Economic Report To The Governor

1991
STATE OF UTAH
NORMAN H. BANGERTER, GOVERNOR

ECONOMIC REPORT TO THE GOVERNOR

1991

STATE OF UTAH

NORMAN H. BANGERTER, GOVERNOR

State Economic Coordinating Committee

Utah Office of Planning and Budget
Utah Department of Employment Security
Utah Department of Community and Economic Development
Utah State Tax Commission
Utah Energy Office
University of Utah, Bureau of Economic and Business Research
First Security Bank Corporation

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PREFACE

This report describes Utah's economic performance over the past year, points out some significant trends, and provides an outlook for the short and long term. Additionally, the report describes, in some detail, the changes and trends in employment, retail sales, construction, wages, and personal income in Utah. It also includes information on Utah's population growth and demographic trends. Considerable national economic information including GNP, interest rates, and prices are also included.

This 1991 Economic Report to the Governor is the fifth of an annual series. It represents a joint effort between several state agencies, representatives of which comprise the State Economic Coordinating Committee. This committee was formed in 1986 by request of the Governor. The principal purpose of the committee is to promote better economic data and analysis of economic issues through interagency cooperation. Another purpose is to develop an economic outlook to assist in generating revenue estimates. The committee is comprised of the following agencies:

Utah Office of Planning and Budget
Utah Department of Employment Security
Utah Department of Community and Economic Development
Utah State Tax Commission
Utah Energy Office
University of Utah, Bureau of Economic and Business Research
Weber State College, Department of Economics
First Security Bank Corporation
Key Bank of Utah
Utah Foundation

This report contains the most recent data available as of December 15. However, all of the data for many of the categories for 1990 have not been finalized. Therefore, annual totals and annual averages have been estimated for the current year based on all actual data which have been collected to date. These data are referred to in the report as preliminary estimates. Revisions to these data items will be made later in 1991 once all final data have been collected and processed.

Much of the information described in this report is found in other state publications. This report is an effort to summarize and interpret much of that economic and demographic information in a single document. Other regular publications from the state agencies involved in the report, where more detailed information can be found, are listed in the appendix.

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NORMAN H. BANGERTER
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STATE OF UTAH

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January 23, 1991

My Fellow Utahns:

I am again pleased to present the fifth annual Economic Report to the Governor for 1991. The report is produced by the Economic Coordinating Committee which I created in 1986. It consists of the following state agencies: Office of Planning and Budget; Department of Employment Security; Department of Community and Economic Development; Tax Commission; Energy Office and the University of Utah Bureau of Economic and Business Research.

The report covers the trends in employment, wages, personal income, energy prices, tax revenues, population and demographics. As in the past, it also includes an "Outlook" section for the nation, region and state. The "Special Studies" section includes three topics: The Forces of Growth in the 1970s and 1980s and the Elements of Growth in the 1990s, Persian Gulf Crisis and Impacts on Utah Petroleum Markets, and Utah's Defense Economy Now and Tomorrow. Each of these issues has particular bearing for Utahns today.

Most exciting is that the report details Utah's excellent economic performance during 1990. Utah's employment growth was one of the best in the nation and our unemployment rate one of the lowest. The state's personal income grew faster than the nation as did our population. However, Utah is very affected much by national and international events which can change overnight. That is why the report is important to read. It provides information that can help business and political leaders and all citizens make decisions about the future.

Sincerely,

Norman H. Bangerter

Norman H. Bangerter
Governor

NHB:mec

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Utah has received impressive national recognition during the last two years indicating the quality of life we enjoy here and the great opportunities that lie ahead. In June 1989, Utah was selected to be the nation's bid city for the 1998 Winter Olympic Games. U.S. News and World Report, in its November 13, 1989 issue, cited Salt Lake City as one of America's "Boom Town's." The article noted that much has changed in the state and that Salt Lake City's future is very bright. Fortune magazine, in its October 23, 1989 issue, praised Utah for its highly educated work force and encouraged companies to look to Utah for expansion.

The recognition continued into 1990. The April 17 issue of Financial World asked the question, "Which states are well run?" In evaluating all fifty states, this financial journal concluded that Utah ranked second in the quality of management in the "statehouse." The article cited the state's adherence to professional standards in financial accounting procedures, keeping expenditures in line with revenues, the state's rainy day fund, its AAA bond rating, and short term debt as examples of sound management procedures. Then, in its October 22 issue, Fortune magazine's feature article was entitled, "The Best Cities for Business." This major business journal cited Salt Lake City as the best city in the nation for business. Fortune states, "The ideal labor market stands out in three ways: It has plenty of workers, they possess advanced skills and a strong work ethic, and local governments put forth gung-ho efforts to help corporate newcomers find and train the people they need. Salt Lake City gets an A+ in all three categories." Certainly Utah can take pride in these numerous compliments. We should also be pleased with the outstanding performance of its economy in the last two years and in the excellent opportunities that lie ahead.

Nineteen ninety also brought good news for new businesses locating in Utah including Discover Card (1200 jobs, Salt Lake County) and Sears Discover Card Services (700 jobs, Davis County). There were also announcements during the year for expansions of existing operations. Among the most notable were McDonnell Douglas and Abbott Laboratories.

There are, however, dark clouds on the national economic horizon that could eventually affect Utah. Problems in the real estate sector, in particular, are creating a downward credit spiral. There are oil price increases and supply uncertainties. Also, despite the painful process of negotiations on the federal budget, the deficit is still too large and will add another trillion dollars to the national debt by the middle of the decade. In the face of all these uncertainties and deteriorating conditions it is important to continue to take steps to strengthen our economy and our ability to compete in the global marketplace. Most economists are projecting a mild recession next year for the nation with little to no employment growth. However, by 1992 the recession should be over and national employment should grow modestly, at about 1.4 percent.

In Utah things should be better. Utah experienced a significant downsizing in 1986-87 in two major industries -- mining and construction. It is not likely that these two cyclical industries will be reduced much further by a national recession. During this downturn, Utah's economy underwent a significant restructuring and is now better positioned for continued growth during the coming years. Employment growth will slow down from its current high rates but still exceed the growth rate of the nation. In 1991, employment should increase by about 3 percent and accelerate to about 4 percent in 1992. In other words, we still expect Utah to do much better than the nation for the next two years.

This year's report includes an analysis of most of the important indicators with which the health of the Utah economy can be measured. This report also continues the "Special Chapters" section. This year, the section will include a chapter on "Utah's Defense Industry Now and Tomorrow", a chapter on "The Forces of Growth in the 1970s and 1980s and the Elements of Growth in the 1990s", and a chapter entitled "The Persian Gulf Crisis and Impacts on Utah Petroleum Markets".

The following paragraphs summarize the major sections of this report. For a more detailed look at each of the sections, the reader is referred to the complete text. For a quick overview of some of the major economic indicators, readers are referred to page 13.

Labor Market Activity

Utah's labor market ended the eighties with one of the best economic years of the decade. This healthy growth continued strong in 1990. During 1989, nonfarm jobs grew 4.7 percent. When final data are available, 1990 should show almost the same growth. Utah's unemployment rate in 1989 registered 4.6 percent. The unemployment rate for 1990 is expected to register slightly lower--4.5 percent. During 1990, Utah's unemployment rate averaged about a percentage point lower than the national figure.

While the national economy languished, Utah held firm. All Utah's major industrial sectors experienced growth, and Utah ranked consistently in the top ten job producing states (in percentage terms). During 1990, Utah added between 31,000 and 32,000 new jobs. In addition, Utah's manufacturing sector registered a moderate 3 percent growth rate, while nationally, manufacturing employment declined. The service industry was again the leader in new jobs with over 13,000, exceeding 40 percent of all new jobs.

Wages

Strong expansion in wages proved to be another indicator of Utah's economic health in 1990. Final 1990 figures are expected to show 8 percent growth in total nonfarm wages--up slightly from the 7 percent growth in 1989. Utah's average monthly wage is expected to exceed $1,600--a 3 percent increase over 1989. Unfortunately, when adjusted for inflation, Utah's average monthly wage actually declined slightly. In addition, growth in wages for Utahns has not kept pace with national wage increases. Utah annual pay as a percentage of U.S. annual pay has declined from a high of 96 percent in 1981 to a low of less than 85 percent in 1989.

The loss of high paying goods-producing jobs in the early and mid-80s contributed to this decline. However, Utah's demographics may also play a part. Utah has a large percentage of young people in the labor market. Young people are usually paid less than older workers. Utah has a higher percentage of individuals working part-time than the national average--another factor which tends to pull down the mean wage.

Personal Income

Utah's 1990 total personal income (TPI) is forecast to be $24.0 billion, up 7.5 percent from the 1989 total. Utah's TPI increased more rapidly than that of the United States through the 1970s. From 1980 through 1984, the yearly rates of growth were nearly identical. Utah's economic slump from 1985 to 1988 retarded its TPI growth while the national growth rate continued its steady progress. The relative strength of Utah's present economic expansion is clearly reflected in the 1989 and 1990 TPI growth comparisons. Utah's 1989 TPI growth was slightly faster (8.0 to 7.6) than that of the U.S. In 1990, the U.S. increase fell to 5.9, while Utah's slipped only slightly to 7.5 percent.

The industrial composition of Utah's TPI has changed in recent years. In 1980, prior to the recession periods, goods-producing industries (mining, construction, manufacturing) generated over 31 percent of Utah's earnings. By 1990 that share had dropped to 23.9 percent. In 1980, service-producing industries paid 67 percent of total earnings. By 1990 this statistic had increased to nearly 75 percent. These comparisons reflect the continuing historical shift from goods- to service-producing jobs in the State's economy. Similar shifts are occurring nationally.

Utah's 1989 per capita personal income of $13,079 ranked 46th among the fifty states. The 1988 ranking pegged Utah at 47th. During the 1970s, Utah's PCI ranged between 81 and 83 percent of the United States PCI. However, from 1978 to 1988 this parameter dropped nine percentage points--from 83 to 74 percent. But 1989 and 1990 both saw improvements in this comparison--the 1990 figure stands at 74.8 percent.

Demographic Characteristics

Utah's official census count as of April 1, 1990 shows a population of 1,727,784. This indicates that during the decade of the 1980s the average annual growth rate of 1.7 percent was substantially lower than the

1970s annual rate of 3.3 percent. Utah had a natural increase of 292,000 and net out-migration of 25,000 during the decade. Despite this slowdown Utah was still the tenth fastest growing state in the nation during the 1980s. In general, the fastest growing states were those in the south and along the west coast.

Over the decade of the 1980s, Utah retained its unique place among states in the nation--its population is still the youngest. The following statistics exemplify this fact: Utah has the highest number of preschoolers and school-aged children to persons of working age in the nation; as a percentage of the total population, Utah's population aged 18-64 is ranked last; and Utah has the highest total fertility rate in the nation. Therefore, Utah's population continued to increase in spite of net out-migration during the 1980s.

As of July 1, 1990, Utah's population was estimated to be 1,734,000 an increase of 1.5 percent over the previous year. This is the fastest annual rate of population growth since 1984. The improved economy of the last two years in Utah has substantially reduced the state's out-migration. During Utah's recession of 1986-1987, there was out-migration of over 11,000 annually over a two year period. But as the economy picked up the number fell to about 6,600 in 1989. In 1990 the out-migration is estimated to have dropped to approximately 1,600. In 1991 it is projected to virtually end with an estimated out-migration of only 800. Another reason for slightly higher population growth during the last year is the stabilization of fertility rates which were declining during the period 1979-1986.

Gross Taxable Sales

The eleven quarter expansion in gross taxable sales, which began in the first quarter of 1988, may culminate in the final quarter of 1990, as gross taxable sales are expected to slow somewhat over the first three quarters of 1991. Following a three quarter growth-pause beginning in the first quarter of 1991, taxable sales in Utah should climb back up to the current 7 percent growth rates.

Retail trade, which constitutes about 58 percent of taxable sales, receded from double-digit growth rates achieved between the first quarter of 1989 and the first quarter of 1990 to a 5 to 6.6 percent growth rate in the second quarter of 1990. While second half of 1990 is expected to see 6 to 8 percent growth rates, a slow down of Utah's job growth in early 1991, increasing inflation and souring consumer attitudes will combine to discourage durable goods sales during the first three quarters of 1991. Rising prices and unemployment tend to drag down consumer confidence, as witnessed by the 20 point drop in Utah's Index of Consumer Sentiment and the 25 point drop in the U.S. Index of Consumer Sentiment in the October 1990 survey.

Taxable business investment and utility sales, which rose 3 percent in the first half of 1990, are expected to make an almost 5 percent gain in 1991 and then slow to a 3 percent growth rate in the first half of 1992. Taxable services, including repairs and leases of tangible property, as well as hotel, amusement and certain recreation sales, is projected to increase 10 percent in 1991, following a rather lackluster 4 percent growth path in 1990.

Construction Activity

Construction activity enjoyed an upswing in 1990 with the total value of permit authorized construction estimated at $1.2 billion, an increase of 24.9 percent over 1989. Residential construction, which began improving in the second half of 1989, continued to gain strength during 1990. The 6,800 dwelling units (single and multi-family) authorized in 1990 were 20.7 percent above last year's totals. With this increased activity, the value of residential construction rose 27.3 percent to $570 million. Throughout the latter part of the 1980s, Utah's construction industry suffered from slow economic growth, out-migration, an over-supply of moderate to low-priced structures, high vacancy rates and high mortgage interest rates. Residential construction activity expanded in 1990 as economic growth increased, out-migration rates slowed, vacancy rates declined and mortgage interest rates lowered and stabilized.

The factors that helped boost the construction of residential units in 1990 should persist into 1991. Even with the possibility of a national recession and the crisis in the Persian Gulf, residential construction in Utah will improve to 7,500 units in 1991 due to an improved economic climate, slower out-migration, new job creation and stable to declining mortgage interest rates. Of these new units, 6,700 are projected to be in single-family homes and 800 in multi-family structures.

Nonresidential construction activity also increased in 1990. The value of nonresidential construction was $430 million, an increase of 10.4 percent over 1989. The nonresidential sector benefitted greatly from the construction of the new $42 million Sports Arena in Salt Lake City. Improved economic conditions also increased demand for nonresidential construction. Even with the improvement in 1990, there appears to be some frailty in the market for nonresidential structures. It is projected that nonresidential construction in 1991 will reflect this susceptibility by decreasing to $400 million. The construction related to the Olympic sports facilities will be an important contributor to nonresidential construction in 1991.

Falling office vacancy rates in 1989 encouraged the construction of new office buildings. With these new structures, the demand for new office space decreased in 1990, but in 1991 it should stabilize because of low vacancy rates. The vacancy rate for 1990 was about 17.5 percent for Class A office space in the metropolitan area. Declines in office construction were offset by increased demand for industrial and retail space and by greater activity in the public sector. Industrial space vacancy rates are at 7 percent for 1990.

Prices and Inflation

Price increases remained a national concern in 1990. Inflation, as measured by the Consumer Price Index, accelerated in the first quarter to year-over gains of 5.3 percent. Price pressures eased in the second quarter as the annual increase averaged 4.6 percent. In early August, Iraq invaded Kuwait, and over the next two months, crude oil prices doubled, rising from $20 to $40 per barrel. Gasoline prices jumped accordingly, and in October the U.S. CPI, at 133.5, was 6.3 percent above the prior year. Oil prices in November, however, had dropped below $30 per barrel since world oil supplies had been restored and direct military confrontation had not yet developed.

Despite accelerated cost increases throughout much of 1990, it is not likely that the current jump in oil prices will contribute to an ongoing inflation problem such as occurred in 1979. Over the past two years, growth in the nation's money supply has been modest by historic standards. Furthermore, with a weakening national economy and intense international competition, higher costs will not easily be passed on in higher prices. Many asset categories, including real estate and stocks, have fallen in value, which is not conducive to an ongoing inflationary environment.

The American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index is prepared quarterly and includes comparative data for approximately 270 urban areas. This index includes price comparisons for a single point in time, but it does not measure inflation of price changes over time. What it does measure are the differences between areas in the cost of consumer goods and services, as compared with a national average of 100. The second-quarter 1990 composite index for Salt Lake City was 92.0, or 8 percent below the national average for the quarter. Last year the index was 95.6 for the same quarter and 98.3 for 1988. Other Utah cities included in the second-quarter survey were Cedar City, 88.6; Provo-Orem, 89.6; and St. George, 91.6.

Energy and Mineral Production and Prices

This past year has been characterized by unstable world oil markets, largely determined by OPEC production and political events in the Persian Gulf. The strong influence of these factors continued to manifest themselves in the form of volatile prices in 1990. Crude oil production is projected to fall for the fifth consecutive year in Utah, down two percent from 1989's 28.4 million barrels.

The value of coal production will surpass the half-billion dollar mark in 1990 and will set an all time high. In addition, Utah continues to record the highest labor productivity of any underground coal mining state in the nation. During 1989, Utah coal production reached a record high of 20.5 million tons, with productivity of over 35 tons per man-day. In 1990, Utah will reach yet another all-time high of 21.5 million tons of production with productivity of over 38 tons per man-day.

Utah's non-fuel mineral production approached another all time high of $1.3 billion in 1989. This was 28 percent higher than the value reached in 1988 and will be about five percent lower than the estimated value of 1990. Copper production by Kennecott Corporation reached a new high in 1989. The value of the copper accounted for more than half of the value of all the metals produced from all Utah mines. During 1990, both production and the unit price of copper will be lower than 1990. Utah is now the third largest copper and gold producing state in the United States.

Tax Collections

Utah's healthy economy in fiscal year 1990 significantly impacted tax collections. Overall sales taxes increased by 6.2 percent over fiscal year 1989 while income taxes increased by 3.6 percent and corporate franchise taxes rose by 7.2 percent.

The strength in tax collections in fiscal year 1989 prompted another special session of the Legislature in September 1989 to reduce the income tax an additional 5.7 percent. The state's unrestricted general fund sales tax rate was reduced by 2.15 percent, from 5.09375 percent to 4.984375 percent, as of January 1, 1990. The total state sales tax rate dropped to 5.0 percent; but, 1/64ths of this was designated to fund the Olympic sports facilities.

Fiscal year 1991 is expected to be another year of solid economic growth. The growth in tax collections should diminish slightly, however, for the following reasons: declining business and consumer confidence; sales tax cuts; new severance tax credits; federal deficit-reduction tax increases; slower growth in taxable investment spending; lower investment income from declining interest rates; shrinking corporate profits; federal administrative charges against mineral lease monies; and conservation due to higher motor fuel prices.

Regional Comparisons

Comparisons of economic performance have been made with other states of the Rocky Mountain Division. The Mountain Division (as defined by the Bureau of the Census) includes the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. The past five years (1984 to 1989) have presented the states of the mountain region with conditions that required a significant amount of economic restructuring. This energy rich region has suffered from the drop in energy prices. In addition, the agricultural sector was depressed. Agriculture and energy are major elements in the economy, as are other natural resource based industries such as timber and metal mining.

By 1989, the economic fortunes of the mountain west had improved. However, there continues to be some residual problems, particularly in Wyoming. Strong growth in service industries, and rebounding agriculture, mining and construction, have enabled the economies of Idaho, Utah, and Colorado to climb out of their mid-decade slumps to display strong economic growth during 1989 and 1990. Nevada's economy has led all 50 states in job creation over the past four years and has yet to show any significant signs of weakness. The Arizona economy has slowed from its high flying days in 1984 and 1985, but continues to grow well above the current national rate.

Utah's economy during the eighties has performed better than most of its neighboring states. Of the eight mountain states, Utah ranks third in nonagricultural jobs created and third in personal income growth and population growth from 1984-1989. During the period August 1989 to August 1990, Utah ranked second in the

region in new job growth. Again, Nevada led the region. Utah also had the lowest unemployment rate in the region during 1989.

The national economy appears to be in recession as 1991 begins. Many economists are projecting a mild and short recession. Economic growth in the eight mountain states is slowing as a result of the national recession. Yet this region is expected to sustain relatively healthy growth in jobs and income during 1991. The "regional recession" in 1986-87 resulted in substantial restructuring and downsizing of major cyclical industries - agriculture, mining and construction. Therefore the mountain states are well positioned for continued growth during 1991.

National Outlook

Surveys indicate that most economists believe the national economy entered into a recession in the fourth quarter of 1990. It will be second quarter 1991, however, before the final Department of Commerce data confirms this prediction. The expansion, had it lasted, would have covered 8 years as of November.

Factors contributing to the current economic downturn include increased oil prices, increased debt levels, declining asset values, and stricter lending standards. Oil prices increased from $20 per barrel on August 1st (the day before the invasion of Kuwait by Iraq) to a high of over $40 per barrel on October 11th. During most of November oil traded in the $30 to $35 range. The jump in oil prices fueled inflationary expectations and produced higher long-term interest rates.

The consensus national outlook is for a mild and short-lived recession. This optimistic outlook assumes that a successful resolution will be achieved in the Mideast, that protectionism and global trade wars will not erupt if international trade negotiations are disbanded, and that real estate values will not collapse nationwide.

Utah Outlook

The economic outlook for Utah in 1991 is for moderate growth. Population growth should hold steady at 1.5 percent. Nonagricultural employment is expected to moderate to around 3.0 percent, an increase of about 22,000 jobs. The average wage is expected to increase by 3.6 percent, total nonagricultural wages should increase by about 6.7 percent, and personal income is expected to increase by 7.0 percent in 1991. These growth rates indicate that Utah should avoid a local recession if the national recession is brief and mild. As mentioned earlier Fortune magazine picked Salt Lake City to head its list of top 10 business locations because of its availability of plentiful, high-quality and low-cost labor. Utah has the highest adult literacy rate in the nation. Inexpensive housing, and a youthful and educated workforce should continue to provide a valuable resource for business expansion.

Telecommunications, computer and related software services, and bio-medical technologies should continue to prosper into 1991. Aerospace equipment manufacturers and defense-related industries could experience more layoffs, however, especially if the Mideast crisis is resolved quickly. Tourism should remain strong but could slow in growth if airline and motor fuel prices increase or remain at high levels. While layoffs for 1991 have been announced by Hercules and Hill Air Force Base, numerous openings are scheduled to occur next year. Planned expansions and new openings include, but are not limited to, Sears Payment Systems, Wal-Mart, UP&L's Gadsby power plant, McDonnell Douglas, Black Diamond Equipment, Charter Oak Partners, ESKAY, Geneva, Softcopy, Novell, Jahabow Industries, and ShopKo.

On the downside, a few indicators point to some weaknesses in the Utah economy. Consumer and business confidence worsened in October as mentioned earlier. Year-over-year personal income growth fell form 8 percent in the fourth quarter of 1989 to 7.9 percent in the first quarter of 1990 and then 7.5 in the second quarter. Job growth has slowed some for a year-over peak of 5.3 percent in November 1989 to 4.5 percent in June 1990. Also the growth in Utah's index of leading indicators lessened in September and October.

Utah's Long Term Outlook

Utah is projected to have over 600,000 more inhabitants in the year 2010 than were counted during the census in 1990. The projected population in 2010 of 2,346,000 represents an average annual growth of 1.5 percent from 1990. While this rate of growth is significantly lower than Utah's rate of 2.5 percent from 1970 to 1990, it is still double the national growth rate for the same projection period. These projections indicate, when compared with recently completed projections by the U.S. Bureau of the Census for all states, that Utah will be the eighth fastest growing state in the 1990s. Utah ranked thirty-sixth among all fifty states in population in 1980 and is expected to rise to thirty-fourth place by the year 2000.

Utah's demographic makeup will change significantly over the next few decades. Utah will continue to have a relatively rapidly growing school age population until approximately 1993-1994 when it is projected to peak and then begin to decline until the year 2003 when it is projected to increase again. As a result of these demographic changes, Utah's school age dependency ratio will drop from the current rate of 49 school age children per 100 adults of working age to 38 school age children per 100 adults of working age in the year 2000. Utah is however, projected to continue to have the youngest population in the nation. Utah's median age in the year 2010 is projected to be 29 years, while the nation's median age is projected to be 39 years.

Total employment in Utah is projected to increase from 839,000 jobs (includes self employment and agriculture) in 1990 to 1,225,000 jobs in 2010. This increase of almost 400,000 jobs represents an average annual growth rate of 1.9 percent. The overall pattern appears to be continued movement away from dependence on the state's traditional extractive-heavy manufacturing-government economic base and toward services and trade as driving sectors in the Utah economy. The more specific industries (2-digit SIC code) which are projected to have the fastest growth rates are machinery and electronic equipment manufacturing, air transportation, services, hotels and lodging, business services and health services.

Utah's labor force will see periods of rapid increase over the next two decades. Increases or decreases in the labor force are caused by three circumstances. Either there are more new entrants (which we define as 16-24 years of age) entering the labor force for the first time; the labor force participation rates for persons already in the 16-64 age group change; or, the migration, in or out, changes the number of people in the labor force pool. The most dramatic change which will be occurring in the 1990s is the new entrants into the labor force. The 16-24 age group actually declined in the 1980s by three percent. However, the 1990s will show an almost 25 percent increase in this group. This means that Utah will continue to not only have a labor force growing at twice the national rate, but will continue to have the youngest labor force in the nation. Nationally, labor shortages are already occurring in many parts of the U.S., and will become more prevalent in the future. This has many positive implications for future employers in the state, including ample labor supply and a young workforce. On the other hand, if jobs are not available in-state, our mobile youth will leave Utah for ample opportunities elsewhere.

Special Studies:

The Forces of Growth in the 1970s and 1980s and the Elements of Growth in the 1990s

The 1970s was a decade of phenomenal growth in Utah. The population grew by 408,000 people, an increase of 38 percent. Over one third of this growth came from in-migration. The economy experienced exceptional growth as well as almost 195,000 jobs were created. This annual growth rate of 4.4 percent far exceeded the national annual growth rate of 2.5 percent. This economic boom, fueled by energy demands, pushed Utah personal income up by an annual average of 12.7 percent, well ahead of the U.S. average of 10.5 percent. As a result, Utah's per capita income (total income divided by total population) actually gained ground with the nation. Utah went from 81 percent of the national average to 83 percent. This is a significant increase given Utah's large families.

The 1980s was a much different decade. Utah and the nation have been shifting from a goods producing economy to a service producing economy for the last few decades. But the speed of the shift in Utah during the 1980s was dramatic. In 1970, goods producing jobs employed 23.4 percent of the state's nonagricultural work force. During the energy and construction boom of the 1980s, goods producing jobs actually increased their share of total employment to 25 percent. But with the downturn in these industries and the corresponding steady growth of services in the 1980s, the shift was profound. By 1989, goods producing employment had fallen to 19.8 percent of nonagricultural employment and service producing industries had grown to 80.2 percent. More specifically mining lost 60 percent of its jobs between 1981 and 1989 while services grew by 33 percent.

With Services now being the largest employer in the state, a closer look at the subsectors of Services is worthwhile. Business Services was the fastest growing subsector, growing by almost 19,000 between 1980-89 to 32,600, a growth of 137 percent. Health Services had the second largest increase. This subsector grew by 16,100 to 43,200, an increase of almost 60 percent. Air transportation grew by 4,300, an increase of 218 percent. Other subsectors that grew rapidly during this time were: Transportation Equipment (this is made up of mostly defense and aerospace), up almost 7,700; Hotels and other lodging, up 4,300; Banking up 4,200; and Trucking and Warehousing up 3,700.

So much has happened in Utah in the last two decades. We are 61 percent more populous than in 1970. We are more urban. We are economically more diversified, with a substantial shift away from our government-mining economy to a service-trade economy. Most importantly, our economy is one that is inextricably tied to a world economy. The decade of the 1990s is here and with it comes the anticipation and excitement of those who see a bright future as well as the pessimism of others who see a gloomy one. Futurists across the country are publishing their projections of the key trends of this decade. The question however still remains, what should state government do now to prepare for the 1990s and beyond? The Economic Coordinating Committee recommends that state government focus on doing those things that government is designed to do and do them well. If government does its part effectively, individuals and businesses will efficiently produce and exchange goods and services and create their own jobs and increase their wealth. More specifically ECC recommends that State Government focus on:

Provision of an Excellent Education System
Insuring a Sound Infrastructure
Providing a Sound Regulatory Environment
Protection of the Environment
Provision of a Sound Fiscal System
Business Recruitment, Retention and Expansion

The Persian Gulf Crisis and Impacts on Utah Petroleum Markets

The United Nations-imposed embargo on trade with Iraq and occupied Kuwait has removed approximately 4.3 million barrels of oil per day from the world petroleum markets. The embargoed production from these countries represents approximately seven percent of the world's current consumption and affects 19 percent of its proved reserves. The anticipated shortfall created by the trade embargo with Iraq and Kuwait oil production and the uncertain course of future events in the Middle East have resulted in extremely volatile prices for crude oil traded on world spot and futures markets.

Oil companies are likely to be cautious in their approach to new drilling in Utah. A modest increase in drilling activity is anticipated in response to higher prices and the risk of war. Price-induced production is expected to yield an additional 495,000 barrels of Utah crude oil in 1991.

There has been no impairment of crude oil availability in Utah. Utah relies exclusively on crude oil from the Rocky Mountains and 1990 deliveries of crude oil to Utah refineries are running 2.7 percent ahead of 1989 deliveries. Similarly refinery crude oil runs and utilization rates exceed 1989 levels. Higher crude runs

have also been reflected in higher refinery utilization rates. Utilization rates are unprecedented as refiners in Utah have exceeded 90 percent utilization in 6 of the 10 months in 1990. Since the Iraqi invasion, refineries in Utah have operated near maximum capacity, averaging 93 percent utilization rate.

On the whole, Utah inventories of gasoline supply and distillates stocks are low and warrant continued surveillance. Constraints are not anticipated due to adequate crude oil supplies, and high refinery utilization rates in Utah which should allow refineries to produce supplies of petroleum products to meet anticipated demand. Demand for petroleum products appears to have softened as preliminary figures indicate October deliveries from refiners' racks are down 17 percent from October 1989 deliveries, reflecting a decrease in quantity demanded due to higher prices and a seasonal slow down in economic activity.

No one knows what the outcome of the Persian Gulf Crisis will be nor its impact on world energy markets. Ironically, a peaceful resolution will leave the world more awash in oil than prior to the invasion, due to the increased production outside of Iraq and Kuwait, and the downward pressure on prices could be very significant, probably in the range of $18 to $20 per barrel. However, at the time of this writing war is a significant possibility. The impact on oil prices will depend on the extent and duration of any conflict. A brief conflict in which Saudi productive capability is unimpaired would likely result in prices ranging from $45 to $50 per barrel. An extensive conflict which affected Saudi productive capability could result in prices of $60 per barrel or greater. In the unlikely event that the status quo is maintained indefinitely, prices are projected to remain at $25-$28 per barrel.

Utah's Defense Economy Now and Tomorrow

Defense spending in Utah has long been recognized as a key source of income and employment for Utah residents, and a significant component of economic activity and growth. In 1989, roughly $2.0 billion in direct defense-related expenditures entered the Utah economy. The defense industry and military establishments employ approximately 50,300 people in Utah, or 6 percent of the civilian labor force. When the secondary impacts are considered, defense expenditures in Utah represent between 16 and 18 percent of total personal income, and at least 14 to 16 percent of the state's civilian labor force.

Changing defense strategies at the federal level are certain to have significant implications for Utah as reductions in defense spending appear inevitable. Though developments in the Middle East have slowed momentum for deep defense cutbacks, and may forestall any significant reduction in the short term, the major changes in Eastern Europe, combined with pressures to reduce the federal deficit, make it likely that long-term defense spending will continue its downward spiral. According to Aviation Week and Space Technology, neither Operation Desert Shield, nor the prospect of new arms sales to Middle Eastern Allies, will pull the U.S. defense industry out of its steepest nosedive in 40 years. Some of the major trends in defense contracting include: increasing competition, a changing environment in defense contracting, change in demand for weapon production, consolidation of military bases and reductions in defense industry employment.

While reduced commitments to defense may enable the government to allot more money for other endeavors, the adjustment process has its costs. Disruptions, which are certain to occur at defense-related companies, will impact all levels of Utah's economy. The effects of reduced spending will have direct consequences for defense contractors and subcontractors, military bases, and finally, state and local units of governments. Depending upon what components of the defense budget are cut, reductions in defense outlays could result in employment layoffs in Utah ranging from 2,700 to 6,000 jobs through the end of 1991. These reductions represent total direct, indirect, and induced impacts; are a worst case scenario; and assume that no diversification takes place. Based on current federal policies, further declines of 3 to 5 percent annually from 1992 to 1997 are realistic.

How will these layoffs affect local economies? In general, the sensitivity of an economy to changes will depend on the strength of that economy. A relatively large cut in a well-diversified, growing economy is more easily absorbed than a small dollar cut in a defense-dependent one. In Utah the economic base of several

counties (Box Elder, Davis, Weber, and Tooele) is relatively dependent upon military spending. Determining the actual impacts on these economies of military base layoffs and cutbacks in defense contracts was beyond the scope of this study; however, the likely impacts will include fewer sales at local businesses, and a reduction in the local tax base.

The long-term picture may be brighter. There is a growing recognition in Congress that the need for an effective military capability did not disappear with the end of the Cold War in Eastern Europe. In all likelihood declines in defense expenditures will be gradual and orderly, thus allowing contractors to keep manpower disruptions at moderate levels.

Executive Summary Table
Actual and Estimated Economic Indicators
December 1990

U.S. AND UTAH INDICATORS	UNITS	1988 Actual	1989 Actual	1990 Estimate	1991 Estimate	% CH 88-89	% CH 89-90	% CHG 90-91
PRODUCTION AND SPENDING								
U.S. Gross National Product	Billion Dollars	4,873.7	5,200.8	5,473.9	5,734.7	6.7	5.3	4.8
U.S. Real Gross National Product	Billion 1982$	4,016.8	4,117.7	4,158.8	4,185.6	2.5	1.0	0.6
U.S. Real Personal Consumption	Billion 1982$	2,606.5	2,656.8	2,685.3	2,703.7	1.9	1.1	0.7
U.S. Real Bus. Fixed Investment	Billion 1982$	487.2	506.1	513.5	512.8	3.9	1.5	(0.1)
U.S. Real Defense Spending	Billion 1982$	260.6	256.3	256.8	262.9	(1.7)	0.2	2.4
U.S. Real Exports	Billion 1982$	534.7	593.3	626.4	645.8	11.0	5.6	3.1
U.S. Industrial Production	1987=100	105.4	108.1	109.5	110.0	2.6	1.3	0.5
Utah Coal Production	Million Tons	18.2	20.5	22.2	21.8	12.6	8.3	(1.8)
Utah Oil Production	Million Barrels	33.0	28.4	27.8	28.2	(13.9)	(2.0)	1.3
Utah Copper Production	Million Pounds	502.0	550.0	520.0	540.0	9.6	(5.5)	3.8
SALES AND CONSTRUCTION								
U.S. New Auto and Truck Sales	Millions	15.5	14.6	14.0	13.7	(5.8)	(4.1)	(2.1)
U.S. Housing Starts	Millions	1.49	1.39	1.21	1.10	(6.7)	(12.9)	(9.1)
U.S. Residential Construction	Billion Dollars	232.5	231.0	223.1	208.6	(0.6)	(3.4)	(6.5)
U.S. Nonresidential Structures	Billion Dollars	139.9	146.2	148.2	149.8	4.5	1.4	1.1
U.S. Final Priv. Domestic Sales	Billion Dollars	3,741.0	3,813.1	3,852.0	3,861.0	1.9	1.0	0.2
Utah New Auto and Truck Sales	Thousands	60.7	60.7	60.0	58.7	0.0	(1.2)	(2.1)
Utah Dwelling Unit Permits	Thousands	5.7	5.6	6.8	7.5	(1.8)	21.4	10.3
Utah Residential Permit Value	Million Dollars	413.0	447.8	570.0	630.0	8.4	27.3	10.5
Utah Nonresidential Permit Value	Million Dollars	272.1	389.6	430.0	400.0	43.2	10.4	(7.0)
Utah Retail Sales	Million Dollars	7,376	8,080	8,573	8,864	9.5	6.1	3.4
Utah Bus. Inv. & Utility Sales	Million Dollars	3,684	3,676	3,910	4,102	(0.2)	6.4	4.9
Utah Taxable Service Sales	Million Dollars	1,649	1,753	1,818	1,997	6.3	3.7	9.8
Utah Total Taxable Sales	Million Dollars	13,018	13,893	14,832	15,353	6.7	6.8	3.5
DEMOGRAPHICS AND SENTIMENT								
U.S. Population	Millions	246.4	248.8	251.4	254.0	1.0	1.0	1.0
U.S. Consumer Sentiment of U.S.	1966=100	93.7	92.8	81.4	75.4	(1.0)	(12.3)	(7.4)
Utah Population (July 1)	Thousands	1,689.0	1,709.0	1,734.0	1,760.0	1.2	1.5	1.5
Utah Migration	Thousands	(11.5)	(6.6)	(1.6)	(0.8)	na	na	na
Utah Consumer Sentiment of Utah	1966=100	76.2	82.9	82.5	80.0	8.8	(0.5)	(3.0)
PROFITS AND PRICES								
U.S. Corp. Profits Before Tax	Billion Dollars	316.7	307.7	308.3	313.5	(2.8)	0.2	1.7
U.S. Oil Ref. Acquis. Cost	$ Per Barrel	14.7	18.0	22.8	27.6	21.9	26.9	21.2
U.S. Coal Price Index	1982=100	95.4	95.5	97.6	101.1	0.1	2.2	3.6
U.S. Ave. Copper Cathode Price	$ Per Pound	1.21	1.31	1.21	1.00	8.7	(7.6)	(17.4)
U.S. No. 1 Heavy Melting Scrap	$ Per Long Ton	109.0	107.3	105.9	100.0	(1.5)	(1.3)	(5.6)
Utah Oil Prices	$ Per Barrel	14.2	18.6	23.2	28.0	31.0	24.5	20.9
Utah Coal Prices	$ Per Short Ton	22.9	22.0	23.2	23.0	(3.9)	5.5	(1.1)
INFLATION, MONEY AND INTEREST								
U.S. CPI Urban Consumers	1982-84=100	118.3	124.0	130.7	137.3	4.8	5.4	5.0
U.S. GNP Implicit Deflator	1982=100	121.3	126.3	131.6	137.0	4.1	4.2	4.1
U.S. Money Supply (M2)	Billion Dollars	3,017.5	3,129.8	3,289.0	3,423.6	3.7	5.1	4.1
U.S. Real M2 Money Supply (CPI)	Billion 82-84$	2,550.7	2,524.0	2,516.4	2,493.5	(1.0)	(0.3)	(0.9)
U.S. Federal Funds Rate	Percent	7.57	9.22	8.11	7.20	21.8	(12.0)	(11.2)
U.S. Bank Prime Rate	Percent	9.31	10.87	9.99	9.73	16.8	(8.1)	(2.6)
U.S. Prime Less CPI Inflation	Percent	5.21	6.05	4.59	4.68	16.2	(24.2)	2.0
U.S. 3-Month Treasury Bills	Percent	6.67	8.11	7.51	6.71	21.6	(7.4)	(10.7)
U.S. T-Bond Rate, 30-Year	Percent	8.96	8.45	8.62	8.08	(5.7)	2.0	(6.3)
U.S. Mortgage Rates, Effective	Percent	9.29	10.12	10.00	9.51	8.9	(1.2)	(4.9)
EMPLOYMENT, WAGES AND INCOME								
U.S. Nonagricultural Employment	Millions	105.53	108.41	110.36	110.45	2.7	1.8	0.1
U.S. Average Nonagriculture Wage	Dollars	23,037	23,736	24,502	25,469	3.0	3.2	3.9
U.S. Total Nonagriculture Wages	Billion Dollars	2,431.1	2,573.2	2,704.0	2,813.0	5.8	5.1	4.0
U.S. Personal Income	Billion Dollars	4,058.7	4,368.1	4,627.0	4,839.4	7.6	5.9	4.6
Utah Nonagricultural Employment	Thousands	660.1	691.2	722.8	744.5	4.7	4.6	3.0
Utah Average Nonagriculture Wage	Dollars	18,590	19,022	19,622	20,334	2.3	3.2	3.6
Utah Total Nonagriculture Wages	Million Dollars	12,271	13,148	14,183	15,139	7.1	7.9	6.7
Utah Personal Income	Million Dollars	20,674	22,327	24,000	25,690	8.0	7.5	7.0

Source: State Economic Coordinating Committee.

ECONOMIC DEVELOPMENT ACTIVITIES

ECONOMIC DEVELOPMENT ACTIVITIES

Dramatic changes have taken place in the Utah, national, and world economies in recent years. Advances in communication, transportation, and technology have made global competition not just a threat or a cliche, but a reality. Today a typical Utah manufacturer faces competition not only from such places as Boise, Cincinnati, and Riverside, but from Korea, Singapore, and France as well.

While the national debate rages on over "unfair" foreign competition, declining test scores in the nation's schools, and federal budget deficits, the states have quietly -- and seriously -- gone about the business of revamping their economic development policies and enhancing their competitiveness in the world marketplace. State economic development policy has undergone a transformation in the past decade. Ten years ago the strategy for most states consisted of what some refer to as "smokestack chasing" or as others more politely call it, "business recruitment." Tourism promotion, of course, was (and still is) another mainstay of economic development. But today, state economic development efforts are more varied, responsive, and productive. This section will describe some of these initiatives and programs in Utah.

Blueprint Updated

In November, 1990 the second edition or update of the Governor's Blueprint for Utah's Economic Future was released. This document is an economic development policy statement. The Blueprint outlines ten "Components of Utah's Foundation for the Future." At the top of the list of components is a "market-driven, productive work force" -- a strategy for making our educational system and the work force, more responsive to the needs of the economy. Copies of the Blueprint may be obtained by calling the Department of Community and Economic Development at (801) 538-8706.

In keeping with the Governor's goal of achieving a more responsive, market-driven educational and job training system, there is a proposal to expand the data presently collected from employers by the Department of Employment Security. Social Security numbers and total wages paid are now being collected. The data proposed to be collected include: 1) occupational title; 2) wage rate; 3) full or part time; and 4) male or female. This comprehensive information could be put to many uses, such as evaluating the effectiveness of education and job training programs (by looking at the number of completers who are working in a particular occupation in Utah, and at what wage level) and helping students make informed decisions as to the prospects for employment before entering a program. It could also help current and prospective employers better understand the labor market.

Utah State and Local Government Fiscal Benefit/Cost Model

Company XYZ wants to locate a manufacturing plant in a metropolitan area in the West and is trying to choose between Salt Lake City and Phoenix. The company will employ 500 people, spend $30 million in construction, and pay $30 million in wages and in-state purchases each year. State coffers will receive corporate income taxes, property taxes, and sales taxes directly from the company. The company will also purchase materials from other in-state companies that pay taxes in Utah and pay wages to employees that contribute to the tax base.

In return, state and local governments will provide public services to an expanded economy and population because of the new economic activity. Government will provide police and fire protection, education to employees' children, maintenance and repair of public infrastructure and a variety of other public services to a larger population.

Bidding wars such as this are commonplace in Utah's economic development community. In an attempt to increase the attractiveness of locating in Utah, state and local governments will periodically offer incentives such as worker training, tax exemptions, new infrastructure or other types of assistance. Decisions about offering subsidies, however, are often made with only sketchy information about the likely benefits and

costs to governments of increased economic activity.

A new computer model, developed by the Utah Office of Planning in Budget, in conjunction with the Utah Department of Community and Economic Development, and the University of Utah, Bureau of Economic and Business Research, will provide critical information to government officials about the magnitude of expected revenues and costs to be incurred by government from new or expanding businesses.

The model attempts to quantify the benefits and costs to government by estimating the economic impact on the regional economy. Next, it determines the increased tax revenue and population impact from the project. Per capita government cost figures are applied to the population impact to assess the cost to government. These benefits and costs are compared over time and then presented as a reasonable approximation of the level of public investment that can be justified.

The model was funded by a grant from the U.S. Economic Development Administration and is still in the test implementation stage. As the model is implemented over the next year, more will be learned about its usefulness in the economic development planning process.

Technology and Capital Availability Enhanced

The application of advanced technology to communications is critical in this Information Age. A five-year, $100 million plan by U.S. West to bring digital technology to 48 rural Utah communities is currently pending review from the Utah Public Service Commission. This represents a significant modernization of the telecommunications infrastructure of non-metropolitan Utah and will facilitate future economic growth.

The Utah Centers of Excellence Program, a partnership between the state's colleges, universities and private industry, was created to stimulate the commercialization of products resulting from research. The program has established 27 Research Centers, and during fiscal year 1990 the state's investment attracted over $51 million in matching funds from federal agencies and private industry. Approximately 28 new companies have spun off from the research and existing participating companies have grown. The Centers Program is proving to be an excellent long-term investment for the state, paying direct economic returns as well as enhancing the technological environment in Utah.

For several years government, education, and the private sector have worked toward the goal of improving access to capital in Utah for business investment. Utah Ventures was the first Utah-based venture capital fund and, until this year, has been the state's only resident fund. During 1990 three new venture capital funds were created or relocated here to promote the commercialization of Utah technology. The three funds are 1) Whitehall Technology Fund, 2) Batterson, Johnson & Wang, and 3) Columbine. Outside venture capitalists have been looking for this type of development so that they could follow or join with resident funds to make more investments in Utah.

Foreign Markets Cultivated

The state is now better-positioned to assist Utah businesses in entering foreign markets than ever before. In addition to the International Office in Salt Lake City, the state has four branches located in Japan, Korea, Taiwan and Belgium. Through the Office and its branches, the state can provide expertise and contacts to simplify and expedite the often intimidating process of exporting to foreign markets. In fiscal year 1990 the Utah International Office directly assisted Utah businesses with $35 million in new export sales.

New and Existing Business Expansions Announced

There is a growing recognition in the country, and around the world, of the advantages of Utah as a location for a variety of manufacturing and service center activities. Evidence of this is the recent number one ranking of Salt Lake City as a place for business by Fortune magazine (October 22, 1990). The article has stimulated an already increasing level of interest in Utah from expanding out-of-state companies. Utah offers a

high quality labor force at a reasonable cost, a good location with excellent transportation infrastructure, a very competitive business tax climate, a reasonable regulatory environment, a growing reputation as a center for high technology, and an outstanding quality of life including world class recreational and cultural opportunities in a relatively uncongested, clean, and safe setting. During 1990 there were announcements for a number of new facilities, including Discover Card (1200 jobs, Salt Lake County), Sears Discover Card Services (700 jobs, Davis County), ESKAY Corp. (up to 200 jobs, site not yet determined), Cerro Wire (125 jobs, Weber County), CT Film (125 jobs, Davis County), and a several dozen smaller facilities.

There were also announcements during the year for expansions of existing operations. Among the most notable were McDonnell Douglas, Abbott Laboratories, and Morton Airbag. McDonnell Douglas opened its Salt Lake plant in 1987 with an intent to expand slowly to 350 to 400 employees by the early 1990s. They now have about 600 employees and announced their intention to add 42,000 square feet and double employment to 1,200 by the end of 1992. Abbott, formerly Sorenson Research Co., will add 200 jobs to reach 1,200 total employees.

Olympic Bid and Tourism Cultivated

The effort to secure the 1998 Winter Olympics for Salt Lake City and Utah is heating up. The International Olympic Committee will make its selection in June, 1991. If successful, the bid for the Olympic Games would have a major economic impact in the state. The exact extent of that impact is unknown and would depend on such factors as the television contract, prudent financial management on the part of the Salt Lake Organizing Committee, usability and attraction of new facilities before and after the Games, and any increased tourism and economic activity as a result of the enhanced image of Utah following the Games. The Bid Committee currently estimates that revenues and expenditures for hosting the Games would each total slightly more than $700 million in 1990 dollars. Based on the experience of recent host cities of the Olympic Games, particularly Calgary, Canada, there is good reason to believe that the overall impacts can be successfully managed and can produce a positive experience for the State of Utah.

The rapid growth in travel and tourism in Utah during 1986 through 1988 has now tapered off. The year 1990 will still go down as probably the best ever for most segments of the travel industry, although the increases over 1989 are modest in most instances. Visitation was up anywhere between 5 percent to 13 percent at Utah's five National Parks during 1990. Visitation to Lake Powell and Glen Canyon National Recreation Area was off by about 11 percent, probably a result of low water conditions. The visitor count was up nearly 9 percent at Temple Square in Salt Lake City during 1990. The total number of skier days was down 2.8 percent during the 1989-90 season from the previous year to 2.5 million. But room rents statewide on hotels, motels, and other temporary lodging was estimated to be up by about 11 percent. Travel and tourism is important to the Utah economy. Some uncertainty exists in the outlook for 1991 because of rising gas prices and growing caution among consumers toward discretionary spending.

Utah's "Underclass" must be Lifted

Periodic reports on American competitiveness have suggested that the real problem with the nation's educational and training system lies in its ineffectiveness in dealing with those at the "bottom" -- the drop-outs, the functional illiterates, the homeless, etc. In other words, America's most skilled and talented can compete with those of any other country. However, we have a huge "underclass" that lacks basic skills. Fortunately, in Utah the problem is smaller than in most other states. For example, Utah has the lowest rate of illiteracy of any of the fifty states, 6 percent here compared with a national average of 13 percent. And, according to The 1990 Development Report Card of the States, Utah has the second most evenly distributed income in the country. The median income of the highest 20 percent of the population is 6.67 times that of the lowest 20 percent. That ratio ranges from 5.98 in New Hampshire to 12.71 in Louisiana. However, the Report Card points out that the ratio has increased in 48 states, including Utah, during the 1980s. Education is a major determinant of income, employment and employability. According to the U.S. Department of Education, only about four out of five Utah ninth graders will go on and graduate from high school. Utah's high school graduation rate is 80.6 percent. And while this is respectable compared with a national average of 71.1 percent, it is not even close to that of

Minnesota (90.6 percent), Wyoming (89.3 percent), or North Dakota (88.4 percent). While data on homelessness in Utah is lacking, there is a consensus among close observers and service providers that the problem has risen significantly in the state in recent years. We must do a better job of lifting those at the bottom of the economic ladder and help them acquire the skills to compete and contribute in our society.

There are dark clouds on the national economic horizon that will, no doubt, eventually affect Utah. Problems in the real estate sector, in particular, are creating a downward credit spiral. There are oil price increases and supply uncertainties. And, despite the painful process of negotiations on the federal budget, the deficit is still too large. In the face of all these uncertainties and deteriorating conditions it is important to continue to take steps to strengthen our economy and our ability to compete in the global marketplace. We cannot control the global environment in which we find ourselves, but we can be pro-active in our response to it. We should work to enhance our technological base, expand our exports, increase the skills of our workforce, make education and training more market-driven, secure the Olympic bid, build our infrastructure, and take other steps that will promote an efficient, clean, safe, and equitable environment with the high quality of life to which we have become accustomed.

ECONOMIC INDICATORS AND CURRENT CONDITIONS

LABOR MARKET ACTIVITY

Utah's economy ended the eighties with one of the best performances of the decade. Furthermore, this healthy situation changed very little in 1990. During 1989, nonfarm jobs grew 4.7 percent. When final data is available, 1990 should show only slightly lower--4.6 percent. Utah's unemployment in 1989 registered 4.6 percent. The unemployment rate for 1990 is expected to register also slightly lower--4.5 percent.

