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Economic Report To The Governor

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1987

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

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PREFACE

Utah and the nation are undergoing continual economic change. As this report will point out, when compared with the economy of the western region and the U.S., Utah's economy is relatively healthy. Utah continues to grow rapidly when compared to the rest of the nation. However, Utah is not without its problems. Certain industries including mining, oil and construction, have seen slower growth or reductions in employment, over the past few years. The results have been slower growth in total employment, slightly higher unemployment rates, three years of out-migration and state revenue shortfalls.

This report describes events in the national and regional economies which affect Utah. This report describes important events and trends in the Utah economy and describes the outlook for the short term and long term.

This 1986 *Economic Report to the Governor* is the first of its kind in Utah. It represents a joint effort between several state agencies which form what has been termed the State Economic Coordinating Committee. This committee was formed several months ago at the Governor's request. The purpose of the committee is to promote better economic data and analysis of economic issues through interagency cooperation. Another purpose is to discuss the outlook of the economy for assistance in developing revenue estimates. It is anticipated that this will become an annual publication. 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

This 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.

Much of the information which is 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

OFFICE OF THE GOVERNOR
SALT LAKE CITY
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January 30, 1987

My Fellow Utahns:

With an economy as diverse and dynamic as Utah's, it is only by constant monitoring that we understand how best to respond to economic challenges.

To assist in our efforts to address these challenges, I have created the State Economic Coordinating Committee (SECC). This committee, comprised of analysts from several departments of state government and the University of Utah Bureau of Economic and Business Research, accepted the challenge to present me with a report about the current state of the Utah economy and the economic outlook. The Economic Report to the Governor is the committee's first report to me on the Utah economy.

The information presented and analyzed in this report will help elected officials and the public understand the economic challenges facing our state. It documents some of these challenges and highlights some of the economic progress that has been made. It points out the various factors that impact our economy. Although Utah is certainly not without its problems, it indicates our economy is strong and has dealt with its adversities commendably.

I express my thanks to the SECC for their work. While no one will agree with everything in this document, I commend the members of the committee for presenting the issues as they see them. This report is an important contribution to the discussion of the state's economy and issues we face as we plan for the future. I hope you will find it informative and helpful.

Sincerely,

Norman H. Bangerter
Governor

EXECUTIVE SUMMARY

This economic report will detail many trends and events that have occurred in the last few years to the economy in Utah. Some of these trends and events have had negative impacts on economic growth. Current economic conditions are not as good as Utah has experienced in its recent past. However, an examination of the current negative influences should not over-shadow the inherent strength and durability of Utah's economy. Utah is fortunate to have a well diversified economic base for a state of its size. Utah's location, its highly educated and productive work force, its abundant natural resource endowment and its recreational opportunities contribute to Utah's good economic prospects.

The prosperity of Utah and the Intermountain Region is largely determined by both national and international forces. This is an era of international markets and international competition. National and international political and economic conditions will affect Utah's economy in ways over which we have very little control. We can influence our economic future only in the sense that we prepare to compete effectively on a national and international bases.

The state, region and national economies are all experiencing low levels of economic expansion. Consequently, there is excess capacity in most industries. There are few resource constraints to continued economic growth with relatively low inflation.

Job growth in Utah, like the nation, is strongest in the service-producing industries. Because of high productivity in the goods-producing industries the economy can produce as many or more goods with very little increases in employment. The relative shift in Utah from goods-producing employment to service-producing employment means that Utah's economy will be characterized to a greater extent as a human-resource based economy rather than its traditional character as a natural-resource based economy.

The federal government plays an important role in Utah's economy. At least 7 percent of nonagricultural employment in Utah is a direct result of federal involvement either in terms of federal government jobs or by manufacturing employment under contract to the federal government. Of these federal related jobs, approximately 85 percent are related to national defense and aerospace.

Significant economic events for 1986 include:

- Kennecott resumed operation during 1986 with its $400 million modernization program and by year's end employed approximately 1,000 persons. By mid 1987 it will re-employ approximately 2,000 persons.
- The service sector continues to expand and is becoming an increasingly important component of our economic base or "export industries". Fidelity Investments, a Boston based mutual fund manager, announced in 1986 its intention to establish a Salt Lake City facility and by the close of the year was employing some 250 people at above average wage rates. They plan to employ a total of 350 in 1987. Meanwhile, AT&T was establishing a centralized credit card facility in Salt Lake that is expected to employ approximately 700 by mid 1987.
- Several new manufacturing firms have opened in Utah including All American Gourmet which now employs 300 people and plans to employ 450 in 1987. Nucor Steel Plant in Box Elder County announced a $30 million expansion project. In addition, the Nephi Rubber Products plant reopened through the

cooperative efforts of city, county, state, federal and private constituencies. Also during the past twelve months, at least six small, non-energy related mining companies have begun operations in rural Utah.

- The aerospace/defense sector continues to expand despite setbacks to Thiokol and the national space program. McDonnell-Douglas has a 150,000 square foot facility under construction and will employ 300 to 500 people at the site near the Salt Lake Airport by the fall of 1987. Other aerospace companies including Grumman are considering locating a facility in Utah.
- USX Corporation announced its intention to phase out steel production at its Geneva Works in Utah County, a loss of roughly 2,000 jobs by 1989. Currently operations are halted due to a labor dispute, which has hurt the state's economy.
- Utah's rural economy has been hurt significantly by declining energy industries. Declining energy prices have resulted in the loss of 1,700 jobs in the uranium, coal and oil industries.
- There have been several plant closures in Utah, including the Sperry Plant in Ephraim, the Norbest plant in Salina, the UTEX company in Vernal, Chicago Bridge and Iron and ElMCO in Salt Lake County.
- Problems in Utah's agricultural industry continue and reflect the national farm crisis.
- Some 1,800 Jobs have been lost as construction at the IPP plant is nearing completion.

Labor Market Activity

Utah has 1,666,000 residents. Of these, 754,000 participate in the labor force, with 711,000 employed and 43,000 unemployed. A large part of the 912,000 people not in the the labor force, are enrolled in public schools. Public school enrollment is 416,000 in 1986.

When analyzing change in the Utah economy, it is important to understand the dynamics that occur between economic and demographic change. Population growth creates new demand for goods and services, while on the other hand, economic growth creates jobs for Utah residents and can attract in-migration or the lack of growth can create out-migration. Throughout the report reference will be made to these relationships.

During the 1980's Utah's average annual unemployment rate has been approximately one percentage point below the national average. The average jobless rate for 1986, 5.7 percent, ranks as the lowest figure so far this decade. However, the unemployment rate has increased in the last half of 1986.

While the jobless rate in Utah as a whole has averaged a relatively mild 5.7 percent, nine counties experienced double digit unemployment. A growing divergence in unemployment between urban and rural areas has emerged. This divergence in unemployment between urban and rural areas is found in many places throughout the U.S. and is predominant in the Rocky Mountain West. Many rural areas depend heavily on a particular industry and can be quickly hurt with a downturn in that industry.

Both Utah men and women show higher labor force participation rates than the nation as a whole. In 1985, almost 70 percent of Utah's population over the age of 16 were in the labor force; nationally this figure is 65 percent. Utah's cultural emphasis on the work ethic and the younger age distribution of the state's population, are

responsible for the higher Utah labor force participation rate. The labor force participation rate of Utah teenagers (16 to 19 years old) is of particular interest at 71 percent. Nationally the rate is only 55 percent.

The growth rate of net new nonagricultural jobs has been slowing since the middle of 1984. By the end of 1986 the year to year increase had sunk to 1.2 percent. The estimated average of 635,200 nonagricultural jobs in 1986 is an increase of 10,800 or just 1.7 percent above the 1985 level. This is very slow job growth compared to the past 20 years. During that time Utah has averaged an annual growth rate of 3.5 percent.

There have been job losses in each of the goods-producing industries — mining, construction, and manufacturing over the past year. Average annual employment was down approximately 6,100 in 1986 compared to 1985 in these industries.

Service producing industries — transportation, communications and public utilities, trade, finance, insurance and real estate, services, and government; continue to show steady job gains. Employment in these industries grew by about 16,800 from 1985 to 1986.

Wages

The average monthly wage for nonagricultural employment has not kept pace with inflation over the past two years. The average monthly wage, when adjusted for inflation using the consumer price index, has fallen by 1.9 percent since 1984. Utah's average annual pay for workers covered by unemployment insurance programs has dropped as a percent of the national average annual wage from 96.0 percent in 1981 to 91.6 percent in 1985.

Personal Income

Since 1980, Utah's inflation adjusted per capita personal income has increased only $240 compared to $1,200 increase in the United States. In 1985, with per capita personal income of $10,500, Utah ranked 47th among the fifty states. During the 1970's per capita personal income in Utah ranged between 81 and 83 percent of the average nationally. Since 1978 this figure has dropped from 83 percent of national per capita personal income in Utah, to just 75 percent.

Population/Demographics

The July 1, 1986 preliminary population estimate for Utah was 1,666,000. This was an increase of 21,000 over the previous year or just 1.3 percent. The population growth rate in Utah has been slowing since 1980. As a result of weak economic conditions, more people have left the state in the last three years than have moved in. In addition, Utah's birth and fertility rates have been declining in the 1980's. In fiscal year 1986, Utah recorded 37,145 births. This is lower than any year since 1977. During the 1970's Utah's population grew on average by 3.3 percent per year. During the 1980's the average population growth rate has been 2.1 percent per year.

The large number of births experienced in Utah from 1977 to 1982 have resulted in record increases in the school age population in recent years. In 1985, 37.3 percent of Utah's population was under the age of 18 compared to 26.4 percent nationally.

In Utah there are not only a relatively larger number of children to support and educate but the proportion of the population that must provide the resources for this support and education is smaller. The working age population, persons 18 to 64 years of age, comprise 54.8 percent of Utah's population compared to 61.7 percent nationally. The working population (persons 18 to 64) in Utah have an increasingly large "burden" in terms of persons it must support than the average for the entire U.S. In 1985 Utah had 68 children (persons under age 18) per 100 persons of working age compared to 43 per 100 nationally.

Gross Taxable Sales

During the last fiscal year gross taxable sales slowed significantly. The total of $12.5 billion was an increase of only .4 percent over fiscal year 1984-85. During fiscal year 1984-85 gross taxable sales totalled $12.4 billion, an 11.3 percent increase over fiscal year 1983-84. This rate was very close to the growth of the two previous fiscal years, 10.1 and 11.1 respectively. Because of falling consumer confidence and lower average wage growth, retail sales are now expected to remain almost constant in fiscal year 1986-1987.

Residential Construction

Residential construction is divided into single family and multifamily construction (apartments and condominiums). Strong single family home construction activity requires high levels of in-migration. 1986 is the third consecutive year that Utah has experienced out-migration and it is likely to continue in 1987. As a result single family construction has been modest ranging between 7,400 units and 8,800 units annually. This rate of construction should continue into 1987.

Multifamily housing has experienced record levels of construction in the past few years because of the apartment boom in the Wasatch Front counties. Most observers agree that the market has been over built. When the weak market conditions are combined with out-migration and the new tax reform law which discourages apartment syndication, a bleak short term forecast for multifamily housing emerges. Multifamily construction activity in 1987 will be approximately 3,000 units.

Nonresidential Construction

The construction of new office buildings and manufacturing plants depends ultimately on the creation of jobs. Utah's sluggish job growth will hold down the development of office and industrial buildings while slow population growth will hamper the development of shopping centers and mercantile buildings, and the fiscal crisis will weaken the public building sector. Tax reform will also be a factor contributing to slower nonresidential construction. Due to lower levels of economic expansion, nonresidential construction in Utah will be below $400 million in 1986, a 30 percent decline from 1985. In 1987 nonresidential construction will continue to decline at least another 10 percent to the $325 to $350 million range.

Inflation

It is estimated that the consumer price index for 1986 will record a 1.9 percent increase over 1985. 1986 will be the fifth year in a row in which the consumer price index has risen 4 percent or less. The outlook for 1987 is for somewhat higher inflation but at rates still below 4 percent.

Mineral Prices and Production

Utah has both fuel and nonfuel mineral production. The state's most valuable fuel resource is oil, followed by coal, and then natural gas. Utah's most important metal is copper, followed by gold, and then silver. The current and future production of these minerals is dependent on commodity prices.

Most of the production of copper, gold and silver metals in Utah comes from Kennecott Copper Corporation. Kennecott is currently spending $400 million in equipment and plant modernization. Kennecott currently employs about 1,000 workers, and plans to expand to approximately 2,000 employees by mid-1987.

The softening of energy prices in recent years and the oil price collapse in 1986, due to the world oil glut, have had a profound effect on employment in Utah. Coal mining employment reached 5,000 jobs in 1982. It has since decreased to the current

level of about 2,800 jobs. Oil and gas mining related employment has declined even more rapidly, from about 5,900 jobs in 1981 to the current level of around 2,400 jobs. The value of coal production however, has remained fairly stable.

The potential for increased oil and coal production in Utah is substantial. National and international politics and economics are important in determining commodity prices. The mining industry must utilize the latest capital intensive technological advancements in order to remain cost competitive in national and international markets. Efforts to improve productivity should result in output gains outpacing employment gains. Coal productivity should continue to improve in the long run. Coal employment should be steady or decline slightly. Oil output will most likely decline in the near-term since drilling activity should remain low, and production from existing wells should start to decline.

The short-term outlook for copper production in Utah is encouraging. Kennecott claims that it should be able to operate its facilities for 25 to 30 years after modernization, if the price of copper remains above 55 cents per pound. Copper prices are expected to remain around 60 to 65 cents per pound in the near-term.

Tax Collections

Many of the negative economic influences which have been discussed have had an impact on state tax collections. Over the last four years, state taxes collected for the General Fund/Uniform School Fund have been growing at a decreasing rate. Growth over the last three fiscal years has been 24 percent, 9.3 percent and 2.6 percent respectively. During fiscal year 1986-1987, these revenues are projected to grow at 1.1 percent, the lowest growth in at least 10 years.

National Outlook

Slow growth and higher prices, appears to be the likely scenario for 1987. This is dependent, however, on the reduction of real interest rates and the trade deficit. Most forecasters expect next years real growth in Gross National Product to be below 3 percent and an inflation rate of less than 4 percent.

Utah and Intermountain Outlook

The prosperity of Utah and the Intermountain region is largely determined by outside forces which include 1) federal defense expenditures and other federal budget decisions and 2) the international demand and supply of agricultural, manufacturing and mining commodities.

The economic outlook for Utah and the Intermountain Region for 1987 is one of continued slow growth. Many commodity prices remain depressed, and the energy and construction booms have ended and will likely be slow to turn around.

Utah has recently experienced declines in its mining and manufacturing industries. While the direct effects of these retractions has occurred, the indirect effects should continue into next year. The rate of employment growth in Utah will continue at a slow rate, and the unemployment rate may increase slightly.

Utah's population is expected to grow moderately during the year. It is likely that fertility rates will continue to decline although at a slower rate until they eventually stabilize. Although Utah will likely experience another year of out-migration, this trend is not seen as continuing throughout the decade. Utah will continue to be one of the fastest growing states in the nation.

Utah's Long Term Outlook

The state as a whole is projected to reach a population just over 2,500,000 in the year 2010. This represents an average annual rate of growth of 1.8 percent from 1980. This is a rate double the national growth rate over the same period.

Jobs are projected to increase by 2.7 percent a year between now and the year 1990. Between now and the year 2010 jobs are expected to grow by 2.2 percent per year, while the national rate of growth is projected to be 1.5 percent.

The period 1980 to 1990 is projected to experience very rapid growth in school age population (kindergarten through twelfth grade). However the decline in fertility rates and our economic slowing will mean a slowdown in school age population growth. School age population will begin to level out, reaching a peak in 1994, declining through the year 2000 at which time a new demographic cycle and another period of rapid growth begins.

The overall employment pattern appears to be one of slight 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 federal government's Bureau of Economic Analysis projects that personal income in Utah will grow much faster than in the nation. The Bureau estimates that between now and the year 2000, personal income in Utah will be the third fastest growing in the nation.

Utah can expect to continue to experience relatively good growth through the rest of the 20th century and well into the 21st. Growth in Utah will not, however, be evenly distributed across the state. The rural counties that have been traditionally dependent on natural resource extraction, face the prospect of not being able to provide adequate jobs to employ all of their young people as they age into the labor force. The state is projected to have out-migration as a result of inadequate employment opportunities during several periods in the next 25 years. The overall state-level picture for most years, however, is one of adequate job growth to meet Utahns' employment needs and of continued in-migration.

Economic Development Activities

All fifty states, as well as thousands of local governments, sponsor or undertake specific activities to foster a healthy economy within their respective jurisdictions. These efforts include such activities as promoting tourism, encouraging research and development linkages between universities and high tech industry, courting and recruiting out of state industry, providing a guarantee for small business loans, providing a source of "seed" capital for fledgling businesses, and many, many more.

However, the most powerful economic forces under a state's control include the educating of the population, the maintaining of the infrastructure, and the creating of a stable fiscal and regulatory environment. Programs aimed specifically at promoting a healthy economy can only be successful to the extent that they support and complement the basic role of government in economic development — that of education and infrastructure.

The total economic success formula involves both the public and private sectors in six fundamental areas:

1) *Capital* - Sources of financing are always a critical ingredient to economic development. Capital markets must function smoothly and efficiently to allocate resources to the highest uses.

2) *Innovation* - New ideas, new ways of providing goods and services are essential to increases in productivity which in turn is essential to the economic development process.

3) *Entrepreneurship* - Risk takers and managers are required to organize the various factors of production.

4) *Human Resources* - The availability, quality, and cost of local labor force is probably the single most important determinant of the course of economic development in a region.

5) *Infrastructure* - The physical infrastructure — the roads, utilities, airports, railroads, parks, schools, etc. — and the fiscal, legal, and regulatory infrastructure provide the basic framework for the economic development process.

6) *Information* - The availability and free flow of information to and between all decision makers in the first five categories is essential for the efficient functioning of a market-system economy.

State sponsored programs attempt to strengthen these six "pillars" of economic development. Indeed, most of state government can be classified into one or more of the six categories.

However, while the state can have an impact on each of the six areas and hence influence the economic development process, two major constraints should be kept in mind. First, economic development is a long term proposition. There are a few areas where the state can invest and obtain a return within a year. More often the return occurs within a two to five year time period. However, in other cases the return may require a much longer period. The second constraint is that of the global and national setting. Utah is subject to a variety of powerful forces beyond its control including national fiscal and monetary policy, global prices for natural resources, national defense spending, unrestrained interstate commerce and migration, an international trade policy, and continuing structural shifts within industry.

In terms of traditional economic development efforts the State of Utah currently sponsors eleven distinct programs within the Department of Community and Economic Development. They have each been carefully structured to strengthen one of the six "pillars" and to capitalize on the state's natural advantages. Total spending on specific economic development programs has increased by nearly 70 percent under the Bangerter administration (from $6.2 to $10.5 million).

While each of the eleven economic development programs are either new or expanded under the Bangerter Administration, three of them have received special emphasis. They are the Centers of Excellence, Federal Procurement, and the International Development programs.

The Centers of Excellence program involves targeting seven areas of expertise and promise in Utah's colleges and universities and partially sponsoring efforts to bring private industry into close cooperation with the institutions and encouraging the commercialization of the technology that is developed in this partnership.

In its first full year of operation (1986), the Federal Procurement program resulted in over $28 million in federal contracts to Utah small businesses. This program is designed to help small business through the sometimes intimidating task of cutting through the red tape of the federal procurement process.

The International Development program has led an aggressive trade thrust into Pacific Rim countries by Utah firms. The program facilitates the process of identifying and developing foreign markets for Utah products and services.

ECONOMIC INDICATORS AND CURRENT CONDITIONS

LABOR MARKET ACTIVITY

One of the most critical economic issues is the availability of employment. Changes in the labor market are measured by looking at new job growth, growth in the labor force, growth in labor force participation and unemployment rates.

Unemployment

The unemployment rate measures the percent of the labor force which is not employed but is actively seeking work. During most of the 1980-1986 period Utah experienced an unemployment rate approximately one point below the national average. The unemployment rate started rising in 1980, peaking at more than 10 percent in early 1983. This sharp rise in unemployment was followed by a rapid decline. By mid-1984, the state's unemployment rate had fallen to 6 percent. From that time, Utah's jobless rate eased down to 5.2 percent in the first half of 1986 and then increased slightly to 6.0 percent at the end of 1986. The average unemployment rate for 1986 (5.7 percent) ranks as the lowest yearly figure so far this decade. Figure 1 presents seasonally adjusted unemployment rates for Utah and the U.S. from 1980 to 1986.

A phenomenon of concern of the past few years is the growing divergence in unemployment between urban and rural areas of Utah. For example, during 1981 when the state unemployment rate averaged 6.6 percent, only two counties experienced unemployment above the 10 percent mark. In other words, unemployment was fairly evenly distributed among Utah's counties. However, by 1984, with state unemployment at 6.6 percent, twelve counties, all non-metropolitan, had experienced double-digit unemployment. In 1986, with the state unemployment rate at 5.7 percent, nine counties still had double digit unemployment.

This divergence in unemployment between urban and rural areas is found in many places throughout the U.S. and is predominant in the Rocky Mountain West. Most urban areas are more economically and industrially diverse which tends to soften the effects of downturns. On the other hand, rural areas traditionally dependent on agriculture and mining can be quickly hurt when prices drop for these commodities. Of all Utah's non-metropolitan areas, only Washington, Box Elder and Cache Counties continue to show noteworthy economic growth. Table 1 shows unemployment rates by county.

Converting the percentages to actual numbers provides another perspective. In 1983, at the height of the recession, approximately 64,000 Utah workers were without paid employment and looking for a job. By 1985, the number of jobless Utahns had dropped to 43,000. Between 1985 and 1986 the number of unemployed did not change significantly — yet the unemployment rate dropped two-tenths of a point. This apparent paradox occurred because Utah's labor force, which includes employed as well as unemployed, continued to expand. Since 1985, Utah's labor force has grown by 24,000 people.

In every category, more Utahns participate in the labor force, that is, are either working or seeking work, than the national average. The most recent figures available (1985) indicate that almost 70 percent of Utah's population over the age of 16 are in the labor force. About 81 percent of Utah men over the age of 16 are labor force participants. Fifty-seven percent of women in the same age group participate in the

labor force. Both Utah men and women show higher participation rates than the nation as a whole (the 1984 national rate was 76.4 percent for men, and 53.6 percent for women.) Utah's cultural emphasis on the work ethnic, the younger age distribution of the state's population and lower minority populations, are responsible for the higher Utah rate. The participation rate for Utah teenagers (16 to 19 years old) measured 71 percent compared to only 55 percent on a nationwide basis.

Utah's young people experience high levels of joblessness. Unemployment for youth (ages 16-24) registers about 5 percentage points higher than the state average for all ages; nationally the youth unemployment rate is 6.4 points higher than the national average.

Women also generally suffer higher unemployment than men, with an unemployment rate in Utah of 6.4 percent compared to 5.7 percent for men. Minorities are also more likely to experience higher unemployment than whites, 5.6 percent for whites, 9.9 percent for minorities. People age 65 and older exhibited a jobless rate of only 1.7 percent — the lowest rate for any component of the labor force. Table 2 provides the characteristics of unemployed persons.

Figure 1

10 Employment Growth

Another good indicator of the state of the economy is growth in nonagricultural jobs. The measure of nonagricultural jobs is used because of the difficulty of measuring agricultural employment. This measure also does not count self-employed persons. Table 3 shows the number and percent change in jobs for the years 1980 through 1986. Figure 2 illustrates this change. Figure 3 shows the annual growth rates in total jobs form 1950-1986.

