Economic Report To The Governor

1988

STATE OF UTAH

NORMAN H. BANGERTER, GOVERNOR

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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

TABLE OF CONTENTS

Page

Preface v

Executive Summary 1

Economic Indicators and Current Conditions 11

- Labor Market Activity 12
- Personal Income 25
- Population/Demographics 33
- Gross Taxable Sales 41
- Construction Activity 47
- Prices and Inflation 53
- Energy Resource Production and Prices 56
- Tax Collections 63
- Intermountain Region 66

Critical Industry Analysis 68

- Defense 69
- Tourism 80

Economic Outlook 87

- National Outlook 88
- Utah Outlook 91
- Utah's Long Term Outlook 94

Appendix 100

PREFACE

Utah and the nation continually feel the effects of economic change. 1987 brought Utah both good and bad economic news. Because of the state's moderate economic performance many people in Utah have directly felt the effects of a sluggish economy. This report attempts to describe Utah's economic performance over the past year, point out some significant trends and provide an outlook for the short and long term. 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. This report will also include an analysis of two of Utah's most critical industries, defense and tourism.

This 1988 Economic Report to the Governor is the second of its kind in Utah. It represents a joint effort between several state agencies which form the State Economic Coordinating Committee. This committee was formed in 1986 by request of Governor Bangerter. 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. 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

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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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

This economic report will discuss the trends and events that have occurred, for the most part, during the 1980s with special emphasis on the last two years. Annual average employment growth in the 1980s has been slower than for any decade since the 1930s. Furthermore, average annual wages, when adjusted for inflation, have decreased.

Although the 1980s have brought slower growth, this should not overshadow the positive factors taking place in the Utah economy. For instance our service producing economy is one of the fastest growing in the nation. This year there was significant improvement in our goods producing sector. Particularly encouraging was the restart of two major mining and manufacturing industries that had previously closed their doors.

The "Critical Industry Analysis" section is a new feature and highlights two very important Utah industries. The following subheadings are summaries of the major sections of this report. It is hoped that the executive summary will capture the essence of the sections. However, for a more detailed look at each of the sections the reader is referred to the complete text.

Labor Market Activity

Historically, Utah has exhibited an unemployment rate one to two points below the national average. In fact, in the 12 years prior to 1987, Utah's jobless rate exceeded the U.S. average for only three months. This was at the height of the 1982-83 recession. In 1986, the unemployment rate averaged 6 percent while the national rate averaged 7 percent. But in the last part of 1986 the monthly unemployment rate began to rise. This continued into 1987, peaking in March at 6.9 percent, slightly above the national rate. Since then it has dropped dramatically and in November stood at 5.4 percent, once again below the national rate of 5.9 percent.

Utah's unemployment rate indicates a widening disparity between rural and urban economies. In 1981, when the state unemployment rate averaged 6.6 percent, only two counties experienced unemployment rates above 10 percent. In 1987, with state unemployment averaging 6.3 percent for the year, ten counties, all rural, experienced double-digit unemployment rates.

Employment Growth

Nonagricultural job growth in Utah has slowed in the last two years. After the 1982-83 recession, the state created 34,101 jobs in 1984. Since then job creation has slowed to 23,289 in 1985, 9,751 in 1986 and a projected 6,400 in 1987.

Although Utah is experiencing the slowest employment growth in decades, its growth is good by national comparisons. Between 1980 and 1986, Utah ranked 10th in the nation in employment growth. During this time, total Utah employment grew by 14.9 percent while national employment grew by only 10.8 percent.

Wages

Total wages increased by 3.1 percent in 1986 and 3.0 percent in 1987. The Utah average wage (total wages divided by total wage earners) grew by 1 percent in 1986 and is projected to grow by 1.9 percent in 1987. When adjusted for inflation, the average monthly wage fell by 0.4 percent in 1986 and is projected to fall again in 1987 by 1.7 percent. The loss of high paying jobs in primary metals and mining are the biggest reasons for the real wage decline.

Utah's average annual pay for workers covered by unemployment insurance programs was $17,863 in 1986--up 1.6 percent from 1985. The average increase for the nation was 4.0 percent, more than double the Utah rate. Utah's average pay was 88.4 percent of the U.S. average in 1986, down from 91.6 percent in 1985. These changes caused Utah to lose four places in pay level ranking from 29th in 1985 to 33rd in 1986. 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.

Personal Income

Utah's 1987 total personal income (TPI) is forecast to be $18.9 billion, up 3.3 percent from 1986. Utah's TPI increased more rapidly than that of the United States during most of the past 16 years. Over the last six years, the difference between Utah and U.S. growth rates has narrowed, and for the past three years Utah's rate of increase has been lower than that of the U.S.

Per capita personal income is an area's personal income divided by the total population as of July 1 of that year. Utah's 1987 per capita personal income (PCI) is estimated at approximately $11,300. From 1979 to 1986, Utah's real per capita income has decreased $209, compared to the $996 increase in the United States real per capita personal income. "Real per capita income" means it has been adjusted for inflation.

Utah's 1986 per capita personal income at approximately $11,000 ranked 48th among the fifty states. This is 75 percent of the U.S. per capita income. Because Utah's population has a large number of children (the result of many years of high birth rates), this PCI comparison portrays Utah as a low-income state. When household incomes are compared Utah ranks more favorably. In 1986 the average Utah household earned $35,580, 89.5 percent of the national average of $39,750.

Population/Demographics

On July 1, 1987, the estimated population of Utah reached 1,678,000, a 0.8 percent or 13,000 resident increase above the 1986 revised estimate of 1,665,000. This is the slowest population growth rate since 1964. During the 1970s, Utah averaged an annual population growth rate of 3.3 percent. From 1980 to 1987, Utah's population growth has dropped to 1.8 percent, annually.

The reasons for the significant drop in population growth rates are twofold: four straight years of out-migration; and a rather sharp decline in fertility rates. The out-migration is due to an economic growth rate that has not been able to keep pace with a fast growing labor force. Out-migration is estimated at 13,500 for the period July 1, 1986 through July 1, 1987. This is the largest out-migration since 1964 when almost 14,000 people were estimated to have left the state. Utah's employment growth rates for the last few years have been above national averages but not high enough to keep pace with those

entering the labor force. Also, much of this out-migration is attributed to declines in the energy producing industries of Utah which created rapid in-migration during the energy boom years of the seventies and early eighties.

The number of live births in the state peaked in 1982 and has dropped steadily since. This decline in births is taking place in every county and every age specific group. As a result the total fertility rate has dropped from 3.2 (3.2 children per woman during a lifetime) to an estimated 2.6 in 1986.

Gross Taxable Sales

Preliminary receipts from October and November 1987 tax collections indicate that third calendar quarter taxable sales fell 2 percent compared to a year earlier. Total taxable sales have continued to decline in 6 out of the last 7 quarters. Taxable sales, when adjusted for inflation, have fallen in 9 out of the last 10 quarters.

The outlook for 1988 is somewhat brighter. Retail sales should grow 2.4 percent, due to an improved job picture, along with the end of the effects of tax reform's removal of the sales tax deduction.

Taxable services should grow at a moderate 3 percent rate in 1988. The taxable services sector is dominated by auto repair and business services. Continued declines in new car and truck sales translate into further increases in auto repair. Business services have rebounded to 1985 levels after the 1986 downturn. Because of the volatility of this sector any forecast is hazardous at best.

Construction Activity

Residential construction (single and multifamily) dropped over forty percent between 1986 and 1987. This is the sharpest one year decline of residential construction since World War II. No further decline is expected in 1988, but it is not likely that an upturn will occur either. Single family construction fell by 25 percent and multifamily fell by 84 percent between 1986 and 1987. Overbuilding in multifamily construction and a decline in the population and economic growth rate has brought residential construction sector to an unusually low level.

Nonresidential construction has historically been led by industrial and office building construction. With vacancy rates in Utah's metro areas at 12 and 18 percent for these two sectors respectively there will be little support for any significant turnaround. However, vacancy rates have started to decline.

Prices and Inflation

Inflation, over the last four years, as measured by the Consumer Price Index, has slowed measurably. In 1984, the inflation rate was 4.3 percent, for 1985 it fell to 3.6 percent and in 1986 it slowed to 1.9 percent. In 1987, it is estimated to grow by 3.6 percent. The projected rate for 1988 is 4.4 percent. These rates are significantly lower than the double digit rates the nation experienced between 1979-1981. Probably the single biggest reason for the decline in the inflation rate is the intensification of international competition. Such forces have dampened wage rates, lowered profits and forced U. S. companies to increase productivity in order to stay competitive

Energy Resource Production and Prices

The presence of significant reserves of oil, natural gas, coal, and uranium has fostered development of a substantial energy producing industry in the state. When measured in the amount of energy produced (BTUs), coal and uranium production accounted for 34.0 and 33.2 percent of total energy produced while crude oil and natural gas contributed 23.1 and 9.7 percent respectively. When measured in the dollar value of production, oil ranks first, producing 46 percent of the total value of energy in the state.

Employment in the four primary energy producing sectors has fallen 47 percent over the course of the past six years. Oil price declines have had a devastating effect on employment in Utah's oil and gas industry. Employment in Utah's coal industry continues to decline despite year-to-year increases in production since 1983. Similarly, Utah's yellowcake (from uranium) production has achieved record levels in the past two years yet employment in 1987 is only 23 percent of what it was in 1980.

Though the rise in crude oil prices has been encouraging, Utah's oil has been the most expensive to drill in the continental United States. In the absence of a dramatic and sustained price increase to at least $30 per barrel, Utah drilling activity will probably remain at its current depressed level. Like oil, natural gas production will eventually decline due to lower prices and decreased drilling activity. Utah coal is also expensive to extract and market outside the intermountain west and Pacific Coast states. Nevertheless, Utah coal production is expected to increase slightly over the next year. The need for uranium is directly related to the use and growth of domestic nuclear energy. With no signs of growth in this industry, uranium production will not likely increase.

Tax Collections

Fiscal years 1975 through 1982 were years of strong growth for sales and income taxes. This was a period of in-migration and relatively high growth in employment and nominal wages. Fiscal year 1983 exhibited a sharp decrease in the rate of growth in taxes due to a recession. Fiscal year 1984 collections compared to fiscal year 1983 were up significantly due to the economic recovery, tax rate increases and windfall payments.

Moderate growth in tax collections occurred in fiscal year 1985 as the economic recovery continued. Fiscal year 1986 showed another sharp decrease in collections. The decline in fiscal year 1986 revenues was largely due to the closure of Kennecott, out-migration, depressed oil prices, declining wages and employment growth, and new sales tax exemptions. Most of the growth took place in the tax exempt service industries rather than in taxable goods industries.

Fiscal year 1987 tax collections improved because of tax increases, windfalls, and accelerations in payments authorized by the 1987 legislative General Session. Had the legislature not implemented these measures, revenues would have fallen by $53.3 million below 1986 collections. The underlying weakness in fiscal year 1987 revenue receipts was due to several factors: 1) idling of the Geneva steel plant, 2) temporary closure and downsizing of Kennecott, 3) continued out-migration, 4) the construction downturn (particularly the completion of IPP), 5) lower oil prices, 6) sluggish economic activity in surrounding states, 7) new tax exemptions, and 8) lower employment, population, and wage growth.

Revenue collections in fiscal year 1988 are expected to improve over those for fiscal year 1987 due primarily to tax increases and accelerated corporate franchise tax payments. The economy should improve somewhat in 1988 for the following reasons: 1) opening of

BP Minerals (formerly Kennecott Copper), 2) re-opening of Geneva, 3) new defense contracts at Thiokol and Hercules, 4) expansions at the airport, 5) office space absorption improving, 6) and tourism remaining strong. Tax collections should also improve in 1988 due to the boost in wages resulting from increased productivity, inflation, and lower unemployment.

Intermountain Region Performance

The intermountain region which includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah, and Wyoming; had the fastest growing population of any of the nine census divisions in the United States between 1980 and 1986. Among the mountain states, Utah was the third fastest growing state with a population increase of 14 percent during this period.

Utah's economy during the eighties has performed better than most of its neighboring states. Of the eight mountain states, Utah tied with Nevada in having the lowest unemployment rate in 1986. Utah ranked third in nonagricultural jobs created, population growth, total personal income growth, and fourth in per capita personal income growth, from 1980 to 1986.

National Outlook

It may be some time before analysts can discern whether or not the economy has been adversely affected by the devaluation of stock prices or fears of inflation and recession. Some economic indicators may be signaling a slowdown. The index of leading indicators fell in October after remaining flat in September. National surveys have registered declines in consumer confidence, the trade deficit worsened in November, and retail sales in November appear to have been flat despite deep discounting.

Other indicators, however, point to a strong economy. The unemployment rate continued to decline through November, industrial production was at 81.7 percent of capacity in November (the highest rate since August 1984), the average workweek in manufacturing in October was the highest in 21 years, export industries are currently experiencing a mini-boom, and the growth in imported goods has been reduced. A recent survey conducted by the 12 district banks of the Federal Reserve uncovered only a "slight decline in optimism" of retailers and capital-goods producers as a result of the stock market crash.

A revived manufacturing sector is currently driving economic growth. A weakened dollar has helped boost exports and reduce the flow of imports. Recent decreases in interest rates in West Germany and other European nations have increased the attractiveness of U. S. investments by increasing the interest rate spread between U. S. and European government securities. This increased spread should help strengthen the dollar and reduce risks of inflation and recession.

The outlook for the U. S. economy in 1988 is for slow growth, but not a recession. The slowing will be consumer led and will reflect increased uncertainty brought on by the recent stock market crash and fears of a recession. This modestly optimistic outlook presumes that the Federal Reserve Board, Congress, and the President will not engineer a recession through policy mistakes. It also assumes that the upturn in exports will continue into 1988 with no further significant declines in the dollar or consumer confidence. The risks remain on the down side, however, and a recession cannot be completely ruled out.

Utah Outlook

Economic indicators are giving mixed signals regarding the current health of the Utah economy. Unemployment insurance claims are down, the unemployment rate has declined, and growth in employment, wages, and incomes has been showing improvement. The decline in the unemployment rate would appear on the surface to be good news. This decline may, however, be largely the result of out-migration during 1987.

The Utah economy is receiving a boost from the upgrading and expansion of the Kennecott and Mercur mining operations. Manufacturing employment is improving due to the re-opening of Geneva Steel. Other signs of improvement include the opening of AT&T's new credit management center; expansions by McDonnell Douglas and Delta airlines; the opening of a telemarketing center by NICE Corporation; expansions by the All American Gourmet Company and Stouffer Foods; plans to construct a wax refinery; and, the winning of sizable defense contracts by both Thiokol and Hercules.

Negative factors in Utah's economy include continued job losses in construction due to overbuilding and the completion of the IPP project; layoffs at Iomega; declines in oil mining due to depressed prices; job losses due to UP&L's closure of coal mines; layoffs at Eastern and Continental airlines; job losses at Union Pacific; planned layoffs early next year at BP minerals; and, job losses that should result from spending cutbacks under the federal budget deficit reduction accord.

All things considered, the economic outlook for Utah is one of improved but slow growth. Population, wages, employment, and incomes are all expected to show slight gains in 1988. Out-migration will likely continue for the fifth consecutive year but at a lower level than in 1987. Population should grow by 18,000 in 1988 compared to an increase of only 13,000 in 1987. According to a consensus of the Economic Coordinating Committee, employment is expected to increase by approximately 11,100 jobs in 1988 compared to 6,400 jobs in 1987.

Increases in productivity and inflation, and a lower unemployment rate, should help improve wages and incomes in 1988. The average nonagricultural wage is expected to increase by 2.2 percent next year compared to 2.0 percent this year. Personal income should increase by 4.2 percent in 1988 compared to 3.4 percent for 1987. Improvements in the general economy should help increase housing and car sales, and give a much needed boost to construction.

Much of the prosperity in Utah is affected by national and international forces beyond the control of Utahns. Improved commodity prices and the confidence of foreign investors have helped to revive the manufacturing and mining industries in Utah. Utah should avoid a recession in 1988 if the national and global economies do not deteriorate significantly.

Utah's Long Term Outlook

The state is projected to reach a population just over 2.4 million in the year 2010. This represents an average annual rate of growth of 1.7 percent from the July 1, 1980 population of 1,474,000. This is a rate double the national growth rate over the same period. Between 1987 and the year 2010 jobs are expected to grow by 2.1 percent per year, while the national rate of growth is projected to be 1.5 percent.

5) Infrastructure. The physical infrastructure -- the roads, utilities, airports, railroads, parks, schools, etc. -- and the fiscal, legal, and regulatory infrastructure provide the basic framework in which economic growth can occur.

6) Information. The availability and free flow of information to and between all decision makers -- consumers, investors, workers students, managers, etc. -- is essential for the efficient functioning of market - system economy.

State sponsored programs attempt to strengthen these six pillars of economic development. Many of the activities of state government actually impact the economy more than the traditional economic development programs of the Department of Community and Economic Development. Indeed, most of state government could be classified into one or more of the six categories.

However, while the state can help shape or strengthen each of the six pillars and hence influence the economy, two important factors should be kept in mind.

1) The positive influence of state & local government on a regional economy can easily be overwhelmed by national and international conditions, including defense activity, energy prices, demographic trends, technological change, environmental factors, defense policy, political trends and priorities, and the decisions of private industry.

2) The investment of the previous generation in public education, higher education, roads, utilities, parks, airports, and the public attitude and policy towards business regulation, the work ethic, entrepreneurship, social problems, environmental problems, and economic development programs are largely responsible for our current relative prosperity or standard of living. In other words, economic development is a long term proposition and what one generation leaves to the next in the way of knowledge, infrastructure, savings, indebtedness, attitudes, and priorities is a major determinant of the process. There are no quick fixes.

In addition to the usual business of government and previously existing economic development programs the State of Utah has in the past year taken several noteworthy actions designed to improve the long-term outlook of the economy. First and most important was the action taken by the Governor and the Legislature to raise taxes during the 1987 Legislative Session. While a tax increase is not usually viewed as a positive force, it is the general consensus of the Economic Coordinating Committee that the failure to enact a tax increase in 1987 would most likely have had a worse impact on the economy than raising taxes. Without new revenues there would have been further deterioration in the infrastructure and a substantial drop in funding for public and higher education. The need for a tax increase was brought on by the convergence of two trends -- the decline in energy and commodity prices and a rapid increase in the school-age population. Even with the tax increase Utah taxes are not out of line with those in most other states. Economic development prospects should not be seriously affected by the higher tax rates. However, that is not to say that further tax increases would not have a negative impact on the economy.

Other noteworthy initiatives of the state include the strengthening of the Centers of Excellence program, the Federal Procurement Program, and the International Marketing Program. Sixteen Centers of Excellence in seven targeted areas of technology have been established at Utah colleges and universities. In 1987 the state leveraged $1.3 million to receive a total of $35 million in funding from 123 private companies and 14 federal agencies. This partnership should help keep Utah on the cutting edge in those advanced

technologies. The Federal Procurement program helped 322 Utah companies obtain federal contracts worth over $33 million. The International Marketing Program has significantly beefed up its efforts to help identify foreign markets for Utah manufactured goods. There are now three Utah foreign trade assistance offices located overseas -- in Japan, Korea, and Taiwan. The low value of the dollar should help ensure that foreign exports will be a high growth market for Utah companies during the next few years.

Some of the major positive events or developments affecting the Utah economy in 1987 and 1988 include the following.

* Total federal spending approaches $6 billion in Utah and the federal government continues to be the dominant economic influence in the state. There is concern over the impact on the state's economy of the deficit reduction measures that will be adopted by the federal government in the wake of the stock market crash in October, 1987.

