduced consumer spending--and an increase in government spending; therefore, final sales actually increased during the quarter. Although aggregate demand as measured by final sales grew during the fourth quarter of 1990, output fell because firms reduced their inventories significantly.

The reduction in output was even greater in the first quarter of 1991. Consumer spending continued to fall, firms not only continued to reduce inventories but also reduced spending on new plant and equipment, and government spending, somewhat surprisingly given the U.S. involvement in a major war during the quarter, also declined. A further \$15.9 billion increase in net exports could not overcome the decreases in the other areas of aggregate demand, and thus final sales as well as output fell during the quarter.

In other signs of a recession, the unemployment rate increased in both quarters, and employment by place of work and private nonfarm manhours fell in both quarters. Real disposable income also declined in both quarters and the money supply grew slowly over the period.

The forecast for the national economy is for the recession to end in the second quarter of 1991. Although the recession will have been about average in terms of duration and reduction in output, the recovery will be slower than average. The main forces driving the recovery will be a return to moderate growth of consumer spending and a reduction of the rate at which firms reduce inventories. Further increases in net exports will be modest at best, as imports begin to grow again along with the increase in consumer spending, while both business and residential investment will be slow to recover. Government

spending will decline throughout the year. One gauge of the weakness of the recovery is the fact that most macroeconomic measures of economic activity will return to their third quarter 1990 level no sooner than the last quarter of 1991.

The recession and slow recovery as well as relative stability in imported oil prices will reduce inflationary pressures in 1990, with inflation as measured by the change in the consumer price index near 4 percent throughout 1991. Somewhat faster money supply growth, coupled with the recession and weak recovery, will cause short-term interest rates to decline through the first half of the year and increase slightly during the second half. Long-term rates will be essentially flat.

The Kansas economy also showed signs of a slowdown during the end of 1990 and the first quarter of 1991. Employment growth slowed and the unemployment rate increased during the period. Personal income growth also declined significantly in the final quarter of 1990. The recovery in Kansas, like the U.S., is expected to be weaker than average. Employment growth will increase, but not enough to bring the unemployment rate down to its pre-recession level. Real personal income will grow during the last half of the year, but real personal income growth for all of 1991 will be slower than it was in 1990.

### **Anatomy of the Recession**

The U.S. economy began a recessionary phase sometime during the third quarter of 1990. Although output grew at a 1.4 percent annual rate during that quarter, most sectors of the economy were already experiencing weak growth or some contraction. The recession deepened as output declined at a 1.6 percent annual rate during the fourth quarter of the year, with most of the decline occurring because of a 3.4 percent decline in consumer spending. Consumer purchases of durable goods fell 12.3 percent in the quarter, with most of the decrease coming through a drop in purchases of motor vehicles and parts; consumer purchases of nondurable goods fell 6.5 percent, with substantial declines in nearly every

category, although consumer spending on services did not decline but grew 1.8 percent, a rate that was far below the 5 percent and 3 percent rates of growth during the two previous quarters.

The large decrease in consumer spending in the fourth quarter was not the only sign of weakness during the period; business spending on plant and equipment during the quarter remained essentially flat, with an 18 percent decline in investment in new structures offsetting a 6.3 percent increase in purchases of equipment. In addition, residential investment continued a double digit rate of decline that began in the second quarter of the year as it fell more than 20 percent.

The declines in consumption and investment spending outlined above totaled just under \$33 billion, but GNP fell only \$16.6 billion during the quarter. So the question we might ask is not "why did the economy do so badly during the fourth quarter," but "why didn't the economy do worse?" The answer is that the \$33 billion decline that we have described was more than offset by a dramatic improvement in net exports; net exports as measured on the national income and products accounts basis grew by \$37.7 billion during the quarter, going from -\$46.5 billion to -\$8.8 billion. This dramatic improvement resulted from an 11 percent growth in real exports coupled with an 11.8 percent decline in real imports-- the latter a result of the reduced demand from the consumption and investment sectors. In addition, government purchases at all levels increased 4.8 percent during the quarter, adding another \$9.6 billion to GNP.

The performance of the four major demand sectors described above suggests that final demand held up surprisingly well during the fourth quarter. As shown in Figure 1, the declines in demand for consumption and investment were more than offset by increases in demand in the net export and government sectors. In fact, aggregate final demand as measured by real final sales actually grew by \$14.5 billion during the quarter, representing an annual growth rate of 1.4 percent. Output fell in spite of this 1.4 percent increase in final demand because firms decided to cut back on inventories. Nonfarm firms used production to increase their inventory holdings by \$4.7 billion in the third quarter of 1990; in the final quarter they reduced their inventories by \$28.5 billion. Thus, the amount by which nonfarm

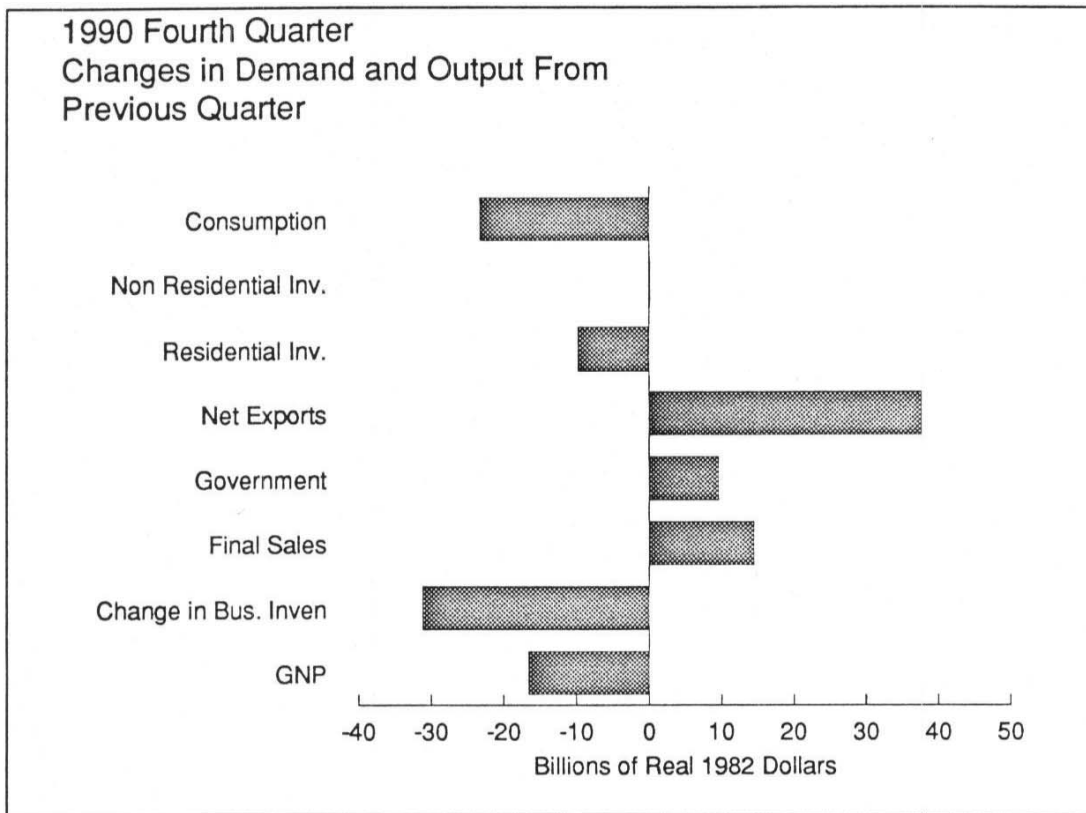


Figure 1

firms used output to increase their inventories fell in the last quarter of the year by \$33.2 billion. Even though the rate at which farmers added to inventories increased by \$2.1 billion, the total fall in the rate of inventory accumulation of \$31.1 billion was \$16.6 billion greater than the increase in final demand, and GNP fell by this amount in the fourth quarter.

In addition to the drop in output, other signs of a recessionary economy were evident at the end of 1990. The unemployment rate, which had stayed at about 5.3 percent since the end of 1988, jumped to 5.6 percent in the third quarter and again to 5.9 percent in the following quarter. Employment by place of work, which had grown by at least 2.7 percent per year in 1987, 1988, and 1989, and above 2.3 percent per year in the first half of 1990, grew only 0.4 percent in the third quarter and fell 1.6 percent in the fourth quarter. Private nonfarm manhours, which had grown at nearly 3 percent per year in the years 1987



and 1988, 2.3 percent in 1989, and again at nearly 3 percent per year in the first half of 1990, grew only 0.4 percent in the third quarter, and fell 3.5 percent in the fourth. Real disposable personal income, which had grown 4.9 percent in 1988, 2.4 percent in 1989, and 2.5 percent in the first quarter of 1990, grew only 0.3 percent in the second quarter, and fell 0.7 percent in the third quarter and 3.5 percent in the fourth. Finally, the M2 measure of the money supply grew only 4.0 percent, 3.0 percent and 2.1 percent in the second, third, and fourth quarters of 1990, respectively.

The data from the last quarter of 1990 painted a mixed picture of the prospects for recovery. On the one hand, the fact that final demand grew during that quarter held out some hope that the recovery could begin sometime in the first quarter of the new year. There was also some hope that the Fed, having seen the signs of a recession mounting, would act quickly to relax money supply growth in order to bolster demand. Finally, the continued presence of the American military in the Persian Gulf suggested that increased government spending would help to strengthen aggregate demand.

On the other hand, the large cut back in business inventories was clearly worrisome, for two reasons. First, such a reduction in inventories suggested that firms were girding for a recession, and that further inventory reductions and, therefore, reduced output, were a possibility. Second, if firms were expecting a recession, they would almost certainly reduce the magnitude of planned investment spending, further dampening aggregate demand. Negative employment growth and the high unemployment rate also suggested that disposable income growth and growth in consumer spending would be weak. Finally, there was concern that the big slide in residential investment that began in the second quarter of 1990 showed no sign of being reversed.

As it turned out, during the first quarter of 1991 the negative factors cited above proved to be dominant. GNP fell by even more in the first quarter of 1991 than it had in the fourth quarter of 1990: 2.8 percent. Employment by place of work declined 2.3 percent, as the unemployment rate increased to 6.5 percent. Private nonfarm manhours fell 4.5 percent. Largely due to the deterioration in the

employment situation, disposable personal income fell 1.5 percent, as a result of which, consumption spending by households also declined 1.5 percent.

Consumption by households was not the only sector that contributed to the further decline in the first quarter of 1991. Not totally unexpectedly, business firms reduced their rate of investment in plant and equipment by 18.2 percent and reduced their level of inventories by a further \$28.1 billion. Perhaps most surprisingly, given that the U.S. was heavily involved in Operation Desert Storm during the quarter, total government spending fell 1.3 percent. State and local government spending fell 1.9 percent, as states faced tighter budget prospects in the face of a slowing economy; Federal government purchases also declined 0.5 percent, as a very modest 2.7 percent increase in federal defense expenditures was more than

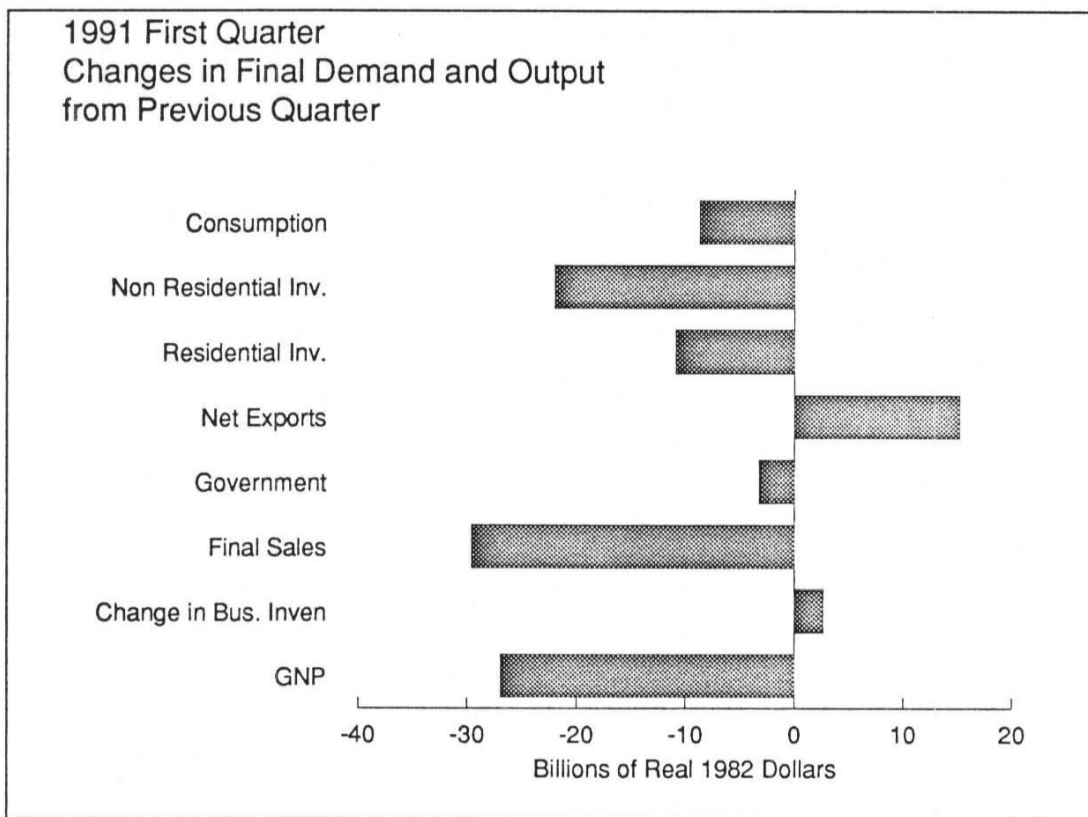


Figure 2

offset by a 10.1 percent decrease in nondefense expenditures. The small increase in defense expenditures was apparently a result of the facts that the cost of the war was lower than expected and much of the cost was borne by the allies. The only sector that showed improvement was net exports, which totalled a positive \$7.1 billion compared to a negative \$8.8 billion in the previous quarter. Although exports grew by only 0.5 percent, imports fell by 8.8 percent as consumers and firms reduced spending. The first quarter 1991 changes in the major sectors of final demand and output are shown in Figure 2.

