Institute for Public Policy and Business Research
The University of Kansas

U.S. AND KANSAS

ECONOMIC FORECASTS FOR 1989

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Preface

The Institute for Public Policy and Business Research is pleased to present this forecast, which 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 1989, 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 has been responsible for the development of a supporting ARIMA model.

Executive Summary

National Forecast

The U.S. Economy will continue to expand during 1989, although at a slower rate than in 1988. Real GNP growth will average 2.3 percent for the year, compared to 3.8 percent for 1988. The major components of GNP, consumption spending, investment spending, government purchases, and net exports, will grow in 1989, but all except government spending will grow more slowly than in 1988.

The major forces for growth will be investment spending and exports. Investment spending will be spurred by continued high capacity utilization rates, although its growth rate will be lower than in 1988 because of higher interest rates. Export growth will be stimulated by a slight decline in the dollar and the healthy economic growth of many of our trading partners. Strong export growth and a reduction in the rate of growth of imports will cause a modest reduction in the real trade deficit of about $6.8 billion.

As a consequence of the expectation that the Federal Reserve's concern over inflation will lead a restrictive monetary policy during the year, interest rates will rise throughout 1989, with the rate on three-month treasury bills averaging 9.1 percent during the fourth quarter.

Nonagricultural establishment employment will grow 2.9 percent compared to 3.5 percent in 1988. The national unemployment rate will decline to just under 5 percent for the year. Some tightness in the labor market will cause wage rates to increase by 5.8 percent, about one percentage point higher than the increase in 1988.

The rate of inflation as measured by the consumer price index will increase 5.2 percent in 1989, compared to 4.1 percent in 1988 due to increased inflationary pressure on the cost side.

Real U.S. personal income, will increase 2.8 percent in 1989, compared to 3 percent in 1988. Because of increases in tax payments, real disposable personal income will increase only 2.3 percent in 1989 after increasing 3.5 percent in 1988.

Table I U.S. Forecast--Summary

	1985	1986	1987	1988	1989
Real GNP	3619	3722	3847	3994	4087
Growth Rate	3.4	2.9	3.4	3.8	2.3
Rate of Inflation	3.5	1.9	3.7	4.1	5.2
Civilian Employment	107.3	109.7	112.6	115.1	117.8
Growth Rate	2.0	2.3	2.6	2.2	2.4
Unemployment Rate	7.1	6.9	6.1	5.4	4.9
3-month Rate T-bills	7.5	6.0	5.8	6.6	8.5
Personal Income	3325	3531	3780	4057	4387
Growth rate	7.0	6.2	7.1	7.3	8.1
Real Disposable Income	2543	2641	2686	2780	2845
Growth Rate	3.0	3.9	1.7	3.5	2.3

The U.S. forecast, summarized in Table I, above, is based on the Indiana University Econometric Model of the United States. To arrive at the preceding forecast, the following major assumptions were imposed on that model:

1. The Federal Reserve will pursue a restrictive monetary policy, with M2 growing at 4 percent in 1989.

2. Real Federal government purchases of goods and services will decline slightly in 1989. There will be no major changes in taxes in 1989.

3. The dollar will continue to depreciate slightly, about 3 percent in 1989.

4. The real growth rate of the other OECD[1] countries will average 3 percent in 1989.

5. Imported oil prices will remain essentially unchanged in the coming year.

Kansas Forecast

The Kansas forecast, summarized in Table II below, is based on the Institute's Kansas Econometric Model and on the national forecast given above.

Table II Kansas Forecast--Summary

	1985	1986	1987	1988	1989
Total Employment	1176.0	1169.0	1205.0	1222.3	1233.7
Growth rate	3.8	-0.6	3.1	1.4	0.9
Wage & Salary Employment	967.9	984.7	999.6	1017.4	1029.1
Growth rate	0.7	1.7	1.5	1.8	1.1
Unemployment Rate	5.0	5.4	4.9	4.6	4.7
Nominal Personal Income	33855	35667	37450	39439	41698
Growth Rate	6.5	5.4	5.0	5.3	5.7
Real Personal Income	30326	31191	31344	31674	31829
Growth Rate	3.1	2.9	0.5	1.1	0.5

Following a trend of recent years, growth of the Kansas economy will lag growth of the U.S. economy. Kansas personal income will grow 5.7 percent in 1989, compared to 8.1 percent for the U.S. Real Kansas personal income will increase 0.5 percent compared to 2.8 percent for the U.S.

Kansas nonfarm wage and salary employment will grow 1.1 percent in 1989, compared to 2.9 percent for the U.S. Total civilian employment in Kansas will grow 0.9 percent, compared to 2.4 percent in the U.S. The Kansas unemployment rate will average 4.7 percent, compared to 4.9 percent for the nation.