While the national economy languished, Utah held firm. All Utah's major industrial sectors experienced growth, and Utah ranked consistently in the top ten job producing states (in percentage terms). During 1990, Utah added between 31,000 and 32,000 new jobs. In addition, Utah's manufacturing sector registered a moderate 3 percent growth rate, while nationally, manufacturing employment declined.

The employed portion of Utah's labor force averaged 766,000 individuals monthly. Unemployed Utahns--those actively seeking work--averaged 36,000. Together, the employed and the unemployed formed Utah's total labor force of 802,000 individuals. During 1990, Utah's unemployment rate averaged about a percentage point lower than the national figure.

Employment by Industry

Utah's goods-producing industries--mining, construction, manufacturing--manifested moderate growth during 1990. Mining and construction turned around after several years of decline. Growth in these sectors averaged almost 5 percent. Manufacturing registered more than 3 percent growth for a gain of 3,500 positions. By the end of the year, however, several durable manufacturing industries started to show employment declines. In contrast, employment in nondurables continued to expand.

Utah's service-producing industries revealed a varied performance. The service industry itself continued its reign as the primary job producer in Utah. This industry added 13,100 new positions for an expansion rate of 8 percent. In fact, the service industry accounted for about 40 percent of Utah's new jobs. Expansion was heavy in business services--particularly computer services. For much of the year, computer services registered growth rates in excess of 20 percent. However, health services, lodging places, personal/amusement services, and engineering services also showed robust increases.

On the more moderate side, the transportation/communications/utilities (TCPU) and trade industries registered increases of slightly more than 4 percent. TCPU added 1,700 new positions while trade contributed 6,800 new jobs (primarily in retail industries).

Finance/Insurance/Real Estate (FIRE) and government registered the slowest growth of the service-producing industries--2 and 3 percent respectively. Depository institutions (banks and the like) lost employment which slowed total FIRE expansion. In the public sector, declines in federal employment proved responsible for the more moderate expansion rate. Both state and local governments increased there payrolls--primarily for education.

Wages

Strong expansion in wages proved to be another indicator of Utah's economic health in 1990. Final 1990 figures are expected to show 8 percent growth in total nonfarm wages--up slightly from the 7 percent growth in 1989.

Utah's average monthly wage is expected to reach over $1,600--a 3 percent increase over 1989. Unfortunately, when adjusted for inflation, Utah's average monthly wage actually declined slightly. In addition, growth in wages for Utahns covered under unemployment insurance has not kept pace with national wage increases. Utah annual pay as a percentage of U.S. annual pay has declined from a high of 96 percent in 1981 to a low of less than 86 percent in 1989.

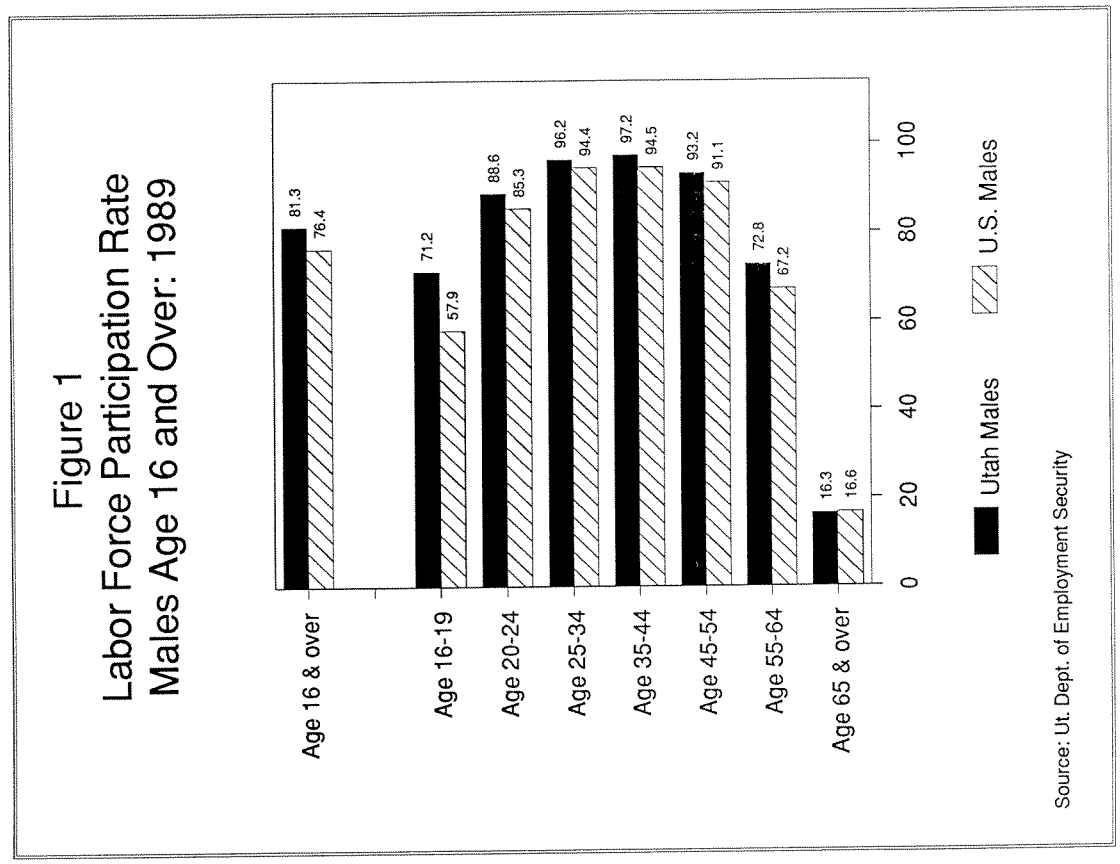


Figure 1
Labor Force Participation Rate
Males Age 16 and Over: 1989
Age 16 & over
Age 16-19
Age 20-24
Age 25-34
Age 35-44
Age 45-54
Age 55-64
Age 65 & over
81.3
76.4
71.2
57.9
88.6
85.3
96.2
94.4
97.2
94.5
93.2
91.1
72.8
67.2
16.3
16.6
0
20
40
60
80
100
Utah Males
U.S. Males
Source: Ut. Dept. of Employment Security

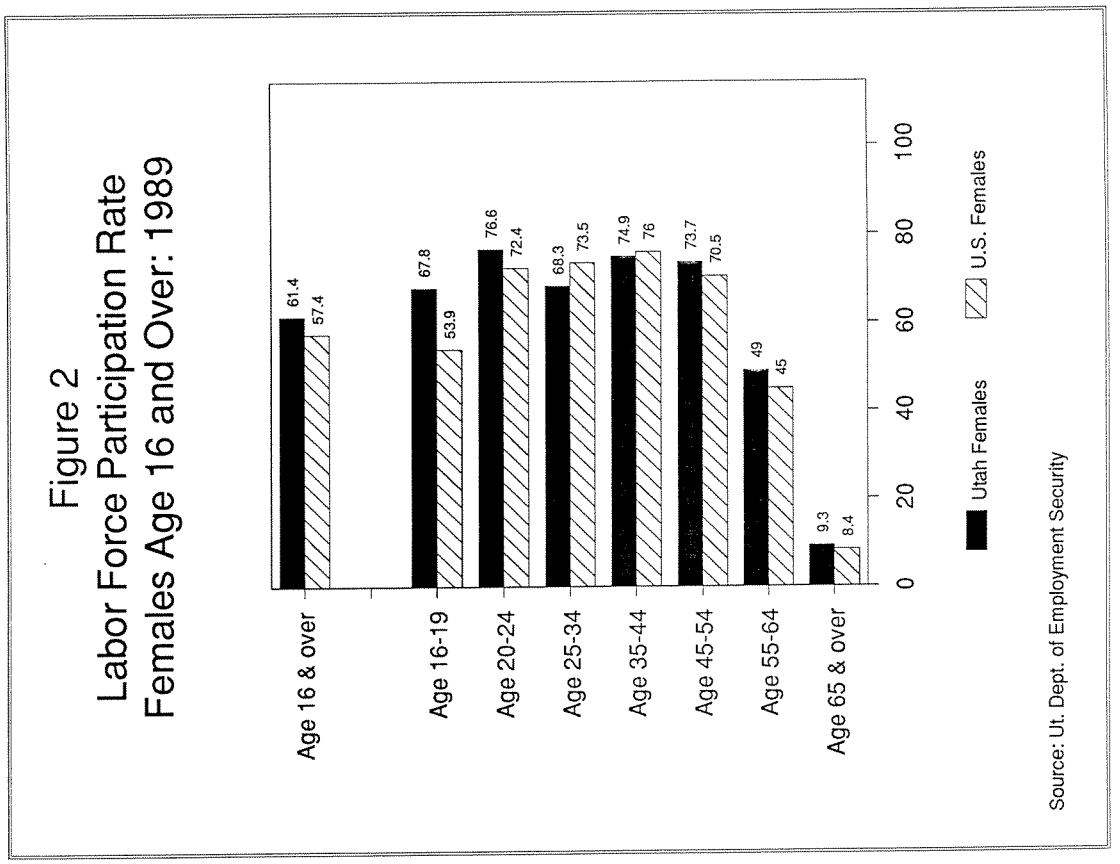
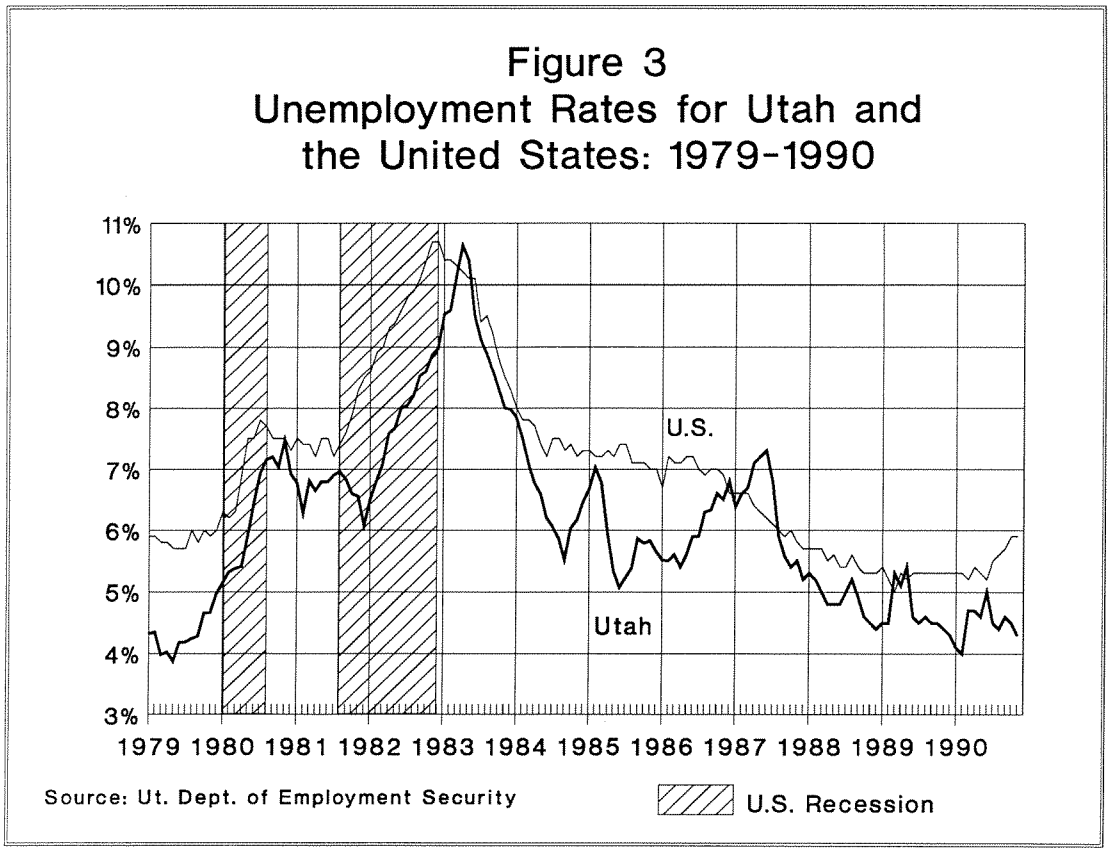


Figure 2
Labor Force Participation Rate
Females Age 16 and Over: 1989
Age 16 & over
Age 16-19
Age 20-24
Age 25-34
Age 35-44
Age 45-54
Age 55-64
Age 65 & over
61.4
57.4
67.8
53.9
76.6
72.4
68.3
73.5
74.9
76
73.7
70.5
49
45
9.3
8.4
0
20
40
60
80
100
Utah Females
U.S. Females
Source: Ut. Dept. of Employment Security



The loss of high paying goods-producing jobs in the early and mid-80s contributed to this decline. However, Utah's demographics may also play a part. Utah has a large percentage of young people in the labor market. Young people are usually paid less than older workers. Utah also has a higher percentage of individuals working part-time than the national average which tends to pull the mean wage down.

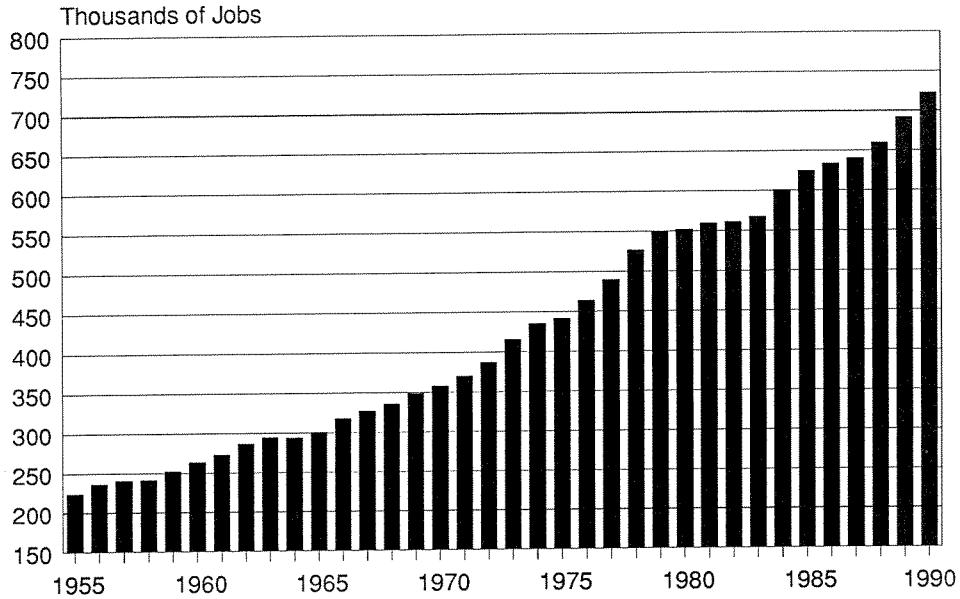
Labor Force Characteristics

In 1989 (the most recent figures available), more than 71 percent of Utah's civilian, noninstitutionalized population, over the age of 16 were labor force participants. This "participation rate" ranks significantly higher than the national average (66 percent). Both Utah women (61 percent) and Utah men (81 percent) participate in the labor market at a higher rate than their national counterparts (57 and 76 percent respectively).

Not surprisingly, individuals between the ages of 20 and 54 percent are most likely to be in the State's work force. The participation rate for this group averages over 82 percent. Men are most likely to work between the ages of 35 and 44 (97 percent). Utah women between the ages of 20 and 24 participated in employment at the highest rate--77 percent.

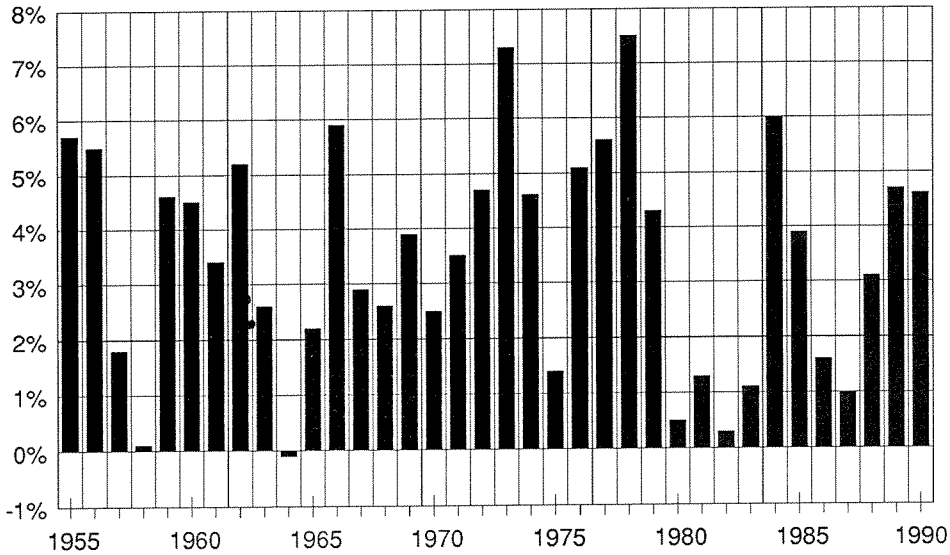
Just why are Utahns more likely to work? Is it just Utah's much-touted work ethic? Not solely. Utah has a relatively young population, *and*, young people are more likely to work--particularly given recent trends toward early retirement. Plus, Utah's young people (16-19 years old) are much more likely to work than young people nationally. In Utah, almost 70 percent of 16-19 year-olds work or are looking for work compared to the U.S. average of 56 percent. In addition, Utah's relatively large families and lower wages may require more families to produce more than one wage-earner. These facts, coupled with Utahn's relatively higher education levels and "work ethic," seem to account for most of the discrepancy between Utah and national rates.

Figure 4
Utah Nonagricultural Employment: 1955-90



Source: Ut. Dept. of Employment Security

Figure 5
Utah Nonagricultural Employment
Annual Percent Change



Source: Ut. Dept. of Employment Security

Single Utahns are most likely to work--almost 79 percent. Never-married men and married men work at about the same rate (81 percent labor force participation rate). On the other hand, married women (59 percent) are much less likely to work than never married women (76 percent). Those in the "other marital status" (separated, divorced, widowed) are least likely of all groups to work (61 percent).

The Unemployed

Unemployment rates decline fairly steadily with age. In 1989, 13 percent of young workers (ages 16-19) were out of work and looking for employment. For Utahns between the ages of 35-54, unemployment registered a mere 3 percent. And, less than 1 percent of the work force over the age of 65 were unemployed. Of course, most people over 65 aren't looking for a job. Whites experienced lower unemployment than nonwhites, men experienced lower unemployment than women, married people experienced lower unemployment than unmarrieds.

About 11 percent of Utah's unemployed suffered job loss through a reduction in force (layoff). Another third lost their jobs for "other reasons." One fourth left voluntarily. New entrants to the labor force made up 11 percent of the unemployed, while re-entrants made up a fourth of the jobless. In the past, a larger share of women fell in the new entrant and re-entrant category. In 1989, the share in this classification registered only slightly higher than that for men. This fact suggests that the influx of women into the labor force may be stabilizing.

How long did unemployment last for Utahns? Almost half of jobless Utahns found work within a month. Altogether, unemployed workers averaged an 11-week spell of unemployment. In addition, less than 3 percent had been out of work a year or more. Women suffered shorter spells of unemployment than did men--less than 10 weeks for women compared to more than 12 weeks for men.

Out of the Workplace

About 321,000 Utahns over the age of 16 chose to stay out of the labor force in 1989. They didn't have a job and weren't looking for one. Why? About 70 percent of nonworking women are keeping house (85 percent of married women), 8 percent are in school, 1 percent are unable to work, and 21 percent have "other reasons." Utah men answer with slightly different answers. Only 2 percent of nonworking men are keeping house, 21 percent are going to school, 2 percent are unable to work, 75 percent cite "other reasons."

Time on the Job

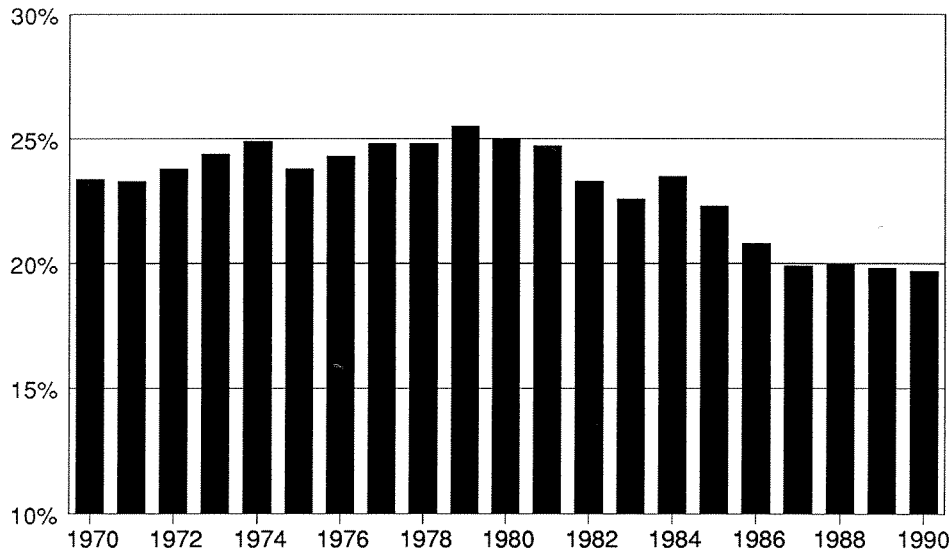
In 1989, Utah's 173,000 part-time workers made up 22 percent of the work force. That's significantly higher than the national average of 17 percent. Although the Utah male part-time rate registered 2 points higher than the U.S. figure, the difference in the female rate is far more pronounced. One-third of Utah's female labor force worked part-time compared to 26 percent nationally. The high percentage of working young people accounts for some of the difference between Utah and U.S. averages. However, Utah is very family oriented, and apparently, many Utah women are working part-time in order to successfully combine work and family responsibilities.

Employed Utahns worked an average of 39 hours a week in 1989. However, Utahns working full-time schedules put in an average of 48 hours a week. Women on full-time tended to work less hours than men--46 hours for women compared with 49 hours for men. More than 30 percent of Utahns put in more than 40 hours a week on the job.

Occupations

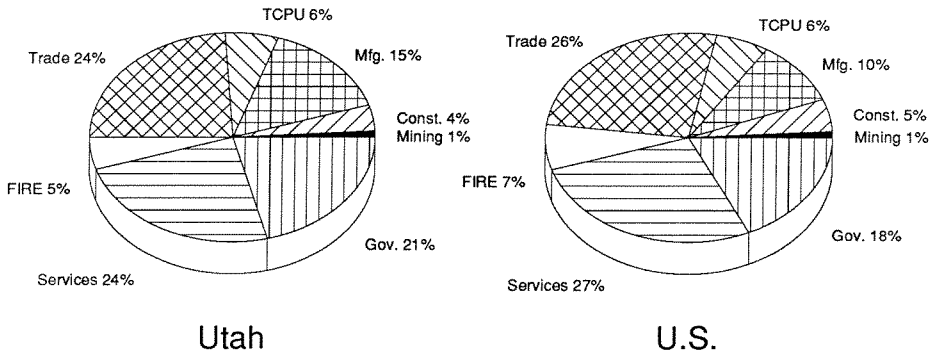
Perhaps remarkably, the broad occupational breakdown in Utah is almost identical to the national average. About one-fourth of employed Utahns work in executive, managerial or professional jobs; about

Figure 6
Percent of Utah Employment in Goods-Producing Industries



Source: Ut. Dept. of Employment Security

Figure 7
Employment by Industry
1989



Source: Ut. Dept. of Employment Security

one-third work in technical, sales, and administrative support (clerical) positions; approximately 13 percent work in service-related occupations, about one-fourth work in "blue collar" occupational fields and only 2 percent work in farming, forestry, and fishing positions.

Occupational breakdowns vary significantly by sex in some areas, but little in others. Men are slightly more likely to work in executive, managerial or professional jobs than are Utah women. On the other hand, women are much more likely to work in administrative support jobs. Only 6 percent of men work in clerical occupations compared to 30 percent of women. Women are also more likely to work in service occupations, while men show a higher propensity to work in "blue collar" positions.

Which occupations experienced the least unemployment? Joblessness in executive, managerial, professional, and technical jobs registered less than 2 percent. On the high end, sales, service, operators, fabricators, laborers, and farming/forestry/fishing jobs produced jobless rates higher than 5 percent.

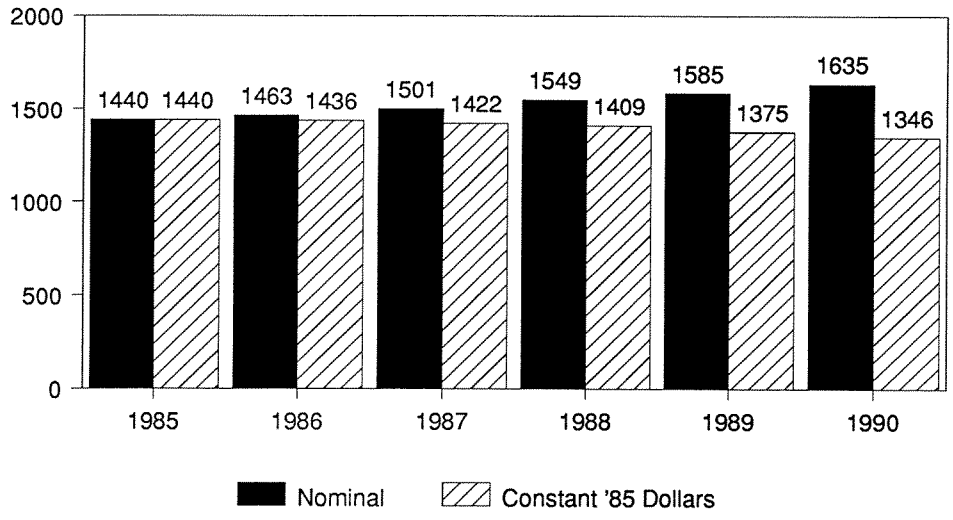
Where do Utahns Work?

Roughly 98 percent of experienced Utah workers are employed in nonagricultural industries. More than a fifth of these individuals work in service industries. Slightly less work in trade. Manufacturing employs 15 percent of experienced workers while transportation/communication/utilities, construction, and finance/insurance/real estate employ about 5 percent each. Experienced government workers make up almost another fifth of the work force--slightly more than the national average. Utah's higher percentage of government workers stems from our large school-age population which requires a large number of teachers. Not quite a tenth of the State's labor force is self-employed.

Conclusion

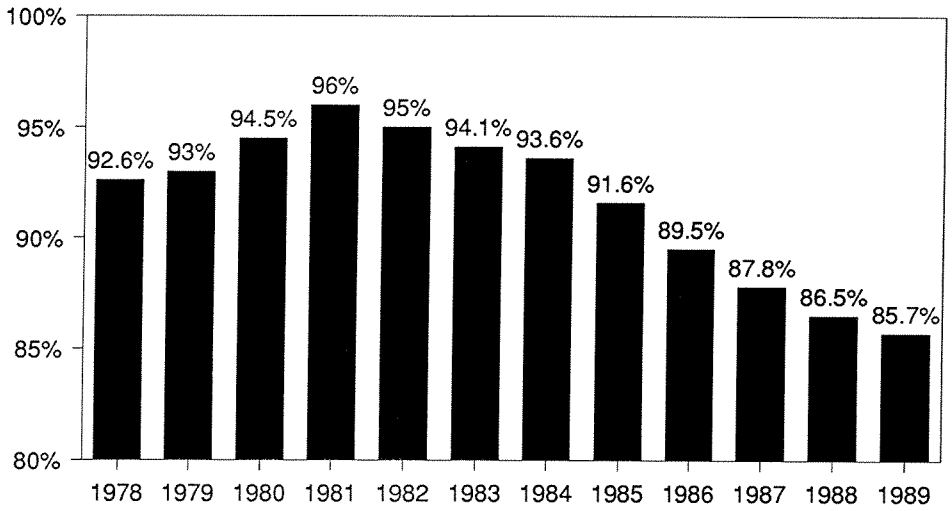
Although Utahns may feel the urge to pat themselves on the back for the State's strong workforce performance during the past two years, if the nation faces a serious economic downturn, Utah could be affected. On the other hand, Utah's job growth remains strong, and the nation's current economic woes are largely of a regional nature. Therefore, Utah could weather any national downturn fairly well.

Figure 8
Utah Nonfarm Average Monthly Wages Nominal and Constant* Dollars



*Constant 1985 $ inflation adj using CPI
Source: Ut. Dept. of Employment Security

Figure 9
Utah Average Annual Pay* as a Percent of U.S. Average Annual Pay*: 1978 to 1989



*For workers covered by unemployment insurance.
Source: U.S. Bureau of Labor Statistics

Table 1
Utah and U.S. Labor Force Participation Rates
For Selected Years

	1950	1960	1970	1980	1989
UTAH	52.2	57.4	58.4	64.2	71.1
Female	25.3	33.5	41.5	49.8	61.4
Male	82.5	82.3	77.4	79.3	81.3
U.S.	54.0	60.0	58.0	62.0	66.5
Female	30.0	37.7	43.3	49.9	57.4
Male	80.0	83.3	79.7	75.1	76.4

Source: Utah Dept. of Employment Security,
U.S. Department of Labor, Bureau of Labor Statistics.

Table 2
Total Unemployment Rate in Utah
By District and County
1985 to 1990

	1985	1986	1987	1988	1989	1990p
State Total	5.9	6.0	6.3	4.9	4.6	4.5
Bear River	4.8	4.3	4.5	3.8	3.8	4.1
Box Elder	4.5	4.1	4.3	3.8	3.8	4.5
Cache	5.1	4.4	4.5	3.8	3.9	4.0
Rich	3.7	5.1	5.8	4.0	2.0	2.3
Wasatch Front	5.3	5.4	5.8	4.7	4.5	4.3
North	4.9	5.5	6.0	5.1	5.0	4.8
Davis	4.0	4.8	5.3	4.4	4.3	4.2
Morgan	6.5	7.2	8.3	7.0	8.2	6.1
Weber	5.9	6.2	6.7	5.8	5.6	5.5
South	5.5	5.3	5.7	4.5	4.3	4.1
Salt Lake	5.5	5.3	5.6	4.5	4.3	4.0
Tooele	6.0	6.3	7.4	5.6	4.6	5.5
Mountainland	6.8	6.7	7.3	4.6	4.6	4.2
Summit	7.8	8.6	8.6	6.5	6.2	6.2
Utah	6.5	6.3	6.9	4.3	4.3	3.9
Wasatch	11.3	13.3	13.5	8.7	8.3	6.9
Central	8.9	10.2	10.0	7.9	7.2	6.7
Juab	15.5	15.8	15.3	9.7	7.7	6.7
Millard	5.5	6.6	7.5	5.6	5.2	4.4
Piute	13.3	14.8	12.6	12.7	7.6	12.3
Sanpete	13.2	14.9	13.4	11.2	10.4	9.3
Sevier	7.4	7.9	7.4	6.0	5.6	5.5
Wayne	8.1	9.4	9.4	6.9	6.4	7.5
Southwestern	6.0	5.9	6.3	4.9	4.9	4.9
Beaver	6.1	6.8	6.3	5.4	5.3	5.0
Garfield	13.5	12.3	12.2	8.6	9.5	10.1
Iron	6.2	6.3	6.5	4.9	4.7	4.6
Kane	8.6	7.1	7.6	6.1	6.9	6.3
Washington	4.7	4.8	5.4	4.4	4.3	4.4
Uintah Basin	9.1	13.1	13.2	9.2	8.5	7.1
Daggett	3.9	4.1	3.4	2.8	2.0	1.9
Duchesne	10.5	15.4	16.4	12.0	10.6	8.5
Uintah	8.5	12.0	11.8	8.0	7.7	6.6
Southeastern	10.9	10.7	10.9	8.6	8.1	7.4
Carbon	10.0	10.1	10.3	8.5	8.2	6.8
Emery	12.9	12.6	14.9	9.3	7.6	8.0
Grand	13.1	12.9	11.0	8.8	9.5	7.9
San Juan	9.0	8.2	8.4	7.9	7.4	7.6

p = preliminary

Source: Utah Department of Employment Security, Labor Market Information Services.

Table 3
Characteristics of Utah Unemployed Persons
1989 Annual Averages

	Total Number	Percent	Males Number	Percent	Females Number	Percent
Total Unemployed	37,000	100.0%	19,000	100.0%	17,000	100.0%
Age of Unemployed						
16-19 Years	10,000	27.0%	6,000	31.6%	5,000	29.4%
20-24 Years	5,000	13.5%	3,000	15.8%	3,000	17.6%
25-34 Years	10,000	27.0%	5,000	26.3%	5,000	29.4%
35-44 Years	5,000	13.5%	3,000	15.8%	2,000	11.8%
45-54 Years	3,000	8.1%	1,000	5.3%	2,000	11.8%
55+ Years	2,000	5.4%	1,000	5.3%	1,000	5.9%
Marital Status of Unemployed						
Single: Never Married	17,000	45.9%	11,000	57.9%	6,000	35.3%
Married: Spouse Present	13,000	35.1%	6,000	31.6%	7,000	41.2%
Other: Widowed, Divorced, & Separated	6,000	16.2%	2,000	10.5%	5,000	29.4%
Length of Unemployment						
Less Than 5 Weeks	18,000	48.6%	9,000	47.4%	10,000	58.8%
5-14 Weeks	11,000	29.7%	6,000	31.6%	5,000	29.4%
15-26 Weeks	4,000	10.8%	2,000	10.5%	2,000	11.8%
27 Weeks And Over	3,000	8.1%	2,000	10.5%	1,000	5.9%
Full And Part-Time Status						
Looking For Full-Time Work	26,200	70.8%	14,900	78.4%	11,300	66.5%
Looking For Part Time Work	10,400	28.1%	4,300	22.6%	6,100	35.9%

Source: Utah Department of Employment Security, Labor Market Information Services.

Table 4
Duration of Unemployment in Utah
as a Percent of Total Unemployed

	Less Than 5 Weeks	5-14 Weeks	15 Weeks+	27 Weeks+
TOTAL (BOTH SEXES)				
1989	47.4	28.9	10.5	7.9
1988	47.3	34.3	37.6	7.5
1987	50.2	27.2	22.6	10.2
1986	45.9	32.2	21.9	10.7
1985	46.7	32.2	21.1	9.8
1984	47.3	29.9	22.7	11.1
1983	37.7	32.0	30.3	15.0
1982	38.2	36.6	25.3	10.1
1981	49.6	29.9	20.5	8.9
MALES				
1989	47.4	31.6	10.5	10.5
1987	44.3	29.5	26.3	11.2
1986	38.4	34.1	27.4	12.8
1985	43.3	34.4	22.3	10.8
1984	42.6	29.3	28.1	13.6
1983	29.8	32.5	37.6	20.2
1982	35.4	34.6	30.0	13.1
FEMALES				
1989	55.5	27.8	11.1	5.6
1987	58.1	24.3	17.6	8.6
1986	53.8	30.2	16.0	8.4
1985	50.9	29.5	19.5	8.6
1984	50.0	31.8	18.1	9.0
1983	49.5	31.3	19.2	7.2

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

Table 5
Reasons for Unemployment in Utah
as a Percent of Total Unemployed

	Job Losers	Job Leavers	New & Reentrants
TOTAL (BOTH SEXES)			
1989	42.1	23.7	34.2
1988	44.2	12.2	43.5
1987	45.7	12.8	41.5
1986	48.5	13.1	38.4
1985	45.0	14.5	40.5
1984	44.3	10.8	44.9
1983	52.9	8.4	38.7
1982	57.5	9.0	36.5
1981	45.0	16.1	38.8
MALES			
1989	42.1	26.3	31.6
1987	62.7	8.6	28.7
1986	61.3	12.2	26.6
1985	56.3	14.0	29.7
1984	58.6	9.7	31.7
1983	67.5	5.0	27.5
1982	65.4	7.0	27.7
FEMALES			
1989	38.9	22.2	38.9
1987	23.8	18.1	58.0
1986	34.9	14.1	51.0
1985	30.8	15.2	54.0
1984	27.3	13.6	59.1
1983	30.9	13.5	55.6

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

Table 6
Utah Labor Force, Nonagricultural Jobs and Wages
Selected Years

	1985	1986	1987	1988	1989	1990(p)	% Change 85-86	% Change 86-87	% Change 87-88	% Change 88-89	% Change 89-90
CIVILIAN LABOR FORCE	730,000	754,000	757,000	759,000	789,000	802,000	3.3%	0.4%	0.3%	4.0%	1.6%
TOTAL EMPLOYED PERSONS	687,000	709,000	709,000	722,000	752,000	766,000	3.2%	0.0%	1.8%	4.2%	1.9%
UNEMPLOYED PERSONS	43,000	45,000	48,000	37,000	37,000	36,000	4.7%	6.7%	-22.9%	0.0%	-2.7%
UNEMPLOYMENT RATE	5.9%	6.0%	6.3%	4.9%	4.6%	4.5%					
NONAGRIGULTURAL JOBS	624,400	634,100	640,300	660,100	691,200	722,800	1.6%	1.0%	3.1%	4.7%	4.6%
Mining	9,700	7,800	8,000	8,100	8,100	8,500	-19.8%	2.4%	2.1%	-0.4%	4.6%
Contract Construction	35,500	32,200	26,700	25,000	25,900	27,100	-9.3%	-17.2%	-6.4%	3.6%	4.8%
Manufacturing	94,000	92,100	92,500	99,000	103,100	106,600	-2.0%	0.4%	7.1%	4.1%	3.4%
Trans.,Comm., & Publ. Util	37,000	37,500	37,900	39,400	40,900	42,600	1.4%	0.9%	3.9%	3.8%	4.3%
Trade	147,900	152,400	152,600	156,500	166,400	173,200	3.1%	0.1%	2.6%	6.3%	4.1%
Finance, Ins., & Real Est.	31,100	32,900	33,800	33,400	33,400	34,100	5.8%	2.7%	-1.0%	-0.1%	2.2%
Services	131,300	137,900	147,500	155,900	167,200	180,300	5.0%	7.0%	5.7%	7.3%	7.8%
Government	137,800	141,300	141,500	142,700	146,300	150,400	2.5%	0.1%	0.9%	2.5%	2.8%
NONAGRICULTURAL WAGES (Millions)	$10,792	$11,131	$11,536	$12,271	$13,148	$14,183	3.1%	3.6%	6.4%	7.1%	7.9%
Average Monthly Wage	$1,440	$1,463	$1,501	$1,549	$1,585	$1,635	1.6%	2.6%	3.2%	2.3%	3.2%
Adjusted For Inflation (Real Wages)	$1,440	$1,436	$1,422	$1,409	$1,375	$1,346	-0.3%	-1.0%	-0.9%	-2.4%	-2.1%

p = preliminary

Source: Utah Department of Employment Security, Labor Market Information Services, December 1990.

Table 7
1989 Nonagricultural Employment in Utah
By District, County and Major Industry

District and County	Total	Mining	Construction	Manufacturing	Transportation, Communications & Public Utilities	Trade	Finance, Insurance & Real Estate	Services & Misc.	Government
State Total	691,244	8,129	25,868	103,071	40,863	166,428	33,380	167,203	146,302
Bear River	43,331	11	1,426	16,886	899	7,678	878	5,454	10,099
Box Elder	15,938	10	534	8,864	264	2,792	264	1,212	1,998
Cache	27,028	0	892	8,021	622	4,819	581	4,190	7,903
Rich	365	1	0	1	13	67	33	52	198
Wasatch Front	485,000	2,820	18,423	67,388	31,530	120,803	27,463	114,194	102,373
North	121,568	100	4,288	17,560	4,326	27,989	3,481	24,449	39,372
Davis	56,675	76	2,211	7,236	2,112	13,084	1,198	9,246	21,512
Morgan	929	0	60	178	7	334	17	45	288
Weber	63,964	24	2,017	10,149	2,207	14,571	2,266	15,158	17,572
South	363,432	2,720	14,135	49,828	27,204	92,814	23,982	89,745	63,001
Salt Lake	352,870	2,479	13,715	48,844	26,991	91,612	23,830	88,823	56,573
Tooele	10,562	241	420	984	213	1,202	152	922	6,428
Mountainland	97,084	116	3,371	13,823	3,068	22,274	3,337	35,399	15,696
Summit	7,601	86	354	263	281	1,838	984	2,786	1,009
Utah	87,049	30	2,771	13,460	2,711	19,869	2,301	31,871	14,036
Wasatch	2,434	0	246	100	76	567	52	742	651
Central	14,610	532	781	1,864	1,287	3,266	361	1,993	4,526
Juab	1,638	109	63	257	26	437	32	276	438
Millard	3,256	122	187	225	699	669	69	415	870
Piute	184	0	0	26	9	17	5	8	119
Sanpete	3,873	1	149	804	143	756	97	414	1,509
Sevier	5,093	300	335	486	399	1,318	158	826	1,271
Wayne	566	0	47	66	11	69	0	54	319
Southwestern	24,517	262	1,021	2,213	1,465	6,942	810	5,675	6,129
Beaver	1,269	0	38	86	155	361	37	132	460
Garfield	1,511	10	29	226	64	198	23	471	490
Iron	7,122	149	208	525	404	1,922	227	1,461	2,226
Kane	1,524	10	26	63	64	481	37	414	429
Washington	13,091	93	720	1,313	778	3,980	486	3,197	2,524
Uintah Basin	10,139	1,441	216	359	1,009	2,132	220	1,749	3,013
Daggett	317	0	0	0	28	33	0	75	181
Duchesne	3,465	402	109	132	381	726	97	391	1,227
Uintah	6,357	1,039	107	227	600	1,373	123	1,283	1,605
Southeastern	16,563	2,947	630	538	1,605	3,333	311	2,739	4,466
Carbon	7,445	1,302	157	278	505	1,729	162	1,364	1,948
Emery	3,653	1,030	274	12	803	413	46	284	791
Grand	2,212	178	68	49	131	687	71	485	543
San Juan	3,253	437	131	193	166	504	32	606	1,184

SOURCE: Utah Department of Employment Security, Labor Market Information Services.

Table 8
1989 Labor Force, Employed and Unemployed Persons
By District and County

Planning District and County	Civilian Labor Force	Total Employed	Unemployed Number	Unemployed Rate
STATE	802,000	766,000	36,000	4.5
BEAR RIVER	52,507	50,330	2,176	4.1
BOX ELDER	18,057	17,245	811	4.5
CACHE	33,490	32,147	1,343	4.0
RICH	960	938	22	2.3
WASATCH FRONT	530,874	508,011	22,864	4.3
WASATCH FRONT NORTH	157,468	149,838	7,630	4.8
DAVIS	80,347	76,976	3,372	4.2
MORGAN	1,701	1,597	104	6.1
WEBER	75,420	71,265	4,155	5.5
WASATCH FRONT SOUTH	373,406	358,172	15,234	4.1
SALT LAKE	362,150	347,539	14,611	4.0
TOOELE	11,256	10,633	623	5.5
MOUNTAINLAND	129,516	124,089	5,427	4.2
SUMMIT	8,297	7,786	511	6.2
UTAH	116,316	111,740	4,576	3.9
WASATCH	4,903	4,563	340	6.9
CENTRAL	22,228	20,744	1,485	6.7
JUAB	2,081	1,941	140	6.7
MILLARD	5,471	5,232	240	4.4
PIUTE	427	375	52	12.3
SANPETE	6,448	5,848	601	9.3
SEVIER	6,689	6,321	368	5.5
WAYNE	1,112	1,028	84	7.5
SOUTHWESTERN	34,701	32,988	1,713	4.9
BEAVER	2,129	2,023	106	5.0
GARFIELD	1,634	1,469	165	10.1
IRON	9,455	9,016	438	4.6
KANE	2,584	2,420	163	6.3
WASHINGTON	18,900	18,060	841	4.4
UINTAH BASIN	13,107	12,175	932	7.1
DAGGETT	472	463	9	1.9
DUCHESNE	4,475	4,094	381	8.5
UINTAH	8,160	7,618	542	6.6
SOUTHEASTERN	19,066	17,663	1,403	7.4
CARBON	8,486	7,911	575	6.8
EMERY	3,714	3,416	297	8.0
GRAND	2,922	2,692	230	7.9
SAN JUAN	3,945	3,644	301	7.6

Note: These estimates are unrounded for convenience rather than to denote accuracy. They will be revised in February 1991.

Source: Utah Department of Employment Security, LMI Services, December 1990.

Table 9
Utah's Largest Nonagricultural Employers
Ranked by Employment Size
December 1989

	Firm Name	Approximate Employment
1	Hill Air Force Base	13,500
2	Brigham Young University	13,500
3	University of Utah (incl. Hospital)	13,000
4	Thiokol Corporation	7,000
5	Granite School District	7,000
6	Smiths Food & Drug	5,500
7	Jordan School District	5,500
8	Internal Revenue Service Center	5,000
9	Hercules Inc.	4,500
10	Utah Dept. of Social Services	4,500
11	ZCMI	4,500
12	Davis School District	4,500
13	Pacific Corp.	4,000
14	Delta Airlines	4,000
15	Tooele Army Depot	4,000
16	U.S. Post Office	4,000
17	Salt Lake County	4,000
18	Utah State University	3,500
19	Alpine School District	3,500
20	Salt Lake School District	3,000
21	Albertson's, Inc.	3,000
22	US West Communications	3,000
23	Unisys Corporation	3,000
24	Sears Roebuck & Co.	3,000
25	Matrixx Marketing	3,000
26	LDS Hospital	3,000
27	Weber School District	2,500
28	K Mart	2,500
29	Geneva Steel	2,500
30	Shopko Stores	2,500
31	Salt Lake City Corporation	2,500
32	Kennecott Copper	2,500
33	Pro-Benefit Staffing	2,000
34	J.C. Penney Co.	2,000
35	Fred Meyer	2,000
36	Defense Depot Ogden	2,000
37	Healthtrust, Inc.	2,000
38	Utah Valley Regional Medical Center	2,000
39	U.S. Forest Service	2,000
40	McKay-Dee Hospital	2,000
41	Provo School District	1,500
42	United Parcel Service	1,500
43	Utah Dept. of Transportation	1,500
44	First Security Bank	1,500
45	American Express	1,500
46	Veterans Administration Hospital	1,500
47	Zions First National Bank	1,500
48	Union Pacific Railroad	1,500
49	Nebo School District	1,500
50	Southland/7-11	1,500

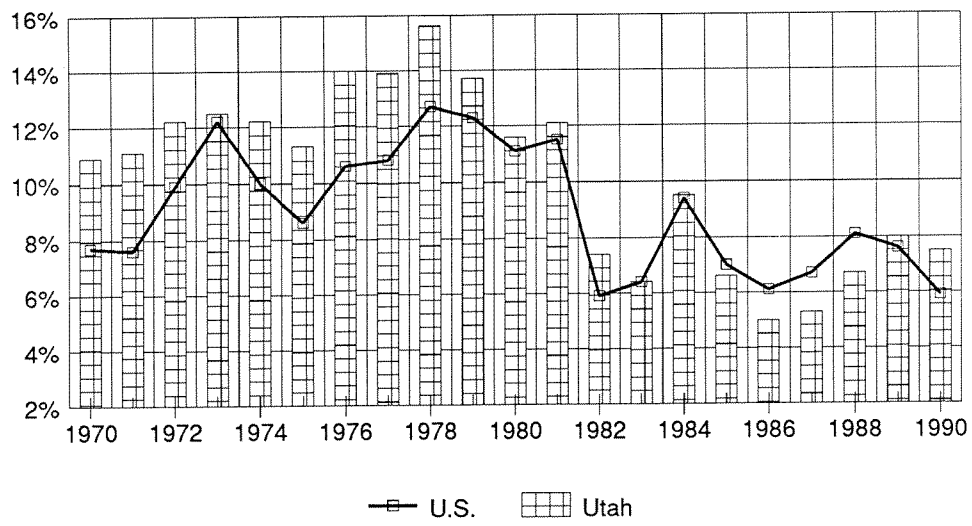
Source: Utah Department of Employment Security

PERSONAL INCOME

Total personal income is defined as all income received by all residents of an area. The statistical series comprising the components of total personal income, by area and by year, constitute the most extensive body of consistent economic information available for the nation, states, counties and metropolitan areas. This entire data series was developed and is maintained by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce.

Utah's 1990 total personal income (TPI) is forecast to be $24.0 billion, up 7.5 percent from the 1989 total. As Table 10 and Figure 10 show, Utah's TPI increased more rapidly than the United States through the 1970s. And, from 1980 through 1984, the yearly rates of growth were nearly identical. But Utah's economic slump from 1985 to 1988 retarded its TPI growth while the national growth rate continued its steady progress. The relative strength of Utah's present economic expansion is clearly reflected in the 1989 and 1990 TPI growth comparisons. Utah's 1989 TPI growth was slightly faster (8.0 to 7.6) than that of the U.S. In 1990, TPI for the U.S. will slow to 5.9, while Utah's will be 7.5 percent.

Figure 10
Utah and United States
Personal Income Growth Rates: 1970-90

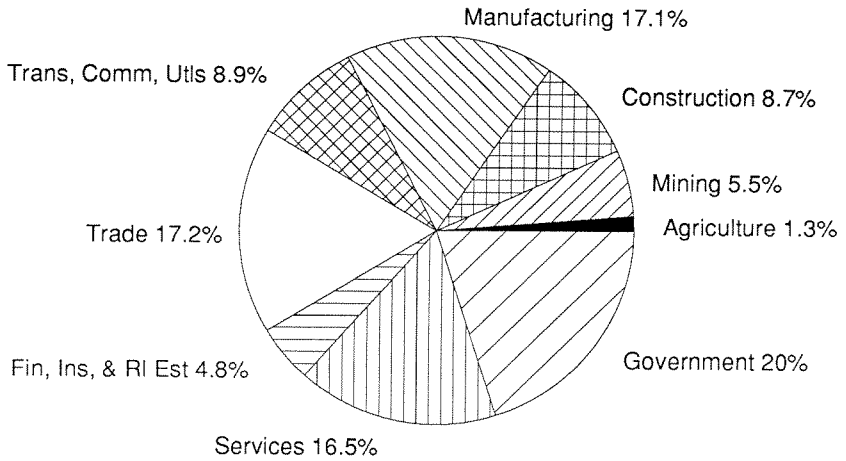


Source: U.S. Bureau of Economic Analysis
and Utah Economic Coordinating Committee

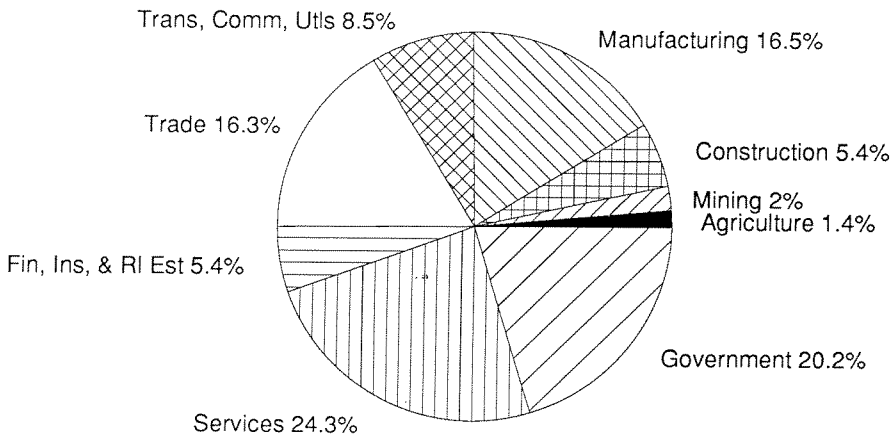
Components of Personal Income

The largest single component of total personal income is "Earnings by Place of Work." As depicted in Table 11, this portion consists of the total earnings from both farm and nonfarm industries, including contributions for social insurance. It may also be viewed as the combined total of wages and salaries, other labor income, and proprietors' income--both farm and nonfarm.