* The modernization and reactivation of the former Kennecott copper operation (now BP Minerals) continues on schedule. Prospects for the company have improved as copper prices moved steadily upward throughout 1987. The $400 million modernization effort should be complete by the 2nd half of 1988 and the facility should stabilize at an employment level of about 1,500.

* The reactivation of the Geneva Steel Plant in Utah County in September, 1987 has provided direct employment for approximately 1,200 workers.

* In addition to the favorable outlook for Utah's steel and copper industries there is reason for optimism for other mineral and energy industries. Although drifting lower in recent months, oil prices are still higher than in 1986. Coal output is increasing and interest and activity in precious metals is building.

* The merger of Western Airlines with Delta Airlines in the spring of 1987 and the continued expansion of Delta's Salt Lake hub operations has brought the airline to a level of about 3,100 employees in Utah and a payroll of $150 million.

* AT&T opened a credit management center (one of five nationwide) in Murray in 1987 and is expected to be at nearly 500 employees by the end of 1988.

* Stouffer's Foods in Springville began 1987 with a brand new plant and a couple of dozen employees. They concluded the year at about 360 employees and are now planning to move ahead with phase 2 (out of 5 phases in their Utah master plan).

* McDonnell-Douglas Corp. dedicated its new Salt Lake facility in September, 1987 and began hiring shortly thereafter. Initial plans call for the company to gradually expand to about 300 employees.

* Morton-Thiokol, Utah's largest private employer, successfully completed several critical tests in the redesign process of the Space Shuttle. The Shuttle program is now on target and is scheduled to resume flights in the middle of 1988. The successful tests have contributed to a feeling of optimism in the company and to a resumption in the flow of contract dollars from NASA into Utah. Morton-Thiokol has expanded slowly throughout the year and is at nearly 8,000 employees.

* A proposed merger between Utah Power & Light and Pacificorp, a Portland based electric utility, is under regulatory review. The merger reportedly will allow UP&L's 5,000 employees to keep their jobs in Utah and should ultimately provide Utah consumers of electricity with more efficient and lower-cost service.

* There are other companies that have recently moved to Utah that are in varying stages of construction or hiring. These include SPS Technologies, Longview Fiber, AL Systems, and U.S. Petroleum Corp. Each of these should make a substantial contribution to the Utah economy.

* A number of Utah companies are prospering and are expanding their operations. these include NICE Corp., Word Perfect, Deseret Medical, Beehive International, Native Plants, Gull Labs, Novell, and Vermax Corp.

In summary, there are many reasons to be optimistic about Utah's economy. The outlook is brighter than it was a year ago. However, as mentioned earlier, there is also a great deal of uncertainty about the national economy and its impact on Utah.

Utah's economy is relatively well diversified for its size. The state has an enviable natural resource endowment inducing spectacular scenery, copper, oil, coal, natural gas, gold, silver, zinc, uranium, molybdenum, salt, magnesium, and more. Utah's work force ranks among the two or three most educated work forces of the fifty states. Prospects for further economic growth are very good.

ECONOMIC INDICATORS AND CURRENT CONDITIONS

LABOR MARKET ACTIVITY

Utah's economy is closely tied to the condition of its labor market. The level of unemployment, new job growth, expansion in the labor force and changes in workforce participation provide vital indicators of the State's economic health or distress.

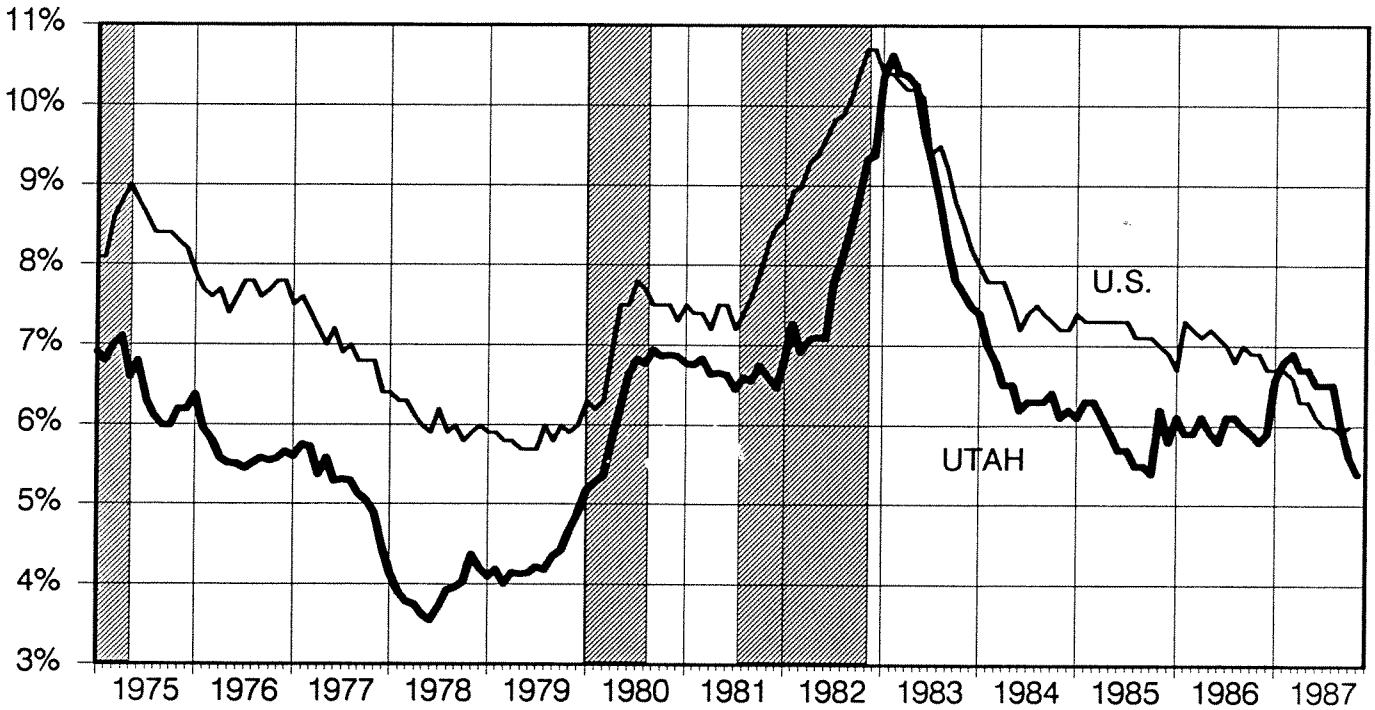
Unemployment

In simple terms, the labor force consists of both employed and unemployed persons. By definition, the unemployed must be actively seeking work. The unemployment rate, measures the percent of the labor force which is unemployed. Historically, Utah has exhibited an unemployment rate one to two points below the national average.

Figure 1 shows unemployment rates for the 12 years prior to 1987. During those years, Utah's jobless rate exceeded the U.S. average during only three months (at the height of the 1982-83 recession). In 1986, monthly unemployment rates bounced right around the 6 percent level and, in fact, averaged 6 percent for the year. Although far below the 9.2 percent rate of 1983, Utah unemployment in 1986 still registered slightly higher than the previous year's figure (5.9 percent).

After the relative unemployment plateau of 1985-86, 1987 provided a decided change. However, this shift was hardly in a desirable direction. By March 1987, deteriorating economic conditions had pushed Utah's unemployment to the 6.9 percent mark. Since then, the jobless rate has dropped dramatically. For example between March and November 1987, Utah's unemployment rate dropped one and one-half percentage

Figure 1
Unemployment Rates, Utah & U.S.: 1975-87



Shaded area represents U.S. recession period.
SOURCE: Utah Department of Employment Security.

points. When data are finalized, the average jobless rate for 1987 is expected to register 6.3 percent.

During the past few years, a growing divergence in the level of unemployment between urban and rural areas of Utah has occurred. For example, during 1981 when the state unemployment rate averaged 6.6 percent, only two counties experienced unemployment above the 10 percent mark (see Table 1). In other words, unemployment was quite evenly distributed among Utah's counties. However, in 1987, with State unemployment at 6.3 percent, ten counties, all nonmetropolitan, experienced double-digit unemployment rates.

Contrasting unemployment rates for the urban and rural areas appear to be relatively common in many areas of the U.S. Urban areas are generally quite economically and industrially diverse. This diversity tends to soften the effects of any economic distress in a particular industry. On the other hand, rural areas are often heavily dependent on agriculture and perhaps one other major industry. If economic hard times hit either of these industries, the rural area can suffer a severe downturn. Of Utah's nonmetropolitan areas, only Washington, Box Elder and Cache counties showed noteworthy economic growth during 1986 and 1987.

Converting the percentages to numbers of out-of-work individuals provides another labor market perspective. In 1983, at the height of the recession, approximately 64,000 Utah workers were without paid employment. By 1985, the number of jobless Utahns had dropped to 43,000. Between 1985 and 1987, the number of unemployed expanded to 48,000.

The employed portion of the labor force also continued to grow--a fact which retarded the rise in the unemployment rate. Since 1985, Utah's labor force has grown by approximately 30,000 people. One of the striking characteristics of Utah's 1987 labor force has been its slow growth. Although unemployment dropped, employment expansion slowed dramatically (Figure 2). Apparently, Utahns are leaving the labor force (they have just stopped looking for work) or are migrating out of the state altogether.

Labor Force Characteristics

During 1986 (the most current figures available), an average of 70 percent of the state's civilian, noninstitutional population, aged 16 and older were members of the labor force. This figure, termed by economists as a "participation rate," registered almost 5 percentage points above the national average. Not surprisingly, the share of men and women working or looking for work varied significantly. Utah men exhibited an overall participation rate of 81 percent, while the female rate registered almost 59 percent. Both sexes in Utah manifested rates higher than the national average (5 and 4 percentage points respectively). Moreover, Utah female participation moved up almost 2.5 points from the previous year. While Utah's strong work ethic is partially responsible for the state's above average rate, the high labor force participation of Utah youth accounts for the majority of the variance. The participation rate for Utah teenagers (16 to 19 years old) measures 70 percent compared to the national average of only 55 percent.

The Unemployed

Utah women, teenagers and minorities suffer higher rates of joblessness than do their older, male, nonminority counterparts (Table 3). In 1986, the unemployment rate for 16 to 19 year olds measured 11.9 percent--almost 6 points higher than the state average of all age groups. (Those aged 55 to 64 exhibited the lowest unemployment rate--only 3.2 percent. Unemployment declines quite steadily with age.) The jobless rate for females in Utah registered 6.8 percent compared to only 5.4 percent for Utah males. Unemployment for minority groups far outstripped the figure for the nonminority portion of the labor force. In 1986, minorities registered an unemployment rate of 9.4 percent compared to only 5.7 percent for Utah's white population.

While the jobless rate is important in defining Utah's economic well-being, the duration of individual joblessness also sheds light on the total labor force picture. In 1986, 46 percent of unemployed individuals were unemployed for less than five weeks. In addition, only 6 percent of the unemployed were without a job for more than one year.

Individuals join the ranks of the unemployed for various reasons. In 1986, an average of 61 percent of the male unemployed were "job losers." Re-entrants to the labor force accounted for the largest share of the female unemployed--41 percent, although an additional 35 percent were job losers. New entrants and job leavers accounted for the remaining one-fifth to one-fourth of the male/female jobless.

Employment Growth

Nonagricultural employment growth (Figures 2 and 3) represents another strong indicator of a state's economy. Although agricultural jobs, domestics and the self-employed are not included, this measure encompasses the vast majority of jobs within the state. Definitive figures for the aforementioned categories are very difficult to obtain.

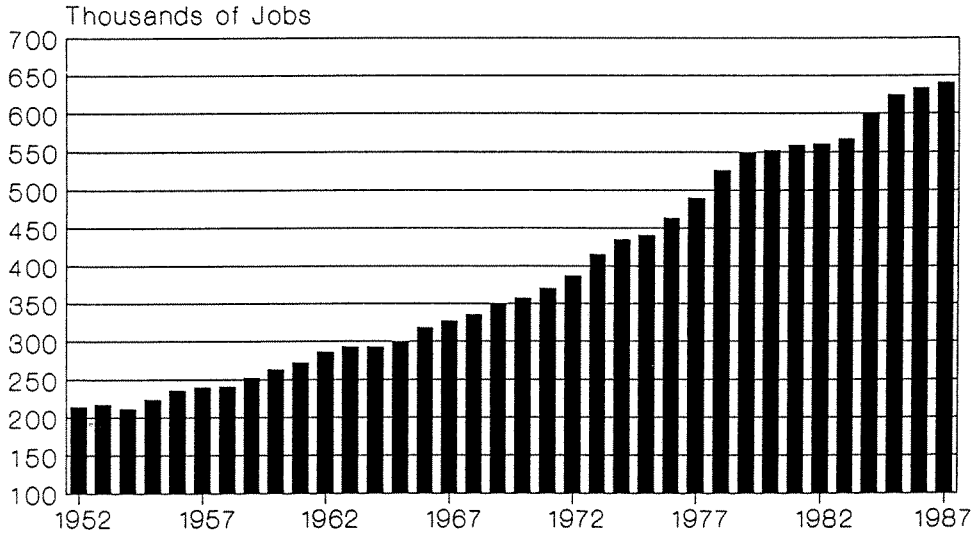
Nonfarm job growth in Utah has slowed considerably in the past two years. Job growth in 1984 and 1985 was strong. In 1986 and 1987 employment growth slowed considerably. In 1986, nonfarm employment increased only 1.6 percent or approximately 9,800 jobs. In 1987 employment grew by only 1 percent or a mere 6,400 jobs. This decline in the rate of growth bottomed out in early 1987, although its recovery has been very slow.

Goods-Producing and Service-Producing Industries

Employment is often classified into two main categories: jobs in goods-producing industries and jobs in service-producing industries. Goods-producing industries include mining, construction and manufacturing. Although technically a goods-producing industry, agriculture is generally categorized as a sector in and of itself. Service-producing industries include finance / insurance / real estate, trade, services, transportation / communications / utilities, and government.

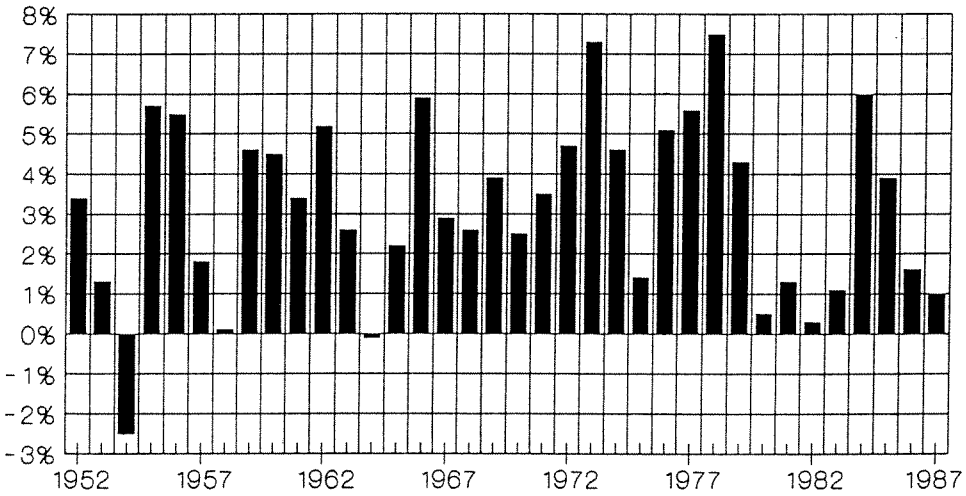
During 1986, all goods-producing industries suffered employment declines (see Table 2 and Figure 4). Service-producing industries, on the other hand, showed moderate job growth in 1986. The pattern changed in 1987, as mining and manufacturing employment rebounded,while several service-producing industries experienced a slowdown in growth rates.

Figure 2
Utah Nonagricultural Employment: 1952-87



Source: Ut Depart of Employment Security

Figure 3
Utah Nonagricultural Employment
Annual Percent Change



Source: Ut Depart of Employment Security

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 employment decline in the energy industry (coal, oil and uranium). Between 1984 and 1985, mining jobs were reduced by one-fourth or about 3,000 jobs (Table 2). The next year followed the same pattern, mining positions dropped by nearly one-fifth (1,900 jobs). However, in 1987, the reopening of B.P. Mineral's (formerly Kennecott Minerals Corporation) Utah operations generated a slight rise in mining employment.

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. In 1987 manufacturing regained some lost jobs. The rebound of the steel industry in Utah County, growth in space/defense related manufacturing, and expansion in food products manufacturing pushed the industry to a net gain of 200 jobs.

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 9 percent decline in construction employment. In 1987, construction employment dropped even further -- 17 percent, almost 5,300 jobs. In fact, construction appeared as the only major industrial sector to actually sustain a net job loss during 1987.

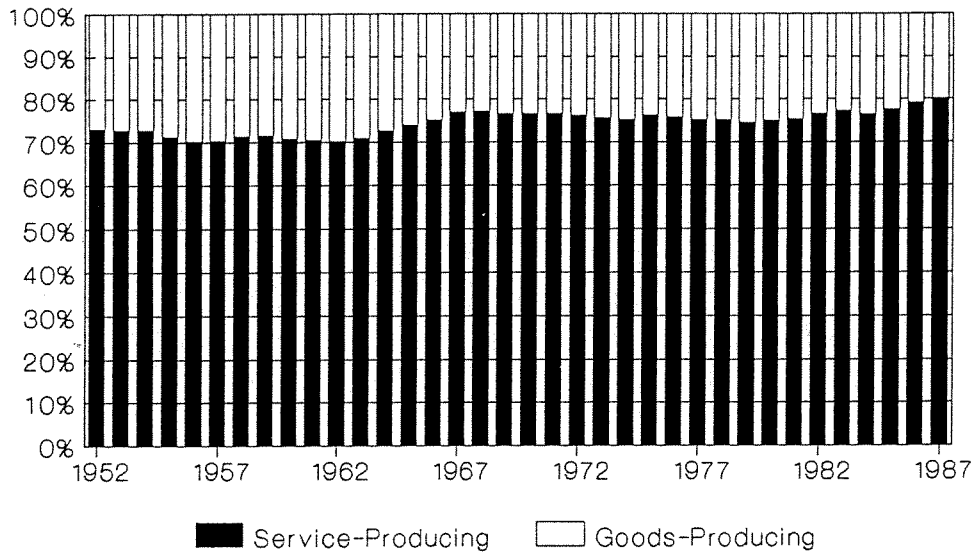
A recent development within Utah's goods-producing sectors has been a reduction in the share of jobs in natural-resource-based industries, coupled with an increased share of jobs in human-resource-based industries. This is characterized by a smaller mining industry and growing manufacturing industry.

The Service-Producing Sector

With the loss of so many goods-producing jobs, 1986 could have thrown Utah into a severe economic downturn--if not for the employment growth in service-producing industries. The service industry itself has provided the primary impetus to employment growth in 1986 by adding approximately 6,400 jobs to the Utah economy--a 5 percent gain. Finance/insurance/real estate, with a higher growth rate of nearly 6 percent also contributed 1,800 jobs. Government and trade showed moderate growth of 2.5 and 3.0 percent respectively. Of the service-producing industries, only transportation / communications / utilities exhibited a growth rate less than the nonfarm average.

Though the growth in service-producing industries slowed in 1987, it continued to provide a substantial part of Utah's new jobs. In fact, the service industry actually saw an increase in its expansion rate to 6 percent. However, job growth in the trade industry slowed to less than 2 percent. Moreover, declines in federal and state government employment brought total government expansion to a virtual standstill. Also, the growth rate in transportation/communication/utilities employment declined.