### **The National Outlook**

The national forecast presented below is based on the following major assumptions<sup>3</sup>:

1. Oil prices will climb gradually in the early summer and then stabilize for the remainder of the year. For all of 1991, oil prices will average 2.9 percent below the average for all of 1990, although this 1991 average will be about 40 percent below the average of imported oil prices in the peak fourth quarter of 1990.

2. The Fed will relax its hold on money supply growth slightly, with M2 growing at a 5.2 percent annual rate throughout the rest of the year, somewhat above its first quarter growth of 3.6 percent.

3. In spite of a decline in domestic interest rates and an increase in foreign rates, the dollar has appreciated sharply since February. The forecast is based on the assumption that the exchange rate will remain at its early May level throughout the forecast period.<sup>4</sup> Given the assumption of a relatively strong dollar and the fact that the outlook for our trading partners is for only modest growth, the forecast is based on the assumption that U.S. exports will grow only 3.9 percent in 1991.

4. As a result of the fact that the cost of the war in the Persian Gulf came in lower than expected, and the fact that much of the cost was covered by the allies, defense spending is assumed to decrease at a 10 percent annual rate throughout the last three quarters of 1991.

The forecast is for the recession to end in the second quarter of 1991, making this recession about average in terms of depth and duration. The recovery, however, will be slower than average. The beginning of the recovery in the second quarter will be spurred by a 5 percent increase in consumption spending and a reduction in the rate at which firms reduce their inventories. Both nonresidential and residential investment spending will continue to fall in the quarter, declining 5.7 percent and 7.5 percent respectively. Net exports will decrease slightly in the second quarter, from \$7.1 billion to \$5.5 billion,

as 3.3 percent export growth is nearly offset by 4.3 percent growth in imports. State and local government spending and federal nondefense spending will remain nearly flat during the quarter, but a 12.4 percent decrease in federal spending will reduce total government spending by 4 percent.

The recovery will continue at a moderate rate throughout 1991, with GNP growth averaging about 2.2 percent over the last three quarters of the year, as shown in Figure 3. GNP for all of 1991 will be less than 0.1 percent higher than GNP for all of 1990. The pattern for the last half of the year will be much like that in the second quarter, with modest increases in consumer spending, and decreases in the rate at which firms reduce inventories, contributing most to the recovery. Figure 4 shows the forecast for changes in nonfarm business inventories; as shown there, firms will begin adding to inventories in the final

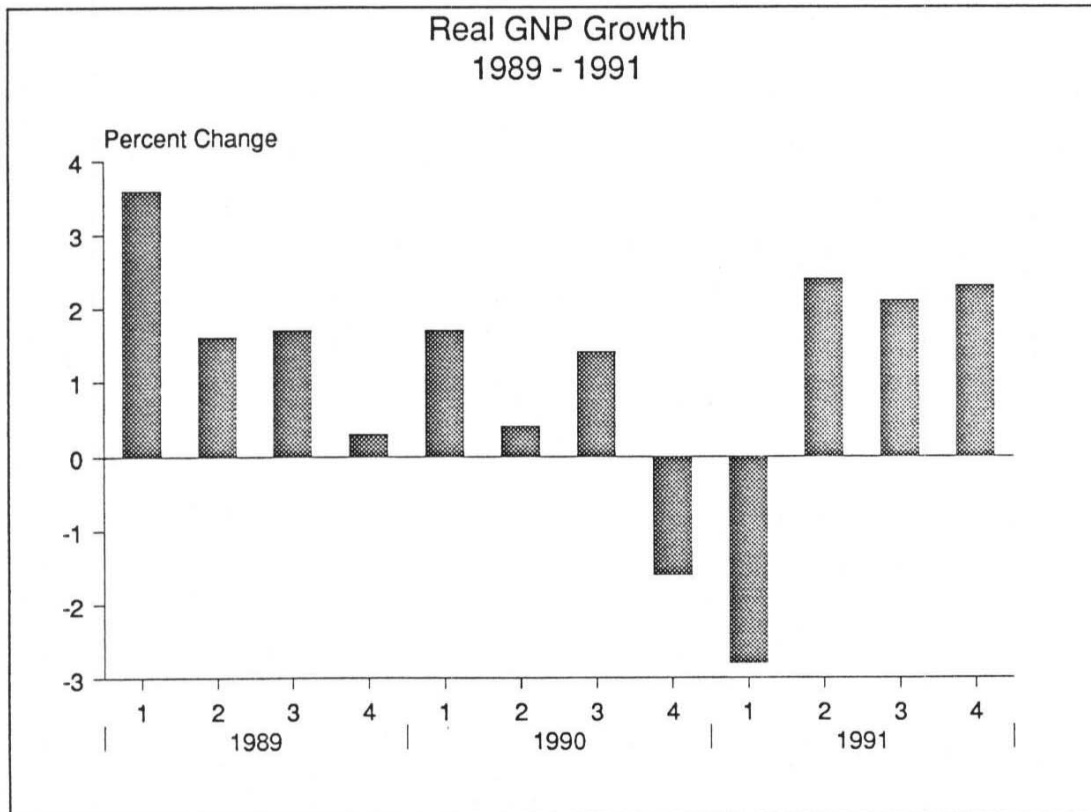
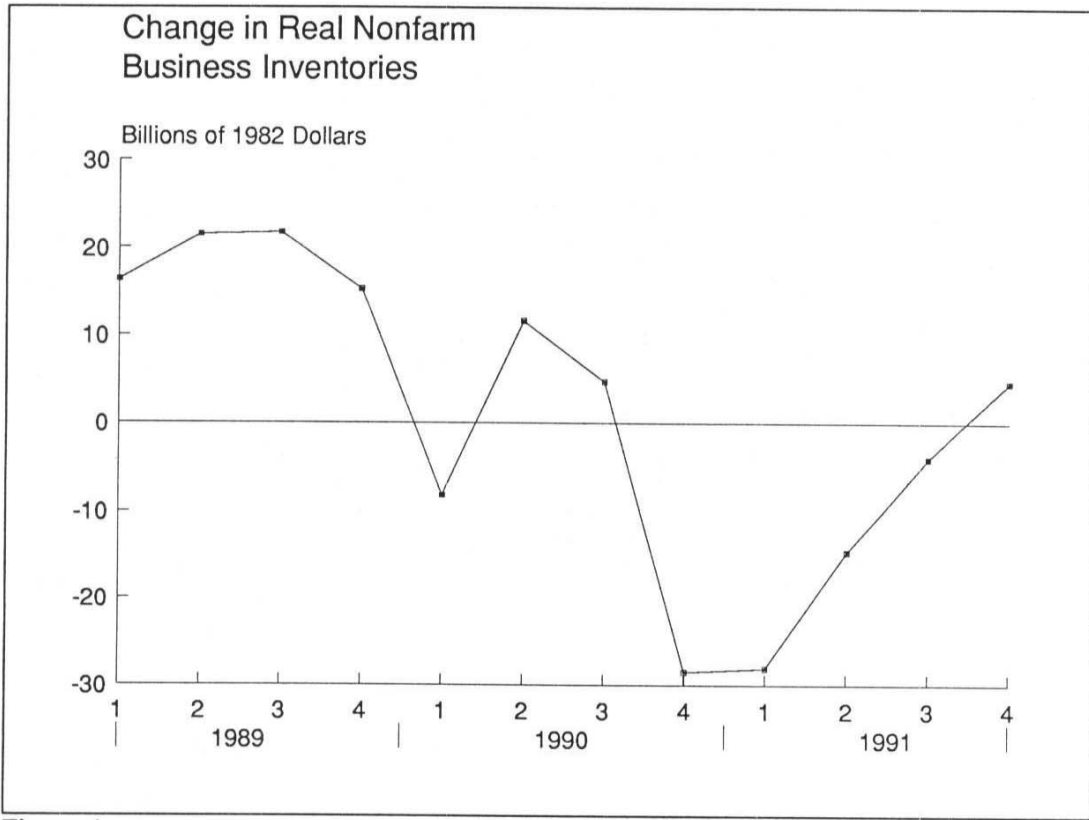


Figure 3



**Figure 4**

quarter of the year. Net exports will decline slightly in the last half of the year, as a very modest growth in exports will continue to be offset by import growth that will occur as a result of increased consumer spending. Government purchases will continue to decline throughout the second half of the year; federal defense purchases will go on declining, while federal nondefense and state and local government purchases will remain nearly flat. On the other hand, both residential and nonresidential investment spending should begin to recover during the second half of the year, with residential investment averaging more than a 9 percent increase over the last two quarters and nonresidential investment producing a more modest 3.4 percent increase over the period.



Figure 5

The recovery can be put in perspective by noticing that in our forecast GNP will not exceed its third quarter 1990 level until the final quarter of 1991. Likewise, personal consumption expenditure in the final quarter of the year will be only 1.0 percent higher than it was in the third quarter of 1990. At the end of the year, nonresidential investment spending will be 4 percent below, and residential investment spending will be 10 percent below, the levels they were before the recession began. Government purchases will be 1.6 percent lower in the fourth quarter of 1991 than they were in the third quarter of 1990. Only net exports will have shown a significant improvement over pre-recession levels by the end of the year, going from -\$46.5 billion in the third quarter of 1990 to \$3.2 billion by the end of 1991-- exports will have grown 5.5 percent over that period, while imports will have fallen 2.1 percent. The improvement in net exports over the last several years is shown in Figure 5.

The less than 0.1 percent growth in GNP for all of 1991 can be attributed to a 0.6 percent increase in consumption spending over all of 1990, as well as a \$39 billion increase in net exports. Nonresidential investment by firms will decrease 4.1 percent for the year, while residential investment will decrease 14.2 percent. Government purchase of goods and services at all levels will decrease 0.3 percent, with a 3.1 percent drop in federal nondefense purchases and a 0.9 percent drop in federal defense purchases nearly offset by a 0.6 percent increase in state and local government purchases.

Personal income growth was also stunted by the recession. U.S. personal income, which grew 8.1 percent in 1988 and 7.7 percent in 1989, grew at only a 3.5 percent annual rate in the fourth quarter of 1990 and 1.5 percent in the first quarter of 1991. The forecast is for only a 3.6 percent increase in the second quarter of 1991; personal income growth then averages above 5 percent over the last half of the year. As a result, personal income in the fourth quarter of 1991 is predicted to be only 4.7 percent above its level in the most recent quarter before the recession. A similar picture arises if we look at after-tax income. Adjusted for inflation, real disposable income of consumers fell 3.5 percent in the last quarter of 1990 and 1.5 percent in the first quarter of 1991. The forecast is for real disposable income to average about a 2 percent increase over the last three quarters of the year. Real disposable income is predicted to be 0.2 percent higher at the end of 1991 than it was in the third quarter of 1990.

The employment forecast gives a further perspective to the emerging picture of the recovery. Although the economy will grow during the last half of the year, the rate of growth will not be sufficient to bring the unemployment rate down. In spite of the beginning of the recovery in output in the second quarter of 1991, employment by place of work will decline 0.9 percent in that quarter and grow at an average rate of 1.8 percent during the second half of the year. Employment by place of residence will average less than 1 percent growth over the last three quarters of the year. As a result, total employment by place of work will be 0.7 percent less in the last quarter of 1991 than it was in the third quarter of 1990, while employment by place of residence will be 0.2 percent less. The rate of employment growth

over the last three quarters of the year will not be sufficient to keep the unemployment rate from growing to 6.9 percent by the end of the year. Thus the year-end unemployment rate will be 1.6 percentage points higher than it was in the second quarter of 1990.