Utah, nonagricultural employment has increased an average of 12,262 jobs each year since 1980. 1984 saw Utah's employment growth surge to 6 percent as Utah and the nation recovered from the 1982-1983 recession. More than 34,000 jobs were added to the Utah economy in 1984. During 1985, employment expansion slowed to 4 percent, but still remained healthy. However, in 1986 job growth has registered only 1.7 percent or 10,800 jobs. By December 1986, the year to year increase had sunk to little more than 1 percent.

Figure 2

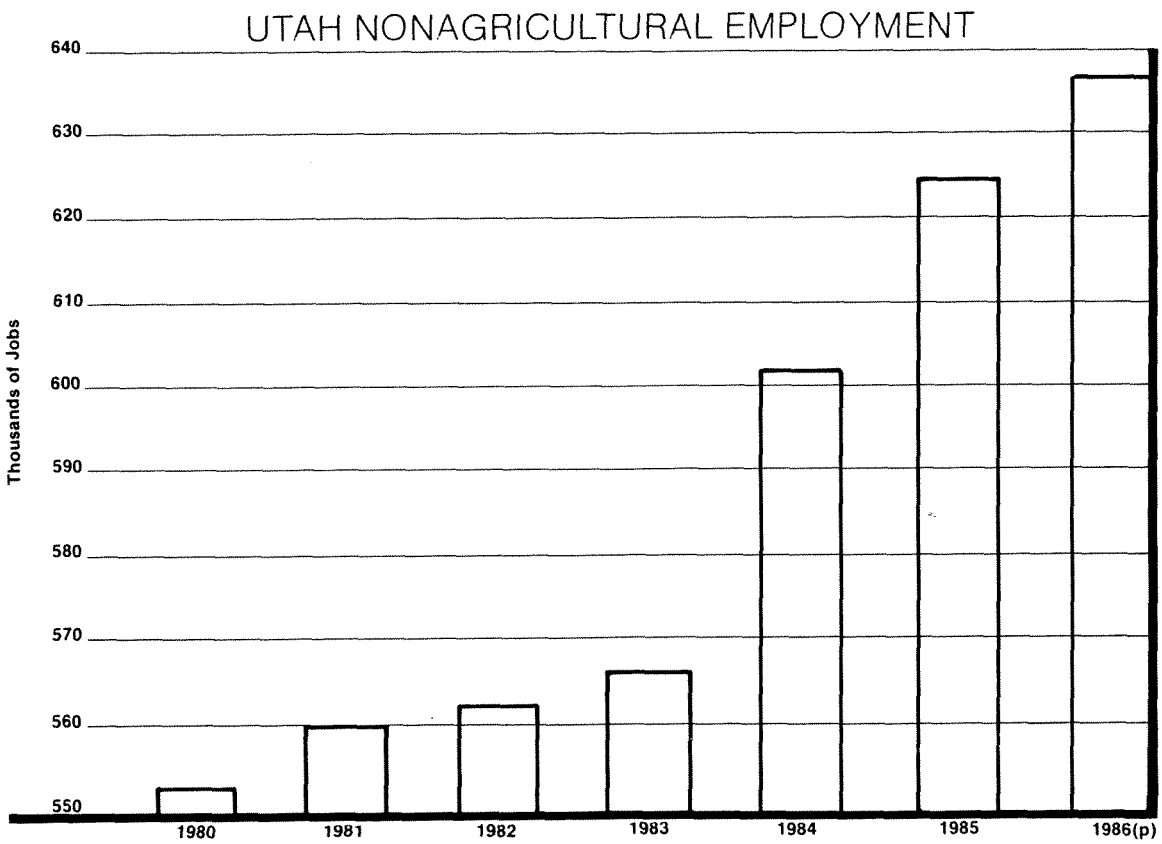
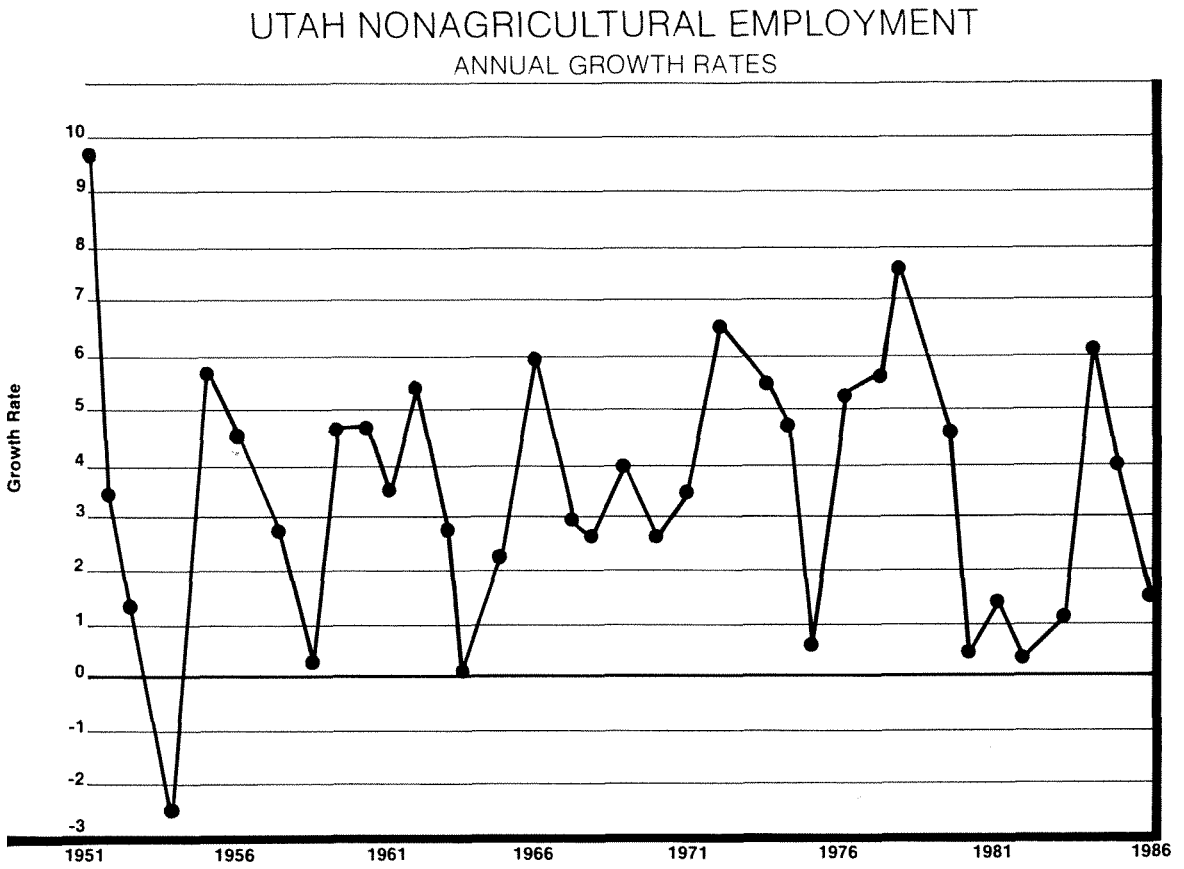


Figure 3



The Goods-Producing Sector

Employment is often classified into two main categories: goods producing industries and service-producing industries. Mining, manufacturing and construction make up the goods-producing sector. During the past few years, the mining industry has sustained two severe blows.

The temporary demise of the copper industry in Utah meant the loss of thousands of jobs. In addition, lower oil prices precipitated the loss of employment in the energy industry (coal, oil and uranium). Between 1984 and 1985 mining jobs were reduced by one-fourth or about 3,000 jobs.

Mining was not the only goods-producing division to endure employment setbacks. Manufacturing lost thousands of primary metals and computer production jobs during 1985 and 1986. Although some manufacturing sectors have continued to gain jobs, overall, employment in the industry declined by 2.1 percent or 2,000 jobs during 1986.

Construction also saw its employment dwindle during the past year. During 1984, the recovery spurred a remarkable 21 percent gain in construction employment. However, by 1986, the completion of the Intermountain Power Project coupled with a general slowdown in construction activity resulted in a 7 percent decline in construc-

tion employment. In sum, 1985 and 1986 brought very little good economic news to Utah's goods-producing sector. Table 4 includes a breakdown of the number and percent change in jobs by industry for the years 1980 through 1986.

A recent development within Utah's goods-producing jobs has been a reduction in the share of jobs in natural resource based industries, coupled with an increased share of jobs in human resource based industries. This is characterized by a smaller mining industry and growing manufacturing industry.

Service-Producing Industries

Trade, services, government, finance-insurance-real estate and transportation-communication-public utilities make up the service-producing industries. Utah has experienced steady growth in the service-producing jobs during the eighties. In fact, Utah's economy would be in a critical situation if expansion in service-producing employment had not occurred.

The trade, services, and finance-insurance-real estate industries have shown strong increases since 1984. In particular, the service industry has made strong employment gains during the last three years. Services added 10,400 jobs in 1985 and 6,000 jobs in 1986. In addition, significant growth in government employment has added a substantial number of jobs to the Utah economy. Federal government added almost 1,000 jobs, state government almost 2,000 and local government 700.

Only transportation-communications-public utilities has shown less than "moderate" growth during the past three years. Clearly, the continued importance of the service-producing industries has helped stabilize economic conditions in the state.

Since 1980, service-producing employment in Utah and in the U.S. has grown at a much faster pace than goods-producing employment. In these six years, Utah's percent of employment in service producing industries moved from 75 to 79, while the U.S. percentage increased from 71 to 75. The major difference between the industrial breakdown between Utah and the U.S. rests in the fact that government jobs maintain more importance in Utah, while manufacturing jobs play a larger role in the national economy. Figure 4 illustrates the trends between Utah and U.S. goods producing and service producing industries.

Export Based Employment

Another way to classify jobs is whether a particular job provides goods and/or services for consumption by nonresidents of Utah or whether it provides goods and/or services to residents of the state. Jobs that produce goods and services for consumption by nonresidents are considered to be "export" based and are defined as "basic employment." Utah jobs that are needed to produce goods and services to be consumed by resident individuals and businesses are non-basic or residentiary employment. The distinction between basic and residentiary employment is important because future employment growth is largely dependent on the expansion of basic employment. According to the export base theory, when the basic component grows, additional growth is created in the economy through the "multiplier effect". Likewise when the basic component is shrinking, additional jobs are lost. Basic employment is most heavily influenced by national economic conditions.

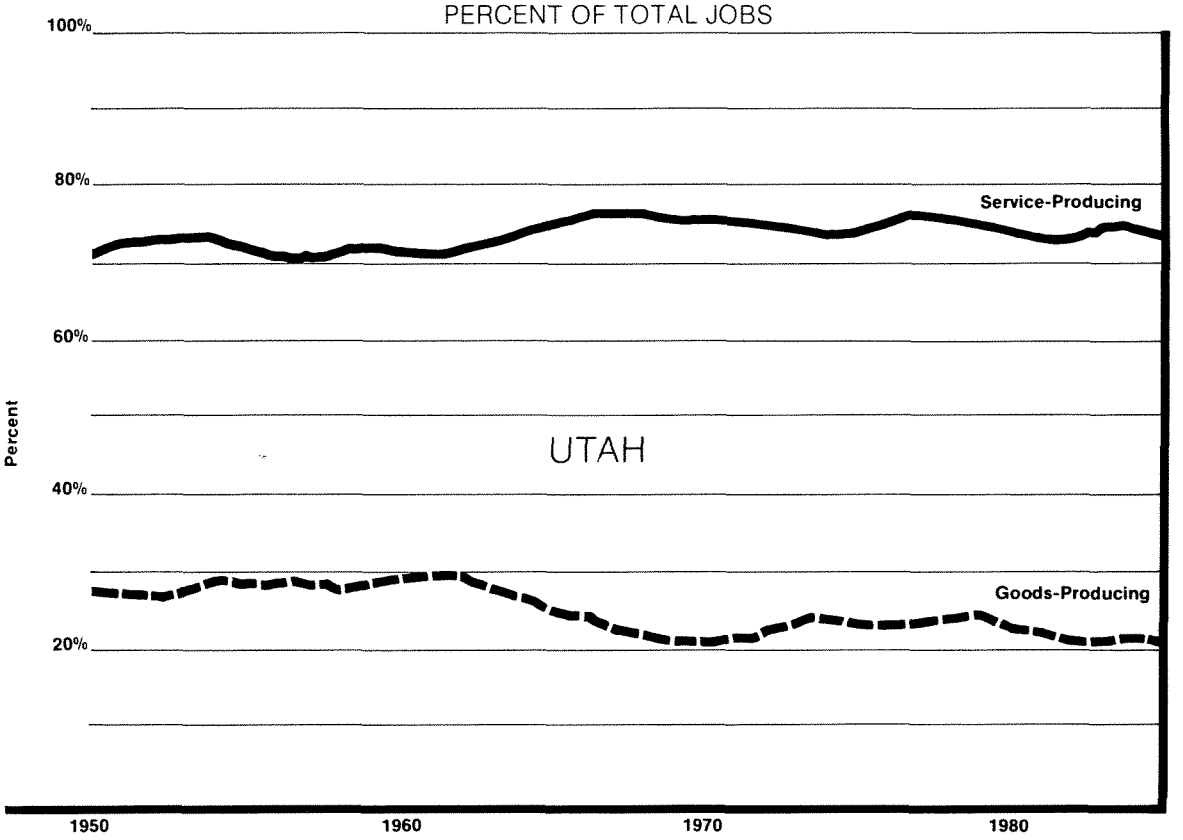
Some examples of industries that have primarily basic employment are mining, manufacturing, and tourism. Non-basic or residentiary dominated industries include retail trade, services and state and local government. However, almost all industries have basic and residentiary job components.

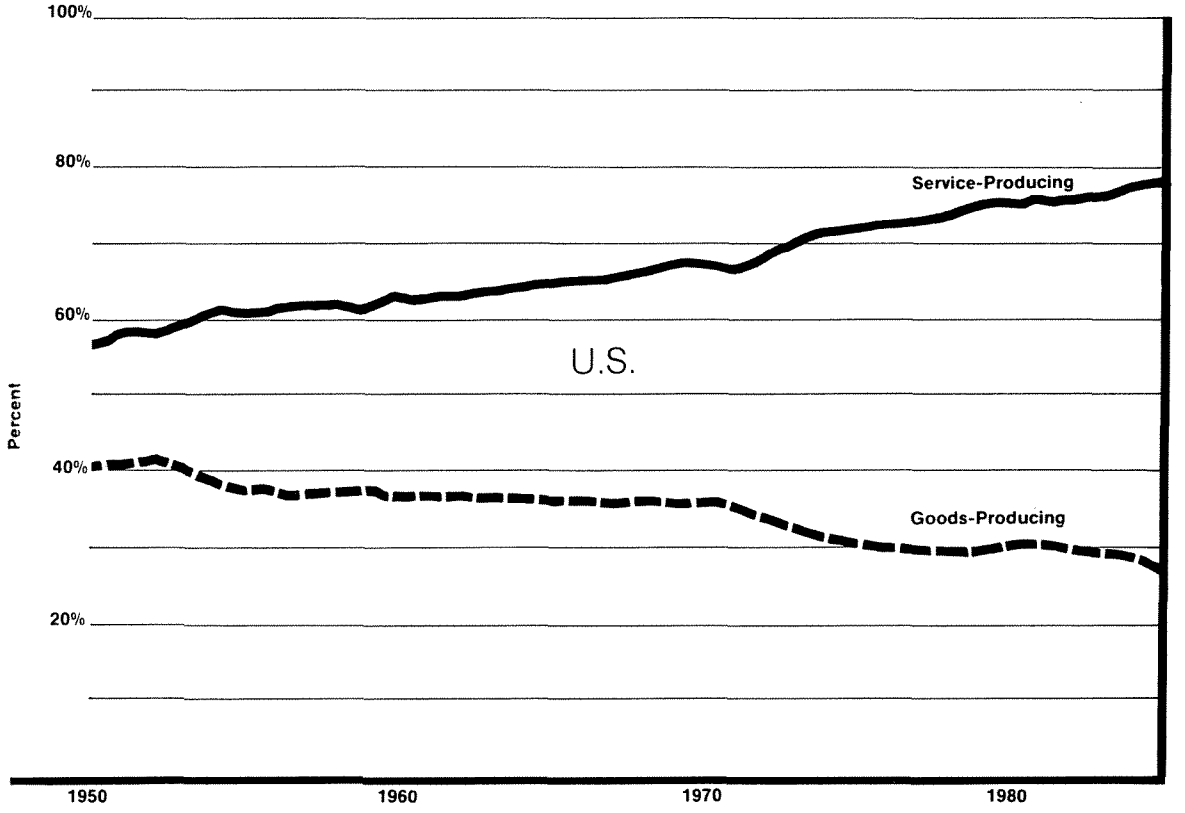
The loss of mining jobs during the 1980's has had particularly negative impacts on Utah's economy because the vast majority of these jobs are basic or export base employment. As noted earlier, service-producing jobs have grown the fastest in recent

Figure 4

UTAH & U.S. GOODS-PRODUCING AND SERVICE-PRODUCING EMPLOYMENT

PERCENT OF TOTAL JOBS





years. In order to sustain future employment growth it is necessary that many of these new service-producing jobs be basic, such as in the tourist industry or financial services to nonresidents (i.e. American Express and Fidelity Investments). Utah must continue to expand its export based/basic employment if there are to be enough jobs for the expanding labor force.

Wages

The shift from a goods-producing economy to a service-producing economy raises concerns about wages in the state of Utah. When final figures are in, total wages are expected to have risen only 3.0 percent during 1986. Total wages have continued to grow over the 1980 to 1986 period by an average of 7.1 percent per year. Figure 5 shows this growth. The loss of high paying jobs in primary metals and mining seems to have contributed to a declining rate of growth during 1985 and 1986.

The nominal Utah average monthly wage for nonagricultural jobs from 1980 to 1986 grew by an average of 4.7 percent per year. Growth in this figure has slowed

Figure 5

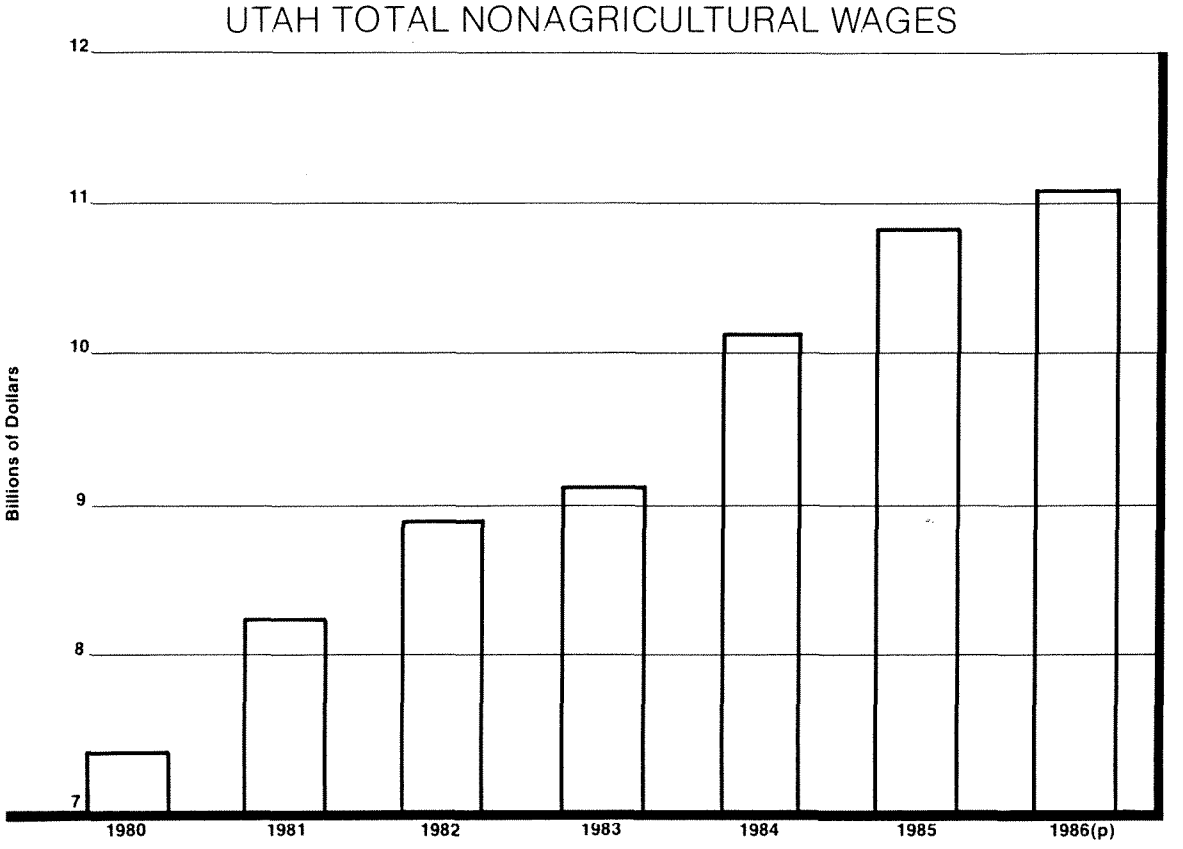
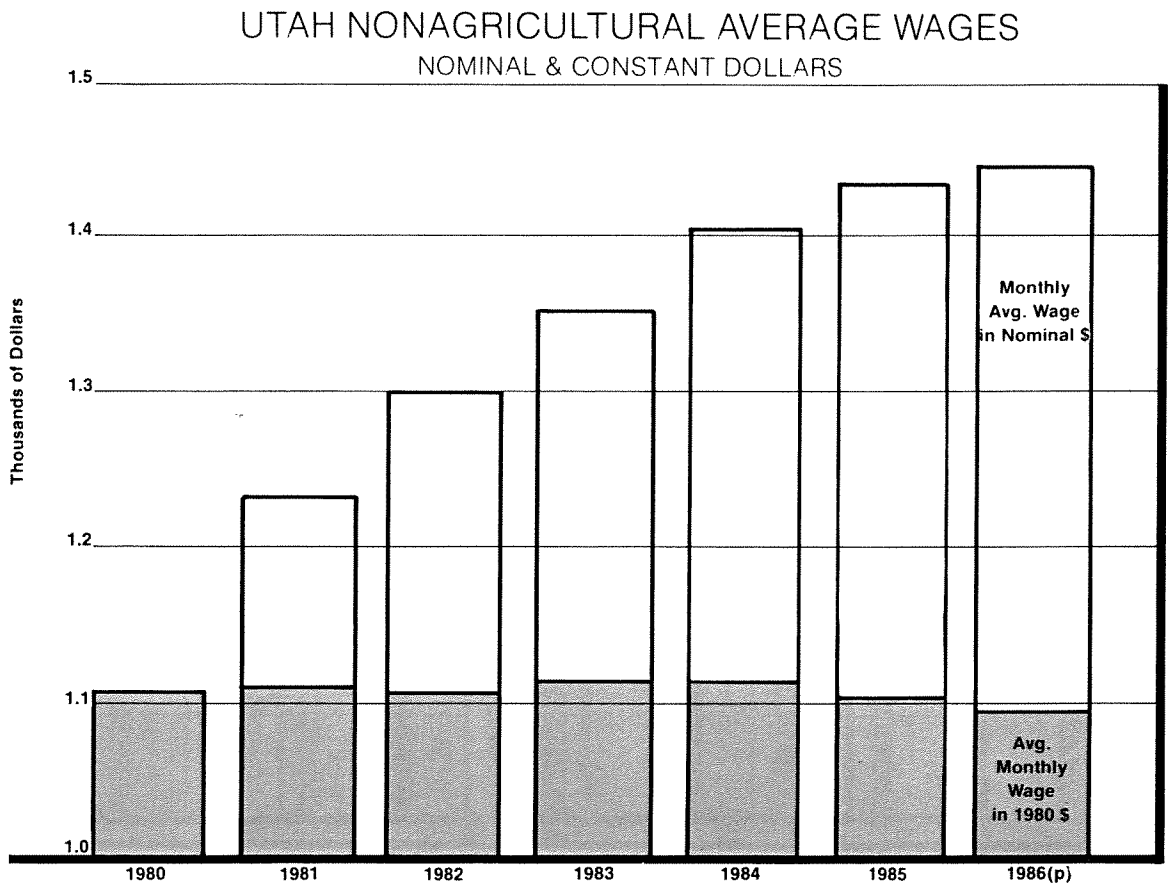