Employment in manufacturing will grow faster than employment in the state as a whole, averaging 2 percent growth for 1989. Employment in nondurable goods manufacturing will grow 2.1 percent; printing and publishing will lead the way with a 5.2 percent employment growth rate. Employment in durable goods manufacturing will grow 2 percent. The fastest growing durable goods sectors will be primary metals (9.9 percent) and stone glass and clay (4.6 percent).

Among the nonmanufacturing sectors, employment in services will exhibit an above average 2.2 percent growth. Employment in construction will grow a modest 1.4 percent. Employment in government will increase 0.9 percent. Employment in finance, insurance, and real estate will grow 0.8 percent, employment in wholesale trade will grow 0.5 percent, and employment in retail trade will grow 0.4 percent.

Employment in transportation and public utilities will remain level in 1989. Employment in mining will fall 4.1 percent.

Introduction

The National economy will continue to grow in 1989, although at a slower rate than it did during a surprisingly strong 1988. Although the main engines of 1988 growth, nonresidential investment spending and export growth, will continue to drive the economy in 1989, they will exert a more moderate influence than they did in the earlier year. A tight money supply, brought about by the Federal Reserve Board's continuing concern over inflation, will cause interest rates to rise throughout the year. Continued moderate economic growth will cause the already low unemployment rate to fall even further, dipping slightly below 5 percent during the latter part of the year. Tightening of the labor market and recent signs of increasing prices will cause inflation to accelerate modestly to 5.2 percent.

The Kansas economy will mirror the national economy, growing in 1989 but more slowly in most areas than in 1988. In addition, the Kansas economy will grow more slowly than the U.S. economy, a trend that has been evident throughout the decade. For example, the average annual growth rate of employment in the U.S. from 1982 to 1988 was 2.4 percent, while the average annual growth rate of of employment in Kansas during the same period was 1.6 percent. Similarly, the average annual rate of growth of personal income in the U.S. from 1982 to 1988 was 7.2 percent, while for Kansas the average annual rate of growth was 5.6 percent.

The manufacturing sector of the Kansas economy will outperform the rest of the state's economy. Kansas personal income in current dollars will grow 5.7 percent slightly above 1988's 5.3 percent, but after adjustment for inflation it will grow only 0.5 percent, somewhat less than its 1.1 percent growth rate of 1988. These are the main themes of the forecast produced this quarter at the Institute for Public Policy and Business Research at the University of Kansas.[2]

The National forecast is based on the following major assumptions:

1. The Federal Reserve will pursue a restrictive monetary policy, with M2 growing at 4 percent in 1989.

2. Real Federal government purchases of goods and services will decline slightly in 1989. There will be no major changes in taxes in 1989.

3. The dollar will continue to depreciate slightly, about 3 percent in 1989.

4. The real growth rate of the other OECD[3] countries will average 3 percent in 1989.

5. Imported oil prices will remain essentially unchanged in the coming year.

National Forecast

The national economy exhibited surprisingly strong growth in 1988 with the effects of the October 1987 stock market crash both milder and shorter lived than many economists expected. Based on actual data for the first three quarters and a forecast for the fourth quarter, we expect the 1988 growth rate of real GNP to be 3.8 percent. The national economy should cool down somewhat in 1989, however, with our forecast calling for a 2.3 percent rate of growth of real GNP in 1989.

The slow down in growth of the national economy will be brought about by a reduction in the rate of growth of several of the major components of aggregate demand. Consumption spending will grow 1.8 percent in 1989 compared to 2.7 percent in 1988. A major reason for the slowdown in the growth of consumption spending is a reduction in the level of spending on consumer durables. The demand for consumer durables will fall by 0.6 percent in 1989 after growing 4.3 percent during 1988. This weakening in spending on consumer durables can be traced to two areas. First, spending on new automobiles, dampened by a slowdown in the rate of growth of disposable personal income as well as higher interest rates, will fall 4.7 percent in 1989, as compared to a 5.1 percent increase in 1988. Second, spending on furnishings and household equipment will level off after growing at a robust 6.1 percent in 1988. Spending on durable goods in other categories will actually grow 1.6 percent in 1989, about one-third faster than the previous year.

Consumer spending on services will grow 2.8 percent in 1989, down slightly from its 1988 growth of 3.4 percent. An exception to the general trend of spending on services is spending on electricity and gas, which will grow 5.7 percent in 1989, up from its 4.1 percent growth in 1988.