The recession and slow recovery will have the effect of reducing inflation. The inflation rate, as measured by the consumer price index for all urban consumers, was 5.4 percent in 1990 and was near or above 7 percent in all quarters but the second. Most of the high inflation in the second half of the year was due to high oil prices as a result of the situation in the Middle East. As oil prices stabilized in the first quarter, the rate of inflation fell to 3.5 percent. The slow recovery and an assumption of mild increases in imported oil prices leads to a forecast of moderate inflation rates throughout the last three quarters of 1991, with inflation at about 3.0 percent in the second quarter and averaging about 4 percent for the last half of the year. Overall, the 1991 inflation rate is expected to be 4.6 percent. The largest price increases are expected to occur in medical care, with prices in this area increasing 8 percent for the year. Even this rate, however, is down from 1990's 9.1 percent rate of inflation for medical care. The price index for transportation will increase 4.6 percent. This includes a 3.6 percent increase in the prices of new cars and a 2.1 percent increase in the price of motor fuel. Food and beverage prices will increase a below average 3.4 percent, down from 1990's 5.7 percent increase. Housing costs will increase 4.4 percent with price increases of 4.9 percent for shelter, 4.3 percent for fuel and utilities, and 2.7 percent for household furnishings and operations.

The depressing effect of the recession on money demand more than offset the Federal Reserve Board's restrictions on money supply during the second half of 1990, and interest rates fell. In spite of the fact that the M2 measure of the supply of money grew only 3 percent in the third quarter and 2.1 percent in the fourth quarter, the three month treasury bill rate fell 0.3 of a percentage point in the third quarter and 0.5 of a percentage point in the fourth quarter. In the first quarter of 1991 the money supply grew only 3.5 percent and the three month treasury bill rate dropped another full percentage point. As



the economy begins to recover, there will be some upward pressure on interest rates; however, the assumption of more liberal money supply growth by the Fed will offset this upward pressure. The forecast is for money supply growth to average 5.2 percent over the last three quarters of 1991, and for the three month treasury bill rate to fall by another 0.5 percentage points to 5.6 percent in the second quarter of 1991 and then increase gradually to 5.8 percent by the end of the year. The forecasts for the three month treasury bill rate, the prime interest rate, and Moody's AAA bond rates are shown in Figure 6.

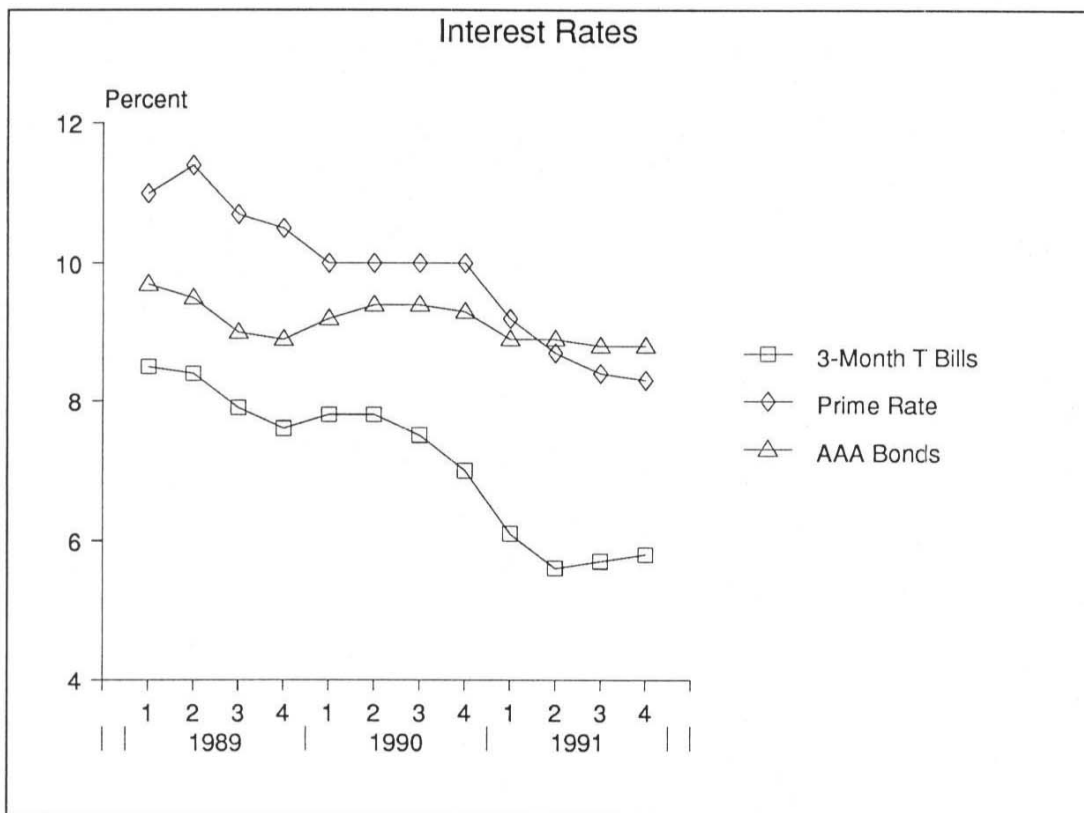


Figure 6

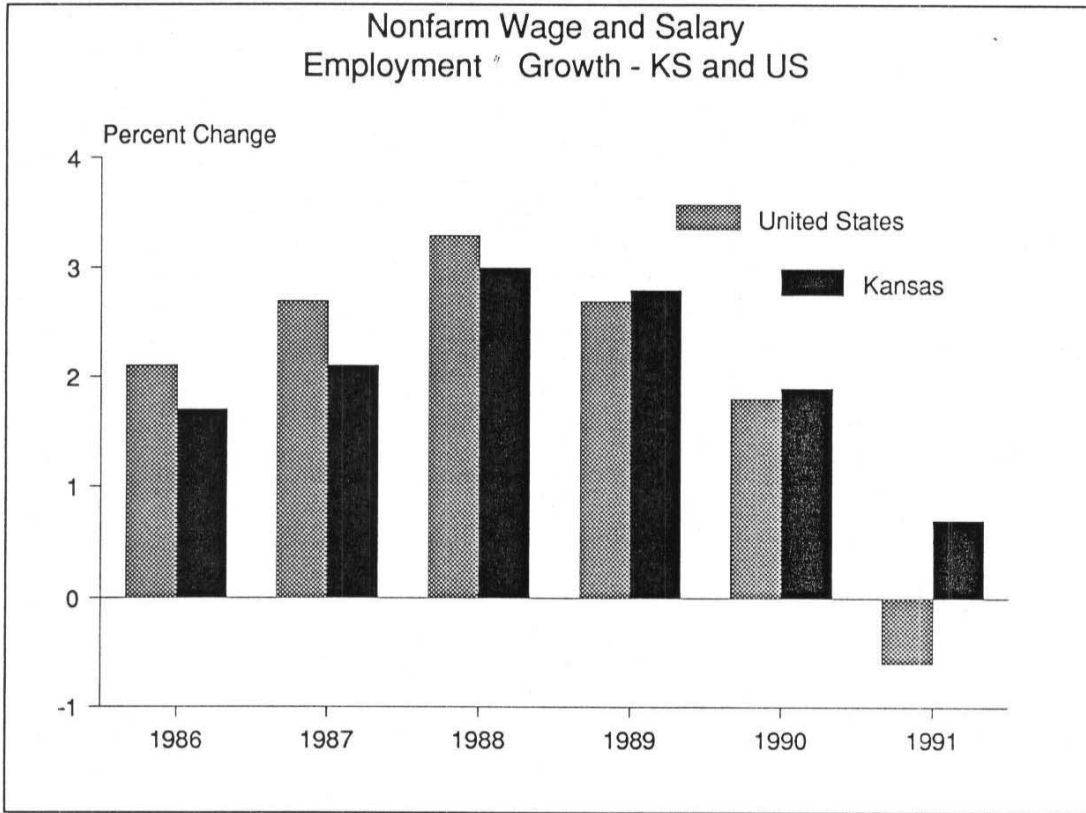
Finally, to get a better picture of the anticipated recovery, we have done a preliminary forecast of some of the major aggregates for 1992. According to that forecast, the recovery will continue at a moderate pace, with GNP growing 2.5 percent for the year. Personal income will grow 6.1 percent before adjusting for inflation, and will grow 2.7 after such adjustment. The inflation rate will fall slightly to 4.1

percent, based on the assumption of slowly increasing imported oil prices and modest growth in demand. Nonfarm employment will grow 1.6 percent, but the rate of growth of employment will once again be insufficient to cause a reduction in the unemployment rate, which will remain at 6.9 percent on average over the year. Increased money demand resulting from the growth of economic activity will be nearly accommodated by increases in the money supply, so that interest rates will rise only slightly. The three-month treasury bill rate is expected to increase to 6.2 percent on average for the year.

### **The Kansas Economy**

Indications are that Kansas began to feel some effects of the national recession in the last half of 1990. Employment by place of work<sup>5</sup>, which had averaged 2.2 percent growth<sup>6</sup> during the first three quarters of the year, grew only 1.2 percent in the fourth quarter. Exhibiting a similar pattern, the unemployment rate in Kansas was the same during the first two quarters of 1990 as it had been during the first two quarters of 1989, but in the last two quarters of 1990 it was 0.6 of a percentage point higher than in the last two quarters of 1989. In the first quarter of 1991, employment by place of work increased only 1.1 percent and the unemployment rate jumped to 5.3 percent, 0.8 of a percentage point higher than it was in the first quarter of 1990. Kansas personal income, exclusive of farm proprietors' income and adjusted for inflation, averaged 1.4 percent growth during the first three quarters of 1990, but fell 2.8 percent in the fourth quarter.

The forecast for Kansas is qualitatively similar to the forecast for the U.S. A gradual recovery should begin in the second quarter of 1991 and continue throughout the year. The employment forecast for Kansas is shown in Figure 7. Employment by place of work is expected to grow 0.7 percent in the second quarter and average 0.5 percent growth over the last half of the year. It will grow 0.7 percent for the year compared to 1.9 percent for 1990. Just as for the U.S., this rate of employment growth will not be great enough to cause the unemployment rate to fall; the unemployment rate for the last three quarters



**Figure 7**

of the year will be on average 0.3 of a percentage point above the unemployment rate for the same three quarters a year ago and 0.8 of a percentage point above the unemployment rate for the same period in 1989. For the full year of 1991, the unemployment rate will be 4.8 percent, compared to 4.4 percent in 1990 and 4.1 percent in 1989. The forecast for personal income growth tells much the same story. Kansas personal income, excluding farm proprietors' income and adjusted for inflation, is predicted to decline a further 0.6 percent in the first quarter of 1991, and to average 2 percent growth over the rest of the year. For all of 1991, real personal income excluding farm proprietors' income is forecasted to grow 0.4 percent, compared to 0.8 percent in 1990. The forecast for Kansas personal income growth is shown in Figure 8.