Figure 6



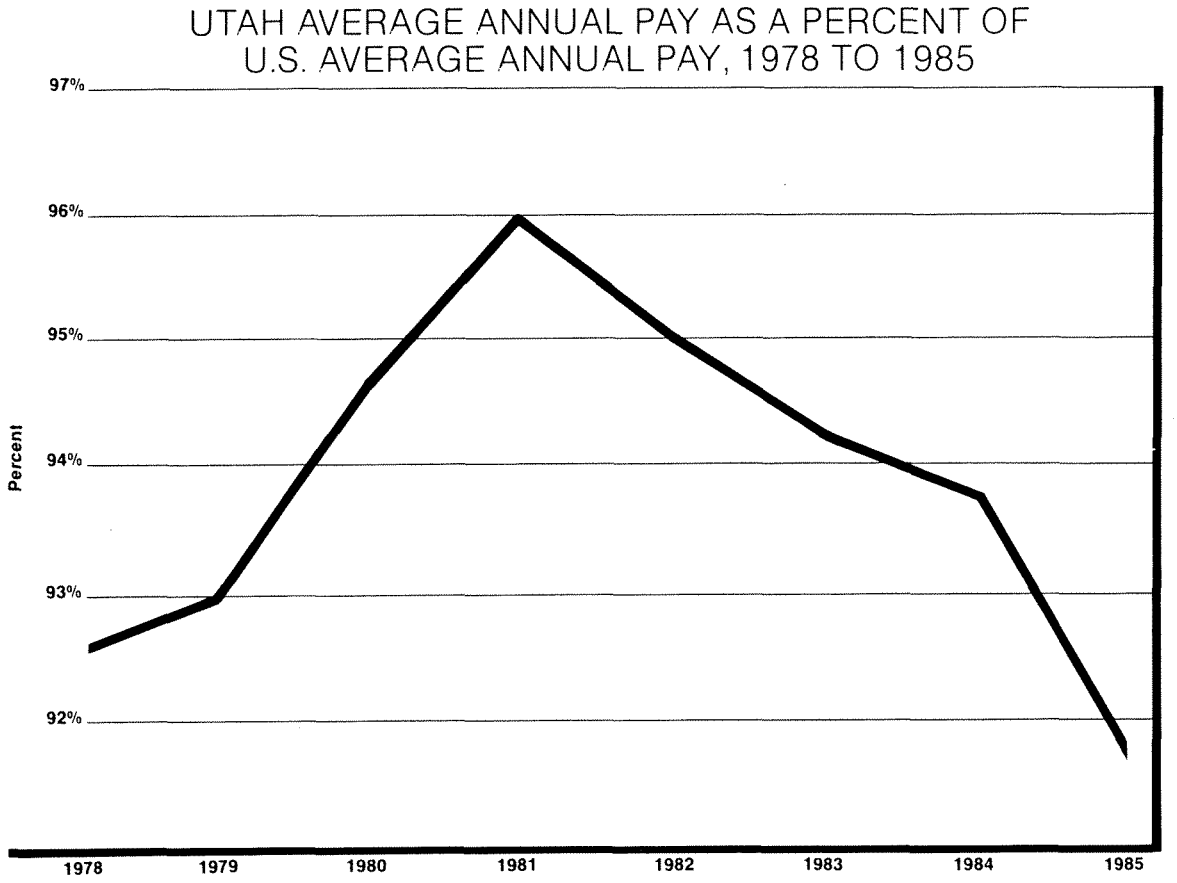
notably during 1985 and 1986. Data for 1986 should show an increase of only 19 dollars (1.3 percent) in the average nonagricultural monthly wage to $1,459.

Moreover, when this wage is adjusted for inflation average wages declined slightly during 1985 and 1986. Figure 6 shows nonagricultural average monthly wages in both nominal and constant dollars from 1980 to 1986.

Utah's average annual pay for workers covered by unemployment insurance programs was $17,577 in 1985, up 2.3 percent from 1984. The average increase for the nation was 4.5 percent, nearly double that for Utah. Utah's average pay was 91.6 percent of the U.S. average in 1985, down from 93.6 percent in 1984. These changes caused Utah to lose one place in pay level ranking, from 28th in 1984 to 29th in 1985. In fact, Utah's position relative to the national average has deteriorated since 1981 when Utah's pay level was 96 percent of the national average. These trends are shown in Figure 7.

There are numerous reasons why wages in Utah are not growing fast enough to keep up with inflation: 1) depressed natural resource prices, particularly oil prices, 2)

Figure 7

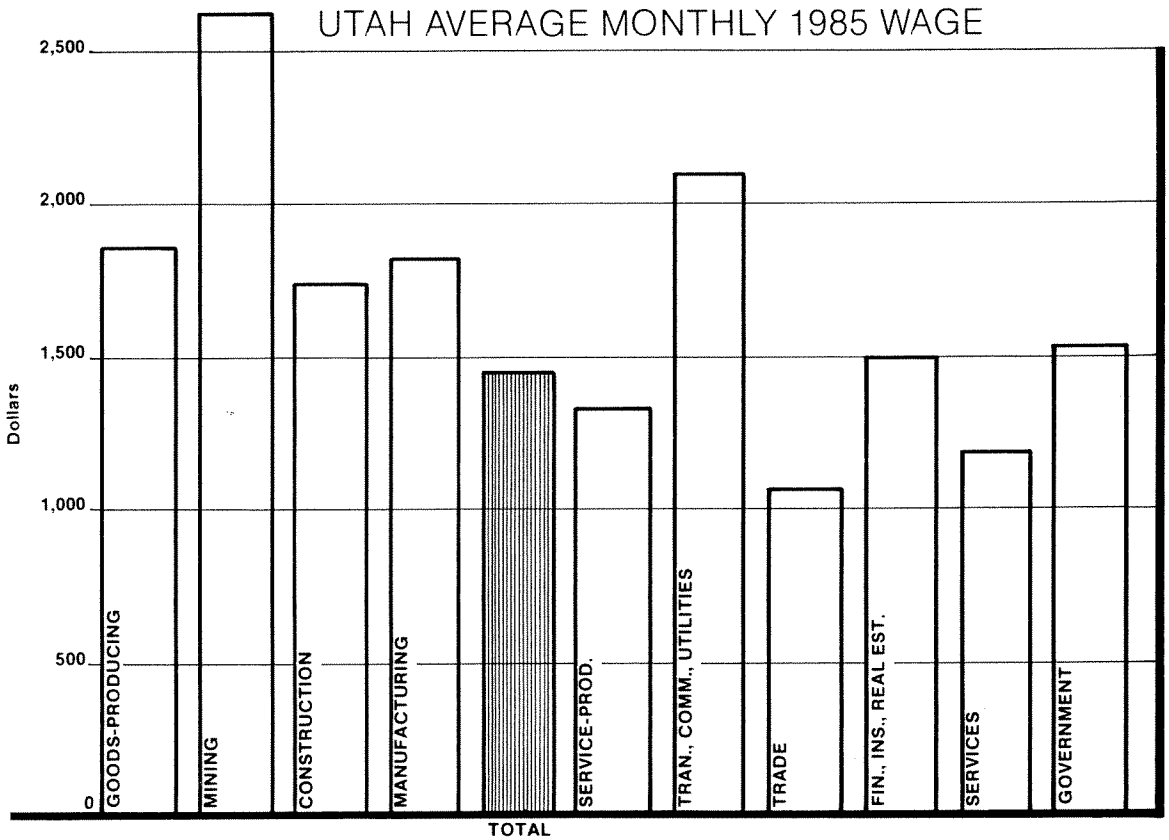


the lack of productivity growth, 3) international competition resulting in wage concessions, 4) increased labor supply as women go to work in increasing numbers, 5) the taming of inflation itself.

Slow growth in wages, the loss of goods-producing jobs and increased service-producing jobs also raises the question of whether Utah is replacing high-paying jobs with low-paying jobs. There does exist about a 500 dollar difference in monthly wages between the goods-producing sector and the service-producing sector. Some of the fastest growing service-producing industries such as retail trade are characterized by relatively low wage, part-time employment.

On the other hand, many growing service-producing jobs pay extremely well such as doctors, lawyers, and computer programmers. The service-producing industries of transportation-communications-utilities and finance-insurance-real estate show an above average monthly wage. As growth in service-producing jobs outstripped expansion in goods-producing jobs, the high number of entry level jobs pulls the

Figure 8



average wage down. However, service-producing part-time jobs fill a definite demand by young people and women in the Utah economy. Figure 8 compares wages among the various industries.

Utah's employment picture has remained relatively strong in 1986 when compared with surrounding states. For instance, Wyoming has an unemployment rate in 1986 of 9.3 percent, Idaho at 8.6 percent. Even so, growth in new jobs has slowed down, reflecting national and international conditions. New jobs are projected at 8,000 for 1987.

Table 1

Utah Unemployment Rates by County

County	1980	1981	1982	1983	1984	1985	1986p
Beaver	6.6	6.3	7.4	9.8	7.3	6.1	6.3
Box Elder	5.5	5.8	6.8	6.4	5.2	4.5	3.9
Cache	5.0	6.0	6.3	6.8	6.0	5.1	4.3
Carbon	5.7	5.3	7.6	21.1	12.6	10.0	9.4
Daggett	1.8	4.3	3.5	4.2	2.5	3.9	3.9
Davis	5.6	6.0	5.9	6.8	4.5	3.7	3.9
Duchesne	6.0	5.8	9.9	13.5	10.1	10.5	14.2
Emery	5.6	4.4	5.3	14.9	17.0	13.0	11.3
Garfield	7.9	9.9	12.3	15.2	16.2	13.5	11.8
Grand	6.9	8.5	13.8	19.4	15.4	13.0	10.9
Iron	8.7	7.3	8.3	8.9	7.1	6.2	5.9
Juab	8.6	6.9	15.3	20.1	15.9	15.5	14.4
Kane	7.0	9.5	8.9	12.3	10.4	8.8	6.9
Millard	5.6	5.1	7.4	8.4	6.6	5.5	6.0
Morgan	4.1	3.7	4.5	5.8	4.8	6.5	6.5
Piute	10.7	8.9	10.7	11.5	14.0	13.0	13.1
Rich	3.0	2.8	4.3	6.7	3.0	3.5	4.4
Salt Lake	6.1	6.6	7.8	8.5	6.1	5.6	5.2
San Juan	6.3	7.1	8.6	12.7	11.0	8.9	7.9
Sanpete	9.6	10.1	11.0	13.8	11.0	13.0	14.4
Sevier	5.1	5.5	6.5	8.4	8.1	7.4	7.4
Summit	8.1	7.9	10.2	10.9	8.9	8.0	8.6
Tooele	5.7	5.4	8.2	10.1	6.1	6.0	5.7
Uintah	4.3	3.9	7.4	13.4	8.2	8.5	11.3
Utah	7.2	6.7	8.5	9.5	6.9	6.6	6.2
Wasatch	10.6	10.7	14.2	20.0	11.7	11.2	12.8
Washington	6.4	7.0	7.1	8.3	6.3	4.8	4.7
Wayne	9.2	9.9	9.8	10.7	10.1	8.2	8.4
Weber	7.4	8.1	8.6	10.3	6.9	5.6	5.6
State	6.3	6.6	7.8	9.2	6.6	5.9	5.7

p = *preliminary*

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

Table 2

Characteristics of Utah Unemployed Persons
1985 Annual Averages

	Total		Males		Females	
	Number	Percent	Number	Percent	Number	Percent
Total Unemployed	43,000	100.0	24,000	100.0	19,000	100.0
Age of Unemployed						
16 - 19 years	10,000	23.3	5,000	20.8	5,000	26.3
20 - 24 years	12,000	27.9	6,000	25.0	7,000	36.8
25 - 34 years	12,000	27.9	7,000	29.2	4,000	21.1
35 - 44 years	5,000	11.6	3,000	12.5	2,000	10.5
45 - 54 years	2,000	4.7	1,000	4.2	1,000	5.3
55 +	2,000	4.7	1,000	4.2	1,000	5.3
Marital Status of Unemployed						
Single; Never Married	19,000	44.2	11,000	45.8	8,000	42.1
Married; Spouse Present	19,000	44.2	9,000	37.5	9,000	47.4
Other; Widowed, Divorced, & Separated	6,000	14.0	4,000	16.7	2,000	10.5
Reason for Unemployment						
Job Losers	20,000	46.5	14,000	58.3	6,000	31.6
Job Leavers	6,000	14.0	3,000	12.5	3,000	15.8
Re-Entrants	14,000	32.6	6,000	25.0	8,000	42.1
New Entrants	4,000	9.3	2,000	8.3	2,000	10.5
Duration of Unemployment						
Less Than 5 Weeks	20,000	46.5	10,000	41.7	10,000	52.6
5 - 14 weeks	14,000	32.6	8,000	33.3	6,000	31.6
15 - 26 weeks	5,000	11.6	3,000	12.5	2,000	10.5
27 - 51 weeks	2,000	4.7	1,000	4.2	1,000	5.3
52 weeks and over	2,000	4.7	1,000	4.2	1,000	5.3

Note: Detail may not add to totals because of rounding. Data are based on a probability sample of households and are subject to both sampling and nonsampling error.

Source: U.S. Bureau of Labor Statistics, Geographic Profile of Employment and Unemployment, 1985; Unpublished Current Population Survey Tables.

Table 3

Utah Net Increase in Jobs
Nonagricultural Employment

Year	Number	Percent
1980	2,537	0.5
1981	7,337	1.3
1982	1,755	0.3
1983	6,016	1.1
1984	34,101	6.0
1985	23,289	3.9
1986	10,800	1.7

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

Table 4

Utah Labor Force, Nonagricultural Jobs (000s)
and Nonagricultural Wages (000,000s)

	1980	1981	1982	1983	1984	1985	1986p
CIVILIAN LABOR FORCE	634.0	647.0	675.0	692.0	702.0	730.0	754.0
Total Employed Persons	594.0	604.0	622.0	628.0	656.0	687.0	711.0
Unemployed Persons	40.0	43.0	53.0	64.0	46.0	43.0	43.0
Unemployment rate	6.3%	6.6%	7.9%	9.2%	6.5%	5.9%	5.7%
NONAGRICULTURAL JOBS	551.9	559.2	561.0	567.0	601.1	624.4	635.2
Mining	18.5	20.3	18.2	14.0	12.8	9.7	8.0
Contract Construction	31.5	28.3	.9	28.7	34.8	35.5	33.1
Manufacturing	87.7	89.3	85.8	85.5	94.0	94.0	92.0
TCPU	34.1	34.4	35.4	35.9	36.5	37.0	37.6
Trade	128.7	130.8	131.7	133.5	140.8	147.9	152.4
FIRE	25.8	.3	.6	28.0	29.7	31.1	33.0
Services	100.5	104.9	109.9	112.6	121.0	131.4	137.4
Government	125.0	124.9	1 .5	128.8	131.5	137.8	141.6
NONAGRICULTURAL WAGES	7396.1	8 2.3	8746.3	9196.6	10163.0	10792.2	11121.0
Average Monthly Wage	1111	1231	1299	1352	1409	1440	1459
Adjusted For Inflation (1980 Dollars)	1111	1115	1109	1118	1118	1103	1096

Percent Change

	80–81	81–82	82–83	83–84	84–85	85–86
CIVILIAN LABOR FORCE	2.1%	4.3%	2.5%	1.4%	4.0%	3.3%
Total Employed Persons	1.7%	3.0%	1.0%	4.5%	4.7%	3.5%
Unemployed Persons	7.5%	23.3%	20.8%	-28.1%	-6.5%	0.0%
NONAGRIGULTURAL JOBS	1.3%	0.3%	1.1%	6.0%	3.9%	1.7%
Mining	9.7%	-10.3%	-23.3%	-8.5%	-24.0%	-17.5%
Contract Construction	-10.2%	-4.9%	6.9%	21.0%	2.1%	-6.8%
Manufacturing	1.8%	-3.9%	-0.4%	9.9%	.0%	-2.1%
TCPU	0.9%	2.9%	1.5%	1.5%	1.4%	1.6%
Trade	1.6%	0.7%	1.4%	5.5%	5.0%	3.0%
FIRE	1.9%	1.1%	5.4%	6.0%	4.7%	6.1%
Services	4.4%	4.8%	2.4%	7.5%	8.6%	4.6%
Government	-0.1%	1.3%	1.8%	2.1%	4.8%	2.8%
NONAGRICULTURAL WAGES	11.7%	5.9%	5.1%	10.5%	6.2%	3.0%
Average Monthly Wage	10.8%	5.5%	4.1%	4.2%	2.2%	1.3%
Adjusted For Inflation	0.4%	-0.6%	0.8%	.0%	-1.3%	-0.6%

p = preliminary
Source: Utah Department of Employment Secutiry, Labor Market Information Services.

PERSONAL INCOME

Personal Income is defined as all the income received by all the residents of an area. In absence of a measure of the State Gross Product, it is the most complete measure of total economic activity for the state. Personal income constitutes one of the most extensive bodies of annual economic information that is available for the nation, states, counties and metro areas. Utah's 1986 total personal income (TPI) is forecasted at $17.8 billion, an increase of 3.2 percent over the 1985 total. As shown in Figure 9, Utah's TPI has increased more rapidly than that of the United States during most of the past seventeen years. The difference between the Utah and United States growth rates, however, is noticeably lower in the past seven years, with the Utah rate lower than the U.S. rate in the past two years.

It is also interesting to look at Utah's personal income growth rates from another perspective. In 1977, Utah's TPI growth rate was exceeded by those of only three other states. In 1979, eight states' income growth rates exceeded Utah's, and by 1985, 23 were higher than Utah. Because of local and national economic fluctuations,

Figure 9

this ranking is quite volatile. Nevertheless, the relative slowdown in Utah's annual growth of total personal income is evident.

Components of Personal Income

The largest single component of Utah's total personal income is "earnings by place of work," which was $13,527 million for 1985, the latest date for which this data is available. This information is found in Table 5. Over the past 56 years, some interesting developments have occurred in the relationship between the components of personal income. Of particular interest is the slowdown in the growth of wages as compared with the other components of personal income. Some of these developments are summarized below:

The relative importance of Personal Contributions for Social Insurance (mainly Social Security) in Utah has increased by 32 times. In 1929, this sector comprised only 0.2 percent of "total earnings by place of work." Over the years, this percentage has increased to 6.4 percent of the 1985 total.

The category "net earnings by place of work," as a percentage of the TPI, stayed near 83 percent from 1929 to 1959. Since then, it has gradually declined to 74 percent by 1985.

From an insignificant beginning, "transfer payments" have become an important component of personal income. In 1929 transfer payments were only 1.7 percent of total income. By 1985, this share had increased to 13.0 percent. The sector responsible for most of the increase in transfer payments total is "retirement, disability, and health insurance payments." In 1959, this sector was 47 percent of transfer payments; by 1985, it had increased to 61 percent.

Another interesting sector of transfer payments is "income maintenance" (mainly welfare payments). In 1959, "income maintenance" was 0.92 percent of Utah's total personal income; by 1985, it had dropped to 0.80 percent of the total. Nationally, this sector's trend was in the opposite direction — from 0.86 percent in 1959 to 1.30 percent of 1985 United States total personal income. Thus, from 1959 to 1985, the relative importance of welfare-type income received by Utah residents decreased by 13 percent, while it increased by 51 percent for the United States.

Since 1929, "dividends, interest and rent" has mirrored changes in TPI. Although this component's share of the total has remained fairly constant between 1977 and 1982, it increased from 10.1 to 12.9 percentage points, primarily due to higher interest rates.

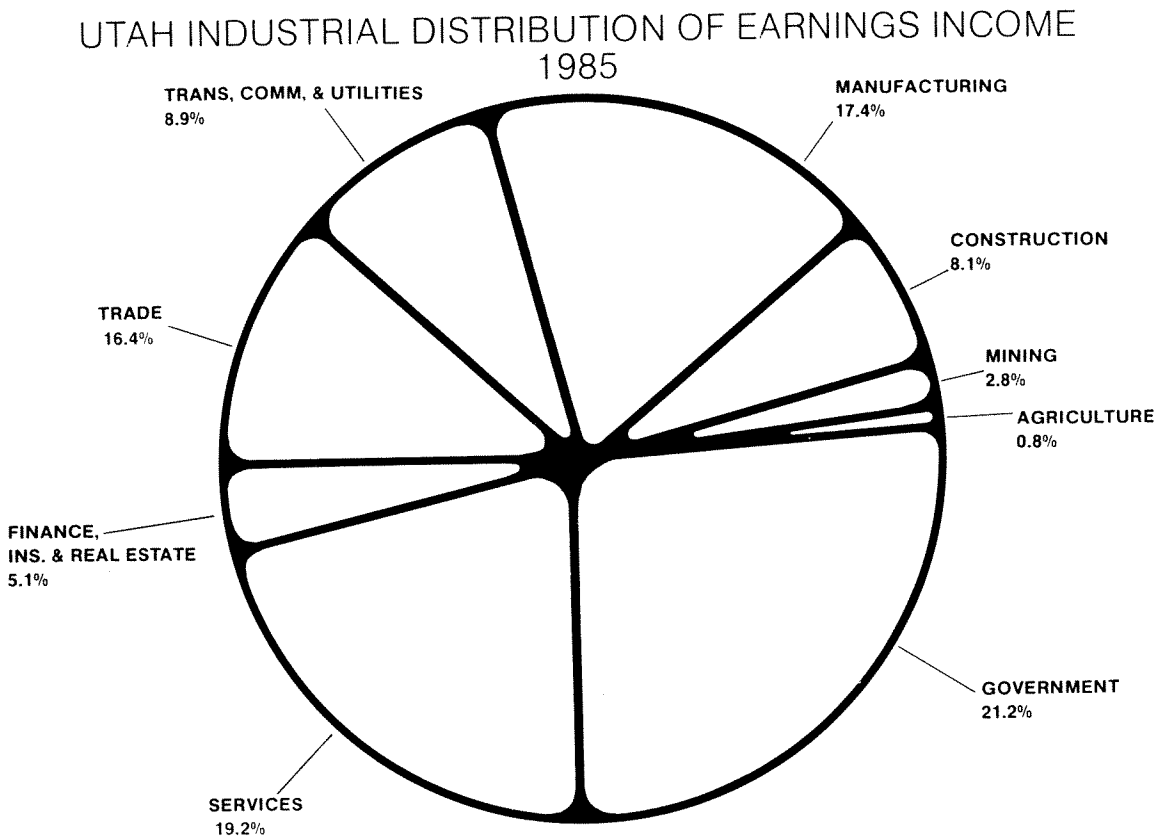
Personal Income by Industry

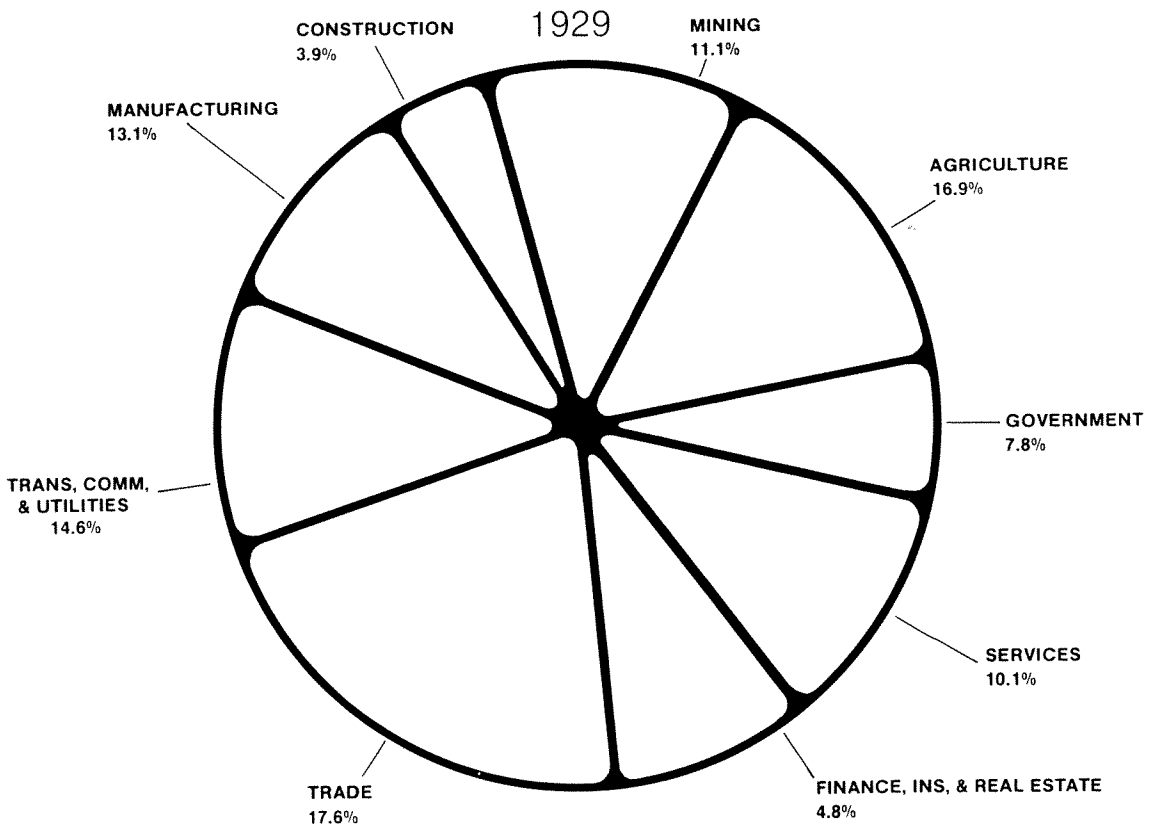
Total earnings by place of work represents the combined income from all the state's industries. The relative importance of these industrial components has undergone great change since 1929. A statistical summary of these components for 1985 and selected earlier years back to 1929 comprises Table 6 and is illustrated in Figure 10.