Figure 11
Utah's Distribution of Earnings Income by Industry for 1980 and 1990



1980



1990p

p - preliminary estimate
Source: U.S. Bureau of Economic Analysis
and Ut. Dept. of Employment Security

In 1990, earnings by place of work was $18.1 billion, representing 76 percent of TPI. Approximately ten percent of this figure was proprietors' income, while ninety percent was wages, salaries, and other labor income. Nonfarm earnings ($17.9 billion) was nearly 99 percent of total earnings; farm income was only 1.2 percent. Private sector nonfarm industries accounted for eighty percent of nonfarm earnings, while earnings from public (government) industries made up twenty percent.

The other components of TPI are (1) dividends, interest and rent (DIR), and (2) transfer payments. In 1990, DIR amounted to $3.4 billion, and transfer payments were $3.5 billion. These two components, plus "Earnings by Place of Residence," constitute TPI.

Some of the major differences between the economic compositions of Utah and the United States can be observed in Table 11. Perhaps the most significant is that Utah DIR (dividends, interest and rent) comprise a somewhat smaller (14.0 percent vs. 17.5) share of TPI than the national figure. Thus, Utahns must rely to a greater extent on earnings. The problem with this is that Utah's average wage is only about 86 percent of the U.S. average. Due to these two factors, Utah's TPI is relatively lower than that of the U.S.

The industrial composition of Utah's TPI has changed in recent years. In 1980, prior to the recession periods, goods-producing industries (mining, construction, manufacturing) generated over 31 percent of Utah's earnings. By 1990 that share had dropped to 23.9 percent. In 1980, service-producing industries (including government) paid 67 percent of total earnings. By 1990 this statistic had increased to nearly 75 percent. These comparisons reflect the continuing historical shift from goods-producing to service-producing jobs in the state's economy. Similar shifts have been experienced nationally.

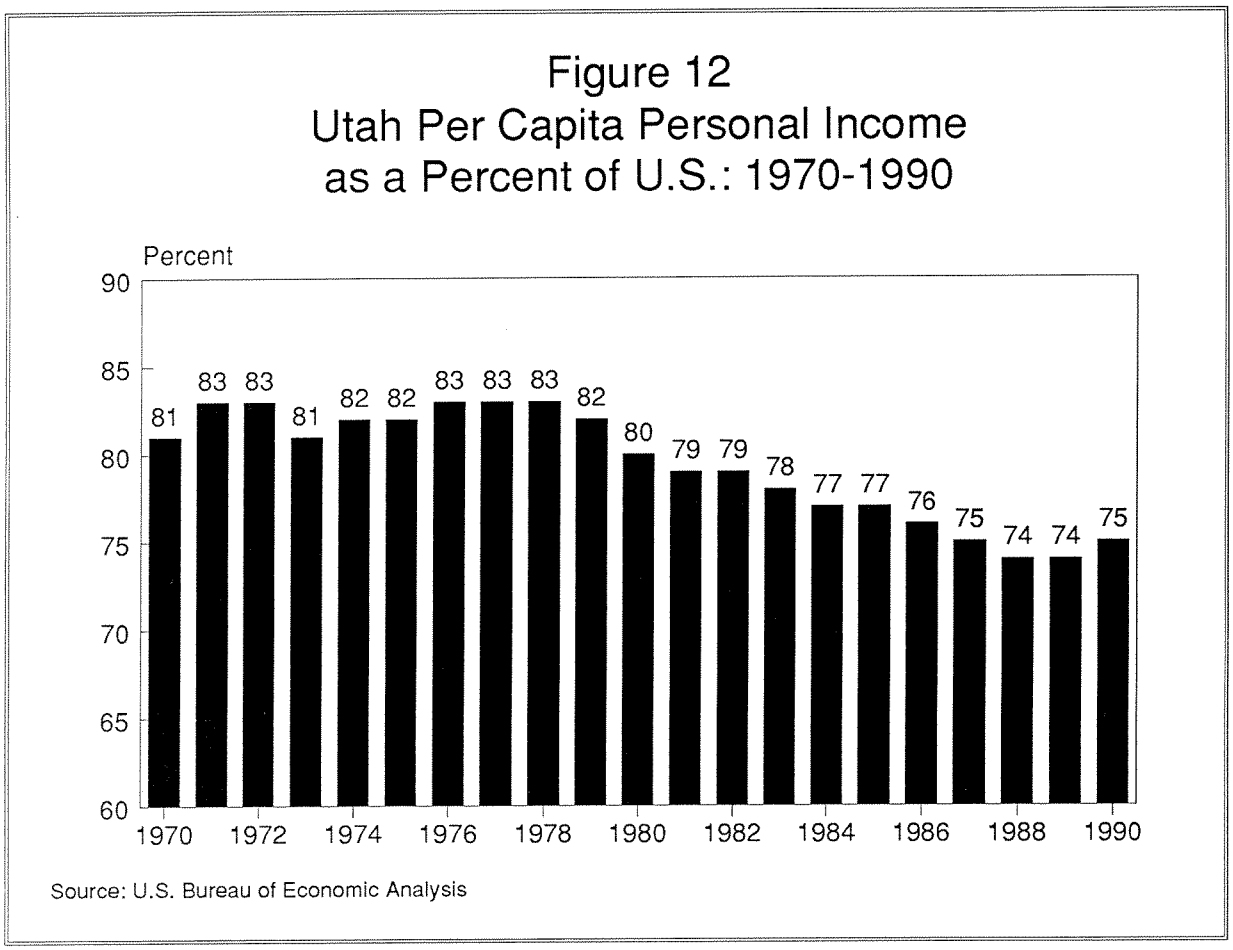
Four major industry sectors generate over three-fourths of Utah's total earnings. Services is the leader, providing 24 percent of earnings; government (including military) pays 20 percent. Manufacturing accounts for nearly 17 percent, and trade produces 16 percent of Utah's total earnings. Following these are transportation/communications/utilities at 9 percent, construction and finance/insurance/real estate both at 5 percent, and mining at 2 percent of earnings. Agriculture and agricultural services make up the remaining 1.4 percent. Figure 11 illustrates these industrial shares of earnings for Utah for 1980 and 1990.

Per Capita Personal Income

Per capita personal income is an area's annual total personal income divided by the total population as of July 1 of that year. Utah's 1990 per capita personal income (PCI) is estimated at approximately $13,840. From 1982 to 1990, Utah's real (inflation-adjusted) PCI has increased $1600, compared to the $3000 increase in the United States' real PCI.

Utah's 1989 per capita personal income of $13,079 ranked 46th among the fifty states. The 1988 ranking pegged Utah at 47th. Because Utah's population has a large number of children (because of a high birth rate), this PCI comparison portrays Utah as a low-income state. However, comparing state per capita income based on adult population estimates improves the Utah ranking considerably: Utah's 1988 ranking is 32nd among the states by this measure. Utah also compares more favorably to the rest of the U.S. when using household income data. Total personal income per household in 1989 in Utah was $41,800, compared with $47,000 for the U.S; Utah's total personal income per household was 89 percent of the national figure.

During the 1970s, Utah's PCI ranged between 81 and 83 percent of the United States PCI. However, as shown in Figure 12, from 1978 to 1988 Utah dropped nine percentage points--from 83 to 74 percent. But 1989 and 1990 both saw improvements in this comparison--the 1990 figure stands at 74.8 percent. Utah's PCI for 1987 to 1990 is included in Table 11.



County Personal Income

Seven of Utah's counties posted double-digit 1988-89 growth in total personal income. These counties are generally in a strip through the central and southwestern regions. Declines (generally minor) occurred in only four counties: Morgan, Piute, Wayne and Uintah. Not surprisingly, counties with substantial TPI increases tended to experience relatively large employment increases too.

With few exceptions, the per capita income estimates in northern Utah's counties are considerably higher than those of the rest of the state. Summit County's $20,000 leads Utah; San Juan County's $8,300 is lowest. Interestingly, Carbon and Daggett are the only counties outside the northern Utah group with PCI's greater than the State figure. The 1989 per capita income of the United States, at $17,596, is higher than that of all of Utah's counties except Summit. Table 12 presents county and planning district TPI and PCI estimates for 1987 through 1989.

Table 10
Total Personal Income
Utah and U.S.
1969 to 1990

	Utah Total Personal Income (Millions)	U.S. Total Personal Income (Millions)	Utah Growth Rates	U.S. Growth Rates
1969	$3,169	$766,522	--	--
1970	$3,513	$825,534	10.9%	7.7%
1971	$3,904	$888,536	11.1%	7.6%
1972	$4,380	$976,181	12.2%	9.9%
1973	$4,928	$1,095,289	12.5%	12.2%
1974	$5,530	$1,204,899	12.2%	10.0%
1975	$6,155	$1,308,482	11.3%	8.6%
1976	$7,014	$1,447,002	14.0%	10.6%
1977	$7,987	$1,602,863	13.9%	10.8%
1978	$9,230	$1,806,968	15.6%	12.7%
1979	$10,490	$2,028,510	13.7%	12.3%
1980	$11,710	$2,254,076	11.6%	11.1%
1981	$13,125	$2,514,231	12.1%	11.5%
1982	$14,091	$2,663,432	7.4%	5.9%
1983	$14,998	$2,834,385	6.4%	6.4%
1984	$16,426	$3,101,163	9.5%	9.4%
1985	$17,512	$3,317,545	6.6%	7.0%
1986	$18,391	$3,519,364	5.0%	6.1%
1987	$19,370	$3,754,396	5.3%	6.7%
1988	$20,674	$4,058,655	6.7%	8.1%
1989	$22,327	$4,368,129	8.0%	7.6%
1990	$24,000	$4,627,000	7.5%	5.9%

Source: U.S. Bureau of Economic Analysis and Utah Department of Employment Security, Labor Market Information Services.

Table 11
Components of Utah Total Personal Income
1987 to 1990

	1987 (Millions)	1988 (Millions)	1989 (Millions)	1990 (Millions)	87-88 % Change	88-89 % Change	89-90 % Change	1989 Percentage Distribution UTAH	1989 Percentage Distribution U.S.	
TOTAL PERSONAL INCOME	$19,371	$20,675	$22,327	$24,000	6.7	8.0	7.5	100.0	100.0	
TOTAL EARNINGS - PLACE/WORK	$14,724	$15,784	$16,913	$18,137	7.2	7.2	7.2	75.7	72.8	
LESS:										
PERSONAL CONT.FOR SOC.INS.	$864	$921	$1,025	$1,112	6.6	11.3	8.5	4.6	4.9	
PLUS: RESID. ADJUSTMENT	$68	$82	$88	$95	21.9	7.3	7.4	0.4	-0.0	
EQUALS: EARNINGS BY RESIDENCE	$13,928	$14,945	$15,976	$17,120	7.3	6.9	7.2	71.6	67.9	
PLUS:										
DIVIDENDS, INTEREST & RENT	$2,541	$2,672	$3,117	$3,384	5.1	16.7	8.6	14.0	17.5	
PLUS:										
TRANSFER PAYMENTS	$2,902	$3,058	$3,234	$3,496	5.4	5.8	8.1	14.5	14.6	
COMPONENTS OF EARNINGS	$14,724	$15,784	$16,913	$18,137	7.2	7.2	7.2	75.7	72.8	
WAGES & SALARIES	$12,122	$12,926	$13,854	$14,843	6.6	7.2	7.1	62.1	58.7	
OTHER LABOR INCOME	$1,087	$1,159	$1,273	$1,379	6.6	9.9	8.3	5.7	5.5	
PROPRIETORS' INCOME	$1,515	$1,699	$1,785	$1,915	12.2	5.1	7.3	8.0	8.5	
FARM	$134	$184	$155	$164	37.1	-15.5	5.9	0.7	1.0	1990
NONFARM	$1,381	$1,515	$1,630	$1,751	9.7	7.6	7.4	7.3	7.6	Distrib.
EARNINGS BY INDUSTRY	$14,724	$15,784	$16,914	$18,137	7.2	7.2	7.2	75.8	72.8	100.0
FARM	$180	$228	$200	$211	27.2	-12.6	5.5	0.9	1.2	1.2
NONFARM	$14,545	$15,556	$16,715	$17,928	7.0	7.5	7.3	74.9	71.6	98.8
PRIVATE SECTOR	$11,435	$12,325	$13,301	$14,275	7.8	7.9	7.3	59.6	60.2	78.7
AG SERVICES, ETC.	$46	$46	$49	$52	0.5	5.4	6.8	0.2	0.4	0.3
MINING	$311	$333	$344	$370	6.8	3.4	7.6	1.5	0.7	2.0
CONSTRUCTION	$906	$915	$961	$988	1.0	5.0	2.8	4.3	4.5	5.4
MANUFACTURING	$2,417	$2,687	$2,854	$2,998	11.2	6.2	5.0	12.8	14.3	16.5
TRANS., COMMUN., UTILITIES	$1,235	$1,333	$1,448	$1,534	8.0	8.6	5.9	6.5	4.8	8.5
WHOLESALE TRADE	$906	$986	$1,097	$1,181	8.9	11.3	7.7	4.9	4.8	6.5
RETAIL TRADE	$1,424	$1,499	$1,614	$1,777	5.2	7.7	10.1	7.2	6.9	9.8
FIN., INS., REAL ESTATE	$873	$874	$902	$978	0.1	3.2	8.5	4.0	5.1	5.4
SERVICES	$3,318	$3,653	$4,033	$4,398	10.1	10.4	9.1	18.1	18.6	24.2
GOVERNMENT (INCL MILITARY)	$3,110	$3,231	$3,414	$3,652	3.9	5.7	7.0	15.3	11.4	20.1
PER CAPITA PERSONAL INCOME	$11,532	$12,225	$13,079	$13,840	6.0	7.0	5.8			

Source: Utah Department of Employment Security, Labor Market Information Services, November 1990.

Table 12
Total and Per Capita Personal Income
By County and Multi-County Planning District

Planning District and County	Total Personal Income (Millions) 1987	1988	1989	87-88 % change	88-89 % change	Per Capita Personal Income 1987	1988	1989	87-88 % change	88-89 % change
STATE TOTAL	$19,370.0	$20,674.0	$22,326.0	6.7	8.0	$11,530	$12,230	$13,080	6.1	7.0
BEAR RIVER	$1,178.0	$1,261.4	$1,354.9	7.1	7.4	$11,090	$11,720	$12,440	5.7	6.1
BOX ELDER	$473.7	$506.0	$526.0	6.8	4.0	$12,450	$13,130	$13,730	5.5	4.6
CACHE	$683.6	$731.8	$804.0	7.1	9.9	$10,350	$10,910	$11,700	5.4	7.2
RICH	$20.7	$23.6	$24.9	14.0	5.5	$9,860	$11,750	$13,080	19.2	11.3
WASATCH FRONT	$13,591.8	$14,415.2	$15,432.0	6.1	7.1	$12,460	$13,070	$13,970	4.9	6.9
NORTH	$4,112.0	$4,355.6	$4,707.5	5.9	8.1	$11,830	$12,380	$13,390	4.6	8.2
DAVIS	$2,023.1	$2,145.5	$2,370.6	6.1	10.5	$11,150	$11,570	$12,750	3.8	10.2
MORGAN	$66.5	$69.2	$68.9	4.1	-0.4	$12,300	$12,760	$12,530	3.7	-1.8
WEBER	$2,022.4	$2,140.9	$2,268.0	5.9	5.9	$12,580	$13,320	$14,160	5.9	6.3
SOUTH	$9,479.8	$10,059.6	$10,724.5	6.1	6.6	$12,750	$13,390	$14,240	5.0	6.3
SALT LAKE	$9,143.2	$9,705.9	$10,351.8	6.2	6.7	$12,970	$13,430	$14,280	3.5	6.3
TOOELE	$336.6	$353.7	$372.7	5.1	5.4	$11,760	$12,280	$13,220	4.4	7.7
MOUNTAINLAND	$2,516.4	$2,794.2	$3,166.2	11.0	13.3	$9,500	$10,450	$11,500	10.0	10.0
SUMMIT	$229.7	$251.7	$288.2	9.6	14.5	$17,260	$18,170	$20,010	5.3	10.1
UTAH	$2,188.7	$2,434.0	$2,761.5	11.2	13.5	$9,050	$9,990	$11,000	10.4	10.1
WASATCH	$98.0	$108.5	$116.5	10.7	7.4	$10,090	$10,920	$11,650	8.2	6.7
CENTRAL	$499.0	$524.7	$557.1	5.2	6.2	$9,270	$9,850	$10,510	6.3	6.7
JUAB	$48.3	$53.4	$61.2	10.6	14.6	$8,330	$9,330	$10,560	12.0	13.2
MILLARD	$120.3	$124.5	$130.2	3.5	4.6	$9,390	$10,080	$10,670	7.3	5.9
PIUTE	$12.0	$12.6	$11.6	5.0	-7.9	$8,570	$9,000	$8,920	5.0	-0.9
SANPETE	$138.1	$148.5	$153.6	7.5	3.4	$8,410	$9,020	$9,420	7.3	4.4
SEVIER	$159.8	$165.0	$180.7	3.3	9.5	$10,430	$10,820	$11,810	3.7	9.1
WAYNE	$20.5	$20.7	$19.8	1.0	-4.4	$9,760	$9,810	$9,440	0.5	-3.8
SOUTHWESTERN	$697.9	$755.4	$864.8	8.2	14.5	$9,280	$9,850	$10,950	6.1	11.2
BEAVER	$45.3	$50.3	$52.8	11.0	5.0	$8,240	$10,660	$11,240	29.4	5.4
GARFIELD	$41.4	$45.1	$49.2	8.9	9.1	$10,100	$10,950	$12,300	8.4	12.3
IRON	$168.1	$180.2	$209.4	7.2	16.2	$8,650	$9,350	$10,630	8.1	13.7
KANE	$48.8	$52.9	$57.0	8.4	7.8	$9,960	$10,760	$11,390	8.0	5.9
WASHINGTON	$394.3	$426.9	$496.4	8.3	16.3	$9,420	$9,780	$10,880	3.8	11.2
UINTAH BASIN	$359.2	$370.8	$371.5	3.2	0.2	$9,440	$10,120	$10,410	7.2	2.9
DAGGETT	$8.5	$9.5	$9.9	11.8	4.2	$10,630	$13,570	$14,180	27.7	4.5
DUCHESNE	$134.8	$135.6	$141.5	0.6	4.4	$9,420	$10,010	$10,890	6.3	8.8
UINTAH	$215.9	$225.7	$220.1	4.5	-2.5	$9,420	$10,090	$10,000	7.1	-0.9
SOUTHEASTERN	$527.6	$552.4	$579.4	4.7	4.9	$10,150	$10,790	$11,560	6.3	7.1
CARBON	$266.4	$276.0	$282.2	3.6	2.2	$11,990	$12,730	$13,570	6.2	6.6
EMERY	$98.8	$101.7	$115.2	2.9	13.3	$8,510	$8,960	$10,470	5.3	16.9
GRAND	$76.8	$82.2	$84.3	7.0	2.6	$11,620	$12,600	$12,980	8.4	3.0
SAN JUAN	$85.6	$92.5	$97.7	8.1	5.6	$7,430	$7,950	$8,280	7.0	4.2

Source: Utah Department of Employment Security, Labor Market Information Services, December 1990.

Table 13
Personal Income Trends
Utah and U.S.

	1980	1985	1990	Average Annual Change* 1980-85	1985-90	1980-90	Percent of U.S. Total 1980	1985	1990
Population (Thousands)									
U.S.	227,255	238,736	250,885	1.0%	1.0%	1.0%	100.00%	100.00%	100.00%
Utah	1,461	1,645	1,734	2.4%	0.9%	1.7%	0.64%	0.69%	0.69%
Total Personal Income (Billions)									
U.S.	$2,254.1	$3,317.5	$4,646.0	8.0%	7.0%	7.5%	100.00%	100.00%	100.00%
Utah	$11.7	$17.5	$24.0	8.4%	6.5%	7.5%	0.52%	0.53%	0.52%
Per Capita Personal Income									
U.S.	$9,919	$13,896	$18,510	7.0%	5.9%	6.4%	100.0%	100.0%	100.0%
Utah	$7,952	$10,653	$13,840	6.0%	5.4%	5.7%	80.2%	76.7%	74.8%

* Compounded Annually.

Sources: U.S. Department of Commerce, Bureau of Economic Analysis.
Utah Department of Employment Security, Labor Market Information Services.

DEMOGRAPHIC CHARACTERISTICS

April 1, 1990 marked the day on which the U.S. Census Bureau conducted the most recent decennial effort of counting all of the nation's people. While the numbers of total state populations were made public on December 26, 1990, details and figures for smaller political boundaries will be released throughout 1991 and later.

Utah's population count was 1,727,784 on April 1, 1990. This reflects an overall increase of 266,747 people, or 18.3 percent from 1980. Although the state's population grew at about 1.7 percent annually during the decade, this is half the 3.3 percent rate of the 1970s. All of the growth can be attributed to natural increase, as the state experienced net out-migration of approximately 25,000 between 1980 and 1990.

Utah was the tenth fastest-growing state in the nation during the 1980s. It is also the only state of the top ten that can attribute its growth solely to a high fertility rate--the nation's highest. Although Alaska also has a high fertility rate, the other top ten states' increases were due primarily to in-migration. All of the fastest-growing states were located along the west coast and in the south, the exception being New Hampshire. Nevada, Alaska and Arizona led the nation in percentage increases. Table 15 depicts all of the states' populations, growth rates and rankings.

Over the past decade, Utah retained its unique place among states in the nation--its population is still the youngest. The following statistics exemplify this fact: Utah has the highest number of preschool and school-aged children to persons of working age in the nation; as a percentage of the total population, Utah's population aged 18-64 is ranked last; and it has the highest total fertility rate in the nation.

1990 Annual Population Growth

Between July 1, 1989 and July 1, 1990, the Utah's population grew by 25,000 people--from 1,709,000 to 1,734,000. As shown in Figures 13 and 14, the level of change indicates continued improvement in the annual rate of growth. The rate of growth, 1.5 percent, during fiscal year 1990, is the fastest since 1984. This is attributed to a significant slowdown in out-migration and a stabilization of once-falling fertility rates.

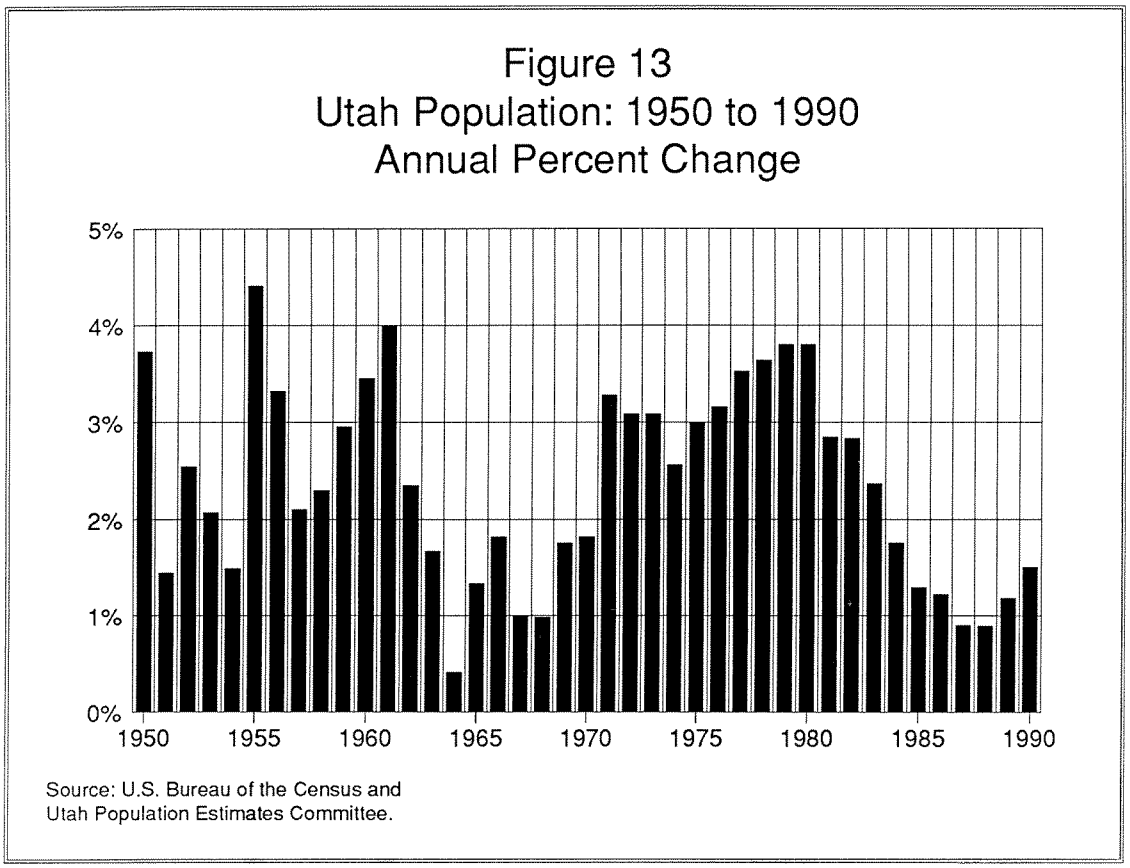
Migration

During Utah's period of economic downturn, out-migration reached record highs of approximately 11,500 in 1987 and 1988. However, due primarily to Utah's strong economic performance in 1989 and 1990, this level of out-migration has been substantially reduced. It was 6,600 in 1989, and estimated to be 1,600 in 1990. In 1991, it is projected to decrease even further to only 800.

Utah's decline in out-migration can also be attributed to the slowdown in other states' economies. Some of the fast-growing areas in California, for example, that were attractive to Utah's young labor force in the mid-'80s, have slowed appreciably.

Natural Increase

Natural increase is the number of births minus the number of deaths in a given area, over a period of time, generally one year. Table 16 illustrates the numbers of births, deaths and the natural increase since 1947. The number of deaths has climbed proportionally with the total population. As shown however, the number of births peaked in 1982, and has declined since then. In fiscal year 1990, births were 35,569 which is only 20 more than the previous year's figure.



The total fertility rate is the number of births that a woman would have during her lifetime if, at each year of age, she experiences the birth rate occurring for that specific year. Fertility rates declined in Utah from 3.3 births per woman in 1979 to 2.5 in 1987. The national rate held constant at approximately 1.8 births per woman from 1977 through 1986. The Utah rate now appears to have stabilized at about 2.6, while the national rate has increased to 1.9. Despite the decline in Utah's fertility rate, it nevertheless remains the nation's highest. Historical fertility rates for Utah and the nation are illustrated in Figure 15 and listed in Table 17.

County Population

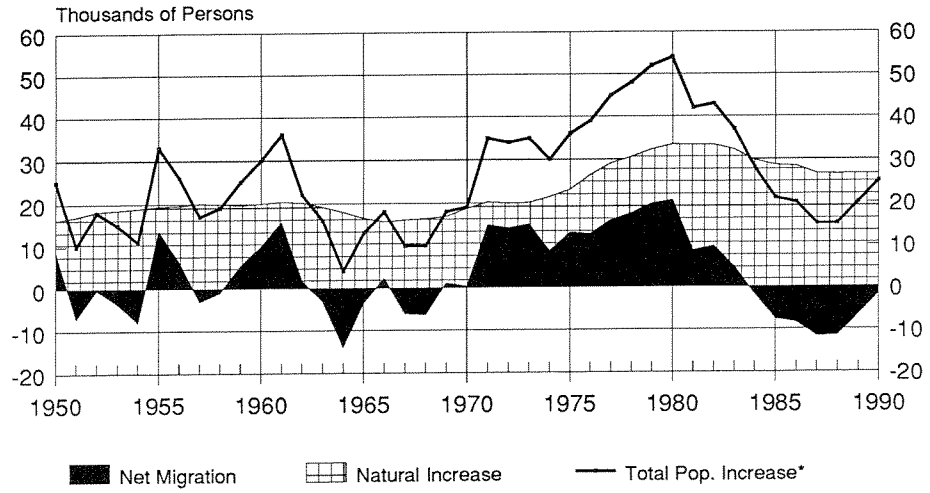
The fastest-growing county during the 1980s was Washington County. The relatively warm climate, size and lifestyle of communities like St. George have been attractive to retirees and others. Growth in Summit County has too been phenomenal, but for different reasons. The Park City area has grown with the ski industry, attracting upper-middle income families who desire close proximity to recreation areas and jobs, while maintaining a residential respite from the urban counties.

Like rural areas across the nation, the rural regions in Utah grew slowly or lost populations during the 1980s. The exceptions are those sites attractive to tourism. In other areas, people have, out of necessity, moved from rural to urbanized areas as employment in natural resource development and agriculture have declined. Carbon, Grand, and Emery are the counties that lost the highest percentage of their populations during the '80s, according to the preliminary 1990 Census counts.

Households

Using the number of households rather the number of persons to examine data can change conclusions or rankings markedly. Utah income, for example, appears quite different when viewed on a household rather than on a per capita basis. Household information is therefore an important tool with which to interpret data.

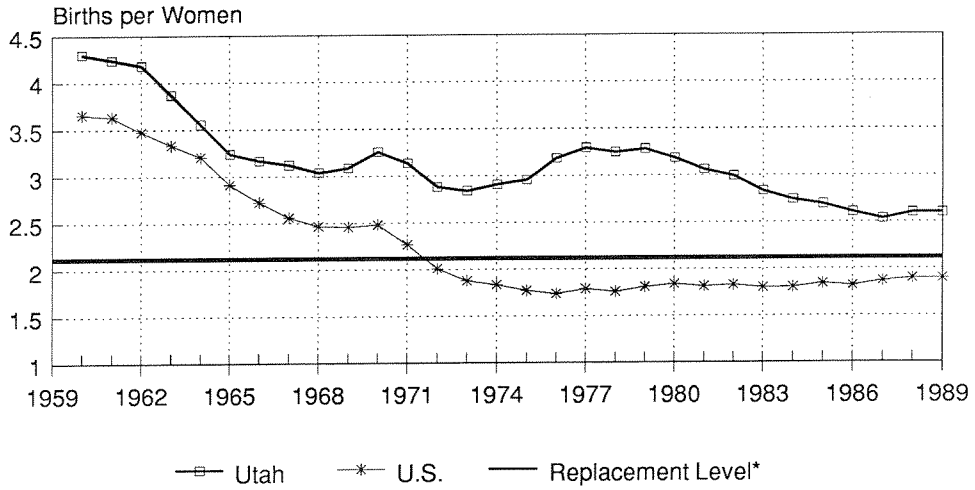
Figure 14
Annual Population Increase in Utah
Net Migration, Natural Increase, & Total



*Population increase = Natural Increase + Net Migration

Source: U.S. Bureau of the Census and
Utah State Office of Planning & Budget.

Figure 15
Total Fertility: 1960-1989
for Utah and the U.S.



*rate (2.1) needed to maintain
population without immigration.
Source: E.Brown-Fertility in Ut; Ut OPB

Household size dropped between 1980 and 1989 in Utah and in the nation. The national rate fell from 2.75 to 2.6, while the Utah rate dropped from 3.2 to 3.14. Utah remained the state with the largest number of people per household. The second highest in the nation was Hawaii at 2.97. The lowest was Oregon with 2.45 persons per household. Utah household estimates can be found in Table 18.

The number of new households formed in Utah between 1980 and 1989 was approximately 85,000. This 19 percent increase is somewhat higher than the national average of 15.6 percent. Nevada experienced the highest percentage increase of 45.2, while West Virginia the least at 3.1 percent. In general, the states that had the largest growth rates were those along the west and southeast coasts, and southwestern states. The high increases, no doubt, were significantly impacted by in-migration during the 1980s. Alaska and New Hampshire were notable high-growth exceptions to the primary areas of increase.

Age Structure

Of particular interest to the state of Utah is the age distribution of the population. Because of Utah's relatively youthful population, the state's tax structure and businesses marketing tools are specific to Utah. No other state can compare with Utah.

Median age figures estimated by the U.S Census Bureau as of July 1, 1989, concluded that the nation's median age was 32.7 years. (The median age is that age at which half of the population is younger, and half is older.) Florida's median age of 36.6 years was the nation's highest. Once again, the state with the lowest was Utah, at 25.7. The second lowest median age was Alaska's at 29.0 years. The median age of all other states was 30.0 or older (see Table 19).

In 1989, only Alaska had a higher percentage of children under five than did Utah (10.4 vs. 10.2). Utah has the highest percentage (26.7) of population in the 5-17 age group; however, Utah is ranked last for the proportion of persons in the 18-64 age group. Utah ranks second to last, in front of only Alaska, for persons aged 65 and older. States' age group figures are listed in Table 20.

Another tool for comparing age groups is the dependency ratio. The dependency ratio compares different age groups to the number of working age (18-64) persons. It is not implied, for example, that persons over age 65 are dependent on younger persons for economic or physical survival. Nevertheless, the larger number of children per family in Utah implies that there are more mouths to feed per wage earner, and fewer taxable incomes per person than in other states.

The average number of dependents per 100 persons of working age in the U.S. is 62. Home of the nation's highest average, 84, is Utah. Utah is also ranked first for the number of preschool and school-aged children for each 100 persons of working age. The eastern retirement state of Florida has the largest number of individuals aged 65 and older per 100 of working age. While Florida has 28 persons of retirement age per 100 of working age, Utah has 15 persons. Dependency ratios are depicted in Table 21.

Table 14
Utah Population Estimates, Net Migration, Births and Deaths
Decade Totals: 1950-1990

Decennial Population				Ten Fiscal-Year Totals			
Year	April 1 Population	Increase	Percent Change	Net Migration	Births	Deaths	Natural Increase
1950	688,862	-----	-----	-----	-----	-----	-----
1960	890,627	201,765	29.29%	10,323	244,787	53,345	191,443
1970	1,059,273	168,646	18.94%	(9,214)	243,455	65,595	177,860
1980	1,461,037	401,764	37.93%	145,320	332,029	75,585	256,444
1990	1,727,784	266,747	18.26%	(25,364)	379,373	87,262	292,111

Sources: U.S. Census Bureau and the Utah Bureau of Health Statistics.

Table 15
1980 and 1990 State Populations

	1980 Population	1990 Population	1990 Size Rank	1980-1990 Change	Percent Change	1980-90 Growth Rank	Annual Rate of Change
Alabama	3,893,888	4,062,608	22	168,720	4.33%	32	0.43%
Alaska	401,851	551,947	49	150,096	37.35%	2	3.22%
Arizona	2,718,215	3,677,985	24	959,770	35.31%	3	3.07%
Arkansas	2,286,435	2,362,239	33	75,804	3.32%	34	0.33%
California	23,667,902	29,839,250	1	6,171,348	26.07%	5	2.34%
Colorado	2,889,964	3,307,912	26	417,948	14.46%	14	1.36%
Connecticut	3,107,576	3,295,669	27	188,093	6.05%	26	0.59%
Delaware	594,338	668,696	46	74,358	12.51%	17	1.19%
Florida	9,746,324	13,003,362	4	3,257,038	33.42%	4	2.93%
Georgia	5,463,105	6,508,419	11	1,045,314	19.13%	8	1.77%
Hawaii	964,691	1,115,274	40	150,583	15.61%	13	1.46%
Idaho	943,935	1,011,986	42	68,051	7.21%	23	0.70%
Illinois	11,426,518	11,466,682	6	40,164	0.35%	46	0.04%
Indiana	5,490,224	5,564,228	14	74,004	1.35%	38	0.13%
Iowa	2,913,808	2,787,424	30	-126,384	-4.34%	49	-0.44%
Kansas	2,363,679	2,485,600	32	121,921	5.16%	28	0.50%
Kentucky	3,660,777	3,698,969	23	38,192	1.04%	40	0.10%
Louisiana	4,205,900	4,238,216	21	32,316	0.77%	43	0.08%
Maine	1,124,660	1,233,223	38	108,563	9.65%	20	0.93%
Maryland	4,216,975	4,798,622	19	581,647	13.79%	15	1.30%
Massachusetts	5,737,037	6,029,051	13	292,014	5.09%	29	0.50%
Michigan	9,262,078	9,328,784	8	66,706	0.72%	44	0.07%
Minnesota	4,075,970	4,387,029	20	311,059	7.63%	22	0.74%
Mississippi	2,520,638	2,586,443	31	65,805	2.61%	36	0.26%
Missouri	4,916,686	5,137,804	15	221,118	4.50%	30	0.44%
Montana	786,690	803,655	44	16,965	2.16%	37	0.21%
Nebraska	1,569,825	1,584,617	36	14,792	0.94%	41	0.09%
Nevada	800,493	1,206,152	39	405,659	50.68%	1	4.18%
New Hampshire	920,610	1,113,915	41	193,305	21.00%	6	1.92%
New Jersey	7,364,823	7,748,634	9	383,811	5.21%	27	0.51%
New Mexico	1,302,894	1,521,779	37	218,885	16.80%	11	1.57%
New York	17,558,072	18,044,505	2	486,433	2.77%	35	0.27%
North Carolina	5,881,766	6,657,630	10	775,864	13.19%	16	1.25%
North Dakota	652,717	641,364	47	-11,353	-1.74%	47	-0.18%
Ohio	10,797,630	10,887,325	7	89,695	0.83%	42	0.08%
Oklahoma	3,025,290	3,157,604	28	132,314	4.37%	31	0.43%
Oregon	2,633,105	2,853,733	29	220,628	8.38%	21	0.81%
Pennsylvania	11,863,895	11,924,710	5	60,815	0.51%	45	0.05%
Rhode Island	947,154	1,005,984	43	58,830	6.21%	25	0.60%
South Carolina	3,121,820	3,505,707	25	383,887	12.30%	18	1.17%
South Dakota	690,768	699,999	45	9,231	1.34%	39	0.13%
Tennessee	4,591,120	4,896,641	17	305,521	6.65%	24	0.65%
Texas	14,229,191	17,059,805	3	2,830,614	19.89%	7	1.83%
UTAH	**1,461,037**	**1,727,784**	**35**	**266,747**	**18.26%**	**10**	**1.69%**
Vermont	511,456	564,964	48	53,508	10.46%	19	1.00%
Virginia	5,346,818	6,216,568	12	869,750	16.27%	12	1.52%
Washington	4,132,156	4,887,941	18	755,785	18.29%	9	1.69%
West Virginia	1,949,644	1,801,625	34	-148,019	-7.59%	50	-0.79%
Wisconsin	4,705,767	4,906,745	16	200,978	4.27%	33	0.42%
Wyoming	469,557	455,975	50	-13,582	-2.89%	48	-0.29%
U.S.	226,545,805	249,632,692	---	23,086,887	10.19%	---	0.98%

Source: U.S. Census Bureau.

Table 16
Utah Births, Deaths and Natural Increase
Fiscal Years 1947-1990

Fiscal Year	Births	Deaths	Natural Increase
1947	19,972	4,891	15,082
1948	21,219	5,033	16,186
1949	20,939	5,000	15,940
1950	21,178	4,952	16,227
1951	21,981	4,935	17,046
1952	23,251	5,042	18,209
1953	23,658	5,136	18,522
1954	23,944	5,038	18,906
1955	24,454	5,042	19,412
1956	24,787	5,158	19,629
1957	25,518	5,460	20,058
1958	25,724	5,753	19,972
1959	25,515	5,844	19,671
1960	25,959	5,938	20,021
1961	26,431	6,039	20,392
1962	26,402	6,203	20,199
1963	25,583	6,435	19,148
1964	24,398	6,474	17,924
1965	23,053	6,538	16,515
1966	22,431	6,761	15,670
1967	22,775	6,683	16,092
1968	23,071	6,699	16,372
1969	23,713	6,837	16,876
1970	25,601	6,927	18,674
1971	27,407	7,207	20,200
1972	27,146	7,236	19,910
1973	27,562	7,517	20,045
1974	28,876	7,496	21,380
1975	30,566	7,515	23,051
1976	33,773	7,378	26,395
1977	36,709	7,595	29,114
1978	38,265	7,687	30,578
1979	40,134	7,846	32,288
1980	41,591	8,108	33,483
1981	41,511	8,112	33,399
1982	41,774	8,404	33,370
1983	40,557	8,346	32,211
1984	38,643	8,886	29,757
1985	37,508	8,923	28,585
1986	37,145	8,790	28,355
1987	35,469	8,813	26,656
1988	35,648	9,122	26,526
1989	35,549	8,916	26,633
1990	35,569	8,950	26,619

*1947-1970 was estimated by averaging the two calendar years' births and deaths that contain the fiscal year.

Sources: Utah Bureau of Health Statistics and the Utah Population Estimates Committee.

Table 17
Total Fertility Rates
Utah and the U.S.
1960 to 1989

	Utah	U.S.		Utah	U.S.
1960	4.3	3.7	1975	3.0	1.8
1961	4.2	3.6	1976	3.2	1.7
1962	4.2	3.5	1977	3.3	1.8
1963	3.9	3.3	1978	3.3	1.8
1964	3.6	3.2	1979	3.3	1.8
1965	3.2	2.9	1980	3.2	1.8
1966	3.2	2.7	1981	3.1	1.8
1967	3.1	2.6	1982	3.0	1.8
1968	3.0	2.5	1983	2.8	1.8
1969	3.1	2.5	1984	2.7	1.8
1970	3.3	2.5	1985	2.7	1.8
1971	3.1	2.3	1986	2.6	1.8
1972	2.9	2.0	1987	2.5	1.9
1973	2.8	1.9	1988	2.6	1.9
1974	2.9	1.8	1989	2.6(p)	1.9(p)

p=preliminary
Sources: Eileen Brown, "Fertility in Utah: 1960-1985;"
U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1023 and the Utah Department of Health.

Table 18
Utah Household Estimates
1980 to 1989

	Households	Percent Change
1980 Census	449,000	--
1981	465,000	3.6%
1982	476,000	2.4%
1983	483,000	1.5%
1984	496,000	2.7%
1985	505,000	1.8%
1986	514,000	1.8%
1987	518,000	0.8%
1988	525,000	1.4%
1989	534,000	1.7%

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1058.

Table 19
Utah and U.S. Median Age
1980 to 1989

	U.S.	Utah	Difference
1980	30.0	24.2	5.8
1981	30.3	24.3	6.0
1982	30.6	24.6	6.0
1983	30.8	24.8	6.0
1984	31.1	25.0	6.1
1985	31.4	25.2	6.2
1986	31.7	25.5	6.2
1987	32.1	25.5	6.6
1988	32.4	25.7	6.7
1989	32.7	25.7	7.0

Source: U.S. Bureau of the Census
Current Population Reports,
Series P-25, No. 1058.

Table 20
Rankings of States and the District of Columbia by Selected Age Groups
July 1, 1989

Ranking by % of Total		Population Under 5 (000)	% of Total		Population 5-17 (000)	% of Total		Population 18-64 (000)	% of Total		Population 65+ (000)	% of Total
	United States	18,752	7.6%	United States	45,330	18.3%	United States	153,173	61.7%	United States	30,984	12.5%
1	Alaska	55	10.4%	Utah	456	26.7%	Virginia	3,958	65.0%	Florida	2,277	18.0%
2	Utah	175	10.2%	Idaho	225	22.2%	Alaska	340	64.6%	Iowa	428	15.1%
3	New Mexico	134	8.8%	Mississippi	566	21.6%	Dist. of Columbia	389	64.5%	Pennsylvania	1,819	15.1%
4	Arizona	311	8.7%	Wyoming	100	21.0%	Maryland	3,024	64.4%	Arkansas	356	14.8%
5	Texas	1,478	8.7%	Alaska	110	20.9%	Colorado	2,128	64.2%	Rhode Island	148	14.8%
6	California	2,489	8.6%	New Mexico	320	20.9%	Nevada	711	64.0%	West Virginia	272	14.6%
7	Louisiana	362	8.3%	Louisiana	911	20.8%	Massachusetts	3,762	63.6%	South Dakota	103	14.4%
8	Hawaii	89	8.0%	Texas	3,474	20.4%	New Hampshire	701	63.4%	Missouri	719	13.9%
9	Colorado	262	7.9%	Georgia	1,286	20.0%	Hawaii	705	63.4%	Nebraska	224	13.9%
10	Dist. of Columbia	48	7.9%	Arkansas	476	19.8%	Delaware	425	63.1%	North Dakota	92	13.9%
11	Georgia	511	7.9%	Alabama	811	19.7%	New Jersey	4,882	63.0%	Oregon	392	13.9%
12	Idaho	79	7.8%	Montana	158	19.7%	Vermont	357	63.0%	Massachusetts	813	13.8%
13	Mississippi	203	7.8%	North Dakota	129	19.6%	North Carolina	4,130	62.9%	Kansas	343	13.7%
14	Nevada	86	7.8%	South Carolina	690	19.6%	California	18,279	62.9%	Connecticut	441	13.6%
15	South Dakota	56	7.8%	South Dakota	140	19.6%	Connecticut	2,039	62.9%	Maine	164	13.4%
16	Kansas	191	7.6%	Kentucky	716	19.2%	New York	11,259	62.8%	Wisconsin	652	13.4%
17	Maryland	358	7.6%	Oklahoma	619	19.2%	Washington	2,977	62.5%	Oklahoma	428	13.3%
18	New Hampshire	84	7.6%	Indiana	1,065	19.0%	Rhode Island	619	62.1%	Montana	106	13.2%
19	North Dakota	50	7.6%	Michigan	1,761	19.0%	Illinois	7,241	62.0%	New Jersey	1,021	13.2%
20	Wyoming	36	7.6%	West Virginia	353	19.0%	Tennessee	3,059	62.0%	Arizona	464	13.1%
21	Minnesota	328	7.5%	Arizona	671	18.9%	Georgia	3,986	61.9%	New York	2,341	13.0%
22	South Carolina	265	7.5%	Nebraska	305	18.9%	Michigan	5,729	61.7%	Ohio	1,399	12.8%
23	Washington	357	7.5%	Ohio	2,036	18.7%	South Carolina	2,167	61.7%	Alabama	523	12.7%
24	Illinois	864	7.4%	Kansas	468	18.6%	Wyoming	292	61.6%	Kentucky	472	12.7%
25	Michigan	684	7.4%	Tennessee	915	18.5%	Maine	753	61.6%	Minnesota	549	12.6%
26	Nebraska	119	7.4%	Wisconsin	899	18.5%	Minnesota	2,674	61.5%	Tennessee	625	12.6%
27	Delaware	49	7.3%	Minnesota	801	18.4%	Indiana	3,439	61.4%	Dist. of Columbia	76	12.5%
28	Montana	59	7.3%	Iowa	519	18.3%	Kentucky	2,289	61.4%	Indiana	694	12.4%
29	New York	1,306	7.3%	Colorado	602	18.2%	Oregon	1,731	61.4%	Mississippi	326	12.4%
30	Virginia	443	7.3%	Illinois	2,116	18.1%	Ohio	6,691	61.3%	Illinois	1,437	12.3%
31	Wisconsin	356	7.3%	Missouri	936	18.1%	Pennsylvania	7,380	61.2%	North Carolina	798	12.1%
32	Alabama	297	7.2%	Washington	859	18.1%	Texas	10,325	60.8%	Idaho	121	11.9%
33	Arkansas	174	7.2%	California	5,225	18.0%	Wisconsin	2,960	60.8%	Michigan	1,100	11.9%
34	Missouri	370	7.2%	Maine	220	18.0%	Missouri	3,135	60.7%	Vermont	68	11.9%
35	Ohio	782	7.2%	Hawaii	199	17.9%	West Virginia	1,122	60.4%	Washington	567	11.9%
36	Oklahoma	234	7.2%	North Carolina	1,179	17.9%	Alabama	2,488	60.4%	Delaware	79	11.8%
37	Indiana	395	7.1%	Vermont	101	17.9%	Oklahoma	1,942	60.3%	New Hampshire	126	11.4%
38	New Jersey	547	7.1%	Oregon	503	17.8%	Kansas	1,511	60.2%	Louisiana	487	11.1%
39	North Carolina	463	7.1%	Delaware	119	17.7%	Iowa	1,702	59.9%	South Carolina	390	11.1%
40	Vermont	40	7.1%	New Hampshire	195	17.6%	Louisiana	2,623	59.8%	Nevada	121	10.9%
41	Connecticut	227	7.0%	Nevada	191	17.2%	Montana	482	59.8%	Maryland	509	10.8%
42	Florida	887	7.0%	Maryland	803	17.1%	Nebraska	963	59.8%	Virginia	657	10.8%
43	Massachusetts	413	7.0%	New York	3,044	17.0%	New Mexico	913	59.8%	Hawaii	119	10.7%
44	Maine	85	6.9%	Virginia	1,039	17.0%	Arizona	2,111	59.4%	California	3,071	10.6%
45	Oregon	194	6.9%	Pennsylvania	2,039	16.9%	Florida	7,522	59.4%	New Mexico	161	10.5%
46	Rhode Island	69	6.9%	New Jersey	1,286	16.6%	North Dakota	390	59.0%	Georgia	653	10.1%
47	Tennessee	340	6.9%	Connecticut	532	16.4%	Arkansas	1,401	58.2%	Texas	1,714	10.1%
48	Kentucky	250	6.7%	Rhode Island	162	16.2%	Mississippi	1,526	58.2%	Colorado	324	9.8%
49	Pennsylvania	801	6.7%	Florida	1,985	15.7%	South Dakota	417	58.2%	Wyoming	46	9.8%
50	Iowa	189	6.6%	Massachusetts	924	15.6%	Idaho	589	58.1%	Utah	146	8.6%
51	West Virginia	110	5.9%	Dist. of Columbia	91	15.1%	Utah	930	54.5%	Alaska	22	4.1%

*May not add due to rounding.

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1058.