Figure 4
Percent of Utah Employment in
Goods vs. Service Producing Industries



Source: Ut Depart of Employment Security

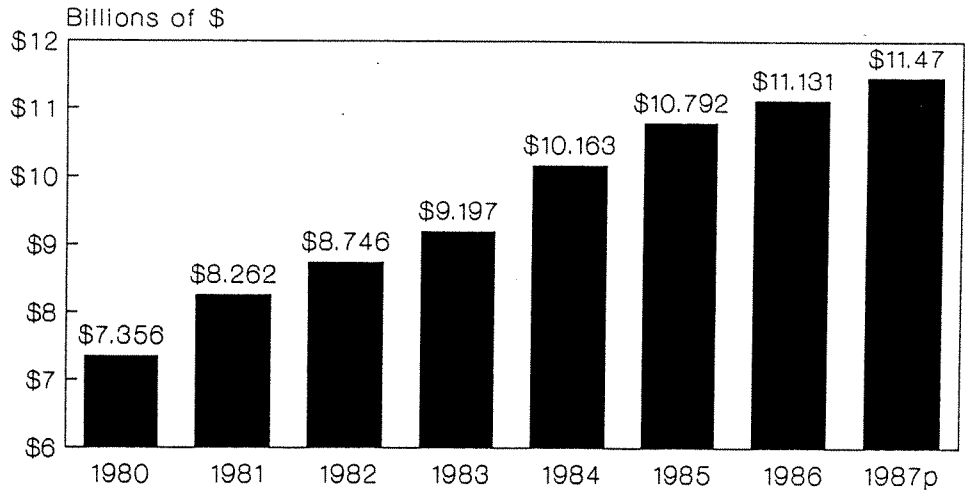
Since 1980, service-producing employment in Utah and in the U.S. has grown at a much faster pace than goods-producing employment. In these seven years, the percent of Utah employment in service-producing industries moved from 75 to 79, while the U.S. percentage increased from 71 to 75 (see Figure 4). 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.

Wages

The shift from a goods-producing economy to a service-producing economy raises concerns about wages in the State of Utah. Total wages grew by 3.1 percent during 1986. The 1987 increase is expected to be 3 percent . In comparison, wages since 1980 have grown by an average of 6 percent a year. However, in light of lower job growth, the almost comparable increase in wages appears promising.

The nominal Utah average monthly wage for nonagricultural jobs from 1985 to 1986 grew by less than 1 percent (see Figure 6). Data for 1987 should show an increase of 28 dollars (1.9 percent) in the average nonagricultural monthly wage to $1,491. Unfortunately, when the average monthly Utah nonfarm wage is adjusted for inflation, average wages declined slightly during 1985 through 1987. The loss of high paying jobs in primary metals and mining seems to have contributed to a declining rate of growth during the 1985 to 1987 period. In addition, a shorter work week and more part-time jobs have tended to dilute average wage growth.

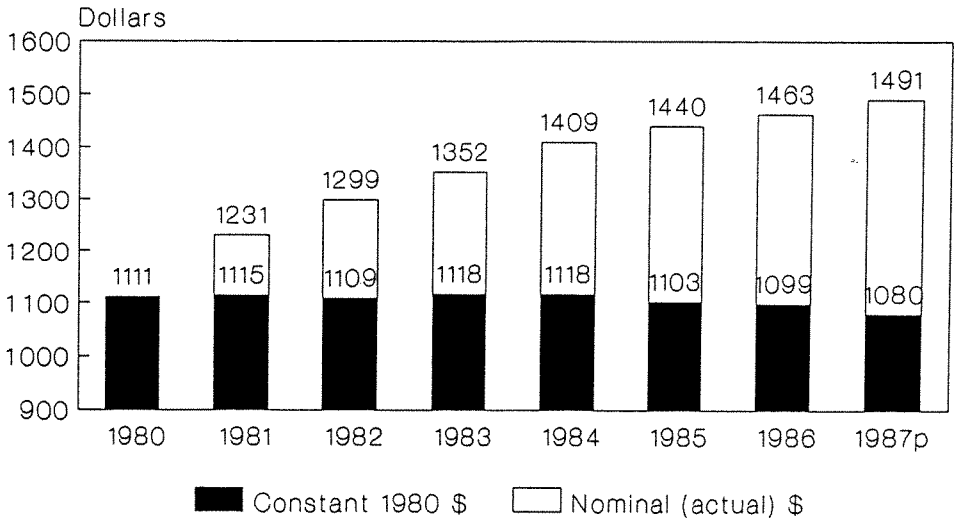
Figure 5
Utah Total Nonagricultural Wages



p - preliminary estimate

Source: Ut Depart of Employment Security

Figure 6
Utah Nonfarm Average Monthly Wages
Nominal and Constant* 1980 Dollars



p - preliminary estimate
*Constant 1980 $ inflation adj using CPI
Source: Ut Depart of Employment Security

Utah's average annual pay for workers covered by unemployment insurance programs was $17,863 in 1986--up 1.6 percent from 1985. The average increase for the nation was 4.0 percent, more than double the Utah rate. Utah's average pay was 88.4 percent of the U.S. average in 1986, down from 91.6 percent in 1985 (Figure 7). These changes caused Utah to lose four places in pay level ranking from 29th in 1985 to 33rd in 1986. 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.

Slow growth in wages, the loss of goods-producing jobs, and accelerated growth in service-producing industries also raises the question of whether Utah is replacing high-paying jobs with low-paying jobs. About a 500 dollar difference in average monthly wages exists (see Figure 8) between the goods-producing sector and the service-producing sector. Some of the growing service-producing industries such as retail trade are characterized by relatively low-wage, part-time employment.

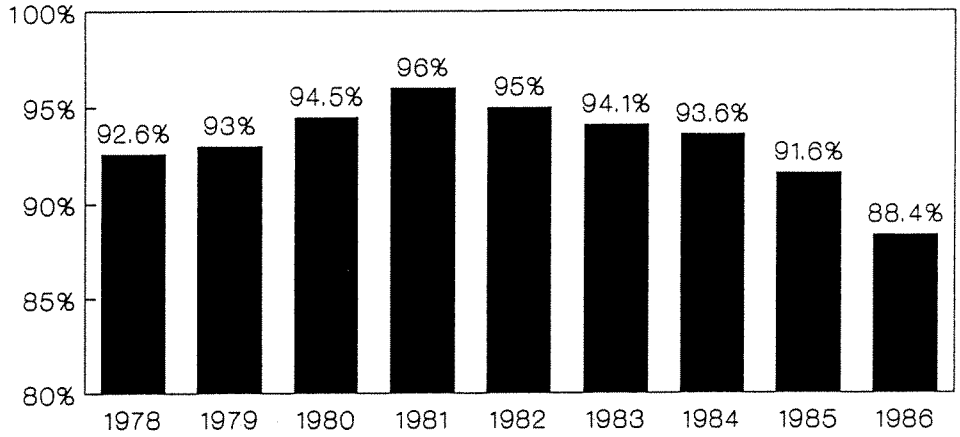
On the other hand, many growing service-producing jobs pay extremely well, such as doctors, lawyers and computer programmers. In addition, the service-producing industries of transportation/communications/utilities and finance/insurance/real estate show an above average monthly wage. Moreover, as growth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

Conclusion

During the past two years, job growth in Utah has been extremely sluggish. As a result, Utah's unemployment rate surpassed the national average for a record number of months during 1987. Even so, the State has still managed to produce new jobs (Table 4) in spite of some significant setbacks in mining, manufacturing, and construction. Fortunately, Utah's manufacturing and mining industries have rebounded during the last half of 1987. The resurgence of the copper industry, growth in space/defense manufacturing, recommencement of steel production in Utah County, and the growth of nondurable goods manufacturing have pushed the goods-producing sector to its first overall employment expansion in several years.

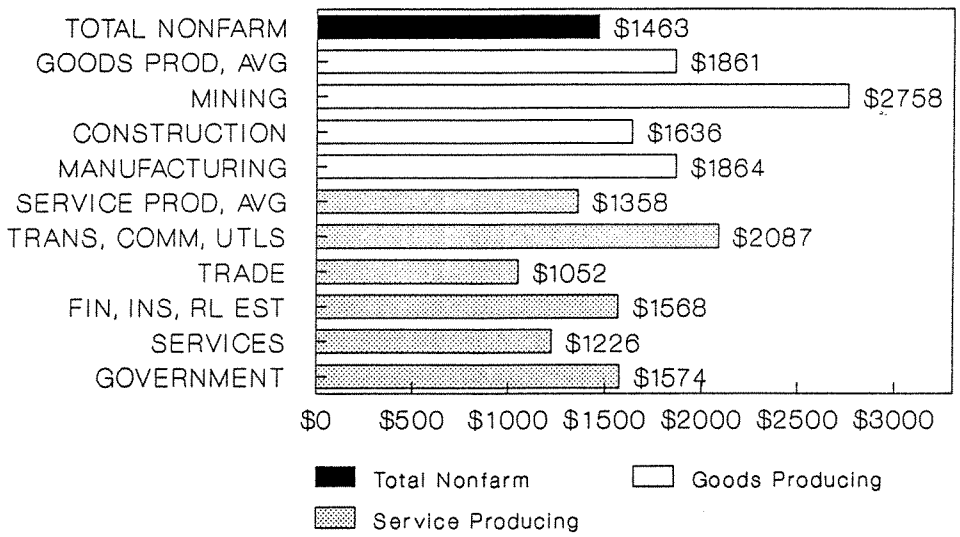
For the most part, Utah's labor market has weathered the economic storm. If the national economy remains strong, the state can expect to see renewed labor market vigor in the upcoming year.

Figure 7
Utah Average Annual Pay* as a Percent of U.S. Average Annual Pay*: 1978 to 1986



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

Figure 8
Utah Average Monthly Nonfarm Wage by Major Industry Group: 1986



Source: Ut Depart of Employment Security

TABLE 1
Unemployment Rates by County
Percent of Labor Force

County	1980	1981	1982	1983	1984	1985	1986	1987
State	6.3	6.6	7.8	9.2	6.6	5.9	6.0	6.3
Beaver	6.6	6.3	7.4	9.8	7.3	6.1	6.8	6.2
Box Elder	5.5	5.8	6.8	6.4	5.2	4.5	4.1	4.5
Cache	5.0	6.0	6.3	6.8	6.0	5.1	4.5	4.7
Carbon	5.7	5.3	7.6	21.1	12.6	10.0	10.1	10.5
Daggett	1.8	4.3	3.5	4.2	2.5	3.9	4.3	3.1
Davis	5.6	6.0	5.9	6.8	4.5	3.7	4.5	5.3
Duchesne	6.0	5.8	9.9	13.5	10.1	10.5	15.2	16.6
Emery	5.6	4.4	5.3	14.9	17.0	13.0	12.4	14.5
Garfield	7.9	9.9	12.3	15.2	16.2	13.5	12.2	11.5
Grand	6.9	8.5	13.8	19.4	15.4	13.0	12.4	10.6
Iron	8.7	7.3	8.3	8.9	7.1	6.2	6.3	6.9
Juab	8.6	6.9	15.3	20.1	15.9	15.5	15.7	16.0
Kane	7.0	9.5	8.9	12.3	10.4	8.8	7.2	7.8
Millard	5.6	5.1	7.4	8.4	6.6	5.5	6.5	7.0
Morgan	4.1	3.7	4.5	5.8	4.8	6.5	7.1	7.7
Piute	10.7	8.9	10.7	11.5	14.0	13.0	14.8	13.4
Rich	3.0	2.8	4.3	6.7	3.0	3.5	5.1	4.8
Salt Lake	6.1	6.6	7.8	8.5	6.1	5.6	5.3	5.5
San Juan	6.3	7.1	8.6	12.7	11.0	8.9	8.2	8.5
Sanpete	9.6	10.1	11.0	13.8	11.0	13.0	15.0	14.3
Sevier	5.1	5.5	6.5	8.4	8.1	7.4	7.9	7.5
Summit	8.1	7.9	10.2	10.9	8.9	8.0	8.6	9.1
Tooele	5.7	5.4	8.2	10.1	6.1	6.0	6.2	7.5
Uintah	4.3	3.9	7.4	13.4	8.2	8.5	12.0	11.9
Utah	7.2	6.7	8.5	9.5	6.9	6.6	6.4	7.1
Wasatch	10.6	10.7	14.2	20.0	11.7	11.2	13.1	14.5
Washington	6.4	7.0	7.1	8.3	6.3	4.8	4.7	5.5
Wayne	9.2	9.9	9.8	10.7	10.1	8.2	9.2	5.7
Weber	7.4	8.1	8.6	10.3	6.9	5.6	6.2	7.1

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

TABLE 2
Utah Labor Force, Nonagricultural Jobs and Total Wages
1980-1987

	1980	1981	1982	1983	1984	1985	1986	1987(p)	Percent Change 80-81	81-82	82-83	83-84	84-85	85-86	86-87
	(Numbers in 000s)														
Civilian Labor Force	634.0	647.0	675.0	692.0	702.0	730.0	754.0	759.0	2.1%	4.3%	2.5%	1.4%	4.0%	3.3%	0.7%
Total Employed Persons	594.0	604.0	622.0	628.0	656.0	687.0	709.0	711.0	1.7%	3.0%	1.0%	4.5%	4.7%	3.2%	0.3%
Unemployed Persons	40.0	43.0	53.0	64.0	46.0	43.0	45.0	48.0	7.5%	23.3%	20.8%	-28.1%	-6.5%	4.7%	6.7%
Unemployment Rate	6.3%	6.6%	7.9%	9.2%	6.5%	5.9%	6.0%	6.3%							
	(Numbers in 000s)														
Nonagricultural Jobs	551.9	559.2	561.0	567.0	601.1	624.4	634.1	640.5	1.3%	0.3%	1.1%	6.0%	3.9%	1.6%	1.0%
Mining	18.5	20.3	18.2	14.0	12.8	9.7	7.8	7.9	9.7%	-10.3%	-23.3%	-8.5%	-24.0%	-19.6%	1.3%
Contract Construction	31.5	28.3	26.9	28.7	34.8	35.5	32.2	26.9	-10.2%	-4.9%	6.9%	21.0%	2.1%	-9.3%	-16.5%
Manufacturing	87.7	89.3	85.8	85.5	94.0	94.0	92.1	92.3	1.8%	-3.9%	-0.4%	9.9%	0.0%	-2.0%	0.2%
Trans.,Comm., & Publ. Util	34.1	34.4	35.4	35.9	36.5	37.0	37.5	37.7	0.9%	2.9%	1.5%	1.5%	1.4%	1.4%	0.5%
Trade	128.7	130.8	131.7	133.5	140.8	147.9	152.4	154.4	1.6%	0.7%	1.4%	5.5%	5.0%	3.0%	1.3%
Finance, Ins., & Real Est.	25.8	26.3	26.6	28.0	29.7	31.1	32.9	33.7	1.9%	1.1%	5.4%	6.0%	4.7%	5.8%	2.4%
Services	100.5	104.9	109.9	112.6	121.0	131.4	137.9	145.8	4.4%	4.8%	2.4%	7.5%	8.6%	4.9%	5.7%
Government	125.0	124.9	126.5	128.8	131.5	137.8	141.3	141.8	-0.1%	1.3%	1.8%	2.1%	4.8%	2.5%	0.4%
Nonagricultural Wages (000,000'S)	7,396	8,262	8,746	9,197	10,163	10,792	11,131	11,470	11.7%	5.9%	5.1%	10.5%	6.2%	3.1%	3.0%
Average Monthly Wage	1,111	1,231	1,299	1,352	1,409	1,440	1,463	1,491	10.8%	5.5%	4.1%	4.2%	2.2%	1.6%	1.9%
Adjusted For Inflation	1,111	1,115	1,109	1,118	1,118	1,103	1,099	1,080	0.4%	-0.6%	0.8%	0.0%	-1.3%	-0.4%	-1.7%

p = projected, December 1987.

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

TABLE 3
Characteristics of Utah Unemployed Persons
1986 Annual Averages

	Total		Males		Females	
	Number	Percent	Number	Percent	Number	Percent
Total Unemployed	45,000	100.0	23,000	100.0	22,000	100.0
Age of Unemployed						
16 - 19 Years	9,000	20.0	4,000	17.4	5,000	22.7
20 - 24 Years	11,000	24.4	5,000	21.7	6,000	27.2
25 - 34 Years	13,000	28.9	7,000	30.4	6,000	27.2
35 - 44 Years	7,000	15.6	4,000	17.4	3,000	13.6
45 - 54 Years	4,000	8.9	2,000	4.2	1,000	4.5
55 +	3,000	4.4	1,000	4.3	1,000	4.5
Marital Status of Unemployed						
Single; Never Married	16,000	35.6	10,000	43.5	6,000	27.3
Married; Spouse Present	20,000	44.4	9,000	39.1	11,000	50.0
Other; Widowed, Divorced, & Separated	10,000	22.2	5,000	21.7	5,000	22.7
Reason For Unemployment						
Job Losers	22,000	48.5	14,000	61.3	8,000	34.9
Job Leavers	6,000	13.1	3,000	12.2	3,000	14.1
Re-Entrants	14,000	30.7	5,000	20.8	9,000	41.2
New Entrants	3,000	7.7	1,000	5.8	2,000	9.8
Duration Of Unemployment						
Less Than 5 Weeks	21,000	45.9	9,000	38.4	12,000	53.8
5 - 14 Weeks	14,000	32.2	8,000	34.1	7,000	30.2
15 - 26 Weeks	5,000	11.2	3,000	14.6	2,000	7.6
27 - 51 Weeks	2,000	5.0	1,000	3.7	1,000	6.4
52 Weeks and Over	3,000	5.7	2,000	9.1	1,000	2.0

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 1986; Unpublished Current Population Survey Tables

TABLE 4
Utah Net Increase in Nonagricultural Jobs

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	9,751	1.6
1987(p)	6,400	1.0

(p) preliminary

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

PERSONAL INCOME

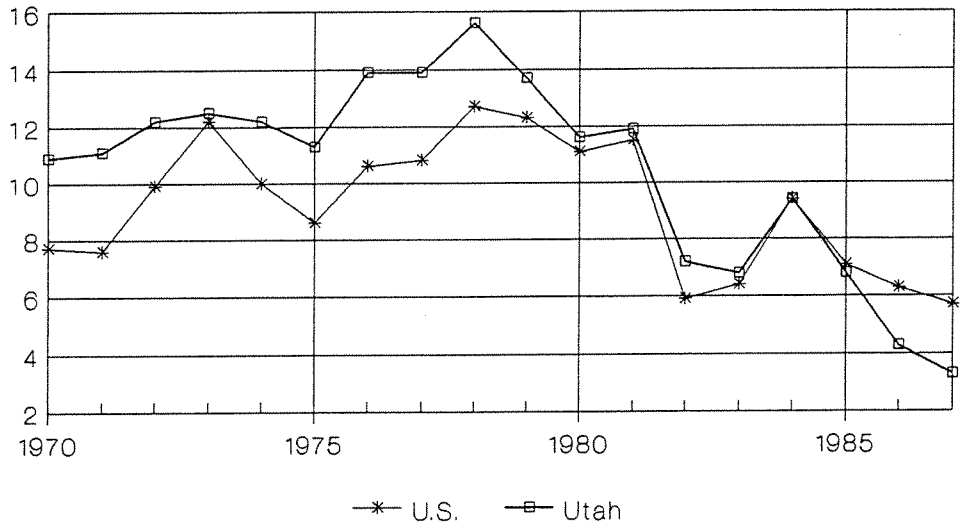
Personal income is defined as all income received by all residents of an area. In absence of a measure of the State Gross Product, it is the most complete measure of total economic activity for the state. Personal income constitutes one of the most extensive bodies of annual economic information that is available for the nation, states, counties, and metro areas.