Utah's total earnings are less than one percent (0.56) of the United State's total. However, as highlighted in the following discussions, some of Utah's industries comprise a substantially greater (or lesser) percentage of their national counterparts.

In 1929, Utah's farm industry ranked second in earnings income among the state's nine major industries. Only the trade sector (wholesale and retail) exceeded it. By 1949, farm income had dropped to fifth in this ranking. Since 1959, it has ranked lowest of all industries. Utah's 1985 farm income was only $72.5 million, which places

Figure 10


UTAH INDUSTRIAL DISTRIBUTION OF EARNINGS INCOME
1985
TRANS, COMM, & UTILITIES
8.9%
MANUFACTURING
17.4%
CONSTRUCTION
8.1%
TRADE
16.4%
MINING
2.8%
AGRICULTURE
0.8%
FINANCE,
INS. & REAL ESTATE
5.1%
GOVERNMENT
21.2%
SERVICES
19.2%


1929
CONSTRUCTION
3.9%
MINING
11.1%
MANUFACTURING
13.1%
AGRICULTURE
16.9%
GOVERNMENT
7.8%
TRANS, COMM,
& UTILITIES
14.6%
SERVICES
10.1%
TRADE
17.6%
FINANCE, INS, & REAL ESTATE
4.8%

this state 42nd in the nation in the size of farm income. Farm income's share of total earnings in Utah has decreased dramatically from 1929's 16.9 percent to 1985's 0.5 percent.

Mining (including oil and natural gas) has long been an important industry in Utah. Mining income has been shrinking in relative importance compared to other Utah industries. In 1929 mining accounted for 11 percent of the state's total earnings income. As late as 1981 mining was 6.2 percent of total state earnings. In the 1980's oil prices peaked and as of late declined dramatically. Increased international competition and low commodity prices have greatly reduced metal mining particularly copper and uranium. The cumulative effect of these conditions resulted in Utah having the largest 1982-1985 mining earnings decline of any state in the nation. In 1985 earnings from mining contributed just 2.8 percent of total state earnings.

Since 1979, manufacturing's share of total earnings in Utah was second among all private industry sectors. In 1985 manufacturing accounted for 17.4 percent of total Utah earnings. Although manufacturing in Utah is a very small portion of the nation's manufacturing industry, this share has steadily increased from 1929's 0.18 percent to 1985's 0.44 percent.

Utah construction industry's personal income in 1929 was only 4 percent of total earnings. By 1959, it had climbed to 7.5 percent of the total, but it slid back to 6.1 percent in 1969. During the 1970's, it gradually climbed to its all time high of 10 percent in 1977. With the recent recession construction's share of Utah's earnings slipped back to 7.4 percent in 1982. In 1985 construction's share grew to 8.1 percent of TPI.

The trade industry for the past 56 years has been remarkably stable. In the eight years represented in Table 6, trade's share of total earnings income has fluctuated within a range of only 5 percentage points.

The finance-insurance-real estate industry's share of Utah's total earnings is presently at about the same level (5.1 percent) that it was in 1929 (4.8 percent).

The transportation-communication-public utilities industry has lost much of its relative economic importance in the past 56 years. In 1929, this industry provided almost 15 percent of the state's total earnings, ranking second among the eight nonfarm industry sectors. By 1985, it ranked only fifth in the state with 8.9 percent of earnings income.

Utah's services industry, in 1929, 1939, and 1949, was the sixth largest industry in the state in terms of providing earnings. In 1959, 1969, and 1979 it ranked fourth; in 1984 and 1985 it ranked second. Over the 56-year period, services increased its share of total earnings from 10.1 to 19.2 percent. "Health services" comprises one-third of the services industry's earnings, both in Utah and in the United States.

Earnings provided by government agencies to their employees, at $2.9 billion, is presently the largest single portion (21.2 percent) of Utah's earnings income total. Back in 1929, this sector's earnings ranked seventh of the nine industry sectors, at only 7.8 percent.

Utah's 1985 civilian earnings from federal government was 1.2 percent of its national counterpart. Earnings from state and local government jobs in Utah is 0.64 percent of the national sector total. This percentage is slightly higher than Utah's total earnings as a percentage of the national total (0.56 percent).

Per Capita Personal Income

Per capita personal income is the total personal income in the state divided by the total population as of July 1 of that year.

Utah's 1986 per capita personal income (PCI) is forecasted at $10,800. Since 1980, Utah's real per capita income has increased only $240, compared to the $1,200

increase in the United States real per capita personal income. "Real per capita income" means it has been adjusted for inflation. Utah's 1985 per capita personal income, at $10,500 ranked 47th among the fifty states. Because Utah's population has a relatively large number of children (the result of many years of high birth rates), this PCI comparison portrays Utah as a low income state. However, when comparing 1984 state per capita income based on adult population estimates, Utah ranking is improved considerably. Utah's ranking is 34th among the states by this measure.

Also, if Utah household income is analyzed we compare more favorable to the rest of the U.S. In 1985 total personal income per household in Utah was $34,518 compared with $38,070 for the U.S. Therefore Utah total personal income per household was 91 percent of the national rate.

Nevertheless, according to the Bureau of Economic Analysis, U.S. Department of Commerce, the 1985 per capita income estimate for Utah exceeds only the estimates for Arkansas, West Virginia and Mississippi.

During the 1970's, Utah's PCI ranged between 81 and 83 percent of the United State's PCI. However, as shown in Figure 11, from 1978 to 1986 this parameter dropped eight percentage points — from 83 to 75. Each major sector of Utah's total personal income contributed to this decline. That is, taking population growth into consider-

Figure 11

ation, each of Utah's major TPI components has not increased as rapidly as its national counterpart. Utah's PCI for selected years 1969 to 1986 is included in Figure 11.

County Personal Income

Estimates of total personal income for Utah's counties portray the scope of current and historical economic activity existing within the state. County personal income information is shown in Table 7. Fifty-six years ago many rural counties were of much greater prominence in Utah than at present. Juab County is the outstanding example of this. Largely because of mining operations in the Tintic District, Juab's personal income was 2.8 percent of the state's personal income in 1929. By 1969, that relationship had dropped to 0.3 percent, the level it maintains presently. Nine other counties have had substantial drops in their share of Utah's total personal income in the past 56 years. Of these, Garfield, Millard, Piute, Rich, Sanpete and Sevier counties experienced major declines in agriculture; while Summit and Wasatch counties lost mining jobs; and Beaver County's railroad jobs dropped with the advent of the diesel locomotive. Of the counties named, only Summit has made a noteworthy recovery. Recreation related developments are largely responsible for its boom.

Davis and Utah counties dramatically increased their share of the state's total personal income over the 56-year period. They have grown from 2.1 to 10.7 percent, and 6.1 to 11.0 percent respectively. Davis County's major increase occurred in the 1940's with the installation of Hill Air Force Base and the Clearfield Navy Depot. In the same decade, Utah County experienced the construction of U.S. Steel's Geneva Works. Related manufacturing plants soon followed.

Personal income in the remaining counties in the state grew at about the same rate as the state's figure and, therefore, maintained a roughly constant percentage of the state total. It is significant that Salt Lake County's share of Utah's total personal income has dropped from 53.6 percent in the 1940's to 47.2 percent in 1985. This is due to the faster rates of growth in other counties, especially Salt Lake County's neighbors, Davis and Utah counties.

Total earnings comprise the largest component of each county's TPI. But, as shown in Table 7, there is considerable diversity among the counties in the relative importance of farm, government, residence adjustment and transfer payment components.

Economic status of Utah's counties is reflected in their respective per capita personal income estimates. Noteworthy observations regarding these statistics are as follows:

Counties whose economies have been dependent on the extraction of energy products have experienced declining PCI's in recent years. These are Carbon, Duchesne, Emery, Grand, San Juan and Uintah counties.

Cache, Iron and Utah counties, with their relatively large nonresident college student populations, have consistently lower PCI's.

San Juan County's large population of low income American Indians causes this county to have the lowest PCI in the State.

Salt Lake, Davis, Weber and Box Elder counties have relatively high PCI's because of higher wages and larger percentages of multi-earner families.

Table 5

Components of Utah's Personal Income
By Place of Residence
(Millions of Dollars)

	1929		1939		1949		1959	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Earnings by Place of Work	236.7		211.4		708.1		1,392.9	
Less: Personal Contributions								
for Social Insurance	0.4		2.2		12.0		38.0	
Percent of Above Total	(0.2)		(1.0)		(1.7)		(2.7)	
Plus: Residence Adjustment	0		0		-0.1		-0.2	
Net Earnings by Place of Residence	236.3	84.5	209.3	84.5	696.0	83.4	1,354.7	81.6
Plus: Dividends, Interest & Rent	28.7	13.8	24.9	10.1	81.6	9.8	192.7	11.6
Plus: Transfer Payments	4.8	1.7	13.4	5.4	57.3	6.9	112.1	6.8
Personal Income by Place of Residence	279.8	100.0	247.6	100.0	834.9	100.0	1,659.6	100.0
Per Capita Personal Income (Dollars)	551.0		456.0		1,244.0		1,908.0	

	1969		1979		1984		1985	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Earnings by Place of Work	2,652.5		8,526.6		12,746.9		13,526.5	
Less: Personal Contributions								
for Social Insurance	123.7		452.2		777.1		859.4	
Percent of Above Total	(4.7)		(5.3)		(6.1)		(6.4)	
Plus: Residence Adjustment	1.7		19.9		36.8		40.8	
Net Earnings by Place of Residence	2,530.6	79.8	8,094.3	77.3	12,006.7	73.8	12,708.0	73.6
Plus: Dividends, Interest & Rent	351.8	11.1	1,129.0	10.8	2,124.4	13.1	2,244.3	13.0
Plus: Transfer Payments	288.8	9.1	1,244.9	11.9	2,141.3	13.2	2,306.3	13.4
Personal Income by Place of Residence	3,171.2	100.0	10,468.2	100.0	16,272.3	100.0	17,258.6	100.0
Per Capita Personal Income (Dollars)	3,029.0		7,392.0		10,024.0		10,493.0	

Source: U.S. Department of Commerce, Bureau of Economic Analysis, unpublished documents, 1982–1986.

Table 6

Utah Industrial Distribution of Earnings Income
(Millions of Dollars)

	1929		1939		1949		1959	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Earnings by Place of Work	236.7	100.0	211.4	100.0	708.1	100.0	1,392.9	100.0
Farm	40.0	16.9	29.4	13.9	78.0	11.0	48.8	3.5
Nonfarm	196.7	83.1	182.0	86.1	630.1	89.0	1,344.1	96.5
Private	178.1	75.3	148.7	68.9	511.0	72.2	1,065.3	76.5
Ag Services, Forestry, Fisheries	0.3	0.1	0.2	0.1	0.8	0.1	1.8	0.1
Mining	26.3	11.1	14.4	6.8	47.4	6.7	83.3	6.0
Construction	9.3	3.9	9.7	4.6	47.4	6.7	103.6	7.2
Manufacturing	30.9	13.1	24.6	11.7	95.1	13.4	243.6	17.5
Transportation & Public Utilities	34.6	14.6	26.3	12.5	78.9	11.2	130.8	9.4
Wholesale & Retail Trade	41.7	17.6	42.1	19.9	147.6	20.9	263.0	18.9
Finance, Insurance & Real Estate	11.3	4.8	7.7	3.6	24.1	3.4	63.7	4.6
Services	23.8	10.1	20.7	9.8	69.6	9.8	175.8	12.6
Government	18.5	7.8	36.3	17.2	119.1	16.8	278.8	20.0
Federal Civilian	4.7	2.0	16.9	8.0	63.6	9.0	144.0	10.3
Federal Military	0.8	0.3	1.4	0.6	7.8	1.1	21.0	1.5
State & Local	13.0	5.5	18.0	8.5	47.6	6.7	113.7	8.2

	1969		1979		1984		1985	
	Amount	Percent	Amount	Percent	Amount	Percent	Amount	Percent
Total Earnings by Place of Work	2,652.5	100.0	8,526.6	100.0	12,746.9	100.0	13,526.5	100.0
Farm	78.1	2.9	128.1	1.5	107.5	0.8	72.5	0.5
Nonfarm	2,574.4	97..1	8,398.5	98.5	12,639.9	99.2	13,454.0	99.5
Private	1,878.5	70.8	6,717.3	78.8	10,021.5	78.6	10,585.1	78.3
Ag Services, Forestry, Fisheries	6.5	0.2	24.8	0.3	40.2	0.3	45.2	0.3
Mining	117.1	4.4	437.1	5.1	472.1	3.7	373.8	2.8
Construction	161.8	6.1	840.0	9.9	1,080.1	8.5	1,098.7	8.1
Manufacturing	421.5	15.9	1,408.7	16.5	2,213.3	17.4	2,358.5	17.4
Transportation & Public Utilities	214.2	8.1	737.2	8.6	1,163.7	9.1	1,200.7	8.9
Wholesale & Retail Trade	471.2	17.8	1,492.7	17.5	2,080.2	16.3	2,211.9	16.4
Finance, Insurance & Real Estate	118.2	4.5	452.6	5.3	625.3	4.9	696.1	5.1
Services	367.9	13.9	1,324.3	15.5	2,346.6	18.4	2,600.2	19.2
Government	695.9	26.2	1,681.2	19.7	2,618.4	20.5	2,869.0	21.2
Federal Civilian	345.8	13.0	619.7	7.3	925.7	7.3	1,008.6	7.5
Federal Military	39.1	1.5	96.7	1.1	171.7	1.3	186.7	1.4
State & Local	311.0	11.7	964.9	11.3	1,512.0	11.9	1,673.7	12.4

Source: U.S. Department of Commerce, Bureau of Economic Analysis, unpublished documents, 1982-1986.

Components of Total Personal Income for Utah and its Counties
1984 Percentages

	State	Beaver	Box Elder	Cache	Carbon	Daggett	Davis	Duchesne	Emery	Garfield
Total Personal Income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Earnings by Place of Work	75.2	58.8	92.3	63.6	65.0	62.0	68.4	70.9	105.9	69.0
Farm Income	0.5	2.8	1.8	1.8	0.3	5.4	0.2	1.3	0.6	4.5
Nonfarm Earnings	74.6	56.0	90.5	61.9	64.7	56.6	68.2	69.6	105.4	64.5
Private Industry	58.6	42.3	82.6	45.2	53.5	17.7	31.1	55.7	93.6	45.0
Government	16.1	13.7	7.9	16.7	11.2	38.9	37.0	13.8	11.8	19.4
Less: Social Insurance (FICA)	5.3	4.2	6.2	4.4	4.5	3.9	4.4	5.0	7.2	4.7
Plus: Residence Adjustment	0.2	-0.9	-15.8	5.5	7.6	7.9	11.4	4.9	-22.9	-8.3
Dividends, Interest & Rent	17.4	23.3	17.5	21.4	16.6	18.2	13.5	18.4	11.5	24.0
Transfer Payments	12.5	23.0	12.2	13.8	15.4	15.8	11.1	10.8	12.6	20.0

	Grand	Iron	Juab	Kane	Millard	Morgan	Piute	Rich	Salt Lake	San Juan
Total Personal Income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Earnings by Place of Work	51.8	64.5	45.3	36.0	99.6	37.1	34.0	43.5	85.5	75.7
Farm Income	0.4	1.3	1.3	1.0	7.4	4.1	10.4	7.9	0.1	4.1
Nonfarm Earnings	51.4	63.2	44.0	35.0	92.2	33.0	23.6	35.8	85.5	71.6
Private Industry	39.3	45.8	30.0	24.3	81.0	26.0	9.0	18.5	72.6	49.3
Government	12.1	17.4	14.0	10.7	11.2	7.0	14.6	17.3	12.8	22.3
Less: Social Insurance (FICA)	3.7	4.6	3.3	2.7	6.7	2.4	2.1	2.8	6.1	5.1
Plus: Residence Adjustment	18.3	4.6	14.1	27.9	-23.0	33.9	12.7	21.1	-7.7	-4.6
Dividends, Interest & Rent	18.7	20.2	21.5	23.7	18.4	19.1	27.9	23.5	17.5	16.7
Transfer Payments	14.8	15.2	22.5	15.1	11.8	12.4	27.4	14.6	10.7	17.3

	Sanpete	Sevier	Summit	Tooele	Uintah	Utah	Wasatch	Washington	Wayne	Weber
Total Personal Income	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Total Earnings by Place of Work	49.9	69.0	61.4	85.0	86.2	63.9	40.3	47.2	47.7	57.2
Farm Income	5.8	5.9	1.7	0.7	1.9	0.5	1.6	0.8	3.4	0.2
Nonfarm Earnings	4.1	63.1	59.7	84.3	84.3	63.5	38.7	46.5	44.3	57.1
Private Industry	27.1	50.8	51.3	31.4	74.8	52.7	26.1	36.3	22.2	41.5
Government	16.9	12.4	8.3	53.0	9.5	10.8	12.6	10.2	22.1	15.6
Less: Social Insurance (FICA)	3.3	4.6	4.3	5.3	6.1	4.6	2.9	3.5	3.4	4.0
Plus: Residence Adjustment	10.8	-0.1	16.0	-5.3	-1.6	9.2	26.8	8.2	2.9	12.5
Dividends, Interest & Rent	21.6	20.5	19.5	10.5	13.2	18.0	20.7	28.0	29.6	17.3
Transfer Payments	21.1	15.1	7.4	15.2	8.2	13.4	15.2	20.0	23.1	17.0

Source: U.S. Department of Commerce, Bureau of Economic Analysis, Local Area Personal Income 1979-1984, August 1986, pages 62-69.

POPULATION/DEMOGRAPHICS

Population Growth

The measure of the total number of residents of the state and its counties is crucial to an understanding of the economy of the area. There exists a strong relationship between population growth and economic growth. A dynamic process occurs where population growth creates economic growth and economic growth in turn creates more population.

The preliminary population estimate for Utah on July 1, 1986 was 1,666,000. This estimate represents an increase of just 21,000, or 1.3 percent growth over the previous year. The U.S. population increase was 0.9 percent during the same period. The last time Utah's population grew by 21,000 or fewer was in 1970 (with an increase of 19,000). The yearly percent increase in population has been greater than 1.3 percent in every year since 1968 when the population in Utah grew by only 1.0 percent.

The census count taken on April 1, 1980 was 1,461,037 inhabitants for Utah. Over the past six years the population has grown by approximately 205,000 persons. This translates into a 2.1 percent average annual growth rate for the 1980's compared to an average annual growth rate of 3.3 percent for the 1970's. Comparable national figures of the average annual growth rates are 1.1 percent in the 1970's and 1.0 percent in the 1980's. Figure 12 illustrates annual population growth rates in Utah for the last 35 years.