Consumer spending on nondurable goods will grow 1.4 percent in 1989, as compared to 1.0 percent in 1988. The fastest growing components of nondurable goods will be spending on clothing and shoes , which will grow 2.9 percent in 1989 as compared to only 0.3 percent in 1988, and spending on gasoline and oil, which will increase 4.6 percent in 1989 after growing 1.4 percent in 1988. Spending on food will increase only 0.3 percent in 1989 after increasing 0.6 percent in 1988, while spending on fuel oil and coal will decrease 3.8 percent in 1989 after increasing 4.5 percent in 1988. Spending on other categories of nondurable goods will increase 1.9 percent in 1989 after growing 2.1 percent in the previous year.

A second major component of aggregate demand, investment spending, will also grow more modestly in 1989 than it did in 1988, but it will retain its position as one of the main forces for economic growth. Nonresidential fixed investment will grow 7.5 percent in 1989 as compared to 10.3 percent in 1988. Although the growth in nonresidential investment spending will be dampened somewhat due to higher interest rates in 1989, it will still remain strong due, in part at least, to continuing high capacity utilization rates. Investment in equipment will increase by 10.0 in 1989 percent, compared to 14.4 percent in 1988, whereas investment in non-residential structures will increase 0.3 percent in 1989 after declining 0.3 percent in 1988. Investment in residential structures is expected to increase 0.8 percent in 1989 after falling 2.2 percent in 1988.

A third major component of aggregate demand, net exports, will also contribute to economic growth in 1988. Real export demand, which grew 17.6 percent in 1988, will continue to exhibit strong growth in 1989, although at a slower 7.0 percent rate, driven by healthy economic growth in the other OECD countries as well as the slight decline in the value of the dollar. Spending on real imports will grow 4.8 percent in 1989, compared to 7.9 percent in 1988. This reduction in the rate of growth of spending on imports will come about mainly from reduced auto imports. Spending on auto imports will fall 14.6 percent in 1989 after falling 6.6 percent in 1988. Imports of oil and petroleum products will grow 4.2 percent in 1989 as compared to 9.4 percent in 1988. Spending on all other categories of imports will increase 6.3 percent in 1989 after growing 8.8 percent in 1988. The ability of the rate of growth of exports to continue to exceed the rate of growth of imports means that the deficit in net exports will shrink by a further $6.8 billion in 1989, following a 1988 decline of $31.3 billion.

The final major category of aggregate demand, government purchases of goods and services, will grow 1.7 percent in 1989 after remaining flat in 1988. Federal government purchases will decline 0.1 percent in 1989 after falling 3.3 percent in 1988. Federal defense purchases will decline 1.6 percent for the second straight year, while nondefense purchases will grow 4.8 percent after falling 8.7 percent in 1988. State and local government purchases will increase 3.0 percent in 1989 compared to 2.7 percent in 1988.

Interest rates will be higher in 1989 than they were in 1988, due to the Federal Reserve Board's adherence to a tight money policy. Not only will the average for typical interest rates be higher than it was in 1988, but rates will continue to increase throughout out the year, as a slight easing by the Fed as the year progresses will not be sufficient to completely eliminate the upward pressure on interest rates. The period of tightest money growth by the Fed will have been the fourth quarter of 1988, with M2 growth at only a 2.7 percent annual rate. During 1989, the growth rate of M2 will gradually increase, beginning with a 3.9 percent annual growth rate in the first quarter and ending with a 4.5 percent growth rate in the last quarter. Since the GNP deflator will be growing at from 4.7 to 5.3 percent annual rates during those quarters, the real money stock will be falling throughout 1989. The declining real money stock and growing real GNP will cause interest rates to rise throughout the year. The forecasted path of selected interest rates is shown in Figure 1.