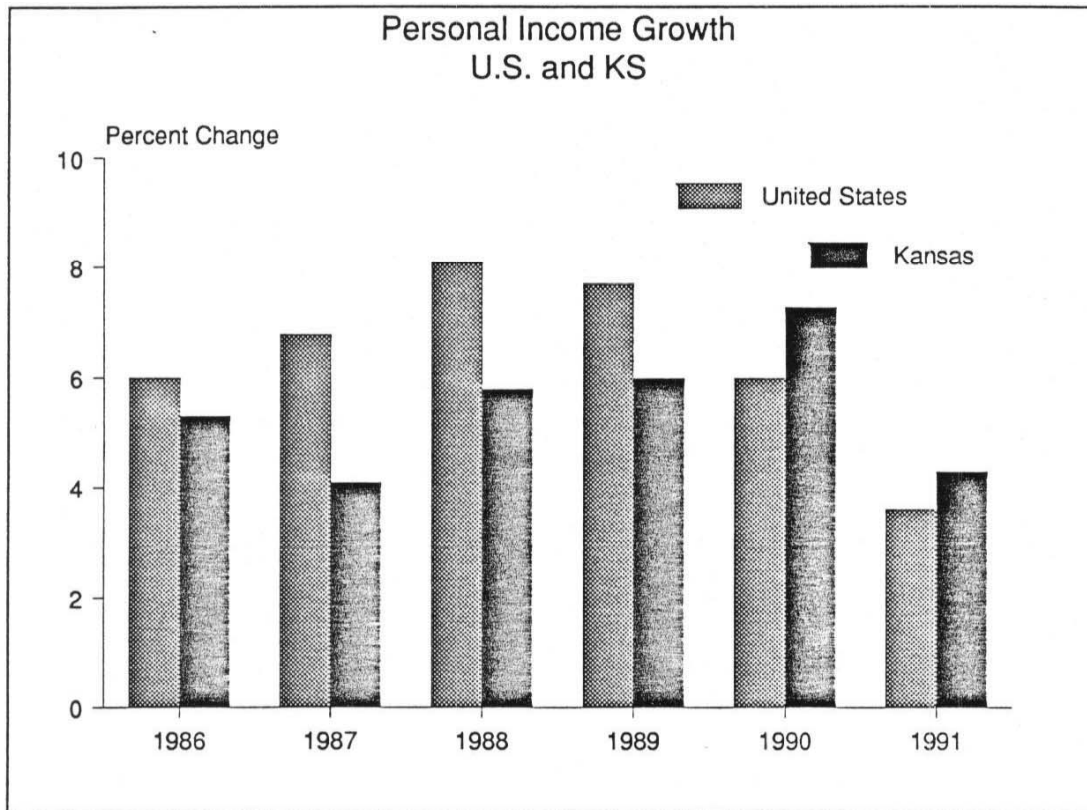


Figure 8

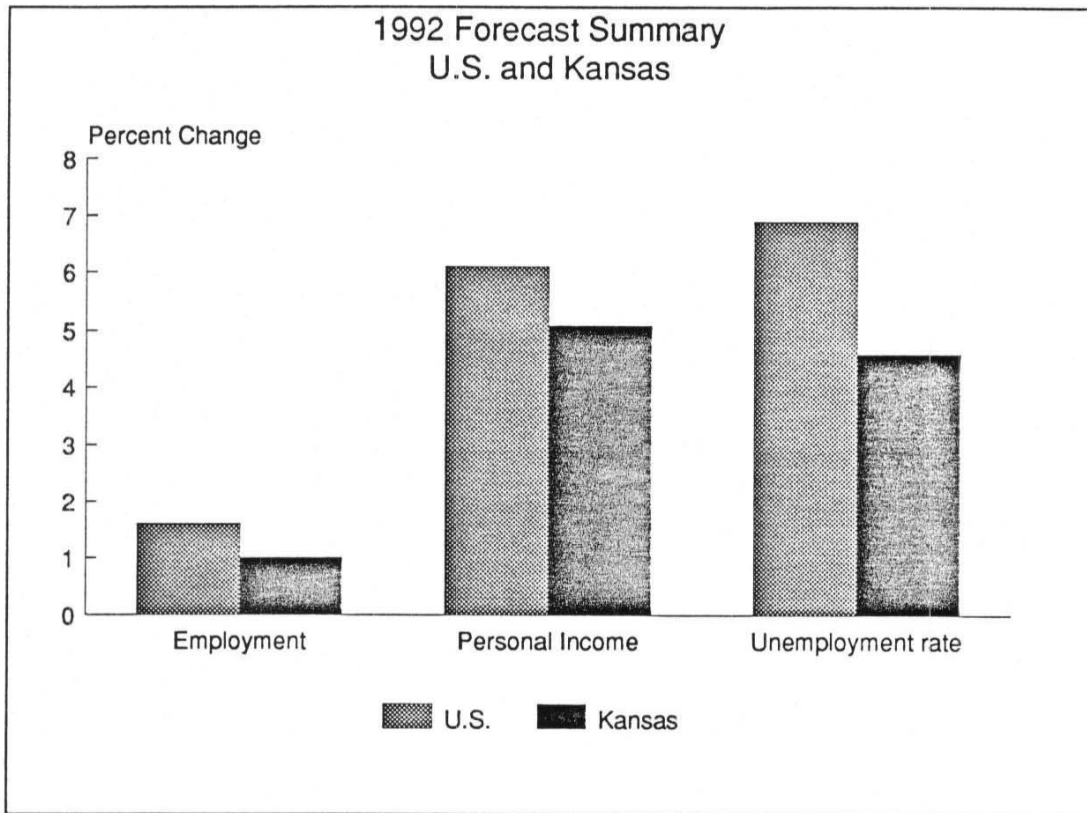
Table 3 gives the breakdown by sector of the Kansas employment forecast. Mining employment is expected to grow 2.1 percent, down from 5.5 percent, as oil prices level out. Construction employment is forecasted to increase 1.9 percent based on lower interest rates and a turnaround in residential investment. The 1.3 percent increase in nondurable goods employment will come from growth in the food and kindred products, apparel, and printing and publishing sectors. There will be a slight decrease in employment in the chemicals and allied products subsector of the nondurable goods sector. With the exception of the fabricated metals subsector, which will grow 3.4 percent, the 2.6 percent decrease in the durable goods sector will be reflected to varying degrees by the individual subsectors. The employment increase in transportation and utilities comes about because employment increases in trucking and warehousing more than offset a decrease in railroad employment.

**Table 3**  
**Kansas Employment Growth by Sector**

	1989	1990	1991
Mining	-9.3	5.5	2.1
Construction	-3.6	3.3	1.9
Durable Goods Manufacturing	2.2	-0.1	-2.6
Nondurable Goods Manufacturing	0.6	1.5	1.3
Transportation and Utilities	4.0	-0.1	2.3
Wholesale Trade	0.6	0.9	-0.4
Retail Trade	2.7	0.3	-0.4
Finance, Insurance, and Real Estate	0.4	0.2	0.8
Services	7.2	4.9	2.4
Federal Government	1.0	-0.6	0.9
State and Local Government	2.5	3.1	0.6
Farm	-0.3	-4.6	0.0

Wholesale and retail trade employment will 0.4 percent, with decreases in employment in general merchandise stores, auto dealers and gas stations, and apparel and accessory stores. The 0.8 percent employment increase in F.I.R.E. includes a 0.9 percent increase in insurance employment and a 0.6 percent decrease in banking employment. The 2.4 percent increase in employment in services includes a 0.8 percent increase in hotels and lodging and a 1.1 percent decrease in personal services. Federal and state and local government employment are forecasted to increase only slightly as both levels of government tighten their budgets. Farm employment will remain level after decreasing 4.6 percent in 1990.

Kansas personal income, including farm proprietors' income, is forecasted to grow 4.3 percent in 1991; adjusted for inflation, this growth becomes 0.4 percent. This personal income growth includes a 4.8 percent growth in wages and salaries, a 5.8 percent increase in other labor income, and an 8.0 percent jump in transfer payments. Dividends, interest, and rent will increase only 1.1 percent as interest rates decline and corporations reduce their dividends. Similarly, nonfarm proprietors' income will grow only 4.1 percent as businesses feel the pinch of the recession. The personal income forecast includes a 3.1 percent increase in farm proprietors' income.



**Figure 9**

As we did with the national forecast, we have produced preliminary forecasts for the major Kansas aggregates for 1992. According to that forecast, nonfarm employment will grow 1.0 percent for the year up slightly from the rate of growth in 1991. The unemployment rate is expected to fall slightly, to 4.6 percent. Personal income growth will improve somewhat to 5.1 percent; personal income adjusted for inflation will grow 1.7 percent. The forecast for some major Kansas and national aggregates is illustrated in Figure 9.

### **Conclusion**

The recession that the national economy entered in sometime during the third quarter of 1990 should end during the second quarter of 1991. The main factors that will cause the recovery are a modest

rebound in consumer spending and a reduction in the rate at which firms reduce their inventories. Plant and equipment purchases by firms will recover less quickly than consumer spending, and will decline until the last half of the year; government purchases of goods and services will decline throughout the year. At best, only modest increases in net exports can be expected. The recovery will not induce enough growth in jobs to bring the unemployment rate down; in fact, the unemployment rate will gradually increase to 6.9 percent by the end of the year. Inflation will be lower in 1991 than it was in 1990, as stable oil prices and a weak economy reduce upward pressure on prices. Interest rates will remain relatively flat over the course of the year.

The Kansas economy will also show only modest growth through the end of 1991. Increases in employment growth over the second half of the year will not be great enough to bring the unemployment rate back to pre-recession levels. Similarly, real personal income will still be below its 1990 first quarter level in the third quarter of 1991.

The forecast of a recovery beginning in the second quarter of 1991 depends upon consumers increasing their spending in spite of very small increases in disposable income and firms reducing their rate of inventory reduction in spite of declining aggregate demand in the most recent past quarter. Thus, if consumers and firms adopt a more cautious approach than the one that we have described, the speed of the recovery and the time of its onset could be adversely affected.

## Notes

1. Employment refers to total number of Kansas residents employed in civilian (including nonmilitary government) jobs. Nonfarm wage and salary employment refers to total 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. Similarly, wage and salary employment for the U.S. refers to total nonfarm civilian (including nonmilitary government) jobs in the U.S.

2. See note 1.

3. 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.

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

5. Employment by place of work is the same as nonfarm wage and salary employment. See note 1.

6. Growth is computed as a percent increase from the same quarter one year ago.

7. See note 1.



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## APPENDIX

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Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 22JUL91 A1

GNP AS EXPENDITURE - 1982 DOLLARS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Gross National Product Percent Change From Last Qtr (AR)	4150.6 1.7	4155.1 0.4	4170.0 1.4	4153.4 -1.6	4124.1 -2.8	4148.4 2.4	4169.6 2.1	4193.6 2.3	4157.3 1.0	4158.9 0.0
US: Personal Consumption Expend. Percent Change From Last Qtr (AR)	2677.3 1.1	2678.8 0.2	2696.8 2.7	2673.6 -3.4	2663.7 -1.5	2696.6 5.0	2707.9 1.7	2721.8 2.1	2681.6 0.9	2697.5 0.6
US: Per. Con. Exp.-Durables Percent Change From Last Qtr (AR)	437.6 14.4	426.8 -9.5	429.5 2.6	415.6 -12.3	402.9 -11.7	410.1 7.3	413.4 3.3	416.9 3.4	427.4 -0.1	410.8 -3.9
US: PCE-Nondurables Percent Change From Last Qtr (AR)	915.6 -3.2	911.2 -1.9	916.4 2.3	901.2 -6.5	897.1 -1.8	901.3 1.9	904.8 1.6	909.2 2.0	911.1 -1.0	903.1 -0.9
US: PCE-Services Percent Change From Last Qtr (AR)	1324.2 0.1	1340.8 5.1	1350.8 3.0	1356.7 1.8	1363.7 2.1	1385.2 6.5	1389.7 1.3	1395.7 1.7	1343.1 2.6	1383.6 3.0
US: Fixed Nonresidential Invest. Percent Change From Last Qtr (AR)	514.6 5.0	508.4 -4.7	519.3 8.9	519.4 0.1	496.8 -16.3	489.5 -5.7	493.7 3.5	497.8 3.3	515.4 1.8	494.5 -4.1
US: Producers Durable Equipment Percent Change From Last Qtr (AR)	390.8 5.7	387.5 -3.3	397.0 10.2	403.1 6.3	383.1 -18.4	377.8 -5.4	381.3 3.7	384.5 3.5	394.6 2.8	381.7 -3.3
US: Investment in Structures Percent Change From Last Qtr (AR)	123.8 2.3	120.9 -9.0	122.4 5.1	116.4 -18.2	113.7 -9.0	111.7 -6.8	112.5 2.8	113.2 2.7	120.9 -1.2	112.8 -6.7
US: Residential Investment Percent Change From Last Qtr (AR)	188.3 15.1	182.8 -11.2	173.0 -19.8	163.3 -20.6	151.8 -25.3	148.9 -7.5	150.6 4.6	155.5 13.7	176.9 -5.4	151.7 -14.2

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.

	1990-1991 US Forecast										22JUL91	A2
	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991		
US: Change in Bus. Inventories	-2.2	9.5	4.7	-26.4	-25.0	-13.2	-2.6	6.1	-3.6	-8.7		
US: Change in Farm Inventories	6.0	-2.1	0.0	2.1	3.1	1.5	1.5	1.5	1.5	1.9		
US: Change in Nonfarm Inv.	-8.2	11.6	4.7	-28.5	-28.1	-14.7	-4.1	4.6	-5.1	-10.6		
US: Net Exports Percent Change From Last Qtr (AR)	-35.4 -70.2	-44.6 152.0	-46.5 18.2	-8.8 -99.9	7.1 -57.6	5.5 -63.7	5.0 -31.4	3.2 -83.6	-33.8 -37.5	5.2 -115.4		
US: Total Exports Percent Change From Last Qtr (AR)	628.1 11.2	620.1 -5.0	630.5 6.9	647.2 11.0	648.0 0.5	653.3 3.3	658.8 3.4	664.9 3.8	631.5 6.4	656.2 3.9		
US: Total Imports Percent Change From Last Qtr (AR)	663.5 2.5	664.7 0.7	677.0 7.6	656.0 -11.8	641.0 -8.8	647.8 4.3	653.8 3.8	661.7 4.9	665.3 2.8	651.1 -2.1		
US: Total Government Purchases Percent Change From Last Qtr (AR)	807.9 2.9	820.2 6.2	822.7 1.2	832.3 4.7	829.6 -1.3	821.2 -4.0	815.0 -3.0	809.2 -2.8	820.8 2.8	818.7 -0.2		
US: Fed. Govt. Purchases Percent Change From Last Qtr (AR)	333.0 0.4	345.9 16.4	346.0 0.1	349.9 4.6	349.5 -0.5	341.1 -9.3	335.1 -6.9	329.2 -6.8	343.7 2.6	338.7 -1.5		
US: Fed. Defense Purchases Percent Change From Last Qtr (AR)	254.4 -1.7	256.5 3.3	258.2 2.7	265.7 12.1	267.5 2.7	258.8 -12.4	252.6 -9.3	246.5 -9.3	258.7 0.9	256.3 -0.9		
US: Fed. Nondefense Purchases Percent Change From Last Qtr (AR)	78.6 7.5	89.4 67.4	87.8 -7.0	84.2 -15.4	82.0 -10.0	82.3 1.5	82.5 1.0	82.7 1.0	85.0 8.1	82.4 -3.1		
US: State and Local Govt. Purch. Percent Change From Last Qtr (AR)	475.0 4.8	474.3 -0.6	476.7 2.0	482.4 4.9	480.1 -1.9	480.1 -0.0	479.9 -0.1	480.0 0.1	477.1 3.0	480.0 0.6		

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.