Utah's 1987 total personal income (TPI) is forecast to be $18.9 billion, up 3.3 percent from 1986. As Figure 9 shows, Utah's TPI increased more rapidly than that of the United States during most of the past 16 years. Over the last six years, the difference between Utah and U.S. growth rates has narrowed, and for the past three years Utah's rate of increase has been lower than that of the U.S.

Components of Personal Income

The composition of TPI can be viewed from several perspectives, as shown in Table 5. The largest single component is "Earnings by Place of Work." This component consists of the total earnings from both farm and nonfarm industries, including contributions for social insurance. It may also be viewed as the combined earnings of wage and salaries, other labor income, and proprietors income -- both farm and nonfarm.

Figure 9
Utah and United States
Personal Income Growth Rates: 1970-87



Source: U.S. Bureau of Economic Analysis
and Ut State Office of Planning & Budget

In 1987 this component of TPI was $14.6 Billion, representing 77 percent of TPI. Approximately 10 percent of this figure was proprietors' income; 90 percent was wages, salary and other labor income. Nonfarm earnings of almost $14.4 billion was nearly 99 percent of total earnings; farm income was about 1 percent. Private sector nonfarm industries accounted for 78 percent of nonfarm earnings, while public (government) industries made up 22 percent.

The other components of TPI are (1) dividends, interest, and rent (DIR), and (2) transfer payments. Each of these sources accounts for about 13 percent of TPI. In 1987, DIR amounted to $2.5 billion, and transfer payments were $2.6 Billion. These two components, plus "Earnings by Place of Residence", constitute TPI.

The industrial composition of Utah's TPI has changed in recent years. In 1980, prior to the recession periods, goods-producing industries (mining, construction, manufacturing) generated over 31 percent of Utah's earnings. By 1987 that had dropped to 25.5 percent. In 1980 service-producing industries (including government) paid 67 percent of total earnings. By 1987 it had increased to over 73 percent . This accentuates the continuing historical shift from goods- to service-producing jobs in the state economy. Similar shifts have been experienced nationally.

Four major industry sectors generate about three-fourths of Utah's total earnings. Government (federal, state, and local) and Services each produce about 21 percent; and manufacturing and trade each account for over 16 percent. Following these are transportation/communications/utilities at 8 percent; construction at 7 percent finance/insurance/real estate at 6 percent; and mining at 2 percent of TPI. Agriculture and agricultural services make up the remaining 3 percent. Figure 10 illustrates these industrial shares of TPI for Utah for 1980 and 1986.

Per Capita Personal Income

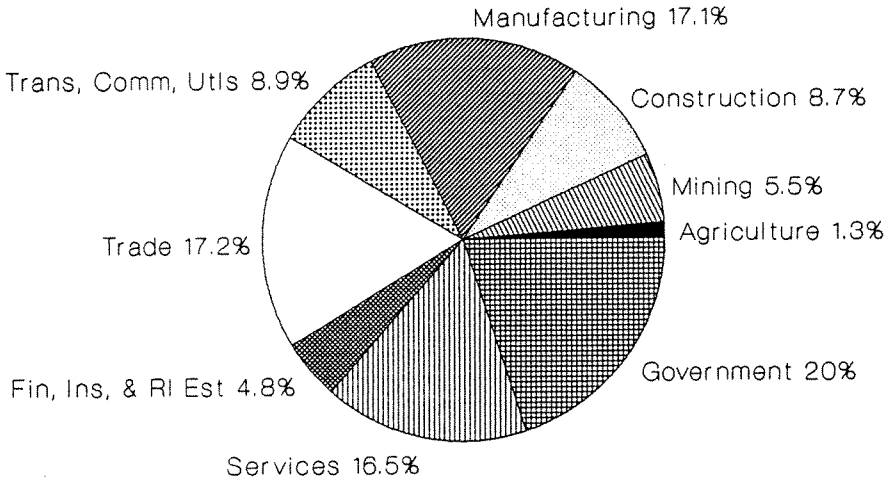
Per capita personal income is an area's personal income divided by the total population as of July 1 of that year. Utah's 1987 per capita personal income (PCI) is estimated at approximately $11,300. From 1979 to 1986, Utah's real per capita income has decreased $209, compared to the $996 increase in the United States real per capita personal income. "Real per capita income" means it has been adjusted for inflation (see Table 6).

Utah's 1986 per capita personal income estimated at approximately $11,000 ranked 48th among the fifty states. Because Utah's population has a 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 state per capita income based on adult population estimates, the Utah ranking is improved considerably. Utah's 1984 ranking is 34th among the states by this measure.

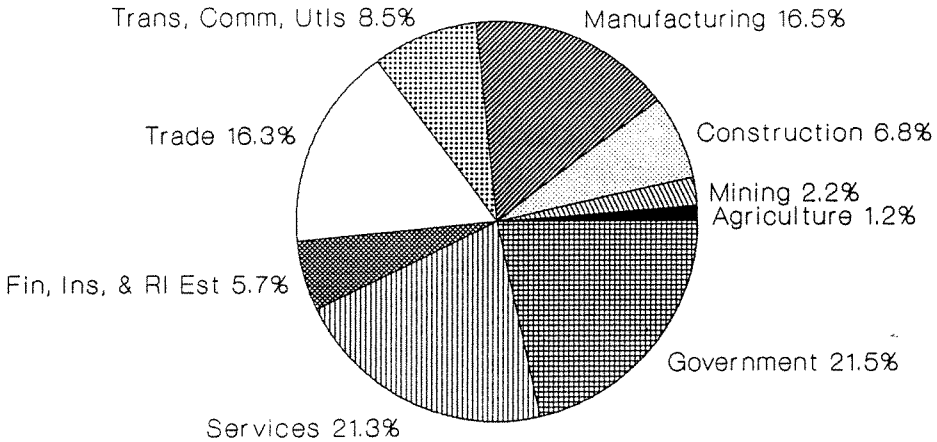
Utah also compares more favorably to the rest of the U.S.when using Utah household income. Total personal income per household in 1986 in Utah was $35,580, compared with $39,750 for the U.S. Utah's total personal income per household was 89.5 percent of the national rate.

Per Capita Personal Income for a state can change relative to the U.S. average because its total personal income, and/or its population may grow at a faster or slower rate than the U.S. average. In Utah, a below average gain in per capita income, 5.8 percent compared to U.S.'s 7.1 percent, reflects more rapid growth in population, 2.3 percent compared to 1.0 percent for the U.S. This more than offsets the similar 8.3 percent and 8.2 percent growth, respectively, in total personal income from 1979 to 1986. This

FIGURE 10
Utah's distribution of Earnings Income by Industry for 1980 and 1987



1980



1987p

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

effectively accounts for Utah dropping from 41st in 1979 to 48th in 1986, among the states in per capita income rankings.

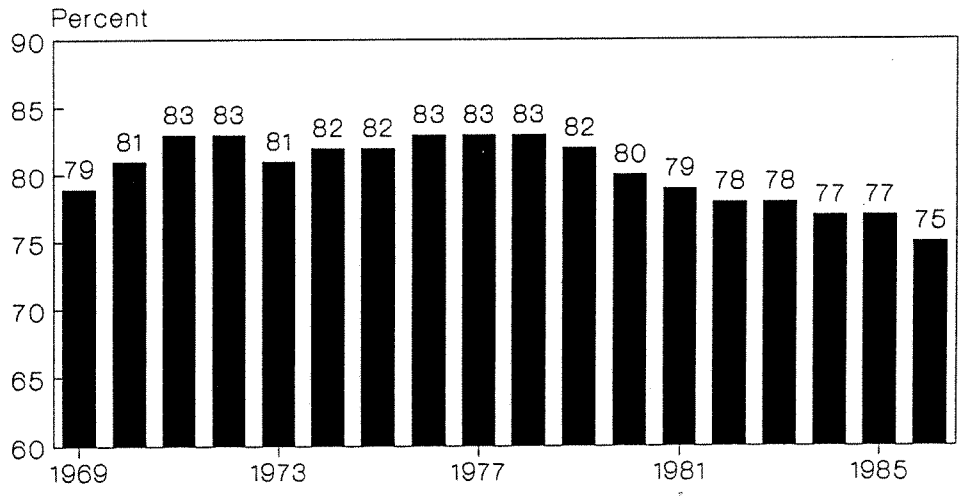
During the 1970's, Utah's PCI ranged between 81 and 83 percent of the United State's PCI. However, as shown in Figure 11, from 1978 to 1986 this parameter dropped eight percentage points -- from 83 to 75. Each major sector of Utah's total personal income contributed to this decline. That is, taking population growth into consideration, each of Utah's major TPI components has not increased as rapidly as its national counterpart. Utah's PCI for 1985 to 1987 is included in Table 5.

County Personal Income

As with other indicators, personal income growth also demonstrates that the economies of Utah's northern counties are maintaining the state's economy. As shown in Table 7, the metropolitan counties' (Davis, Salt Lake, Utah and Weber) TPI growth are all above the state's 3.3 percent level. The 1987 growth in total personal income ranges from Millard County's minus 6.7 percent to Washington and Kane counties' 6.6 percent. Nearly all the remaining counties are clustered in the 0 to 5 percent growth levels.

With a few exceptions, the per capita income estimates in northern Utah's counties are also considerably higher than those of the rest of the state. Weber County's $13,300 leads Utah; neighboring Rich County's $5,300 is lowest. A note: The 1987 per capita income of Utah's highest county is $1,300 lower than the 1986 average of the U. S. ($14,641).

Figure 11
Utah Per Capita Personal Income
as a Percent of U.S.: 1969-1986



Source: U.S. Bureau of Economic Analysis

TABLE 5
Components of Total Personal Income for Utah
In Millions of Dollars

ITEMS	(in millions) 1985	1986	1987	1985-86% Change	1986-87% Change
Total Personal Income	17,539	18,288	18,900	4.27	3.35
Total Earnings - Place/Work	13,601	14,109	14,566	3.74	3.24
Less: Personal Cont. for Soc. Ins.	801	834	862	4.15	3.39
Plus: Resid. Adjustment	62	64	66	4.07	2.38
Equals: Earnings by Resident	12,861	13,339	13,770	3.71	3.23
Plus: Dividends, Interest and Rent	2,319	2,439	2,500	5.17	2.49
Plus: Transfer Payments	2,358	2,510	2,630	6.45	4.80
Components of Earnings	13,601	14,109	14,566	3.74	3.24
Wages and Salaries	11,291	11,641	11,981	3.10	2.92
Other Labor Income	1,070	1,084	1,109	1.38	2.24
Proprietors' Income	1,241	1,384	1,476	11.53	6.70
Farm	48	95	124	3.41	31.66
Non-Farm	1,192	1,289	1,352	8.11	4.87
Earnings by Industry	13,601	14,109	14,566	3.74	3.24
Farm	97	143	174	47.93	22.17
Non-Farm	13,504	13,966	14,392	3.42	3.05
Private Sector	10,635	10,934	11,255	2.81	2.94
AG Services, Etc.	42	39	41	-7.14	5.25
Mining	381	329	320	-13.71	-2.51
Construction	1,100	1,041	987	-5.34	-5.14
Manufacturing	2,351	2,367	2,404	0.71	1.54
Trans., Commun., Utilities	1,185	1,203	1,235	1.54	2.71
Trade (Wholesale and Retail)	2,220	2,312	2,372	4.13	2.58
Fin., Ins., Real Estate	692	771	832	11.53	7.94
Services	2,666	2,871	3,062	7.72	6.65
Government (Incl. Military)	2,869	3,033	3,137	5.69	3.43
Per Capita Personal Income	10,661	10,981	11,335	3.00	3.22

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

TABLE 6
Personal Income Trends
Utah and the U.S.

	1979	1986	Average Annual Percent Change	Percent of U.S. 1979	Percent of U.S. 1986
			Population (thousands)		
U.S.	224,569	241,078	1.0	100.0	100.0
Utah	1,416	1,665	2.3	0.6	0.7
			Total Personal Income (billions $)		
U.S.	2,028.5	3,529.5	8.2	100.0	100.0
Utah	10.5	18.3	8.3	0.5	0.5
			Per Capita Personal Income		
U.S.	9,033	14,641	7.1	100.0	100.0
Utah	7,408	10,981	5.8	82.0	75.0

Source: U. S. Bureau of Economic Analysis

TABLE 7
Total and Per Capita Personal Income
Utah, Multi-County Districts and Counties

Planning District And County	1985 TPI (millions of dollars)	1986 TPI	1987 TPI	85-86 % chg	86-87 % chg	1985 PCI	1986 PCI	1987 PCI
State Total	17,539.0	18,288.0	18,900.0	4.27%	3.35%	10,663	10,981	11,263
Bear River	990.4	1,084.5	1,123.5	9.51%	3.59%	9,523	10,369	10,559
Box Elder	419.9	459.8	477.5	9.50%	3.86%	11,410	12,493	12,801
Cache	556.5	612.0	634.4	9.97%	3.66%	8,584	9,344	9,483
Rich	14.0	12.7	11.6	-8.71%	9.20%	5,909	5,543	5,261
Wasatch Front	12,400.1	12,971.5	13,421.6	4.61%	3.47%	11,708	12,058	12,396
North	3,836.8	4,059.0	4,203.5	5.79%	3.56%	11,384	11,796	12,070
Davis	1,869.3	1,959.3	2,026.6	4.82%	3.40%	10,692	10,879	11,005
Morgan	60.4	59.8	60.9	-0.98%	1.91%	11,512	11,498	11,389
Weber	1,907.1	2,039.9	2,116.6	6.96%	3.76%	12,151	12,845	13,328
South	8,563.3	8,912.5	9,218.1	4.08%	3.43%	11,859	12,181	12,550
Salt Lake	8,253.6	8,594.6	8,892.0	4.13%	3.46%	11,909	12,234	12,607
Tooele	309.7	317.9	326.1	2.67%	2.57%	10,663	10,888	11,168
Mountainlands	2,146.7	2,261.0	2,349.1	5.33%	3.89%	8,252	8,591	8,767
Summit	154.9	154.8	156.1	-0.03%	0.81%	11,993	12,003	11,648
Utah	1,918.7	2,032.7	2,114.8	5.94%	4.04%	8,075	8,452	8,649
Wasatch	73.2	73.5	78.2	0.46%	6.40%	7,608	7,500	7,782
Central	489.2	450.0	443.5	-8.02%	1.44%	8,619	8,049	7,983
Juab	46.1	42.7	40.2	-7.26%	-5.97%	7,632	7,241	6,809
Millard	156.0	116.7	108.9	-25.23%	-6.65%	10,803	8,216	7,892
Piute	9.8	9.4	9.2	-3.90%	-2.24%	6,680	6,261	6,120
Sanpete	113.6	113.8	114.1	0.18%	0.18%	6,803	6,858	6,834
Sevier	145.0	149.4	153.2	3.02%	2.55%	9,091	9,577	9,821
Wayne	18.6	17.9	17.9	-3.90%	-0.32%	8,653	8,533	8,713
Southwestern	614.5	665.8	698.5	8.35%	4.91%	8,884	9,196	9,388
Beaver	44.6	37.1	36.5	-16.80%	-1.51%	8,639	7,274	7,381
Garfield	32.6	35.9	36.5	10.02%	1.67%	7,977	8,755	8,901
Iron	163.1	164.0	168.3	0.54%	2.64%	8,304	8,282	8,501
Kane	50.8	57.3	61.1	12.86%	6.63%	10,828	11,938	12,599
Washington	323.4	371.5	396.0	14.88%	6.60%	9,088	9,625	9,731
Uintah Basin	374.2	327.7	325.8	-12.43%	-0.58%	9,034	8,172	8,484
Daggett	7.7	8.0	7.6	3.79%	-4.16%	10,235	11,397	10,923
Duchesne	135.3	124.3	121.6	-8.12%	-2.19%	8,835	8,176	8,326
Uintah	231.2	195.4	196.6	-15.48%	0.59%	9,118	8,076	8,510
Southestern	523.9	527.4	538.1	0.67%	2.02%	9,665	9,896	10,240
Carbon	274.4	279.9	282.2	1.99%	0.83%	11,896	12,329	12,769
Emery	109.0	109.3	112.0	0.27%	2.47%	8,749	8,961	9,335
Grand	73.4	68.4	70.6	-6.81%	3.11%	10,095	9,639	10,154
San Juan	67.1	69.8	73.3	4.07%	5.04%	5,879	6,177	6,376

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

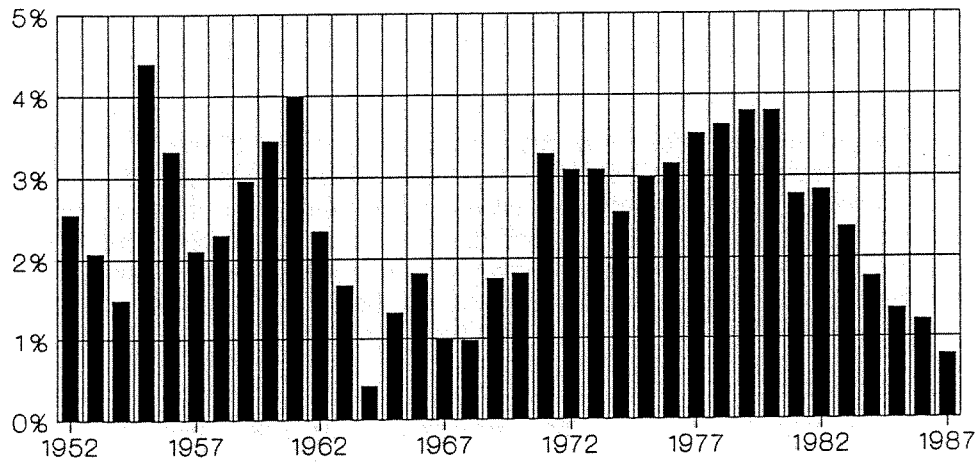
POPULATION/DEMOGRAPHICS

Population Growth

There exists a strong relationship between population growth and economic growth; knowing the number of residents of the state and its counties can then help provide an understanding the area's economy. The preliminary population estimate for Utah on July 1, 1987 was 1,678,000. This estimate represents an increase of 13,000, or 0.8 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 13,000 or fewer was in 1968. The yearly percent increase in population has been greater than 1.0 percent every year since 1964, when the population in Utah grew by only 0.4 percent.

The July 1, 1980 population estimate was 1,474,000 inhabitants for Utah. Over the past seven years the population has grown by approximately 204,000 persons. This translates into a 1.9 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
Utah Population: 1952 to 1987
Annual Percent Change



Source: U.S. Bureau of the Census and Utah Population Estimates Committee.

Table 8 shows population by county and the subsequent growth rates for all years between 1980 and 1987. This table indicates that almost two-thirds of the counties in the state either declined or stayed constant with last year's population estimate. Eight counties were estimated to have the same population as 1986, while nine counties were estimated to have declined in actual population. The declining counties are all non-metropolitan, and have been severely impacted by the depressed energy industries, resulting in high unemployment and out-migration.

Population Change

The dramatic slow down in Utah's population growth in recent years has been caused by a combination of out-migration (as a result of economic conditions) as well as a decline in natural increase. There were 35,469 births and 8,813 deaths from July 1, 1986 to June 30, 1987, resulting in a net natural increase of 26,656. This compares to the peak year of 1980 when natural increase was 33,483. As Table 9 shows, Utah's population grew by an estimated 13,000 for the period 1986-1987, which would imply a net out-migration of over 13,500 persons from Utah. This would mean that approximately 0.8 percent of the 1986 population left the state in the past year. Out-migration is created primarily by imbalances in the labor market (i.e., rapidly growing new entrants into the labor force with small growth in creation of new jobs.)