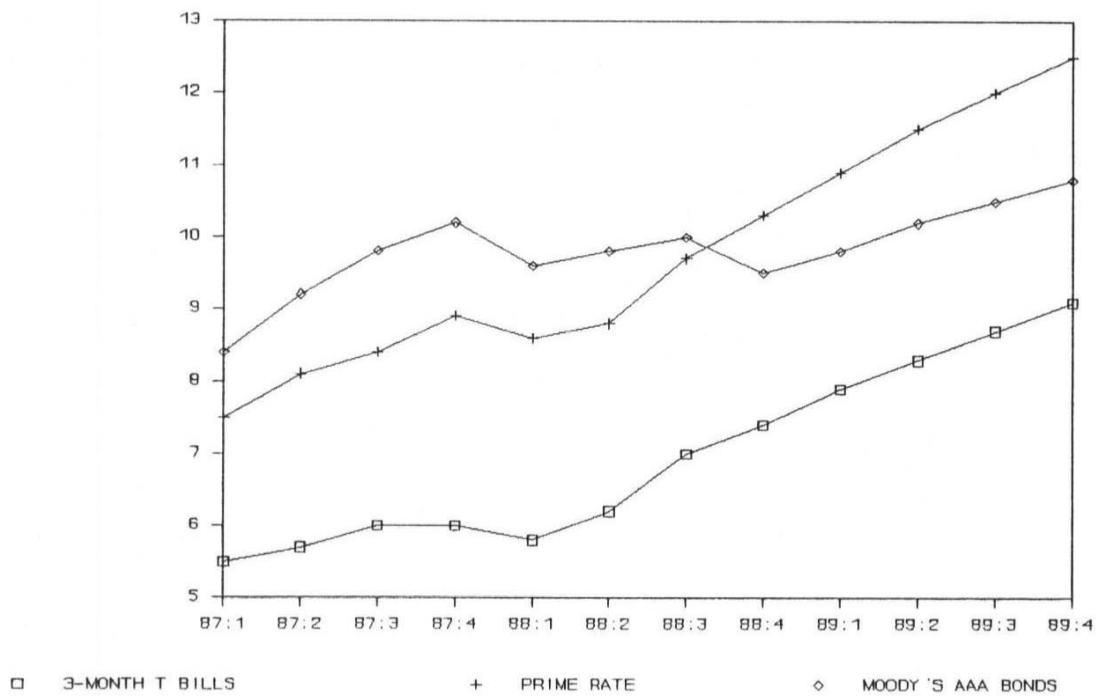

Figure 1 Forecasted Interest Rates

There will be a gradual decline in the unemployment rate in 1989 in spite of the slowdown in the rate of growth of the economy, as employment grows slightly faster than the labor force. Nonagricultural establishment employment will grow 2.9 percent in 1989 after growing 3.5 percent in 1988. The national unemployment rate will decline from 5.4 percent in 1988 to 4.9 percent in 1989. Tightness in the labor market coupled with some signs of growing inflation will cause wages to grow faster in 1989 than in the two previous years. The average hourly wage in private nonfarm employment will increase 5.8 percent in 1989 as compared to 4.9 percent in 1988 and 4.6 percent in 1987.

Increased inflationary pressures from the cost side will cause a modest increase in inflation in 1989. The inflation rate, as measured by the rate of change in the consumer price index, will be 5.2 percent in 1989 compared to 4.1 percent in 1988. With real GNP growing at a slightly lower rate than potential output is growing, there appears to be little demand side inflationary pressure. However, with wages going up faster in 1989 than in 1988, and productivity posting a 0.3 percent decrease in 1989 as compared to a 1.1 percent increase in 1988, there is increased cost side inflationary pressure for 1989. This is reflected in the forecast for increased inflation in 1989.

The largest consumer price increases in 1989 will be in food, medical care, and other goods and services. Food prices, in part because of the lingering effects of the drought, will increase 7.5 percent in 1989 following a more modest 4.4 percent increase in 1988. Medical care prices will increase 7.7 percent in 1989 after rising 6.7 percent in 1988. The 1989 increase is composed of a 9 percent increase in the prices of medical commodities and a 7.4 percent increase in the prices of medical services. Prices of other goods and services, which consists of personal care, personal and educational expenses, and tobacco and smoking products, will increase 7.5 percent in 1989 following a 6.9 percent increase in 1988.

Housing, apparel, transportation, and entertainment will show moderate price increases in 1989. Housing costs will increase 4.6 percent in 1989 following a 3.7 percent increase in 1988. The main increase in housing costs will come from a 5.4 percent increase in the cost of shelter, while costs of fuel and utilities and household furnishings and operations will increase 2.9 percent and 3.8 percent respectively. Transportation costs will increase 4.2 percent in 1989, following a 3.1 percent increase in 1988. Prices of entertainment will increase 4 percent in 1989 following a 4.3 percent increase in 1988. Apparel and upkeep prices will show a very modest 1.5 percent increase in 1989, after increasing 3.7 percent in 1988.

Personal income in current dollars will grow 8.1 percent in 1989, following a 7.3 percent increase in 1988. These figures may be misleading, however, since much of the increase is due to price increases. In real terms personal income will increase 2.8 percent in 1989 as compared to 3 percent in 1988. Real disposable personal income will grow substantially more slowly in 1989 (2.3 percent rate of growth) than it did in 1988 (3.5 percent rate of growth) due to a 5.4 percent increase in real personal tax and non-tax payments. This increase in tax and non-tax payments comes about through a 3.0 percent increase in real taxable income and a 0.5 percentage point increase in the average federal personal tax rate. The 2.3 percent growth in real disposable income coupled with the 1.8 percent increase in real consumption expenditure leads to a slight increase in the personal saving rate, from 4.0 percent in 1988 to 4.5 percent in 1989. Figure 2 shows the pattern of the growth of personal income since 1980.