Figure 12

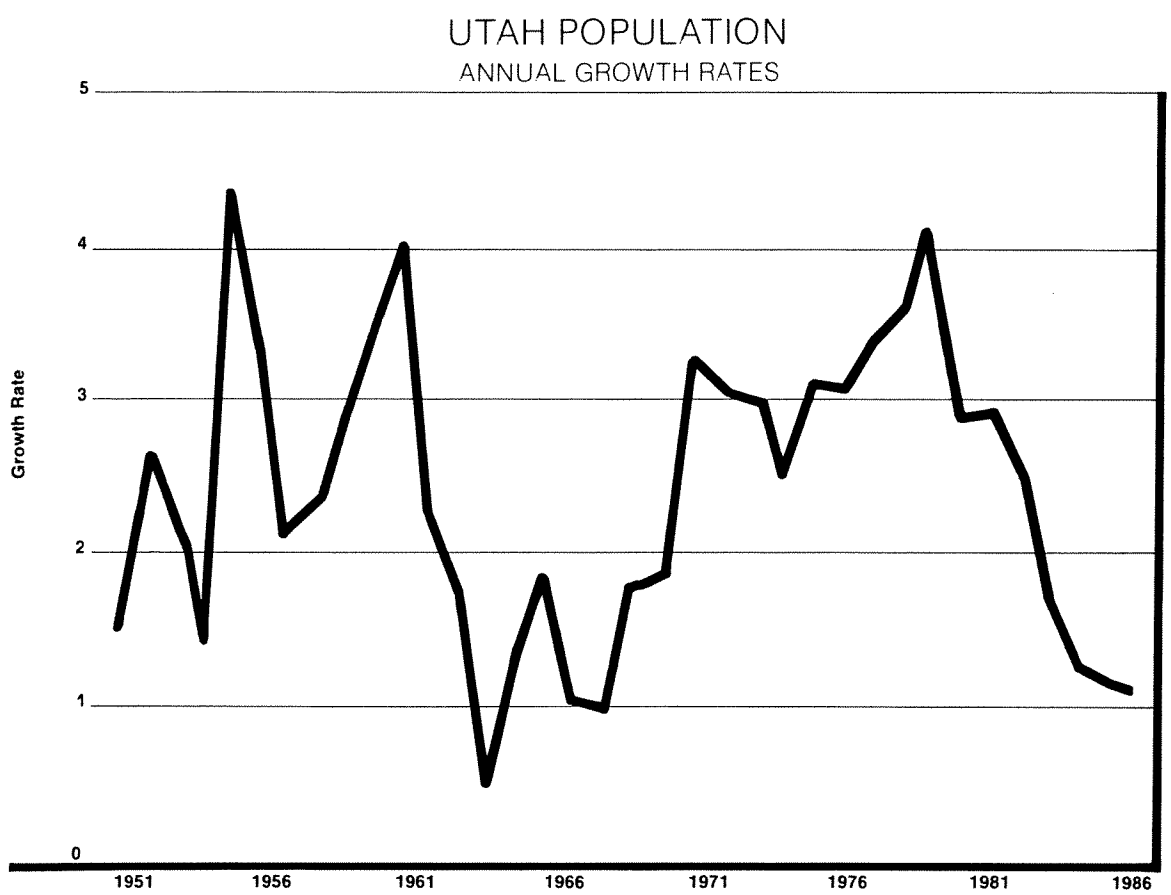


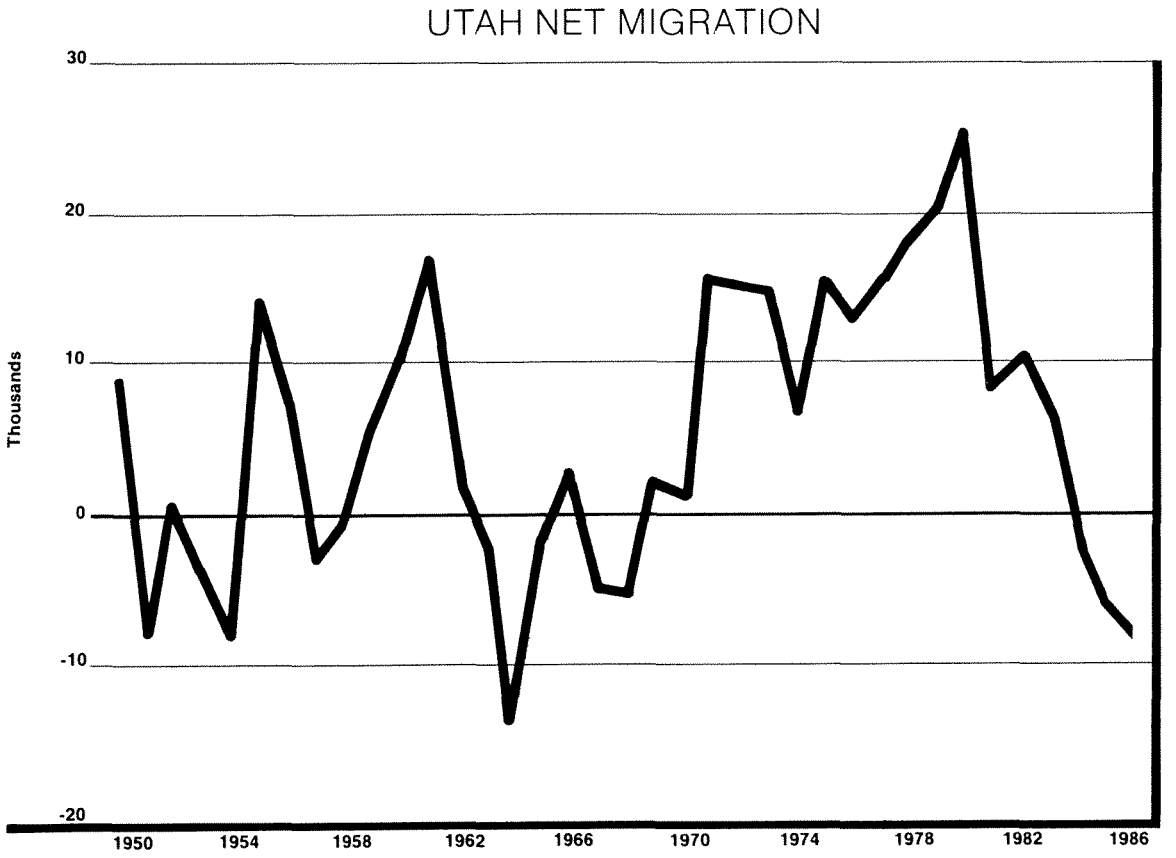
Table 8 shows population by county and the subsequent growth rates for all years between 1980 and 1986. This table indicates that between 1985 and 1986 11 Utah counties had actual declines in population, all of which are non-metropolitan. Much of the decline in rural Utah counties resulted from depressed energy producing industries and the resultant out-migration.

Migration

The dramatic slow down in Utah's population growth in recent years has been caused by changes out-migration as well as slower natural increase. There were 37,145 births and 8,790 deaths from July 1, 1985 to June 30, 1986, resulting in a net natural increase of 28,355. Since it is estimated that Utah's population grew by only 21,000 during this same period there was a net out-migration of 7,355 persons from Utah. This amounts to 0.4 percent of the 1985 population leaving the state.

Utah had an extended period of net in-migration each year from 1969 to 1983. The current out-migration pattern is in its third consecutive year (since 1984). The last time this occurred was in the 1960's (1963-65). The level of migration for the last 35 years is shown in Figure 13.

Figure 13



During the 1980's Utah's population has grown largely as a result of natural increase. July 1, 1980 to July 1, 1986 births were 237,138 and deaths were 51,461. This is a net natural increase of 185,677. With an overall increase of about 192,000 persons since 1980, Utah has had about 6300 net in-migration. This net in-migration accounts for 3.3 percent of Utah's population increase in the eighties. This is a very small amount compared to the 151,556 net in-migration, or 37 percent of the growth that occurred in Utah during the 1970's.

Clearly, the significantly slower population growth of Utah in the 1980's compared to the 1970's is due in part because of weaker economic conditions resulting in little net in-migration. Natural increase, the other component of population growth, must provide any remaining insight into the slowdown. Table 9 shows Utah's population and the components of population change from 1970 to 1986.

Fertility

Births in fiscal year 1985-86 (July 1, 1985 through June 30, 1986) were 37,145. This is the lowest number of births in Utah since fiscal year 1976-77 when births were 36,709. The largest number of births, occurred in fiscal year 1981-1982 at 41,774, declining each year since.

The crude birth rate (births during the calendar year per 1,000 population on July 1st) has dropped from 28.3 in 1980 to 22.7 in 1985. Utah had the highest crude birth rate in the U.S in 1980, but is now exceeded by Alaska. This is due to Alaska's dominance of child-bearing-age adults in its population. The U.S. crude birth rate held virtually constant during this same period registering 15.9 in 1980 and 15.7 in 1985. Even at its current level, Utah's crude birth rate is still much higher (by 45 percent) than the national rate.

The large number of children born in Utah from 1977 to 1982 have been entering the school system since 1982. This has caused a tremendous enrollment growth problem unmatched anywhere else in the nation.

The significant declines in the absolute number of births and in the crude birth rate during the last four years have signaled a major demographic change in Utah. The most complete measure of fertility in any given year is *total fertility*. The total fertility rate for a given year shows how many births the average woman would have during her entire childbearing period (defined to be ages 15 to 44), if, during her reproductive period, she were to experience the same *age-specific birth rates* that occurred for all women of childbearing age in that given year. The total fertility rate is the most complete measure of fertility for a *specified year* because it uses age-specific birth rates for each age 15 to 44 thus eliminating any effect of the differences in size between age groups of women in their fertile years.

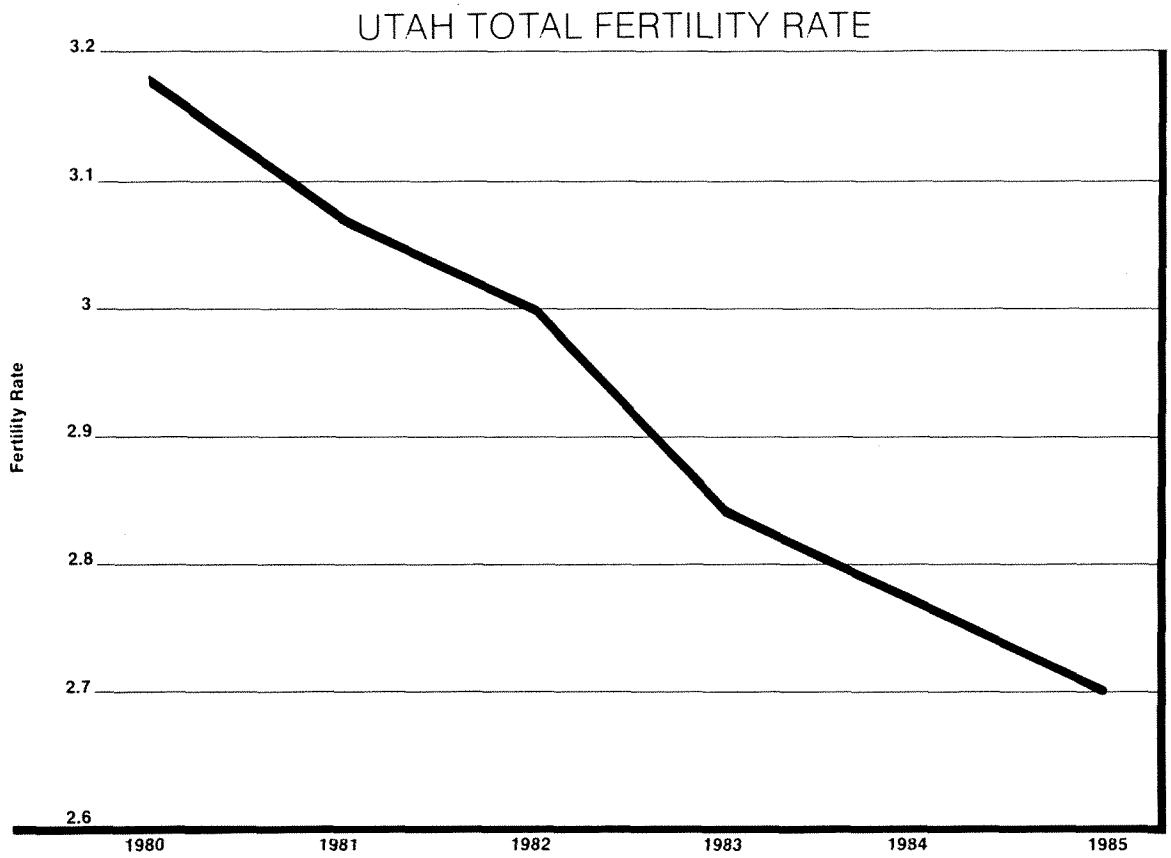
Utah has had, and continues to have, the highest total fertility rate in the nation. However, total fertility in Utah has been falling since 1980 from 3.2 births per woman to an estimated 2.7 births per woman in 1985. This decline is illustrated in Figure 14. The U.S. total fertility rate has held at an almost constant rate of 1.8 births per woman since the mid 70's.

The recent decline in fertility of Utah women, seems to indicate that Utah's family size is now moving closer to the U.S. average. However, the rate of decline in Utah fertility is slowing and Utah fertility rates will undoubtedly continue to be substantially higher than national rates.

Age Structure

A comparison of the age structure between Utah and the nation as a whole reveals the true demographic uniqueness of Utah. Some of the changes in Utah's age

Figure 14



structure since 1980 have had a profound affect on Utah's education system. Table 10 provides a comparison by selected age groups for selected years between Utah and the nation.

The record high births in Utah between 1977 and 1982 were mentioned earlier. As a result of these births the school age population in Utah has grown significantly as a percent of the total population. In 1980, 24.0 percent of Utah's population was between the ages of 5 and 17 (school age). By 1985 this percentage had increased to 25.5 percent. During this same period the school age population in the U.S. dropped from 20.8 percent in 1980 to 18.8 percent in 1985.

It is important to realize that when the percentage of Utah's school age population increases there are not only a relatively larger number of children to educate but the proportion of the population that must provide the resources for this education is smaller. This result becomes evident by using a statistic known as the dependency ratio.

The dependency ratio is computed by dividing the population into two groups; (1) persons of working age between 18 and 64 years and (2) persons who are of retirement age (65 years and above) or are children (ages 0 to 17). For the purposes of

this statistic the children and retirees are referred to as "dependents". The dependency ratio is defined to be the number of dependents per 100 persons of working age.

In 1980 Utah had a dependency ratio of 80, that is 80 dependents (children and retirees) per 100 persons of working age. The U.S. dependency ratio was 65 in 1980. Therefore, Utah had 15 more dependents, or 23 percent more dependents than the average for the U.S. By 1985 the dependency ratio in Utah grew to 83 while the U.S. dependency ratio decreased to 62. Utah now has 34 percent more dependents than the nation as a whole. As a result, the working population (persons 18 to 64) in Utah have a much larger and increasing burden in terms of persons it must support than the average for the entire U.S. Table 11 shows Utah and the nation's dependency ratios.

Most of this increase in the dependency ratio is due to the increases in the school age population. Utah had 43 children of school age (ages 5 to 17) per 100 persons of working age compared to 34 for the U.S. in 1980 or 27 percent more. By 1985 this ratio was 47 for Utah to 31 for the U.S. Utah had 52 percent more children per 100 persons of working age to educate in our primary and secondary schools than the average for the nation in 1985.

The recent decline in births and fertility is beginning to manifest an effect when we look at the population under the age of five. In Utah the ratio of children under 5 per 100 persons of working age dropped from 24 in 1980 to 21 in 1985. In the U.S. this ratio almost held constant at 12 in both 1980 and 1985. So while Utah had *double* the number of children under five years per 100 persons 18 to 64 years of age in 1980, by 1985 this figure had dropped to 75 percent more.

Table 8

Utah Population Estimates by County

County	July 1 1980	July 1 1981	1980-81 % Growth	July 1 1982	1981-82 % Growth	July 1 1983	1982-83 % Growth	July 1 1984	1983-84 % Growth	July 1 1985	1984-85 % Growth	July 1 1986	1985-86 % Growth
Beaver	4,400	4,600	4.55%	4,650	1.09%	5,000	7.53%	5,150	3.00%	5,050	-1.94%	4,950	-1.98%
Box Elder	33,500	34,000	1.49%	34,700	2.06%	35,300	1.73%	35,800	1.42%	36,600	2.23%	37,300	1.91%
Cache	57,700	59,800	3.64%	62,000	3.68%	64,500	4.03%	65,600	1.71%	66,700	1.68%	67,800	1.65%
Carbon	22,400	23,100	3.13%	24,700	6.93%	24,500	-0.81%	23,700	-3.27%	23,400	-1.27%	23,000	-1.71%
Daggett	750	850	13.33%	850	0.00%	750	-11.76%	750	0.00%	700	-6.67%	700	0.00%
Davis	148,000	153,000	3.38%	158,000	3.27%	162,000	2.53%	166,000	2.47%	170,000	2.41%	175,000	2.94%
Duchesne	12,700	13,100	3.15%	13,700	4.58%	14,400	5.11%	14,800	2.78%	14,700	-0.68%	14,300	-2.72%
Emery	11,600	12,100	4.31%	13,000	7.44%	13,100	0.77%	12,400	-5.34%	11,800	-4.84%	11,800	0.00%
Garfield	3,700	3,700	0.00%	3,750	1.35%	3,950	5.33%	3,950	0.00%	4,050	2.53%	4,050	0.00%
Grand	8,250	8,400	1.82%	8,100	-3.57%	7,950	-1.85%	7,650	-3.77%	7,050	-7.84%	6,850	-2.84%
Iron	17,500	17,900	2.29%	18,300	2.23%	18,900	3.28%	19,300	2.12%	19,400	0.52%	19,500	0.52%
Juab	5,550	5,600	0.90%	5,700	1.79%	5,900	3.51%	6,150	4.24%	6,250	1.63%	5,800	-7.20%
Kane	4,050	4,050	0.00%	4,150	2.47%	4,350	4.82%	4,500	3.45%	4,700	4.44%	4,800	2.13%
Millard	9,050	9,600	6.08%	10,400	8.33%	11,400	9.62%	13,500	18.42%	14,200	5.19%	13,600	-4.23%
Morgan	4,950	5,050	2.02%	5,200	2.97%	5,250	0.96%	5,350	1.90%	5,450	1.87%	5,500	0.92%
Piute	1,350	1,400	3.70%	1,350	-3.57%	1,450	7.41%	1,500	3.45%	1,550	3.33%	1,550	0.00%
Rich	2,150	2,250	4.65%	2,400	6.67%	2,300	-4.17%	2,150	-6.52%	2,100	-2.33%	2,050	-2.38%
Salt Lake	625,000	639,000	2.24%	654,000	2.35%	667,000	1.99%	678,000	1.65%	689,000	1.62%	698,000	1.31%
San Juan	12,400	12,700	2.42%	12,600	-0.79%	13,000	3.17%	12,800	-1.54%	12,500	-2.34%	12,700	1.60%
Sanpete	14,800	15,400	4.05%	16,100	4.55%	16,900	4.97%	17,000	0.59%	16,900	-0.59%	16,500	-2.37%
Sevier	14,900	15,200	2.01%	15,500	1.97%	15,800	1.94%	16,100	1.90%	16,200	0.62%	15,800	-2.47%
Summit	10,400	10,900	4.81%	11,300	3.67%	11,800	4.42%	12,200	3.39%	12,400	1.64%	12,700	2.42%
Tooele	26,200	26,800	2.29%	27,100	1.12%	27,300	0.74%	28,200	3.30%	28,300	0.35%	28,100	-0.71%
Uintah	20,700	21,900	5.80%	24,300	10.96%	25,300	4.12%	24,500	-3.16%	24,000	-2.04%	23,000	-4.17%
Utah	220,000	228,000	3.64%	235,000	3.07%	242,000	2.98%	247,000	2.07%	250,000	1.21%	253,000	1.20%
Wasatch	8,650	8,900	2.89%	8,750	-1.69%	9,050	3.43%	9,200	1.66%	9,200	0.00%	9,450	2.72%
Washington	26,400	27,700	4.92%	29,400	6.14%	30,700	4.42%	32,600	6.19%	35,700	9.51%	39,100	9.52%
Wayne	1,950	2,000	2.56%	2,000	0.00%	2,150	7.50%	2,150	0.00%	2,100	-2.33%	2,100	0.00%
Weber	145,000	148,000	2.07%	151,000	2.03%	154,000	1.99%	155,000	0.65%	155,000	0.00%	157,000	1.29%
State Total	1,474,000	1,515,000	2.78%	1,558,000	2.84%	1,596,000	2.44%	1,623,000	1.69%	1,645,000	1.36%	1,666,000	1.28%

Source: Utah Population Estimates Committee and the
Utah Office of Planning and Budget, Data Resources Section

Table 9

Utah July 1st Population Estimates,
Natural Increase and Net Migration

Year	July 1st Population	Percent Increase	Increase in Population =	Net Migration +	Natural Increase =	Fiscal Year Births –	Fiscal Year Deaths
1970	1,066,000						
1971	1,101,000	3.3%	35,000	14,800	20,200	27,407	7,207
1972	1,135,000	3.1%	34,000	14,090	19,910	27,146	7,236
1973	1,169,000	3.0%	34,000	13,955	20,045	27,562	7,517
1974	1,197,000	2.4%	28,000	6,620	21,380	28,876	7,496
1975	1,234,000	3.1%	37,000	13,949	23,051	30,566	7,515
1976	1,272,000	3.1%	38,000	11,605	26,395	33,773	7,378
1977	1,316,000	3.5%	44,000	14,886	29,114	36,709	7,595
1978	1,364,000	3.6%	48,000	17,422	30,578	38,265	7,687
1979	1,416,000	3.8%	52,000	19,712	32,288	40,134	7,846
1980	1,474,000	4.1%	58,000	24,517	33,483	41,591	8,108
1981	1,515,000	2.8%	41,000	7,601	33,399	41,511	8,112
1982	1,558,000	2.8%	43,000	9,630	33,370	41,774	8,404
1983	1,596,000	2.4%	38,000	5,789	32,211	40,557	8,346
1984	1,623,000	1.7%	27,000	-2,757	29,757	38,643	8,886
1985	1,645,000	1.4%	22,000	-6,585	28,585	37,508	8,923
1986*	1,666,000	1.3%	21,000	-7,355	28,355	37,145	8,790

* preliminary

Source: Utah Population Estimates Committee Utah Office of Planning and Budget, Data Resources Section Utah Department of Health, Bureau of Health Statistics

Table 10

Estimated and Projected Population Distribution of Utah and the U.S.
Selected Age Groups and Selected Years

Ages		1980	Estimated 1983	1985	1990	Projected 1995	2000
0-4	UTAH	13.0%	12.7%	11.8%	10.0%	9.4%	9.2%
	U.S.	7.2%	7.5%	7.6%	7.7%	7.2%	6.6%
5-17	UTAH	24.0%	24.4%	25.5%	25.4%	24.5%	22.1%
	U.S.	20.8%	19.3%	18.8%	18.1%	18.7%	18.6%
18-64	UTAH	55.6%	55.2%	54.8%	55.1%	56.2%	58.6%
	U.S.	60.7%	61.5%	61.7%	61.5%	61.1%	61.8%
65 +	UTAH	7.5%	7.7%	7.9%	9.5%	10.0%	10.2%
	U.S.	11.3%	11.7%	12.0%	12.7%	13.1%	13.0%

Table 11

Estimated and Projected Dependency Ratios*
Utah and the United States

Ages		1980	Estimated 1983	1985	1990	Projected 1995	2000
Dependency Ratio*	UTAH	80	81	83	82	78	71
	U.S.	65	63	62	62	63	64
Children 0-4 per Adults 18-64	UTAH	24	23	21	18	17	16
	U.S.	12	13	12	13	12	12
School age per Adults 18-64	UTAH	43	44	47	46	44	38
	U.S.	34	31	31	30	29	31
Adults 65 + per Adults 18-64	UTAH	13	14	14	17	18	17
	U.S.	19	19	19	19	21	21

* The dependency ratio is defined to be the number of children ages 0-17 and adults ages 65 + (retirees) per 100 persons of working age, 18-64 years of age.

Source: U.S. Bureau of the Census
Utah Office of Planning and Budget, Data Resources Section

GROSS TAXABLE SALES

Retail activity is an important part of any economy. Purchasing patterns are important in understanding the confidence consumers have in the future of an area's economy. Also taxes received from retail sales are critical to the operation of state government. During the last fiscal year gross taxable sales slowed significantly. The total of $12.5 billion was an increase of only .4 percent over fiscal year 1984-85. During fiscal year 1984-85 gross taxable sales totalled $12.4 billion, an 11.3 percent increase over fiscal year 1983-84. This rate was very close to the growth of the two previous fiscal years, 10.1 and 11.1 percent respectively.

Sales from retail stores represent about 54 percent of the sales tax base in Utah. The balance comes from wholesale trade, services, mining, manufacturing and construction purchases. Gross taxable sales by sector from 1982 - 86 are shown in Table 12.

Among those stores which generally sell durable items (items which last three years or more), retail sales were rather soft in 1986. Motor vehicle sales rose only 3.1 percent. Furniture and home furnishing store sales increased by only 1.6 percent. Moreover, purchases from manufacturing, mining, construction and several other sectors actually declined in 1986.

Nondurable sales fared better in 1986. Eating and drinking sales gained 9.8 percent. Food store sales rose 10.1 percent. General merchandise increased 4.0 percent and apparel by 8.1.

During the first half of 1986 retail sales in Utah rose only 3.2 percent. Expectations of a 7 percent increase did not materialize due to falling oil prices and general softness in key state industries.

One of the important variables which explain lower retail sales growth is consumer confidence or consumer sentiment. A consumer sentiment survey was completed by the University of Utah Survey Research Center. This survey asks Utah residents the same questions asked by the University of Michigan in their 17 year old U.S. Consumer Sentiment Survey. From this survey a "consumer sentiment index" is derived. The U.S. index tends to lead consumer spending by 6 to 12 months. Utah's consumer sentiment index has fallen from 92.6 in January, 1986 to 82.9 in September. The national and Utah indexes are shown in Figure 15.