Utah had an extended period of net in-migration each year from 1969 to 1983. The current out-migration pattern is in its fourth consecutive year. The last time this occurred was in the 1963-1965 period.

During the 1980's Utah's population grew largely because of natural increase. July 1, 1980 to July 1, 1987 births were 272,607 and deaths were 60,274. This is a net natural increase of 212,333. With an overall increase of about 204,000 persons since 1980, this implies that Utah has had over 8,000 net out-migration in the last seven years. This is quite significant especially when compared to the 151,556 net in-migration that occurred in Utah during the 1970's.

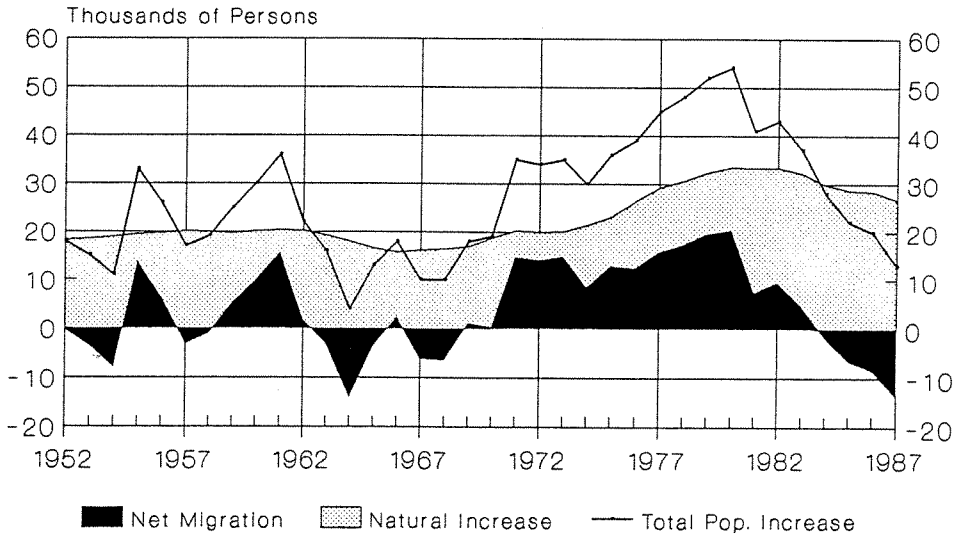
The slow population growth Utah has experienced in the 1980's is due in part because of weaker economic conditions. However the other component of population growth, natural increase, has also experienced a decline and must be viewed as an important contributing factor to the slowing of the population growth. Table 9 shows Utah's population and the components of population change from 1980 to 1987. Components of population change for the last 35 years is shown in Figure 13.

Fertility

Births in fiscal year 1987 (July 1, 1986 through June 30, 1987) were 35,469. This is the fifth straight year of declining births and is the lowest number of births in Utah since fiscal year 1976 when births were 33,773. The largest number of births occurred in fiscal year 1982 with 41,774 births. This significant decline in the absolute number of births during the last five years has signaled a major demographic change for Utah.

The crude birth rate (births during the calendar year per 1,000 population on July 1) has dropped from 28.3 in 1980 to 21.9 in 1986. The U.S. crude birth rate held virtually constant during this same period registering 15.9 in 1980 and 15.5 in 1986.

Figure 13
Annual Population Increase in Utah
Net Migration, Natural Increase, & Total



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

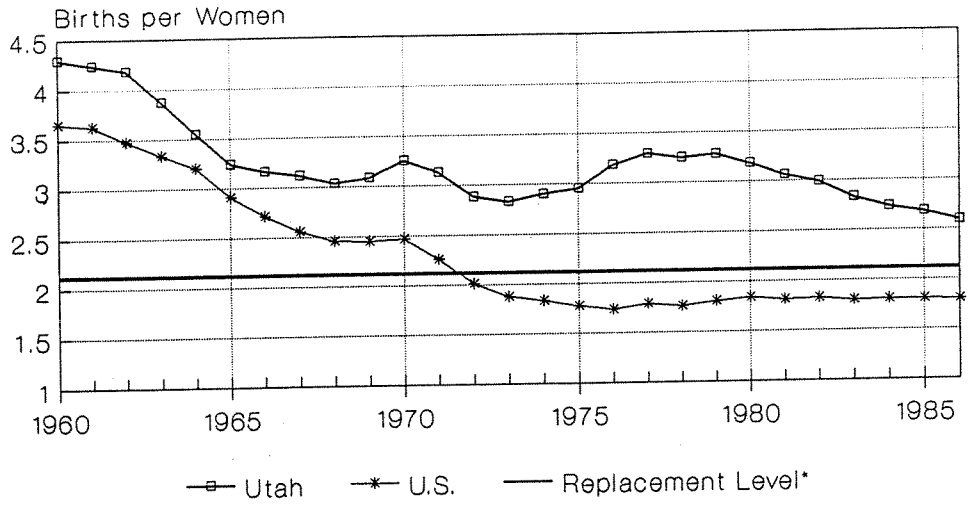
The most complete measure of fertility in any given year is total fertility, which shows, for any given year, how many births the average woman would have during her entire childbearing years, ages 15 to 44. This assumes that during her reproductive period she experiences the same age-specific birth rates that occurred for all women of childbearing age in the given year. Total fertility in Utah has fallen from 3.2 births per woman in 1980, to an estimated 2.6 births per woman in 1986. This decline is illustrated in Figure 14. Even with a declining total fertility rate, Utah continues to have the highest rate in the nation. The U.S. total fertility rate has held at an almost constant rate of 1.8 births per woman since the mid 1970's.

Age Structure

A comparison of the age structure between Utah and the nation reveals the true demographic uniqueness of Utah. Table 10 provides a comparison by selected age groups for selected years between Utah and the nation.

As a result of record high births in Utah between 1977 and 1982, 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. By 1986 this had increased to 25.7. During this same period the school age population in the U.S. dropped from 20.8 percent to 18.7 percent.

Figure 14
Total Fertility: 1960-1986
for Utah and the U.S.



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

When the percentage of Utah's school age population increases, the proportion of the population that must provide the resources for this education becomes smaller. This result becomes evident by using a statistic known as the dependency ratio.

The dependency ratio is computed by dividing the working age population (18 to 64 years of age) by "dependents", or persons who are of retirement age (65 years and older) and children (ages 0 to 17). The dependency ratio is thus defined as the number of dependents per 100 persons of working age.

In 1980 Utah had a dependency ratio of 80. In other words, there were 80 dependents (children and retirees) for every 100 persons of working age. The U.S. dependency ratio was 65 in 1980. By 1986 the dependency ratio in Utah grew to 84 while the U.S. dependency ratio decreased to 62. As a result, the working age population in Utah has a larger and increasing burden in terms of persons it must support. Table 11 shows Utah and the nation's dependency ratios.

Most of this increase in the dependency ratio is due to increases in the school age population. Utah had 43 children of school age per 100 persons of working age compared to 34 for the U.S. in 1980. By 1986 this ratio was 47 for Utah to 30 for the U.S., or 57 percent more children per 100 persons of working age to educate in Utah than the national average.

TABLE 8
Utah Population Estimates by County
1980-1987

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	July 1 1987	1986-87 % Growth
Beaver	4,400	4,600	4.5%	4,650	1.1%	5,000	7.5%	5,150	3.0%	5,050	-1.9%	4,950	-2.0%	4,900	-1.0%
Box Elder	33,500	34,000	1.5%	34,700	2.1%	35,300	1.7%	35,800	1.4%	36,600	2.2%	37,300	1.9%	37,800	1.3%
Cache	57,700	59,800	3.6%	62,000	3.7%	64,500	4.0%	65,600	1.7%	66,700	1.7%	67,800	1.6%	69,200	2.1%
Carbon	22,400	23,100	3.1%	24,700	6.9%	24,500	-0.8%	23,700	-3.3%	23,400	-1.3%	23,000	-1.7%	22,400	-2.6%
Daggett	750	850	13.3%	850	0.0%	750	-11.8%	750	0.0%	700	-6.7%	700	0.0%	700	0.0%
Davis	148,000	153,000	3.4%	158,000	3.3%	162,000	2.5%	166,000	2.5%	170,000	2.4%	175,000	2.9%	179,000	2.3%
Duchesne	12,700	13,100	3.1%	13,700	4.6%	14,400	5.1%	14,800	2.8%	14,700	-0.7%	14,300	-2.7%	13,700	-4.2%
Emery	11,600	12,100	4.3%	13,000	7.4%	13,100	0.8%	12,400	-5.3%	11,800	-4.8%	11,800	0.0%	11,600	-1.7%
Garfield	3,700	3,700	0.0%	3,750	1.4%	3,950	5.3%	3,950	0.0%	4,050	2.5%	4,050	0.0%	4,050	0.0%
Grand	8,250	8,400	1.8%	8,100	-3.6%	7,950	-1.9%	7,650	-3.8%	7,050	-7.8%	6,850	-2.8%	6,700	-2.2%
Iron	17,500	17,900	2.3%	18,300	2.2%	18,900	3.3%	19,300	2.1%	19,400	0.5%	19,500	0.5%	19,500	0.0%
Juab	5,550	5,600	0.9%	5,700	1.8%	5,900	3.5%	6,150	4.2%	6,250	1.6%	5,800	-7.2%	5,800	0.0%
Kane	4,050	4,050	0.0%	4,150	2.5%	4,350	4.8%	4,500	3.4%	4,700	4.4%	4,800	2.1%	4,850	1.0%
Millard	9,050	9,600	6.1%	10,400	8.3%	11,400	9.6%	13,500	18.4%	14,200	5.2%	13,600	-4.2%	13,200	-2.9%
Morgan	4,950	5,050	2.0%	5,200	3.0%	5,250	1.0%	5,350	1.9%	5,450	1.9%	5,500	0.9%	5,650	2.7%
Piute	1,350	1,400	3.7%	1,350	-3.6%	1,450	7.4%	1,500	3.4%	1,550	3.3%	1,550	0.0%	1,550	0.0%
Rich	2,150	2,250	4.7%	2,400	6.7%	2,300	-4.2%	2,150	-6.5%	2,100	-2.3%	2,050	-2.4%	1,950	-4.9%
Salt Lake	625,000	640,000	2.4%	655,000	2.3%	667,000	1.8%	679,000	1.8%	689,000	1.5%	697,000	1.2%	700,000	0.4%
San Juan	12,400	12,700	2.4%	12,600	-0.8%	13,000	3.2%	12,800	-1.5%	12,500	-2.3%	12,700	1.6%	12,900	1.6%
Sanpete	14,800	15,400	4.1%	16,100	4.5%	16,900	5.0%	17,000	0.6%	16,900	-0.6%	16,500	-2.4%	16,600	0.6%
Sevier	14,900	15,200	2.0%	15,500	2.0%	15,800	1.9%	16,100	1.9%	16,200	0.6%	15,800	-2.5%	15,800	0.0%
Summit	10,400	10,900	4.8%	11,300	3.7%	11,800	4.4%	12,200	3.4%	12,400	1.6%	12,700	2.4%	13,200	3.9%
Tooele	26,200	26,800	2.3%	27,100	1.1%	27,300	0.7%	28,200	3.3%	28,300	0.4%	28,100	-0.7%	28,100	0.0%
Uintah	20,700	21,900	5.8%	24,300	11.0%	25,300	4.1%	24,500	-3.2%	24,000	-2.0%	23,000	-4.2%	21,900	-4.8%
Utah	220,000	228,000	3.6%	235,000	3.1%	242,000	3.0%	247,000	2.1%	250,000	1.2%	253,000	1.2%	257,000	1.6%
Wasatch	8,650	8,900	2.9%	8,750	-1.7%	9,050	3.4%	9,200	1.7%	9,200	0.0%	9,450	2.7%	9,700	2.6%
Washington	26,400	27,700	4.9%	29,400	6.1%	30,700	4.4%	32,600	6.2%	35,700	9.5%	39,100	9.5%	41,200	5.4%
Wayne	1,950	2,000	2.6%	2,000	0.0%	2,150	7.5%	2,150	0.0%	2,100	-2.3%	2,100	0.0%	2,050	-2.4%
Weber	145,000	148,000	2.1%	151,000	2.0%	154,000	2.0%	155,000	0.6%	155,000	0.0%	157,000	1.3%	157,000	0.0%
STATE	1,474,000	1,516,000	2.8%	1,559,000	2.8%	1,596,000	2.4%	1,624,000	1.8%	1,645,000	1.3%	1,665,000	1.2%	1,678,000	0.8%

Source: Utah Population Estimates Committee

TABLE 9
Utah Population Estimates
Natural Increase and Net Migration
1980-1987

Year	July 1st Population Estimate	Percent Increase	Increase in Population =	Net Migration +	Natural Increase =	Fiscal Year Births -	Fiscal Year Deaths
1980	1,474,000						
1981	1,516,000	2.8%	42,000	8,601	33,399	41,511	8,112
1982	1,559,000	2.8%	43,000	9,630	33,370	41,774	8,404
1983	1,596,000	2.4%	37,000	4,789	32,211	40,557	8,346
1984	1,624,000	1.8%	28,000	(1,757)	29,757	38,643	8,886
1985	1,645,000	1.3%	21,000	(7,585)	28,585	37,508	8,923
1986	1,665,000	1.2%	20,000	(8,355)	28,355	37,145	8,790
1987	1,678,000	0.8%	13,000	(13,656)	26,656	35,469	8,813

Source: Utah Population Estimates Committee

TABLE 10
Estimates Age Structure for Utah and the U.S.
Selected Age Groups and Selected Years

Age Group		1980	1983	1985	1986
0 - 4	UTAH	13.0%	12.7%	11.8%	11.2%
	U.S.	7.2%	7.5%	7.6%	7.5%
5 - 17	UTAH	24.0%	24.4%	25.5%	25.7%
	U.S.	20.8%	19.3%	18.8%	18.7%
18 - 64	UTAH	55.5%	55.2%	54.8%	54.3%
	U.S.	60.7%	61.5%	61.6%	61.7%
65 +	UTAH	7.5%	7.7%	7.9%	8.8%
	U.S.	11.3%	11.7%	12.0%	12.1%

Note: Data for 1983, 1985 and 1986 are estimates.

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

TABLE 11
Estimated Dependency Ratios* for Utah and the U.S.
Selected Age Groups and Selected Years

		1980	1983	1985	1986
Dependency Ratio*	UTAH	80	81	83	84
	U.S.	65	63	62	62
Children 0-4 per 100 Adults 18-64	UTAH	24	23	21	21
	U.S.	12	13	12	12
School age 5-17 per 100 Adults 18-64	UTAH	43	44	47	47
	U.S.	34	31	31	30
Adults 65+ per 100 Adults 18-64	UTAH	13	14	14	16
	U.S.	19	19	19	20

Note: Data for 1983, 1985 and 1986 are estimates.

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

Sources: U.S. Bureau of the Census
Utah Office of Planning and Budget

GROSS TAXABLE SALES

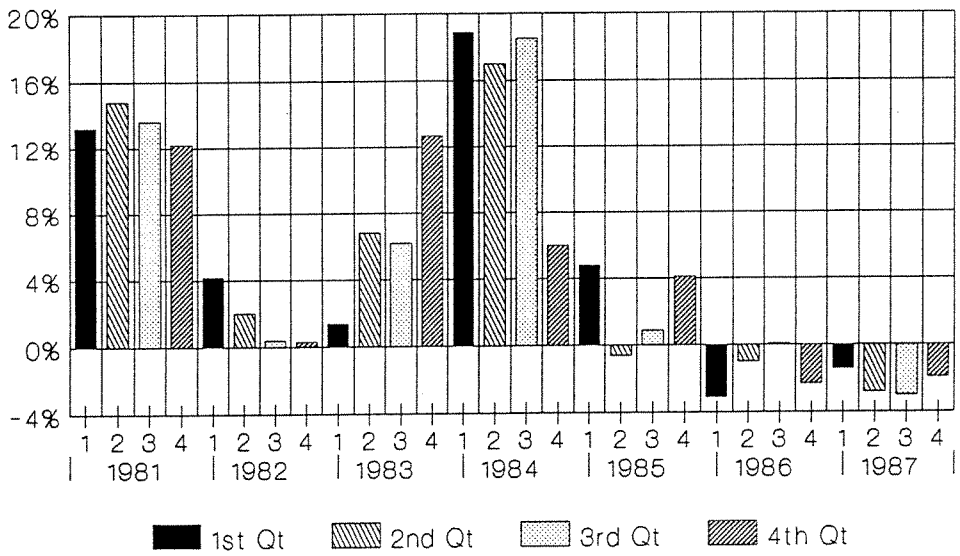
Total Taxable Sales

Preliminary receipts from October and November tax collections indicate that third calendar quarter taxable sales fell 2 percent compared to a year earlier. Taxable sales have continued to decline in six out of the last seven quarters (Figure 15). Taxable sales adjusted for inflation have fallen in nine out of the last ten quarters, dating back to the second quarter of 1985.

The 1984 boom which occurred when commodity prices were peaking and the $5 billion Intermountain Power Project was under construction has been a tough act to follow.

Gross taxable sales declined by 2.3 percent in calendar year 1986. This should turn around in 1987 and grow by approximately 3 percent or more. Retail sales, boosted by nondurable sales, should grow by 2.4 percent. Taxable services, following a 12 percent rebound in 1987 will moderate to 3 percent on 1988. Despite commodity price increases and the comeback of the copper and steel industries, taxable business investment will grow very little, because of sales tax exemptions given to these industries. On a fiscal year basis, retail sales declined by 1.9 percent between 1986-87, while 1985-86 showed a slight decline. Gross taxable sales for all industries for fiscal years 1982-87 are shown in Table 12.

Figure 15
Percent Change in Gross Taxable Sales
Compared to the Same Quarter a Year Ago



Source: Utah State Tax Commission

Below is an outlook for the three major components of taxable sales -- retail sales, taxable services, and taxable business investment (see Figures 16A - C). By breaking down taxable sales into these categories, it is easier to understand the dynamics of the state's economy.

Retail Sales

Between 1985 and 1987, retail sales have increased from 53 percent to over 57 percent of the tax base. During the first half of 1987, retail sales of $3.25 billion were almost even with 1986 first half spending. The 0.6 percent decline during the second quarter, however, was the first decline in over nine years and contrasted markedly to the U.S. increase of 5.7 percent during the same period.

An improved job picture, along with the end of the effects of tax reform's removal of the sales tax deduction in 1986 should push retail sales forward in 1988. The stock market crash of October, 1987 may block durable goods sales growth in future quarters.

After sliding five quarters in a row, average wages in Utah bounced back from zero growth in the first quarter to 2.3 percent growth in the second quarter of 1987. If employment growth doubles from the 1 percent level to the 1.7 percent expected growth path for 1988, nondurable goods (those expected to last less than three years) may post a 5 percent gain in 1988.

Nondurable retail sales rose 4.4 percent during the first half of 1987. This was led by an almost 10 percent gain in general merchandise and apparel and a 6 percent increase in restaurant and fast food sales.