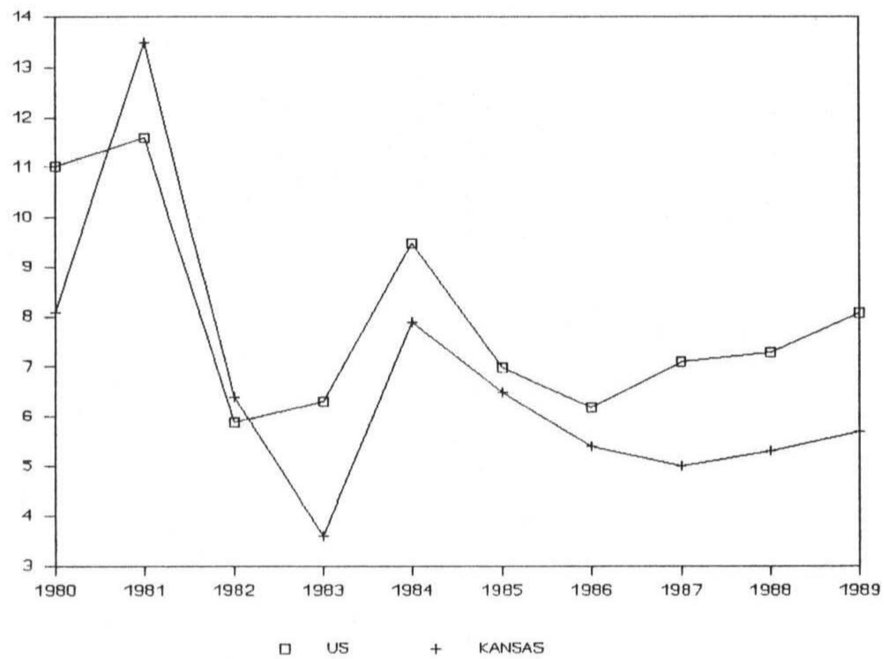

Figure 2 U.S. and Kansas
Personal Income Growth
(Current Dollars)

Kansas Forecast

The Kansas economy, like the national economy, will continue to grow in 1989, although at a slower rate than in 1988. Furthermore, as Figures 2 and 3 illustrate, Kansas will grow more slowly than the U.S., as it has in recent years. Nonfarm wage and salary employment will grow 1.1 percent in 1989, down somewhat from its 1988 1.8 percent growth rate. Total Kansas civilian employment will grow 0.9 percent in 1989, also down from its 1988 1.4 percent rate of growth. A slowdown in the rate of growth of the labor force, from 1.2 percent

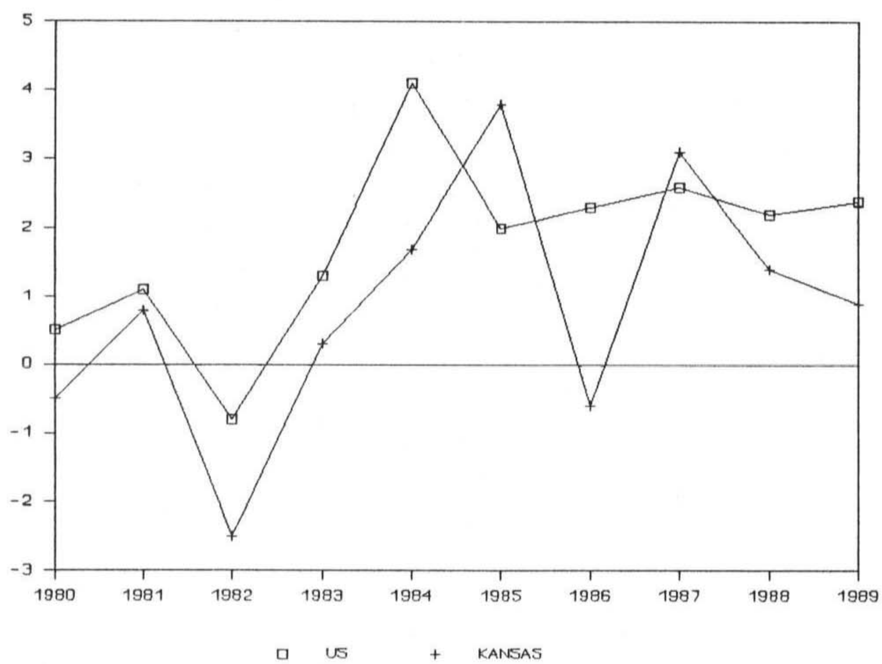

Figure 3 U.S. and Kansas
Forecasted Employment Growth

in 1988 to 1.0 percent in 1989, will keep the employment rate from increasing appreciably. The unemployment rate for 1989 will be 4.7 percent, little changed from 1988's 4.6 percent. Figure 4 contrasts the forecasts for the Kansas and U.S. unemployment rates.