Because of this falling consumer confidence and lower average wage growth in 1986, illustrated earlier in this report, sales are now expected to remain almost constant in fiscal year 1986-87. After it is clear that federal tax decreases will actually take affect and as average wages tend to rise during the beginning of 1988, retail sales are expected to return to a more positive 3 to 5 percent growth path.

Figure 15

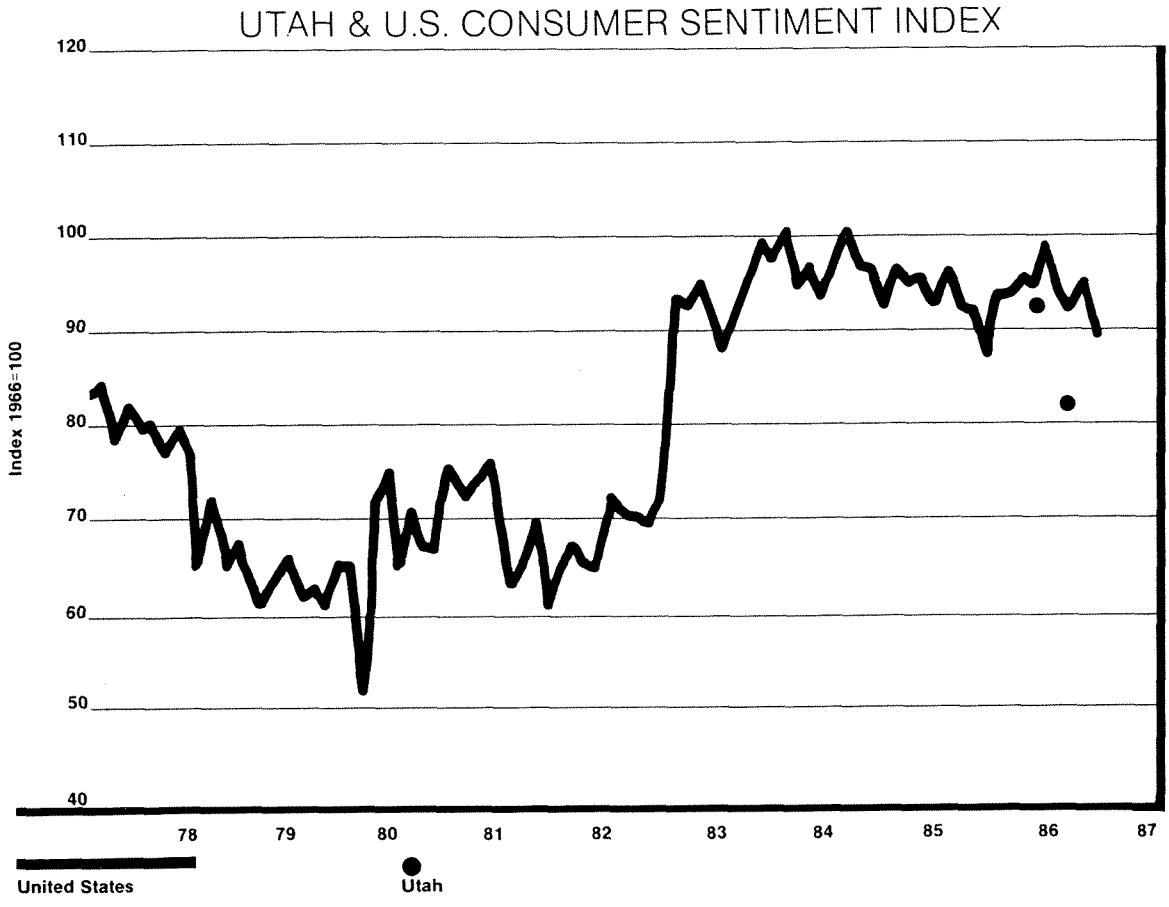

UTAH & U.S. CONSUMER SENTIMENT INDEX
Index 1966=100
120
110
100
90
80
70
60
50
40
78
79
80
81
82
83
84
85
86
87
United States
Utah

Table 12

Utah Gross Taxable Retail Sales
Fiscal Years 1982–1986
Thousands of Dollars

Industry	1982	1983	1984	1985	1986	84-85	85-86
Agriculture, Forestry & Fishing	9,119	7,727	8,500	9,382	8,701	10.38%	-7.26%
Mining	274,034	214,485	200,835	190,755	118,459	-5.02%	-37.90%
Construction	204,512	208,846	270,353	342,746	299,243	26.78%	-12.69%
Manufacturing	831,155	788,654	868,110	968,172	948,582	11.53%	-2.02%
Transportation	74,840	48,268	57,203	66,694	54,569	16.59%	-18.18%
Communications	265,080	301,450	293,256	308,709	329,583	5.27%	6.76%
Electric, Gas & Sanitation	594,381	608,199	687,289	858,057	803,160	24.85%	-6.40%
Wholesale Trade	1,524,798	1,274,852	1,379,250	1,432,277	1,370,784	3.84%	-4.29%
Retail Trade:							
Food Stores	1,244,257	1,373,499	1,443,342	1,539,602	1,695,255	6.67%	10.11%
Building & Garden	401,506	380,426	471,467	531,630	528,301	12.76%	-0.63%
General Merchandise	744,697	808,707	852,071	883,111	918,227	3.64%	3.98%
Motor Vehicles	875,310	929,554	1,175,413	1,326,899	1,368,249	12.89%	3.12%
Apparel & Accessories	248,324	247,452	270,585	301,865	326,206	11.56%	8.06%
Home Furnishings	314,181	316,775	380,436	437,087	444,053	14.89%	1.59%
Eating & Drinking	469,705	493,381	545,225	607,372	667,022	11.40%	9.82%
Miscellaneous	658,771	682,643	730,386	830,779	817,798	13.75%	-1.56%
Finance, Insurance & Real Estate	45,568	41,425	47,991	51,574	61,912	7.47%	20.04%
Services	913,789	1,041,359	1,135,595	1,378,376	1,364,676	21.38%	-0.99%
Public Administration	42,678	54,256	76,490	101,552	72,450	32.77%	-28.66%
Private Motor Vehicle Sales	183,929	176,417	204,301	222,716	213,524	9.01%	-4.13%
Occasional Sales	20,784	30,324	36,235	19,231	36,459	-46.93%	89.58%
Nondisclosable	11,235	24,133	36,990	22,812	34,627	-38.33%	51.79%
Total	9,952,653	10,052,832	11,171,323	12,431,398	12,481,840	11.28%	0.41%

Source: Utah State Tax Commission

CONSTRUCTION ACTIVITY

Construction activity is an important employer in Utah or in any area. Construction activity is also a good indicator of investment being made in the state and construction activity generally results in longer term more permanent economic activity. Construction activity is influenced heavily by performance of the overall economy.

Residential Construction

Residential construction is divided into single family and multifamily construction (apartments and condominiums). In Utah for 1986, there will be approximately 13,400 new residential units built compared to 15,200 in 1985, a 12.1 percent decline. This information is shown in Table 13. This decline in residential construction activity comes despite a significant reduction in mortgage interest rates. Mortgage rates have dropped from 13.5 percent in 1983 to 9.5 percent in 1986 but single family construction has been unaffected; moving in a narrow range during these years between 7,400 units and 8,800 units.

Even with further declines in interest rates it is doubtful the demand for single family housing in 1987 will move out of this range. The impetus for a strong surge in single family construction lies with renewed high levels of in-migration. Between 1975 and 1980 the state had an annual average in-migration rate of 17,000 people. These people moved to Utah because of job opportunities. Their arrival created demand for new housing units. This phenomenon no longer exists. Due to fewer job opportunities out-migration has occurred the past 3 years. Consequently the demand for housing in Utah has declined, substantially.

The pattern of out-migration is likely to continue in 1987. There is no single event or set of events on the economic horizon that would dramatically increase in-migration and the demand for housing. However, demand could decline below the 7,400 to 8,800 range if the economy slipped into a serious recession. Barring a recession single family housing in Utah should be approximately 8,000 new units in 1987.

Multifamily housing has experienced record levels of construction in the past few years because of the "apartment boom" in the Wasatch Front Counties. Most observers agree that the market has been over built. Vacancy rates exceed 15 percent for many projects and it is estimated that in Salt Lake County there are nearly 10,000 vacant apartment units, leaving an 18-24 month supply of vacant rental units on the market.

Third quarter multifamily construction activity in Salt Lake County is a harbinger of 1987. Multifamily construction activity in the third quarter dropped to only 100 units compared to 2,200 units for the first and second quarter. Multifamily construction activity is likely coming to an abrupt halt. When the very weak market conditions are combined with out-migration and the new tax reform law which discourages apartment syndication, a bleak short term forecast for multifamily housing emerges.

Multifamily construction activity in 1987 will drop to approximately 3,000 units. Unlike past years neither Washington County (St. George) nor Park City can offer any support in buoying up activity since both these non-metropolitan areas are also over built.

Therefore in 1987 residential construction activity is estimated to be 11,000 units; 8,000 single family units and 3,000 multifamily units.

Nonresidential Construction

In 1986 the value of nonresidential construction will be down about 30 percent to $400 million. In 1987 the value of nonresidential construction will drop at least another 10 percent to $325 to $350 million range.

In past years the major segments of nonresidential construction activity have been: industrial buildings with 17.5 percent of nonresidential activity, office buildings with 15.5 percent, alterations with 14.6 percent and stores with 11.1 percent. Whenever nonresidential construction has hit high levels of activity both office and industrial construction have led the building boom. The current market conditions are weak for both office buildings and industrial buildings. Therefore in 1987 the activity in these two important sectors of nonresidential construction will be relatively sluggish.

In Salt Lake County the vacancy rate for office space is 19.8 percent and for industrial space over 8 percent. Through August of this year the value of new office construction was only $47 million; a steep decline from the $100 million per year activity of 1983 and 1984. This year may be only a $50 million year in office construction and 1987 will probably be even lower.

The value of industrial activity has held up well so far in 1986 due mainly to new construction at Hercules, Inc. In March permits were issued for 29 buildings valued at $33 million for construction of Hercules Inc.'s test facilities. These test facilities account for 45 percent of industrial construction activity in the state this year. The other major industrial project in 1986 is the McDonnell Douglas manufacturing plant, which was issued a building permit in June for $9.8 million. These two large projects will save industrial construction from a severe decline in 1986 but there are no anticipated large projects in 1987 to buoy up industrial activity.

The construction of new office buildings and manufacturing plants depends ultimately on the creation of jobs. In fact the entire nonresidential sector is very sensitive to increases in employment. With slow job growth nonresidential construction must slow down. The recent peak years of 1979 and 1984 in nonresidential construction were preceded by very rapid job growth. Between 1977 and 1979 the number of jobs in Utah increased by 62,000 employees; in 1983 jobs increased by 34,000 employees. This growth provided the stimulus for new nonresidential construction. Job growth in Utah in the last year has been much slower, as discussed earlier in the report.

Utah's sluggish job growth will hold down the development of office and industrial buildings while slow population growth will hamper the development of shopping centers and mercantile buildings, and the fiscal crisis will weaken the public building sector. Tax reform will also be a factor contributing to slower nonresidential construction.

The kind of rapid economic growth for the state, upon which the feasibility of many recent nonresidential projects was justified, has yet to materialize. The state, region and national economies are all experiencing low levels of economic expansion consequently nonresidential construction in Utah will be below $400 million in 1986, a 30 percent decline. In 1987 nonresidential construction will continue to decline at least another 10 percent to the $325 to $350 million range. The $400 million modernization of Kennecott's Utah operation will provide some cushion but not enough to offset declines in the construction of new office buildings, industrial buildings, and shopping centers. Table 14 provides the value of nonresidential construction from 1976 to 1986.

Table 13

Utah Residential Construction Activity

Year	Single Family Units	Multi-Family Units	Total
1976	13,546	5,075	18,621
1977	17,424	5,856	23,282
1978	15,625	5,646	21,264
1979	12,570	4,197	16,767
1980	7,760	3,141	10,901
1981	5,413	3,840	9,253
1982	4,767	2,904	7,671
1983	8,806	5,858	14,664
1984	7,496	11,325	18,823
1985	7,403	7,834	15,237
1986(P)	8,503	4,834	13,387

(P) Preliminary

Table 14

Utah Nonresidential Construction

Year	Value of Nonresidential Construction (Millions of Dollars)
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(P)	395.0

(P) Preliminary

Source: Bureau of Economic and Business Research, University of Utah, Graduate School of Business, 1986.

PRICES AND INFLATION

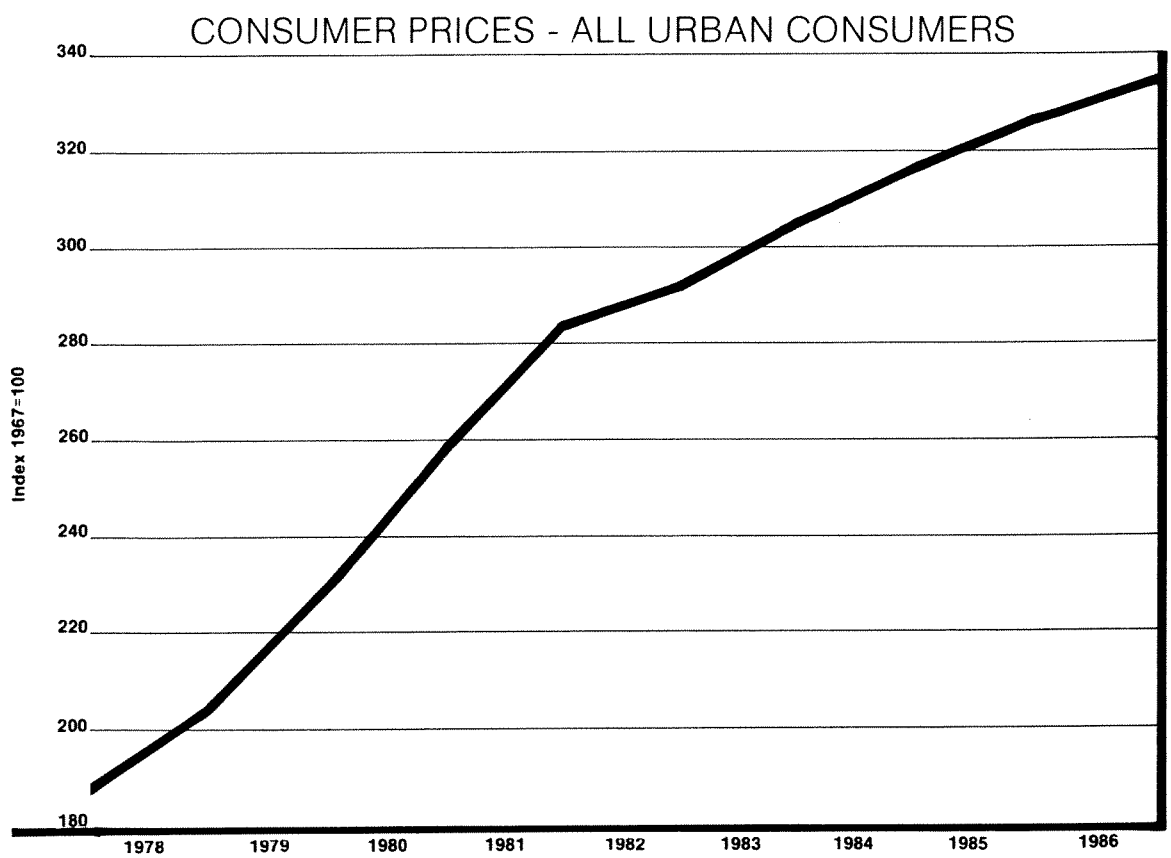
Inflation is an important concern for everyone. It is an economic problem because it erodes ones purchasing power. However inflation does not impact everyone equally.

The Consumer Price Index (CPI)

The CPI for 1986 will experience the smallest increase in 20 years. It is estimated that the final price index for 1986 will record a 1.9 percent increase over 1985, a far contrast from the 13.5 percent increase recorded in 1980. 1986 will be the fifth year in a row during which the consumer price index has risen four percent or less. Table 15 and Figure 16 show the consumer price index for all urban consumers from 1978 to November of 1986.

Housing and medical care prices have risen somewhat faster than all prices during the past four years. Housing prices have risen 5 to 6 percent range each year. Medical care prices have risen more than 6 percent per year.

Figure 16



The low rate of inflation in 1986 is generally due to the plunge in oil prices that occurred early in the year and the lackluster performance of the economy which saw commodity prices trending down through most of the year.

With inflation rates down and the economy performing at relatively low growth levels, the Federal Reserve Board has pursued an expansive monetary policy increasing the money supply well beyond previously announced targets.

The outlook for 1987 is for higher inflation but at rates still below 4 percent. The decline in the dollar, the expansion in the monetary base and the prospect for increases in oil and other commodity prices should push growth in the consumer price index above 3 percent. There are an increasing number of business leaders and economists who believe that a mild dose of inflation will be an expansionary and stimulative force.

It should be noted that inflation measures are not specific to Utah. The consumer price index or the GNP deflator are national measures derived through surveys in a number of U.S. cities. Utah could be experiencing more or less inflation than these measures indicate, but there is really no way of knowing.

The Consumer Price Index measures price changes in a fixed market basket. That is, it compares the current cost of purchasing a fixed set of goods and services with the cost of the same set last month, last year, and so on. Keeping the market basket constant enables the CPI to measure price changes rather than both price and purchasing pattern changes.

Another commonly used inflation index is the GNP Implicit Price Deflator or GNP Deflator. The Implicit Price Deflator differs from the CPI in two major respects. First, it is more comprehensive. In addition to consumption expenditures it measures changes in the other components of GNP, i.e. investment, government, and net international trade expenditures. Secondly, the deflator reflects both changes in prices and changes in the composition of output.

The GNP Implicit Price Deflator is used when a comprehensive inflation index is needed for the total economy that accounts for changes in the makeup of GNP. The CPI is generally used to measure price inflation or the increasing cost of living to consumers.

Inflation as measured by the GNP Implicit Price Deflator was estimated to be 2.8 percent in 1986. Most economists expect this index to be between 2.8 to 3.8 percent in 1987.

Table 15

U.S. Consumer Price Index-All Urban Consumers
1967 = 100 Except as Noted

				Housing												
					Shelter						Transportation					
Year	All Items	% Ch.	Food	Total	Total	Renters' Costs (1982 = 100)	Homeowners' Costs (1982 = 100)	Maintenance & Repairs	Fuel & Other Utilities	Apparel and Upkeep	Total	New Cars	Motor Fuel	Medical Care	Energy	All Items Less Food Energy & Shelter
1978	195.4	211.4	202.8	210.4	NA	NA	233.0	216.0	159.6	185.5	153.8	196.3	219.4	220.4	179.1	
1979	217.4	11.3	234.5	227.6	239.7	NA	NA	256.4	239.3	166.6	212.0	166.0	265.6	239.7	275.9	191.5
1980	246.8	13.5	254.6	263.3	281.7	NA	NA	285.7	278.6	178.4	249.7	179.3	369.1	265.9	361.1	208.3
1981	272.4	10.4	274.6	293.5	314.7	NA	NA	314.4	319.2	186.9	280.0	190.2	410.9	294.5	410.0	228.1
1982	289.1	6.1	285.7	314.7	337.0	NA	NA	334.1	350.8	191.8	291.5	197.6	389.4	328.7	416.1	245.6
1983	298.4	3.2	291.7	323.1	344.8	103.0	102.5	346.3	370.3	196.5	298.4	202.6	376.4	357.3	419.3	258.4
1984	311.1	4.3	302.9	336.5	361.7	108.6	107.3	359.2	387.3	200.2	311.7	208.5	370.7	379.5	423.6	271.2
1985	322.2	3.6	309.8	349.9	382.0	115.4	113.1	368.9	393.6	206.0	319.9	215.2	373.8	403.1	426.5	281.6
1986(f)	328.4	1.9														
1986 Nov.	330.8		316.4	361.7	NA	NA	NA	NA	NA	213.1	304.3	NA	NA	444.6	NA	NA

(f) forecast

Source: Department of Labor, Bureau of Labor Statistics

MINERAL PRICES AND PRODUCTION

Utah is endowed with plentiful supplies of fuel and nonfuel mineral resources. These resources have been an important part of the Mountain West's and Utah's economic history. The state's most valuable fuel resource is oil, followed by coal, and then natural gas. Utah's most important metal is copper, followed by gold, and then silver. In addition, Utah develops and has the potential to develop many other fuel and nonfuel resources such as uranium, oil shale, tar sands, salt, potassium, magnesium, lead, iron ore, sand and gravel, lime, zinc, and stone.

The current and future production of these minerals is dependent on commodity prices. Commodity prices are determined by the national and international supply and demand and the exchange value of the dollar. In addition, oil, gas and coal have historically been competitive substitute products; i.e., the price and availability of each has affected the production and price of the others.

Copper, Gold and Silver

Up until 1986 most of the production of metals in Utah came from Kennecott Copper Corporation. The production of copper and silver came to a virtual standstill with the closure of Kennecott in 1985. The main reasons for the closure were noncompetitive production costs from outdated technology, high wages, low commodity prices resulting from a strong dollar and a world glut of copper. Gold production continued, however, as the Mercur mine near Tooele accelerated its operations. The Mercur mine expects to produce approximately 111,000 ounces of gold in 1986.

Copper, silver and gold prices peaked in 1980 and have generally declined since then. The annual price of copper in 1980 was $1.02 per pound, for gold it was $612.6 per ounce, and for silver $20.63 per ounce. Approximately 174 thousand short tons of copper, about 2.2 million ounces of silver, and around 180 thousand ounces of gold were produced that year. Thus, the 1980 value of copper production in Utah was $356.4 million, the value of production for gold was $110.3 million, and for silver it was $45.4 million.

As of December 20, 1986, however, copper was selling for about 63 cents per pound, gold for about $395 per ounce, and silver for about $5.40 per ounce. Kennecott, in announcing its plans to reopen with a $400 million modernization investment, stated that it needs 55 cents per pound for copper to make a profit. Kennecott currently employs about 1,000 workers, and plans to expand to around 2,000 employees by mid-1987. Kennecott employed 7,400 people as recently as 1981.

Coal

Table 16 gives the oil and coal price, production and employment levels for 1980 to 1986. Coal mining employment reached 5,000 jobs in 1982 and has since decreased to the current level of about 2,800 jobs. In 1982 12.83 million short tons of coal were produced in Utah at an average mine mouth value of $27.69 per short ton. The value of coal production in Utah for 1985 was about $355.3 million.

The recent variation in coal prices has been minor compared to the fluctuations in oil prices. Coal prices peaked in 1982 at $29.42 per short ton, and have since decreased to around $27.

Oil and Gas

Oil and gas mining related employment has declined even more rapidly than coal from about 5,900 jobs in 1981 to about 2400 jobs in 1986. The price of oil in Utah has declined from its peak at $34.14 per barrel in 1981, to an apparent low of $9.96 per barrel in June of 1986. The average third quarter price of oil in Utah is estimated to rise to $12.29, and the fourth quarter price is expected to be about $13.50 per barrel.

The value of oil production in Utah peaked in 1985 at around $981.3 million. The average wellhead price for a barrel of crude oil at that time was $23.85. The oil production level was 41.1 million barrels.

The collapse in oil prices that has occurred since December, 1985, had its origins in the price shocks of the 1970's. During that decade the world oil markets experienced two major supply disruptions which led to large increases in oil prices. The first, which resulted from the 1973 Arab-Israeli War, led to the Arab oil embargo and a quadrupling of oil prices between 1973-1974. The second disruption followed the 1979 Iranian Revolution and carried prices to a three-fold increase before stabilizing at $34 per barrel.

Ironically, these two events also set in motion price-driven factors that would work to undermine OPEC's official price and exert downward pressure on oil prices which eventually led to the recent collapse in world oil prices.