GNP AS EXPENDITURE - CURRENT DOLLARS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Gross National Product Percent Change From Last Qtr (AR)	5375.4 6.7	5443.3 5.1	5514.6 5.3	5527.3 0.9	5557.7 2.2	5629.3 5.3	5702.8 5.3	5785.1 5.9	5465.1 5.1	5668.7 3.7
US: Personal Consumption Expend. Percent Change From Last Qtr (AR)	3588.1 8.2	3622.7 3.9	3693.4 8.0	3724.9 3.5	3742.8 1.9	3804.2 6.7	3850.2 4.9	3903.1 5.6	3657.3 6.0	3825.1 4.6
US: Per. Con. Exp.-Durables Percent Change From Last Qtr (AR)	492.1 19.0	478.4 -10.7	482.3 3.3	468.5 -11.0	455.3 -10.8	464.9 8.7	470.8 5.1	477.0 5.4	480.3 1.2	467.0 -2.8
US: PCE-Nondurables Percent Change From Last Qtr (AR)	1174.7 9.3	1179.0 1.5	1205.0 9.1	1216.0 3.7	1212.7 -1.1	1218.8 2.0	1230.2 3.8	1244.3 4.7	1193.7 5.6	1226.5 2.7
US: PCE-Services Percent Change From Last Qtr (AR)	1921.3 4.9	1965.3 9.5	2006.2 8.6	2040.4 7.0	2074.8 6.9	2120.5 9.1	2149.3 5.5	2181.7 6.2	1983.3 7.5	2131.6 7.5
US: Fixed Nonresidential Invest. Percent Change From Last Qtr (AR)	523.1 9.1	516.5 -5.0	532.8 13.2	524.0 -6.4	503.6 -14.7	497.3 -4.9	504.3 5.7	511.7 6.1	524.1 2.4	504.2 -3.8
US: Producers Durable Equipment Percent Change From Last Qtr (AR)	374.3 11.0	369.3 -5.2	383.0 15.7	381.9 -1.1	364.1 -17.4	359.8 -4.7	364.8 5.7	370.2 6.0	377.1 3.1	364.7 -3.3
US: Investment in Structures Percent Change From Last Qtr (AR)	148.8 4.7	147.2 -4.2	149.8 7.3	142.1 -19.0	139.5 -7.1	137.5 -5.5	139.4 5.7	141.5 6.2	147.0 0.5	139.5 -5.1
US: Residential Investment Percent Change From Last Qtr (AR)	235.9 18.9	229.1 -11.0	217.9 -18.2	205.2 -21.4	190.5 -25.7	187.9 -5.3	191.5 7.8	199.4 17.5	222.0 -3.9	192.3 -13.4

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				22JUL91	A4
	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991					
US: Change in Bus. Inventories	-11.8	13.4	9.0	-30.8	-34.2	-16.2	-2.0	9.2	-5.0	-10.8					
US: Change in Farm Inventories	5.3	0.5	2.2	1.5	2.9	2.4	2.4	2.4	2.4	2.5					
US: Change in Nonfarm Inv.	-17.0	13.0	6.8	-32.4	-37.1	-18.6	-4.4	6.8	-7.4	-13.3					
US: Net Exports Percent Change From Last Qtr (AR)	-30.0 -47.8	-24.9 -52.5	-41.3 656.8	-28.8 -76.4	13.5 -95.2	18.3 237.3	20.6 60.0	22.4 40.7	-31.2 -32.2	18.7 -159.8					
US: Total Exports Percent Change From Last Qtr (AR)	661.3 12.0	659.7 -1.0	672.7 8.1	697.4 15.5	694.5 -1.7	704.4 5.8	715.7 6.6	728.0 7.1	672.8 7.4	710.7 5.6					
US: Total Imports Percent Change From Last Qtr (AR)	691.3 8.0	684.6 -3.8	714.1 18.4	726.2 7.0	681.0 -22.7	686.1 3.0	695.1 5.4	705.6 6.2	704.0 4.7	692.0 -1.7					
US: Total Government Purchases Percent Change From Last Qtr (AR)	1070.1 10.7	1086.4 6.2	1102.8 6.2	1132.9 11.4	1141.5 3.1	1137.7 -1.3	1138.2 0.2	1139.3 0.4	1098.1 7.1	1139.2 3.7					
US: Fed. Govt. Purchases Percent Change From Last Qtr (AR)	410.6 11.1	421.9 11.5	425.8 3.7	437.6 11.6	443.8 5.8	435.6 -7.2	431.8 -3.5	428.1 -3.3	424.0 6.0	434.8 2.6					
US: Fed. Defense Purchases Percent Change From Last Qtr (AR)	307.2 11.1	309.6 3.2	312.6 3.9	325.0 16.8	331.2 7.9	322.5 -10.1	317.3 -6.3	312.4 -6.0	313.6 4.2	320.8 2.3					
US: Fed. Nondefense Purchases Percent Change From Last Qtr (AR)	103.4 11.2	112.3 39.1	113.2 3.2	112.6 -2.1	112.6 0.0	113.1 1.9	114.5 5.0	115.7 4.3	110.4 11.6	114.0 3.3					
US: State and Local Govt. Purch. Percent Change From Last Qtr (AR)	659.6 10.5	664.6 3.1	677.0 7.7	695.3 11.3	697.7 1.4	702.1 2.6	706.4 2.5	711.2 2.7	674.1 7.8	704.4 4.5					

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.

RELATION OF GNP, NNP, NAT. INCOME & PERS. INCOME	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Gross National Product Percent Change From Last Qtr (AR)	5375.4 6.7	5443.3 5.1	5514.6 5.3	5527.3 0.9	5557.7 2.2	5629.3 5.3	5702.8 5.3	5785.1 5.9	5465.1 5.1	5668.7 3.7
US: Cap. Cons. Allow. with Adj. Percent Change From Last Qtr (AR)	567.0 -3.8	571.1 2.9	579.3 5.9	585.1 4.1	591.5 4.4	599.0 5.2	606.7 5.2	614.9 5.6	575.6 3.8	603.0 4.8
US: Cap. Cons. Allow w/o Adj. Percent Change From Last Qtr (AR)	538.6 -4.1	539.3 0.5	540.7 1.0	543.3 1.9	548.0 3.5	553.5 4.1	559.7 4.5	566.9 5.3	540.5 -0.3	557.0 3.1
US: Cap. Cons. Adjustment, Total Percent Change From Last Qtr (AR)	-28.4 2.9	-31.8 57.2	-38.6 117.1	-41.8 37.5	-43.6 18.4	-45.5 18.6	-47.0 13.9	-48.0 8.8	-35.1 180.1	-46.0 30.9
US: Net National Product Percent Change From Last Qtr (AR)	4808.4 8.0	4872.2 5.4	4935.3 5.3	4942.2 0.6	4966.2 2.0	5030.3 5.3	5096.2 5.3	5170.2 5.9	4889.5 5.2	5065.7 3.6
US: Indirect Business Taxes Percent Change From Last Qtr (AR)	431.7 10.0	433.0 1.2	444.9 11.5	451.4 6.0	461.4 9.2	464.9 3.1	470.2 4.7	476.6 5.5	440.2 6.3	468.3 6.4
US: Business Transfer Payments Percent Change From Last Qtr (AR)	34.1 8.7	34.7 7.2	35.4 8.3	36.0 7.0	36.7 8.0	37.0 2.9	37.4 5.0	37.9 5.6	35.1 8.2	37.3 6.3
US: Statistical Discrepancy	0.7	-3.2	-4.9	0.4	8.2	0.0	0.0	0.0	-1.7	2.0
US: Sub. less Cur. Sur.-Gov. E. Percent Change From Last Qtr (AR)	8.4 21153.3	3.6 -96.6	-7.5 1783.8	5.3 -75.1	-3.5 -81.0	-5.0 316.5	-6.2 136.4	-2.3 -98.1	2.4 -61.0	-4.2 -273.5
US: National Income Percent Change From Last Qtr (AR)	4350.3 8.0	4411.3 5.7	4452.4 3.8	4459.7 0.7	4456.4 -0.3	4523.4 6.1	4582.3 5.3	4653.4 6.3	4418.4 4.6	4553.9 3.1

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.

	199001	199002	199003	199004	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Corp. Prof. w. IVA + CCADJ Percent Change From Last Qtr (AR)	296.8 8.4	306.6 13.9	300.7 -7.5	288.9 -14.8	286.2 -3.7	321.4 59.0	332.9 15.1	343.5 13.4	298.2 -4.3	321.0 7.6
US: Net Interest Percent Change From Last Qtr (AR)	463.6 1.7	466.2 2.3	468.3 1.8	468.4 0.1	460.9 -6.3	459.8 -1.0	462.4 2.3	467.1 4.2	466.6 4.8	462.5 -0.9
US: Cont. to Soc. Ins.-Total Percent Change From Last Qtr (AR)	498.9 12.7	503.9 4.1	511.3 6.0	513.7 1.9	527.6 11.3	531.1 2.7	537.1 4.6	543.9 5.2	506.9 6.3	534.9 5.5
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 Percent Change From Last Qtr (AR)	646.8 16.6	652.0 3.3	661.0 5.6	679.0 11.3	708.7 18.7	721.0 7.1	726.0 2.8	743.8 10.1	659.7 9.1	724.9 9.9
US: Personal Interest Income Percent Change From Last Qtr (AR)	670.5 3.4	678.0 4.5	685.3 4.4	687.9 1.5	682.0 -3.4	680.4 -0.9	685.0 2.7	692.0 4.2	680.4 5.8	684.9 0.7
US: Personal Dividend Income Percent Change From Last Qtr (AR)	120.5 8.0	122.9 8.2	124.9 6.7	126.7 5.9	126.7 0.0	129.0 7.6	131.6 8.3	134.3 8.3	123.8 8.1	130.4 5.4
US: Personal Income Percent Change From Last Qtr (AR)	4562.8 8.6	4622.2 5.3	4678.5 5.0	4718.5 3.5	4735.8 1.5	4778.1 3.6	4830.1 4.4	4906.5 6.5	4645.5 6.0	4812.6 3.6

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

DISPOSITION OF PERSONAL INCOME - CURRENT DOLLARS		1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Personal Income		4562.8	4622.2	4678.5	4718.5	4735.8	4778.1	4830.1	4906.5	4645.5	4812.6
Percent Change From Last Qtr (AR)		8.6	5.3	5.0	3.5	1.5	3.6	4.4	6.5	6.0	3.6
US: Wage and Salary Disburse.		2651.6	2696.3	2734.2	2738.9	2742.8	2764.2	2799.3	2839.5	2705.2	2786.5
Percent Change From Last Qtr (AR)		6.1	6.9	5.7	0.7	0.6	3.2	5.2	5.9	5.1	3.0
US: Other Labor Income		252.8	256.4	260.0	263.2	266.2	268.1	271.4	275.1	258.1	270.2
Percent Change From Last Qtr (AR)		8.8	5.8	5.7	5.0	4.6	2.9	4.9	5.6	6.7	4.7
US: Total Proprietors Inc.		404.0	401.7	397.9	406.2	404.4	411.9	414.9	422.7	402.5	413.5
Percent Change From Last Qtr (AR)		25.5	-2.3	-3.7	8.6	-1.8	7.6	2.9	7.8	6.1	2.7
US: Farm Proprietors Inc.		57.4	51.0	42.4	48.8	48.5	50.2	48.2	50.5	49.9	49.3
Percent Change From Last Qtr (AR)		148.9	-37.7	-52.2	75.5	-2.4	15.0	-15.2	20.2	2.6	-1.1
US: Nonfarm Proprietors Inc.		346.6	350.8	355.6	357.4	355.8	361.7	366.7	372.2	352.6	364.1
Percent Change From Last Qtr (AR)		13.2	4.9	5.6	2.0	-1.8	6.8	5.6	6.2	6.6	3.3
US: Rental Income of Persons		5.5	4.3	8.4	9.3	5.6	5.9	6.3	6.7	6.9	6.1
Percent Change From Last Qtr (AR)		223.8	-62.6	1356.3	50.3	-86.9	23.2	30.0	27.9	-16.4	-10.9
US: Personal Interest Income		670.5	678.0	685.3	687.9	682.0	680.4	685.0	692.0	680.4	684.9
Percent Change From Last Qtr (AR)		3.4	4.5	4.4	1.5	-3.4	-0.9	2.7	4.2	5.8	0.7
US: Personal Dividend Income		120.5	122.9	124.9	126.7	126.7	129.0	131.6	134.3	123.8	130.4
Percent Change From Last Qtr (AR)		8.0	8.2	6.7	5.9	0.0	7.6	8.3	8.3	8.1	5.4
US: Total Transfer Payments		680.9	686.7	696.4	715.1	745.4	757.9	763.4	781.7	694.8	762.1
Percent Change From Last Qtr (AR)		16.1	3.5	5.8	11.2	18.1	6.9	2.9	9.9	9.1	9.7

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.