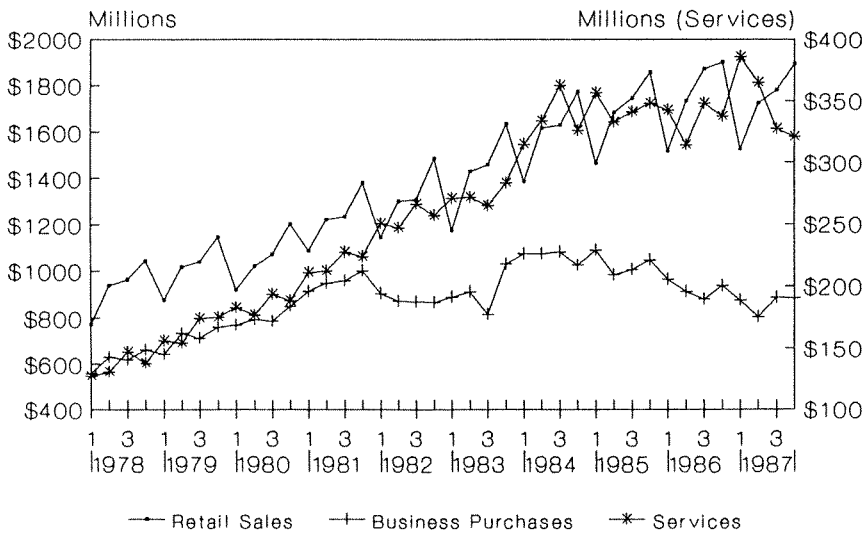
Despite lagging job and wage growth, durable goods sales did quite well in 1986. The reason is that people took advantage, for the last time, of the deductibility of sales tax. Thus durable goods sale were accelerated to capture the sales tax deduction. As a result, in the first half of 1987, durable goods sales fell 5.4 percent.

Two additional hurdles face durable goods retailers in 1988. The recent stock market crash has already chilled U.S. and Utah consumer confidence. The plethora of negative news stories accompanying the stock market crash correction influences even the unaffected consumers. The Consumer Sentiment Index for the U.S. and Utah is shown in Figure 17. These indices have dropped significantly for both Utah and the U.S. in recent months.

The second hurdle facing durable goods retailers is the soft Utah housing market. New dwelling units are expected to fall from 13,400 in 1986 to 7,300 in 1987. The nosedive is more acute in multiple family starts due to overbuilding and the end of income tax benefits. Due to declines in residential construction, declines in building and garden, as well as furniture and home furnishing store sales will continue through the third quarter of 1988.

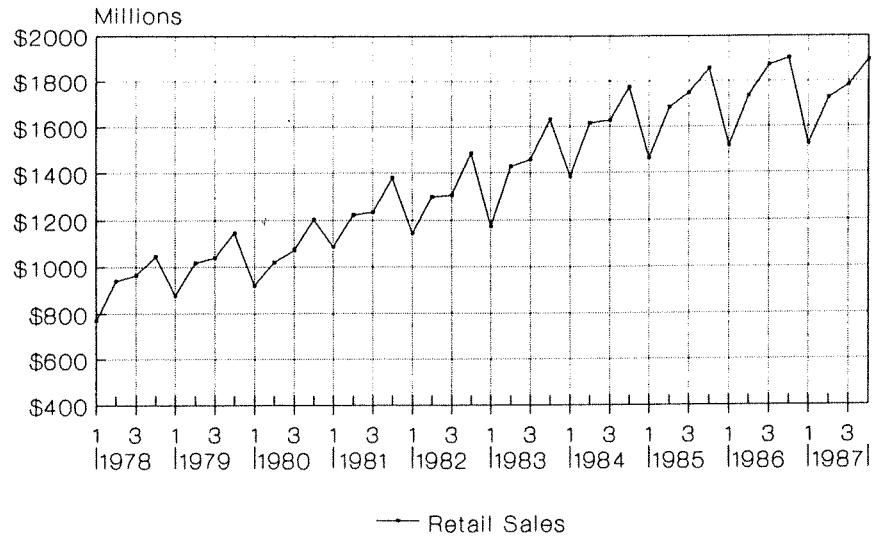
Oakland, California economist Chuck Sexton, a consultant to major investment banks, recently warned that commercial real estate has been hit hard by tax reform and that the stock market crash sent a "smell" into the national commercial market. However, nonresidential construction in Utah, which was earlier expected to fall 30 percent in 1987, will probably only fall 18 percent. Continued absorption of downtown office space, an improved job market, and falling vacancy rates may cause nonresidential construction to improve by 10 percent in 1988.

Figure 16
Utah Taxable Sales by Quarter: 1978-87



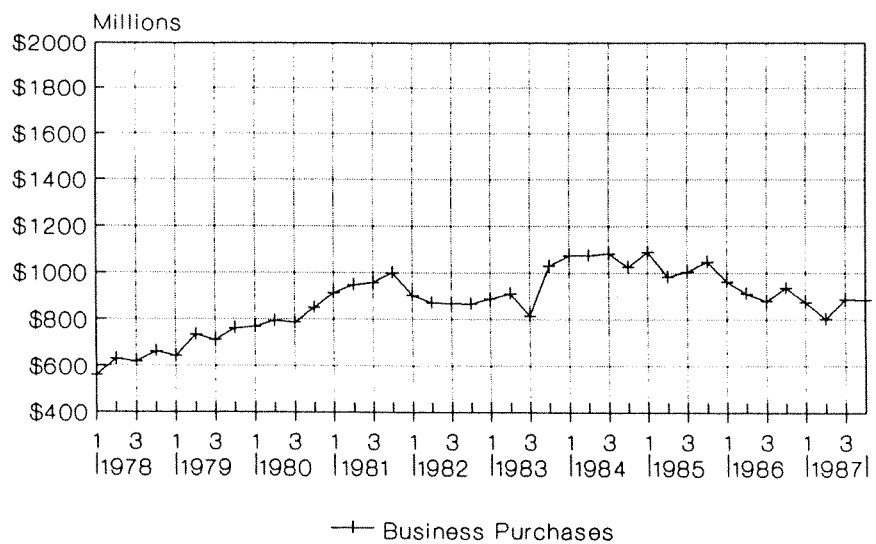
Source: Utah State Tax Commission

Figure 16a
Retail Sales by Quarter: 1978-87



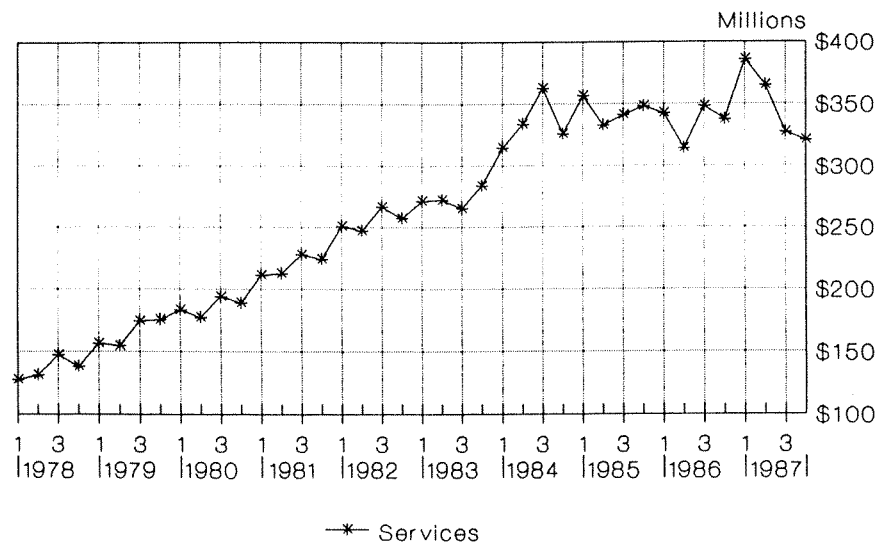
Source: Utah State Tax Commission

Figure 16b
Business Purchases by Quarter: 1978-87



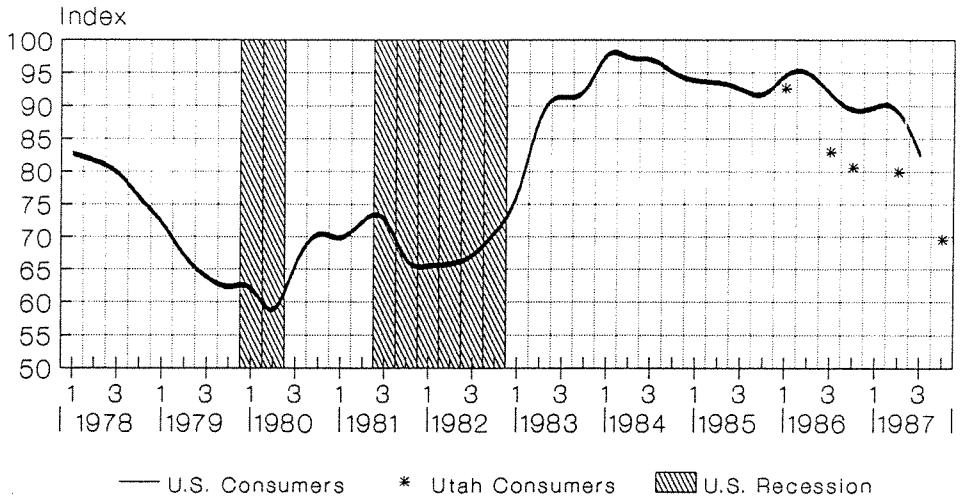
Source: Utah State Tax Commission

Figure 16c
Taxable Services by Quarter: 1978-87



Source: Utah State Tax Commission

Figure 17
Consumer Sentiment Surveys for the U.S. and Utah



1966 = 100

Source: U of U, Survey Research Center

Business Investment

Figure 16 illustrated the continued fall in taxable business investment purchases since 1984. Four factors appear to be causing the downward trend in business investment. First, the construction and completion of the $5 billion Intermountain Power Project contributed to a portion of the 1984 through 1985 boom in equipment and structure purchases. Second, the decline in commodity prices in the mid-1980's caused Utah's copper and steel companies to shutdown, reorganize and finally startup production in 1987. Third, major exemptions from the sales tax base eroded "taxable purchases" in the mining and manufacturing sectors. Fourth, overbuilding, tax reform and higher interest rates have caused both residential and nonresidential construction to fall in 1987.

On the bright side, the Commodity Research Bureau's index of future prices was up 10.2 percent on December 4, 1987, despite a slight setback after the stock market crash. In fact, early December copper and steel cash prices were up 47 and 94 percent, respectively, over 1986 prices. Furthermore, the Wharton Econometric Forecasting Associates (WEFA) Group expects U.S. nonresidential fixed investment to grow 6.5 percent in 1988. These positive signs would normally point to a rebound for Utah's business investment picture in 1988.

Since business investment and utility sales comprise almost one third of the tax base the consequences of ten percent per year declines result in a 3 percent drop in the base

alone. Repeated forecasts for a rebound in these sectors have been met with further declines. Even with the return of BP Minerals (formerly Kennecott Copper) and Geneva steel, the prospects for an upturn seem questionable.

One reason may be the negative impacts of the completion of IPP. This may offset the positive effects of the startups of Utah's major steel and copper manufacturers. This offset, a narrower tax base, and the general downward trend persuade us to estimate that Utah business equipment purchases will be flat at $3.34 billion in 1988.

Taxable Services

After a 2.7 percent decline in 1986, Utah taxable services rebounded 14.3 percent to $750 million during the first half of 1987. A modest rebound of about 5 percent was not expected until early 1988. Business services have rebounded to 1984 and 1985 levels after the 1986 downturn. Led by computer and data processing, business services rose 25 and 20 percent, respectively, during the first two quarters of 1987.

The taxable services sector, which comprises about 12 percent of the tax base, is dominated by two subsectors - - auto repair and business services. Continued declines in new car and truck sales translate into further increases in auto repair. Auto repair services are usually required when consumers postpone automobile purchases, as is the case this year. The late ski season was responsible for the 12 percent advance in amusement and recreation sales during the first quarter of 1987.

After a 12 percent expansion from the 1986 trough, services growth should moderate to a 3 percent growth rate in 1988. Because of the volatility of this sector, however, any forecast here has a wide degree of confidence associated with it.

TABLE 12
Utah Gross Taxable Retail Sales by Industry
Fiscal Years 1982-1987
Thousands of Dollars

Industry	1982	1983	1984	1985	1986	1987	% Change 85-86	% Change 86-87
Agriculture, Forestry & Fishing	9,119	7,727	8,500	9,382	8,701	9,848	-7.26%	13.18%
Mining	274,034	214,485	200,835	190,755	118,459	91,848	-37.90%	-22.46%
Construction	204,512	208,846	270,353	342,746	299,243	200,873	-12.69%	-32.87%
Manufacturing	831,155	788,654	868,110	968,172	948,582	736,878	-2.02%	-22.32%
Transportation	74,840	48,268	57,203	66,694	54,569	42,675	-18.18%	-21.80%
Comunications	265,080	301,450	293,256	308,709	329,583	384,839	6.76%	16.77%
Electric, Gas & Sanitation	594,381	608,199	687,289	858,057	803,160	776,296	-6.40%	-3.34%
Wholesale Trade	1,524,798	1,274,852	1,379,250	1,432,277	1,370,784	1,181,506	-4.29%	-13.81%
Retail Trade:								
Food Stores	1,244,257	1,373,499	1,443,342	1,539,602	1,695,255	1,826,551	10.11%	7.74%
Building & Garden	401,506	380,426	471,467	531,630	528,301	540,432	-0.63%	2.30%
General Merchandise	744,697	808,707	852,071	883,111	918,227	980,558	3.98%	6.79%
Motor Vehicles	875,310	929,554	1,175,413	1,326,899	1,368,249	1,370,725	3.12%	0.18%
Apparel & Accessories	248,324	247,452	270,585	301,865	326,206	335,273	8.06%	2.78%
Home Furnishings	314,181	316,775	380,436	437,087	444,053	489,911	1.59%	10.33%
Eating & Drinking	469,705	493,381	545,225	607,372	667,022	708,725	9.82%	6.25%
Miscellaneous	658,771	682,643	730,386	830,779	817,798	740,883	-1.56%	-9.41%
Finance, Insurance & Real Estate	45,568	41,425	47,991	51,574	61,912	74,070	20.04%	19.64%
Services	913,789	1,041,359	1,135,595	1,378,376	1,364,676	1,435,949	-0.99%	5.22%
Public Administration	42,678	54,256	76,490	101,552	72,450	75,920	-28.66%	4.79%
Private Motor Vehicle Sales	183,929	176,417	204,301	222,716	213,524	202,227	-4.13%	-5.29%
Occasional Sales	20,784	30,324	36,235	19,231	36,459	26,203	89.58%	-28.13%
Nondisclosable	11,235	24,133	36,990	22,812	34,627	19,336	51.79%	-44.16%
Total	9,952,653	10,052,832	11,171,323	12,431,398	12,481,840	12,251,526	0.41%	-1.85%

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

In a single year, residential construction (single- and multifamily construction) in Utah has declined over 40 percent; dropping from 13,444 dwelling units in 1986 to about 7,300 in 1987. This is the sharpest one-year decline in residential construction activity in Utah's post-war history.

The abrupt decline reflects the collapse of the multifamily market; a market which had been deteriorating for the past two years. A further decline is unlikely in 1988 but no significant strength is anticipated for either multifamily or single family construction; hence residential construction activity in 1988 is projected to be between 7,000 and 8,000 units.

The construction of multifamily units declined from 5,000 in 1986 to less than 800 in 1987. The recent volatility of the multifamily market is shown in Table 13. In five years multifamily activity has gone from 2,900 units in 1982, rising to 11,300 units in 1984, and plummeting to 800 units in 1987. The rapid decline in multifamily construction activity is a consequence of both overbuilding and changing demographics.

Overbuilding was encouraged by tax advantages, resulting in the construction of over 25,000 apartment units in Utah's metropolitan areas from 1983 through 1986. This overbuilding pushed the local vacancy rate to 15 percent .

Changing demographics, specifically the shifting age structure of the population and accelerating out-migration, have also discouraged multifamily construction. The shift in the age structure of the population with the aging of the "baby boom" generation has made for relatively fewer households in the prime renter age group, namely households with the head of household under 30 years old. Fewer new, young households means a declining demand for apartments. Likewise, net out-migration has also reduced the number of households in the state and further eroded the demand for apartments.

Overbuilding and declining demand for apartments have contributed to the unfavorable apartment market conditions that have brought the rapid retreat to the multifamily sector. It has been over 20 years since multifamily construction has failed to exceed 1,000 units; but in both 1987 and 1988, it is likely there will be fewer than 1,000 multifamily units built in Utah.

The same demographic factors that weakened the multifamily market in 1987 combined with rising interest rates to cut demand for single family housing. Construction of single family dwelling units in Utah will be near 6,500 in 1987, about 25 percent below the level of 1986.

Single-family construction during the 1980's has averaged less than 7,000 units annually, about half the level of the new construction activity of the 1970's. Favorable demographic forces in the decade of the 1970's created high levels of demand for single-family housing, with new construction reaching an all-time high of 17,424 units in 1977. The annual average for the decade was 13,400 units. Since 1980, however, the highest

level of single-family construction occurred in 1983 with 8,806 units. Even mortgage rates below 10 percent in 1986 failed to boost single family construction above 9,000 units.

Single family construction will not exceed 9,000 units without significant in-migration. But there is no single event or set of events on the economic horizon that will create these conditions in 1988. The monthly construction data for 1987 showed a growing weakness throughout the year. This is due to the increase in the inventory of vacant unsold homes created by the high level of out-migration. Given this context for 1988, there is not much prospect for improvement in single family construction, therefore, the estimated range of construction activity for 1988 is 6,000 to 7,000 single family dwelling units.

Nonresidential Construction

In 1987 the value of nonresidential construction will be down about 10 percent to $400 million. Another 10 percent decline to $360 million is expected for 1988, as market conditions remain relatively weak for office buildings, industrial buildings, hotels and motels and stores and mercantile buildings. Historically, these sectors account for about 60 percent of nonresidential construction and with the exception of the office building sector, the value of new construction in each of these sectors declined in 1987. See Tables 14 and 15.

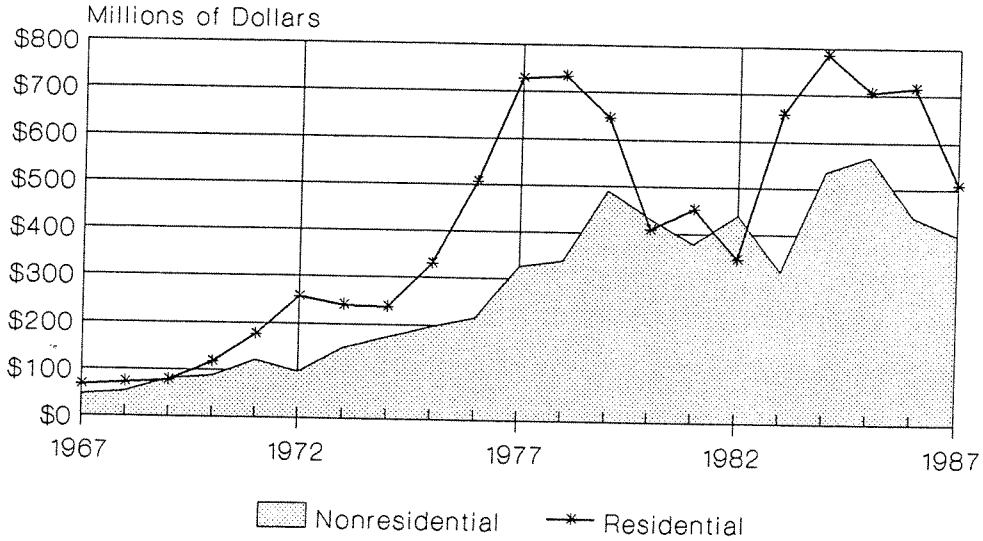
The industrial sector has declined despite the construction activity for the modernization of the mining, smelting and concentrator facilities of B.P. Minerals America (formerly Kennecott Minerals Company). In November, a building permit for an $18 million concentrator was approved for B.P. Minerals, which was the largest nonresidential project in the state in 1987.