Table 21
Dependency Ratios for States and the District of Columbia
July 1, 1989

Rank		Dependents Per 100 of Working Age	Rank		Pre-School Per 100 of Working Age	Rank		School Age Per 100 of Working Age	Rank		Retirement Age Per 100 of Working Age
-	U.S. Average	62	-	U.S. Average	12	-	U.S. Average	30	-	U.S. Average	20
1	Utah	84	1	Utah	19	1	Utah	49	1	Florida	30
2	Idaho	72	2	Alaska	16	2	Idaho	38	2	Arkansas	25
3	Arkansas	72	3	Arizona	15	3	Mississippi	37	3	Iowa	25
4	Mississippi	72	4	New Mexico	15	4	New Mexico	35	4	South Dakota	25
5	South Dakota	72	5	Texas	14	5	Louisiana	35	5	Pennsylvania	25
6	North Dakota	69	6	Louisiana	14	6	Wyoming	34	6	West Virginia	24
7	Arizona	68	7	California	14	7	Arkansas	34	7	Rhode Island	24
8	Florida	68	8	South Dakota	13	8	Texas	34	8	North Dakota	24
9	New Mexico	67	9	Idaho	13	9	South Dakota	34	9	Nebraska	23
10	Nebraska	67	10	Mississippi	13	10	North Dakota	33	10	Missouri	23
11	Louisiana	67	11	North Dakota	13	11	Montana	33	11	Kansas	23
12	Montana	67	12	Georgia	13	12	Alabama	33	12	Oregon	23
13	Iowa	67	13	Kansas	13	13	Alaska	32	13	Oklahoma	22
14	Kansas	66	14	Hawaii	13	14	Georgia	32	14	Wisconsin	22
15	Oklahoma	66	15	Arkansas	12	15	Oklahoma	32	15	Montana	22
16	Alabama	66	16	Nebraska	12	16	South Carolina	32	16	Arizona	22
17	West Virginia	66	17	Dist. of Columbia	12	17	Arizona	32	17	Maine	22
18	Missouri	65	18	Wyoming	12	18	Nebraska	32	18	Connecticut	22
19	Texas	65	19	Colorado	12	19	West Virginia	31	19	Massachusetts	22
20	Wisconsin	64	20	Minnesota	12	20	Kentucky	31	20	Mississippi	21
21	Pennsylvania	63	21	Montana	12	21	Kansas	31	21	Alabama	21
22	Ohio	63	22	South Carolina	12	22	Indiana	31	22	New Jersey	21
23	Oregon	63	23	Nevada	12	23	Michigan	31	23	Ohio	21
24	Kentucky	63	24	Oklahoma	12	24	Iowa	30	24	New York	21
25	Minnesota	63	25	Wisconsin	12	25	Ohio	30	25	Kentucky	21
26	Indiana	63	26	Washington	12	26	Wisconsin	30	26	Idaho	21
27	Wyoming	62	27	New Hampshire	12	27	Minnesota	30	27	Minnesota	21
28	Maine	62	28	Michigan	12	28	Tennessee	30	28	Tennessee	20
29	South Carolina	62	29	Alabama	12	29	Missouri	30	29	Indiana	20
30	Michigan	62	30	Illinois	12	30	Illinois	29	30	Illinois	20
31	Georgia	61	31	Maryland	12	31	Maine	29	31	Dist. of Columbia	20
32	Tennessee	61	32	Missouri	12	32	Oregon	29	32	North Carolina	19
33	Rhode Island	61	33	Florida	12	33	Washington	29	33	Michigan	19
34	Illinois	61	34	Ohio	12	34	California	29	34	Vermont	19
35	Washington	60	35	New York	12	35	North Carolina	29	35	Washington	19
36	New York	59	36	Delaware	12	36	Vermont	28	36	Delaware	19
37	North Carolina	59	37	Indiana	11	37	Colorado	28	37	Louisiana	19
38	California	59	38	Maine	11	38	Hawaii	28	38	South Carolina	18
39	Connecticut	59	39	North Carolina	11	39	Delaware	28	39	New Hampshire	18
40	Vermont	59	40	Oregon	11	40	New Hampshire	28	40	New Mexico	18
41	New Jersey	58	41	Vermont	11	41	Pennsylvania	28	41	Nevada	17
42	Delaware	58	42	New Jersey	11	42	New York	27	42	Hawaii	17
43	New Hampshire	58	43	Virginia	11	43	Nevada	27	43	Maryland	17
44	Hawaii	58	44	Rhode Island	11	44	Maryland	27	44	California	17
45	Massachusetts	57	45	Connecticut	11	45	Florida	26	45	Texas	17
46	Nevada	56	46	Tennessee	11	46	New Jersey	26	46	Virginia	17
47	Colorado	56	47	Iowa	11	47	Virginia	26	47	Georgia	16
48	Dist. of Columbia	55	48	Massachusetts	11	48	Rhode Island	26	48	Wyoming	16
49	Maryland	55	49	Kentucky	11	49	Connecticut	26	49	Utah	16
50	Alaska	55	50	Pennsylvania	11	50	Massachusetts	25	50	Colorado	15
51	Virginia	54	51	West Virginia	10	51	Dist. of Columbia	23	51	Alaska	6

Source: U.S. Bureau of the Census, Current Population Reports, Series P-25, No. 1058.

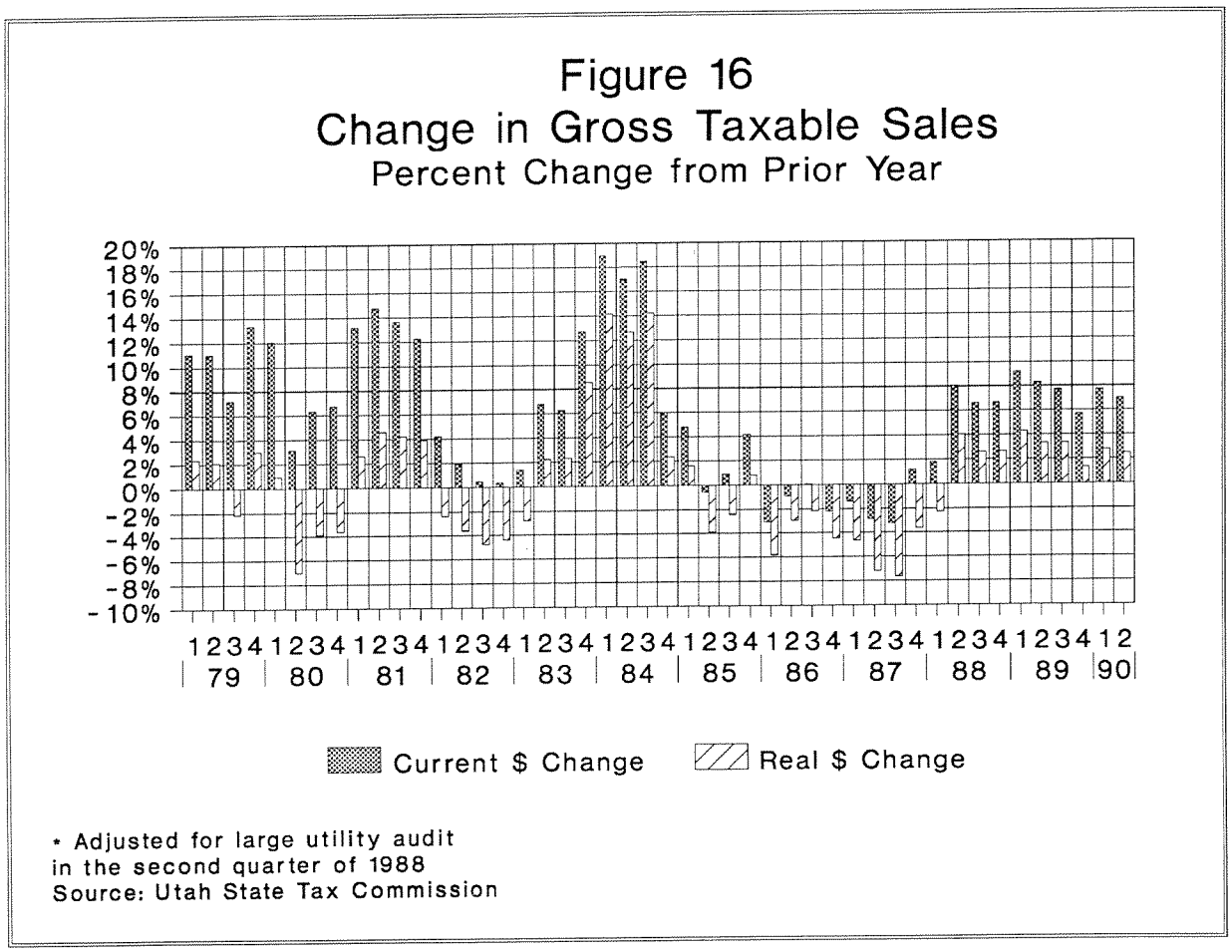
GROSS TAXABLE SALES

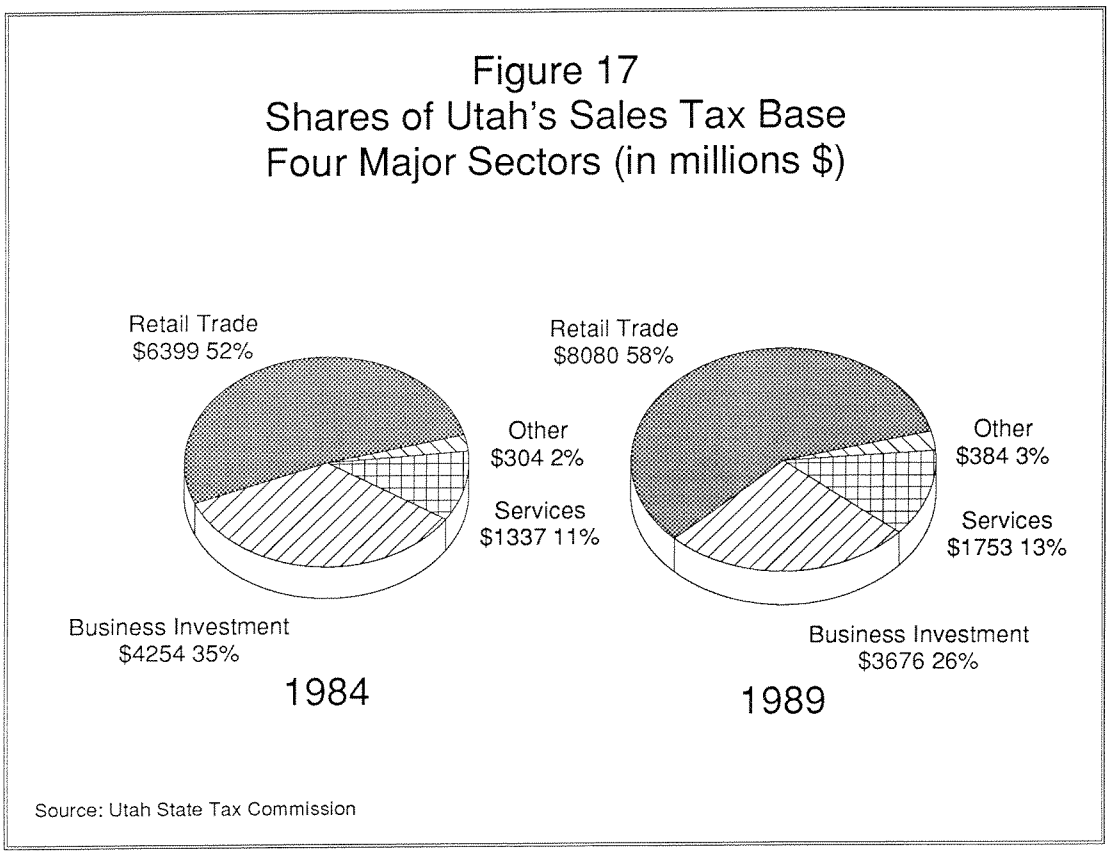
The eleven-quarter expansion in gross taxable sales (Figure 16), which began in the first quarter of 1988, may culminate in the final quarter of 1990 because gross taxable sales are expected to slow down somewhat over the first three quarters of 1991. Following a three-quarter growth-pause beginning in the first quarter of 1991, taxable sales in Utah should climb back up to the current 7 percent growth rates.

Retail trade, which constitutes about 58 percent of taxable sales (Figure 17), receded from double-digit growth rates, achieved between the first quarter of 1989 and the first quarter of 1990, to a 5 to 6.6 percent growth rate in the second quarter of 1990. While second half of 1990 is expected to see 6 to 8 percent growth rates, the first 3 quarters of 1991 will be much slower because of slower job growth, increasing inflation, and souring consumer attitudes.

Taxable business investment and utility sales, which comprise 26 percent of taxable sales, rose 3 percent in the first half of 1990. This component of sales is expected to make an almost 5 percent gain in 1991 and then slow to a 3 percent growth rate in the first half of 1992.

Taxable services (13 percent of the taxable sales base), including repairs and leases of tangible property, as well as hotel, amusement and certain recreation sales, may increase 10 percent in 1991, following a rather lackluster 4 percent growth path in 1990.





Retail Trade Sales

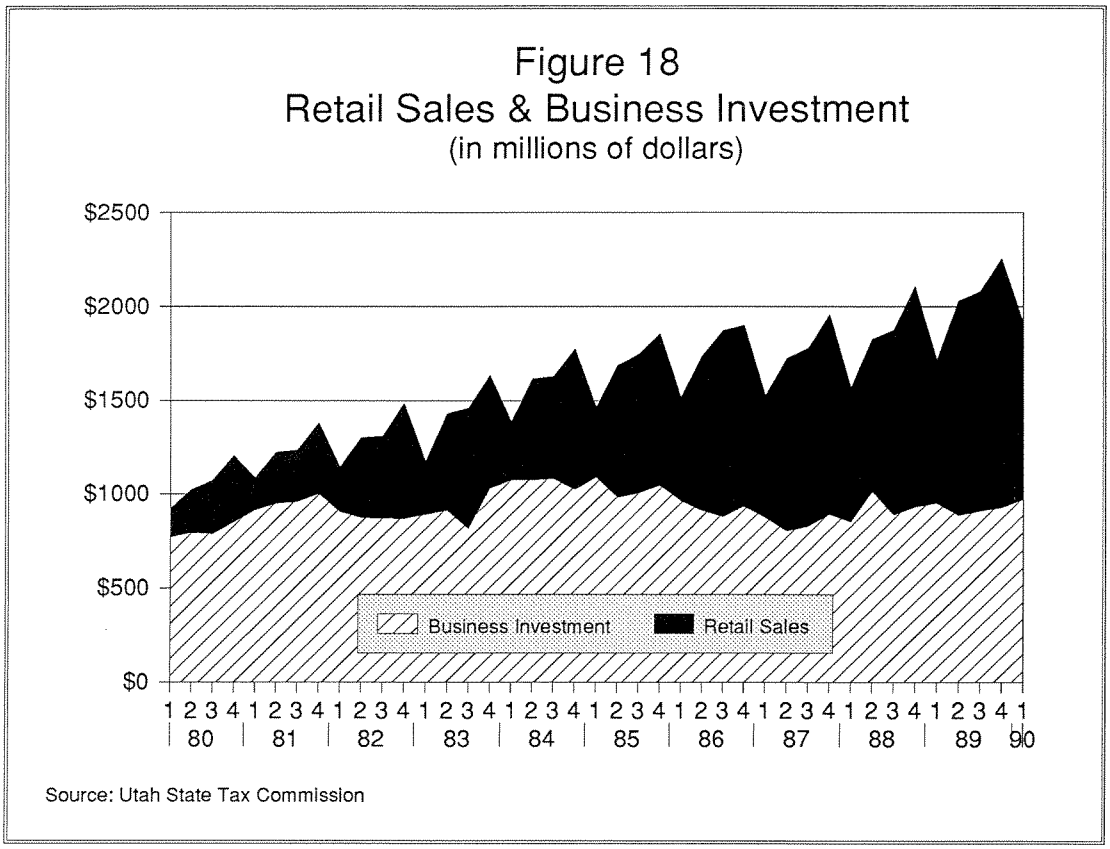
Retail trade, the largest component of taxable sales, has been the key to the respectable growth rates over the past ten quarters. Having fallen 0.6 percent in 1987, retail sales rebounded to almost 6 percent in 1988, and then increased almost 10 percent in 1989 (Table 22).

After another strong performance of 11.8 percent growth in the first quarter of 1990, the growth rate fell back to 5 to 6.6 percent during the second quarter. Motor vehicle dealer sales, which had risen 15 percent in 1989, fell 4 percent during the second quarter of 1990, offsetting strong performances in food, general merchandise, eating and drinking, and building and furniture stores.

Consumers are expected to be much more cautious early in 1991 than they have been in the past two years. Utah's index of consumer confidence fell almost 20 points in the October 1990 survey (Figure 19). Perhaps mitigating this significant drop is that much of the fall was derived from response to the question on how Utahns felt about the U.S. economy over the next five years.

Durable goods sales, consisting of items generally lasting three years or more, are expected to fall between 5 and 12 percent during the first three quarters of 1991 (Figure 21). Made up primarily of motor vehicle dealer sales and building, garden, and furniture store sales, these sales are a function of wages and salaries, price discounting (dealer incentives), mortgage rates and consumer confidence.

Despite the fact that consumer confidence is down, Utah wages and salaries are expected to rise almost 7 percent in 1991. This being the case, it is possible for Utah consumers to believe that their jobs are secure, and continue to spend on durable goods. Further strengthening this possible scenario is the fact that Utah's post-World War II baby boomers will continue to upgrade their homes and cars, especially if real disposable income is on the rise.



A point which challenges the optimistic scenario outlined above is the recent runup in gasoline prices. The 30 cents per gallon increase, in addition to the federal tax hike of 5 cents per gallon, will shift about $245 million (.35 x 700 million gallons of gasoline) from what would otherwise be spent on taxable durable and nondurable items to gasoline service stations. This shift in spending is similar to the decline projected in durable retail store spending of about $251 million.

The decline in durable spending will be somewhat offset by reasonably strong increases in nondurable retail sales (Figure 22). Sectors which sell primarily nondurable items are general merchandise and apparel, food, and miscellaneous shopping goods stores, as well as eating and drinking establishments. During 1989 both the general merchandise/apparel and the eating and drinking sectors grew at rates of 11 and 10.3 percent, respectively. Food store sales rose almost 5 percent in 1989 and miscellaneous shopping goods store sales rose almost 7 percent.

Nondurable goods sales, despite the downturn in consumer confidence, should grow 5.6 percent in 1991, only slightly less than the 6.7 percent gain in Utah wages and salaries. Flat tourism sales during the summer of 1991, in response to higher gasoline prices, may slow the pace of eating and drinking place sales from double digit growth in 1990 to 7.2 percent in 1991. Following gains of 11 percent in 1988 and 6.1 percent in 1989, general merchandise and apparel store sales may rise only 5.1 percent in 1991. Food store sales are expected to gain 4.5 percent, following a 12 percent rise in 1990. Miscellaneous shopping store sales will increase slightly over 7 percent in 1991.

Business Equipment and Utility Sales and Purchases

Last year we forecasted a 2.4 percent gain in business equipment and utility sales for 1990. During the first half of 1990 these sales rose 3 percent. As expected, transportation, communication and public utility sales and purchases shrank 7.5 percent in the first half of the year, largely due to continuing electricity rate cuts and a

more competitive communications market. This sector is expected to rebound in 1991 to a 6.6 percent growth path.

Indicative of a thriving mining and manufacturing sector, taxable purchases in these sectors rose 45.3 and 11.6 percent, respectively, in the first half of 1990. The end of the mining construction, expansion and modernization exemption on July 1, 1989 also played a part in the recent surge in taxable sales. Nevertheless, continued advances are expected in mining purchases during 1991 due to the recent spike in oil prices and due to continued expansion of Utah's copper and gold reserves.

Manufacturers and construction contractors will probably purchase supplies and taxable equipment at about the same high level in 1991 that they did in 1990. Double digit, 10.8 percent growth in 1990 will be followed by 9.9 percent growth in 1991. Driving the slight decline is the flat outlook nationally for nonresidential fixed investment, as well as the fall off of Utah's nonresidential construction, after a peak year in 1990.

Bolstering this position is the fact that Utah's business executives expect capital outlays to be the same over the next six months, according to the October 1990 Business Conditions Survey, performed by the University of Utah's Survey Research Center (Figure 20).

Utah's wholesale trade sector is projected to get a shot in the arm from increasing purchases in the mining and manufacturing and construction sectors. Final (taxable) sales by wholesalers were flat in 1989. First half of 1990 final sales by wholesalers were up almost 5 percent and are expected to average 8 percent growth over the next six quarters.

Taxable Services

Only about one-fourth of the personal and business services are taxable under current Utah law. Repairs and leases of tangible property (car rental, computer leases, auto repair) are taxable. Admissions to certain amusement and recreation events, as well as hotel and lodging services are also taxable. Growth rates in this sector, which constitutes about 13 percent of taxable sales, have been slowing over the past few years:

1987 - up 13.2 percent,
1988 - up 8.5 percent,
1989 - up 6.3 percent, and
first half of 1990 - up only 0.3 percent.

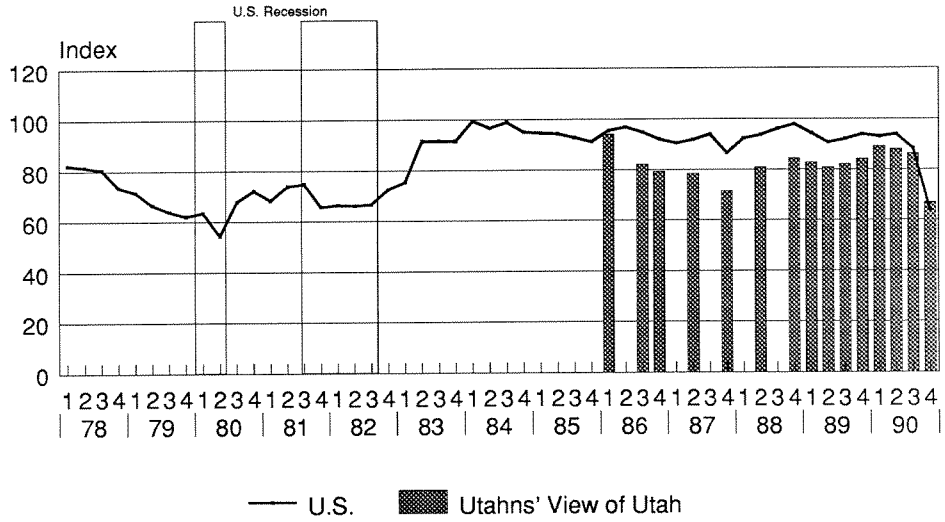
Despite recent sluggishness, 1990 is projected to finish with a 3.7 percent gain, followed by an almost 10 percent increase in 1991. Recent gains in Utah wages and salaries in addition to the 5.5 percent increase in prices for services account for the predicted rebound.

Forecast Assumptions and Caveats

The primary assumption for the 1991 forecast is that Utah wages and salaries will slow from their current 8 percent growth rates to 6.7 percent. The slowdown in wages is expected to come primarily from a drop in the employment growth from its current 4.6 growth path to 3 percent. Consequently, with slower out-migration, Utah's unemployment rate will rise to 5.5 percent from its current 4.4 percent level by the third quarter of 1991. In addition, inflation has risen from 4 percent levels in 1989 to 6 percent in the final half of 1990. Rising prices and unemployment reduces consumer confidence, as witnessed by the 20 point drop in Utah's Index of Consumer Sentiment and the 25 point drop in the U.S. Index of Consumer Sentiment (Figure 19).

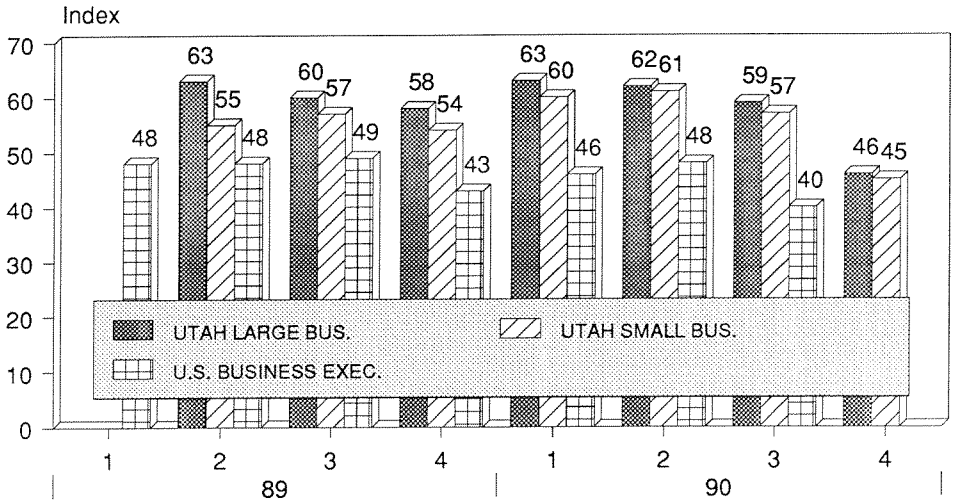
A decline in consumer confidence tends to defer purchases of durable goods. But, if Utah wages and salaries grow by 6.5 percent as projected, durable purchases may not fall 5 percent. Certainly, the decline in Utahn's appetite for building, garden and furniture store goods hasn't abated to date. But car sales appear to

Figure 19
U.S. and Utah Consumer Sentiment Indices



Source: U.S. - University of Michigan,
Utah - University of Utah Survey
Research Center

Figure 20
Utah Business Executive Confidence Survey



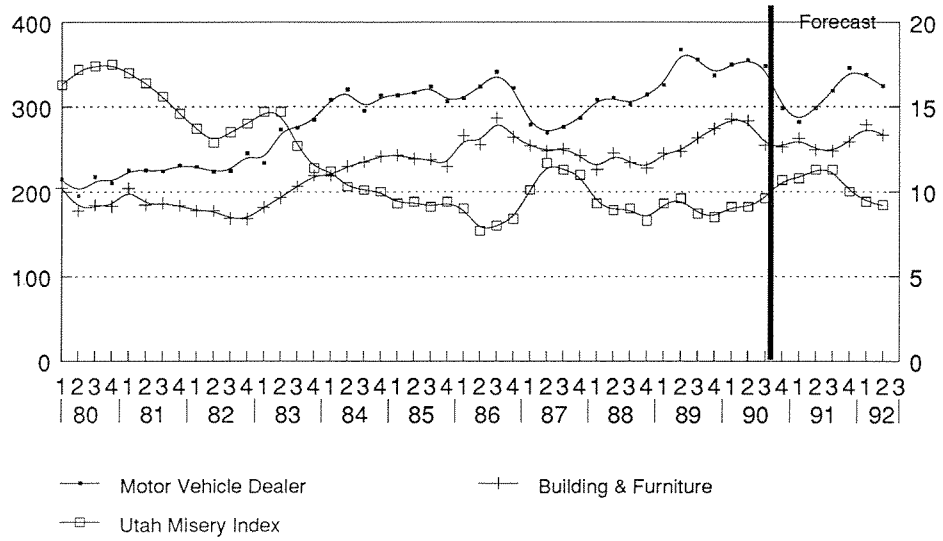
[25=moderately worse, 50=same,
75=moderately better]
Source: Utah State Tax Commission

have peaked in the first quarter of 1990.

The key to the rather cautious forecast perhaps lies in the notion that nontaxable-nondurable gasoline sales will increase $245 million, shifting what would otherwise be money spent on taxable durable goods. But this assumption may quickly become outdated, if the tense Iraq situation melts and gasoline prices decline back to their 1989 levels.

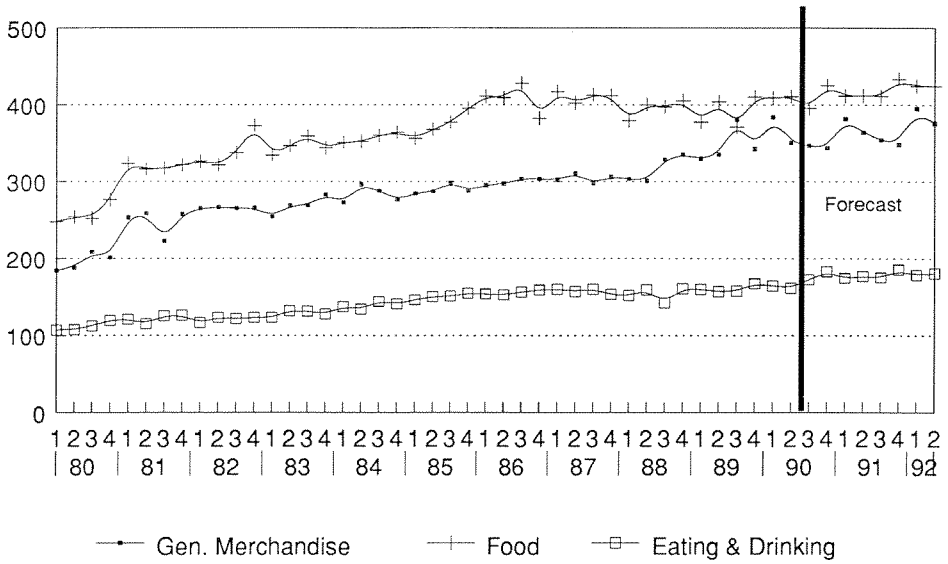
It seems clear, however, that the outlook for retail sales in 1991 will not be as robust as either the 9.6 percent growth rate achieved in 1989 nor the respectable 6 percent to 7.5 percent growth range projected for 1990. While retail sales growth may not diminish all the way to a 3.4 percent level, given the shift to nontaxable gasoline and the drop in consumer confidence, it seems difficult to justify more than 5 percent growth at this time.

Figure 21
Durable Retail Sales
(Seasonally Adjusted in 1982 Dollars)



Source: Utah State Tax Commission

Figure 22
Nondurable Retail Sales
(Seasonally Adjusted in 1982 Dollars)



Source: Utah State Tax Commission

Table 22
Utah Gross Taxable Sales
1984 to 1991
(in Millions of Dollars)

Calendar Year	Retail Sales	Business Purchases	Services	All Other	Total Gross Taxable Sales
1984	$6,399	$4,254	$1,337	$304	$12,294
1985	$6,749	$4,122	$1,379	$324	$12,574
1986	$7,022	$3,689	$1,342	$325	$12,378
1987	$6,982	$3,398	$1,520	$289	$12,189
1988	$7,376	$3,684	$1,649	$309	$13,018
1989	$8,080	$3,676	$1,753	$384	$13,893
1990e	$8,573	$3,910	$1,818	$531	$14,832
1991f	$8,864	$4,102	$1,997	$390	$15,353
Percent Change					
1985	5.5%	-3.1%	3.1%	6.6%	2.3%
1986	4.0%	-10.5%	-2.7%	0.3%	-1.6%
1987	-0.6%	-7.9%	13.3%	-11.1%	-1.5%
1988	5.6%	8.4%	8.5%	6.9%	6.8%
1989	9.5%	-0.2%	6.3%	24.3%	6.7%
1990e	6.1%	6.4%	3.7%	38.3%	6.8%
1991f	3.4%	4.9%	9.8%	-26.6%	3.5%

e = Estimate
f = Forecast

Source: Utah State Tax Commission

CONSTRUCTION ACTIVITY

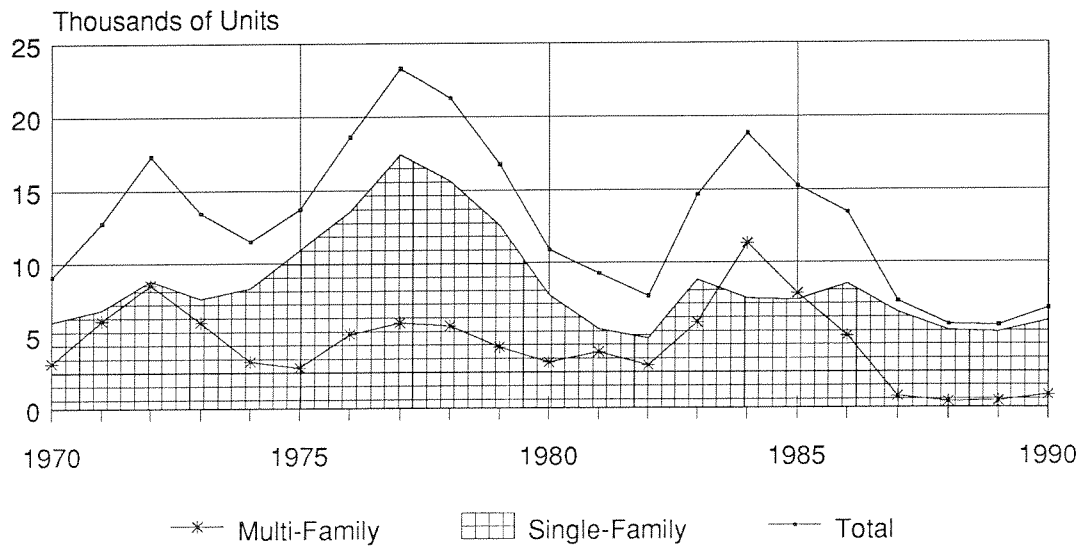
Residential Construction

Construction activity improved in 1990. Residential construction, which began improving in the second half of 1989, continued to gain strength during 1990. The 6,800 dwelling units (single and multi-family) authorized in 1990 were 20.7 percent above last year's totals. With this increased activity the value of residential construction rose 27.3 percent to $570 million.

Throughout the latter part of the 1980s, Utah's construction industry suffered from slow economic growth, out-migration, an over-supply of moderate to low-priced structures, high vacancy rates and high mortgage interest rates. Residential construction activity expanded in 1990 as economic growth increased, out-migration slowed, vacancy rates declined and mortgage interest rates dropped. The demand for single-family homes increased due to economic expansion and slowing out-migration. There continues to be strong demand for higher-valued homes as the "baby boom" segment of the population chooses to improve their standard of living. Demand is also increasing for moderate to lower-priced structures as the supply of these houses on the market decreases.

The factors that helped boost the construction of single-family homes in 1990 should persist into 1991. Even with the possibility of a national recession, and the crisis in the Persian Gulf, residential construction in Utah should improve to 7,500 units in 1991 due to an improved economic climate, slower out-migration, new job creation and stable or lower mortgage interest rates. Of these new units 6,700 are projected to be in single-family homes and 800 in multi-family structures.

Figure 23
Utah Residential Construction Activity
Permit-Authorized Construction



* 1990 Estimated
U of U, Bureau of Economic and Business Research.

The factors that encouraged growth in single-family construction also spurred growth in multi-family housing. The total number of multi-family units for 1990 was 850, an increase of 87.6 percent over 1989. Improved economic conditions, continued strong job growth and lower vacancy rates (between 6 and 8 percent) have combined to increase the demand for multi-family structures. Most of these multi-family structures were constructed in the metropolitan areas of the state, near colleges and universities, recreation areas or in the southwestern corner of the state. Multi-family construction will be at about this level next year as the market adjusts to the new supply of multi-family housing built in 1990 and as the effects of slower national economic growth affect Utah. Residential construction activity from 1970 to 1990 is shown in Table 23 and Figure 22.

Nonresidential Construction

Nonresidential construction activity also increased in 1990. The value of nonresidential construction was $430 million, an increase of 10.4 percent over 1989 (see Figure 23). The nonresidential sector benefitted greatly from the construction of the new $42 million Sports Arena in Salt Lake City. Improved economic conditions also increased demand for nonresidential construction. Even with the improvement in 1990, there appears to be some frailty in the market for nonresidential structures. It is projected that nonresidential construction in 1991 will reflect this susceptibility by decreasing to $400 million. The construction related to the Olympic sports facilities will be an important contributor to nonresidential construction in 1991.

Falling office vacancy rates in 1989 encouraged the construction of new office buildings. With the completion of these new structures the demand for new office space decreased in 1990, but should stabilize in 1991 because of low vacancy rates. The vacancy rate for 1990 is around 17.5 percent for Class A office space in the metropolitan area. Declines in office construction were offset by increased demand for industrial and retail space and by greater activity in the public sector. Industrial space vacancy rates are at 7 percent for 1990.

Construction in the major nonresidential sectors--hotels and motels, churches, office buildings, industrial buildings, and retail stores--have experienced mixed results. (These five areas historically account for over half of all nonresidential construction). Hotels and motels, industrial buildings, and retail stores have had increased activity, while churches and office buildings experienced less construction. Public buildings and other structures (the Jazz Sports Arena) have also contributed to the expansion in the value of nonresidential buildings. Nonresidential construction values are presented in Tables 24 and 25.

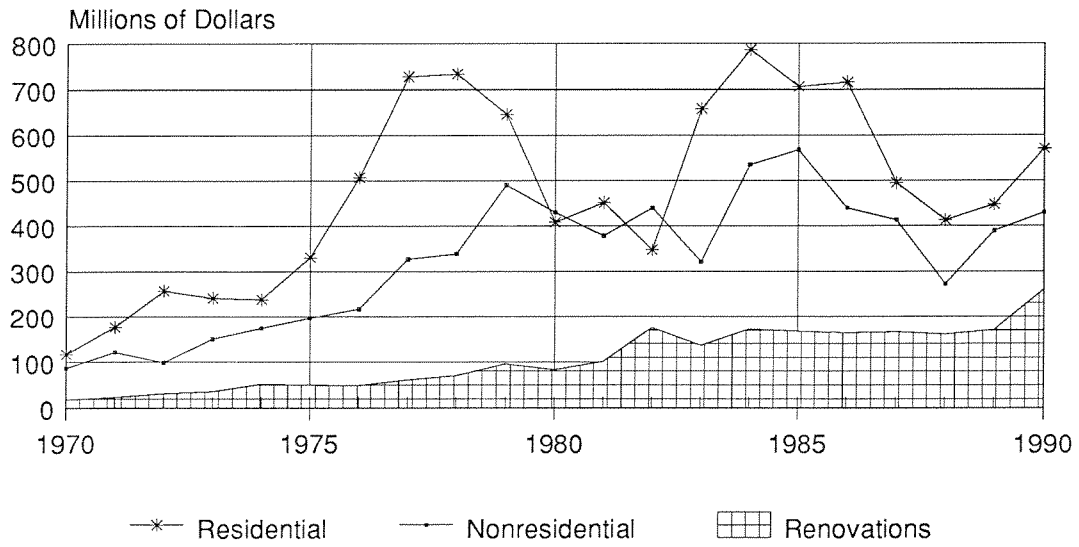
Additions, alterations and repairs have contributed to the rise in construction values in 1990 (Figure Z). The value of additions, alterations and repairs to residential structures increased over 20 percent; while nonresidential additions, alterations and repairs improved 50 percent, largely because of the $42 million Hotel Utah renovation. Additions, alterations and repairs will decrease slightly in 1991, as it is unlikely there will be another large renovation project such as the Hotel Utah.

The increase in construction activity during 1990 pushed the total value of permit authorized construction to $1.2 billion, an increase of 24.9% over 1989. The value of total construction should be slightly below 1990 levels because of projected decreases in the valuations for nonresidential buildings and additions, alterations and repairs. Figure 24 presents the valuation of construction from 1970 to 1990.

Nonbuilding Construction

Nonbuilding construction is an important contributor to Utah's construction industry. Major construction projects such as highways, bridges, dams, power plants, and construction on military installations are included in this category. Most of these construction activities do not require a permit. The estimated $428 million in nonbuilding construction in 1990 was a slight decrease from 1989. Nonbuilding construction in 1991 should decrease slightly due to lower spending on highway construction and maintenance. Nonbuilding construction values were obtained by telephone interviews with Utah Department of Transportation, Utah Water Resources, Utah Facilities Management and Construction, and Bureau of Reclamation personnel.

Figure 24
Value of New Construction in Utah
Residential, Nonresidential, Renovations



* 1990 Estimated
U of U, Bureau of Economic
and Business Research

Table 23
Residential Construction Activity in Utah
1970 to 1990

Year	Single Family Units	Multi-Family Units	Total Units	Value (Millions)
1970	5,962	3,108	9,070	$117.0
1971	6,768	6,009	12,777	$176.8
1972	8,807	8,513	17,320	$256.5
1973	7,546	5,904	13,450	$240.9
1974	8,284	3,217	11,501	$237.9
1975	10,912	2,800	13,712	$330.6
1976	13,546	5,075	18,621	$507.0
1977	17,424	5,856	23,280	$728.0
1978	15,618	5,646	21,264	$734.0
1979	12,570	4,179	16,749	$645.8
1980	7,760	3,141	10,901	$408.3
1981	5,413	3,840	9,253	$451.5
1982	4,767	2,904	7,671	$347.6
1983	8,806	5,858	14,664	$657.8
1984	7,496	11,327	18,823	$786.7
1985	7,403	7,844	15,247	$706.2
1986	8,512	4,932	13,444	$715.5
1987	6,530	775	7,305	$495.2
1988	5,297	418	5,715	$413.0
1989	5,179	453	5,632	$447.8
1990(e)	5,950	850	6,800	$570.0

(e) estimate

Source: University of Utah, Graduate School of Business,
Bureau of Economic and Business Research, November 1990.

Table 24
Nonresidential Construction Activity in Utah
1970 to 1990

Year	Value of Nonresidential Construction (Millions)
1970	$87.3
1971	$121.6
1972	$99.0
1973	$150.3
1974	$174.2
1975	$196.5
1976	$216.8
1977	$327.1
1978	$338.6
1979	$490.3
1980	$430.0
1981	$378.2
1982	$440.1
1983	$321.0
1984	$535.2
1985	$567.7
1986	$439.9
1987	$413.4
1988	$272.1
1989	$389.6
1990(e)	$430.0

(e) estimate

Source: University of Utah, Graduate School of Business, Bureau of Economic and Business Research, November 1990.

Table 25
Utah Nonresidential Construction by Sector
(in Millions)

Sector	1987	1988	1989	1990(e)	Average Percent of Total(a)
Hotels and Motels	$4,621.8	$17.1	$6,073.3	$10,000.0	1.4
Churches and Religious Buildings	$25,429.9	$20,909.1	$23,036.0	$18,000.0	5.8
Industrial Buildings	$67,450.1	$57,906.6	$65,510.2	$89,000.0	18.6
Offices, Banks and Professional Buildings	$79,923.4	$46,909.0	$102,310.6	$37,000.0	17.7
Stores and Other Mercantile Buildings	$59,609.6	$49,598.5	$58,753.5	$92,000.0	17.3
Publicly Owned Buildings	$84,193.3	$24,584.3	$60,673.9	$79,000.0	16.5
Other Nonresidential Construction	$92,212.3	$72,130.5	$73,245.3	$105,000.0	22.8
Total Nonresidential Construction	$413,440.4	$272,055.1	$389,602.8	$430,000.0	100.0

(a) Data represents four year average, 1987 to 1990.
(e) Estimate

Source: University of Utah, Graduate School of Business, Bureau of Economic and Business Research, November 1990.

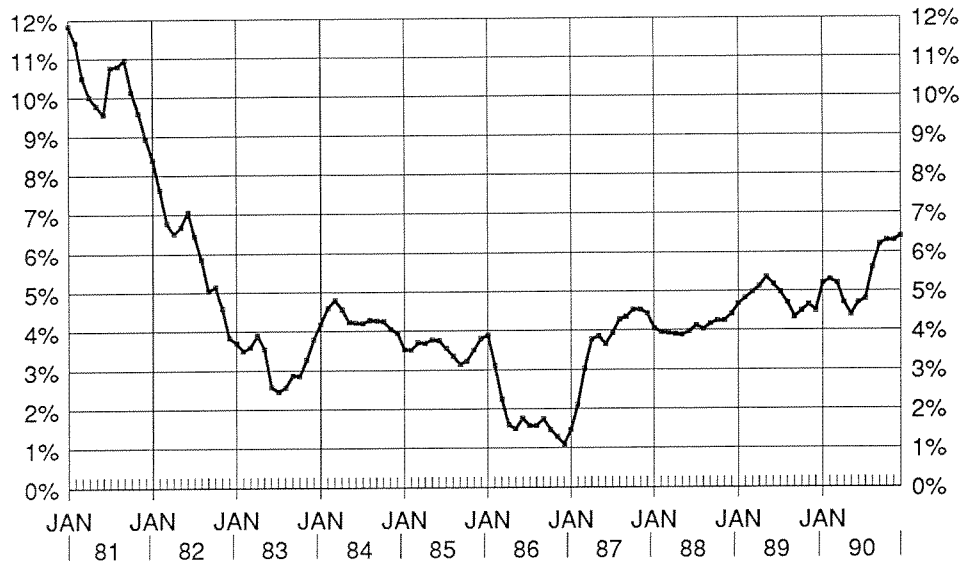
PRICES, INFLATION AND UTAH'S COST OF LIVING

Price increases remained an area of national concern in 1990. Inflation, as measured by the Consumer Price Index, accelerated in the first quarter to year-over gains of 5.3 percent. Price pressures eased in the second quarter as the annual increase averaged 4.6 percent. In early August, Iraq invaded Kuwait, and over the next two months, crude oil prices doubled, rising from $20 to $40 per barrel. Gasoline prices jumped accordingly, and in October, the U.S. CPI at 133.5 was 6.3 percent above the prior year. Oil prices in November, however, had dropped below $30 per barrel, since world oil supplies had been restored and direct military confrontation had not yet developed.

Despite accelerated cost increases throughout much of 1990, it is not likely that the current jump in oil prices will contribute to an ongoing inflation problem such as occurred in 1979. Over the past two years, growth in the nation's money supply has been modest by historic standards. Furthermore, with a weakening national economy and intense international competition, higher costs will not easily be passed on in higher prices. Many asset categories, including real estate and stocks, have fallen in value, which is not conducive to an ongoing inflationary environment.

There are two commonly used GNP-related measures of inflation. The Implicit Price Deflator is a comprehensive measure of price changes also impacted by variations in the composition of output. The Fixed Weight Deflator is another broad measure of price change, but it assesses price changes for a fixed number of goods and services and, therefore, is not influenced by alterations in the output composition of GNP. These measures are shown on Table 26.

Figure 25
Increase in Prices Over the Previous 12 Months measured by CPI: Jan 81 to Dec 90



Source: U.S. Department of Labor

In a third quarter of 1990, the GNP implicit deflator increased at an annual rate of 3.4 percent, lower than the 4.7-percent increase in the second quarter and 4.8-percent increase in the first quarter. The GNP fixed weight deflator remained generally stable in the third quarter, increasing at an annual rate of 4.2 percent compared to 4.0 percent in the second quarter and 6.6 percent in the first quarter.

Utah Cost of Living

The American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index is prepared quarterly and includes comparative data for approximately 270 urban areas. The index includes price comparisons for a single point in time, but it does not measure inflation or price changes over time. What it does measure is the differences between areas in the cost of consumer goods and services, as compared with a national average of 100. The composite index is based on six components, including grocery items, housing, utilities, transportation, health care and miscellaneous goods and services. The Salt Lake Area Chamber if Commerce is a member of ACCRA and submits quarterly data for the local area.

The second-quarter 1990 composite index for Salt Lake City was 92.0, or 8 percent below the national average for the quarter. The second-quarter breakdown by component for the Salt Lake area is:

Grocery items, 88.8	Health care, 93.7
Housing, 81.5	Miscellaneous goods and services, 101.9
Utilities, 84.4	
Transportation, 97.0	

Other Utah cities included in the second-quarter survey were Cedar City, 88.6; Provo-Orem, 89.6; and St. George, 91.6.

Table 26
U.S. Consumer Price Index
All Urban Consumers (CPI-U)
1982 to 1984 = 100

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	AVG.	Percent Change Dec-Dec	Percent Change Ann. Avg.
1954	26.9	26.9	26.9	26.8	26.9	26.9	26.9	26.9	26.8	26.8	26.8	26.7	26.9	-0.7	0.7
1955	26.7	26.7	26.7	26.7	26.7	26.7	26.8	26.8	26.9	26.9	26.9	26.8	26.8	0.4	-0.4
1956	26.8	26.8	26.8	26.9	27.0	27.2	27.4	27.3	27.4	27.5	27.5	27.6	27.2	3.0	1.5
1957	27.6	27.7	27.8	27.9	28.0	28.1	28.3	28.3	28.3	28.3	28.4	28.4	28.1	2.9	3.3
1958	28.6	28.6	28.8	28.9	28.9	28.9	29.0	28.9	28.9	28.9	29.0	28.9	28.9	1.8	2.8
1959	29.0	28.9	28.9	29.0	29.0	29.1	29.2	29.2	29.3	29.4	29.4	29.4	29.1	1.7	0.7
1960	29.3	29.4	29.4	29.5	29.5	29.6	29.6	29.6	29.6	29.8	29.8	29.8	29.6	1.4	1.7
1961	29.8	29.8	29.8	29.8	29.8	29.8	30.0	29.9	30.0	30.0	30.0	30.0	29.9	0.7	1.0
1962	30.1	30.1	30.1	30.2	30.2	30.2	30.3	30.3	30.4	30.4	30.4	30.4	30.2	1.3	1.0
1963	30.4	360.4	30.5	30.5	30.5	30.6	30.7	30.7	30.7	30.8	30.8	30.9	30.6	1.6	1.3
1964	30.9	30.9	30.9	30.9	30.9	31.1	31.1	31.0	31.1	31.1	31.2	31.2	31.0	1.0	1.3
1965	31.2	31.2	31.3	31.4	31.4	31.6	31.6	31.6	31.6	31.7	31.7	31.8	31.5	1.9	1.6
1966	31.8	32.0	32.1	32.3	32.3	32.4	32.5	32.7	32.7	32.9	32.9	32.9	32.4	3.5	2.9
1967	32.6	32.9	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	33.4	3.0	3.1
1968	34.1	34.2	34.3	34.4	34.5	34.7	34.9	35.0	35.1	35.3	35.4	35.5	34.8	4.7	4.2
1969	35.6	35.8	36.1	36.3	36.4	36.6	36.8	37.0	37.1	37.3	37.6	37.7	36.7	6.2	5.5
1970	37.8	38.0	38.2	38.5	38.6	38.8	39.0	39.0	39.2	39.4	39.6	39.8	38.8	5.6	5.7
1971	39.8	39.9	40.0	40.1	40.3	40.6	40.7	40.8	40.8	40.9	40.9	41.1	40.5	3.3	4.4
1972	41.1	41.3	41.4	41.5	41.6	41.7	41.9	42.0	42.1	42.3	42.4	42.5	41.8	3.4	3.2
1973	42.6	42.9	43.3	43.6	43.9	44.2	44.3	45.1	45.2	45.6	45.9	46.2	44.4	8.7	6.2
1974	46.6	47.2	47.8	48.0	48.6	49.0	49.4	50.0	50.6	51.1	51.5	51.9	49.3	12.3	11.0
1975	52.1	52.5	52.7	52.9	53.2	53.6	54.2	54.3	54.6	54.9	55.3	55.5	53.8	6.9	9.1
1976	55.6	55.8	55.9	56.1	56.5	56.8	57.1	57.4	57.6	57.9	58.0	58.2	56.9	4.9	5.8
1977	58.5	59.1	59.5	60.0	60.3	60.7	61.0	61.2	61.4	61.6	61.9	62.1	60.6	6.7	6.5
1978	62.5	62.9	63.4	63.9	64.5	65.2	65.7	66.0	66.5	67.1	67.4	67.7	65.2	9.0	7.6
1979	68.3	69.1	69.8	70.6	71.5	72.3	73.1	73.8	74.6	75.2	75.9	76.7	72.6	13.3	11.3
1980	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3	82.4	12.5	13.5
1981	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0	90.9	8.9	10.3
1982	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6	96.5	3.8	6.2
1983	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3	99.6	3.8	3.2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9	3.9	4.3
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6	3.8	3.6
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6	1.1	1.9
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6	4.4	3.6
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.7	118.3	4.6	4.1
1989	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0	4.5	4.8
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	134.2(e)	130.7(e)	6.4(e)	5.4(e)

(e) Estimate.

Sources: U.S. Bureau of Labor Statistics and Utah Office of Planning and Budget.