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Tot. Pers. Tax + Montax Pay Percent Change From Last Qtr (AR)	675.1 3.3	696.5 13.3	709.5 7.7	716.6 4.1	714.6 -1.1	721.3 3.8	731.3 5.7	743.4 6.8	699.4 6.2	727.6 4.0
US: Disposable Personal Income Percent Change From Last Qtr (AR)	3887.7 9.6	3925.7 4.0	3969.1 4.5	4001.9 3.3	4021.3 2.0	4056.8 3.6	4098.8 4.2	4163.2 6.4	3946.1 5.9	4085.0 3.5
US: Personal Consumption Expend. Percent Change From Last Qtr (AR)	3588.1 8.2	3622.7 3.9	3693.4 8.0	3724.9 3.5	3742.8 1.9	3804.2 6.7	3850.2 4.9	3903.1 5.6	3657.3 6.0	3825.1 4.6
US: Int. Paid by Cons. to Bus. Percent Change From Last Qtr (AR)	107.4 6.6	107.5 0.4	107.9 1.5	108.5 2.2	108.6 0.4	108.2 -1.6	107.8 -1.5	107.4 -1.5	107.8 5.5	108.0 0.1
US: Pers. Trans. Pay. to For. Percent Change From Last Qtr (AR)	0.9 -68.4	0.4 -96.1	1.3 11056.6	1.0 -65.0	1.2 107.4	1.2 0.0	1.2 0.0	1.2 0.0	0.9 -36.8	1.2 33.3
US: Personal Saving Percent Change From Last Qtr (AR)	191.3 45.8	195.1 8.2	166.5 -47.0	167.5 2.4	168.7 2.9	143.2 -48.0	139.6 -9.8	151.5 38.6	180.1 4.8	150.7 -16.3
US: Disposable Personal Income Percent Change From Last Qtr (AR)	2900.9 2.5	2902.8 0.3	2898.0 -0.7	2872.4 -3.5	2861.9 -1.5	2875.3 1.9	2882.7 1.0	2902.9 2.8	2893.5 0.9	2880.7 -0.4
US: YSAV as a Percent of YPD	4.9	5.0	4.2	4.2	4.2	3.5	3.4	3.6	4.6	3.7

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.

NATIONAL INCOME - CURRENT DOLLARS		1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: National Income		4350.3	4411.3	4452.4	4459.7	4456.4	4523.4	4582.3	4653.4	4418.4	4553.9
Percent Change From Last Qtr (AR)		8.0	5.7	3.8	0.7	-0.3	6.1	5.3	6.3	4.6	3.1
US: Wages and Salaries		2651.6	2696.3	2734.2	2738.9	2742.8	2764.2	2799.3	2839.5	2705.2	2786.5
Percent Change From Last Qtr (AR)		6.1	6.9	5.7	0.7	0.6	3.2	5.2	5.9	5.1	3.0
US: W. and S.-Govt. + Govt. Ent.		497.1	505.7	511.3	518.1	529.8	538.2	544.4	550.9	508.0	540.8
Percent Change From Last Qtr (AR)		8.8	7.1	4.5	5.4	9.3	6.5	4.7	4.9	6.6	6.4
US: W. and S.-Other		2154.5	2190.6	2222.9	2220.8	2213.0	2226.0	2255.0	2288.6	2197.2	2245.6
Percent Change From Last Qtr (AR)		5.5	6.9	6.0	-0.4	-1.4	2.4	5.3	6.1	4.8	2.2
US: Supplements to w. and s.		528.8	536.1	542.7	548.0	556.5	560.2	566.6	573.8	538.9	564.3
Percent Change From Last Qtr (AR)		10.4	5.6	5.0	4.0	6.4	2.7	4.6	5.2	6.5	4.7
US: Emp. Cont. to Soc. Ins.		276.0	279.7	282.7	284.8	290.3	292.1	295.2	298.7	280.8	294.1
Percent Change From Last Qtr (AR)		11.8	5.5	4.4	3.0	8.0	2.5	4.3	4.9	6.4	4.7
US: Other Labor Income		252.8	256.4	260.0	263.2	266.2	268.1	271.4	275.1	258.1	270.2
Percent Change From Last Qtr (AR)		8.8	5.8	5.7	5.0	4.6	2.9	4.9	5.6	6.7	4.7
US: Total Proprietors Inc.		404.0	401.7	397.9	406.2	404.4	411.9	414.9	422.7	402.5	413.5
Percent Change From Last Qtr (AR)		25.5	-2.3	-3.7	8.6	-1.8	7.6	2.9	7.8	6.1	2.7
US: Farm Proprietors Inc.		57.4	51.0	42.4	48.8	48.5	50.2	48.2	50.5	49.9	49.3
Percent Change From Last Qtr (AR)		148.9	-37.7	-52.2	75.5	-2.4	15.0	-15.2	20.2	2.6	-1.1
US: Nonfarm Proprietors Inc.		346.6	350.8	355.6	357.4	355.8	361.7	366.7	372.2	352.6	364.1
Percent Change From Last Qtr (AR)		13.2	4.9	5.6	2.0	-1.8	6.8	5.6	6.2	6.6	3.3

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Institute for Public Policy and Business Research, University of Kansas										1990-1991			US Forecast			22JUL91		A10	
	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991									
US: Rental Income of Persons Percent Change From Last Qtr (AR)	5.5 223.8	4.3 -62.6	8.4 1356.3	9.3 50.3	5.6 -86.9	5.9 23.2	6.3 30.0	6.7 27.9	6.9 -16.4	6.1 -10.9									
US: Corp. Prof. w. IVA + CCADJ Percent Change From Last Qtr (AR)	296.8 8.4	306.6 13.9	300.7 -7.5	288.9 -14.8	286.2 -3.7	321.4 59.0	332.9 15.1	343.5 13.4	298.2 -4.3	321.0 7.6									
US: Net Interest Percent Change From Last Qtr (AR)	463.6 1.7	466.2 2.3	468.3 1.8	468.4 0.1	460.9 -6.3	459.8 -1.0	462.4 2.3	467.1 4.2	466.6 4.8	462.5 -0.9									
US: Corp. Prof. before Tax Percent Change From Last Qtr (AR)	296.9 10.2	299.3 3.3	318.5 28.2	304.1 -16.9	281.6 -26.5	309.4 45.7	330.4 30.0	348.4 23.7	304.7 -1.0	317.4 4.2									
US: Profits Tax Liability Percent Change From Last Qtr (AR)	129.9 22.4	133.1 10.2	139.1 19.3	126.5 -31.6	117.1 -26.5	124.4 27.2	129.7 18.2	134.4 15.1	132.2 -2.2	126.4 -4.4									
US: Corp. Prof. after Taxes Percent Change From Last Qtr (AR)	167.1 1.9	166.1 -2.4	179.4 36.1	177.6 -4.0	164.5 -26.5	185.0 60.0	200.6 38.5	214.1 29.6	172.6 -0.0	191.0 10.7									
US: Dividends-Total Percent Change From Last Qtr (AR)	130.3 8.4	133.0 8.5	135.1 6.5	137.2 6.4	137.5 0.9	140.4 8.7	143.4 9.0	146.7 9.2	133.9 8.4	142.0 6.0									
US: Undistributed Corp. Prof. Percent Change From Last Qtr (AR)	36.8 -17.4	33.2 -33.8	44.3 217.0	40.4 -30.8	27.0 -80.2	44.6 647.3	57.2 171.2	67.4 93.0	38.7 -21.3	49.0 26.8									
US: Inventory Valuation Adj. Percent Change From Last Qtr (AR)	-11.4 -61.8	-0.5 -100.0	-19.8 245912429	-13.8 -76.4	8.1 -88.1	16.8 1752.5	8.3 -93.9	1.6 -99.9	-11.4 -47.5	8.7 -176.6									
US: Corp. Cap. Cons. Adj. Percent Change From Last Qtr (AR)	11.3 -72.5	7.7 -78.4	2.0 -99.5	-1.4 -76.0	-3.5 3806.3	-4.8 250.8	-5.8 117.4	-6.5 57.2	4.9 -80.8	-5.2 -205.2									
US: Net Interest Percent Change From Last Qtr (AR)	463.6 1.7	466.2 2.3	468.3 1.8	468.4 0.1	460.9 -6.3	459.8 -1.0	462.4 2.3	467.1 4.2	466.6 4.8	462.5 -0.9									

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.

Institute for Public Policy and Business Research, University of Kansas 1990-1991 US Forecast 22JUL91 A11  
 PRICE DEFLATORS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: CPI-All items Percent Change From Last Qtr (AR)	1.3 7.4	1.3 3.9	1.3 6.9	1.3 7.0	1.3 3.5	1.4 2.9	1.4 4.1	1.4 4.2	1.3 5.4	1.4 4.6
US: Implicit Deflator - GNP Percent Change From Last Qtr (AR)	1.3 4.9	1.3 4.7	1.3 3.8	1.3 2.5	1.3 5.2	1.4 2.8	1.4 3.2	1.4 3.5	1.3 4.1	1.4 3.7
US: Implicit Deflator - C Percent Change From Last Qtr (AR)	1.3 7.0	1.4 3.7	1.4 5.2	1.4 7.1	1.4 3.5	1.4 1.7	1.4 3.1	1.4 3.5	1.4 5.0	1.4 4.0
US: Implicit Deflator - IOIL Percent Change From Last Qtr (AR)	0.6 48.2	0.5 -56.6	0.6 135.2	0.9 345.0	0.6 -75.0	0.6 -11.3	0.6 3.3	0.6 3.2	0.7 22.1	0.6 -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.

EMPLOYMENT

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
US: Civilian Labor Force Percent Change From Last Qtr (AR)	124.6 0.7	124.8 0.6	124.8 -0.1	124.9 0.4	125.0 0.3	125.5 1.7	125.9 1.0	126.2 1.0	124.8 0.8	125.6 0.7
US: Civilian Employment Percent Change From Last Qtr (AR)	118.1 0.9	118.2 0.4	117.8 -1.3	117.6 -0.9	116.9 -2.4	117.1 0.8	117.2 0.5	117.5 0.9	117.9 0.5	117.2 -0.6
US: Unemployment Percent Change From Last Qtr (AR)	6.6 -2.3	6.6 4.7	7.0 22.0	7.4 23.9	8.1 50.3	8.5 16.2	8.6 8.3	8.7 2.7	6.9 5.6	8.5 23.2
US: Unemployment Rate-Total	5.3	5.3	5.6	5.9	6.5	6.7	6.9	6.9	5.5	6.7
US: Tot. Nonfarm Empl. Percent Change From Last Qtr (AR)	109.7 2.6	110.2 1.9	110.2 -0.2	109.8 -1.4	109.2 -2.3	108.9 -0.9	109.4 1.7	109.9 2.0	110.0 1.5	109.3 -0.6
US: Total Govt. Empl. Percent Change From Last Qtr (AR)	18.1 4.3	18.5 8.3	18.4 -2.4	18.4 -0.2	18.4 0.8	18.4 -0.3	18.4 -0.1	18.4 0.1	18.3 3.1	18.4 0.3
US: Fed. Govt. Empl. Percent Change From Last Qtr (AR)	3.0 6.9	3.3 36.5	3.1 -23.7	3.0 -12.5	3.0 -1.7	2.9 -2.2	2.9 -0.7	2.9 -0.7	3.1 3.3	2.9 -4.9
US: S & L Govt. Empl. Percent Change From Last Qtr (AR)	15.1 3.8	15.2 3.2	15.3 2.7	15.4 2.4	15.4 1.3	15.4 0.1	15.4 0.0	15.4 0.3	15.2 3.0	15.4 1.3
US: Output Per Manhour-Pr. Manag. Percent Change From Last Qtr (AR)	19.0 -0.7	18.9 -1.2	18.9 0.9	19.0 0.4	19.0 1.1	19.2 3.6	19.2 0.7	19.2 0.6	18.9 -0.4	19.2 1.2