The oil price increase that followed the Iranian Revolution resulted in significant reduction of crude oil demand and an increase in the production of non-OPEC oil.

Between 1979-1985 world demand for oil declined 12 percent or approximately six million barrels per day. This dramatic fall in demand was attributable to 1) weaknesses in the world economy, 2) voluntary and government mandated conservation programs, and 3) substitution of non-oil energy resources for oil (e.g. coal for fuel oil).

During the same period, non-OPEC production increased by almost eight million barrels per day. The combination of lower demand and increased production by non-OPEC producers resulted in a 10 million barrel per day surplus of production. With such a large capacity surplus overhanging the market, OPEC members found it increasingly difficult to support OPEC's official posted price and maintain their share of the market.

Despite reductions in posted-prices and production quotas in 1983 and 1984, by 1985 OPEC members were still unable to sustain their share of the world oil market at the prevailing official OPEC price. Production quota cheating and discounting by OPEC members became prevalent and undermined efforts by Saudi Arabia to support the official price by reducing it's production below its assigned quota.

By the summer of 1985 OPEC's quota had shrunk to 15 million barrels per day. Saudi Arabia had absorbed virtually all of the production cut backs in defense of the posted-price and was now producing only 2.2 million less than their peak in 1980.

In September of 1985 Saudi Arabia abandoned its role as "swing" producer and its adherence to official OPEC prices in an attempt to recapture its share of the world oil market. The Saudis increased production to over four million barrels per day and began selling its oil on a "net back" basis.

By December of 1985, a saturated world oil market was suddenly awash in relatively cheap oil. With a large capacity surplus and no apparent support, the price of oil fell well below OPEC's established price level to $28.00 per barrel. Within four months, oil prices on the spot market had collapsed to less than $10 per barrel.

The recent decline in oil prices have no doubt had negative impacts on Utah's economy. Low oil prices have caused lower employment (especially in rural areas) and lower state revenues. Much of the state's severance tax, for example, is exported onto out of state oil company stockholders. State revenues are affected by lower employment and the lower value of oil production. The near-term and long-term impacts of lower oil prices on the Utah economy are less clear, however, since many consumers and businesses benefit from lower petroleum product prices, and lower inflation and interest rates.

Mineral Revenues

Although the value of coal production has remained fairly stable, oil prices and the value of oil production have significantly decreased, thus impacting significantly tax revenues. Table 17 shows that unrestricted general and uniform school fund mineral resource revenues have declined with the price of oil. Mineral resource revenues and the price of oil are both down about 50 percent from July to November of 1986 compared to the same time period of 1985. Table 17 does not include revenue losses from lower mining employment.

Outlook for Mineral Production in Utah

The potential for increased oil and coal production in Utah is high. Utah has many undeveloped coal and oil fields, and vast coal, oil shale and tar sands deposits. However, energy resource development in Utah is expensive, since many of the resources are deep in the ground, must be transported long distances, or are in remote areas which lack pipelines, railroads and highways necessary for development.

National and international politics and economics are important in determining oil prices and production in Utah. Forecasting world oil markets is hazardous. Over the past 15 years unanticipated political and economic events have dramatically altered the course of the oil industry and international oil markets to the point where today's market would hardly be recognized from the one forecasted one year ago. The collapse of oil prices since December 1985 is an example of how one government's actions can confound forecasts based solely on the economics of supply and demand. Estimates of future crude oil prices are subject to these unanticipated changes and the forecast presented here is based solely on the current market situation and political environment.

Based on its December meeting, OPEC clearly intends to reassert its influence over production and prices in an attempt to bring stability to a volatile world oil market. Its focus on establishing production quotas to move the world oil price towards a sustainable $18 per barrel represents such an attempt. However, OPEC's ability to establish a world price is somewhat limited by underlying market factors that are beyond their control. These include:

- Long term conservation efforts initiated following the oil price shocks of the 1970's have left the U.S. and world with a much smaller energy appetite. Improvements in energy efficiencies in automobiles, appliances, residence and commercial buildings, and industrial equipment and processes will continue to suppress oil demand.
- Major non-OPEC producers such as Mexico, the United Kingdom, and Norway are still developing their crude oil resources. Significant new volumes are expected from China, India, Canada and Brazil. In a world market awash in oil, expanded non-OPEC production can be expected to continue to act as a restraint to rapid price increases in 1987.
- The precedence of OPEC members to cheat on production quotas and engage in price discounting is well established. Members are expected to behave no differently in support of the December's OPEC agreement.

These factors are not anticipated to substantially change over the next three years and will tend to dampen any efforts by OPEC to rapidly increase prices. Accordingly, prices are anticipated to remain in the mid-teen range throughout 1987. In a market as volatile as the world oil market prices could temporarily rise above $18 per barrel or significantly fall below $14 per barrel. However, market forces will tend to restore these fluctuations to a range of $14 to $18.

Low oil and coal prices would reduce mineral production in Utah in the long run. On the other hand, higher commodity prices would translate into more resource extraction and output. The affect of higher commodity prices on employment, however, is far less certain. The mining industry must utilize the latest capital intensive technological advancements in order to remain cost competitive in national and international markets.

Efforts to improve productivity should result in output gains outpacing employment gains, or in employment losses. Productivity improvements are already evident in Utah's copper and coal mining industries. In 1981, for example, Kennecott produced around 230 thousand short tons of copper with a workforce of 7,400. After its modernization is completed, Kennecott plans to employ around 2,000 workers and produce 180 thousand short tons of copper annually. In other words, output per worker should more than double after modernization.

Output per worker has also improved in the coal industry. In 1982, for instance, approximately 16.9 million short tons of coal were produced with a workforce of 5,100. In 1985 a workforce of 2,900 produced 12.8 million short tons of coal. Thus, over this period coal productivity improved about 35 percent.

The history of mineral production in Utah has been one of boom and bust cycles. Consequently, there is much uncertainty involved in projecting future resource development. Given current conditions, however, the outlook for mineral production in Utah appears as follows. Coal productivity should continue to improve in the long run. Coal employment should be steady or decline slightly, and prices and output should be stable or increase moderately. Most of the demand for coal will continue to come from electric power generation.

The outlook for oil production and employment appears less promising than that for coal. Oil output will most likely decline in the near-term since drilling activity should remain low, and production from existing wells should start to decline. Oil mining employment in the near-term should remain at low levels.

The short term outlook for copper production in Utah is encouraging. Kennecott claims that it should be able to operate its facilities for 25 to 30 years after modernization, if the price of copper remains above 55 cents per pound. Copper prices are quite volatile, but are expected to remain around 60 to 65 cents per pound in the near-term. With Kennecott reopening, metal mining employment and output will increase significantly over the next couple of years. Because of strong international competition, however, copper prices, output and employment in Utah will most likely not increase substantially in the long-term.

Table 16

State of Utah
Oil, Gas and Coal Resources
Prices, Production & Employment
Calendar Years 1980 to 1986

Calendar Year	Oil Price Per Per Barrel	Oil Production (000)	Value Of Production ($000000)	Coal Price Per Short Ton	Coal Production (000)	Value Of Production ($000000)	Oil & Gas Mining Employment	Year Over Year Growth	Coal Mining Employment	Year Over Year Growth
1980	19.79	24,978	494.31	25.63	13,236	339.24	4,519	4,356		
1981	34.14	25,860	882.86	26.90	13,808	371.44	5,915	1,396	4,512	156
1982	30.50	22,440	684.42	29.42	16,912	497.55	5,401	(514)	5,063	551
1983	28.12	29,534	830.50	28.30	11,829	334.76	4,493	(908)	3,148	(1,915)
1984	27.21	34,689	943.89	29.20	12,259	357.96	4,962	469	2,784	(364)
851Q	24.26	9,634	233.72	29.41	2,666	78.41	4,526	NA	2,635	NA
852Q	22.53	9,978	224.80	25.54	3,166	80.86	3,810	NA	2,753	NA
853Q	24.25	10,705	259.60	26.73	3,296	88.10	3,537	NA	2,942	NA
854Q	24.56	10,828	265.94	28.05	3,703	103.87	3,470	NA	3,100	NA
1985	23.85	41,144	981.28	27.69	12,831	355.29	3,846	(1,116)	2,857	73
861Q	17.85	10,574	188.75	27.05	4,204	113.72	3,095	(1,431)	3,143	508
862Q	11.15	9,778	109.02	27.29	3,202	87.38	2,366	(1,444)	2,816	63
863Q	12.29	9,352	114.94	27.17	2,967	80.61	NA	NA	2,733	(209)
864Q	13.50	9,500	128.25	27.17	2,741	74.47	NA	NA	2,800	(300)
1986	13.60	39,200	533.12	27.17	13,114	356.31	NA	NA	2,873	16

1) 1986 third and fourth quarter values are estimates.
2) Coal prices and production data provided by energy information administration (EIA).
4) Oil prices and production for 1980 to 1984 provided by EIA.
4) Oil prices after 1984 provided by Utah State Tax Commission.
5) Oil production figures after 1984 provided by Utah Division of Oil & Gas.
6) Employment figures provided by Utah Department of Employment Security.

Table 17

State of Utah
Unrestricted General & Uniform School Fund
Mineral Resource Revenues
Fiscal Years 1985 to 1987

	FY1986 FY1985 Actual Collections ($Millions)	FY1987 FY1986 Actual Collections ($Millions)	July to Nov Actual Collections ($Millions)	July to Nov Actual Collections ($Millions)	% Change July to Nov. FY86 to FY87
Source of Revenue					
Mine Occupation Tax	46.9	43.8	11.3	5.7	-49.56
Mineral Production Tax	18.1	22.9	11.7	5.4	-53.85
Mineral Lease Payments	34.2	32.6	16.3	8.2	-49.69
State Land Income	18.4	11.2	4.2	3.1	-26.19
Conservation Tax	2.5	2.3	0.9	0.4	-55.56
Mineral Recapture Tax	6.4	7.9	0	0	NA
Total	126.5	120.7	44.4	22.8	-48.65

Source: Utah State Tax Commission and Department of Administrative Services, Finance Division.

TAX COLLECTIONS

Total tax collections for the General Fund/Uniform School Fund totaled $1.25 billion in fiscal year 1985-86. The most current estimate for fiscal year 1986-87 is $1.29 billion. Tax collections from all sources from 1975-87 are shown in Table 18.

Approximately 80 percent of General and Uniform School Fund revenues come from two sources: individual income and sales and use taxes. These taxes are primarily a result of wages and salaries paid to Utah workers. Most of the general and uniform school funds come from sales and use taxes which make up 43.4 percent, income taxes which make up 36.3 percent, and corporate franchise taxes which make up 6.7 percent of the total for the two funds.

Growth in Tax Collections

Over the last four years, state taxes collected for the General Fund/Uniform School Fund have been growing at a decreasing rate. Growth over the last three fiscal years has been 24 percent, 9.3 percent and 2.6 percent respectively. During fiscal year 1986-1987, these revenues are projected to grow at 1.1 percent, the lowest growth in at least 10 years.

Yet, over the past twenty years from 1966-1986, sales tax collections for the General Fund/Uniform School Fund grew at an average annual rate of 12.2 percent, and income tax collections grew at an even faster rate of 12.8 percent.

The largest average annual growth in sales and income taxes occurred from 1971-76. Sales tax grew by 14.0 percent and income tax grew by 17.8 percent. The slowest annual average growth period for sales taxes was from 1981-86, at 7.4. For income taxes the slowest growth occurred from 1966-71, at 8.8 percent; but, the 9.0 percent growth rate from 1981-86 was not significantly higher.

Average annual growth rate for both sales and income taxes exceeded the growth in personal income for the five year period 1981-86. However, there were individual years when the growth in personal income was greater than the growth in taxes. The growth in sales and income taxes, compared to the growth in personal income, over the last three years has significantly deteriorated. This information is shown in Table 19. Most of the deterioration in fiscal year 1984-85, however, was due to major tax increases and windfalls which occurred in fiscal year 1983-84. General Fund/Uniform School Fund revenues were increased in fiscal year 1983-84 by substantial increases in sales, corporate, severance and beer taxes, and by a sales tax acceleration-in-payments windfall.

The continued decline in the growth of taxes during fiscal year 1985-86, however, was largely due to new sales tax exemptions, stronger growth in tax exempt services industries than in taxable goods industries, declining wages and employment, depressed oil prices, the closure of Kennecott, and out-migration.

Table 18

Selected Annual Forecast and Historic Tax Collections in Utah
Fiscal Years 1975 to 1987
December 1986

	Sales Tax Rate	Sales Taxes	Percent Change	Income Taxes	Percent Change	Corporate Taxes	Percent Change	Production Taxes	Percent Change	Lease Payments	Percent Change
FY75	4.00000	173,736,847		104,919,366		18,002,679		0		5,531,870	
FY76	4.00000	194,799,068	12.123	140,561,916	33.971	24,501,925	36.102	0	0	5,512,262	-0.354
FY77	4.00000	225,793,595	15.911	158,268,002	12.597	24,866,694	1.489	0	0	9,017,517	63.590
FY78	4.00000	257,988,280	14.258	183,893,615	16.191	29,448,490	18.425	0	0	9,639,068	6.893
FY79	4.00000	288,602,629	11.867	225,955,596	22.873	32,874,065	11.632	0	0	12,325,351	27.869
FY80	4.00000	320,453,903	11.036	265,327,485	17.425	40,377,089	22.824	0	0	14,932,594	21.153
FY81	4.00000	347,382,326	8.403	294,947,280	11.163	40,667,112	0.718	0	0	18,153,384	21.569
FY82	4.00000	385,260,241	10.904	331,139,396	12.271	40,894,065	0.558	0	0	26,890,532	48.130
FY83	4.00000	388,726,234	0.900	347,728,217	5.010	33,762,545	-17.439	4,340,869	0	36,161,670	34.477
FY84	4.30000	515,202,345	32.536	389,959,101	12.145	53,227,690	57.653	10,812,453	149.085	37,468,039	3.613
FY85	4.50000	539,698,530	4.755	434,872,993	11.518	65,918,130	23.842	18,120,056	67.585	34,189,748	-8.750
FY86	4.50000	542,826,784	0.580	453,768,361	4.345	83,816,005	27.152	22,922,687	26.505	32,578,152	-4.714
FY87	4.59375	554,300,000	2.114	500,600,000	10.321	66,000,000	-21.256	11,500,000	-49.831	19,000,000	-41.679

1) FY87 values are forecast amounts.
2) Sales taxes for FY84 include a $55.3 million windfall payment.
3) Sales taxes for FY87 include 6/64 percent reserve account transfer.
4) Income taxes for FY87 include a 4 percent surcharge and $16.5 million in tax reform windfalls.
5) Corporate taxes for FY87 include a 4 percent surcharge.
6) Corporate taxes and income taxes beginning in FY83 each include mineral production taxes.

	Mine Occupation Taxes	Percent Change	Motor Fuels Taxes	Percent Change	Special Fuels Taxes	Percent Change	Beer Cigarette & Tobacco Taxes	Percent Change	Insurance Premium Taxes	Percent Change
FY75	5,769,461		40,484,784		5,753,299		8,699,506		9,520,415	
FY76	11,258,648	95.142	43,514,958	7.485	6,240,646	8.471	9,197,229	5.721	8,384,435	-11.932
FY77	8,489,036	-24.600	45,694,373	5.008	6,865,182	10.008	9,617,419	4.569	10,098,434	20.443
FY78	8,446,277	-0.504	48,808,152	6.814	7,391,145	7.661	9,988,619	3.860	11,917,410	18.012
FY79	8,423,221	-0.273	61,371,556	25.740	9,851,605	33.289	10,156,180	1.678	13,452,007	12.877
FY80	9,821,081	16.595	60,451,305	-1.499	10,469,670	6.274	12,445,300	22.539	14,718,258	9.413
FY81	14,757,130	50.260	56,507,749	-6.524	10,107,098	-3.463	13,520,490	8.639	15,777,757	7.199
FY82	20,694,158	40.232	67,733,812	19.866	12,672,251	25.380	14,107,947	4.345	21,493,820	36.229
FY83	24,329,303	17.566	68,685,458	1.405	12,603,487	-0.543	16,210,648	14.904	17,101,600	-20.435
FY84	36,242,720	48.967	68,978,640	0.427	14,448,900	14.642	19,896,528	22.737	19,985,661	16.864
FY85	46,880,366	29.351	89,337,474	29.515	17,790,559	23.127	21,309,223	7.100	22,262,350	11.392
FY86	43,814,665	-6.539	92,164,304	3.164	19,368,763	8.871	21,053,621	-1.199	26,077,060	17.135
FY87	22,500,000	-48.647	94,000,000	1.992	20,000,000	3.259	21,000,000	-0.255	28,000,000	7.374

1) FY87 values are forecast amounts.
2) Mine occupation taxes include oil and metals.
Sources: Utah State Tax Commission and Utah Office of Planning and Budget

Table 19

Utah Revenues Collected as a Percentage of Personal Income
Fiscal Years 1966 to 1986

Fiscal Years	(1) Avg Yearly % Chg in Personal Income	(2) Avg Yearly % Chg in Sales Tax	(3) (2)/(1)	(4) Sales Tax as a % of Personal Income	(5) Avg Yearly % Chg in Income Tax	(6) (5)/(1)	(7) Income Tax as a % of Personal Income	(8) Avg Yearly % Chg in GF & USF	(9) (8)/(1)	(10) GF & USF as a % of Personal Income
1982	9.46	10.90	1.15	2.84	12.27	1.30	2.44	11.54	1.22	6.55
1983	6.75	0.91	0.13	2.69	5.01	0.74	2.40	1.17	0.17	6.21
1984	7.77	32.52	4.18	3.31	12.14	1.56	2.50	24.02	3.09	7.15
1985	7.57	4.75	0.63	3.22	11.52	1.52	2.59	9.33	1.23	7.26
1986	5.36	0.58	0.11	3.07	4.35	0.81	2.57	2.64	0.49	7.08
1966-71	8.70	13.42	1.54	2.409	8.80	1.01	1.670	NA	NA	NA
1971-76	12.12	13.99	1.15	2.920	17.83	1.47	1.885	NA	NA	NA
1976-81	13.49	12.26	0.91	2.917	15.98	1.18	2.285	12.50	0.97	6.24
1981-86	7.37	9.34	1.27	3.040	9.00	1.22	2.509	9.45	1.28	6.88
1966-76	10.40	13.70	1.32	2.732	13.23	1.27	1.806	NA	NA	NA
1976-86	10.39	10.79	1.04	2.992	12.43	1.20	2.422	10.58	1.12	6.69
1966-86	10.39	12.24	1.18	2.928	12.83	1.23	2.270	NA	NA	NA

1) The 1976-81 & 1976-86 calculations for the GF & USF are 1978-81 & 1978-86 calculations, since data for these funds is not available before 1978.
2) Taxes as a % of personal income will increase as long as the percent change in taxes is greater than the percent change in personal income; i.e., as long as the ratios in columns 3, 6 & 9 are greater than one.
3) FY84 to FY86 sales taxes and general fund monies exclude the 1/8 % restricted state sales tax.
4) Effective sales tax increases occurr in FY66, FY69, FY70, FY84 AND FY85.
5) The FY84 percent change for sales taxes includes a $55.3 million windfall.

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

ECONOMIC OUTLOOK

NATIONAL OUTLOOK

The U.S. economy should continue to muddle along in 1987 with real Gross National Product growing in the 2.5 percent - 3.0 percent range. However this is dependent on the reduction of real interest rates and the trade deficit. Real interest rates have remained high to help keep banks solvent, and to attract foreign capital to cover the federal deficit. The Federal Reserve is likely to lower its discount rate only if it feels that real GNP growth is faltering, or if interest rates are reduced in other trading countries. The Federal Reserve will, for example, probably lower its discount rate if it feels that consumer or business spending is retrenching.

High real interest rates have allowed the U.S. to keep up its standard of living by tapping the savings of foreigners. In fact, borrowing is at unprecedented levels. The national debt and other forms of debt, including corporate, individual, and state and local government debt, have doubled since 1979. Eventually, this credit binge must be repaid.

Real interest rates may also be lowered through inflation, rather than by lowering the federal discount rate, even though nominal interests rates usually increase with inflation. The Federal Reserve has in fact been trying to re-inflate the economy by significantly increasing the supply of money. By increasing the money supply and lowering the value of the dollar, the U.S. can repay its debtors with cheaper dollars. Re-inflating can also help reduce the trade deficit by reducing the value of the dollar, which in turn makes export products cheaper and import products more expensive.

The trade deficit is a serious symptom of a new era of global competitiveness. The United States is facing increasingly stiff competition worldwide. Steps to become more competitive will be needed in order to solve the trade imbalance over the long term.

The trade deficit can also be reduced by U.S. employers and employees becoming more productive and cost competitive, or through reductions in the federal deficit. It is largely because of the federal deficit that real interest rates are high, the exchange value of the dollar is strong, and export products are expensive. The federal deficit will improve, however, only if federal spending is slowed since tax increases under the Reagan administration seem highly unlikely. Because elected officials continue to appear unwilling to significantly reduce federal government spending, it seems unlikely there will be any significant reductions in the deficit. Although, the Gramm-Rudman-Hollings deficit reduction act might be reducing the deficit slightly, it would appear that the legislation is not working as intended.

On the other hand, if congress attempts to lower the trade deficit by passing protectionist trade legislation, the risk of a recession increases. Our trading partners are likely to retaliate to such legislation with trade barriers of their own. A trade war could reduce world trade and lower growth in all countries.

Slow growth and higher prices, appears to be the likely scenario for 1987. Most forecasts for next year expect real GNP growth below 3 percent, and a GNP inflation rate of 3 percent or more. The inflation rate should increase for the following reasons: 1) because of the vast amount of money that has been pumped into the economy, 2) oil prices have probably bottomed out, 3) because a declining dollar will make imported goods more expensive, and 4) due to tax reform which will increase the purchasing

power of consumers and shift the tax burden onto businesses, who will in turn pass much of their tax increase onto consumers in the form of higher product prices.

Forecasts for several national economic variables are shown in Table 20.

Table 20

State of Utah
Forecast of Salient Economic Indicators
December 1986

UTAH AND UNITED STATES INDICATORS	UNITS	1985 Actual	1986 Forecast	1987 Forecast	% Ch. 85–86	% Ch. 86–87
PRODUCTION						
U.S. Gross National Product	Billion Dollars	3,998.1	4,212.8	4,478.0	5.4	6.3
U.S. Real GNP	1982$	3,585.2	3,675.8	3,776.2	2.5	2.7
U.S. Nonagricultural Employment	Millions	97.61	100.05	102.15	2.5	2.1
U.S. Auto Sales	Millions	11.0	11.3	10.5	2.7	(7.1)
U.S. Housing Starts	Millions	1.74	1.83	1.73	5.2	(5.5)
U.S. Industrial Production	1967 = 100	123.8	125.0	128.4	1.0	2.7
Utah Coal Production	Million Tons	12.83	13.1	14.1	2.1	7.6
Utah Oil Production	Million Barrels	41.1	39.2	38.0	(4.6)	(3.1)
Utah Copper Production	Thousand Tons	64.8	0.0	22.0	(100.0)	NA
Utah Car & Truck Sales	Thousands	78.1	78.9	NA	1.0	NA
Utah Dwelling Unit Permits	Thousands	15.2	13.4	11.0	(12.1)	(17.9)
Utah Residential Construction	Million Dollars	630.6	601.6	NA	(4.6)	NA
Utah Nonresidential Construction	Million Dollars	567.7	395.0	350.0	(30.4)	(11.4)
SOCIAL INDICATORS						
Utah Population	Thousands	1,645.0	1,666.0	1,693.0	1.3	1.6
PRICES						
CPI	1967 = 100	322.2	328.4	340.1	1.9	3.6
GNP Deflator	1982 = 100	111.5	114.6	118.6	2.8	3.5
U.S. Unit Labor Cost	1977 = 100	166.6	169.9	173.0	2.0	1.8
Utah Crude Oil Prices	$ Per Barrel	23.9	13.6	14.5	(42.9)	6.6
Utah Coal Prices	$ Per Ton	27.7	27.2	27.5	(7.8)	1.1
Domestic Copper Prices	$ Per Pound	0.64	0.62	0.62	(3.1)	0.0
FINANCING						
U.S. 3-Month Treasury Bills	Percent	7.48	5.97	5.39	(20.2)	(9.7)
Conventional Mortgage Rates	Percent	11.74	10.23	9.59	(12.9)	(6.3)
U.S. Corporate Profits	Billion Dollars	223.1	235.7	291.7	5.6	23.8
UTAH EMPLOYMENT AND WAGES						
Nonagricultural Employment	Thousands	624.4	635.2	643.1	1.7	1.2
Average Nonagriculture Wage	Dollars	17,284	17,508	17,846	1.3	1.9
Total Nonagriculture Wages	Million Dollars	10,792	11,121	11,477	3.1	3.2
Utah Personal Income	Million Dollars	17,259	17,811	18,381	3.2	3.2

UTAH AND INTERMOUNTAIN OUTLOOK

The prosperity of Utah and the intermountain region is largely determined by outside forces which include 1) federal defense expenditures and other federal budget decisions and 2) the international demand and supply of agricultural, manufacturing and mining commodities. It should be noted that although reductions in defense and other federal spending could hurt the Utah economy in the short run, in the long term deficit reduction is critically important to the performance of the U.S. economy and hence the Utah economy.