Table 27
U.S. Implicit Price Deflator and Fixed Weight Deflator

	GNP Implicit Price Deflator			GNP Fixed Weighted Deflator		
	Index (1982=100)	% Change Last Quarter*	% Change Year Ago	Index (1982=100)	% Change Last Quarter*	% Change Year Ago
1985						
Q1	109.7	2.6%	3.0%	110.6	3.7%	3.6%
Q2	110.6	3.3%	3.1%	111.5	3.3%	3.4%
Q3	111.3	2.5%	2.9%	112.3	2.9%	3.3%
Q4	112.2	3.2%	2.9%	113.2	3.2%	3.3%
Ann. Avg.	111.0	--	3.0%	111.9	--	3.4%
1986						
Q1	112.4	0.7%	2.5%	113.8	2.1%	2.9%
Q2	113.2	2.8%	2.4%	114.4	2.1%	2.6%
Q3	114.6	4.9%	3.0%	115.3	3.1%	2.7%
Q4	115.1	1.7%	2.6%	116.1	2.8%	2.6%
Ann. Avg.	113.8	--	2.6%	114.9	--	2.7%
1987						
Q1	116.1	3.5%	3.3%	117.4	4.5%	3.2%
Q2	117.0	3.1%	3.4%	118.4	3.4%	3.5%
Q3	118.0	3.4%	3.0%	119.4	3.4%	3.6%
Q4	118.5	1.7%	3.0%	120.5	3.7%	3.8%
Ann. Avg.	117.4	--	3.1%	118.9	--	3.5%
1988						
Q1	119.3	2.7%	2.8%	121.6	3.7%	3.6%
Q2	120.6	4.4%	3.1%	123.0	4.6%	3.9%
Q3	122.0	4.6%	3.4%	124.7	5.5%	4.4%
Q4	123.4	4.6%	4.1%	126.1	4.5%	4.6%
Ann. Avg.	121.3	--	3.3%	123.9	--	4.1%
1989						
Q1	124.6	3.9%	4.4%	127.6	4.8%	4.9%
Q2	125.8	3.9%	4.3%	129.0	4.4%	4.9%
Q3	126.8	3.2%	3.9%	130.0	3.1%	4.3%
Q4	128.0	3.8%	3.7%	131.2	3.7%	4.0%
Ann. Avg.	126.3	--	4.1%	129.5	--	4.5%
1990						
Q1	129.5	4.7%	3.9%	133.3	6.4%	4.5%
Q2	131.0	4.6%	4.1%	134.6	3.9%	4.3%
Q3	132.1	3.4%	4.2%	136.0	4.2%	4.6%

* Annual Basis

Source: U.S. Bureau of Economic Analysis and Utah Office of Planning and Budget.

Table 28
ACCRA Composite Cost-of-Living Comparisons
For Selected Metropolitan Areas
Second Quarter 1990

Component Index Weight	100%	17%	22%	11%	13%	7%	30%
City	All Items	Groceries	Housing	Utilities	Transportation	Health Care	Miscellaneous
U.S. Average	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Salt Lake City	92.0	88.8	81.5	84.4	97.0	93.7	101.9
*Cedar City, Utah	88.6	103.1	68.3	81.7	93.1	88.4	95.8
Provo/Orem, Utah	89.6	90.9	76.8	85.0	96.7	89.1	97.0
*St. George, Utah	91.6	99.4	83.1	65.0	101.3	94.9	98.2
Western States							
Phoenix, Arizona	102.4	96.6	97.4	97.9	108.1	116.0	105.5
Los Angeles, California	124.1	102.5	197.7	76.5	107.8	128.5	105.7
San Diego, California	131.7	104.6	215.8	73.4	131.9	125.3	108.3
Denver, Colorado	100.5	91.3	100.6	97.6	105.8	117.5	100.4
Boise, Idaho	97.1	94.7	106.2	71.4	91.2	111.6	100.3
Las Vegas, Nevada	108.9	95.7	116.2	87.5	117.7	125.4	111.2
Albuquerque, New Mexico	101.7	98.3	106.3	99.0	103.6	102.4	100.2
Salem, Oregon	98.4	101.5	94.4	77.1	101.2	116.5	102.1
Seattle, Washington	112.3	112.6	133.3	63.3	112.8	144.1	107.1
Laramie, Wyoming	96.5	103.2	89.7	93.6	99.2	104.0	95.8
Other Areas							
Anchorage, Alaska	126.0	131.4	122.4	97.5	116.7	191.9	124.6
Atlanta, Georgia	101.4	97.6	98.4	116.8	102.2	117.6	95.9
Kansas City, Missouri/Kansas	93.1	92.8	96.1	96.1	95.7	85.5	90.6
Nassau-Suffolk, New York	155.7	117.6	224.3	205.0	131.4	138.6	123.3
Houston, Texas	99.3	103.5	83.8	94.5	116.9	104.0	101.3
** Highest City	131.7 San Diego, CA	116.1 New London, CT	216.7 Orange Co., CA	182.1 Philadelphia, PA	131.9 San Diego, CA	144.1 Seattle, WA	122.2 Bakersfield, CA
** Lowest City	86.6 Loveland, CO	88.8 Salt Lake City, UT	65.1 Gadsden, AL	62.2 Eugene, OR	83.7 Gastonia, NC	73.2 Fayetteville, AK	86.4 Canton, OH

*Non-metropolitan Area
** Does not include cities in Alaska or New York.

Source: American Chamber of Commerce Researchers Association (ACCRA).

Table 29
ACCRA Cost-of-Living Index
for the Salt Lake City Metropolitan Area

COMPONENT INDEX WEIGHTS:	100%	17%	22%	11%	13%	7%	30%
	ALL ITEMS	GROCERIES	HOUSING	UTILITIES	TRANSPORTATION	HEALTH CARE	MISCELLANEOUS
U.S. AVERAGE:	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	100.1	96.1	107.3	80.7	107.8	100.9	101.8
1982	100.9	101.2	107.5	89.4	103.5	100.6	99.0
1983	96.0	96.2	104.9	88.0	95.2	98.6	92.2
1984	98.0	100.3	97.4	88.2	97.5	106.8	98.9
1985	101.7	100.6	97.9	95.3	102.2	103.2	107.1
1986	101.4	102.9	94.4	97.2	98.6	105.3	107.5
1987	99.3	95.4	94.0	96.2	105.5	101.6	103.4
1988	98.3	94.6	88.4	94.0	105.4	106.1	104.4
1989	95.6	94.8	86.9	89.8	101.1	100.9	100.9
1990	92.0	88.8	81.5	84.4	97.0	93.7	101.9

* Second Quarter

SOURCE: Utah Department of Employment Security, Labor Market Information (LMI) Services.

ENERGY AND MINERALS PRODUCTION AND PRICES

Petroleum

World oil prices were again largely determined by OPEC production and political events in the Persian Gulf. The roller coaster ride for crude oil prices that started in 1986 continued throughout 1990. The year began with oil prices at $20.00 per barrel. However, by June the average spot price for the OPEC basket of crude had fallen precipitously as OPEC over production and seasonally weak demand through the second quarter forced the price to under $15.00 per barrel.

By July a brief summer price recovery began. This was the result of seasonally higher demand and the anticipation of an accord being reached at the July ministerial meeting of OPEC. On July 25 crude oil was again trading at just over $20.00 per barrel and there was some promise that OPEC members would adhere to production quotas through the remainder of 1990.

On the morning of August 2, Iraq invaded Kuwait, sending oil markets reeling and oil prices surging to levels not seen since the Iranian Revolution ten years before. U.S crude oil prices prior to the Iraqi invasion had been trading at just over $20.00 per barrel. By August 6, the price exceeded $28.00 as the U.N. imposed embargo removed 4.3 million barrels of combined Iraqi and Kuwaiti crude oil production from world markets. Prices continued to climb sharply, briefly exceeding $40.00, on the strength of rumors and military developments that fueled the market's expectation of war. Since peaking on October 9, prices have retreated below $30.00 and traded within a range of $28 - $34 during November and December. The drop in price resulted from enhanced prospects for peace and surge-production from Saudi Arabia, Venezuela, the United Arab Emirates, Mexico and other countries.

Crude Oil Exploration and Development

Historically, exploration and development activity have been closely tied to the market price of crude oil. Producer uncertainty, created by four years of price volatility, and the August 2 Iraqi invasion of Kuwait have strongly influenced the level of exploration activity experienced in Utah's oil provinces during the past year.

Evidence of the uncertainty that accompanied the erosion of Utah oil prices from a January high of $23.96 to a June low of $15.42 were reflected in the key measures of exploration and drilling activity -- well permits, rotary rig activity, and well completions -- during the first half of 1990. On the strength of higher crude oil prices during the last quarter of 1989 and the first two months of 1990, exploration and drilling activity appeared headed for its first increase in seven years. Drilling permits issued during the first six months totaled 115, a 248 percent increase over the number of drilling permits issued for the same period in 1989, and exceeded total drilling permits issued for the entire year of 1989 by 18. The number of rotary rigs operating in Utah during this period, however, remained fairly flat, averaging 5.1 rigs, only slightly higher than the 4.9 rigs operating in 1989. Similarly, well completions in Utah's oil provinces did not reflect the increases that might have been expected by the number of drilling permits issued. Well completions totaled 39 wells through the first six months of the year, up only marginally from the 37 wells completed for the same period in 1989.

Significantly higher prices, as a result OPEC's July meeting and the subsequent Iraqi invasion of Kuwait, have raised expectations that drilling activity will increase over the last half of 1990, and third quarter figures indicate this will be the case. Drilling activity rebounded from July through September as rotary rig activity averaged 7 rigs raising the year-to-date average to 5 rigs for 1990. October's average rig count was 7.25. On the strength of increased rig activity, 24 wells were completed during July, August and September bringing to 63 the number of wells completed through the end of the third quarter.

Thirty-nine percent of all wells completed to date have been drilled in Duchesne County, followed by San Juan County (29 percent) and Uintah County (21 percent). Responding to the volatility of crude oil prices, Utah operators' exploration and production budgets have been heavily weighted towards in-fill and development drilling in 1990. Eighty-six percent of all wells drilled through the first nine months of 1990 have been development or extension wells.

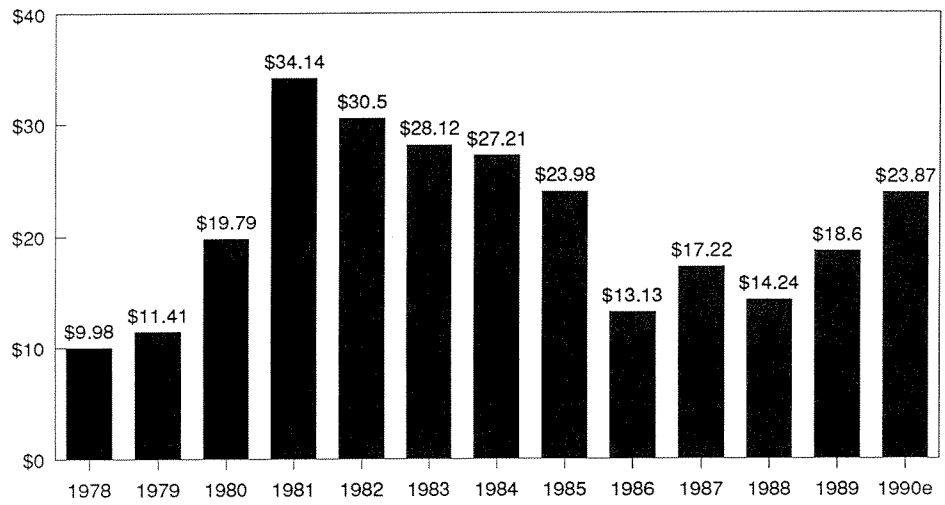
Of the 63 wells drilled through the first nine months of 1990, 41 have been oil wells, 12 more than 1989. The success rate of oil wells remains very high as 38 of the 41 wells completed are currently listed as producing oil wells. Only 3 wells are identified as shut-in.

With crude oil prices remaining above $25.00 a barrel since August, exploration and drilling activity for the remainder of 1990 should continue to increase over the third quarter of 1990. Well permits issued in 1990 are expected to close the year at an increase of 140 percent over 1989 and the highest number of permits issued since 1985. Accordingly, well completions are projected to increase 13 percent to 92 wells in 1990, 11 more wells than in 1989.

Crude Oil Production

Since the first quantities of oil were produced in Utah at the Virgin field in 1907, Utah oil wells have produced an estimated one billion barrels of oil. The Paradox Basin located in San Juan County, and eastern Utah's Uinta Basin encompassing Duchesne and Uintah counties have been the most prolific producing regions in the state. Seven of the top ten all-time producing fields are located in the three counties included in these basins. In recent years, Summit County has become an important player in the production of oil with the discovery and development of the Pineview field in 1974 and the giant Anschutz Ranch East field in 1981 in Utah's portion of the Overthrust Belt. Despite having only produced for seven years, Anschutz Ranch East ranks as the 4th all-time cumulative producing field in Utah.

Figure 26
Average Oil Price per Barrel
in Utah: 1978-1990



e - estimate
Source: U.S. Department of Energy and Utah State Energy Office.

Since 1986 oil production in Utah has suffered from the cumulative effects of: price instability; a significant fall in the number of development wells drilled; and declining production from the prolific Anschutz Ranch East field, which is in the downward portion of its production curve. This year, wells in 131 fields are projected to produce an estimated 27.9 million barrels of oil allowing Utah to retain its ranking as the 10th largest oil producing state in the U.S.

Because of unstable prices Utah crude oil production is projected to fall for the fifth consecutive year. This year production is expected to be down two percent from 1989's 28.4 million barrels. For the seventh straight year Summit County (the Anschutz Ranch East field) will lead all other producing counties with 9.8 million barrels. San Juan County is projected to follow with 7.4 million barrels while Duchesne and Uintah counties are expected to produce 5.9 and 4.3 million barrels respectively.

Historically, Utah's oil provinces have been the most expensive to drill in the continental United States due to complex geology, and difficult and isolated terrain. The drop in the number of wells drilled in the state since 1985 reflects that many Utah drilling prospects have been weeded out of exploration and development programs. What has followed has been an inevitable decline in production, as wells that were drilled in the early 1980s, responsible for the surge in production between 1982-1985, continue their natural decline and too few new wells were drilled to compensate for the production losses from these older wells. The result has been demonstrated by the drop in production between 1986 and 1990. Lacking a significant and sustainable increase in the price paid for a barrel of Utah crude oil, the level of activity in industry's upstream operations is expected to remain depressed and current trends are anticipated to continue into the early 1990s.

Petroleum Product Consumption and Prices

Higher oil prices resulting from the August 2 Iraqi invasion of Kuwait, and the fourth quarter slow down in economic growth in Utah have complicated our assessment of petroleum product markets for 1990. Preliminary estimates indicate that 1990 Utah petroleum consumption will increase 3.7 percent above 1989 levels and approach 40.9 million barrels in 1990, the highest level of petroleum consumption ever.

Petroleum products consumption estimates for 1990 indicate two of the three major product categories, motor gasoline, middle distillates and aviation fuel will increase over 1989. Demand for petroleum products was strong during the first 8 months of 1990 but increased prices and a slowdown in economic activity weakened demand in the last 4 months.

Motor gasoline is the single largest consumption category for petroleum products and typically accounts for between 44 to 48 percent of all petroleum consumed in Utah. In 1990, motor gasoline consumption is expected to increase only slightly as a result of higher prices in the first, third and fourth quarters. Total estimated consumption for the year will increase 67 thousand barrels to 18.3 million barrels.

Distillate demand is most affected by economic growth through agricultural and industrial production, and commerce. Gains in diesel fuel use by the transportation (trucking) and agricultural sectors are largely responsible for the 2.8 percent growth rate in distillate demand through 1990. Estimated consumption for 1990 is expected to increase 227,000 barrels to 8.15 million barrels and account for 20 percent of total petroleum consumed.

The combined category of aviation fuel includes kerosene jet fuel for commercial aviation, naphtha jet fuel used in military aircraft and aviation gasoline for small fixed wing aircraft and represents the third largest consumption category for Utah petroleum products. On the strength of increased commercial consumption of kerosene jet fuel and military consumption of naphtha jet fuel, 1990 consumption of aviation fuel is projected to grow by 1.2 million barrels, an increase of 22.3 percent.

Increased supplies of petroleum products to meet 1990 and future demand will increasingly come from products imported from California and Wyoming, and crude oil transported via pipeline from Colorado and

Wyoming. Four years of unstable crude oil prices have sharply curtailed drilling activity in Utah and accelerated a decline in Utah crude oil production. This in turn has led to a tightening of Utah crude oil supplies for local refineries. Refiners have increasingly turned to crude oil from Wyoming, Colorado and Nevada to fill out their crude runs. This has been seen in the rise of crude oil imported from other Rocky Mountain states to Utah. Since 1985, Utah crude oil's share of refinery runs has slipped from 43 percent to 38 percent in 1990.

NATURAL GAS

Natural Gas Exploration and Development

Through the first nine months of 1990, spot market prices for natural gas at the wellhead have declined seven percent from the same period in 1989. The continued softening in spot market prices has led to a decline in drilling and exploration activity for natural gas in Utah. Although well completions for oil and gas increased 15 percent to 63 in the first 9 months of 1990, only 13 were identified as gas wells, 2 fewer than the previous year. Of the 13 gas wells completed, 12 have been shut-in or temporarily abandoned reflecting the weakness in spot market prices for Utah natural gas. Uintah county again saw the largest amount of drilling activity as 6 of the 12 gas wells drilled through September were completed in this county. Operators in Utah have been targeting existing fields as 8 development wells were completed statewide while only 1 wildcat well was drilled.

Overall drilling activity is expected to increase in the last quarter of 1990 despite weak spot market prices for natural gas at the wellhead. Post invasion oil prices are forecast to drive spot market prices about 6 cents/MMbtu higher than previously expected in 1990 as roughly 25 percent of independent companies have increased capital expenditures on exploration and production activities since the Iraqi invasion.

Natural Gas Production

Despite another year of depressed drilling activity, an average of 641 wells are expected to produce 322,891 million cubic feet (MMcf) of natural gas in 1990 representing a 16 percent increase over 1989. Fully 70 percent of this total will come from the prolific Anschutz Ranch East Field in Summit County. The top ten producers of natural gas will account for 90 percent of gross production in 1990, with Amoco Rockmount production from the Anschutz Ranch East field contributing 70 percent of total production.

In 1990, marketed production is also projected to increase 25 percent over 1989's production, to 149,809 million cubic feet. Along with 12 gas wells that have been shut-in, another indication of weak spot market prices is the amount of gas being returned to formations. Through August, reinjected gas has increased nearly 10 percent over the same period in 1989.

Natural Gas Consumption

Lower spot market prices, a strong Utah economy, and growth in Mountain Fuel Supply's customer base were not enough to offset the unusually mild winter which caused natural gas demand to decrease in 1990. End-use deliveries are estimated to decrease nearly two percent to 102.2 million decatherms. Deliveries to the residential sector, which is the largest consumer of natural gas, are estimated to decrease eight percent to 45.6 million decatherms.

Increased economic activity through the first 3 quarters of 1990 was reflected by a rise in demand for natural gas by the industrial sector. Deliveries of natural gas are estimated to increase eight percent over 1989 to 34.2 million decatherms. Because of lower spot market prices and events in the Persian Gulf, demand for natural gas is expected to remain strong in the industrial sector. Firms with fuel switching capability will continue using natural gas until deliveries are interrupted due to peak winter demand as the price of No. 2 fuel oil has doubled since Iraq's invasion of Kuwait.

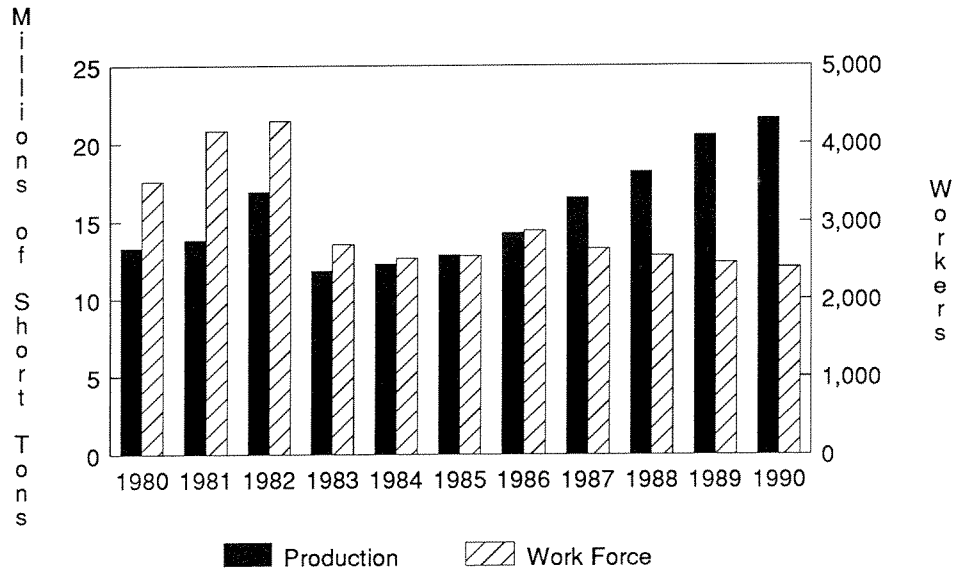
Coal

The value of Utah coal production will surpass the half-billion dollar mark in 1990 and will set an all time high. In addition, Utah continues to record the highest labor productivity of any underground coal mining state in the nation. During 1989, Utah coal production reached a record high of 20.5 million tons, with productivity of over 35 tons per man-day. In 1990, Utah will reach yet another all-time high of 21.5 million tons of production with productivity of over 38 tons per man-day. This level of productivity has not even been attained by many of the surface coal mining states.

One of the keys to high labor productivity in Utah coal mining is the prevalence of long wall mining operations. Long wall mining uses specialized equipment to rapidly remove the coal from two-hundred yard sections of the mine wall, dramatically boosting output over other techniques. Presently there are six long wall mining machines in use in Utah. Because of the high capital cost associated with this technique, at current coal prices, long wall operations can only survive if production is at or near full capacity.

The lion's share of Utah's coal production is consumed by electric utilities. Utah Power and Light will have a moderate increase in consumption during 1990, as will the Intermountain Power Project. These two entities consume more than half of Utah's coal production. The demand for Utah coal from the two major Nevada utilities, Sierra Pacific and Nevada Power, will remain unchanged, while an increased amount of Utah's coal will be consumed by newly-constructed cogeneration facilities in California. These electric utility plants together would consume 10 percent more of Utah coal in 1990 than in 1989, and consumption could approach 3 million tons.

Figure 27
Utah Coal Production and
Average Daily Work Force



Source: Utah Energy Office

Geneva Steel's consumption of Utah coking coal will increase, as will the industrial consumption of steam coal in Utah during 1990. The combined consumption could reach 1.5 million tons. The consumption of industrial coal outside of Utah, which is mainly in chemical and cement plants in California, will also show a 4 percent increase during 1990 over the previous year and may approach 2.5 million tons.

Exports of Utah coal to the Pacific Rim have quadrupled over the past three years, and will likely increase by about half a million tons in 1990. In addition, there are some multipartile deals in the works which would lead to further growth in the export sector. A coal export tax credit passed by the legislature in 1990 will provide a $1 subsidy for every ton of coal a company exports beyond its 1989 level.

Uranium

A year ago many believed the Utah uranium industry would rebound from a low production year in 1988. Production for 1988 was 2.8 million pounds U_3O_8. That was down considerably from the 5.32 million pounds of 1987 and the 5.77 million pounds of 1986. By the end of 1989, it was estimated that Utah yellowcake production may reach 6 million pounds. Unfortunately, the rebound did not occur.

Vanadium prices did not rebound, so uranium production from vanadium-uranium ores was curtailed. Also, low cost foreign imports of uranium increased for the fifth year in a row further depressing the domestic market. Utah's lone uranium mill shut down, curtailing production, so that by year's end only 3.8 million pounds of yellowcake was produced. This was up nearly 36 per cent over 1988, but far short of expectations.

The White Mesa Mill processed ores from Colorado and Utah mines, mostly with associated vanadium. These mines may not be reopened soon. Other sources of ore for the mill are the rich deposits of uranium from the Arizona Strip. Energy Fuels is continuing to produce ore from these mines that will eventually be milled at the White Mesa Mill. Meanwhile these ores are being stockpiled.

During 1989, four U.S. uranium production centers shut down due to poor market conditions, with several others scheduled for shut down in 1990. In Utah, the White Mesa Mill at Blanding announced that it would be placed on standby status. It operated at less than capacity for much of 1990. It is not certain when it will resume operations.

In addition, there is one uranium by-product production center in Utah. Energy Fuels recovers uranium from the Bingham copper mining operations. The facility is currently on standby. There was some production in 1990, but figures are unavailable.

Non-Fuel Minerals

Utah's non-fuel mineral production approached another all time high of $1.3 billion in 1989. This was 28 percent higher than the value reached in 1988 and will be about five percent lower than the estimated value of 1990.

Copper production by Kennecott Corporation reached a new high in 1989. The value of copper accounted for more than half of the value of all the metals produced from all Utah mines. During 1990, both production and the unit price of copper will be lower than 1989, but the value of the produced copper will still have the same relationship to the total value of all the metals produced in the state as it did in 1989. Almost all the copper produced in Utah came from the Bingham Canyon mine, which still is the second largest copper producing mine in the nation.

Utah is now the third largest copper and gold producing state in the United States. Gold production increased considerably during 1989 and will also increase further during 1990. Even though gold prices fell during 1989, the increased production more than made up for this decrease and the total value surpassed that of 1988. In 1990 the increase in production and unit price will push the value of this product much higher. The Bingham Canyon mine was again the largest producer of gold in the state and second largest in the nation, even

though the gold is a by-product of copper production as are silver, molybdenum and selenium. Barrick Mercur was the largest primary producer of gold followed by Tenneco Minerals which started operations in the spring of 1989. Gold was also produced by Jumbo Mining Company and North Lily Mining Company. In the latter months of 1989, Kennecott also started mining gold out of Barney Canyon mine as a primary product. The mine will produce gold in 1990 at a comparable rate to that of the Barrick Mercur mine.

An increase in the combined value of copper, gold, and magnesium accounted for most of the increased value of non-fuel mineral production. As a percentage of the total value of the metals production, however, the combined value of copper, gold and magnesium decreased by three percent. This was a result of a strong showing by molybdenum, beryllium and selenium.

During 1989, molybdenum production increased by almost 500 percent over 1988 and it is expected to increase in 1990 by yet another 30 percent over 1989. This unexpected increase in production is mostly due to the modification of the molybdenum circuit by Kennecott Corporation of RTZ. Kennecott Corporation also produced selenium in good quantity as a by-product of copper.

Cleveland-based Brush Wellman Company, which is operating the world's largest beryllium mine in Juab County, produced slightly less beryllium in 1989 than 1988, but at a higher price and total value. Production in 1990 should be on the rise due to the new orders by the Defense Department for building up the strategic materials stockpile as well as the new, innovative uses of this lightweight metal.

In 1989 the Magnesium Corporation of America (Magcorp), produced over $100 million worth of magnesium. In 1990, higher production and prices should push this figure even higher. Magcorp is the second largest magnesium producer in the nation and the third largest in the non-centrally planned economies in the world.

Hecla mining company was the only primary producer of silver in Utah until the end of 1988 when its reserves ran out and the mine was closed indefinitely. During 1989, over 1.5 million Troy ounces of silver was produced at the mine from the existing stock pile and for 1990 the production would decrease to one half of 1989. Five other companies produced silver as by-product of other metals production. Total silver production of Utah was up considerably in 1989 over the previous year. This production will decrease in 1990 by about 13 percent.

During 1989, steel production was up despite an autumn cut back. The total production by Geneva steel mill surpassed 1.3 million tons. It is expected that an equal amount will be produced in 1990. Utah mines produce over 850,000 tons of iron ore for the Geneva Plant in 1989. In 1990 a similar amount will also be produced.

While Utah's metals production increased during 1989, the production of the industrial minerals decreased both in amount and as a percentage of the total value. The main cause of this decrease was the slowing down of the construction industry. Because of the higher volume and the increased unit price of construction material in 1990, the value of the industrial mineral production will go up, despite the expected slow down of the economic activities during the last quarter of the year.

Table 30
Utah Energy Production, Prices and Value
1980-1990

Year	Oil				Natural Gas				Coal				Uranium			
	Gross Production (M Bbls.)	Price ($/Bbl.)	Value (M $)	Btu Trillion	Marketed Production (MM cf)	Price ($/Mcf)	Value (M $)	Btu Trillion	Production (M Tons)	Price ($/Ton)	Value (M $)	Btu Trillion	Production (M lbs.)	(U3O8) Price ($/lb.)	Value (M $)	Btu Trillion
1980	24,979	19.79	494,328	144.88	47,857	1.12	53,600	52.55	13,236	25.63	339,239	304.43	2,397	28.15	67,476	139.03
1981	24,309	34.14	829,926	141.00	58,865	1.10	64,752	64.93	13,808	26.87	371,021	317.58	4,487	34.65	155,475	260.25
1982	23,595	30.50	719,655	136.85	56,367	3.06	172,483	62.40	16,912	29.42	497,551	388.98	2,895	38.37	111,081	167.91
1983	31,045	28.12	872,991	180.06	54,700	3.18	173,946	60.99	11,829	28.32	334,997	272.07	1,372	38.21	52,424	79.58
1984	38,054	27.21	1,035,446	220.71	73,154	3.41	249,455	81.13	12,259	29.20	357,963	281.96	858	32.65	28,014	49.76
1985	40,971	23.98	982,483	237.63	80,122	3.23	258,794	89.10	12,831	27.69	355,290	295.11	1,564	31.43	49,157	90.71
1986	39,172	13.33	522,158	227.20	90,013	2.90	261,038	99.91	14,269	27.64	394,395	328.19	5,767	30.01	173,068	334.49
1987	35,788	17.22	616,273	207.57	79,597	1.82	144,867	88.51	16,521	25.67	424,094	379.98	5,320	27.37	145,608	308.56
1988	33,018	14.24	470,170	191.50	101,028	1.70	171,748	112.34	18,164	22.85	415,047	417.77	2,800	25.65	71,820	162.40
1989	28,416	18.60	528,532	164.81	119,819	1.60	191,710	133.24	20,517	22.00	451,374	471.89	3,800	19.43	73,834	360.3
1990(e)	27,732	23.87	661,963	160.85	149,809	1.51	226,056	166.59	21,590	23.21	501,104	496.57	NA	NA	NA	

(e)=estimate

Note: Coal production is in short tons.

Source: Utah Department of Natural Resources, Utah Energy Office, Energy Data Information System.

Table 31
Utah Coal Mine Production and Productivity

Calendar Year	Number of Active Mines	Production (M Short Tons)	Average Daily Work Force	Average Number of Days Worked	Average Tons per Man Day
1980	29	13,263	3,512	229	15.69
1981	28	13,808	4,166	209	15.92
1982	29	16,912	4,296	223	16.40
1983	25	11,829	2,707	191	20.72
1984	24	12,259	2,525	192	23.52
1985	22	12,831	2,563	213	22.40
1986	21	14,269	2,881	205	24.64
1987	20	16,521	2,650	203	26.00
1988	17	18,164	2,559	232	29.52
1989	20	20,517	2,471	235	35.36
1990(e)	20	21,590	2,410	235	38.16

(e) Estimate

Source: U.S. Department of Energy, Energy Information Administration, Coal Production, DOE/EIA-0117, 1980-1985; Utah Department of Natural Resources, Utah Energy Office, Survey of Annual Production and Distribution of Coal in Utah, 1986-1989.

Table 32
Utah Oil and Natural Gas Resource Development

Year	Geophysical Activity Crew-Months	Drilling Permits	Average Active Rotary Rigs	Exploration and Development				
				Well completions				Total Footage
				Oil	Gas	Dry	Total	
1980	158	523	43	71	99	140	310	1,793,177
1981	122	678	68	199	168	205	572	3,764,185
1982	127	664	41	172	136	156	464	3,103,363
1983	111	588	36	167	110	150	427	2,681,406
1984	121	622	46	228	80	141	449	3,073,797
1985	29	392	29	201	71	102	374	2,666,858
1986	10	219	13	109	53	57	219	1,596,866
1987	21	195	8	55	23	46	124	785,620
1988	12	165	6	61	24	41	126	735,041
1989 (p)	14	97	5	42	16	23	81	452,332
1990 (e)	12	243	5	46	18	28	92	699,817

(p)=preliminary, (e)=estimate

Sources: 1) Utah Department of Natural Resources, Division of Oil, Gas and Mining, "Utah Oil and Gas Activity."
2) Petroleum Information Corporation, "State of Utah Drilling Success Summary".
3) Utah Energy Office, Energy Data Information System.

Table 33
Top 10 Oil Companies and 10 Largest Crude Oil Fields in Utah

Oil Companies Operating in Utah Ranked by Production, August 1990 YTD.

Rank	Operator	Crude Oil Production (barrels)	% of Utah Production
1	Amoco Rockmount	5,339,553	28.68%
2	Coastal/ANR	1,659,249	8.91%
3	Mobil Productuion	1,446,726	7.77%
4	Penzoil	1,337,045	7.18%
5	Texaco	1,294,323	6.95%
6	Chevron, USA	1,269,471	6.82%
7	Phillips Petroleum	974,824	5.24%
8	Linmar	611,665	3.28%
9	Flying J. Inc.	462,052	2.48%
10	Meridian Oil, Inc.	456,763	2.45%
	Totals	14,851,671	79.76%

Crude Oil Production by the Ten Largest Fields as of August 1990.

Rank	Field	Year of Discovery	County	Production (barrels)	Cumulative
1	Greater Aneth	1959	San Juan	3,755,695	232,115,643
2	Bluebell	1959	Duchesne	2,581,931	114,236,445
3	Altamont	1970	Duchesne	2,002,326	94,118,197
4	Anschutz Ranch East	1980	Summit	5,339,553	92,913,191
5	Red Wash	1959	Uintah	641,522	72,368,528
6	Lisbon	1960	San Juan	285,062	49,246,331
7	Wonsits Valley	1965	Uintah	607,124	37,358,537
8	Pineview	1975	Summit	285,661	24,461,216
9	Upper Valley	1964	Garfield	229,917	21,467,477
10	Walker Hollow	1965	Uintah	249,446	13,759,170

Source: Utah Department of Natural Resources, Utah Energy Office.

Table 34
Utah Energy Consumption Estimates by Primary Source
1980-1990

			Petroleum									
	Coal	Natural Gas	Asphalt & Road Oil	Aviation Fuel	Distillate & Kerosene	Lubricants	LPG	Motor Gasoline	Residual Fuel	Total	Hydro-Electric Power	Geothermal Energy
Year	Thousand Short Tons	Thousand Decatherms	Thousand Barrels								Million Kwh	
1980	7,106	117,936	1,477	2,776	8,503	299	1,301	15,534	3,495	36,114	821	0
1981	7,432	107,990	927	2,564	7,253	287	1,546	15,548	1,022	30,909	623	0
1982	6,787	110,753	933	2,877	6,630	262	1,523	15,793	855	30,717	1,024	0
1983	6,873	104,086	820	3,387	6,445	274	1,577	15,954	1,600	32,421	1,394	0
1984	7,905	114,943	1,340	3,491	6,943	292	1,493	16,151	1,645	33,772	1,391	38
1985	8,303	105,062	1,576	3,902	5,977	272	1,610	16,236	1,899	33,703	1,019	110
1986	8,112	89,989	1,295	4,445	7,332	266	1,546	17,541	1,496	36,106	1,413	172
1987	11,806	86,131	1,387	5,068	6,791	301	1,622	17,582	2,167	37,366	893	164
1988	14,513	97,155	969	5,173	7,349	290	1,408	18,172	1,292	37,455	593	174
1989	15,108	104,099	1,440	5,555	7,925	303	1,505	18,240	1,729	39,403	562	173
1990	15,868	102,243	1,342	6,653	8,158	309	1,485	18,307	1,815	40,893	466	157

Note: 1) 1989-1990 data represent Utah Energy Office estimates.

Source: 1) U.S. Department of Energy, Energy Information Administration, "State Energy Data Report, Consumption Estimates 1960-1988".

TAX COLLECTIONS

Estimated and historic tax collections and trends are presented in Table 35 for fiscal years 1975 to 1992. Fiscal years 1975 through 1982 were years of strong growth for state tax collections. This was a period of in-migration and relatively high growth in employment and wages. A sharp decrease in the rate of growth in taxes occurred in fiscal year 1983 due to a recession which lingered on during most of that year.

Fiscal year 1984 collections increased dramatically due to economic recovery, windfall payments, and sales, corporate, severance and beer tax increases. Fiscal year 1985 brought moderate growth in taxes as the economic recovery continued. Also contributing to the growth in revenues in fiscal year 1985 was an increase in motor and special fuels taxes.

Fiscal year 1986 showed a sharp decrease in collections. This decline was largely due to the closure of Kennecott Copper, out-migration, depressed oil prices, declining wages and employment, new sales tax exemptions, and stronger growth in tax exempt services industries than in taxable goods industries.

Increased tax collections in fiscal year 1987 resulted from accelerated corporate payments, an income tax surcharge, and windfalls from the 1986 federal income tax reform. Without the above mentioned tax changes, revenue receipts would have fallen in fiscal year 1987. The reason for this was the combined effects of the Geneva Steel and Kennecott Copper closures, the construction downturn (particularly the completion of IPP), lower oil prices, sluggish economic activity in surrounding states, and lower employment, population, and wage growth in general.

Revenue collections in fiscal year 1988 improved as a result of income tax windfalls, state income tax reform, increased oil prices, the reopening of Geneva and Kennecott, and sales, cigarette, and motor and special fuels tax increases. Because income tax reforms resulted in larger than anticipated tax windfalls, and due to improvements in general economic activity during fiscal year 1988, a special session of the Legislature met in July 1988 to reduce income taxes by 11.5 percent. A one-time income tax rebate of approximately $71 million was also approved during the July 1988 special session.

Economic activity continued to improve during fiscal year 1989. Tax collections increased due to one-time mineral lease and inheritance tax windfalls, higher profits and bonus payments at Kennecott and Geneva, strong growth in manufacturing, trade and service sectors, and expansions of new and existing firms in prominent areas such as telecommunications, aerospace, and computer and bio-medical technologies.

The economy continued to prosper into fiscal year 1990. The strength in tax collections in fiscal year 1989 prompted another special session of the Legislature in September 1989 to reduce the income tax an additional 5.7 percent. The state's unrestricted general fund sales tax rate was reduced by 2.15 percent, from 5.09375 percent to 4.984375 percent, as of January 1, 1990. The total state sales tax rate dropped to 5.0 percent; but, 1/64ths of this was designated to fund the winter olympics.

Fiscal year 1991 is expected to be another year of solid economic growth. The growth in tax collections should diminish slightly, however, due to declining business and consumer confidence; sales tax cuts; new severance tax credits; federal deficit-reduction tax increases; slower growth in taxable investment spending; lower investment income from declining interest rates; shrinking corporate profits; federal administrative charges against mineral lease monies; and conservation due to higher motor fuel prices.

Table 35
Selected Annual Forecast and Historic Tax Collections
Fiscal Years 1975 to 1991
November 1990
(in Thousands)

	SALES TAXES	PERCENT CHANGE	INCOME TAXES	PERCENT CHANGE	CORPORATE TAXES	PERCENT CHANGE	MINERAL PRODUCTION TAXES	PERCENT CHANGE	MINERAL LEASE PAYMENTS	PERCENT CHANGE
FY75	173,737		104,919		18,003		na	na	5,532	
FY76	194,799	12.12	140,562	33.97	24,502	36.10	na	na	5,512	-0.36
FY77	225,794	15.91	158,268	12.60	24,867	1.49	na	na	9,018	63.61
FY78	257,988	14.26	183,894	16.19	29,448	18.42	na	na	9,639	6.89
FY79	288,603	11.87	225,956	22.87	32,874	11.63	na	na	12,325	27.87
FY80	320,454	11.04	265,327	17.42	40,377	22.82	na	na	14,933	21.16
FY81	347,382	8.40	294,947	11.16	40,667	0.72	na	na	18,153	21.56
FY82	385,260	10.90	331,139	12.27	40,894	0.56	na	na	26,891	48.14
FY83	388,771	0.91	347,977	5.08	33,763	-17.44	4,341	na	36,162	34.48
FY84	526,158	35.34	390,913	12.34	53,226	57.65	10,812	149.07	37,468	3.61
FY85	555,415	5.56	435,510	11.41	65,918	23.85	18,120	67.59	34,190	-8.75
FY86	558,581	0.57	454,290	4.31	84,048	27.50	22,923	26.51	32,578	-4.71
FY87	559,208	0.11	533,288	17.39	68,898	-18.03	9,519	-58.47	22,385	-31.29
FY88	613,520	9.71	640,894	20.18	78,806	14.38	10,414	9.40	28,836	28.82
FY89	666,943	8.71	636,514	-0.68	92,979	17.98	9,290	-10.79	50,800	76.17
FY90	708,234	6.19	659,566	3.62	99,694	7.22	8,634	-7.06	34,941	-31.22
FY91	730,000	3.07	705,000	6.89	90,000	-9.72	10,500	21.61	35,500	1.60
FY92	755,000	3.42	758,000	7.52	90,000	0.00	12,200	16.19	36,000	1.41

	MINE OCCUPATION TAXES	PERCENT CHANGE	MOTOR FUELS TAXES	PERCENT CHANGE	SPECIAL FUELS TAXES	PERCENT CHANGE	B,C & T TAXES	PERCENT CHANGE	INSURANCE PREMIUM TAXES	PERCENT CHANGE
FY75	5,769		40,485		5,753		8,700		9,520	
FY76	11,259	95.16	43,515	7.48	6,241	8.48	9,197	5.71	8,384	-11.93
FY77	8,489	-24.60	45,694	5.01	6,865	10.00	9,617	4.57	10,098	20.44
FY78	8,446	-0.51	48,808	6.81	7,391	7.66	9,989	3.87	11,917	18.01
FY79	8,423	-0.27	61,372	25.74	9,852	33.30	10,156	1.67	13,452	12.88
FY80	9,821	16.60	60,451	-1.50	10,470	6.27	12,445	22.54	14,718	9.41
FY81	14,757	50.26	56,508	-6.52	10,107	-3.47	13,520	8.64	15,778	7.20
FY82	20,694	40.23	67,734	19.87	12,672	25.38	14,108	4.35	21,494	36.23
FY83	24,329	17.57	68,685	1.40	12,603	-0.54	16,211	14.91	17,102	-20.43
FY84	36,243	48.97	68,979	0.43	14,449	14.65	19,897	22.74	19,986	16.86
FY85	46,880	29.35	89,337	29.51	17,791	23.13	21,309	7.10	22,262	11.39
FY86	43,797	-6.58	92,164	3.16	19,369	8.87	21,503	0.91	26,077	17.14
FY87	21,530	-50.84	99,985	8.49	20,627	6.49	23,995	11.59	27,762	6.46
FY88	29,156	35.42	129,370	29.39	27,554	33.58	29,153	21.50	28,223	1.66
FY89	28,134	-3.51	131,220	1.43	29,305	6.35	30,730	5.41	26,406	-6.44
FY90	30,096	6.97	132,475	0.96	29,092	-0.73	30,178	-1.80	30,020	13.69
FY91	34,000	12.97	131,500	-0.74	33,100	13.78	28,800	-4.57	31,800	5.93
FY92	39,600	16.47	130,000	-1.14	35,100	6.04	27,500	-4.51	33,500	5.35

1) FY91 and FY92 values are estimates.
2) The July 1988 special session reduced income taxes by 11.5%, retroactive to Jan. 1, 1988. Tax rates were cut by 5% and 1/3 of the federal deduction was restored. This amounted to $35 and $38MM respectively. 11.5% = ((35+38)/635.3). A $71 million rebate was also approved in the July 1988 session.
3) As a result of the September 1989 special session of the Legislature, FY90 income taxes were reduced a total of $35.2 million or 5.7% =(35.2/615.156). The components of this reduction include:
a) Income tax rates were cut across the board by 2%. The top rate was reduced from 7.35% to 7.2%. This will amount to a $14 million reduction in FY90. However, since the cut was retroactive to January 1, 1989, the State will accrue an overwithholding liability of $12.4 million for FY89.
b) FY90 income taxes were also reduced during the special session by $21 million because the Legislature raised the deductibility of federal taxes, that could be claimed against state income taxes, from 33.3% to 50%.
c) FY90 income taxes were further reduced by $3.5 million due to legislative action which increased the retirement exemption from $6 thousand to $7.5 thousand.
d) Finally, income taxes were RAISED by $3.3 million due to a legislative decision to start taxing state employee pensioners.
4) The general fund sales tax rate drops to 4.984375% from 5.09375% as of Jan. 1, 1990; or 2.15%. The overall rate drops to 5.0%, but 1/64ths of this goes to fund the winter olympics.
5) Federal deficit-reduction tax changes will impact Utah income, beer, liquor, cigarette, and gasoline revenues.

Sources: Utah State Tax Commission and Office of Planning and Budget.

REGIONAL COMPARISONS

In this chapter, comparisons will be made between Utah and other states of the mountain division. The Mountain Division (as defined by the Bureau of the Census) includes the states of Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming.

During the past five years the states of the mountain region have undergone a significant amount of economic restructuring. This energy rich region suffered from the collapse in energy prices in 1985. In addition, agricultural and other natural resource based industries such as timber and metal mining fell on hard times. Weakness in these natural resource based industries spread to related industries such as construction and financial services. As a result, many states in the mountain region experienced serious economic distress and even recession during 1986 and 1987. The nation, meanwhile, had strong and sustained growth. In 1988 there were signs that economic conditions for the mountain states were improving. Significant job growth was occurring in various service industries, agriculture rebounded, and copper prices strengthened. By 1989, the economies of most mountain states had restructured and began growing at a healthy pace. Nevada, in contrast, has been a leading growth state throughout this entire period, based upon its strong gaming and tourism industries. An examination of basic demographic and economic statistics demonstrates the current favorable economic conditions among most mountain states, while economic clouds have gathered for the national economy.

Population Growth

The rate of population growth in the mountain states slowed during most of the 1980s. By 1988 it had fallen to 1.2 percent. With improving economic conditions, population growth in this region increased in 1989 and 1990, accompanied by a significant influx of new migrants to Arizona and Nevada.

From 1988 to 1989, there was a 1.4 percent increase in the mountain states population and a 1.0 percent increase nationally. Four of the eight mountain states experienced net in-migration; Nevada, Arizona, Idaho, and New Mexico. Net out-migration from Colorado, Wyoming, Utah, and Montana continued but at reduced levels from the previous year. Migration into the region was high enough in 1989 for a net increase of 48,000 new residents. Births exceeded deaths by 139,000 bringing the total growth to 187,000 and a the population to 13,513,000.

Wyoming, still heavily dependent on the energy industry, has not yet recovered from the energy bust of the eighties. As a result, it has lost population in each year since 1983. Colorado, Montana, and Utah have growing populations because their natural increase (births minus deaths) is greater than their net out-migration.

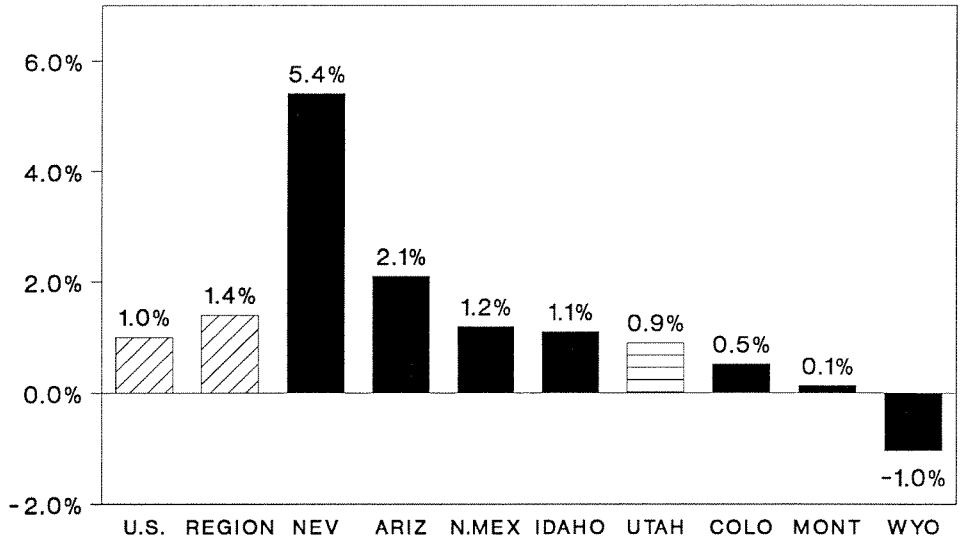
Personal Income Growth

Total personal income for the region grew at an average annual rate of 6.8 percent from 1984 to 1989, as compared to the national rate of 7.4 percent. Utah's average annual growth of personal income was 6.0 percent during this period. Of the eight states in the mountain region, only Nevada and Arizona have had personal income growth rates above the national average since 1984.

From 1988 to 1989 income grew by 8.2 percent in the mountain states compared to 7.6 percent in the U.S. The faster growth in personal income relative to the nation was due primarily to significant economic improvement in the whole mountain region in 1989. The most recent data show that income growth is slowing. Personal income grew by 6.6 percent and by 5.9 percent in the mountain states and the U.S. respectively from the second quarter of 1989 to the second quarter of 1990. During this time personal income in Utah grew at 7.5 percent, almost one percent above the region-wide growth rate and 1.6 percent faster than the national average.

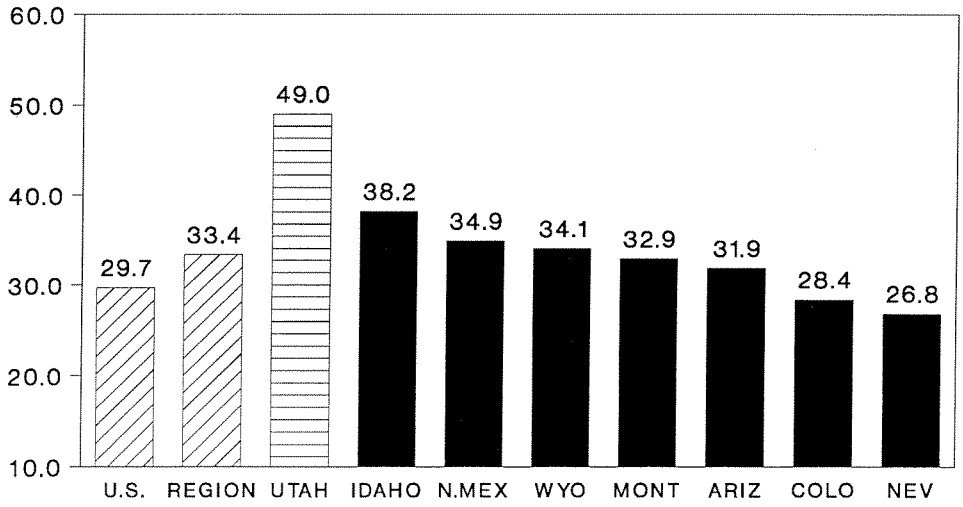
Per capita personal income for a region can change relative to the U.S. average because its total personal income, its population, or both, grow at a faster or slower rate than the U.S. average. From 1984 to

Figure 28
Population Growth 1988 to 1989



Source: Census Bureau

Figure 29
School Age Population per 100 Adults Aged 18-64: 1989



Source: Census Bureau

1989 income in the mountain region grew slower than the national rate and population grew at a faster rate. The obvious result is that per capita income for the mountain states has deteriorated relative to national per capita income. In 1984 per capita income in the mountain region was $12,069, or 92 percent of the national figure of $13,114. By 1989 per capita income for the mountain states was 88 percent of the national figure; $15,566 compared to $17,596.