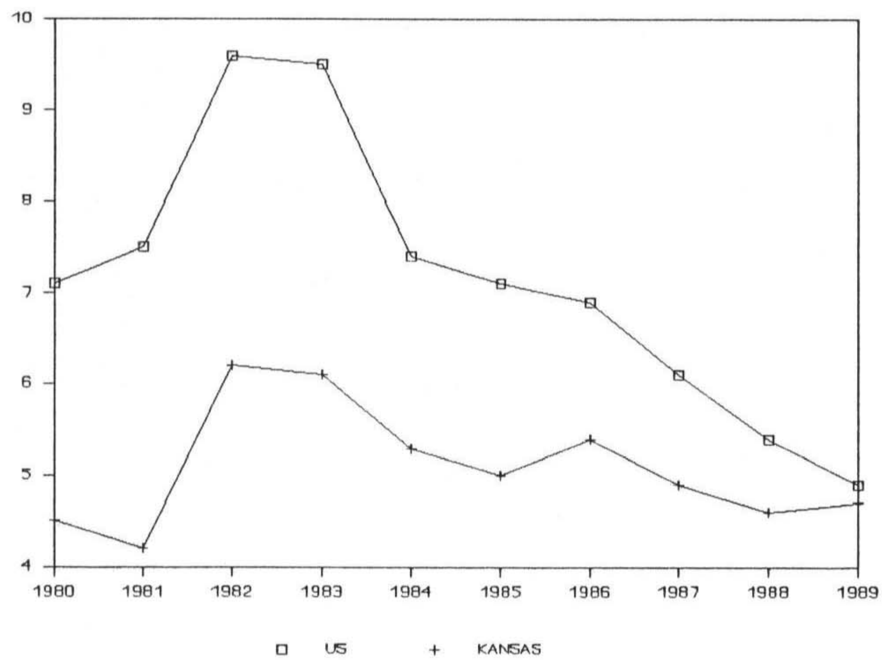

Figure 4 U.S. and Kansas
Forecasted Unemployment Rates

Table III, below, summarizes Kansas employment growth forecasts by sector. Employment growth in the manufacturing sector will outperform employment growth in the rest of the Kansas economy, growing 2.0 percent in 1989, down somewhat from its healthy 2.8 percent growth rate of 1988. Reflecting the national consumption trends, Kansas employment in nondurable goods production will be

Table III Kansas Employment Forecasts by Sector

	1985	1986	1987	1988	1989
Mining	16.7	12.2	11.5	11.5	11.0
Growth Rate	-6.7	-26.8	-6.3	0.1	-4.1
Construction	42.3	43.9	44.4	42.1	42.6
Growth Rate	-2.9	3.7	1.3	-5.4	1.4
Durable Goods	102.1	102.6	102.4	106.7	108.8
Growth rate	-3.0	0.5	-0.2	4.2	2.0
Nondurable Goods	72.3	73.1	73.5	74.1	75.7
Growth Rate	1.6	1.1	0.6	0.8	2.1
Transportation & Public Utilities	63.9	62.7	61.4	61.0	60.9
Growth Rate	-0.3	-1.9	-1.9	-0.8	0.0
Wholesale Trade	67.2	67.1	68.0	69.9	70.2
Growth Rate	0.0	-0.1	1.3	2.7	0.5
Retail Trade	176.0	180.6	183.4	186.9	187.7
Growth Rate	2.2	2.6	1.5	1.9	0.4
F.I.R.E.	52.8	54.7	56.4	57.0	57.5
Growth Rate	2.9	3.5	3.1	1.2	0.8
Services	185.8	193.7	200.8	207.9	212.3
Growth Rate	1.7	4.3	3.6	3.5	2.2
Federal Gov't.	27.1	27.7	27.3	26.5	26.7
Growth Rate	3.2	2.2	-1.6	-2.9	0.9
State & Local Government	161.6	166.4	170.5	173.9	175.5
Growth Rate	1.7	3.0	2.5	2.0	0.9

stronger in 1989, growing 2.1 percent compared to a rather weak 0.8 percent in 1988, while Kansas employment in durable goods will grow 2.0 percent in 1989, down significantly from its 4.2 percent 1988 growth rate.