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										
FINANCIAL AND GOVERNMENT BUDGET DEFECIT										
	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	22JUL91	A13
US: M1 Money Supply Percent Change From Last Qtr (AR)	800.4 5.3	808.9 4.3	816.3 3.7	823.3 3.5	835.4 6.0	845.7 5.0	856.1 5.0	866.4 4.9	812.2 3.7	850.9 4.8
US: M2 Money Supply Percent Change From Last Qtr (AR)	3252.7 6.3	3284.4 4.0	3308.8 3.0	3325.1 2.0	3353.4 3.4	3380.0 3.2	3423.4 5.2	3467.3 5.2	3292.8 5.2	3406.0 3.4
US: 3-Month T-Bill Rate Percent Change From Last Qtr (AR)	7.8 6.6	7.8 0.5	7.5 -13.4	7.0 -22.8	6.1 -44.8	5.6 -27.3	5.7 5.6	5.8 10.5	7.5 -7.4	5.8 -23.0
US: Prime Rate Charged By Banks Percent Change From Last Qtr (AR)	10.0 -16.5	10.0 -1.5	10.0 0.0	10.0 0.0	9.2 -28.7	8.7 -20.8	8.4 -13.0	8.3 -5.3	10.0 -7.9	8.6 -13.9
US: Moodys AAA Corp. Bond Rate Percent Change From Last Qtr (AR)	9.2 14.4	9.4 9.1	9.4 0.3	9.3 -4.6	8.9 -14.6	8.9 -2.0	8.8 -3.5	8.8 -1.6	9.3 0.7	8.9 -5.0
US: Federal Govt. Surplus Percent Change From Last Qtr (AR)	-168.3 58.1	-166.0 -5.4	-145.7 -40.7	-184.3 156.0	-125.5 -78.5	-140.5 57.1	-192.5 252.6	-192.3 -0.5	-166.1 23.7	-162.7 -2.0

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.

EMPLOYMENT

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Civilian Labor Force Percent Change From One Year Ago	1277.1 0.9	1309.7 0.7	1313.5 1.4	1299.7 1.6	1310.6 2.6	1321.3 0.9	1317.2 0.3	1309.3 0.7	1300.0 1.2	1314.6 1.1
KS EMP: Employed Percent Change From One Year Ago	1220.0 0.9	1255.8 0.6	1255.1 0.8	1241.1 0.9	1241.4 1.8	1259.6 0.3	1256.0 0.1	1248.3 0.6	1243.0 0.8	1251.3 0.7
KS EMP: Unemployed Percent Change From One Year Ago	57.0 0.4	53.9 3.9	58.4 17.9	58.6 17.6	69.2 21.3	61.7 14.5	61.2 4.7	61.0 4.1	57.0 9.6	63.3 11.0
KS EMP: Unemployment Rate Percent Change From One Year Ago	4.5 0.0	4.1 2.5	4.4 15.7	4.5 15.4	5.3 17.0	4.7 13.8	4.6 4.8	4.7 3.6	4.4 8.0	4.8 9.7
KS EMP: Adj. for Res. & Self Emp. Percent Change From One Year Ago	99.3 -15.1	109.4 -4.8	112.8 -8.0	91.3 1.6	110.3 11.1	102.4 -6.4	106.7 -5.4	97.5 6.8	103.2 -7.1	104.2 1.0
KS EMP: Farm Percent Change From One Year Ago	49.7 1.8	55.6 -8.4	63.1 -4.9	51.8 -5.9	48.8 -1.8	58.5 5.2	64.0 1.5	48.9 -5.7	55.0 -4.6	55.1 0.0
KS EMP: Total Non-farm Wage & Salary Percent Change From One Year Ago	1071.0 2.7	1090.8 1.7	1079.2 2.2	1097.9 1.2	1082.3 1.1	1098.7 0.7	1085.3 0.6	1101.8 0.4	1084.7 1.9	1092.0 0.7
KS EMP: Mining Percent Change From One Year Ago	9.5 3.2	9.9 5.3	10.0 5.3	10.4 8.0	10.3 7.7	10.1 1.5	10.3 3.3	10.0 -3.5	10.0 5.5	10.2 2.1

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
Institute for Public Policy and Business Research, University of Kansas 1990-1991 Kansas Forecast 22JUL91 A15										
KS EMP: Oil & Gas Extraction Percent Change From One Year Ago	8.3 1.6	8.5 4.9	8.5 4.9	9.0 8.8	9.0 8.5	8.8 3.5	8.9 5.1	8.8 -3.0	8.6 5.1	8.9 3.4
KS EMP: Mining Residual Percent Change From One Year Ago	1.3 15.2	1.4 7.5	1.5 7.3	1.4 2.5	1.3 2.6	1.3 -10.4	1.4 -7.1	1.3 -6.5	1.4 7.8	1.3 -5.6
KS EMP: Construction Percent Change From One Year Ago	36.9 5.3	42.2 2.6	44.0 1.9	42.7 3.6	38.0 3.0	43.0 2.0	45.1 2.7	42.7 0.1	41.4 3.3	42.2 1.9
KS EMP: Non-durable Goods Percent Change From One Year Ago	75.9 1.2	76.4 0.2	76.7 1.7	77.1 3.2	77.7 2.4	77.7 1.7	77.6 1.2	77.0 -0.1	76.5 1.5	77.5 1.3
KS EMP: Food & Kindred Percent Change From One Year Ago	26.6 -1.1	26.5 -1.0	27.2 2.8	27.4 3.1	27.3 2.5	27.2 2.5	27.8 1.9	27.8 1.5	26.9 0.9	27.5 2.1
KS EMP: Apparel Percent Change From One Year Ago	3.5 6.1	3.5 -1.9	3.5 -1.9	3.8 8.6	3.7 6.7	3.9 11.2	3.9 9.9	3.8 1.0	3.6 2.6	3.8 7.1
KS EMP: Printing & Publishing Percent Change From One Year Ago	20.2 3.4	20.5 0.7	20.1 1.3	20.1 3.6	20.8 3.3	20.8 1.7	20.2 0.4	20.1 0.2	20.2 2.2	20.5 1.4
KS EMP: Chemicals & Allied Prod. Percent Change From One Year Ago	7.7 -2.1	7.6 -1.3	7.7 0.4	7.8 0.9	7.7 -0.4	7.7 1.0	7.6 -1.1	7.4 -4.3	7.7 -0.5	7.6 -1.2
KS EMP: Petroleum & Coal Percent Change From One Year Ago	12.0 2.0	12.4 3.3	12.2 2.2	12.0 3.7	12.2 1.4	12.2 -1.2	12.2 0.1	11.9 -0.9	12.2 2.8	12.1 -0.2
KS EMP: Non-durables Residual Percent Change From One Year Ago	5.9 4.1	6.0 0.6	5.9 0.6	6.1 1.1	6.0 2.3	5.9 -0.9	5.9 0.1	5.9 -2.4	6.0 1.6	5.9 -0.3

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	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS EMP: Durable Goods Percent Change From One Year Ago	108.3 0.0	109.9 1.5	109.4 -0.5	108.2 -1.5	105.5 -2.6	106.7 -2.9	106.0 -3.1	106.4 -1.7	108.9 -0.1	106.1 -2.6
KS EMP: Stone Glass Clay Percent Change From One Year Ago	6.5 8.3	7.0 8.8	6.8 2.0	6.4 -4.0	5.9 -9.7	6.6 -5.7	6.6 -2.8	6.4 0.7	6.7 3.6	6.4 -4.4
KS EMP: Primary Metals Percent Change From One Year Ago	2.9 -3.3	2.9 -3.3	2.9 -1.1	2.9 1.1	2.8 -2.3	2.8 -3.2	2.7 -6.6	2.7 -8.2	2.9 -1.7	2.8 -5.1
KS EMP: Fabricated Metals Percent Change From One Year Ago	10.3 -9.7	10.4 -8.8	10.2 -3.2	10.3 1.3	10.5 2.6	10.6 2.1	10.7 5.3	10.7 3.7	10.3 -5.3	10.6 3.4
KS EMP: Machinery, Incl. Electrical Percent Change From One Year Ago	29.3 4.4	29.5 4.5	29.6 1.5	29.2 -0.6	28.7 -2.0	28.9 -1.8	28.5 -3.6	28.2 -3.4	29.4 2.4	28.6 -2.7
KS EMP: Transportation Equipment Percent Change From One Year Ago	49.0 -0.7	49.6 2.1	49.3 -1.0	49.0 -2.7	47.4 -3.3	47.5 -4.2	46.9 -4.7	48.0 -2.0	49.2 -0.6	47.5 -3.5
KS EMP: Durables Residual Percent Change From One Year Ago	10.3 -1.6	10.5 -1.2	10.6 -2.2	10.3 0.0	10.2 -1.3	10.3 -2.4	10.4 -1.6	10.2 -0.9	10.5 -1.3	10.3 -1.6
KS EMP: Transportation & Utilities Percent Change From One Year Ago	66.0 1.5	66.6 0.0	66.7 -0.9	67.1 -1.0	67.6 2.4	67.8 1.8	68.3 2.5	68.7 2.4	66.6 -0.1	68.1 2.3
KS EMP: Railroads Percent Change From One Year Ago	8.2 -6.5	8.0 -9.4	7.7 -10.9	7.5 -10.7	7.2 -12.2	7.3 -9.2	7.2 -6.5	7.0 -7.1	7.8 -9.4	7.1 -8.8
KS EMP: Trucking & Warehousing Percent Change From One Year Ago	21.6 -2.7	22.3 -2.9	22.4 -2.5	22.4 -1.3	22.5 4.3	23.0 2.9	23.4 4.4	23.3 4.3	22.2 -2.3	23.1 4.0

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: Electric Gas & Sanitary Serv Percent Change From One Year Ago	12.5 -0.5	12.6 0.3	12.7 -1.0	12.5 -0.8	12.5 0.0	12.5 -0.8	12.7 -0.1	12.4 -0.8	12.6 -0.5	12.5 -0.4
KS EMP: Trans. & Utilities Residual Percent Change From One Year Ago	23.7 10.4	23.7 6.6	23.9 4.4	24.7 2.6	25.3 7.0	25.1 5.7	25.1 4.8	26.0 5.2	24.0 5.9	25.4 5.7
KS EMP: Wholesale Trade Percent Change From One Year Ago	68.9 1.0	70.0 0.2	70.4 0.8	70.3 1.6	69.7 1.1	70.3 0.4	70.0 -0.6	68.6 -2.4	69.9 0.9	69.6 -0.4
KS EMP: Retail Trade Percent Change From One Year Ago	194.3 1.8	197.1 -0.2	197.2 0.0	200.1 -0.5	194.1 -0.1	196.1 -0.5	196.4 -0.4	199.0 -0.6	197.2 0.3	196.4 -0.4
KS EMP: Gen. Merchandise Stores Percent Change From One Year Ago	26.3 -2.0	26.0 -4.2	26.4 -0.5	28.0 -3.6	25.2 -3.9	24.9 -4.3	24.8 -6.2	26.6 -5.2	26.7 -2.6	25.4 -4.9
KS EMP: Food Stores Percent Change From One Year Ago	29.4 5.5	29.1 3.8	29.0 1.4	29.7 -0.7	29.4 0.1	29.1 -0.3	29.2 0.9	29.6 -0.2	29.3 2.4	29.3 0.1
KS EMP: Auto. Dealers & Gas Stations Percent Change From One Year Ago	23.7 -2.2	23.8 -3.1	23.8 -2.3	23.3 -2.5	22.9 -3.2	23.0 -3.4	23.0 -3.4	22.6 -2.9	23.7 -2.5	22.9 -3.2
KS EMP: Apparel & Accessory Stores Percent Change From One Year Ago	10.9 -0.3	10.6 -5.9	10.3 -8.3	11.0 -0.8	10.2 -6.4	9.9 -5.9	9.8 -4.3	10.3 -6.5	10.7 -5.4	10.1 -5.8
KS EMP: Retail Trade Residual Percent Change From One Year Ago	104.1 3.0	107.6 1.1	107.7 1.2	108.1 1.5	106.3 2.1	109.2 1.5	109.5 1.6	109.9 1.6	106.9 1.7	108.7 1.7
KS EMP: Finance, Insurance, R.E. Percent Change From One Year Ago	57.6 0.5	58.4 0.3	58.3 -0.2	58.0 0.3	58.0 0.7	58.7 0.6	59.1 1.5	58.3 0.5	58.1 0.2	58.5 0.8