Seven of the eight mountain states experienced a decrease in per capita personal income relative to the U.S. average from 1984 to 1989. Wyoming had the greatest deterioration, going from 93 percent of the U.S. average in 1984, to 82 percent in 1989. By contrast, Nevada's per capita income grew from 106 percent of the U.S. average to 110 percent from 1984 to 1989.

Per capita income is one statistic that is used to measure relative economic prosperity between states. In Utah, on average, the birth rate is higher and household size is larger than found in other states. With 37 percent of Utah's population under the age of 18 compared to 26 percent nationally, Utah's per capita income is just 74 percent as high as the national figure of $17,596 for 1989. This rate of 74 percent is the lowest of any state in the region.

Another measure of relative economic prosperity, per household income, recognizes that most people live in households and not as individuals. In 1989, Utah's per household income was fourth out of the eight mountain states, and was 89 percent of the national figure of $47,000. Per household income in the mountain region at $42,400 was 90 percent of the average for the U.S.

Wages

The most complete measure of relative wages paid between states is average annual pay for all workers covered either by state or federal unemployment insurance programs. Wage growth for the intermountain region averaged 3.1 percent per year from 1984 to 1989 compared to the national growth rate of 4.2 percent. With a slower growth rate in wages for the mountain states, wages dropped from 95 percent of the U.S. average in 1984 to 90 percent by 1989. Average wages dropped in each of the eight mountain states over this five year period when measured as a percent of the U.S. average. In 1984, Colorado and Wyoming had pay greater than or equal to the U.S. average. By 1989 none of the mountain states had wages above the national average. In 1989 average pay in Utah was 86 percent of the national average, ranking fourth among the eight mountain states.

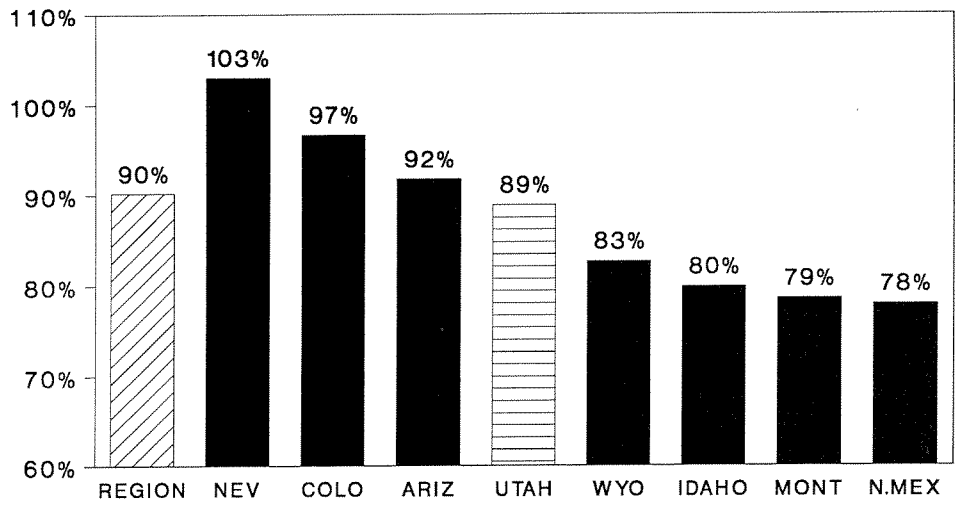
Labor Market Activity

From 1984 to 1989, the mountain region's employment growth rate was a little slower than that of the nation. Nonagricultural job growth in the region averaged 2.6 percent per year, while the national rate was 2.8 percent. Among the eight states of the region, however, job growth varied from a high of 6.5 percent per year in Nevada to a minus 1.1 percent per year in Wyoming. Over this five year period, only Nevada and Arizona increased in employment at a faster rate than the national growth rate, while Utah's job growth equaled the U.S. rate. The most recent complete year for which data is available is 1988 to 1989. During this time, nonagricultural employment growth in the mountain region was 3.6 percent compared to the national rate of 2.8 percent. Nevada led the way with a increase of 8.3 percent. Idaho and Utah also grew faster the national rate at 5.4 percent and 4.7 percent respectively.

Latest available information, September 1989 to September 1990, indicates that the job picture in the mountain region is very healthy. Nonagricultural job growth averaged 3.0 percent, while nationally it was just 1.5 percent. The booming Nevada economy leads the nation with nonagricultural employment growth of 6.8 percent. Among the mountain states, Nevada, Utah, Idaho, Arizona and Colorado are producing jobs faster than the nation from September 1989 to September 1990.

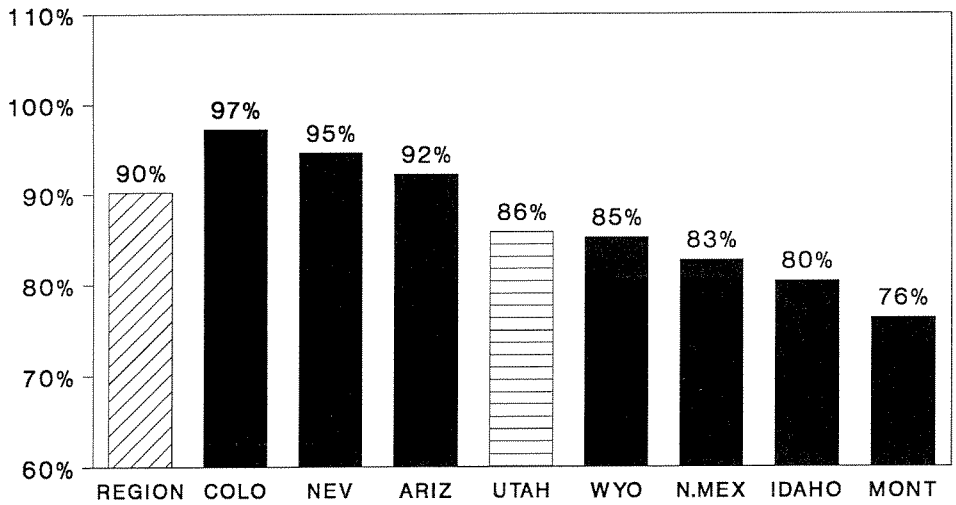
Unemployment in the mountain region has been consistently below the national average for most of the 1980s. In recent years, the unemployment rate has been dropping nationally, until it fell below the

Figure 30
Per Household Income as a Percent of U.S. Per Household Income: 1989



Source: U.S. Bureau of Econ Analysis

Figure 31
Average Annual Pay* as a Percent of U.S. Average Annual Pay*: 1989



*For workers covered by unemployment insurnace.
Source: U.S. Bureau of Labor Statistics

unemployment rate for the mountain region. In 1989 the national unemployment rate was 5.2 percent compared to 5.5 percent for mountain states. The latest data, indicates that unemployment in this region is once again below the national rate.

A relatively favorable unemployment situation for the mountain states was maintained throughout the 80s even in the face of many economic reverses. Low unemployment rates were possible because of the geographic and career mobility exhibited by the labor force. When particular industries have sustained significant declines, many workers have either moved on to where they could gain employment, have changed careers, or both. With the dynamic forces that operate in modern economies, continued restructuring of the economy, training of the labor force, and in and out-migration flows are essential in order to prevent chronic long-term unemployment problems from developing in a particular region or state. This has certainly been the case for the mountain states during the 1980s.

The weakness in natural resource based industries in the recent past caused a significant amount of economic restructuring among the intermountain states. In 1989 the economic fortunes of the mountain west were improving. There continues to be some residual problems, particularly in Wyoming. Strong growth in service industries, and rebounding agriculture, mining and even construction, have enabled the economies of Idaho, Utah, and Colorado to climb out of their mid-decade slumps to display strong economic growth during 1989 and 1990. Nevada's economy has lead all 50 states in job creation over the past four years and has yet to show any significant signs of weakness. The Arizona economy has slowed from its high flying days in 1984 and 1985, but continues to grow well above the current national rate.

The national economy appears to be in recession as 1991 begins. Many economist are projecting a mild and short recession. Economic growth in the eight mountain states is slowing as a result of the national recession. Yet this region is expected to sustain relatively healthy growth in jobs and income during 1991. The "regional recession" in 1986-87 resulted in substantial restructuring and downsizing of major cyclical industries - agriculture, mining and construction, therefore the mountain states are well positioned for continued growth during 1991.

Table 36
U.S. and Mountain Division
Demographics and Economic Performance: 1984, 1988, 1989

	U.S.	REGION	ARIZ	COLO	IDAHO	MONT	NEV	N. MEX	UTAH	WYO
Population in 1984 (in thousands)	236,477	12,543	3,053	3,189	1,000	823	916	1,426	1,623	513
Population in 1988 (in thousands)	245,785	13,326	3,483	3,300	1,003	805	1,054	1,510	1,691	480
Population in 1989 (in thousands)	248,239	13,513	3,556	3,317	1,014	806	1,111	1,528	1,707	475
Avg Ann Growth Rate 1984-89	1.0%	1.5%	3.1%	0.8%	0.3%	-0.4%	3.9%	1.4%	1.0%	-1.5%
Percent Change 1988 to 1989	1.0%	1.4%	2.1%	0.5%	1.1%	0.1%	5.4%	1.2%	0.9%	-1.0%
Net Migration 1988 to 1989 (July 1st, in thousands)	674	48	35	-15	3	-4	47	1	-11	-8
Net Migra as a Pct of 1988 Pop	0.3%	0.4%	1.0%	-0.5%	0.3%	-0.5%	4.5%	0.1%	-0.7%	-1.7%
Pct Distribution of Pop by Age Group 1989										
0-4 (pre-school)	7.6%	8.5%	8.7%	7.9%	7.8%	7.3%	7.8%	8.8%	10.2%	7.6%
5-17 (school age)	18.3%	20.2%	18.9%	18.2%	22.2%	19.7%	17.2%	20.9%	26.7%	21.0%
18-64 (working age)	61.6%	60.4%	59.3%	64.1%	58.1%	59.8%	64.1%	59.8%	54.5%	61.6%
65 & over (retirement age)	12.5%	11.0%	13.1%	9.8%	11.9%	13.2%	10.9%	10.5%	8.6%	9.8%
School Age (5-17) per 100 Adults 18-64,	29.7	33.4	31.9	28.4	38.2	32.9	26.8	34.9	49.0	34.1
Median age of population in 1989 (years)	32.7	31.0	31.9	31.8	31.1	32.7	32.5	30.8	25.7	30.2
Households in 1989 (in thousands)	92,917	4,962	1,303	1,281	370	307	442	548	534	177
Persons per household in 1989	2.60	2.67	2.67	2.53	2.69	2.55	2.47	2.74	3.14	2.64
Personal Income 1984 (millions $)	$3,101,163	$151,389	$36,800	$44,947	$10,357	$8,922	$12,678	$14,979	$16,426	$6,280
Personal Income 1988 (millions $)	$4,058,655	$194,435	$52,234	$54,356	$12,686	$10,361	$18,822	$18,723	$20,674	$6,579
Personal Income 1989 (millions $)	$4,368,129	$210,350	$56,196	$58,221	$13,898	$11,342	$21,403	$20,080	$22,326	$6,884
Avg Ann Growth Rate 1984-89	7.1%	6.8%	8.8%	5.3%	6.1%	4.9%	11.0%	6.0%	6.3%	1.9%
Percent Change 1988 to 1989	7.6%	8.2%	7.6%	7.1%	9.6%	9.5%	13.7%	7.2%	8.0%	4.6%
Prsnl Income 2nd Qrt 1989 (millions $)	$4,347,177	$208,927	$55,805	$57,874	$13,817	$11,282	$21,147	$19,953	$22,217	$6,830
Prsnl Income 2nd Qrt 1990 (millions $)	$4,605,604	$222,614	$59,005	$61,449	$14,977	$11,756	$23,233	$21,094	$23,877	$7,223
Percent Change 2nd Qrt 89 to 90	5.9%	6.6%	5.7%	6.2%	8.4%	4.2%	9.9%	5.7%	7.5%	5.8%
Per Capital Personal Income 1984	$13,114	$12,069	$12,054	$14,094	$10,362	$10,836	$13,846	$10,501	$10,120	$12,245
Per Capital Personal Income 1988	$16,513	$14,590	$14,995	$16,471	$12,652	$12,870	$17,849	$12,401	$12,225	$13,720
Per Capital Personal Income 1989	$17,596	$15,566	$15,802	$17,553	$13,707	$14,078	$19,269	$13,140	$13,079	$14,508
Avg Ann Growth Rate 1984-89	6.1%	5.2%	5.6%	4.5%	5.8%	5.4%	6.8%	4.6%	5.3%	3.4%
Percent Change 1988 to 1989	6.6%	6.7%	5.4%	6.6%	8.3%	9.4%	8.0%	6.0%	7.0%	5.7%
as a percent of U.S., 1984	100%	92%	92%	107%	79%	83%	106%	80%	77%	93%
as a percent of U.S., 1988	100%	88%	91%	100%	77%	78%	108%	75%	74%	83%
as a percent of U.S., 1989	100%	88%	90%	100%	78%	80%	110%	75%	74%	82%

Table 36 (con't)

	U.S.	REGION	ARIZ	COLO	IDAHO	MONT	NEV	N.MEX	UTAH	WYO
Per Household Personal Income 1984	$36,050	$33,810	$33,520	$37,550	$29,680	$29,450	$35,710	$30,140	$33,120	$34,510
Per Household Personal Income 1988	$44,340	$39,970	$41,000	$42,940	$34,950	$33,970	$45,140	$34,740	$39,380	$37,380
Per Household Personal Income 1989	$47,010	$42,390	$43,130	$45,450	$37,560	$36,940	$48,420	$36,640	$41,810	$38,890
Avg Ann Growth Rate 1984-89	5.5%	4.6%	5.2%	3.9%	4.8%	4.6%	6.3%	4.0%	4.8%	2.4%
Percent Change 1988 to 1989	6.0%	6.1%	5.2%	5.8%	7.5%	8.7%	7.3%	5.5%	6.2%	4.0%
as a percent of U.S., 1984	100%	94%	93%	104%	82%	82%	99%	84%	92%	96%
as a percent of U.S., 1988	100%	90%	92%	97%	79%	77%	102%	78%	89%	84%
as a percent of U.S., 1989	100%	90%	92%	97%	80%	79%	103%	78%	89%	83%
Avg. ann. pay for all workers covered by unemployment insurance - 1984	$18,353	$17,498	$17,349	$18,797	$15,793	$15,560	$17,565	$16,426	$17,174	$18,318
- 1988	$21,872	$19,895	$20,383	$21,472	$17,648	$16,957	$20,548	$18,259	$18,910	$19,097
- 1989	$22,567	$20,354	$20,808	$21,940	$18,146	$17,224	$21,342	$18,667	$19,362	$19,230
Avg Ann Growth Rate 1984-89	4.2%	3.1%	3.7%	3.1%	2.8%	2.1%	4.0%	2.6%	2.4%	1.0%
Percent Change 1988 to 1989	3.2%	2.3%	2.1%	2.2%	2.8%	1.6%	3.9%	2.2%	2.4%	0.7%
as a percent of U.S., 1984	100%	95%	95%	102%	86%	85%	96%	90%	94%	100%
as a percent of U.S., 1988	100%	91%	93%	98%	81%	78%	94%	83%	86%	87%
as a percent of U.S., 1989	100%	90%	92%	97%	80%	76%	95%	83%	86%	85%
Nonag Employment 1984 (in thousands)	94,496	4,930	1,182	1,402	331	281	426	503	601	204
Nonag Employment 1988 (in thousands)	105,584	5,421	1,419	1,436	349	283	538	548	660	189
Nonag Employment 1989 (in thousands)	108,581	5,614	1,457	1,472	367	291	582	561	691	194
Avg Ann Growth Rate 1984-89	2.8%	2.6%	4.3%	1.0%	2.1%	0.7%	6.5%	2.2%	2.8%	-1.1%
Percent Change 1988 to 1989	2.8%	3.6%	2.7%	2.5%	5.4%	2.7%	8.3%	2.4%	4.7%	2.4%
Nonag Employ, Sept 1989 (in thousands)	109,195	5,697	1,462	1,479	382	297	600	570	706	202
Nonag Employ, Sept 1990 (in thousands)	110,858	5,870	1,510	1,508	399	300	641	572	737	203
Percent Change Sept 89 to Sept 90	1.5%	3.0%	3.3%	1.9%	4.6%	0.9%	6.8%	0.4%	4.5%	0.6%
Unemployment Rate 1984	7.5%	6.2%	5.0%	5.6%	7.2%	7.4%	7.8%	7.5%	6.5%	6.3%
Unemployment Rate 1988	5.4%	6.2%	6.3%	6.4%	5.8%	6.8%	5.2%	7.8%	4.9%	6.3%
Unemployment Rate 1989	5.2%	5.5%	5.2%	5.8%	5.1%	5.9%	5.0%	6.7%	4.6%	6.3%
Unemp Rt, Sept 1990 (Not Sea Adjust)	5.5%	4.6%	5.1%	3.9%	4.5%	5.6%	4.3%	5.6%	4.2%	4.5%

Source: U.S. Bureau of Economic Analysis, U.S. Bureau of the Census, U.S. Bureau of Labor Statistics, and Utah Office of Planning & Budget.

ECONOMIC OUTLOOK

NATIONAL OUTLOOK

Positive Current Conditions

Several economic indicators point to positive economic growth. Inflation adjusted (real) GNP grew at an average annual rate of 1.3 percent over the first three quarters of 1990. In the third quarter of 1990, real GNP grew at an annual rate of 1.7 percent. Real consumer spending increased 3.6 percent, real government purchases grew 1.3 percent, and real exports increased at an annual rate of 1.2 percent. The Purchasing Manager's Index for New Export Orders increased in November for the 35th consecutive month.

Personal income grew at an annual rate of 4.9 percent in the third quarter and continued to grow at .1 percent in October. Retail sales increased .1 percent in October, after rising 1.1 percent in September. Industrial output increased 3.8 percent and car and truck sales increased at an annual rate of 7.6 percent in the third quarter.

Factory orders for durable goods increased 3.9 percent in October after declining 1.6 percent in September and .9 percent in August. Orders for nondurable and durable goods increased 2.8 percent in October following a decline of .2 percent in September. The 1.48 ratio of inventory to sales remained below levels of the previous two years, even though sales declined and inventories rose slightly in September.

After-tax profits of corporations jumped 6.7 percent in the third quarter after declining by .6 percent in the second quarter. Worker productivity increased .2 percent in the third quarter and helped boost corporate profits. Worker productivity increased .3 percent in the second quarter after falling 1.3 percent in the first quarter and .7 percent for all of 1989.

Inflationary pressure from wages, salaries and benefits paid to private-industry employees continued to slow during the third quarter as worker compensation rose only 1 percent after increasing 1.3 percent in the second quarter and 1.6 percent in the first quarter. Consumer prices, except for the surge in oil prices, have continued to fall. Excluding energy prices, consumer prices rose 4.5 percent for the three months ending in October, down from 5.2 percent for the previous three months and 5.6 percent for the three months before that. As of December 7th the Commodity Research Bureau's index of commodity prices had dropped over 10 percent from its high in May.

The federal funds interest rate has declined since the second quarter of 1989, when it was 9.73 percent, to 8.16 percent in the third quarter of 1990. The federal funds rate continued to drop in October and as of December 7th stood at 7.32 percent. The Federal Reserve also eliminated bank's reserve requirements beginning December 27th on non-personal time deposits and Eurocurrency liabilities.

The three-month Treasury Bill rate has decreased steadily from 7.9 percent in March of 1990 to 7.17 percent in December 8th. Effective composite mortgage rates have declined steadily for several months from 10.17 percent in May to 9.98 percent during September. After increasing in the third quarter, thirty-year Treasury Bond rates declined in early December to 8.18 percent, the lowest level in 11 months.

Negative Current Conditions

Many other indicators point to negative economic growth. The Index of Leading Indicators fell in November, the fifth monthly decline in a row. The Index of Coincident Indicators fell 1 percent in October, the fourth monthly decline. The National Association of Purchasing Management index declined for the fifth consecutive month in November to 41.3 percent, its lowest level since the trough of the recession in November 1982.

A National Federation of Independent Business survey conducted in September showed confidence of small businesses falling to a level deeper than the recession of 1982. The Conference Board reported that its

executive confidence index declined to 40 percent in the third quarter, its lowest level since 1980. A mid-November survey by the National Association of Business Economists found that two-thirds of its members felt that the nation had entered into a recession. Eighty percent of the economists surveyed in November by Blue Chip Economic Indicators felt that a recession would begin by year's end.

Housing sales fell 3.5 percent in October, continuing a steady decline since June. Housing starts dropped 6 percent in October to an annual rate of just 1.04 million units, a level not seen since the recession of 1981-82. This was the ninth consecutive monthly decline, the worst string of losses since the Commerce Department began tracking the data in 1959. As of October nearly 20 percent of existing office space nationwide was vacant, and office construction was down 29 percent for the first nine months of 1990. Contracting for new residential and nonresidential construction slipped in October to its lowest level in more than four years.

Civilian employment declined by over 1 million from June to November after increasing by 500,000 in the first half of the year. The unemployment rate increased from 5.2 percent in June to 5.9 percent in November. Filings for unemployment insurance have increased since mid-year to an annual rate of 488,000 by mid-November, the highest level since the last recession. The Conference Board's help-wanted advertising index fell in October to 115 from 122 in September and from 149 in the year-ago month.

Operating rates at factories and industrial production both fell .8 percent in October. The Commerce Department's index of net business formation has been declining and business failures increased 14.5 percent for the first nine months of the year. Businesses are also heavily in debt. Corporate net interest payments as a percentage of cash flow reached 28.8 percent in the third quarter, close to the record hit during the 1973-75 recession.

The index of consumer sentiment measured by the University of Michigan fell 24.3 points between July and October, the largest three-month decrease in the last 44 years. The 63.9 October index remained above the 51.7 record low of May 1980. Consumer prices rose .6 percent in October following .8 percent increases in September and August. Energy prices accounted for half of the increase. CPI inflation escalated to an 8.9 percent annual rate in the three months following the August 2nd invasion of Kuwait by Iraq.

Consumption expenditures declined .3 percent in October, the first decline since June 1989. Wages and salaries also dropped .3 percent in October, the first such decline since November 1989. Inflation adjusted after-tax consumer income dropped .5 percent in October, the third monthly drop in a row. Late November car sales fell to the slowest pace since October 1982. In early December, the Federal Reserve and large retailers reported weak retail sales in most areas for November. Stronger sales surfaced for factory outlets, warehouse clubs, and other discount retailers.

Outlook

Surveys indicate that most economists believe that the national economy entered into a recession in the fourth quarter of 1990. It will be second quarter 1991, however, before the final Department of Commerce data confirms this prediction. The expansion, had it lasted, would have covered 8 years as of November.

The statistical definition of recession as two consecutive quarterly declines in real GNP was coined by Arthur Okun under the Johnson administration. The official National Bureau of Economic Research's definition of recession is less specific, as is that of the Federal Reserve. In fact, the NBER declared a recession for the first 6 months of 1980 even though real GNP declined only in the second quarter.

Factors contributing to the current economic downturn include increased oil prices, increased debt levels, declining asset values, and stricter lending standards. Light sweet crude oil prices increased from $21.54 on August 1st (the day before the invasion of Kuwait by Iraq) to $40.42 on October 11th. During most of November oil traded in the $30 to $35 range. The jump in oil prices fueled inflationary expectations and produced higher long-term interest rates.

Total government, corporate and consumer debt now amounts to 2.4 times GNP, up from 1.7 times before the 1981-82 recession. Many banks have experienced loan losses and increased reserves because some real estate and leveraged buyout loans have turned sour. Banks responded to loan losses and declining collateral values by tightening credit standards out of concern over the ability of borrowers to repay loans during an economic downturn.

Over the past two years banks and thrifts supplied less than 20 percent of the economy's credit needs, down from 40 percent for most of the 1980s, 55 percent in the late 1970s, and 80 percent in the early 1970s. Roughly 30 percent of bank lending is for real estate. Real estate losses in Southern California and the Northeast have been the largest.

Growth in loans at insurance and finance companies has similarly declined. Although stricter lending standards have contributed to the economic slowdown, much of the credit slowing appears to be demand-induced rather than supply-constrained. Private credit demand has declined 20 percent over the past year.

Some analysts are urging the Federal Reserve to substantially ease credit and interest rates in order to prevent an economic downturn. A weakening economy, slower growth in wages and recent decreases in oil prices has given the Fed some room for easing short-term rates. The Fed needs to be careful, however, not to cause foreign investors to flee from the dollar by reducing short-term rates excessively. The Persian Gulf crisis and a recession could push up Washington's borrowing needs at a time when foreigners have already become net sellers of U.S. securities. Yields on short-term, dollar-denominated investments are below those in many foreign countries.

Monetary policy is slow-acting and limited in what it can do to shield people from the adverse effects of oil supply disruptions. The Fed tried to mitigate the adverse impacts of the oil price shocks of 1973-74 and 1978-79, only to reverse itself when the extend of the jump in inflation became known. A decline in output resulting from oil supply disruptions is as real and unavoidable as the effects of agricultural droughts.

The national outlook is for a mild and short-lived recession. This optimistic outlook assumes that a successful resolution will be achieved in the Mideast, that protectionism and global trade wars will not erupt if international trade negotiations are disbanded, and that real estate values will not collapse nationwide.

As of early December, world oil inventories were higher, demand weaker, and supplies slightly higher than before the Persian Gulf crisis. Consequently, a successful resolution to the Mideast crises would likely result in a drop in oil prices, inflation and long-term interest rates. An unsuccessful resolution could generate the opposite effects.

The 107-nation trade talks, held under the General Agreement of Tariffs and Trade (GATT), failed to reach a compromise on agricultural subsidies and were adjourned in early December. Under the Omnibus Trade and Competitiveness Act of 1988, the U.S. trade representative is authorized to retaliate against "unfair" trade practices in other countries. Retaliation against unfair practices could, however, spark similar moves against American products. Retaliation by foreigners against the Smoot-Hawley Tariff Act of June 1930 helped bring about the Great Depression.

UTAH OUTLOOK

Positive Current Conditions

Most indicators point to a strong Utah economy. First quarter to second quarter 1990 personal income growth in Utah was the fourth highest in the nation. Utah's Index of Leading Indicators increased in October after declining in September, the third monthly gain in the last four months. Retail sales were up 5 to 6 percent in the second quarter following an 11.8 percent year-over-year gain in the first quarter.

Nonagricultural jobs grew at a year-over rate of 4.77 percent for the first six months of 1990 and continued to grow at roughly 4.5 percent through November. The unemployment rate dropped to 4.3 percent in November from 4.5 percent in October, 1.6 points below the national 5.9 percent rate.

November service industry growth was the strongest, at 8 percent compared to November 1989. Computer services lead the industry at 24 percent. Year-over growth for the construction industry and wholesale and retail trade was up 5 percent in November, growth for transportation, communications, and utilities was up 4 percent. Manufacturing increased 3 percent, governments expanded 2 percent, and mining employment growth was unchanged.

The number of new dwelling permits increased to about 6,800 units in 1990 after falling for 5 years in a row. Dwelling permits had peaked at 18,823 units in 1984. Housing sales on the Salt Lake Board's Multiple Listing Service were up 16 percent for the first 10 months of the year. A recent University of Michigan study noted Salt Lake City as among the least risky real estate markets in the nation.

New firms and expansions of existing firms contributed to 1990's strong economic performance. New openings and major expansions included, but were not limited to, McDonnell Douglas, Abbott Laboratories, Sears Discover Card Services, Sorex Medical, Morton International, The Travelers, Moroni Feed, Kennecott, Marriott Reservations, Fidelity Investments, Pep Boys, Hecla Mining, Principal Financial Group, EDO Western, Cerro Wire, CT Film, Novell, Wal-Mart, East Carbon Development Corporation, AT&T, and ZCMI.

Negative Current Conditions

A few indicators point to weakness in the Utah economy. Consumer and business confidence worsened in October. The Utah consumer confidence index dropped 19 points from 86.1 to 66.9. Utah business confidence decreased by 13 points from 59 to 46 for large firms, and by 12 points from 57 to 45 for mid-sized firms.

Year-over-year personal income growth fell from 8 percent in the fourth quarter of 1989 to 7.9 percent in the first quarter of 1990, and then to 7.47 percent in the second quarter. Employer reports to Employment Security show that job growth declined from a year-over peak of 5.31 percent in November 1989 to 4.54 percent in June 1990. Initial claims for unemployment insurance were up 25 percent over year-ago October.

The state continued to experienced net out-migration in 1990; but, the out-migration of 1,600 persons in 1990 was down from 6,600 in 1989. Business failures in Utah increased 20.6 percent in the first 9 months of 1990 compared to the same three quarters in 1989. Liabilities held by failed Utah firms increased 835.7 percent over this period, indicating a rise in the number of large firms filing for bankruptcy.

One of Utah's weaknesses may be its successes. An explanation given by Chase Manhattan for its recent selection of Tempe, Arizona over Utah for the site of its new credit-card center was Utah's low unemployment rate. Chase expressed concern over whether or not enough people would apply for jobs at the wage level that it was prepared to pay. Numerous telecommunication companies have located in Utah during the last two years and competition for workers could intensify.

Contractions and closures in 1990 included, but were not limited to, layoffs at Skaggs Alpha Beta, Hill Air Force Base, Thiokol, Utah Power and Light, U.S. West, Fred Meyers, Citibank, Hercules, UMETCO, Eastman Christenen, Logan Manufacturing, Salt Lake County, Seven Up-RC Bottling, Crossland Savings, Wagstaff Toyota, Transcon, Deseret Federal, Mountain West, Escalante Sawmill, and the Tooele Army Depot.

Outlook

The economic outlook for Utah in 1990 is for moderate growth. Utah should avoid a local recession if the national recession is brief and mild. The October 1990 issue of Fortune magazine picked Salt Lake City to head its list of top 10 business locations because of its availability of plentiful, high-quality and low-cost labor. Utah has the highest adult literacy rate in the nation. Inexpensive housing and a youthful and educated workforce should continue to provide a valuable resource for expansions of new and existing firms.

Telecommunications, computer and related software services, and bio-medical technologies, should continue to prosper into 1991. Aerospace equipment manufacturers and defense-related industries could experience more layoffs, however, especially if the Mideast crisis is resolved quickly. Tourism growth should moderate particularly if airline and motor fuel prices increase or remain at high levels.

While layoffs for 1991 have been announced by Hercules and Hill Air Force Base, numerous openings are scheduled to occur next year. Planned expansions and new openings include, but are not limited to, Sears Payment Systems, Wal-Mart, UP&L's Gadsby power plant, McDonnell Douglas, Black Diamond Equipment, Charter Oak Partners, Geneva, ESKAY, Softcopy, Novell, Jahabow Industries, and ShopKo.

Slower net out-migration, stable to declining mortgage interest rates and moderate job creation should help improve residential construction in 1991. Nonresidential construction activity should remain relatively good into 1991 due to construction of new office buildings, manufacturing plants, a sports arena, and winter olympic facilities. Also many of the new building permits issued in 1990 will actually be constructed in 1991.

Employment, population, wages, and incomes should all grow moderately in 1991. Population growth should hold steady at 1.5 percent. Nonagricultural employment is expected to moderate to around 3.0 percent, an increase of about 22,000 jobs. If the average wage is expected to increase by 3.6 percent, total nonagricultural wages should increase by about 6.7 percent, and personal income is expected to increase by 7.0 percent in 1991.

Table 37
Utah and United States
Actual and Estimated Economic Indicators
December 1990

U.S. AND UTAH INDICATORS	UNITS	1988 Actual	1989 Actual	1990 Estimate	1991 Estimate	% CH 88-89	% CH 89-90	% CHG 90-91
PRODUCTION AND SPENDING								
U.S. Gross National Product	Billion Dollars	4,873.7	5,200.8	5,473.9	5,734.7	6.7	5.3	4.8
U.S. Real Gross National Product	Billion 1982$	4,016.8	4,117.7	4,158.8	4,185.6	2.5	1.0	0.6
U.S. Real Personal Consumption	Billion 1982$	2,606.5	2,656.8	2,685.3	2,703.7	1.9	1.1	0.7
U.S. Real Bus. Fixed Investment	Billion 1982$	487.2	506.1	513.5	512.8	3.9	1.5	(0.1)
U.S. Real Defense Spending	Billion 1982$	260.6	256.3	256.8	262.9	(1.7)	0.2	2.4
U.S. Real Exports	Billion 1982$	534.7	593.3	626.4	645.8	11.0	5.6	3.1
U.S. Industrial Production	1987=100	105.4	108.1	109.5	110.0	2.6	1.3	0.5
Utah Coal Production	Million Tons	18.2	20.5	22.2	21.8	12.6	8.3	(1.8)
Utah Oil Production	Million Barrels	33.0	28.4	27.8	28.2	(13.9)	(2.0)	1.3
Utah Copper Production	Million Pounds	502.0	550.0	520.0	540.0	9.6	(5.5)	3.8
SALES AND CONSTRUCTION								
U.S. New Auto and Truck Sales	Millions	15.5	14.6	14.0	13.7	(5.8)	(4.1)	(2.1)
U.S. Housing Starts	Millions	1.49	1.39	1.21	1.10	(6.7)	(12.9)	(9.1)
U.S. Residential Construction	Billion Dollars	232.5	231.0	223.1	208.6	(0.6)	(3.4)	(6.5)
U.S. Nonresidential Structures	Billion Dollars	139.9	146.2	148.2	149.8	4.5	1.4	1.1
U.S. Final Priv. Domestic Sales	Billion Dollars	3,741.0	3,813.1	3,852.0	3,861.0	1.9	1.0	0.2
Utah New Auto and Truck Sales	Thousands	60.7	60.7	60.0	58.7	0.0	(1.2)	(2.1)
Utah Dwelling Unit Permits	Thousands	5.7	5.6	6.8	7.5	(1.8)	21.4	10.3
Utah Residential Permit Value	Million Dollars	413.0	447.8	570.0	630.0	8.4	27.3	10.5
Utah Nonresidential Permit Value	Million Dollars	272.1	389.6	430.0	400.0	43.2	10.4	(7.0)
Utah Retail Sales	Million Dollars	7,376	8,080	8,573	8,864	9.5	6.1	3.4
Utah Bus. Inv. & Utility Sales	Million Dollars	3,684	3,676	3,910	4,102	(0.2)	6.4	4.9
Utah Taxable Service Sales	Million Dollars	1,649	1,753	1,818	1,997	6.3	3.7	9.8
Utah Total Taxable Sales	Million Dollars	13,018	13,893	14,832	15,353	6.7	6.8	3.5
DEMOGRAPHICS AND SENTIMENT								
U.S. Population	Millions	246.4	248.8	251.4	254.0	1.0	1.0	1.0
U.S. Consumer Sentiment of U.S.	1966=100	93.7	92.8	81.4	75.4	(1.0)	(12.3)	(7.4)
Utah Population (July 1)	Thousands	1,689.0	1,709.0	1,734.0	1,760.0	1.2	1.5	1.5
Utah Migration	Thousands	(11.5)	(6.6)	(1.6)	(0.8)	na	na	na
Utah Consumer Sentiment of Utah	1966=100	76.2	82.9	82.5	80.0	8.8	(0.5)	(3.0)
PROFITS AND PRICES								
U.S. Corp. Profits Before Tax	Billion Dollars	316.7	307.7	308.3	313.5	(2.8)	0.2	1.7
U.S. Oil Ref. Acquis. Cost	$ Per Barrel	14.7	18.0	22.8	27.6	21.9	26.9	21.2
U.S. Coal Price Index	1982=100	95.4	95.5	97.6	101.1	0.1	2.2	3.6
U.S. Ave. Copper Cathode Price	$ Per Pound	1.21	1.31	1.21	1.00	8.7	(7.6)	(17.4)
U.S. No. 1 Heavy Melting Scrap	$ Per Long Ton	109.0	107.3	105.9	100.0	(1.5)	(1.3)	(5.6)
Utah Oil Prices	$ Per Barrel	14.2	18.6	23.2	28.0	31.0	24.5	20.9
Utah Coal Prices	$ Per Short Ton	22.9	22.0	23.2	23.0	(3.9)	5.5	(1.1)
INFLATION, MONEY AND INTEREST								
U.S. CPI Urban Consumers	1982-84=100	118.3	124.0	130.7	137.3	4.8	5.4	5.0
U.S. GNP Implicit Deflator	1982=100	121.3	126.3	131.6	137.0	4.1	4.2	4.1
U.S. Money Supply (M2)	Billion Dollars	3,017.5	3,129.8	3,289.0	3,423.6	3.7	5.1	4.1
U.S. Real M2 Money Supply (CPI)	Billion 82-84$	2,550.7	2,524.0	2,516.4	2,493.5	(1.0)	(0.3)	(0.9)
U.S. Federal Funds Rate	Percent	7.57	9.22	8.11	7.20	21.8	(12.0)	(11.2)
U.S. Bank Prime Rate	Percent	9.31	10.87	9.99	9.73	16.8	(8.1)	(2.6)
U.S. Prime Less CPI Inflation	Percent	5.21	6.05	4.59	4.68	16.2	(24.2)	2.0
U.S. 3-Month Treasury Bills	Percent	6.67	8.11	7.51	6.71	21.6	(7.4)	(10.7)
U.S. T-Bond Rate, 30-Year	Percent	8.96	8.45	8.62	8.08	(5.7)	2.0	(6.3)
U.S. Mortgage Rates, Effective	Percent	9.29	10.12	10.00	9.51	8.9	(1.2)	(4.9)
EMPLOYMENT, WAGES AND INCOME								
U.S. Nonagricultural Employment	Millions	105.53	108.41	110.36	110.45	2.7	1.8	0.1
U.S. Average Nonagriculture Wage	Dollars	23,037	23,736	24,502	25,469	3.0	3.2	3.9
U.S. Total Nonagriculture Wages	Billion Dollars	2,431.1	2,573.2	2,704.0	2,813.0	5.8	5.1	4.0
U.S. Personal Income	Billion Dollars	4,058.7	4,368.1	4,627.0	4,839.4	7.6	5.9	4.6
Utah Nonagricultural Employment	Thousands	660.1	691.2	722.8	744.5	4.7	4.6	3.0
Utah Average Nonagriculture Wage	Dollars	18,590	19,022	19,622	20,334	2.3	3.2	3.6
Utah Total Nonagriculture Wages	Million Dollars	12,271	13,148	14,183	15,139	7.1	7.9	6.7
Utah Personal Income	Million Dollars	20,674	22,327	24,000	25,690	8.0	7.5	7.0

Source: State Economic Coordinating Committee.

UTAH'S LONG TERM OUTLOOK

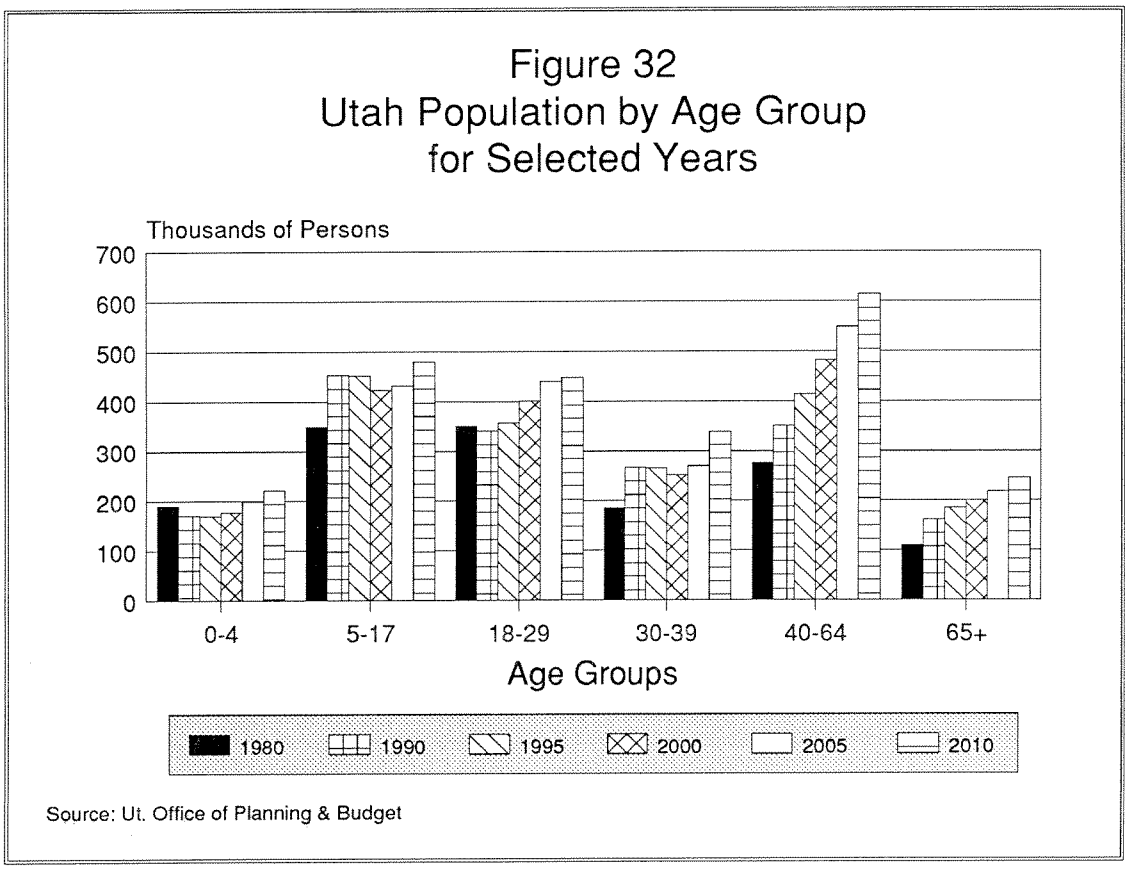
Utah is projected to have over 619,000 more inhabitants in the year 2010 than were counted during the census in 1990. The projected population of 2,346,000 represents an average annual growth of 1.5 percent from 1990 to 2010. While this rate of growth is significantly lower than Utah's rate of 2.5 percent from 1970 to 1990, it is still double the national growth rate for the same projection period.

Although these rates of growth have slowed down on the state level, there are some individual multi-county districts which show more growth, while others show less growth. However, Utah will still experience growth rates larger than the U.S. average, and larger than most other states.

As the detailed results from the 1990 Census become available, a more clear picture of what Utah will look like in the 1990s, and beyond will emerge. The most significant implication of the 1990 final census population count is that the annual average growth rate for the 1980s was **half** of what it was in the 1970s (1.7% versus 3.3%). This means that future projections must take this lower growth in to account, rather than continuing to use the higher rates of the 1970s. This slower growth of the 1980s confirms two components which were recognized as having experienced changes in the years between the 1980 and 1990 censuses. First, Utah's fertility rate dropped significantly during the past decade, from 3.12 children per woman, to approximately 2.6 children. Second, net out-migration was estimated to have occurred since the mid-80s.

Births

Population change in any area over time results from three phenomena: (1) Births, (2) Deaths, and (3) Net in- or out-migration. Utah's birth rate has historically been the highest in the nation. Total fertility (a



measure of average births per woman) in Utah is still very high relative to the national average. However, Utah's rate steadily declined during the 1980s, while the national rate held fairly constant for the last decade and a half, at about 1.8 births per woman. After a historical comparison of Utah and U.S. fertility rates it seemed reasonable to assume that the Utah total fertility rate would stabilize at a level above that of the U.S. average. For the purpose of these projections, Utah's total fertility rate was assumed to remain constant at approximately 2.5 births per woman through the projection period.

It is projected that over 775,000 births will occur to Utah residents between 1990 and 2010. The number of births is expected to taper off over the next few years, and then another surge of births is expected in the mid-1990s as another generation begins to age into the childbearing years.

Deaths

Not surprisingly, the number of deaths in the state is expected to rise continually through 2010, even though the survival rates for each age level are assumed to remain constant. The reason for this increase is that the population as a whole becomes more heavily concentrated in the older, lower survival rate age groups. For example, in 1990, it is estimated that 10.5 percent of the population was 60 years old or older. By 2010, this age group is projected to increase to 14.2 percent.

Net Migration

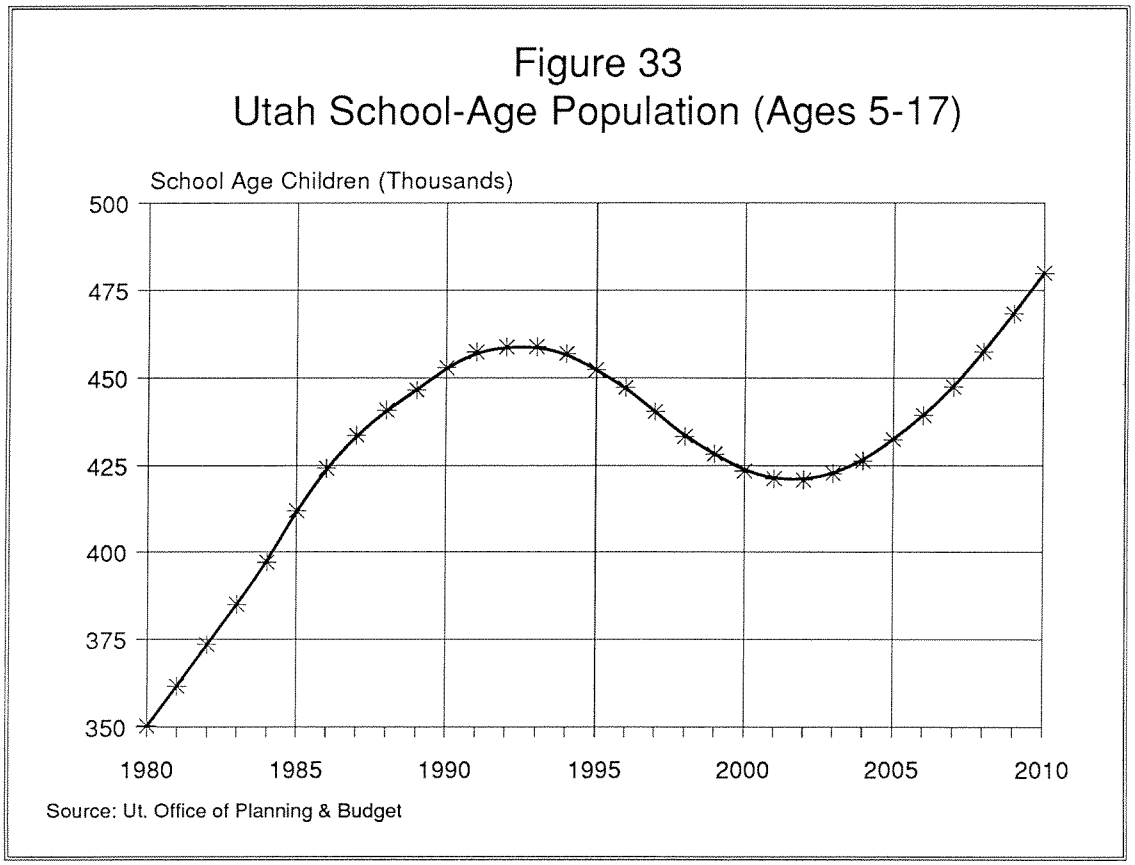
Migration is typically the most volatile component of population change because it varies with demographic changes and economic conditions. Since 1950, there have been two extended periods of net out-migration (1951-1968 and 1983-1990) and one extended period of net in-migration (1969-1982) in Utah. This depicts the volatility of migration. For the decade of the 1980s, the total net out-migration for the state was approximately -25,000. This is very different from the 1970s, when there was a net in-migration of 150,000 people.

During the period 1990 to 2010, 136,000 net in-migration is expected to occur in the state (i.e., in-migration is expected to exceed out-migration by 136,000). However out-migration is projected to occur during some years of this period. Out-migration is created when the economy is not growing fast enough to provide enough jobs for the growing labor force. Population growth frequently occurs during these periods of net out-migration due to natural increase.

School Age Population

The ratio of school age population to total population has increased in the decade of the 1980s, from 23.5% in 1980, to almost 26% 1990. This means that a greater number of students are being supported by the total population than before. However, it is expected that this ratio will begin to decline in the 1990s as the effects lower fertility rate behavior become evident in the schools (i.e. less children).

Although school age population is still increasing, it is expected to grow at about one percent per year from 1990 through 1993. This is substantially less growth than the 2.6 percent annual rate of growth experienced from 1980 to 1990. The decline in fertility rates, the age structure of women in the childbearing years and the recent out-migration are responsible for the slowdown in the growth of the school age population. After 1993, there are nine consecutive years that are expected to show an actual decline in the total school age population. It should be kept in mind that while total enrollment may be declining, it will be concentrated in the elementary grades. Enrollment in the middle and secondary schools will in fact increase during the period of total enrollment declines. In 2003 growth resumes, as a new demographic cycle begins when larger age cohorts of women enter the childbearing years. Between 1990 and 2010, school age population is projected to increase by almost 27,000 children, an increase of 6 percent.