Among the nondurable goods producing sectors, printing and publishing will exhibit the strongest performance, with employment in that sector growing 5.2 percent in 1989, rebounding from no growth in 1988. Employment in food and kindred products will grow only 0.8 percent, while employment in chemicals and allied products will decline 0.1 percent. Employment in apparel and petroleum and coal products will decline significantly, falling 2.4 percent and 4.7 percent respectively. Employment in all other nondurable goods manufacturing, about one sixth of the total, will grow a healthy 4.8 percent.

Among the durable goods producing sectors, primary metals and stone glass and clay will stand out. Employment in stone glass and clay will make a strong comeback, growing 4.6 percent after declining by 3.6 percent in 1988. Primary metals employment is forecasted to perform even better, growing 9.9 percent. Also exhibiting strong 1989 growth will be fabricated metals and machinery, including electrical. Fabricated metals employment will grow 2.8 percent and employment in machinery, including electrical, will grow 2.9 percent. Employment growth in transportation equipment, which makes up over two-fifths of the durable goods manufacturing total, will grow only 0.8 percent in 1989, well down from its 3.6 percent growth in 1988.

Among the nonmanufacturing sectors, only employment in services is expected to exhibit above average growth at 2.2 percent, and even so this growth rate is down significantly from the 3.5 percent employment growth posted by this sector in 1988. Employment in finance, insurance, and real estate will grow only 0.8 percent, slightly less than in 1988, with employment in banking and insurance actually declining. Employment in wholesale trade will grow 0.5 percent, down from 1988's 2.7 percent. Employment in retail trade will grow 0.4 percent, down from 1.9 percent in 1988, with employment in general merchandise stores, auto dealers and gas stations, and apparel and accessory stores declining slightly, and employment in food stores and other retail trade sectors increasing 1.5 percent.

Employment in transportation and public utilities will level off in 1989 after falling 0.8 percent in 1989, with employment in railroads continuing to fall, and employment in trucking and warehousing exhibiting modest growth. Employment in mining, which is mostly oil and gas extraction in Kansas, will fall 4.1 percent after remaining flat in 1988. Construction employment will partly rebound, growing 1.4 percent following a 5.4 percent decrease in 1988. Both federal and state and local government employment in Kansas will increase 0.9 percent in 1989, compared to a 2.9 percent drop in federal government employment and a 2.0 percent increase in state and local government employment in 1988.

Kansas personal income in current dollars will grow 5.7 percent in 1989, compared to 5.3 percent in 1988. After adjusting for inflation[4], however, Kansas personal income will grow only 0.5 percent, compared to 1.1 percent in 1988. Kansas wages and salaries in current dollars will grow 5.3 percent, about the same as in 1988. Dividends, interest and rents will grow 8.9 percent in 1989 compared to 7.3 percent in 1988, in part reflecting 1989's higher interest rates. Nonfarm proprietor's income will grow 7.0 percent, transfer payments will grow 6.4 percent and other labor income will grow 6.0 percent. However farm proprietor's income, due mainly to the lingering effects of the drought, is expected to fall 4.1 percent.

FOOTNOTES

[1]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, United Kingdom, and the United States.

[2]The forecasts of the national economy are produced by the Econometric Model of the United States using assumptions generated at the Institute. This model was developed at the Center for Econometric Model Research at the University of Indiana, R. Jeffery Green and Morton J. Marcus, Directors. The Kansas forecasts are produced by the Kansas Econometric Model, which is a product of the Institute.

[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, United Kingdom, and the United States.

[4]Since there is not price deflator for Kansas, we use the Personal Consumption Deflator for the U.S. to deflate Kansas income.