Prices for farm, metals, forest, and energy commodities, for example, are affected by international markets and the exchange rate of the dollar. The exchange rate of the dollar is in turn affected by the federal deficit. A less valuable dollar makes import goods more expensive and export goods less expensive.

The economic outlook for Utah and the intermountain region for 1987 is one of continued slow growth. Many commodity prices remain depressed, and the energy and construction booms have ended and will likely be slow to turn around. Growth in service producing industries have not totally offset the decline in basic industries.

Intermountain commodity prices and economies should improve, however, as the exchange rate of the dollar falls, the demand for commodities increases, and/or the supply of commodities outside of the region decreases. On the other hand, if the federal deficit is reduced through reductions in defense spending and spending on the administration of federal lands, economies in some states could be adversely affected.

Utah has recently experienced declines in its mining and manufacturing industries. While the direct effects of these retractions has occurred, the indirect effects should continue into next year. The rate of employment growth in Utah may continue to decline, and the unemployment rate may edge higher, during the first quarter of 1987.

The remainder of 1987 should show some improvement in growth, however, if 1) most of the Kennecott workers who are going to be rehired are called back to work by mid-1987, 2) commodity prices do not decline, 3) the USX labor dispute is resolved, 4) consumer confidence does not deteriorate further, 5) office space absorption continues to increase, 6) tourism remains strong, 7) real interest rates are reduced, and 8) the trade deficit improves.

Based on the preceeding, 8,000 new jobs are projected for 1987, a 1.2 percent increase. Total wages are projected to grow by 3.2 percent, with personal income projected to grow by 3.2 percent.

Utah's population is expected to grow moderately during the year. This is due to a significant decline in fertility rates and employment growth rates discussed earlier. The result of these occurrences is a projected population growth rate of 1.6 percent for 86-87 for a total population of 1,693,000 as of July 1, 1987. This means Utah will likely experience another year of out-migration, a trend which has occurred since 1984.

UTAH'S LONG TERM OUTLOOK

An updated projection of "Baseline" or "most likely" economic and demographic conditions, through the year 2010, for the State of Utah has been prepared. These projections are based on a crucial set of assumptions which include:

Declining fertility rates through 1990, and then held constant at 2.5 average births per woman throughout her childbearing years.

Constant age specific mortality rates.

Employment related in or out migration concentrated in early adult ages with much fewer middle aged and older adults being likely to migrate.

An approximate 11 percent increase in overall female labor force participation rates to approximately 64 percent of all women 16-64 and an increased proportion of the labor force made up of women.

State Population and Total Employment Growth

Table 21 present total population and employment projections for the state through the year 2010. The state is projected to reach a population just over 2.5 million in the year 2010. This represents an average annual rate of growth of 1.8 percent from the July 1, 1980 population of 1,474,000. This is a rate double the national growth rate over the same period. As Table 21 shows, this 1.8 percent growth per year average is not evenly distributed throughout the three decades between 1980 and 2010. The first fifteen years are projected to experience growth rates less than 2.0 percent per year, with the exception of the first three years of the decade. After 1995, growth rates fall to around one percent per year, and then increase to over 2 percent per year by the 2005-2010 period.

As mentioned above employment growth has slowed considerably during the last year. The latest projections indicate a 1.3 percent growth in jobs during the next year. However, job growth is not anticipated to be as slow throughout the decade. Total jobs are projected to increase by 2.7 percent a year between now and the year 1990. Between now and the year 2010 jobs are expected to grow by 2.2 percent per year, while the national rate of growth is projected to be 1.5 percent. Table 21 also shows total state employment increasing from 617,000 jobs in 1980 to 1,209,000 jobs in 2010.

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. A critical assumption in the past has been that Utah's "total fertility rate" would remain constant, with a statewide average of 3.2 in 1980. As mentioned earlier, recent analysis of the birth data shows that this previously constant rate began to decline in the early 1980's. Given this decline, the assumption has been revised to indicate a continued decline from 1986 to 1990, albeit at a slower rate than experienced in the early 1980's. After careful research of the national phenomena of declining fertility it was concluded that after 1990, the total fertility rate would begin to stabilize at approximately 2.5. These fertility rates result in a total of almost 1,200,000 births to Utah residents projected for the period 1980-2010. While the number of births is expected to taper off between 1980 and 2000, another surge of births is expected after the year 2000 as another generation ages into the prime childbearing years.

Deaths

The number of deaths in the state is expected to rise continually through 2010. The number of deaths per year increases at an annual rate of 2.81 percent, well above

the population growth rate. The number of deaths per 1,000 population increases from 5.50 per year in 1980 to 7.44 per year in 2010. This increase occurs despite the fact that 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 1980, 10.5 percent of the population was 60 years old or older. In 2010, this group is projected to increase to 14.3 percent of the total.

Net Migration

Migration is typically the most volatile component of population change because it varies with demographic changes and economic conditions. As mentioned earlier in the report, a period of out-migration occurred in the fifties and sixties. However, no net out-migration was experienced from 1968 until 1984. Another period of net out-migration is projected to occur around the turn of the century, reaching a peak in the mid-1990's and then a turn around with substantial in-migration occurring in the period 2005-2010. Out-migration is created when the economy is not growing fast enough to provide jobs for the growing labor force. Population growth frequently occurs during periods of out-migration.

School Age Population

Table 21 and Figure 17 and Figure 18 indicate that the fifteen year period from 1980 to 1995 is projected to experience very rapid growth in school age population (kindergarten through twelfth grade). In 1995, there are projected to be 34 percent more school age children in the state than there were in 1980. This indicates an average yearly growth of over 8,000 potential students, or an annual average growth rate of 1.97 percent per year. However the decline in fertility rates and our economic slowing will mean a slowdown in school age population growth. School age population will begin to level out, growing 2.1 percent per year between now and 1990, growing 1 percent between 1990 and 1994, reaching a peak in 1994 and beginning to decline thereafter. This decline will continue through the year 2000 at which time a new demographic cycle and another period of rapid growth begins. However, these trends will not be spread evenly across the state. Over the entire 30 year projection interval, school age population increases by 44 percent from 354,000 in 1980 to over 510,000 in 2010 for an average annual growth rate of 1.22 percent.

Figure 17

UTAH TOTAL SCHOOL AGE POPULATION

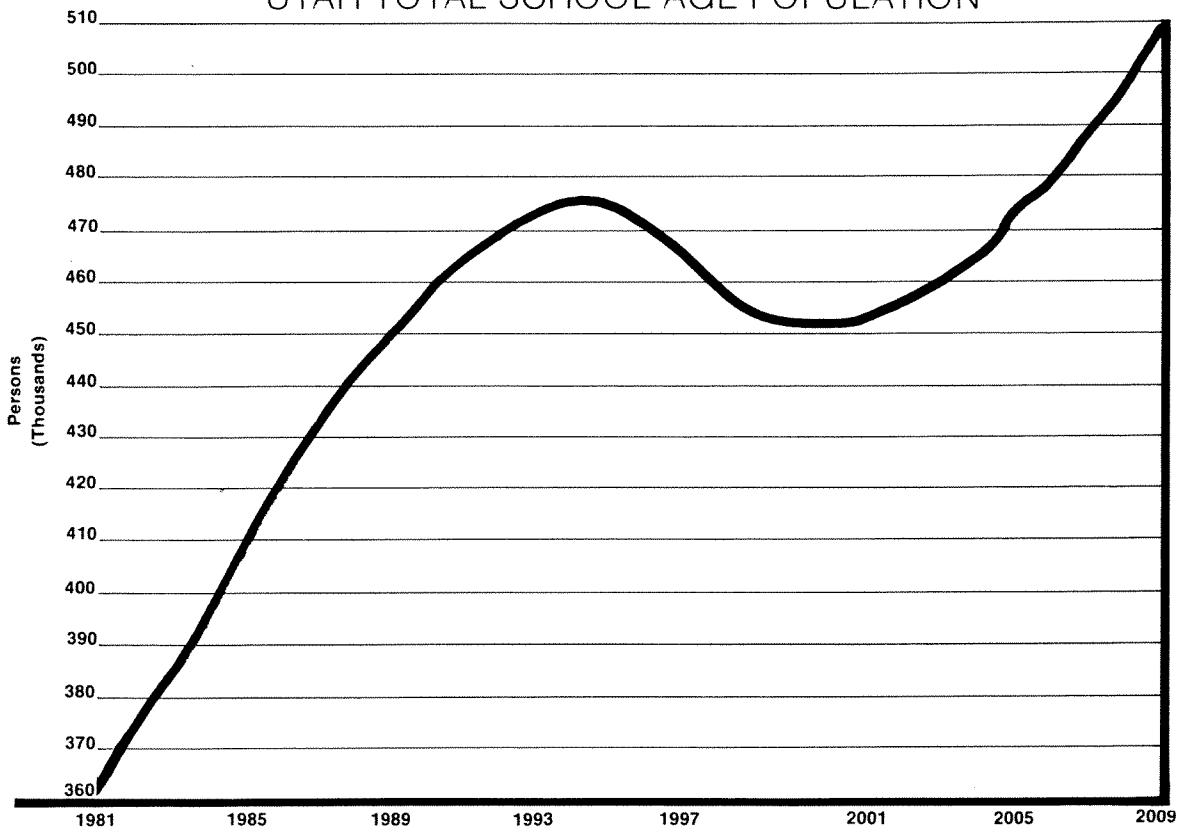
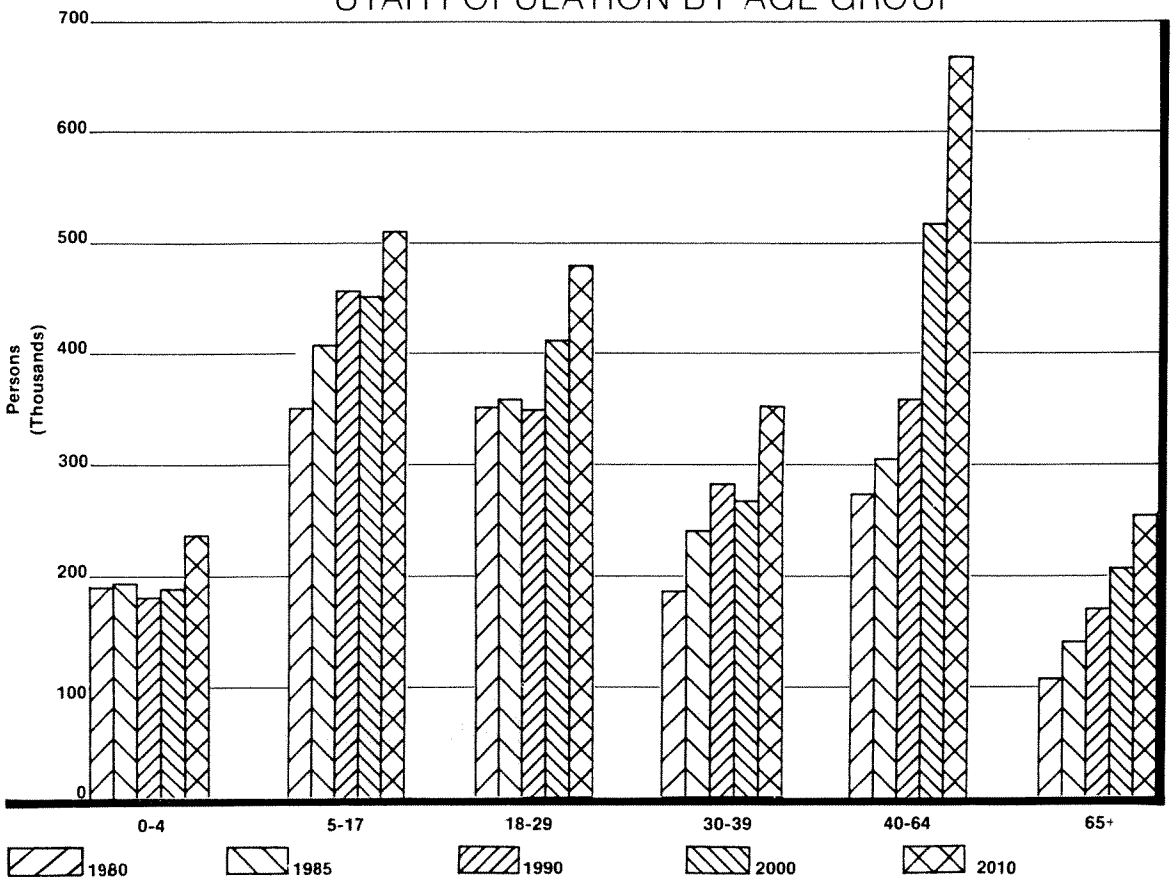


Figure 18

UTAH POPULATION BY AGE GROUP



Employment by Industry

Table 22 and Figure 19 show the change in employment by industry and illustrate the industrial structure projected for Utah's job market. Agriculture, mining, and government are projected to decline as percents of total state employment with agriculture projected to continue its historical decline in total jobs. Government shows the biggest proportional decline of almost 5 percentage points. The wholesale and retail trade and services sectors are expected to increase their proportions of total Utah jobs by 1.5 and 5.7 percentage points, respectively between 1980 and 2010. The other sectors remain relatively constant as percents of the state totals. 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

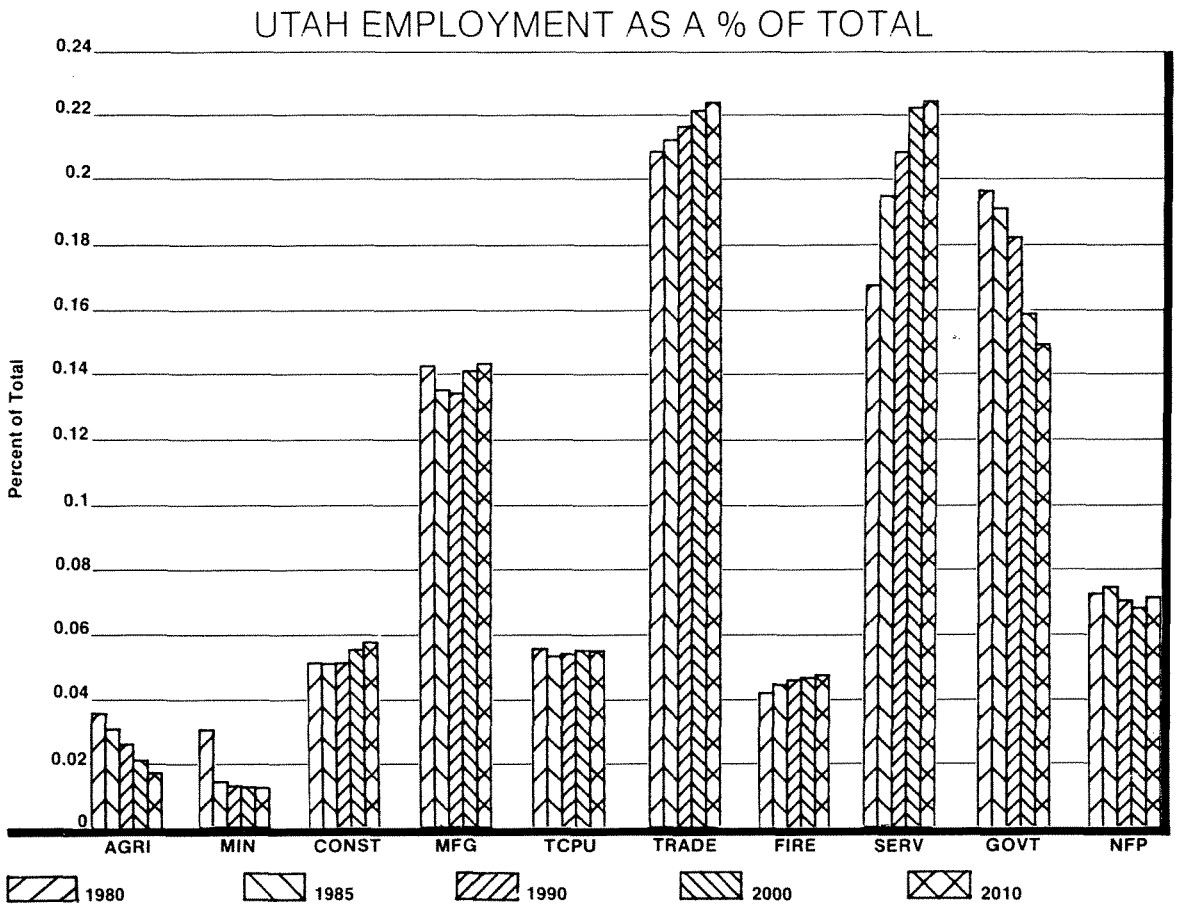
hotels and lodging

business services

health services

The overall pattern appears to be one of slight 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.

Figure 19



Personal Income

The federal government's Bureau of Economic Analysis projects that personal income in Utah will grow much faster than in the nation. They maintain that this is a result of our favorable industrial structure, (i.e. Utah possesses strength in many of the U.S.'s growth industries.) The Bureau estimates that between now and the year 2000, personal income in Utah will be the third fastest growing in the nation, behind only Arizona and Nevada. Utah's per capita income is expected to grow by 2 percent per year. The national average is expected to be 1.8 percent growth. This is a significant turnaround from the 1973-85 period when per capita income in Utah grew 0.9 percent and the national average at 1.4 percent per year.

From the foregoing, it can be seen that Utah can expect to continue to experience relatively good growth through the rest of the 20th century and well into the 21st. Utah will be a growth state but will not experience the rapid growth rates of the past. The population growth rate in Utah is projected to be almost twice the growth projected for the nation. Growth in Utah will not, however, be evenly distributed across the state. In particular, the rural counties, historically dependent on natural resource development, appear to face the prospect of not being able to provide adequate jobs to employ all of their young people as they age into the labor force. Indeed, as has been experienced over the last few years, the entire state will experience out-migration as a result of inadequate employment opportunities during several periods in the next 25 years. The overall state-level picture for most years, however, is one of adequate job growth to meet Utahns' employment needs and of continued in-migration. The geographic distribution of new jobs may result in migration within the state from rural areas to metropolitan counties. However, as mentioned earlier, migration is extremely volatile and difficult to project and is subject to cycles in various industries. These expectations, as expressed in these projections, are, of course, based on a set of crucial assumptions about future economic and demographic behavior. These assumptions are summarized and discussed earlier. They represent a consensus best effort of a large number of planners, officials, and analysts at both state and local levels. They are certainly plausible and reasonable as viewed at this point in time. Nonetheless, as all users and producers of such projections are constantly aware, some of them will prove to be wrong — some badly wrong. The long term future of Utah is inherently difficult to predict.

Table 21

Utah Projected Population by Age Group and Total Employment

Year	Total Population	0–4	5–17	18–29	30–39	40–64	65+	Total Employment
1980	1,474,000	191,000	354,000	354,000	188,000	277,000	110,000	617,000
1985	1,645,000	193,000	407,000	358,000	240,000	306,000	141,000	700,000
1990	1,791,000	180,000	457,000	347,000	280,000	357,000	170,000	788,000
2000	2,045,000	188,000	451,000	412,000	267,000	519,000	208,000	979,000
2010	2,500,000	236,000	510,000	479,000	351,000	669,000	255,000	1,209,000

1980-2010
Annual Average Rate of Change 1.78%
Total Employment includes Agriculture & Non-Farm Proprieters
Source: Utah Population Estimates Committee
Utah Office of Planning & Budget, Data Resources Section: Utah Process Economic & Demographic Model

Table 22

State of Utah Employment by Industry

	1980	% of Total	1985	% of Total	1990	% of Total	2000	% of Total	2010	% of Total
Agriculture	21,944	3.6	21,494	3.1	20,700	2.6	20,800	2.1	21,000	1.7
Mining	18,500	3.0	9,738	1.4	10,200	1.3	12,200	1.2	15,100	1.2
Construction	31,549	5.1	35,510	5.1	40,400	5.1	53,900	5.5	69,300	5.7
Manufacturing	87,700	14.2	93,999	13.5	106,000	13.4	138,000	14.1	173,000	14.3
TCPU*	34,120	5.5	37,013	5.3	42,500	5.4	53,600	5.5	66,000	5.5
Trade	128,678	20.8	147,920	21.2	171,000	21.6	217,000	22.2	270,000	22.3
FIRE**	25,768	4.2	31,059	4.5	36,300	4.6	45,500	4.6	57,300	4.7
Services	103,162	16.7	135,815	19.5	165,000	20.8	217,000	22.2	271,000	22.4
Government	121,310	19.6	133,333	19.1	144,000	18.2	155,000	15.8	180,000	14.9
NFP'S***	44,626	7.2	51,852	7.4	55,600	7.0	66,400	6.8	86,000	7.1
Total	617,357		697,733		792,000		979,000		1,209,000	

* Transportation-Communications-Public Utilities
** Finance-Insurance-Real Estate
*** Nonfarm Proprietors
Sources: Utah Department of Employment Security, Labor Market Information
Utah Office of Planning and Budget, Data Resources Section
U.S. Department of Commerce, Bureau of Economic Analysis

APPENDIX

REGULAR ECONOMIC/DEMOGRAPHIC PUBLICATIONS

Utah Office of Planning and Budget

State of Utah Revenue Forecast (quarterly, published jointly with State Tax Commission)
Utah Data Guide (quarterly)
Baseline Projections Report (annual)
Budget in Brief (annual)
Capital Budget (annual)

Utah Department of Community and Economic Development

Utah Facts
Utah Directory of Business and Industry (annual)
Utah Export Directory
Utah Economic Development Plan

Utah Department of Employment Security

Utah Labor Market Report, (monthly)
Utah Annual Report, Volume III-Labor Market Information (annual)
Labor Market Information (quarterly by district)
Occupations in Demand (quarterly)
Utah Job Outlook for Occupations
Utah Personal Income (1929-1985)

Utah State Tax Commission

Utah Statistics of Income (annual)
New Car and Truck Sales (quarterly)
Gross Taxable Retail Sales and Purchases (quarterly)
Annual Report
Statistical Study of Assessed Valuations (annual)

Bureau of Economic and Business Research

Utah Economic and Business Review (monthly)
Construction Report (quarterly)
Statistical Abstract of Utah, 1983.

Utah Energy Office

Data Source (quarterly)
Utah Energy Statistical Abstract (biennial)