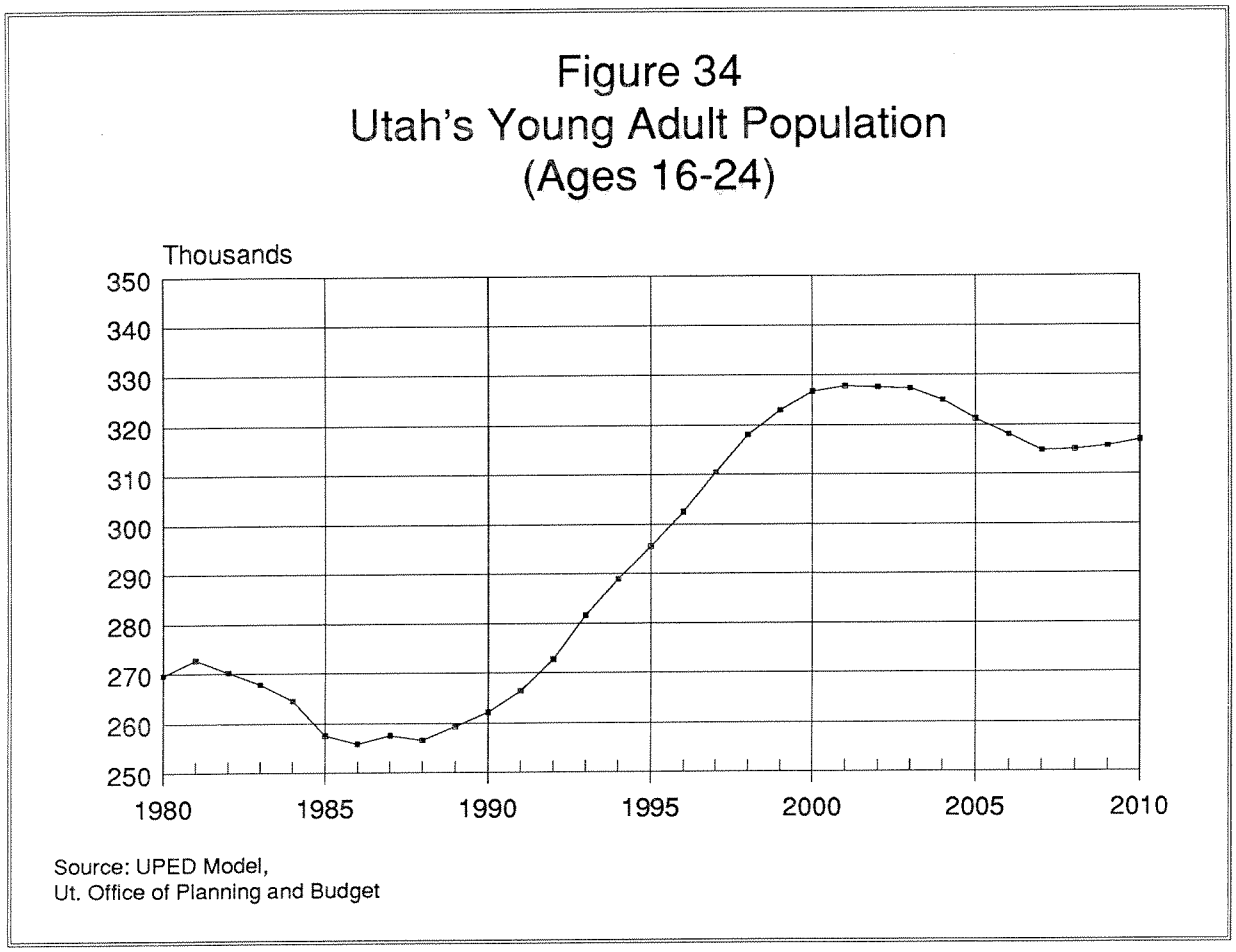
Labor Force

Increases or decreases in the labor force are caused by three circumstances. Either there are more new entrants (which we define as 16-24 years of age) entering the labor force for the first time; the labor force participation rates for persons already in the 16-64 age group change; or, the net migration changes the number of people in the labor force pool. The most dramatic change which will be occurring in the 1990s, is the new entrants into the labor force. The 16-24 age group actually declined in the 1980s by three percent. However, the 1990s will show an almost 25 % increase in this group. This means that Utah will continue to have the youngest labor force in the nation.

Utah's labor force will grow at about twice the national rate for next ten years. Nationally, labor shortages are already occurring in many parts of the U.S., and will become more prevalent in the future. This has many positive implications for future employers in the state, including ample labor supply and young workforce.

Employment

Total state employment (including self-employment and agriculture) is projected to increase from 839,200 jobs in 1990 to 1,225,000 jobs in 2010. This increase of over 385,000 jobs represents an average annual growth rate of 1.9 percent. The overall pattern appears to be one of significant movement away from dependence on the state's traditional extractive-heavy manufacturing-government economic base and toward services and trade as driving sectors in the Utah economy.



The more specific industries (2-digit SIC code) which are projected to have the fastest growth rates are:

machinery and electronic equipment
air transportation
transportation services
hotels and lodging
business services
health services

BEA Income Projections

The U.S. Department of Commerce's Bureau of Economic Analysis (BEA) has produced a set of personal income projections by state. The projections for Utah show an average 2.2 percent rate of growth for the period 1988-2010. This translates into Utah being the fourth fastest growing states in the U.S. for the twenty-two year period. Per capita income in Utah, for the years 1988 to 2010, is expected to experience a 1.2 percent annual rate of growth.

Summary of Long Term Projections

The following is a summary of the long term projections for Utah relative to the rest of the nation:

The total fertility rate of Utah women is assumed to remain constant at approximately 2.5 average births per woman throughout her childbearing years. Total fertility rates nationally are projected to remain in the 1.8 to 1.9 range.

Projected rates of population growth in Utah are higher than the rest of the nation. Utah is projected to have a 1.5 percent rate of growth between now and 2010 while the nation is projected to growth at less than half that rate.

Utah is projected to continue to have the youngest population in the nation. Utah's median age in the year 2010 is projected to be 29 years, while the nation's median age is projected to be 39 years. The differences in age between Utah and the U.S. are projected to actually increase over the next two decades.

Utah school age population will continue to grow over the next four years. It will then peak and begin to decline until the year 2003, when it begins to increase again. Utah will have a six percent increase in school age population during the period 1990-2010, while the national growth rate will be less than one percent.

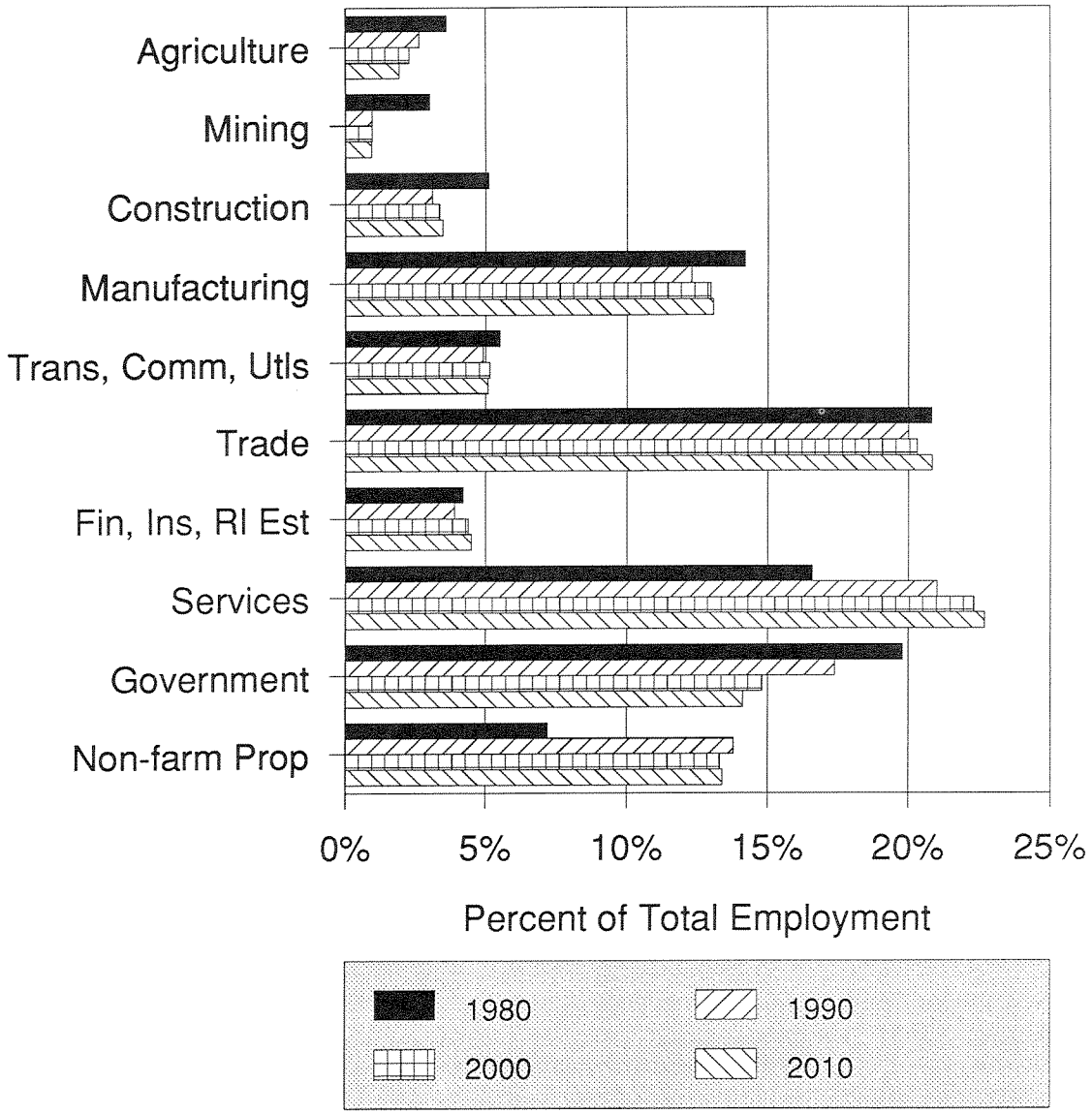
Utah's labor force will see periods of rapid increase over the next two decades. Utah will continue to have the youngest labor force in the nation. Nationally, labor shortages are occurring now in many parts of the U.S. and will become more prevalent in the future.

The current out-migration is not expected to continue every year for the next two decades. However, the large increase in the labor force will create periods of some out-migration in Utah's future unless job growth is larger than has been historically experienced.

Implication of the Projections

Utah can be expected to experience continued relatively good growth through the remainder of the 20th century and well into the 21st. The population growth rate in Utah is projected to be twice the growth projected for the nation. Although Utah will continue to be a growth state, it will not experience the rapid growth rates of the past. Also, growth in Utah will not be evenly distributed across the state. In particular, the rural counties, historically dependent on natural resource development, will not be able to provide adequate jobs to employ all of their young people as they age into the labor force. Indeed, as has already been observed in the past few years, the entire state will experience periods of net out-migration as a result of inadequate employment opportunities. The overall state-level picture for most projections years is one of adequate job growth to meet Utahns' employment needs. The geographic distribution within the state of new jobs may cause in-migration from rural areas to metropolitan counties. Migration is extremely volatile and difficult to project and is subject to cycles in various industries. The expectations, as expressed in these projections are, of course, based on a set of crucial assumptions about future economic and demographic behavior. The assumptions have been summarized and discussed earlier, and they represent a consensus best effort of a large number of planners, officials, and analysts at both state and local levels. They are plausible and reasonable as viewed from this point in time.

Figure 35
Utah Employment by Industry for Selected Years



Source: Ut. Office of Planning & Budget

Table 38
Utah Economic and Demographic Projections Summary
1989 to 2010

Year	Population Total	Population Change	Population % Change	School Age Population Total	School Age Population Change	School Age Population % Change	Total Employment Total	Total Employment Change	Total Employment % Change	Households Total	Households Change	Households % Change
1989	1,709,000	--	--	446,631	--	--	820,651	--	--	554,943	--	--
1990	1,734,000	25,000	1.46	452,885	6,254	1.40	839,363	18,712	2.28	566,514	11,571	2.09
1991	1,765,643	22,576	1.30	457,360	4,475	0.99	856,675	17,312	2.06	578,079	11,565	2.04
1992	1,785,745	20,102	1.14	458,733	1,373	0.30	873,254	16,579	1.94	588,458	10,379	1.80
1993	1,804,303	18,558	1.04	458,845	112	0.02	890,116	16,862	1.93	598,047	9,589	1.63
1994	1,825,579	21,276	1.18	456,915	(1,930)	-0.42	908,171	18,055	2.03	609,128	11,081	1.85
1995	1,842,131	16,552	0.91	452,324	(4,591)	-1.00	923,735	15,564	1.71	619,272	10,144	1.67
1996	1,855,050	12,919	0.70	447,317	(5,007)	-1.11	937,542	13,807	1.49	628,434	9,162	1.48
1997	1,869,070	14,020	0.76	440,495	(6,822)	-1.53	952,168	14,626	1.56	638,009	9,575	1.52
1998	1,887,415	18,345	0.98	433,340	(7,155)	-1.62	968,586	16,418	1.72	648,998	10,989	1.72
1999	1,911,422	24,007	1.27	428,271	(5,069)	-1.17	987,123	18,537	1.91	662,255	13,257	2.04
2000	1,935,583	24,161	1.26	423,437	(4,834)	-1.13	1,005,096	17,973	1.82	675,710	13,455	2.03
2001	1,959,267	23,684	1.22	421,269	(2,168)	-0.51	1,021,690	16,594	1.65	688,666	12,956	1.92
2002	1,987,771	28,504	1.45	420,876	(393)	-0.09	1,040,028	18,338	1.79	703,059	14,393	2.09
2003	2,024,296	36,525	1.84	422,693	1,817	0.43	1,061,009	20,981	2.02	719,713	16,654	2.37
2004	2,064,725	40,429	2.00	426,289	3,596	0.85	1,083,437	22,428	2.11	737,786	18,073	2.51
2005	2,106,819	42,094	2.04	432,424	6,135	1.44	1,105,833	22,396	2.07	756,260	18,474	2.50
2006	2,148,566	41,747	1.98	439,363	6,939	1.60	1,127,302	21,469	1.94	774,271	18,011	2.38
2007	2,192,170	43,604	2.03	447,448	8,085	1.84	1,149,065	21,763	1.93	792,562	18,291	2.36
2008	2,243,003	50,833	2.32	457,437	9,989	2.23	1,174,229	25,164	2.19	813,261	20,699	2.61
2009	2,294,417	51,414	2.29	468,246	10,809	2.36	1,199,272	25,043	2.13	834,086	20,825	2.56
2010	2,346,854	52,437	2.29	479,873	11,627	2.48	1,224,910	25,638	2.14	855,254	21,168	2.54

Note: These projections were developed before the final 1990 Census count was available.
These projections are intended to provide a long term perspective which is relatively unaffected by the level at which they begin.

Source: Utah Office of Planning and Budget, UPED Model.

Table 39
Utah Projected Population by Age Group

Age Group	April 1, 1980	April 1, 1990	1995	2000	2005	2010
0-4	189,962	170,494	168,893	177,042	198,688	221,112
5-17	350,143	452,885	452,324	423,437	432,424	479,873
18-29	351,391	335,637	356,878	401,312	440,327	447,901
30-39	184,866	261,979	265,533	251,906	269,702	338,828
40-64	275,455	345,320	414,414	482,531	548,680	613,601
65+	109,220	161,469	184,089	199,355	216,998	245,539
15-44	678,160	793,733	856,766	886,971	933,803	1,019,785
Total	1,461,037	1,727,784	1,842,131	1,935,583	2,106,819	2,346,854
Median Age	24	25	26	27	28	29
Percent of Total						
Age Group	1980	1990	1995	2000	2005	2010
0-4	13.0%	9.9%	9.2%	9.1%	9.4%	9.4%
5-17	23.9%	26.2%	24.5%	22.0%	20.6%	20.5%
18-29	24.0%	19.4%	19.4%	20.7%	20.9%	19.1%
30-39	12.7%	15.2%	14.4%	13.0%	12.8%	14.4%
40-64	18.9%	20.0%	22.5%	24.9%	26.0%	26.1%
65+	7.5%	9.3%	10.0%	10.3%	10.3%	10.5%
15-44	46.4%	45.9%	46.5%	45.8%	44.3%	43.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%

Source: Utah Office of Planning and Budget, UPED Model.

Table 40
Utah Employment Projections by Industry

	Agricul-ture (1)	Mining	Construction	Manufac-Turing	TCPU (2)	Trade	FIRE (3)	Services (4)	Government (5)	Non-Farm Proprietors (6)	Total Employ	Total Wage & Salary
1980												
Number of Jobs	21,966	18,500	31,549	87,700	34,120	128,678	25,768	102,232	122,240	44,626	617,379	550,787
% of Total	3.6%	3.0%	5.1%	14.2%	5.5%	20.8%	4.2%	16.6%	19.8%	7.2%	100.0%	
1990 (Preliminary)												
Number of Jobs	22,100	8,500	27,100	106,600	42,600	173,200	34,100	180,300	150,400	119,000	863,900	722,800
% of Total	2.6%	1.0%	3.1%	12.3%	4.9%	20.0%	3.9%	21.0%	17.4%	13.8%	100.0%	
1995												
Number of Jobs	22,500	9,000	30,200	117,800	47,200	185,800	40,000	201,400	146,600	123,200	923,700	778,000
% of Total	2.4%	1.0%	3.3%	12.8%	5.1%	20.1%	4.3%	21.8%	15.9%	13.3%	100.0%	
2000												
Number of Jobs	22,900	9,700	33,800	130,400	51,800	204,600	44,000	224,800	149,500	133,700	1,005,200	848,500
% of Total	2.3%	1.0%	3.4%	13.0%	5.2%	20.3%	4.4%	22.3%	14.8%	13.3%	100.0%	
2005												
Number of Jobs	23,200	10,500	37,900	144,400	56,700	227,700	48,900	250,100	158,800	147,500	1,105,700	935,100
% of Total	2.1%	0.9%	3.4%	13.0%	5.1%	20.6%	4.4%	22.6%	14.4%	13.3%	100.0%	
2010												
Number of Jobs	23,600	11,500	42,500	160,100	62,200	255,100	54,900	277,800	173,100	164,200	1,225,000	1,037,100
% of Total	1.9%	0.9%	3.5%	13.1%	5.1%	20.8%	4.5%	22.7%	14.1%	13.4%	100.0%	
Avg. Annual Growth												
1980-1990	0.1%	-7.5%	-1.5%	2.0%	2.2%	3.0%	2.8%	5.8%	2.1%	10.3% (6)	3.4%	
1990-2010	0.3%	1.5%	2.3%	2.1%	1.9%	2.0%	2.4%	2.2%	0.7%	1.6%	1.8%	

(1) Includes Agricultural Services
(2) Transportation, Communication, Public Utilities
(3) Finance, Insurance, Real Estate
(4) Includes Private Household Employees and State/Local Hospitals for 1980 and 1990
(5) Excludes State/Local Hospitals for 1980 and 1990
(6) Bureau of Economic Analysis (BEA) definition and accounting methods changed in 1987, resulting in a much larger NFP count than in previous years

Sources: 1980 final and 1990 preliminary, Utah Department of Employment Security and U.S. Bureau of Economic Analysis.
1995-2010, Utah Office of Planning and Budget, UPED Model.

Table 41
Utah and United States
Median Age

Year	Utah	U.S.
1980	24	30
1990	25	33
1995	26	35
2000	27	36
2005	28	38
2010	29	39

Sources: 1980, U.S. Bureau of the Census; and
1990-2010, Utah Office of Planning and Budget, UPED Model.

SPECIAL STUDIES

THE FORCES OF GROWTH IN THE 1970s AND 1980s AND THE ELEMENTS OF GROWTH IN THE 1990s.

The decade of the 1990s is here, and with it comes the anticipation and excitement of those who see a bright future as well as the pessimism of others who see a gloomy one. Futurists across the country are publishing their projections of the key trends of this decade. Rather than summarizing the trends already published by the futurists it was felt that it would be helpful to comment on what elements need to be in place for Utah to meet the challenges and take advantage of the opportunities of the 1990s. Before the 1990s are discussed, however, an overview of the two preceding decades is helpful in order to put the 1990s in perspective.

Utah in the 1970s

The 1970s was a decade of phenomenal growth in Utah. Our population grew by 408,000 people, an increase of 38 percent. Over one third of this growth came from in-migration. Our economy experienced exceptional growth as well. Almost 195,000 jobs were created. This annual growth rate of 4.4 percent far exceeded the national annual growth rate of 2.5 percent.

Every sector of the economy did well for most of the decade. The goods producing industries of the state (manufacturing, mining, and construction) did especially well. In 1970 these three industries employed 23.3 percent of the nonagricultural work force. By 1980 it had grown to 24.9 percent. This was indirect contrast to what was happening nationally. During this same time, goods producing employment dropped from 33.3 percent of employment to 28.4 percent.

The reasons for such growth centered on the national energy shortage and the resulting rise in commodity prices. Crude oil prices went from $3.18 a barrel in 1970 to $7.67 in 1975 and to $21.19 by 1980. Copper prices jumped from 58 cents a pound to 64 cents to $1.02 and coal prices rose from $6.26 per short ton to $19.23 and to $24.52 in those same years.

With our state's abundant supply of natural resources, Utah experienced an energy boom. Mining employment in the state grew significantly, from 12,800 to 18,500, an increase of 44 percent. Coal production jumped from 4.7 million short tons in 1970 to 12 million short tons in 1980. Crude oil production rocketed from 23.3 million barrels in 1970 to 40 million barrels in 1975. Natural gas production rose from 42.7 billion cubic feet to 56.9 billion cubic feet between 1970 and 1979. Yellow cake production rose from 1.6 million pounds to 2.8 million pounds during this same time.

The population of the counties where this energy production took place grew dramatically. The state's leading coal producing counties (Carbon, Emery and Sevier) grew 42, 72 and 46 percent respectively. The leading oil producing counties (Summit, San Juan, Duchesne, and Uintah) grew by 73, 27, 72, and 62 percent respectively.

The increase in the state's population spawned a construction boom. From 1970 to 1979, construction employment increased by 14,700 jobs to total 35,600, an increase of 142 percent. So spectacular was this growth that construction employment grew from 4.1 percent of the state's nonagricultural work force to 6.5 percent. The number of new dwellings rose from 9,200 in 1970 to a peak of 20,000 in 1978. Value of residential construction rose from $117 million to $646 million during this time. Value of nonresidential construction likewise rose, from $87 million to $490 million.

In addition to the healthy growth of the goods producing industry, the state's service sector also showed sizeable growth. Services grew by over 83,000 jobs and increase of 23.3 percent. Trade grew by almost 50,000 jobs, an increase of 24.9 percent. Finance, Insurance and Real Estate grew by over 10,000 jobs, an increase of 72 percent.

This economic boom, fueled by energy demands, pushed Utah personal income up by an annual average of 12.7 percent, well ahead of the U.S. average of 10.5 percent. As a result, Utah's per capita income (total income divided by total population) actually gained ground with the nation. Utah went from 81 percent of the national average to 83 percent. This is a significant increase given Utah's large families.

Utah in the 1980s

The 1980s was a much different decade. The decade began with a serious national recession brought on by a tight monetary policy. The purpose was to reduce inflation which hit double digit levels during 1979-81. The tighter monetary policy caused interest rates to skyrocket. The prime rate went from about 7 percent in 1977 to almost 19 percent in 1981. This restrictive policy almost doubled the unemployment rate. It rose from 6 percent in early 1980 to almost 11 percent by the end of 1982. Utah unemployment went from 5 percent in 1980 to almost 11 percent in early 1983.

Utah's nonagricultural employment growth rate came to a virtual standstill, averaging less than one percent annually from 1980-83. During these three years, Utah had a net increase in jobs of only 15,100. During the 1970s, there were only three years that did not exceed this three year total.

Utah's economy rebounded in 1984 and 1985 only to enter a significant regional recession in 1986-87. One of the main causes of this regional downturn was the drop in energy related commodity prices. After peaking in 1981 at $34 a barrel, oil prices plummeted by more than 61 percent to $13 a barrel in 1986. Oil production shortly followed suit. Production peaked in 1985 at 41 million barrels and fell to about 28 million barrels by 1989. Coal prices peaked in 1982 and fell steadily for the rest of the decade. Copper prices dropped by one third between 1980 and 1985.

Some mining industries simply reduced their activity, hoping that prices would come back. In the oil industry, the number of active rigs dropped from 46 in 1984 to 6 in 1988. The oil and gas extraction industry employment fell by over 2,600, a drop of 58 percent. Drilling permits dropped from 622 to 165 in the same time. Other mining industries made major internal adaptations. Kennecott Copper Corporation closed down in 1985, spent $400 million in modernization and reopened one year later. However, over 2,000 employees never returned to work and the 2,000 that did took a significant reduction in compensation. The coal industry likewise modernized. With new long wall mining techniques, they reduced their work force and increased their production. From 1981 to 1989, Utah's mining industry reduced its work force by 60 percent from 20,300 to about 8,100.

In addition to these energy related problems, another major Utah manufacturer also closed -- Geneva Steel Works. This plant, part of the USX Corporation, initially stopped production as a result of a labor dispute. But in the labor negotiations, the parent company decided not to reopen the Geneva plant. Over 1,500 people were unemployed. However, the company was bought by a Utah firm and reopened. Like Kennecott, however, Geneva was also downsized and is being modernized. The result was a more productive but much reduced workforce. Currently underway is an additional modernization project. This $226 million overhaul will include new furnaces, rolling mills, and pollution control equipment.

The completion of the huge Intermountain Power Project near Delta in 1986 was another factor exacerbating the downturn. At its peak, the project employed 4,500 construction workers. The slowdown in the state economy from the cumulative effects of oil prices, Kennecott, IPP and Geneva reduced population growth and thereby reduced the demand for housing. The value of residential construction fell from $706 million in 1985 to $413 million in 1988. The result of all this was that unemployment rose. In mid 1985 it stood at 5 percent. Two years later it was 7.5 percent.

During this significant mining and construction downturn the services industries continued the steady growth of the 1970s. Between 1980 and 1989, service jobs grew by 33 percent This industry created 48 percent or 66,700 of the 139,400 new jobs in the state. The second biggest growth industry was trade. It grew by 29

percent creating 37,800 new jobs. These two major industries, created three-fourths of all the jobs during the 1980s. Services went from 18 percent of the work force to 24 percent while Trade went from 23 percent to 24 percent. Combined these two industries grew from 41 percent of the work force to just over 48 percent. By contrast, mining fell from 3 percent to 1 percent of the work force. Construction fell from almost 5.5 percent to 3.7 percent.

Utah and the nation have been shifting from a goods producing economy to a service producing economy for the last few decades. But the speed of the shift in Utah during the 1980s was dramatic. In 1970, goods producing jobs employed 23.4 percent of the state's nonagricultural work force. During the energy and construction boom of the 1980s, goods producing jobs actually increased its share of total employment to 25 percent. But with the downturn in these industries and the corresponding steady growth of services in the 1980s, the shift was profound. By 1989, goods producing employment had fallen to 19.8 percent of nonagricultural employment and services had grown to 80.2 percent.

Another major shift in the state's work force took place in government. From 1950 to 1976, government was the largest employer in the state. But in 1976, Trade became the biggest employer and government fell to second. In 1989, government fell another notch. In that year, Services became the largest industry, Trade second and government dropped to third.

With Services being the largest employer in the state, a closer look at the subsectors of Services is worthwhile. Business Services was the fastest growing subsector, growing by almost 19,000 between 1980-89 to 32,600, a growth of 137 percent. Health Services had the second largest increase. This subsector grew by 16,100 to 43,200, an increase of almost 60 percent. Air transportation grew by 4,300, an increase of 218 percent. Other subsectors that grew rapidly during this time were: Transportation Equipment up almost 7,700, Hotels and other lodging, up 4,300, Banking up 4,200, Trucking and Warehousing up 3,700.

Several smaller professions had large percent increases and are becoming significant industries. They are: Social Services, up almost 4,000, an increase of 131 percent, Legal Services up 2,100, an increase of 94 percent, Insurance agents and brokers, up almost 1,400 an increase of 166 percent, Transportation Services, up 1,200 an increase of 149 percent; Security and Commodity Brokers up almost 1,000 an increase of 145 percent. Paper and Allied Products up over 700 an increase of 107 percent; and Holding and Other Investments, up over 600 employees an increase of over 220 percent.

How Does Utah Prepare for the 1990s and Beyond?

So much has happened in Utah in the last two decades. We are 61 percent more populous than in 1970. We are more urban. We are economically more diversified, with a substantial shift away from our government-mining economy to a service-trade economy. Most importantly, our economy is one that is inextricably tied to a world economy. What should state government do now to prepare for the 1990s and beyond?

The Role of Government

The sweeping events in Eastern Europe have amazed all of us. Within less than two years virtually every totalitarian system in this region is being removed from power and new struggling democracies are surfacing. The forces of change were not suddenly produced; nor were the people suddenly desirous of change. The peoples of these nations have long wanted the personal and economic benefits of western nations. What allowed the change to take place was the decision of the Soviet Union to stop backing these unpopular governments by the force of the Soviet military. Once this crutch was removed, the governments fell like a deck of cards. The fact that the new governments were democracies should tell Americans a great deal. What the people hated most about their systems was that these governments did not allow people the freedom to control their own lives. Everything was planned for them whether they liked it or not or whether it was to their benefit or not. Centralized planning and the power to impose those plans on their citizenry was forcefully rejected.

As Utah State Government leaders prepare for the 1990s and beyond, they should take note of the events in Europe. Utahns do not want state government nor any government to plan their future for them. What people want is information in order for them to prepare themselves for the future. Utahns need more than anything knowledge and skills. What then should Utah State government do to prepare its citizenry for the 1990s? The Economic Coordinating Committee recommends that state government focus on doing those things that government is designed to do and do them well. If government does its part effectively, individuals and businesses will efficiently produce and exchange goods and services and create their own jobs and increase their wealth.

Education - If one is going to be competitive in the 1990s, one must realize the importance of education. Never before has it been so critical than it is now to have a solid education. The shift to the service-producing industry that has been discussed, highlights the importance of a good education. The services industry is diverse and varied. There are many low paying, entry level jobs in the services-producing industries, but there are many good paying ones as well. According to the Utah Department of Employment Security, production workers will be in the greatest demand during the next five years, with openings of 22,500. Production workers consist of: skilled, semi-skilled, and unskilled trades. The second largest group of workers are clerical, basically secretaries, accounting clerks, office clerks and word processors. Over 15,000 clerical openings will occur. The third group is services, needing almost 15,000 new employees. This includes fast food workers, hotel workers such as maids janitors. Professionals are next with a demand of over 14,000. These positions include engineers, accountants, computer programmers, nurses, and teachers, and technicians.

As can be seen, it easy to pick out the good paying jobs and those that are not. It is also easy to see that specific skills are needed to land the good paying jobs. If the State of Utah wants to help its citizens improve their standard of living and create wealth it must see that they have the education that allows them to compete for the good paying jobs in the services-producing industry. This does not mean that everybody needs a college education. In fact, 80 percent of new jobs need less than a four-year degree. It does mean, however, that some kind of formal, technical training beyond a good high school education (where the basics of reading, writing and the fundamentals of math are learned) is necessary. Much of the growth in the services and trades industries are is among small and medium business that compete in the international market. These companies need employees that have the skills to adapt quickly to market changes.

Investing in and developing an excellent education system is the single most important area of government involvement. Currently half of the state's total budget goes to public and higher education. The state must do everything it can to maximize the results of such a heavy investment.

How does that state improve its return on this $1.7 billion investment? Rather than getting into specific recommendations, the ECC felt it important that guidelines be suggested. Across the nation two trends in education are clear -- greater accountability and the infusion of competition. From teacher testing to graduation tests, from vouchers to alternative certification, and from open enrollment to magnate schools options are being tried that place greater accountability on schools and parents and greater competition between and within schools. The state of Utah made some important steps in the 1990 General Session. New laws were passed that not only required statewide uniform testing but also required that these test results be published on a district and school basis and mailed to parents. More can be done and should be done in these areas.

Infrastructure - A critical area of government responsibility is insuring a sound infrastructure for our citizens and businesses. This is allows them to live in a safe, clean environment and work in an efficient manner. This means that roads, bridges, and water systems need to work properly and effectively. But it also means that they need to be built and maintained in the most cost effective manner. The best way to do this is to allow market forces, wherever possible, to play major roles about demand and price. This will put the projects where they are needed and build them when they are needed.

Sound Regulatory Environment - The state also has the responsibility to protect its citizens from harm, fraud and abuse. A state regulatory environment must be sound and clear. But too often regulatory agencies become captives of those they regulate. The result is that they tend to limit competition and harm entrepreneurship rather

than encouraging it. State regulatory agencies should be looked at to see if any are discouraging competition and thereby restricting the entry of entrepreneurs into the marketplace. At the same time, the resources given to important regulatory agencies should be looked at to make sure they have the power and resources to do their job properly.

Environment - During the 1980s poll after public opinion poll showed increasing concern about the quality of this nation's environment. Polls even showed that when asked if they were willing to pay more taxes to improve the environment the majority of people said yes. Polls showed that when the choice is jobs vs. health, health wins, when the choice is jobs vs environmental controls, environmental controls wins also. The importance of environmental quality is becoming more significant given the nature of much of the new business growth nationally.

In the information age, many businesses can choose to live almost anywhere they want. If Utah wants to continue to be an attractive place for the new businesses, it must protect its environment where it is still clean and clean up its environment where it is not. The Governor's Clean Air Committee which has made recommendations to the state is an excellent start.

A Sound Fiscal System - A state's fiscal house must be in good order. This does not mean just having low taxes. Studies show that state and local taxes are generally not a major concern for business formation unless there are major discrepancies. Of the nation's fifty states, 40 states have combined state and local government taxes totalling between 8 and 10 percent. More important than the amount of the taxes is how well the taxes are spent. In other words, are the taxes providing the necessary goods and services in an effective and efficient manner?

Business Recruitment, Retention and Expansion - States across the nation are selling themselves to companies in hopes of a new plant being built in their state. This should be done but it must be done with reason. Direct marketing approaches put companies in the position to ask "What will you give me to come?" It is these type of questions states must be careful with. Tax breaks to induce companies to come must be used sparingly and only after a sound cost-benefit analysis. Companies that will only come with heavy tax incentives may be marginal companies to begin with. More than tax breaks, companies need the things that have just been mentioned: a quality work force (a product a good educational system), a good infrastructure, sound fiscal system, quality work and living environment (a product of good governmental planning). These are far more essential to business in the long run than tax breaks.

These areas of governmental responsibility are even more important when it is realized that over 80 percent of the new jobs created in a state are usually created by existing businesses in a state or new businesses starting in a state by a resident entrepreneur. If the state produces well educated graduates from its schools it is producing good employees and potential entrepreneurs as well. Seeing to it that our current employers and future employers have a safe, efficient and clean environment, with a quality work force are the most important things government can do for business and its people.

PERSIAN GULF CRISIS and IMPACTS on UTAH PETROLEUM MARKETS

The United Nations-imposed embargo on trade with Iraq and occupied Kuwait has removed approximately 4.3 million barrels of oil per day from the world petroleum markets. The embargoed production from these countries represents approximately seven percent of the world's current consumption and affects 19 percent of its proved reserves. The anticipated shortfall created by the trade embargo with Iraq and Kuwait oil production and the uncertain course of future events in the Middle East have resulted in extremely volatile prices for crude oil traded on world spot and futures markets.

World Situation

World Oil Prices

Crude oil prices have been on a roller coaster ride that began August 2 with the Iraqi invasion of Kuwait. Prices have surged at various points in response to Iraqi threats against Middle Eastern oil fields, clashes between Palestinians and Israeli police, and Saddam Hussein's threat to deploy a new-long range missile against Israel. These developments increased market tension as traders were served notice that there was more than one potential flashpoint for triggering war in the Middle East. In the first ten weeks following the invasion, the spot price of a barrel of crude oil had jumped almost 19 dollars per barrel, an increase of 88 percent. Responding to rumors, threats, and military moves, crude oil prices have jumped as much as $4.00 in a single day. Crude oil which was trading on the New York Mercantile Exchange (MERC) for $21.54 per barrel on August 1 peaked on October 9 at $40.40.

Within a week of peaking at $40.40 per barrel, market tensions began to ease as an absence of direct confrontation initiated a sharp retreat from the record high prices established on October 9. As fears of war receded the market began a correction that would see the price of oil drop by as much as $5.41 in a single day before closing October 22, at $28.38. Crude oil prices recovered to close out the month of October at $35.23, and traded between $29 - $36 during November, averaging $32.30 for the entire month. As prospects for a peaceful settlement in the Middle East materialized during the first two weeks of December, prices plunged to their lowest levels since the end of August, falling almost $3 to $26.40 on December 7.

World Oil Supply

In contrast to the spot and futures prices, world crude oil supplies have remained relatively stable with no OECD member reporting supply shortages. There are four reasons why supplies have remained stable despite crude oil prices that suggested severe disruptions and supply shortages. First, oil production from Iraq and Kuwait placed in transit prior the invasion was not included in the embargo. These supplies continued to be delivered throughout August and early September. Second, at the time of the embargo world commercial inventories of crude oil were at all-time record levels. Where spot shortages or access to adequate supplies of crude oil occurred during the past twelve weeks shortfalls have been made up by drawing down commercial stocks. Third, approximately 5.5 million barrels per day of excess production capacity exists among the world's oil producing countries. Since the August 6 U.N. embargo an estimated 3.9 million barrels per day of offsetting production has been brought on line by countries such as Saudi Arabia, the United Arab Emirates, Venezuela, the United States, Mexico, and others. This additional production has shrunk the net oil loss due to the embargo to 400,000 barrels per day. Finally, higher oil prices and a slow down in economic activity has reduced demand for petroleum among OECD countries by more than 400,000 barrels per day. Combined with increased production from non-OPEC and OPEC countries, world oil markets will in all likelihood be able to off set most, if not all of the shortfall for the remainder of the year.

For these reasons, and in deference to the unstable military situation in the Persian Gulf, James D. Watkins, Secretary of the U.S. Department of Energy has characterized the future supply situation as ".....relatively stable, but uncertain".

Utah's Petroleum Situation

Crude Oil Prices

Predictably, crude oil prices in the Rocky Mountain area moved in step with those reported on the New York Mercantile Exchange. At an average price of $17.72 per barrel on July 31, field prices for crude oils processed by Utah's refiners rose sharply following the August 2 Iraqi invasion and closed August 31 at an average of $25.88 per barrel. The $8.16 per barrel surge represented an increase of 46 percent and stands as the largest monthly gain since the crisis began. Crude oil prices continued their strong upward movement gaining $6.21 by September 30, to an average price of $32.09 per barrel on October 12. Alamont Yellow Wax established a record posted price for Utah produced crude listing at $40.25 per barrel on the same day. By month's end, prices had fallen $4.07 from the peak to settle at an average of $35.75 per barrel. In the month of November, crude prices steadily declined, falling 12 percent overall, or $4.16 per barrel to an average of $31.59. Through the first eleven days of December, the trend of decreasing prices continued as the price for crude oils processed by Utah's refiners fell $4.43 to an average of $27.16 per barrel from the November 30, closing price.

Crude Oil Supply

Historically, Utah refineries have relied exclusively on crude oil from the Rocky Mountain states. Of the 40.7 million barrels of crude oil delivered to Utah refineries through the first nine months of 1990, Utah oil fields supplied an estimated 38 percent, Wyoming 30 percent, Colorado 29 percent and Nevada provided the remaining three percent. There has been no impairment of crude oil availability in Utah. 1990 deliveries of crude oil to Utah refineries are running 2.7 percent ahead of 1989 deliveries. Similarly refinery crude oil runs and utilization rates have exceeded 1989 levels. Higher crude runs have also been reflected in higher refinery utilization rates. Utilization rates of Utah refineries have been unprecedented as they have exceeded 90 percent utilization in 6 of the first 10 months in 1990. Since the Iraqi invasion, refinery utilization rates in Utah have averaged near maximum capacity at 93 percent.

Petroleum Products Supply

At year-end, there is concern for the level of motor gasoline and distillate inventories, especially in light of unforseen maintenance problems at the Chevron Refinery. A drop in gasoline production in October, the result of lower crude oil runs due to Chevron's "turnaround" and "hardware problems", led to a 2 percent drop in motor gasoline inventories as stocks in the custody of Utah refiners fell to 856,000 barrels at the beginning of November.

Our assessment of the market at year-end is complicated by the hardware problems at Chevron's North Salt Lake refinery. Chevron's refinery is the largest Utah refinery and reduced output from this plant due to the extended "turnaround" would in our estimation result in a tightening of supply and possible spot shortages in the market area served by Utah refineries. While some shortages of No. 2 distillates were reported in parts of Idaho, and eastern Washington, supplies locally were reported as only being "very tight". The local market has apparently benefitted from a softening of demand for petroleum products which we would attribute to higher prices and a seasonal slow-down of economic activity. Preliminary figures suggest that shipments of products from Salt Lake refiners' racks were down 17 percent in October 1990 compared to October 1989. In addition the large disparity between the higher prices of No. 2 distillate in the local market and those of cheap priced surrounding markets has resulted in movement of distillates into the Salt Lake market, and increased the quantity supplied.

Petroleum Product Prices

Of immediate concern to consumers in Utah have been the rapid increases in crude oil and petroleum product prices. In the volatile market that followed the Iraqi invasion, and U.N. embargo, Utah consumers expressed alarm at the rapidity with which motor fuel prices in Utah have increased.

Predictably, prices for Rocky Mountain crude oil moved in step with those on the New York MERC. Listing at an average of $19.18 per barrel on August 1, posted field prices for crude oils processed by Utah's refiners have since increased $18.28 to $37.46 per barrel. This was followed in short order by increases in wholesale prices at the refinery "rack" and gas pump. Prior to August 2, rack prices for unleaded regular averaged $.69 per gallon in Salt Lake City. Between August 2, and September 26, the prices increased 28 cents to $.97 per gallon, an increase of 40 percent.

The first component of the sharp rise in gasoline prices appears to be related to crude oil prices which had been increasing since mid-June. By August 1, the average cost of crude oil purchased by Utah refiners had risen $4.00 per barrel. Based on the historical response of gasoline prices to changes in the costs of crude oil, we would have expected the Salt Lake rack price of unleaded regular gasoline to have increased by about 10 cents per gallon. In fact, rack prices only increased an average of one penny, leaving a 9 cents per gallon increase in costs that had not been passed through to the wholesale dealer or to retail consumers. Following Iraq's invasion of Kuwait, jobbers and large commercial accounts correctly assumed product prices would increase. In an effort to secure product at lower prices and to move those supplies into secondary storage they made a "run" on refinery rack supplies. Refiners responded by increasing rack prices to protect low inventories and in doing so appear to have included most of the 9 cent per gallon increase that had not been passed on during July.

The second component of the increase in the price of gasoline appears to be associated with crude oil prices that have continued to increase following the August 2, invasion. After the initial 9 cents per gallon increase in the rack price of unleaded regular gasoline, prices continued to track crude oil prices as refiners continued to pass crude oil cost increases through to the wholesale rack.

In the fourth quarter of 1990 petroleum products prices were subject to the same volatility witnessed in the price of crude oil. Higher average price per barrel of crude oil continued to translate into higher petroleum product prices at the refinery rack through the first two weeks of October. Salt Lake rack price for unleaded regular began the month averaging 99.2 cents per gallon and peaked at 102.4 cents during the week of October 12-18. Similarly, higher crude costs and strong demand for No.2 distillate combined with unusually low inventories created upward pressure on rack prices for this product. Averaging 98.8 cents per gallon at the beginning of the month, rack prices for No. 2 distillate peaked at 111.6 cents during the same week.

The oil price collapse in mid-October and softening demand for gasoline products pulled the price of unleaded regular back down below $1.00 for the second-half where it settled at a month-ending at 97.1 cents. In contrast, prices for No. 2 distillate remained firm during the second half of October as supplied continued to be tight due primarily to shortages in Idaho and eastern Washington and "turnaround" problems at Utah's largest refinery. Closing the month at 109.3 cents per gallon, No. 2 distillate rack prices were down only 2.3 cents from the October peak, making prices in the Salt Lake market among the highest in the United States.

Through November motor gasoline and No. 2 distillate prices tracked crude oil prices although they continued to show resistance on the downside as refiners attempted to maintain product prices in an effort to recover increased costs of crude oil that was not passed through to the rack and retail outlets during the first twelve weeks of the "crisis". The average price of crude oil dropped to $32.30 per barrel in November while unleaded regular gasoline and No. 2 distillate fell to 94.6 cents and 108.9 cents respectively. December has seen the resumption of normal supply activity into the regions served by the Salt Lake refining system. Combined with lower crude oil prices and softening demand there has been a corresponding decline in prices. Prices have fallen by as much as 7-10 cents since the end of November with the average rack prices of unleaded regular and No. 2 diesel listed at 99 and 86 cents per gallon, respectively as of December 6.

Impact on Production

The surge in oil prices following the invasion may have a small positive impact on Utah production, but because a peaceful resolution of the conflict would send prices tumbling, the oil industry is expected to be

cautious about committing significant investment dollars in new exploration and drilling in Utah. Nevertheless, some moderate activity is expected to occur as oil companies hedge their bets. Some increased production is expected from capital improvements which will be made on existing wells (known as "workovers"). Legislation passed in 1990 allows a twenty percent credit against severance tax obligations for workover expenses. It is likely that a number of workovers will be induced by the legislation, but the magnitude of the inducement effect is difficult to predict. If producers maintain the same level of net private expenditure in 1990 as occurred in 1989, then the workover tax credit could induce some 240,000 barrels of incremental production in 1991.

In addition, higher prices should spark a modest increase in drilling, which is forecasted to yield 495,000 barrels of increased production over what would have been produced at pre-invasion prices.

Impact on Consumption

The short-term demand for motor fuel is very price inelastic. In the short run, the quantity of fuel demanded does not drop significantly in response to a price increase. Studies indicate that quantity demanded falls about one to two percent for every ten percent increase in price. The upshot is that the dramatic rise in motor fuel prices will not significantly reduce the quantity of motor fuel consumed in Utah. Similarly, at the national level, if an escalation of hostilities in the Persian Gulf were to require a substantial reduction in the quantity of motor fuel consumed, the price increase necessary to achieve such a reduction will be dramatic.

The increase in motor fuel prices following the Iraqi invasion will cost Utah motorists approximately $96 million in 1990. The combined effect of the Iraqi invasion and a five-cent per gallon federal tax increase will cause Utah motorists to pay an additional $264 million for motor fuel in 1991, assuming a retail price of $1.35 per gallon for unleaded regular. This increase is equivalent to nearly 16 percent of the expected growth in state income for the year.

The Outlook in 1991

It would be difficult to imagine a situation less amenable to a single point forecast than the outcome of the Persian Gulf crisis and its impact on world energy markets. A peaceful resolution of the crisis will send oil prices tumbling, while a war will cause prices to sky rocket. Perversely, the least likely outcome is maintenance of the status quo.

Ironically, a peaceful resolution will leave the world more awash in oil than prior to the invasion, due to the increased production outside of Iraq and Kuwait. This increased production is currently making up for most of the shortfall associated with the United Nations boycott of Iraqi and Kuwaiti production, and if this new production were to be sustained after a peaceful resolution, the downward pressure on prices could be very significant. The degree of downward pressure would depend, in part, on OPEC's discipline in holding production to 22.5 million barrels per day. A peaceful resolution would result in prices in range of $18 to $20 per barrel.

At the time of writing, war is a significant possibility. The impact on oil prices will depend on the extent and duration of any conflict. A brief conflict in which Saudi productive capability is unimpaired would likely result in prices ranging from $45 to $50 per barrel. An extensive conflict which affected Saudi productive capability could result in prices of $60 per barrel or greater.

In the unlikely event that the status quo is maintained indefinitely, prices are projected to remain at $25 to $28 per barrel, but may remain subject to considerable volatility depending on the market's perception of future events.

Summary

The data presented in this chapter leads us to the following conclusions regarding the impact of the Persian Gulf conflict on Utah's petroleum markets:

The prospect for energy markets in 1991 depends upon which of two widely divergent outcomes to the Persian Gulf crisis results: peaceful resolution or military conflict. The former will send oil prices tumbling, the latter will likely cause them to skyrocket. The least likely outcome is maintenance of the status quo.

Oil companies are likely to be cautious in their approach to new drilling in Utah. A modest increase in drilling activity is anticipated in response to higher prices and the risk of war. Price-induced production is expected to yield an additional 495,000 barrels of Utah crude oil in 1991.

There has been no impairment of crude oil availability in Utah. Utah relies exclusively on crude oil from the Rocky Mountains and 1990 deliveries of crude oil to Utah refineries are running 2.7 percent ahead of 1989 deliveries. Similarly refinery crude oil runs and utilization rates exceed 1989 levels. Higher crude runs have also been reflected in higher refinery utilization rates. Utilization rates are unprecedented as refiners in Utah have exceeded 90 percent utilization in 6 of the 10 months in 1990. Since the Iraqi invasion, refineries in Utah have operated near maximum capacity, averaging 93 percent utilization rate.

On the whole, Utah inventories of gasoline supply and distillates stocks are low and warrant continued surveillance. Constraints are not anticipated due to adequate crude oil supplies, and high refinery utilization rates in Utah which should allow refineries to produce supplies of petroleum products to meet anticipated demand. Demand for petroleum products appears to have softened as preliminary figures indicate October deliveries from refiners' racks are down 17 percent from October 1989 deliveries, reflecting a decrease in quantity demanded due to higher prices and a seasonal slow down in economic activity.

Supplies have been particularly tight for No. 2 distillate. There is also some evidence to suggest that the exceedingly high prices for No. 2 distillate in this market has resulted in a movement of product from cheaper-priced outlying markets such as Denver, Las Vegas, and the Pacific Northwest into the area supplied by Utah's refineries.

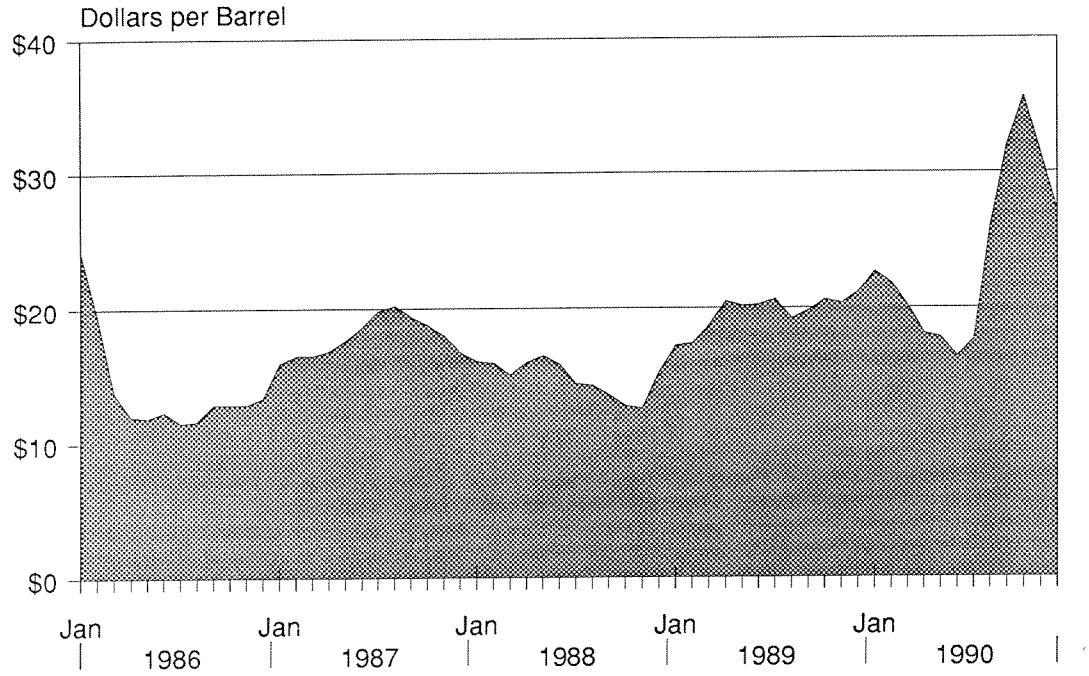
Gasoline and No. 2 distillate prices will continue to track crude oil prices but will continue to show some resistance on the down-side. Competitive pressures and low stocks will keep supplies tight for No. 2 distillate and ensure prices for this product remain firm until the market is resupplied from outlying areas and local stock levels are increased.