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			22JUL91	A18
	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991				
KS EMP: Banking Percent Change From One Year Ago	24.6 -0.1	24.8 -0.8	24.7 -2.4	24.4 -2.1	24.5 -0.4	24.5 -0.9	24.6 -0.2	24.2 -0.8	24.6 -1.4	24.5 -0.6				
KS EMP: Insurance Percent Change From One Year Ago	12.9 0.5	13.0 1.3	13.0 1.3	13.0 1.3	12.9 0.5	13.1 0.8	13.2 1.4	13.2 0.9	13.0 1.1	13.1 0.9				
KS EMP: F. I. R. E. Residual Percent Change From One Year Ago	20.1 1.2	20.6 1.0	20.6 1.5	20.6 2.8	20.5 2.2	21.1 2.3	21.3 3.6	20.9 1.7	20.5 1.6	21.0 2.4				
KS EMP: Services Percent Change From One Year Ago	236.8 6.6	242.3 5.0	243.8 4.4	244.2 3.6	244.7 3.3	247.7 2.2	248.6 2.0	249.4 2.1	241.8 4.9	247.6 2.4				
KS EMP: Hotels & Lodging Percent Change From One Year Ago	9.2 3.0	9.9 1.7	10.1 2.7	10.1 5.6	9.6 4.3	9.9 -0.0	10.2 0.8	9.9 -1.6	9.8 3.2	9.9 0.8				
KS EMP: Personal Services Percent Change From One Year Ago	11.8 1.4	11.8 7.3	11.7 8.0	11.7 7.0	11.9 0.3	11.7 -1.0	11.4 -1.9	11.5 -1.8	11.8 5.8	11.6 -1.1				
KS EMP: Services Residual Percent Change From One Year Ago	215.8 7.0	220.5 5.0	222.0 4.3	222.4 3.3	223.2 3.4	226.1 2.5	226.9 2.2	227.9 2.5	220.2 4.9	226.0 2.7				
KS EMP: Federal Gov. Percent Change From One Year Ago	29.4 0.2	29.7 -0.6	29.4 -1.0	29.0 -1.2	29.2 -0.6	29.8 0.3	29.9 1.8	29.6 2.2	29.4 -0.6	29.6 0.9				
KS EMP: State & Local Gov. Percent Change From One Year Ago	187.4 2.8	188.4 1.8	173.4 6.7	190.8 1.5	187.6 0.1	190.9 1.3	173.9 0.3	192.1 0.7	185.0 3.1	186.1 0.6				

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 22JUL91 A19  
 HOURS AND WAGES

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS HRS/WK: Food & Kindred Products Percent Change From One Year Ago	39.3 1.5	41.7 3.2	41.8 0.2	41.7 3.8	41.9 6.8	41.0 -1.7	41.6 -0.5	40.8 -2.3	41.1 2.2	41.3 0.5
KS HRS/WK: Apparel&Other Fin. Prod. Percent Change From One Year Ago	37.0 1.6	37.4 1.5	37.0 -1.8	37.8 -0.3	34.6 -6.5	34.1 -8.9	35.3 -4.7	35.8 -5.4	37.3 0.3	34.9 -6.4
KS HRS/WK: Pet. Refining & Rel. Ind. Percent Change From One Year Ago	40.1 -8.3	40.0 -5.9	36.0 -8.6	37.8 -7.0	37.4 -6.7	38.9 -2.8	39.7 10.2	40.4 6.9	38.5 -7.4	39.1 1.6
KS HRS/WK: Fabricated Metal Products Percent Change From One Year Ago	36.7 -1.8	37.4 1.1	39.7 10.0	40.0 6.7	37.1 1.1	38.9 3.9	39.1 -1.4	39.3 -1.8	38.5 3.9	38.6 0.4
KS HRS/WK: Machinery, Incl. Elec. Percent Change From One Year Ago	40.9 -1.6	40.1 -1.3	40.0 -2.1	40.6 -3.1	39.7 -3.0	39.5 -1.3	39.1 -2.1	40.3 -0.8	40.4 -2.0	39.6 -1.8
KS HRS/WK: Transportation Equipment Percent Change From One Year Ago	40.8 -2.9	40.9 -2.5	41.4 0.2	41.4 21.6	40.7 -0.3	41.2 0.8	41.2 -0.5	41.9 1.2	41.1 3.2	41.2 0.3
KS WAGE/HR: Food & Kindred Products Percent Change From One Year Ago	9.2 -1.8	9.4 0.5	9.4 0.0	9.3 0.3	9.4 2.7	9.6 2.1	9.7 2.7	9.8 5.4	9.3 -0.3	9.6 3.2
KS WAGE/HR: Apparel&Other Fin. Prod. Percent Change From One Year Ago	5.7 1.3	5.8 3.8	5.8 3.9	5.6 0.5	5.8 3.1	6.1 5.5	6.3 8.7	6.5 15.5	5.7 2.4	6.2 8.2
KS WAGE/HR: Pet. Refining & Rel. Ind Percent Change From One Year Ago	11.7 -4.1	11.9 -1.9	11.8 -2.3	11.5 -5.8	11.1 -5.6	11.0 -7.3	11.1 -6.2	11.2 -2.4	11.7 -3.5	11.1 -5.4
KS WAGE/HR: Fabricated Metal Product Percent Change From One Year Ago	8.7 0.8	8.9 3.1	8.9 3.7	8.9 2.6	8.9 3.3	9.0 1.9	9.1 2.5	9.2 3.2	8.8 2.5	9.1 2.7
KS WAGE/HR: Machinery, Incl. Elec. Percent Change From One Year Ago	9.8 1.0	9.6 -0.3	9.8 0.6	9.9 1.1	9.8 -0.4	9.8 1.4	9.9 1.1	10.0 0.7	9.8 0.6	9.9 0.7
KS WAGE/HR: Transportation Equipment Percent Change From One Year Ago	13.5 2.1	13.7 6.5	13.7 3.3	14.0 5.7	14.1 4.5	14.4 5.1	14.7 7.5	15.1 8.2	13.7 4.4	14.6 6.3

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WAGE BILLS

	1990Q1	1990Q2	1990Q3	1990Q4	1991Q1	1991Q2	1991Q3	1991Q4	1990	1991
KS WG BILL: Total Wages & Salaries Percent Change From One Year Ago	22767.0 4.7	23186.0 5.5	23671.0 7.0	23872.0 6.4	24054.3 5.7	24326.4 4.9	24643.0 4.1	24948.0 4.5	23374.0 5.9	24492.9 4.8
KS WG BILL: Farm Wages & Salaries Percent Change From One Year Ago	153.0 0.0	156.0 2.0	157.0 3.3	159.0 4.6	161.2 5.4	163.0 4.5	164.6 4.9	166.0 4.4	156.3 2.5	163.7 4.8
KS WG BILL: Agricultural Services Percent Change From One Year Ago	89.0 6.0	91.0 3.4	94.0 1.1	92.0 -1.1	93.3 4.8	94.5 3.9	95.8 1.9	97.1 5.5	91.5 2.2	95.2 4.0
KS WG BILL: Mining Percent Change From One Year Ago	234.0 4.0	236.0 6.8	249.0 10.7	269.0 14.5	281.5 20.3	275.0 16.5	279.2 12.1	279.8 4.0	247.0 9.1	278.9 12.9
KS WG BILL: Construction Percent Change From One Year Ago	957.0 5.5	935.0 2.7	984.0 7.2	998.0 6.7	991.6 3.6	1010.6 8.1	1037.9 5.5	1031.2 3.3	968.5 5.6	1017.8 5.1
KS WG BILL: Durable Goods Percent Change From One Year Ago	3020.0 3.1	3111.0 3.7	3151.0 5.1	3143.0 6.9	3036.5 0.5	3142.6 1.0	3172.6 0.7	3255.5 3.6	3106.3 4.7	3151.8 1.5
KS WG BILL: Nondurable Goods Percent Change From One Year Ago	1768.0 2.5	1773.0 1.5	1799.0 3.2	1842.0 5.1	1878.4 6.2	1871.2 5.5	1905.8 5.9	1920.0 4.2	1795.5 3.1	1893.8 5.5

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Institute for Public Policy and Business Research, University of Kansas		1990-1991					22JUL91		A21	
		199001	199002	199003	199004	Kansas Forecast	1991Q3	1991Q4		
KS WG BILL: Trans. & Public Utilities Percent Change From One Year Ago	1898.0	2062.0	2120.0	2120.0	2190.0	2208.3	2242.0	2282.2	2050.0	2230.6
	-2.1	5.3	9.4	7.1	15.4	7.1	5.8	7.7	4.9	8.8
KS WG BILL: Wholesale Trade Percent Change From One Year Ago	1874.0	1844.0	1842.0	1851.0	1860.0	1869.2	1873.5	1872.6	1852.8	1868.8
	8.1	6.3	5.1	4.8	-0.7	1.4	1.7	1.2	6.1	0.9
KS WG BILL: Retail Trade Percent Change From One Year Ago	2283.0	2288.0	2319.0	2312.0	2321.0	2330.8	2346.9	2363.5	2300.5	2340.5
	4.6	4.5	4.0	3.9	1.7	1.9	1.2	2.2	4.2	1.7
KS WG BILL: Finance, Insurance, & R.E Percent Change From One Year Ago	1360.0	1406.0	1425.0	1437.0	1457.2	1477.7	1498.9	1504.8	1407.0	1484.7
	-1.1	4.4	4.8	6.0	7.2	5.1	5.2	4.7	3.5	5.5
KS WG BILL: Services Percent Change From One Year Ago	4297.0	4417.0	4571.0	4633.0	4708.6	4754.1	4844.6	4924.8	4479.5	4808.1
	9.6	11.1	12.9	10.5	9.6	7.6	6.0	6.3	11.0	7.3
KS WG BILL: Govt. & Govt. Enterprises Percent Change From One Year Ago	4833.0	4866.0	4959.0	5014.0	5075.0	5129.5	5181.0	5250.7	4918.0	5159.1
	5.5	4.8	6.5	4.3	5.0	5.4	4.5	4.7	5.3	4.9

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Institute for Public Policy and Business Research, University of Kansas										Kansas Forecast			22JUL91	A22
PERSONAL INCOME										1990-1991	1990	1991	1990	1991
	199001	199002	199003	199004	199101	199102	199103	199104	1991	1990	1991			
KS PERS INC: Total Personal Income	43766.0	44114.0	44129.0	46236.0	45856.4	46206.4	46344.6	47580.0	44561.3	46496.8				
Percent Change From One Year Ago	7.5	6.4	7.2	8.3	4.8	4.7	5.0	2.9	7.3	4.3				
KS PERS INC: Real Personal Income	32656.5	32620.0	32221.6	33186.6	32635.4	32749.1	32594.5	33176.8	32671.2	32788.9				
Percent Change From One Year Ago	2.5	1.9	1.9	2.4	-0.1	0.4	1.2	-0.0	2.2	0.4				
KS PERS INC: Farm Proprietors Income	1682.0	1426.0	726.0	2393.0	1703.2	1600.0	1250.4	1868.2	1556.8	1605.4				
Percent Change From One Year Ago	71.3	30.2	112.3	96.8	1.3	12.2	72.2	-21.9	71.3	3.1				
KS PERS INC: Non-farm Proprietors Inc	3570.0	3586.0	3648.0	3677.0	3682.9	3744.8	3794.9	3844.9	3620.3	3766.9				
Percent Change From One Year Ago	4.8	5.3	6.7	5.7	3.2	4.4	4.0	4.6	5.6	4.1				
KS PERS INC: Dividends Interest & Ren	8177.0	8249.0	8372.0	8422.0	8324.6	8335.2	8411.4	8513.2	8305.0	8396.1				
Percent Change From One Year Ago	8.2	5.1	4.5	3.2	1.8	1.0	0.5	1.1	5.2	1.1				
KS PERS INC: Adj. For Residence	1053.0	1075.0	1060.0	1048.0	1065.7	1084.3	1098.6	1109.7	1059.0	1089.6				
Percent Change From One Year Ago	2.8	3.9	-0.9	-1.0	1.2	0.9	3.6	5.9	1.1	2.9				
KS PERS INC: Pers. Cont. For Soc. Ins	2005.0	2022.0	2073.0	2092.0	2160.4	2175.6	2202.0	2232.3	2048.0	2192.6				
Percent Change From One Year Ago	7.7	6.9	8.5	8.0	7.8	7.6	6.2	6.7	7.8	7.1				
KS PERS INC: Transfer Payments	6261.0	6308.0	6371.0	6513.0	6757.6	6844.4	6870.9	7015.5	6363.3	6872.1				
Percent Change From One Year Ago	9.0	8.1	7.4	7.4	7.9	8.5	7.8	7.7	8.0	8.0				
KS PERS INC: Other Labor Income	2263.0	2306.0	2354.0	2404.0	2428.5	2446.8	2477.4	2512.8	2331.8	2466.4				
Percent Change From One Year Ago	6.3	6.5	7.6	8.0	7.3	6.1	5.2	4.5	7.1	5.8				

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