In the past, high levels of nonresidential construction activity have been led by industrial and office building construction. But with vacancy rates in the metropolitan area for these two sectors at 12 and 18 percent respectively, there will be little support for a significant turnaround.

New construction in the nonresidential sector is very sensitive to increases in employment. The recent peak years for nonresidential construction, 1979 and 1984, were preceded by employment growth in excess of 30,000 jobs. The current 1 percent employment growth rate will hold down the development of office and industrial buildings while slow population growth will hamper the development of shopping centers and mercantile buildings. The public sector's fiscal challenges will weaken construction in that sector.

One bright spot is nonbuilding construction. Although this construction activity (bridges, highways, dams and power plants) is not included in the construction valuation figure, nonbuilding activity nevertheless does provide high wage construction jobs. In 1988 construction on the Central Utah Project's Jordanelle Dam and expenditures by the Department of Transportation for highway construction will contribute significantly to income and jobs for the construction sector. The value of residential and nonresidential construction is shown in Figure 18.

Figure 18
Value of New Construction in Utah, Residential and Nonresidential



Source: U of U, Bureau of Economic and Business Research

Table 13
Residential Construction Activity in Utah

Year	Single Family Units	Multi-Family Units	Total	Value (millions $)
1970	5,954	3,166	9,070	117
1971	6,766	6,011	12,777	177
1972	8,807	8,513	17,320	256
1973	7,546	5,904	13,450	241
1974	8,284	3,217	11,501	238
1975	9,922	2,762	12,684	331
1976	13,546	5,075	18,621	507
1977	17,424	5,856	23,282	728
1978	15,625	5,646	21,264	734
1979	12,570	4,179	16,767	646
1980	7,760	3,141	10,901	408
1981	5,413	3,840	9,253	452
1982	4,767	2,904	7,671	348
1983	8,806	5,858	14,664	658
1984	7,496	11,325	18,821	787
1985	7,403	7,834	15,237	706
1986	8,512	4,932	13,444	716
1987 (p)	6,500	800	7,300	510

(p) preliminary

Source: Bureau of Economic and Business Research

Table 14

Nonresidential Construction Activity in Utah

Year	Value of New Nonresidential Construction (millions $)
1970	87.9
1971	121.6
1972	99.0
1973	150.3
1974	174.2
1975	196.5
1976	216.8
1977	327.1
1978	338.6
1979	490.3
1980	430.0
1981	378.2
1982	440.1
1983	321.0
1984	535.2
1985	567.7
1986	439.9
1987 (p)	400.0

(p) preliminary

Source: Bureau of Economic and Business Research

Table 15

Utah Nonresidential Construction by Sector
(millions of dollars)

Sector	1985	1986	1987 (a)	Percent of Total (b)
Hotels & Motels	39.9	14.4	4.6	4.9%
Churches	35.3	35.1	23.1	7.0%
Industrial Buildings	76.6	86.4	65.7	21.9%
Offices & Banks	111.7	55.8	69.3	18.9%
Stores	82.3	55.8	50.4	13.9%
Public Buildings	102.4	49.5	83.0	14.2%
Other	118.9	143.0	103.9	19.4%

(a) Data through November
(b) Data represent ten-year average

Source: Bureau of Economic and Business Research

INFLATION

The continuing high federal and balance of payments deficits have caused a considerable concern regarding inflationary expectations. As measured by the Consumer Price Index, inflation during 1987 has remained low at 3.6 percent, however this is almost twice the rate of 1.9 percent for 1986. However, the October 1987 decline in stock prices has reduced both growth and inflationary expectations. There is little inflationary pressure on the cost side with most wage increases below 3 percent, but the continuing decline in the value of the dollar will add somewhat to imported price inflation. Figure 19 shows CPI monthly changes as measured from 1981 to 1987.

When the cross currents are matched against each other, the outlook for inflation in 1988 appears to be approximately 4.4 percent. Volatility in oil prices has played a major role in year-to-year differences in inflation and may play a significant role in the future.

It should be noted that inflation measures are not specific to Utah. The Consumer Price Index (CPI) 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.

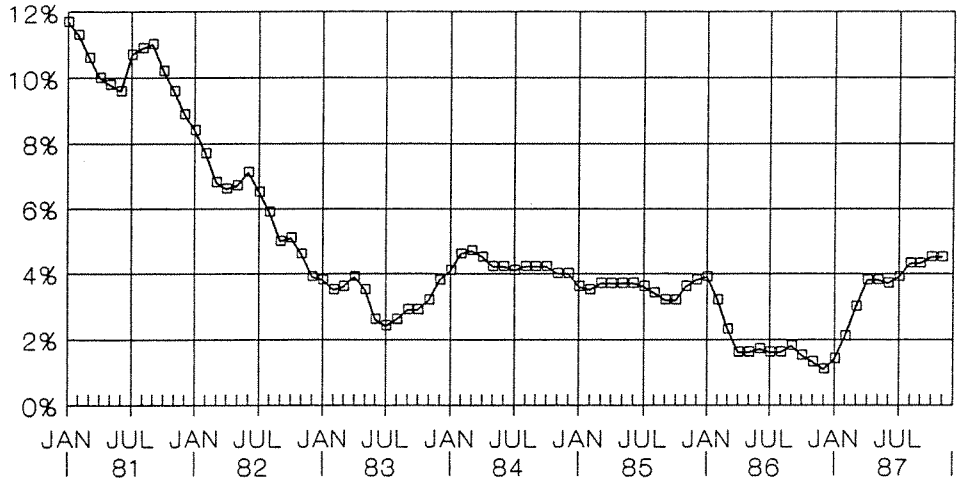
The Consumer Price Index measures price changes in a fixed market basket. That is, it compares the current cost of purchasing a fixed set of goods and services with the cost of the same set last month, last year, and so on. Keeping the market basket constant enables the CPI to measure price changes rather 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 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 2.9 percent in 1987. Most economists expect this index to be between 4.4 and 5.0 percent in 1988.

Figure 19
Increase in Prices Over the Previous 12 Months measured by CPI: Jan 81 to Nov 87



Source: U.S. Department of Labor

TABLE 16
Annual Changes in the Consumer Price Index For the U.S.

Year	Percent Change
1988	4.4(a)
1987	3.6(a)
1986	1.9
1985	3.6
1984	4.3

(a) Estimated by Wharton Econometric Forecasting Associates (WEFA)

UTAH ENERGY RESOURCES PRODUCTION AND PRICES

Energy plays two key roles in the economy of Utah. First, on the production side the state relies on development of the energy resources to provide jobs, income, tax revenues, and economic development opportunities for the state and its citizens. Secondly, our economy consumes large volumes of energy to heat our homes and businesses, fueling plants and manufacturing processes, and transporting our goods and services.

Total Production

The presence of significant reserves of oil, natural gas, coal, and uranium has fostered development of a substantial energy producing industry in the state. In 1986, Utah's four primary energy sectors produced an estimated 984 trillion BTUs for in-state and out-of-state consumption. The value of this production is estimated at $1.3 billion. Coal and uranium production accounted for 34.0 and 33.2 percent of total energy produced while crude oil and natural gas contributed 23.1 and 9.7 percent respectively.

Oil production ranked first in value among Utah's energy resources in 1987. Though contributing only 23 percent to total energy produced, on the basis of value, oil accounted for $627.35 million or 46 percent of the total value of energy produced in the state. Total tonnage of coal mined in 1987 was valued at $481.3 million. Natural gas maintains its place as the third most valuable energy resource produced in Utah although, the value of gas produced in the state in 1987 decreased 25.1 percent to $164.4 million. Despite a depressed world market Utah production of yellowcake (from uranium) nearly quadrupled in 1986 and declined only slightly in 1987. Based on spot market prices, the value of yellowcake production was $95.4 million placing it fourth among Utah's energy producing industries in 1987. Table 17 shows production, prices and the value of production for all energy resources from 1980 to 1987.

Employment

Employment in the four primary energy producing sectors has fallen precipitously since 1981. From a decade high of 11,898, employment has fallen 47 percent over the course of the past six years. Direct employment attributable to energy production in 1986 was 5,634 jobs paying total wages of $208.1 million. These figures represented approximately 1 percent of total employment of non-agricultural jobs in the state and 1.9 percent of total wages and salaries.

All sectors have experienced substantial decreases since 1981 as reflected in the total energy industry figures. Oil industry cutbacks in exploration and the attendant drop in drilling and production have had a devastating effect on employment in Utah's oil and gas industry. At the height of Utah's most recent oil boom in 1981, 5,915 individuals were employed in exploration and production activities. By the end of the second quarter of 1987, employment in this sector had declined to a decade low of 1,753, a decline of 70 percent from 1981.

Despite year-to-year increases in production since 1983, employment in Utah's coal industry continues to decline. Technological advances in the mining of coal have been the primary reason for the reduction in manpower. Between 1986 and 1987 employment in Utah's coal fields declined 10 percent to 2,587. This represented a 49 percent reduction in the coal industry work force in 1982. Table 18 shows employment information from 1980 to 1987 for all Utah energy industries.

Similarly, Utah's yellowcake production has achieved record levels in the past two years, yet employment through the second quarter of 1987 is only 23 percent of what it

was in 1980. Currently there are approximately 350 individuals employed by the two mills and five mines operating in the state. With at least one mill expected to shut down for the first six months of 1988, the employment growth prospects for this industry are bleak.

Consumption

The connections between energy consumption and economic development are numerous. Inexpensive energy attracts new businesses, reduces the costs of manufactured goods and lowers the price of these products to consumers. Consumers with lower energy bills have more disposable income to spend, further stimulating economic activity.

Energy consumption in Utah was 494.0 trillion BTUs in 1986, 1.6 percent below the 1985 level and 5.6 percent below the peak consumption level of 523.4 trillion BTU during 1979. In doing so, Utahns' estimated expenditures on energy exceeded $2.03 billion. Energy consumption of coal and natural gas decreased while Utah consumed more petroleum products than in the previous year. Coal accounted for the largest portion of energy used in Utah during 1986 comprising 39.7 percent of all energy consumed. Petroleum's share of total consumption increased 2.8 percent to 186.32 trillion BTU and represented 37.7 percent of the total. Natural gas usage fell 12.8 percent to 92.4 trillion BTU.

Decrease in total energy consumption in 1986 is attributable to a number of factors. First, there has been a prolonged decline in the growth of Utah's economy due primarily to a downturn in mining, construction, manufacturing, and agricultural activities. All of these economic activities require large amounts of energy and recent declines in these sectors is partially reflected in the decrease in energy consumption between 1985-1986. Secondly, conservation continues to have an impact on energy demand. Energy conservation measures brought about by increases in real energy prices between 1973 and 1981 are still with us. Consumption has been reduced through improvements in energy efficiency of automobiles, appliances, residences, commercial buildings and industrial equipment. This trend towards greater energy efficiency is expected to continue into the future.

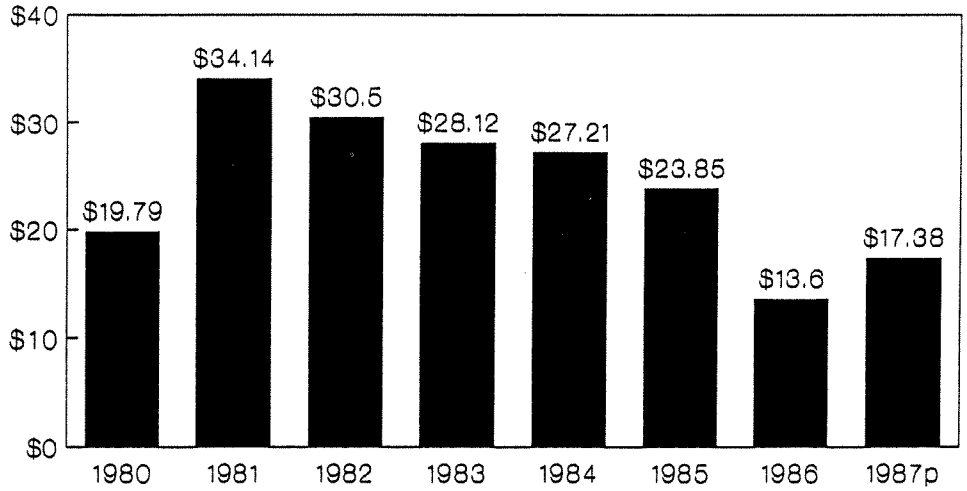
Oil

The collapse in oil prices was clearly a mixed blessing for Utah. An obvious benefit was a reduction in prices for all petroleum based fuels resulting in an estimated $660 million in savings for Utah consumers of petroleum products. The price drop also provided a boost to the economy through the combined effects of increased purchasing power of consumers, lower interest rates, and a lower rate of inflation. Oil price changes are shown in Figure 20.

While lower oil prices aided consumers and the economy, Utah's oil producers and supporting industries suffered significant setbacks. Falling prices cut into producer revenues causing shut-ins of marginally producing wells, reductions in exploration and drilling, rising oil field unemployment, smaller royalty payments for both private land owners and state government, and significant reductions in state revenues.

Optimism for improving industry conditions in 1987 followed on the heels of a gradual increase in prices paid for Utah crude oil. Encouraging as the price rise may be, pessimism about the future is still reflected in the number of well permits issued, rotary rig

Figure 20
Oil Price per Barrel: 1980-87



p - preliminary estimate
Source: U.S. Department of Enery and Utah State Energy Office.

activity, and wells completed. Through the third quarter of 1987, drilling permits issued totaled 115, down 22 percent from the 148 issued during the same period in 1986. In addition, rising oil prices have failed to stem the fall in the number of rigs operating in Utah. Having peaked in October 1986 at 17, Utah's active rotary rig count declined to three rigs at the end of March 1987. Though rebounding significantly following a summer of relatively active drilling, the average rig count through the third quarter of 1987 stood at nine. This is 30 percent below rotary rig activity for the same period in 1986. Well completions have tracked permits and rotary rig activity. As of October 21, 66 wells were reported as having been completed in 1987, a fall of 40 percent from the depressed levels of 1986.

A year-and-a-half of lower oil prices appear to have exacerbated already declining crude oil production. Because of the drop in drilling, new oil and gas discoveries have failed to offset natural production declines of existing wells. From an historic high of 41 million barrels in 1985, Utah crude oil production fell to 39.2 million barrels in 1986. At rates of production established through the first seven months of 1987, Utah production will drop an additional three million barrels from 1986 production levels, to 36.1 million barrels.

Natural Gas

Marketed gas production in Utah increased for the fifth straight year in 1986 to 90.0 million cubic feet. Through the first seven months of 1987, however, marketed production has fallen off slightly from last year's total. Under current market conditions this trend is

expected to continue through the remainder of 1987 resulting in a 3.7 percent decrease in marketed production, 86.6 million cubic feet.

Coal

Production from Utah mines in 1986 was 14.2 million tons. This accounts for approximately 33 percent of all energy produced in the state. This level of production marked the second highest level achieved by Utah's century-old coal industry. Coal production in 1987 has continued to climb above the previous year's total. Through the second quarter of this year, 8.426 million tons of coal were produced representing a 13 percent increase over the levels achieved in 1986. Forecast to reach 16.5 million short tons in 1987, production is expected to easily exceed 1986's production total.

Utah mines produce coal for four principal markets; 1) electric utilities, 2) coke plants, 3) other industrial plants, and 4) residential and commercial users. Electricity production is clearly the most important end-use sector for Utah's coal industry. In 1986, 9.9 million tons of Utah coal were produced for shipment to utilities, representing 74 percent of all Utah coal distributed in 1986. The largest portion of this total, 6.9 million tons, went to coal-fired power plants in Utah. The remaining three million tons were distributed to power plants in Nevada and Mississippi. On the strength of increased demand for steam coal by electric utilities and stable demand by the industrial sector, coal shipments from Utah mines increased 24 percent during the first two quarters of 1987.

Uranium

Presently, there are two uranium mills operating in Utah. These mills are responsible for a major share of the uranium production in the U.S. In 1986, Utah's mills processed 5.8 million pounds of yellowcake, about 43 percent of total U.S. domestic production. As of October 31, 1987 production was at 4.9 million pounds. Production for 1987 is not expected to exceed 5.5 million pounds as the largest producer of yellowcake is scheduled to be shut down between November 1987 and July 1, 1988.

Outlook for Energy Prices and Production

In the past year, petroleum prices have rebounded from the sharp price reductions of mid-1986. Between July 1986 and September 1987, refiner acquisition costs climbed $8/bbl from $10.92/bbl to $19.02, and have stabilized through the third quarter of 1987 at $19.05. Despite what would appear to be a bullish outlook, the oil price picture has been weakened considerably in light of OPEC's recent failure to agree on limiting members' production. Already prices for oil contracts traded on the New York Mercantile Exchange have fallen below $17.00. Expectations for the short-term are for prices to remain in the $16-$18 range. This is due to the existing glut of crude oil on world markets, reduced demand due to seasonal factors, and OPEC's inability to adhere to the official production ceiling agreed to at their December 1986 meeting.

There is a great deal of uncertainty in forecasting the price of oil, even over a short period of time. OPEC's ability to raise prices in 1988 has been seriously called into question. Throughout 1987, members' production has consistently exceeded OPEC's established production ceiling by 2.6 to 2.8 million barrels per day in a market already awash in oil. Barring any significant disruptions in oil supplies from the Persian Gulf as a result of increased military hostilities, the price of a barrel of oil is expected to remain within an average range of $16-$18 per barrel throughout 1988.

Prices of other forms of energy should track those of crude oil in 1988. Prices paid for Utah natural gas dropped below two dollars, per MCF in 1987. Declines in prices are likely to continue through 1988 due to an existing glut of natural gas and competition from low-priced residual oil. During 1987, coal prices at the mine-mouth have fallen from 1986 levels. The 1987 average mine-mouth price of Utah coal was $29.17 per ton, a decrease of 8 percent from the 1986 average price of $31.64. Coal prices in 1988 are expected to stabilize and remain in the range of $28 to $29.

Though the rise in crude oil prices has been encouraging, the geographic and geological setting of Utah's oil resources remain unchanged. Historically, Utah's oil provinces are the most expensive to drill in the continental United States. In the absence of a dramatic and sustained price increase to at least $30 per barrel, Utah drilling activity will remain at its current depressed level. Due to the significant decrease in drilling activity Utah's crude oil production is expected to continue its decline. Production will be lost as existing wells continue their natural declines and too few new wells are drilled to compensate for these declines.

Natural gas and oil are interrelated in regards to production. A significant percentage of the natural gas produced in Utah is associated crude oil production. Like oil, natural gas production will eventually decline due to lower prices and decreased drilling activity. A surplus of deliverable gas prevented production from falling in step with crude oil production in 1986, however, natural gas production is expected to decline in 1987 in response to depressed prices.

Utah coal is not generally competitive for use outside the intermountain west and Pacific coast states. Despite the limited market growth and the demise of the coking coal market, demand for Utah coal is expected to increase over the next year. A strong, stable industrial market on the west coast and increased utilization of in-state electric generation capacity, because of IPP's Unit No. 2 being brought on line, will ensure growth and increased shipments and consumption of coal for the remainder of the decade.

The need for uranium is directly related to the contribution of nuclear energy to the domestic supply of electric power. As of January 1, 1987 there were 128 nuclear power generating units in the United States. As a result there will be a need for uranium to fuel these plants well into the 21st Century.

The domestic demand for uranium is 40 million pounds per year. The domestic industry supplies about 12-14 million pounds while foreign competition and withdrawals from utility industry stock piles account for the remainder.

The current price for yellowcake is now $17 per pound, down from a peak of $67 per pound in 1976. Since the average cost of production in the U.S. is approximately between $20 and $30, the domestic industry, including Utah, will continue to have a difficult time competing against higher grade resources and lower production costs of foreign competition in the foreseeable future.