Table 42
Average Posted Field Prices in Utah
(Dollars per Barrel)

	1986	1987	1988	1989	1990
January	$24.25	$15.92	$16.04	$17.21	$22.64
February	$19.42	$16.48	$15.91	$17.36	$21.82
March	$13.71	$16.50	$15.01	$18.72	$20.10
April	$11.99	$16.84	$15.95	$20.47	$18.06
May	$11.87	$17.63	$16.47	$20.16	$17.76
June	$12.31	$18.59	$15.83	$20.24	$16.35
July	$11.47	$19.82	$14.37	$20.61	$17.56
August	$11.63	$20.20	$14.24	$19.15	$25.94
September	$12.85	$19.33	$13.53	$19.75	$31.98
October	$12.85	$18.74	$12.72	$20.59	$35.62
November	$12.85	$17.97	$12.52	$20.32	$31.48
December	$13.34	$16.70	$15.22	$21.14	$27.09
Annual Average	$14.05	$17.89	$14.82	$19.64	$23.87

Source: Utah Energy Office, Energy Data Information System.

Figure 36
Average Posted Field Prices in Utah



Source: Utah Energy Office

Table 43
Utah Refinery Crude Oil Stocks
(Thousand Barrels)

	1985	1986	1987	1988	1989	1990
January	695	559	613	599	608	656
February	629	667	668	562	631	698
March	609	731	641	637	504	698
April	779	664	803	624	640	708
May	666	685	698	660	750	698
June	648	572	732	570	775	538
July	897	467	738	552	614	579
August	655	555	569	565	599	609
September	626	502	489	552	576	548
October	622	450	548	624	519	614
November	534	557	623	568	539	732
December	556	588	603	593	524	---

Source: Utah Energy Office, Energy Data Information System.

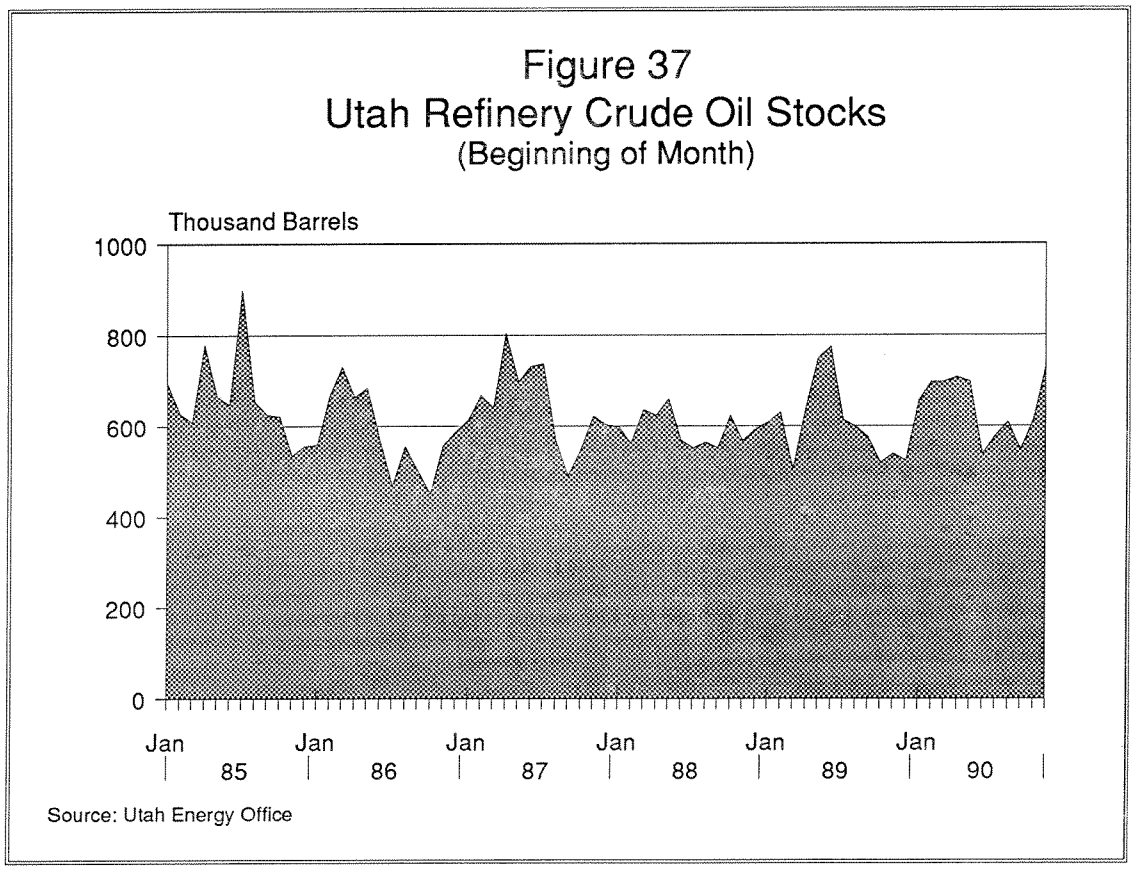


Table 44
Utah Refinery Gasoline Stocks
(Thousand Barrels)

	1985	1986	1987	1988	1989	1990
January	1,210	1,147	1,132	931	1,026	1,372
February	1,125	1,371	1,160	1,157	1,184	1,621
March	1,084	1,461	1,294	1,165	1,020	1,463
April	1,029	1,310	1,371	1,104	1,287	1,371
May	944	923	1,153	995	1,132	1,275
June	1,052	764	1,116	916	1,175	1,047
July	1,033	987	972	828	1,230	923
August	741	1,051	918	756	1,242	797
September	906	955	824	824	1,212	717
October	884	883	942	884	1,077	871
November	924	913	889	764	997	856
December	905	1,073	955	861	1,128	---

Source: Utah Energy Office, Energy Data Information System.

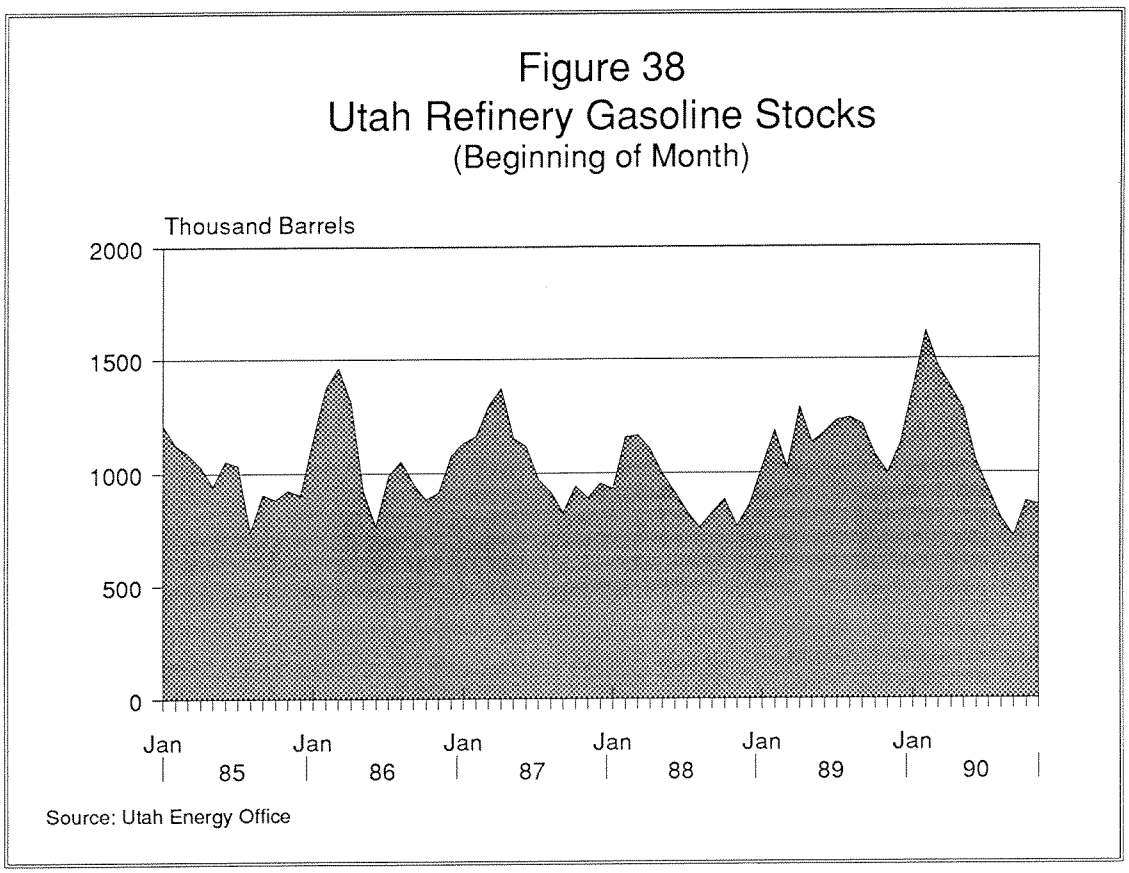


Table 45
Utah Refinery Distillate Stocks (Beginning of Month)
(Thousand Barrels)

	1985	1986	1987	1988	1989	1990
January	617	580	521	425	442	571
February	644	596	483	479	454	481
March	657	695	560	425	390	509
April	441	509	439	297	321	380
May	439	387	496	413	317	340
June	453	543	440	379	381	367
July	401	457	438	475	276	394
August	355	476	487	397	379	433
September	308	425	391	287	334	209
October	405	341	430	201	423	253
November	351	376	271	347	334	331
December	417	487	342	323	433	---

Source: Utah Energy Office, Energy Data Information System.

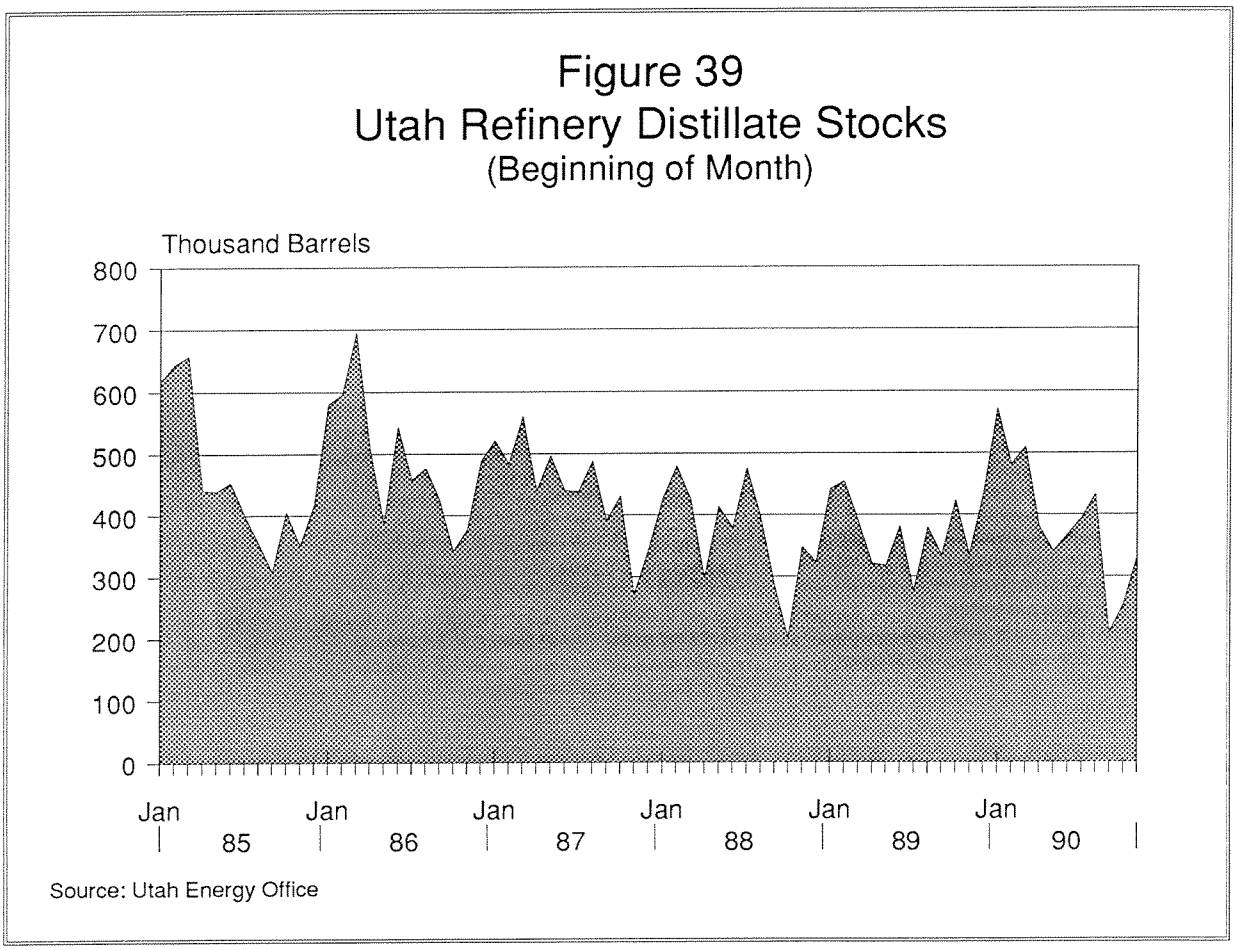
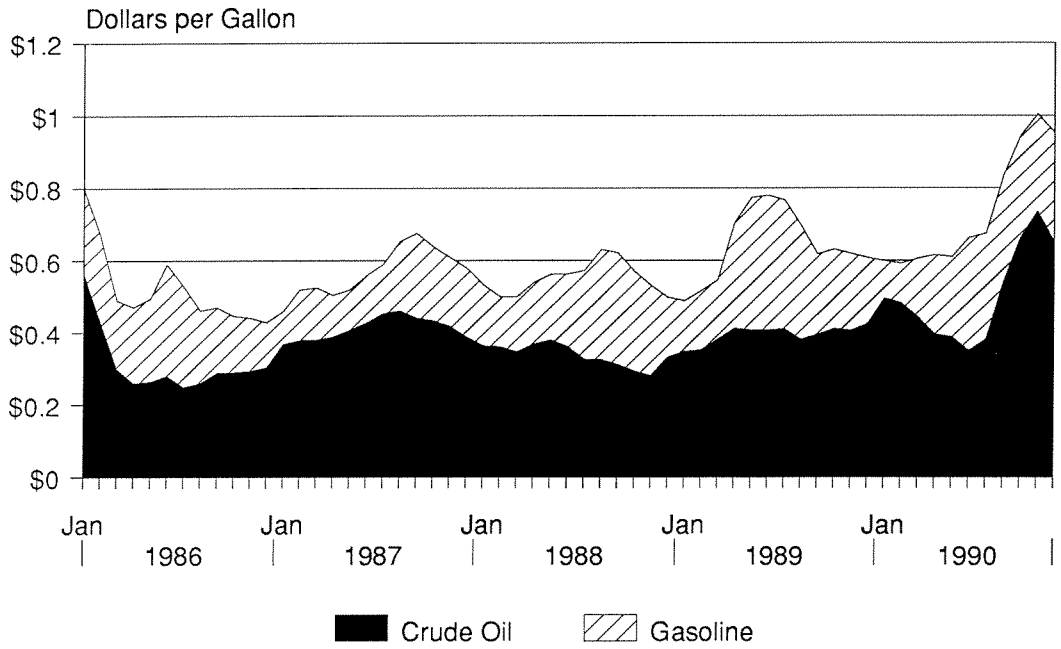


Table 46
Utah Unleaded Regular Gasoline Margins
(Dollars per Gallon - Wholesale Rack)

	1986	1987	1988	1989	1990
January	$0.24	$0.09	$0.17	$0.14	$0.10
February	$0.24	$0.14	$0.14	$0.17	$0.11
March	$0.19	$0.15	$0.15	$0.17	$0.16
April	$0.21	$0.12	$0.17	$0.29	$0.22
May	$0.23	$0.11	$0.18	$0.37	$0.22
June	$0.31	$0.13	$0.20	$0.37	$0.31
July	$0.28	$0.14	$0.25	$0.36	$0.29
August	$0.20	$0.19	$0.31	$0.32	$0.29
September	$0.18	$0.23	$0.31	$0.22	$0.28
October	$0.16	$0.21	$0.28	$0.22	$0.27
November	$0.15	$0.19	$0.25	$0.21	$0.30
December	$0.13	$0.19	$0.17	$0.18	--
Annual Average	$0.21	$0.16	$0.22	$0.25	$0.23

Source: Utah Energy Office, Energy Data Information System.

Figure 40
Utah Crude Oil and Gasoline Prices



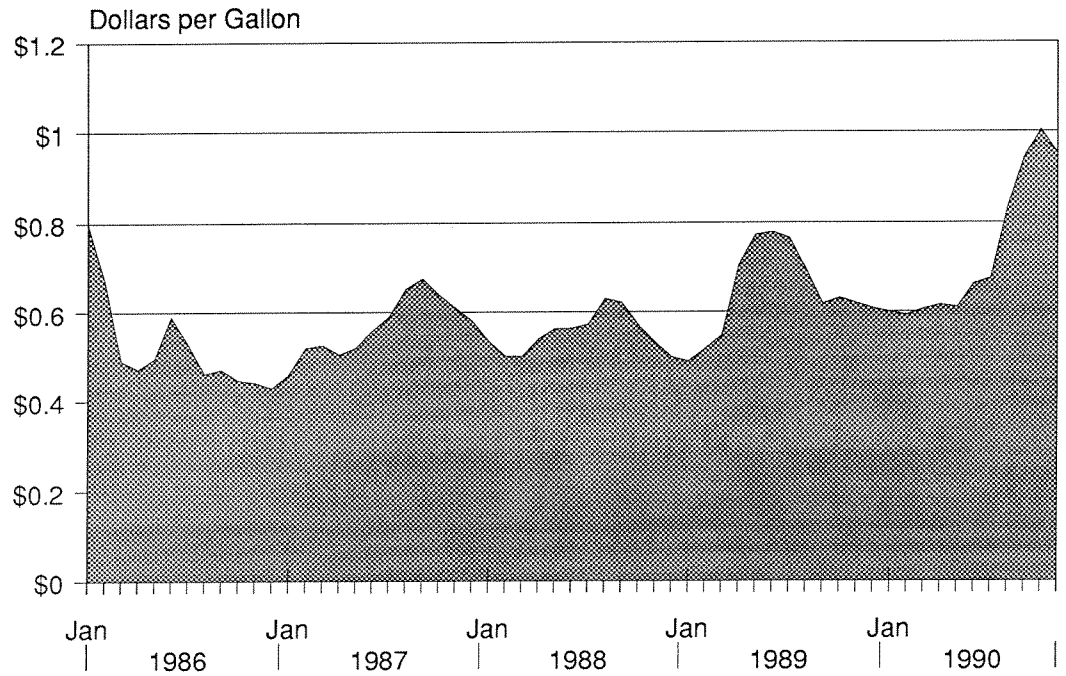
Source: Utah Energy Office

Table 47
Unleaded Gasoline Rack Prices
(Dollars per Gallon)

	1986	1987	1988	1989	1990
January	$0.80	$0.46	$0.53	$0.49	$0.60
February	$0.67	$0.52	$0.50	$0.52	$0.59
March	$0.49	$0.53	$0.50	$0.55	$0.61
April	$0.47	$0.50	$0.54	$0.70	$0.62
May	$0.50	$0.52	$0.56	$0.77	$0.61
June	$0.59	$0.56	$0.56	$0.78	$0.66
July	$0.53	$0.59	$0.57	$0.77	$0.67
August	$0.46	$0.65	$0.63	$0.70	$0.83
September	$0.47	$0.68	$0.62	$0.62	$0.94
October	$0.45	$0.64	$0.57	$0.63	$1.00
November	$0.44	$0.61	$0.53	$0.62	$0.95
December	$0.43	$0.58	$0.50	$0.61	--
Annual Average	$0.52	$0.57	$0.55	$0.65	$0.71

Source: Utah Energy Office, Energy Data Information System.

Figure 41
Utah Unleaded Gasoline Rack Prices



Source: Utah Energy Office

UTAH'S DEFENSE ECONOMY NOW AND TOMORROW

Defense spending in Utah has long been recognized as a key source of income and employment for Utah residents, and a significant component of economic activity and growth. In 1989, roughly $2.0 billion in direct defense-related expenditures entered the Utah economy. The defense industry and military establishments employ approximately 50,300 people in Utah, or 6 percent of the civilian labor force. When the secondary impacts are considered, defense expenditures in Utah represent between 16 and 18 percent of total personal income, and at least 14 to 16 percent of the state's civilian labor force.

Composition of Utah's Defense Industry

Defense activity in Utah is almost evenly split between the industrial sector and military bases -- the two primary components of defense spending in the state. Industrial sector expenditures consist of direct purchases, in the form of Prime Contract Awards (PCAs) from contractors. Direct spending at military bases consists of direct salaries and wages paid to military and civilian DOD employees. Secondary, and much less important sources of defense spending are, military retirement pay and federal grants to state and local governments (Table 48). Since 1983, the most stable source of defense spending in Utah has been wages and salaries paid to military and Department of Defense (DOD) civilian personnel. During the same time period, PCAs have been highly volatile. After peaking in 1986, the dollar value of prime contract awards declined sharply, hitting a five-year low in 1988.

In 1989, Utah received $2,076,807,000 from the Department of Defense, which represented approximately 34 percent of all federal expenditures made in the state during that year.[1] Of the total, $948,600,000 was spent on military payrolls (wages, salaries, and fringe benefits) at Hill Air Force Base, Tooele Army Depot, Defense Depot at Ogden, Dugway Proving Grounds, and National Guard Units. Slightly more than $1.0 billion was paid to Utah companies who provided a variety of goods and services to agencies of DOD. However, the total $1.0 billion paid in PCAs to Utah firms represents only a portion, albeit a significant one, of defense activity in Utah.

Prime contract data are an imperfect measure of total activity for several reasons. First, the data indicate when awards are made, but the actual expenditure may not occur during the specified year. A more serious limitation is the lack of subcontractor data. There is a substantial flow of defense spending on subcontracts (estimated by the Department of Defense to be about 50% of total Prime Contract Awards) that is not reflected in the prime contract data. Furthermore, PCAs identify the location of final stage production, but do not identify the share of work performed by subcontractors, or where the subcontracting share will be undertaken.

Essentially all of Utah's major defense contractors undertake both prime contracting work for the Department of Defense and subcontracting work for other large defense contractors, many of which are not located in Utah. Finally, there is a great deal of PCA "leakage"; that is, prime contracts that are awarded to Utah companies but subcontracted to non-Utah firms. Therefore, the figures referred to in this study reflect only the **direct** expenditures made in Utah by the Department of Defense.

DOD Contract Awards

Total estimated employment within the defense industry is 22,500, with an annual payroll in 1989 (wages, salaries and fringe benefits) of $901,501,380.[2] As in the case nationally, defense jobs in Utah are comparatively high-paying. In 1989, workers in the defense sector averaged $30,816 annually while the state's non-agricultural annual payroll wage averaged $19,020.

Although in 1989 the total dollar volume of prime contracts awarded was higher than the total awarded in Utah in 1988, it was at least $300 million less than in 1987 and $600 million less than the total awarded in the peak year of 1986. Another measure of the volatility in prime contracting activity is the change in the

number of companies receiving PCAs. In 1987, 535 companies received PCAs in Utah; 92 companies received more than one award. By the end of 1989, the number of Utah companies receiving a PCA had shrunk to 477, with only 65 receiving multiple awards.

Of the $1.0 billion in PCAs awarded to Utah during 1989, 53.1 percent was awarded by the Air Force, 20.1 percent was awarded by the Army, the Navy awarded 12.4 percent. The remaining 14.4 percent was awarded by other agencies for defense-related activities.

Direct purchases by the Department of Defense from Utah companies consist primarily of manufactured goods -- $624.5 million of the $1.01 billion in 1989 PCAs (Table 49). Utah's defense industry is characterized by a high concentration in the Missile Program which is dominated by Thiokol Corporation and Hercules Aerospace Company -- the only companies receiving prime contracts of more than $100 million in 1989.

Utah's defense industry is heavily concentrated in the missile programs. Components of two of the country's largest unclassified strategic systems -- the MX and Trident 2 Systems -- are being manufactured in Utah. The missile program has been key in the state's industrial defense growth. Thiokol, Hercules, Boeing, and TRW are all participating in the production and operation of the Air Force's Peacekeeper missile (MX), an advanced system replacing the Minuteman missile. Hercules is producing the third-stage motor and Thiokol is producing the first-stage motor.

Hercules and Thiokol are also involved in the development of another strategic missile, the Trident 2. Both Hercules and Thiokol are participating in the manufacture of the propulsion systems for the Trident 2 -- Thiokol is producing first and second-stage Trident 2 motors. Hercules is partner with Thiokol on the first-stage motor. The Midgetman missile is yet another system on which Hercules and Thiokol are working. Hercules is developing the third-stage motor, laser ordnance system, stage separator, and ignition system. Thiokol is developing the first-stage motor for the missile.

Beyond the strategic missile programs for the Air Force and the Navy, Thiokol, Hercules, and Williams International are also propulsion manufacturers for a number of other DOD missile programs (HARM, ALCM, and STANDARD). Teleflex Defense Systems also produces missile launch systems for the AMRAAM missile, and the Army's Tow 1,2,2A missile system.[3]

This high concentration in the Missile program is demonstrated in PCA data. In Utah, the heaviest concentration of defense spending occurs in the Transportation Equipment Standard Industrial Code (SIC 37); specifically in SIC 3764 which includes guided missiles, space vehicles, propulsion units and parts. In 1987, contracts awarded to companies classified under this SIC code totaled $844 million; an increase of $252 million over 1986 and approximately 63 percent of all PCAs awarded to Utah in 1987. Not surprisingly, the average annual employment reported in this segment of the manufacturing industry also increased, although not as dramatically.

In both 1988 and 1989, PCAs in SIC 3764 have been lower than at any point prior to 1987. Subsequent drops in employment have occurred and further reductions are expected. However, the magnitude of these reductions is difficult to determine for the following reasons: (1) Contracts have different terms and completion dates; (2) a large part of the contract may be earmarked for completion outside of Utah; and (3) the amount of subcontracting work that enters the state is unknown.

Many companies in Utah receive PCAs, but not all depend on defense contracting for their revenues. Other sizable segments of Utah's defense industry include Services ($118.2 million) and Construction ($115.5 million). And, while many of Utah's largest companies regularly receive PCAs, almost half (46.5%) of the companies winning DOD awards in 1989 had fewer than 100 employees. Construction firms and consulting companies were among the smallest. Exhibit 3 identifies those companies receiving large PCAs in 1989 and their primary products and/or services. These 16 organizations accounted for little over 75 percent of all PCAs awarded in 1989.

County Distribution of Prime Contract Awards

As shown in Table 51, PCAs are concentrated in a handful of Utah counties - namely, Box Elder, Davis, Salt Lake, Tooele and Weber. This level of concentration has remained fairly constant over the past five years with the exception of a substantial increase in Tooele County resulting from several large construction projects at Tooele Army Depot and Dugway Proving Grounds (Table 51).

Military Activities

In 1989, the Department of Defense employed 28,000 people (22,000 civilian DOD and 5,800 military) at military bases located throughout Utah. Almost $1.0 billion was spent for military and civilian payrolls (wages, salaries, and fringe benefits). The average annual wage in 1989 for DOD employees was $29,538 -- again, significantly higher than the average non-agricultural wage in the state.[4]

Utah's inventory of active military bases includes Hill Air Force Base, Tooele Army Depot, Defense Depot at Ogden, and Dugway Proving Ground (Table 52). Military bases have played an active role in shaping Utah's economy. For example, the growing demand by DOD for the services and support provided by Hill Air Force Base has resulted in a base employment level of almost 20,000 employees - making it the largest employer in Utah. Along with the contributions made by military bases to Utah's economic growth has come a certain degree of vulnerability at the local level. Military spending in Utah is unevenly distributed and is heavily concentrated in a few counties -- Davis, Weber, Tooele, and to a lesser extent, Salt Lake.

A brief description of active military bases located in Utah is included. At the present time there is a great deal of uncertainty as to future defense spending levels; however, none of the bases identified have been slated for closure, though consolidations and employment reductions are anticipated. Recently, as a result of budgetary constraints, Hill Air Force Base has announced plans to reduce its work force during the upcoming year.

Hill Air Force Base

Hill Air Force Base (HAFB), located in Ogden, Utah, originally served as a major supply and maintenance depot for stations in Utah and the Pacific Northwest. Since those early beginnings, HAFB has provided logistics support for some of the nation's most advanced weapons systems. Components of HAFB include the Ogden Air Logistics Center, various tenant activities, and an Air Base Group. Tenant activities at the base include organizations of the Tactical Air Command, Air Force Communications Command, Air Force Reserves, Air Force Systems Command and the Military Aircraft Command.

1. Economic Profile of Hill Air Force Base - 1989

Employment:	Civilian	14,537
	Military	4,896
	Total	19,879

Payroll: $590.1 million

Total Operating Budget: $1.4 billion (approximate)

2. Mission of Hill Air Force Base

Ogden Air Logistics Center -- The primary mission of Ogden Air Logistics Center consists of providing worldwide logistics management and maintenance support for the Peacekeeper and Minuteman missiles, F-4 Phantom, F-16 Fighting Falcon, OV-10 Bronco and C-130 Hercules. The center is the logistics manager for all conventional airmunitions, solid propellants, and explosive services used throughout the Air Force.

Tenant Activity -- HAFB also provides tenant space for various Air Force activities: Tactical Air Command, Air Force Systems Command, Air Force Communications Command, the Air Force Reserves, and Military Airlift Command. Organizations include:

Tactical Air Command
The 388th Tactical Fighter Wing
The 84th Radar Evaluation Squadron
The 729th Tactical Control Squadron

Air Force Systems Command
The 6501st Range Squadron
The 6545th Test Group
The 6514th Test Squadron

Air Force Reserves
The 419th Tactical Fighter Wing

Air National Guard
The 299th Range Control Squadron

3. Characteristics of Hill Air Force Base

HAFB includes 962,000 acres and has 1,438 buildings, 239 miles of roadway systems, 31 miles of railroad, and 6.4 million square feet of airfield pavement. The Base also has a hospital that services Utah, parts of Idaho, Nevada, and Wyoming.

Additional information about Hill Air Force Base is available in the Economic Resource Impact Statement 1990, prepared by the Ogden Air Logistics Center, Hill Air Force Base, Utah 84056-5990.

Tooele Army Depot

Tooele Army Depot (TEAD -- originally Tooele Ordnance Depot -- was established in 1942 with a mission to store vehicles, small arms, and fire control equipment and to overhaul and modify tanks, track vehicles and their armaments. Employment at the depot reached 5,000 during World War II and as many as 5,300 during the Korean conflict. In the 1960s, Tooele Army Depot became the largest ammunition depot in the U.S. when TAD assimilated Deseret Chemical Depot and the Ogden Arsenal.

1. Economic Profile of Tooele Army Depot - 1989

Employment:	Civilian	4,000
	Military	53
	Total	4,053
Payroll:		$158.1 million
Operating Budget:		$279.4 million

2. Mission of Tooele Army Depot

Maintenance -- Principal responsibility (80 percent of maintenance workload) is overhauling the Army's tactical wheeled vehicles and associated items, including trucks, trailers, engines, and transmissions. Also overhauls and repairs various troop support equipment (generators, topographical and surveying equipment, and reproduction equipment). TEAD is the only DOD facility capable of depot-level overhaul of rail equipment for the 60-, 80-, and 100-ton locomotives.

Chemical Munitions -- Renovation, modification, maintenance and destruction of conventional and chemical munitions.

Storage -- Tooele Army Depot has some of the largest storage capabilities in the United States-- covered magazines, above ground magazines, controlled humidity tanks and general purpose warehouses.

3. Characteristics of Tooele Army Depot

TEAD is one of 13 depots (and six depot activities) comprising the Depot System Command. This installation consists of three locations: the main depot with 24,961 acres located approximately 35 miles southwest of SLC; the South Area with 19,364 acres, remotely located about 15 miles south of the main dept; and the Non-Tactical Generator and Rail Shops Division situated 60 miles northeast at Hill Air Force Base.

Additional information about Tooele Army Depot is available from the Public Affairs Office, Tooele Army Depot, Tooele, Utah.

Defense Depot Ogden Utah

The Defense Depot Ogden Utah (DDOU) was originally established in 1941 as a permanent general warehousing depot of the Quartermaster Corps. Peak employment during World War II reached 8,000 employment and was as high as 4,000 employees during the Vietnam War. The DDOU is one of the largest defense supply distribution depots in the United States with supply responsibility to 13 western states and the Pacific area. It is one of six depots in the Defense Logistics Agency.

1. Economic Profile of Defense Depot Ogden Utah

Employment: Civilian and Military 2,315
(Includes Depot, DRMC, DSAC, and 1120th Army Signal Battalion)

Payroll: $82.4 million
(Does not include payroll for 1120th Army Signal Battalion)

Operating Budget: $114.8 million
(Does not include operating budget for 1120th Army Signal Battalion)

2. Mission of Defense Depot Ogden Utah

The mission of the Defense Logistics Agency is to provide common supplies, contract administration services, technical services, and logistics for the military, other federal agencies, and foreign governments as assigned by the Secretary of Defense. To that end, DDOU has a two missions -- Supply Responsibility and Refurbishing and Repair Functions.

Supply Responsibility -- DDOU receives, stores, maintains, and distributes electronics, medical supplies, general construction materials, clothing and textiles, package petroleums, and chemicals. DDOU also outfits and ships Deployable Medical Systems (mobile field hospitals).

Refurbishing and Repair Functions -- DDOU performs bearing renovation and pipe refurbishment. Also refurbishes compressed gas cylinders containing acetylene, ammonia, and oxygen. Tent and sleeping bag repair projects are also undertaken at the depot. The depot has an Electronics Test Branch that is one of a kind in the Defense Logistics Agency. In this branch, microchips are reprogrammed, and extensive quality analysis programs conducted to ascertain that electronic components provided by contractors meet all contract requirements.

3. Characteristics of Defense Depot Ogden

The DDOU, located in Ogden, Utah occupies 1,139 acres (one-third of total Defense Logistics Agency storage), 6.7 million square feet of covered space, and has 33 miles of rail.

Additional Information on Defense Depot Ogden Utah is available from the Public Affairs Office, Defense Depot Ogden, Utah 84407-5000.

Dugway Proving Grounds

Dugway Proving Grounds was established in 1942 as a "proving ground" for the Chemical Warfare Service, but following World War II, this base was closed. During the Korean conflict, Dugway Proving Grounds was reactivated and carried on a stepped-up program of testing material and equipment for the Army Chemical Corps. Since then, Dugway Proving Grounds has been the site for testing of toxic gases, meteorological tests, bacteriological tests, radiation tests and ecological systems surveys. It is one of the major proving grounds in the country.

1. Economic Profile of Dugway Proving Grounds - 1991 (projected)

Employment:	Civilian	814
	Military	300
	Total	1,114
Payroll:		$32.5 million
Operating Budget:		$90.0 million

2. Mission of Dugway Proving Grounds

Biological and chemical warfare testing, Air Force test range of high speed photography, battlefield obscurrence and smoke and ranger training.

3. Characteristics of Dugway Proving Grounds

Located about 85 miles southwest of Salt Lake City, Dugway Proving Grounds encompasses an area of approximately 30 by 50 miles (830,000 acres of land).

Trends

Changing defense strategies at the federal level are certain to have significant implications for Utah as reductions in defense spending appear inevitable. Though developments in the Middle East have slowed momentum for deep defense cutbacks, and may forestall any significant reduction in the short term, the major changes in Eastern Europe, combined with pressures to reduce the federal deficit, make it likely that long-term defense spending will continue its downward spiral. According to Aviation Week and Space Technology, neither Operation Desert Shield, nor the prospect of new arms sales to Middle Eastern Allies, will pull the U.S. defense industry out of its steepest nosedive in 40 years. Some of the major trends in defense contracting include:

Increasing competition -- Most defense contractors will be conducting business in a much more competitive environment than in the past. Shrinking defense budgets will mean fewer contracts, canceled programs, and a diminishing amount of new business. One way that companies have tried to ameliorate their losses is to reduce the amount of work they subcontract. While this effectively postpones employee displacement at the prime contractors, it increases competition at the subcontracting level.

Utah's businesses, defense and non-defense alike, are already feeling the effects of this competitive environment. Utah companies compete for PCAs with companies located throughout the United States. Many companies have indicated that they are now competing for contracts with a growing number of non-Utah firms.

Changing Environment in Defense Contracting -- Along with reductions in defense spending, DOD is also changing the way it does business. There will be even fewer cost-plus contracts as DOD tries to shift part of the risk to the contractor. The federal government is demanding more up-front investment requiring private industry to assume more risk in developing weapons systems. Penalties for contract discrepancies are becoming more prevalent. There is a greater emphasis on awarding contracts based on the lowest price where, in previous years, more consideration was given to technical qualifications, experience and ability. Finally, DOD is also encouraging greater participation in the bidding process by foreign competitors.

Change in Demand -- In the upcoming era of greatly reduced military spending, major weapon production programs are winding down. Inside and outside the government there is widespread uncertainty about the need for new weapons and systems which until recently were taken for granted.

Consolidation of Military Bases -- In 1989 Secretary of Defense Richard Cheney proposed closing 29 military bases, depots, and plants located throughout the U.S. While events in the Middle East have temporarily forestalled the closure of military bases throughout the United States, it is clear that base closures and consolidations are inevitable.

Reductions in Defense Industry Employment -- Unemployment in the aerospace industry is expected to soar as defense contractors become adjusted to shrinking defense budgets. Since January 1990, according to industry analysts, more than 45,000 defense-related jobs at major defense manufacturers have been earmarked for elimination sometime within the next 18 months. An additional 90,000 to 135,000 positions could be lost at the vendor level as a consequence of cutbacks at the prime contractors. The majority of the 45,000 defense related jobs planned for elimination are in the manufacturing sector. Analysts are projecting that these individuals will have a difficult time finding employment within the industry as hiring in the commercial segment has come to a standstill.

It appears that Utah manufacturers have contributed to this unemployment figure. As result of reduced spending at the federal level, and in the face of increased competition, most of Utah's large defense contractors have gradually been reducing their employment levels over the past two to three years, largely through attrition. As defense companies scale back to keep in line with declining military expenditures, the long term outlook is for continued reductions, which will likely involve layoffs over and above what can be accomplished through normal attrition.

Effects of Reduced Defense Spending on Utah

While reduced commitments to defense may enable the government to allot more money for other endeavors, the adjustment process has its costs. Disruptions, which are certain to occur at defense-related companies, will impact all levels of Utah's economy. The effects of reduced spending will have direct consequences for defense contractors and subcontractors, military bases, and finally, state and local units of governments.

Depending upon what components of the defense budget are cut, reductions in defense outlays could result in employment layoffs in Utah ranging from 2,700 to 6,000 jobs through the end of 1991. These reductions represent total direct, indirect, and induced impacts; are a worst case scenario; and assume that no diversification takes place. Based on current federal policies, further declines of 3 to 5 percent annually from 1992 to 1997 are realistic.[5]

What will declining defense budgets mean for Utah's military bases? Utah's military bases are perhaps most vulnerable to cutbacks within the next 12 months. Private defense contractors have more flexibility in using the commercial market to offset reductions in the defense market. Operations at military bases are driven by the availability of budgeted monies, and consolidation and closure decisions made at a higher level. One military base in Utah, HAFB, has already felt the repercussions of cutbacks, and recently announced a reduction in force effective early in 1991. However, at the present time, not one of the state's active military bases has been slated for closure. Furthermore, there is pending legislation that would require advance notification of potential base closure and federal monies available to assist communities in the economic conversion process that follows a base closure.

How will these layoffs affect local economies? In general, the sensitivity of an economy to changes will depend on the strength of that economy. A relatively large cut in a well-diversified, growing economy is more easily absorbed than a small dollar cut in a defense-dependent one. In Utah the economic base of several counties (Box Elder, Davis, Weber, and Tooele) is relatively dependent upon military spending. Determining the actual impacts on these economies of military base layoffs and cutbacks in defense contracts was beyond the scope of this study; however, the likely impacts will include fewer sales at local businesses, and a reduction in the local tax base.

What are the consequences for industry? Utah's defense contractors vary in their reliance on defense, but most depend upon military spending for at least 50 percent of their revenues. Conversion and or diversification will be most difficult for companies which manufacture complete or semi-complete systems (weapons, missiles, etc.). Companies which manufacture components, especially electronic components, face fewer challenges in entering the commercial market. It is possible that some defense contractors may reevaluate their commitment to defense and opt to leave the industry altogether. Industry analysts estimate that it takes approximately three to five years for a defense contractor to successfully reduce the ratio of defense to commercial business. Those who choose to remain will have to streamline their organizations and fight even harder for a decreasing number of contracts. Either option has limitations and a high degree of certainty that further employment reductions are forthcoming.

The long-term picture may be brighter. There is a growing recognition in Congress that the need for an effective military capability did not disappear with the end of the Cold War in Eastern Europe. In all likelihood declines in defense expenditures will be gradual and orderly, thus allowing contractors to keep manpower disruptions at moderate levels.

Table 48
Federal Defense-Related Spending in Utah
1983-1989

Year	Wages and Salaries*	Prime Contract Awards	Military Retirement	State/Local Government Grants	Total
1983	667,761	722,224	81,024	18	1,471,027
1984	695,776	885,546	88,844	131	1,670,297
1985	737,548	1,115,879	90,220	695	1,944,342
1986	784,567	1,688,947	94,612	301	2,568,427
1987	794,294	1,343,924	98,743	5,766	2,242,727
1988	817,787	876,681	98,876	1,318	1,794,662
1989	$870,295	$1,010,016	$108,005	$10,186	$1,998,502

* Does not include fringe benefits.

Source: Wage and Salaries, Military Retirement, and Grants to State and Local Governments: "Federal Expenditures by State for Fiscal Years 1983 through 1989," U.S. Department of Commerce, Bureau of the Census; Procurements: Federal Procurement Data System, "DOD Federal Contract Awards over $25,000 for all 50 States," Performed in Utah, DOD Summary Report (1989).

Table 49
Prime Contract Awards Performed in Utah
Grouped by Major Industries
1987 - 1989

Industry	1987	1988	1989
Mining	$0	$0	$760,000
Construction	54,971,000	77,922,000	118,419,000
Manufacturing	1,088,685,000	560,631,000	643,685,000
Petroleum Refining	13,878,000	17,222,000	76,613,000
Electronic, Electrical Equipment and Components	106,810,009	82,633,000	32,441,000
Transportation Equipment	884,088,000	333,784,000	490,729,000
Transportation and Public Utilities	20,150,000	21,677,000	68,657,000
Electric, Gas and Sanitary Services	19,339,000	20,066,000	13,903,000
Wholesale Trade	30,090,000	31,037,000	21,045,000
Durable Goods	26,995,000	28,723,000	18,046,000
Retail Trade	1,299,000	1,167,000	2,243,000
Eating and Drinking Places	741,000	317,000	1,257
Finance, Insurance, and Real Estate	749,000	666,000	0
Services	104,391,000	153,878,000	118,575,000
Business Services	29,906,000	31,999,000	14,874,000
Educational Services	18,014,000	21,496,000	36,171,000
Engineering, Research, Management Services	48,964,000	95,274,000	60,929,000
Local Goverments	632,000	1,547,000	2,057,000
Total	1,300,967,000	848,525,000	975,441,000
Not Specified*	42,957,000	28,156,000	34,575,000
Grand Total	$1,343,924,000	$876,681,000	$1,010,016,000

* Includes Prime Contracts awarded to companies for which no SIC or industry designation could be identified.

Source: Federal Procurement Data System, "DOD Federal Contract Awards over $25,000 for all 50 States," Fiscal Year 1989.

Table 50
Companies Receiving Largest Prime Contract Awards
Performed in Utah - 1989

Company	Multiple Contracts	Prime Contract Award ($000)	Product or Service
Thiokol Corporation	Y	$293,244	Solid propulsion systems, ordnance and composite products for space and defense.
Hercules Aerospace Company	Y	158,987	High energy solid propellants and high performance structures for DOD, NASA and commercial applications.
Amoco Corporation	N	49,710	Oil refining.
EG & G Intertech	N	46,921	Construction.
Utah State University	N	31,705	Educational institution.
TRW Inc.	Y	30,836	Technical support for the Peacekeeper and Minuteman missile programs.
Oakland Construction	N	30,570	Commercial and Industrial contractor.
Crysen Refining Corporation	N	19,024	Gasoline, diesel and jet fuels, and asphalt materials.
Litton Systems	N	15,098	Inertial navigation systems for ships, aircraft, and missiles.
Big D Construction	Y	12,260	Non-residential contractor.
Clememt Brothers	N	12,000	General contractor.
Unisys Corporation	Y	11,478	Specialized microwave communication systems for military applications.
Gramoll Construction	N	11,436	Construction.
Utah Power & Light	Y	11,225	Electric company.
Williams International Corp.	N	10,714	Small gas turbo engines for the Cruise missile program, and jet engines for target drone for Northrup Corp.
Fiber Technology	N	10,188	External survivable fuel tanks for helicopters.

Source: Federal Procurement Data System, "DOD Federal Contract Awards for all 50 States," Performed in Utah in Fiscal Year 1989.

Table 51
Department of Defense Contract Awards by County
1984 through 1989
($000s)

County	1985	1986	1987	1988	1989
Box Elder	$179,409	$226,967	$558,619	$186,480	$286,668
Cache	19,696	31,376	13,281	17,535	35,659
Carbon	845	1,844	650	7,323	4,215
Davis	222,453	352,129	154,528	211,153	143,119
Duchesne	0	0	98	0	4,029
Grand	451	451	0	0	0
Juab	0	0	91	217	0
Morgan	109	145	62	35	0
Rich	0	30	0	56	0
Salt Lake	596,535	869,492	485,428	333,418	318,662
San Juan	2,155	2,974	972	794	1,410
Sanpete	0	0	92	0	0
Sevier	1,126	1,747	532	357	605
Summit	92	121	45	0	1,232
Tooele	32,774	77,377	44,989	47,187	131,824
Uintah	0	0	135	392	225
Utah	21,558	33,928	23,023	35,542	34,727
Washington	9,679	9,679	0	489	199
Weber	29,037	53,754	61,379	35,428	47,442
Total	$1,115,879	$1,688,947	$1,343,924	$876,681	$1,010,016

Source: Federal Procurement Data System, "DOD Federal Contract Awards over $25,000 for all 50 States," Fiscal Years 1985 through 1989, Arlington, VA.

Table 52
Economic Profile of Military Bases in Utah
1989

	Employment	Payroll**	Operating Budget
Hill Air Force Base	19,879	$590,113,804	$1,400,000,000
Tooele Army Depot	4,053	158,100,000	279,400,000
Defense Depot Ogden Utah***	2,315	82,400,000	114,800,000
Dugway Proving Grounds	1,114	32,500,000	90,000,000

* Estimate
** Payroll figures do not include fringe benefits.
*** Payroll and operating budget figures do not include 1120th Army Signal Battalion.

Source: Interviews with base personnel, November 1990 and various base publications.

ENDNOTES

1 Total federal expenditures in Utah during 1989 were reported to be $6,191,000,000.
Source: Federal Expenditures by State for Fiscal Year 1989, U.S. Department of Commerce, Bureau of the Census, (March 1990).

2 Defense industry employment estimates for Utah were provided by the Defense Budget Project, located in Washington D.C., and have been calculated based on DOD and Department of Labor data. Projected payrolls and average monthly wage information were calculated by the Bureau of Economic and Business Research based on prime contract award data and average wage data provided by the Utah Department of Employment Security.

3 Aerospace Target Industry Study, Bureau of Economic and Business Research, Graduate School of Business, University of Utah (1989).

4 Military and civilian military employment estimates for Utah were provided by the Defense Budget Project (Washington D.C.) and are based on DOD and Department of Labor data. Payroll data were obtained from Federal Expenditures by State for Fiscal Year 1989, U.S. Department of Commerce, Bureau of the Census, (March 1990). Average monthly wage information and fringe benefits were calculated by the Bureau of Economic and Business Research based on prime contract award data and average wage data provided by the Utah Department of Employment Security.

5 The total impact of defense cuts depends on how the cuts are made. These figures represent the ranges of layoffs that could occur depending upon which components of the defense budget are cut.

APPENDIX

Select Publications of the Agencies Comprising the State Economic Coordinating Committee*

Utah Office of Planning and Budget

Regular Reports
Utah Data Guide (Quarterly)
Economic and Demographic Projections Report (Annually)
Executive Budget (Annually)
Utah Economic and Demographic Profiles (Annually)
Governor's Summary of Legislative Action (Annually)

Special Reports
Utah State and Local Government Fiscal Benefit-Cost Model
Analysis of Population Growth Trends: Park City Census County Division
Initiative A: Fiscal Impacts of Removing the Sales Tax From Food (joint publication)
The Value of the 1990 Census to Utah: An Examination of Federal and State Funds Distributed Based on Population Statistics
Migration in Utah
Issues of Fertility in Utah
The Impact of Tax Limitation in Utah
Economic and Financial Summary of the Utah Winter Olympics
The Impact of Lake Powell Tourism on State and Local Tax Revenues
Analysis of the Demand for Recreational Uses in the Wasatch Front Canyons
Historic Analysis of Property Taxes 1989 Update

Utah Department of Community and Economic Development

Regular Reports
Utah Facts (Annually)
Utah Directory of Business and Industry (Annually)
Utah Export Directory (Annually)

Special Reports
Utah's Rural Development Strategy
Governor's Blueprint for Utah's Economic Future
Going Into Business in Utah

Utah Department of Employment Security

Regular Reports
Utah Labor Market Report (Monthly)
Labor Market Information (Quarterly, by District)
Job Service Statistical Abstract 1988 (Annually)
Affirmative Action (Annually)
Employment, Wages and Reporting Units by Firm Size (Annually)
Occupations in Demand (Quarterly)
Utah Job Outlook for Occupations (Biennially)

Special Reports
Utah Workforce 2000
Women in the Utah Labor Force

Utah State Tax Commission

Regular Reports
Annual Report of the Utah State Tax Commission (Annually)
Utah Statistics of Income (Annually)
New Car and Truck Sales (Quarterly)
Gross Taxable Retail Sales and Purchases (Quarterly)
Statistical Study of Assessed Valuations (Annually)
Hotel Sales, Room Rents and Transient Room Taxes in Utah (Annually)

Special Reports
Initial Tax Burdens on Business and Households in Ten Western States
Broadening the Base: An Evaluation of a Sales Tax on Services
Selected State Tax Rates in the U.S.
An Evaluation of Utah's Business Tax Competitiveness

Bureau of Economic and Business Research

Regular Reports
Utah Economic and Business Review (Monthly)
Construction Report (Quarterly)
Statistical Abstract of Utah (Triennially)
Economic Diversification: Utah's Adjustment to Declining Defense Spending

Utah Energy Office

Regular Reports
Data Source (Semiannually)
Utah Energy Statistical Abstract, 1990

First Security Bank Corporation

Regular Reports
Insights (Quarterly)
Local Consumer Price Index (Monthly)
Local Index of Leading Economic Indicators (Monthly)

*This list includes only the reports which are particularly relevant to the Economic Report to the Governor. To obtain a complete list of the publications of each agency or copies of reports, contact the applicable agencies.