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APPENDIX

GNP AS EXPENDITURE - 1982 DOLLARS

	1988Q1	1988Q2	1988Q3	1988Q4	1989Q1	1989Q2	1989Q3	1989Q4	1988	1989
US: Gross National Product	3956.1	3985.2	4010.9	4022.4	4055.5	4078.9	4098.7	4113.5	3993.7	4086.6
Percent Change From Last Qtr (AR)	3.4	3.0	2.6	1.2	3.3	2.3	2.0	1.5	3.8	2.3
US: Personal Consumption Expend.	2559.8	2579.0	2604.5	2610.2	2623.3	2631.9	2640.0	2645.1	2588.4	2635.1
Percent Change From Last Qtr (AR)	4.5	3.0	4.0	0.9	2.0	1.3	1.2	0.8	2.7	1.8
US: Per. Con. Exp.-Durables	401.1	410.6	409.5	409.8	409.3	407.1	404.4	401.1	407.8	405.5
Percent Change From Last Qtr (AR)	14.7	9.7	-1.0	0.3	-0.5	-2.1	-2.6	-3.3	4.3	-0.6
US: PCE-Nondurables	892.7	893.6	905.5	905.6	908.7	910.9	913.2	914.8	899.3	911.9
Percent Change From Last Qtr (AR)	1.0	0.4	5.4	0.0	1.4	0.9	1.0	0.7	1.0	1.4
US: PCE-Services	1265.9	1274.8	1289.5	1294.8	1305.3	1313.9	1322.4	1329.2	1281.3	1317.7
Percent Change From Last Qtr (AR)	4.0	2.8	4.7	1.7	3.3	2.6	2.6	2.1	3.4	2.8
US: Fixed Nonresidential Invest.	473.4	490.2	496.0	504.5	516.2	524.2	532.1	538.9	491.0	527.8
Percent Change From Last Qtr (AR)	7.6	15.0	4.8	7.0	9.7	6.3	6.2	5.2	10.3	7.5
US: Producers Durable Equipment	349.4	365.1	370.0	378.7	390.6	398.5	406.4	413.3	365.8	402.2
Percent Change From Last Qtr (AR)	21.6	19.3	5.5	9.7	13.2	8.3	8.2	6.9	14.4	10.0
US: Investment in Structures	124.0	125.0	126.0	125.8	125.6	125.6	125.6	125.6	125.2	125.6
Percent Change From Last Qtr (AR)	-22.4	3.5	3.1	-0.7	-0.6	0.1	-0.1	-0.2	-0.3	0.3
US: Residential Investment	189.5	189.6	191.1	193.1	194.0	193.3	191.7	190.1	190.8	192.3
Percent Change From Last Qtr (AR)	-6.5	0.2	3.2	4.3	2.0	-1.6	-3.3	-3.2	-2.2	0.8

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.

	1988Q1	1988Q2	1988Q3	1988Q4	1989Q1	1989Q2	1989Q3	1989Q4	1988	1989
US: Change in Bus. Inventories	65.9	35.3	36.7	22.3	24.0	27.6	30.5	30.7	40.1	28.2
US: Change in Farm Inventories	14.1	5.3	-0.3	-5.0	0.0	0.0	0.0	0.0	3.5	0.0
US: Change in Nonfarm Inv.	51.9	30.1	36.7	27.3	24.0	27.6	30.5	30.7	36.5	28.2
US: Net Exports	-109.0	-92.6	-95.2	-93.4	-91.6	-90.5	-91.0	-90.0	-97.6	-90.8
US: Total Exports	486.2	496.9	510.7	518.5	527.1	534.9	542.2	549.4	503.1	538.4
Percent Change From Last Qtr (AR)	25.7	9.1	11.6	6.3	6.8	6.1	5.6	5.4	17.6	7.0
US: Total Imports	595.1	589.5	605.9	611.9	618.7	625.4	633.2	639.4	600.6	629.2
Percent Change From Last Qtr (AR)	6.9	-3.7	11.6	4.0	4.5	4.4	5.1	4.0	7.9	4.8
US: Total Government Purchases	776.4	783.8	777.8	785.7	789.5	792.5	795.6	798.7	780.9	794.1
Percent Change From Last Qtr (AR)	-7.9	3.9	-3.0	4.1	1.9	1.5	1.6	1.6	0.1	1.7
US: Fed. Govt. Purchases	327.8	331.6	323.7	328.0	328.2	327.6	327.1	326.7	327.8	327.4
Percent Change From Last Qtr (AR)	-21.0	4.7	-9.2	5.4	0.2	-0.7	-0.6	-0.5	-3.3	-0.1
US: Fed. Defense Purchases	264.6	263.6	256.7	258.0	258.0	257.0	256.0	255.0	260.7	256.5
Percent Change From Last Qtr (AR)	-5.3	-1.5	-10.1	2.0	0.0	-1.5	-1.5	-1.6	-1.6	-1.6
US: Fed. Nondefense Purchases	63.2	67.9	69.4	70.0	70.2	70.6	71.1	71.7	67.6	70.9
Percent Change From Last Qtr (AR)	-60.1	33.2	9.1	3.5	1.1	2.3	2.9	3.4	-8.7	4.8
US: State and Local Govt. Purch.	448.7	452.2	454.1	457.7	461.3	464.9	468.5	472.0	453.2	466.7
Percent Change From Last Qtr (AR)	3.5	3.2	1.7	3.2	3.2	3.1	3.1	3.1	2.7	3.0

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.