TABLE 17
Energy Resources in Utah
Prices, Production and Value of Production
1980 to 1987

Calendar Year	Oil Price (BBL.) [3]	Oil Production (M BBL.) [1]	Value Of Production ($MM) [1]	Natural Gas Price (MCF) [3,4]	Natural Gas Production (M MCF) [1]	Value Of Production ($MM)	Coal Price Per Short Ton [3]	Coal Production (M Tons) [2]	Value Of Production ($MM)	Yellow Cake Price Per Pound [2]	Yellow Cake Production (M LBS.) [2]	Value Of Production ($MM)
1980	19.79	24.98	494.33	1.86	49.94	92.89	25.63	13.26	339.93	31.79	2.40	76.20
1981	34.14	24.97	852.31	2.40	68.53	164.47	26.90	13.81	371.44	24.18	4.49	108.50
1982	30.50	22.97	700.46	3.06	80.11	245.12	29.42	16.91	497.55	19.89	2.90	57.58
1983	28.12	31.05	872.99	3.18	59.44	189.02	28.30	11.83	334.76	22.98	1.37	31.53
1984	27.21	35.84	975.12	3.30	70.98	234.23	29.20	12.26	357.96	17.27	8.58	14.82
1985	23.85	40.99	977.64	3.27	75.90	248.20	27.69	12.83	355.29	15.60	1.56	24.40
1986	13.60	39.17	532.73	2.44	90.01	219.63	31.64	14.18	448.59	16.96	5.77	97.81
87Q1	15.46	8.87	137.05	NA	23.41	NA	29.65	4.15	122.99	17.06	1.49	25.49
87Q2	16.99	8.88	150.82	NA	19.70	NA	28.69	4.28	122.74	17.10	1.49	25.55
87Q3	19.05	9.26	176.33	NA	21.64(e)	NA	NA	4.09(e)	NA	17.68	1.48	26.15
87Q4 (e)	18.00	9.10	163.76	NA	21.82	NA	NA	4.00	NA	17.93	4.00	NA
1987 (e)	17.38	36.10	627.35	1.90	86.56	164.47	29.17	16.50	481.31	17.44	5.47	95.40

(e) estimates

Sources:

(1) Utah Dept. of Natural Resources, Division of Oil, Gas and Mining, Annual Production Reports

(2) Utah Dept. of Natural Resources, Utah Energy Office, Energy Data Information System

(3) U.S. Dept. of Energy, Energy Information Administration, Petroleum Marketing Monthly (DOE/EIA-0380), Quarterly Coal Report (DOE/EIA-0121) and Natural Gas Monthly (DOE/EIA-0131)

(4) State of Utah Revenue Forecast, Quarterly Report, September 1987

TABLE 18
State of Utah Employment
Energy Resources Production Sector
1980 to 1987

Calendar Year	Oil & Gas Mining Employment	Coal Mining Employment	Uranium Mining Employment	Total Energy Employment
1980	4,519	4,536	1,532	10,587
1981	5,915	4,512	1,471	11,898
1982	5,401	5,063	1,113	11,577
1983	4,493	3,148	744	8,385
1984	4,962	2,784	376	8,122
1985	3,846	2,857	281	6,984
1986	2,408	2,873	353	5,634
87Q1	1,746	2,561	336	4,643
87Q2	1,753	2,612	348	4,713
87Q3	NA	NA	NA	NA
87Q4 (e)	NA	NA	NA	NA
1987 (e)	1,750	2,587	342	4,679

(e) estimates

Source: Utah Dept. of Employment Security, Labor Market Information, Utah Annual Report, 1980-1986

TAX COLLECTIONS

Table 19 gives the actual historic annual revenue collections and trends in rates of growth for selected taxes for fiscal years 1975 to 1987, and the collections and trends forecast for fiscal years 1988 and 1989. As can be seen from this table, fiscal years 1975 through 1982 were years of strong growth for sales and income taxes. This was a period of in-migration and relatively high growth in employment and nominal wages. The strong growth in nominal nonagricultural wages, coupled with the possibility that the in-migrants may have brought savings from out-of-state with them to spend in Utah, could account for the growth in sales tax collections exceeding the growth in incomes during this period.

Fiscal year 1983 exhibited a sharp decrease in the rate of growth in taxes due to the recession which lingered on during most of that year. Fiscal year 1984 collections compared to fiscal year 1983 were up significantly due to the economic recovery, tax rate increases and windfall payments. Major tax increases affecting fiscal year 1984 included a 1/8th cent sales tax increase effective July 1, 1983, and another 1/2 cent increase effective October 1, 1983; increases in corporate taxes from 4 to 4.65 percent effective January 1, 1983, and an additional increase from 4.65 to 5 percent effective January 1, 1984; an increase from 2 to 4 percent on January 1, 1984 in the oil and gas occupation tax; and, an increase from $4.12 to $11 per barrel in the beer tax effective July 1, 1983. Sales tax and oil occupation tax payments were also accelerated in fiscal year 1984.

Moderate growth in taxes occurred in fiscal year 1985 as the economic recovery continued. Also contributing to the growth in revenue in fiscal year 1985 was a 3 cent increase in motor and special fuels taxes which became effective on July 1, 1984. Fiscal year 1986 showed another sharp decrease in collections. The decline in fiscal year 1986 revenues was largely due to the closure of Kennecott, out-migration, depressed oil prices, declining growth in wages and employment, new sales tax exemptions, and stronger growth in tax exempt services industries than in taxable goods industries.

Fiscal year 1987 tax collections reflect improvements in revenue collections that are primarily the result of tax increases, windfalls and accelerations in payments authorized by the February 1987 legislative session. Revenue increases in that year resulted from tax increases, accelerated corporate payments, income tax surcharges, overwithholding of income taxes, windfalls from federal tax reform, and one-time capital gains brought about by federal tax reform. In other words, the increases were not the result of improvements or growth in the general economy. In fact, fiscal year 1987 collections would have been $53 million less than fiscal year 1986 receipts without these tax and windfall increases.

The underlying weakness in fiscal year 1987 revenue receipts was due to 1) the idling of the Geneva Steel plant, 2) the temporary closure and downsizing of Kennecott, 3) continued out-migration, 4) the construction downturn (particularly IPP), 5) lower oil prices, 6) sluggish economic activity in surrounding states, 7) new tax exemptions, and 8) lower employment, population, and wage growth in general.

Revenue collections in fiscal year 1988 are expected to improve over those for fiscal year 1987. The expected increase is due primarily to tax increases and accelerated corporate franchise tax payments. The tax increases include: 1) a 1/2 cent increase in the sales tax effective March 31, 1987; 2) an 11 cents increase per pack in cigarette taxes effective April 27, 1987; 3) windfalls from federal income tax reform effective January 1, 1987; and, 4) a 5 cents per gallon increase in motor and special fuels effective April 1, 1987.

Modest improvements in the general economy in calendar year 1988 should help improve revenue collections in fiscal year 1989. The economy should improve somewhat in 1988 due to BP Minerals' (formerly Kennecott Copper) re-opening, Geneva's re-opening, new defense contracts at Thiokol and Hercules, expansions at the airport, office space absorbtion improving, and tourism remaining strong. Tax collections should also improve in 1988 due to the boost in wages resulting from increased productivity, inflation, and lower unemployment.

TABLE 19
Selected Annual Forecast and Historic Tax Collections
Fiscal Years 1975 to 1989
December 1987

	Sales Tax Rate	Sales Taxes	Percent Change	Income Taxes	Percent Change	Corporate Taxes	Percent Change	Mineral Production Taxes	Percent Change	Mineral Lease Payments	Percent Change
FY75	4.00	173,737		104,919		18,003		0		5,532	
FY76	4.00	194,799	12.12	140,562	33.97	24,502	36.10	0	0.00	5,512	-0.36
FY77	4.00	225,794	15.91	158,268	12.60	24,867	1.49	0	0.00	9,018	63.61
FY78	4.00	257,988	14.26	183,894	16.19	29,448	18.42	0	0.00	9,639	6.89
FY79	4.00	288,603	11.87	225,956	22.87	32,874	11.63	0	0.00	12,325	27.87
FY80	4.00	320,454	11.04	265,327	17.42	40,377	22.82	0	0.00	14,933	21.16
FY81	4.00	347,382	8.40	294,947	11.16	40,667	0.72	0	0.00	18,153	21.56
FY82	4.00	385,260	10.90	331,139	12.27	40,894	0.56	0	0.00	26,891	48.14
FY83	4.00	388,726	0.90	347,728	5.01	33,763	-17.44	4,341	0.00	36,162	34.48
FY84	4.30	515,202	32.54	389,959	12.14	53,228	57.65	10,812	149.07	37,468	3.61
FY85	4.50	539,699	4.75	434,873	11.52	65,918	23.84	18,120	67.59	34,190	-8.75
FY86	4.50	542,955	0.60	454,521	4.52	83,817	27.15	22,923	26.51	32,578	-4.71
FY87	4.59	559,256	3.00	533,190	17.31	68,898	-17.80	9,519	-58.47	22,385	-31.29
FY88	5.09	586,900	4.94	527,200	-1.12	76,000	10.31	11,800	23.96	25,000	11.68
FY89	5.09	606,200	3.29	570,000	8.12	63,000	-17.11	12,000	1.69	24,500	-2.00

1) FY88 and FY89 values are forecast amounts.
2) Sales taxes for FY84 include a $55.3 million windfall payment.
3) Sales Taxes for FY87 to FY89 includea 6/64 percent reserve account transfer and a tax increase of 1/2 cent as of March 31, 1987.
4) Income taxes for FY87 to FY89 include tax reform windfalls, overwithholding adjustments and a surcharge of 4% in FY87.
5) Corporate taxes for FY87 and FY88 include and acceleration of payments and a 4% surcharge.
6) Corporate and income taxes include mineral production taxes.

	Mine Occupation Taxes	Percent Change	Motor Fuels Taxes	Percent Change	Special Fuels Taxes	Percent Change	B,C & T Taxes	Percent Change	Insurance Premium Taxes	Percent Change
FY75	5,769		40,485		5,753		8,700		9,520	
FY76	11,259	95.16	43,515	7.48	6,241	8.48	9,197	5.71	8,384	-11.93
FY77	8,489	-24.60	45,694	5.01	6,865	10.00	9,617	4.57	10,098	20.44
FY78	8,446	-0.51	48,808	6.81	.7,391	7.66	9,989	3.87	11,917	18.01
FY79	8,423	-0.27	61,372	25.74	9,852	33.30	10,156	1.67	13,452	12.88
FY80	9,821	16.60	60,451	-1.50	10,470	6.27	12,445	22.54	14,718	9.41
FY81	14,757	50.26	56,508	-6.52	10,107	-3.47	13,520	8.64	15,778	7.20
FY82	20,694	40.23	67,734	19.87	12,672	25.38	14,108	4.35	21,494	36.23
FY83	24,329	17.57	68,685	1.40	12,603	-0.54	16,211	14.91	17,102	-20.43
FY84	36,243	48.97	68,979	0.43	14,449	14.65	19,897	22.74	19,986	16.86
FY85	46,880	29.35	89,337	29.51	17,791	23.13	21,309	7.10	22,262	11.39
FY86	43,797	-6.58	92,164	3.16	19,369	8.87	21,503	0.91	26,077	17.14
FY87	21,530	-50.84	99,985	8.49	20,627	6.49	23,995	11.59	27,762	6.46
FY88	28,500	32.37	127,600	27.62	28,400	37.68	30,300	26.28	29,400	5.90
FY89	31,500	10.53	129,500	1.49	28,900	1.76	31,500	3.96	30,400	3.40

1) FY88 and FY89 values are forecast amounts.
2) Mine occupation taxes include oil and metals.
3) Fuels taxes include the April 1, 1987, 5 cents tax increase.
4) Beer, cigarette and tobacco taxes include the April 27, 1987 11 cents per pack tax increase.

Source: Utah State Tax Commission and the Utah Office of Planning and Budget

INTERMOUNTAIN REGION

The Intermountain or Rocky Mountain Region, as defined by the U.S. Bureau of the Census, includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming. Table 20 shows comparisons with this region and the U.S. and comparisons within this region with respect to various important economic indicators for 1986 and changes between 1980-86.

This analysis indicates that the Mountain Region outperformed the U.S. during the period 1980-86 (1987 data not yet available for all states) in terms of growth in personal income, jobs and population. Personal income growth was only slightly higher than the U.S., 59 percent to 56.6 percent. Employment growth in the Mountain Region was significantly higher, 15.2 percent to 10.8 percent. Population growth was more than double the national rate, 14.1 percent to 6.4 percent. The growth in per capita income however, lagged significantly behind the U.S. Moreover, in 1986 per capita income for the region was only 90 percent of the U.S. average. Also, the 1986 unemployment rate for the region stood at one-half percentage point higher than the U.S., 7.4 percent to 6.9 percent.

During 1986, total personal income growth lagged behind the U.S. This is an unusual occurrence. For most years since 1970 the Mountain States have surpassed the U.S. in personal income growth. Obviously, most of this erosion of growth is due to lower oil prices and the decline of other related energy activity in this energy rich region. The drop was so severe as to create declines in total jobs in Colorado, Idaho, Montana and Wyoming during 1986.

Within the Mountain Region Utah has done relatively well in the 1980's. Utah ranks third in personal income, employment and population growth during the period 80-86. Also, Utah has tied Nevada for the lowest unemployment rate during 1986. However, Utah had the lowest per capita income in the 8 mountain states. As mentioned earlier in the report, much of this is due to Utah's unique demographic structure.

TABLE 20
Intermountain Region Economic Performance
1980-1986

	Personal Income 1986 (millions)	Rank	Percent Change 1980-86	Rank	Per Capita Income 1986	Percent of U.S. Total	Rank	Percent Change 1980-86	Rank	Nonfarm Employment 1986 (thousands)	Percent Change 1980-86	Rank	Unemployment Rate 1986	Rank	Population 1986 (thousands)	Percent Change 1980-86	Rank
Arizona	44,719	2	78.3	1	13,474	92.0	3	47.1	1	1,341.4	32.3	1	6.9	3	3,279	20.6	2
Colorado	49,771	1	61.4	2	15,234	104.1	2	43.8	2	1,402.2	12.1	5	7.4	4	3,266	13.0	5
Idaho	11,250	6	38.4	6	11,223	76.7	7	31.0	7	334.5	1.4	6	8.7	6	1,002	6.1	7
Montana	9,666	7	37.3	7	11,803	80.6	5	32.3	6	276.1	-1.5	7	8.1	5	817	3.8	8
Nevada	14,870	5	60.8	3	15,437	105.4	1	35.2	5	468.6	17.2	2	6.0	1-2	967	20.9	1
New Mexico	16,894	4	57.8	4	11,422	78.0	6	39.7	3	527.9	13.4	4	9.2	8	1,479	13.5	4
Utah	18,288	3	56.2	5	10,981	75.0	8	38.1	4	634.1	14.9	3	6.0	1-2	1,664	13.9	3
Wyoming	6,485	8	20.5	8	12,781	87.3	4	12.8	8	199.1	-5.3	8	9.0	7	507	7.9	6
Mountain Total	171,941	--	59.0	--	13,203	90.2	--	39.8	--	5,183.9	15.2	--	7.4	--	12,982	14.1	--
U.S. Total	3,529,522	--	56.6	--	14,641	100.0	--	47.6	--	100,167.0	10.8	--	7.0	--	241,096	6.4	--

Source: U.S. Bureau of the Census, U.S. Bureau of Economic Analysis and U.S. Bureau of Labor Statistics

CRITICAL INDUSTRY ANALYSIS

DEFENSE AND SPACE ACTIVITY IN THE UTAH ECONOMY

Spending increases in defense and space programs in the United States have become increasingly important to the Utah economy since 1977, but at a greater level since 1981. While the levels of activity on military bases--already a large component of the Utah economy--have remained relatively stable, the significant increases have occurred in private sector firms contracting with both the Department of Defense and the National Aeronautics and Space Administration (NASA). These increases have come during a period (1981-1986) when basic sectors of the state's economy, such as mining and construction, have undergone major contractions.

Defense and space contracts impact every major industry sector of the state. However, the majority of the activity is concentrated in the Wasatch Front counties. Utah has shared in the national defense buildup as have most states.

National Defense Buildup

The defense buildup in the United States between 1977 and the present has had a significant impact on the economy of the state. To understand Utah's role in national defense, a brief review of national data is important.

For the United States, real defense spending increased by about 2 percent annually between 1977 and 1980. "However, between 1980 and 1985, defense expenditures accelerated, increasing by 5.5 percent annually. By 1985, national defense represented $235.7 billion or 6.6 percent of GNP--the largest proportion of the economy during a peacetime buildup."[1] "Total defense-related employment is estimated to have increased by less than 4 percent from 1977 to 1980, with all the increase occurring in private sector jobs. From 1980 to 1985, total defense jobs increased almost 22 percent, while private sector jobs attributed to defense purchases increased 45 percent."[2]

Table 21 shows the percent of defense-generated jobs for the 17 most defense-dependent industries in the national economy.

The largest increases in federal defense outlays were in the procurement of aircraft, missiles, weapons and tracked vehicles, ships, research and testing. The smallest increases were for military personnel, operations and maintenance, and ammunition. In 1977 only 21 Utah industries produced 10 percent or more of their output for defense. By 1985, 45 Utah industries produced more than 10 percent of total output for defense.

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[1]David K. Henry and Richard P. Oliver. "The Defense Buildup, 1977-85: Effects on Production and Employment." Monthly Labor Review, August 1987, pp.3-10.

[2]Henry and Oliver

DOD Contract Awards

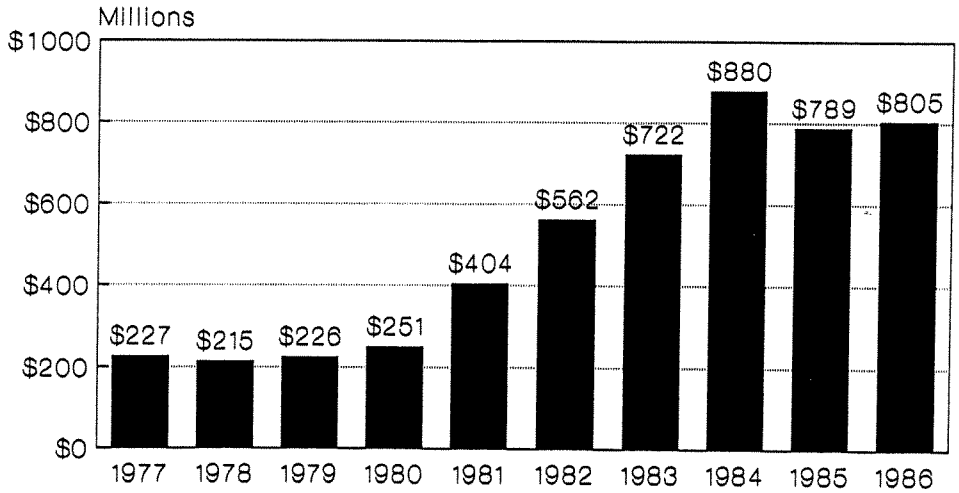
There is more than one series on federal defense contract data. One series covers prime contracts, another covers total Defense Department contracts. Both series on contract awards apply to awards above $25,000. The differences in the series are significant. For example, in fiscal year 1985, total prime contract awards were $789 million, while the broader measure of Department of Defense contracts with Utah firms was $1,116 million , or 41 percent higher. Some contracts cover multi-year activity while others cover activities of a duration of less than one year.

Table 22 shows total Department of Defense contracts awarded to each of the 50 states for fiscal year 1986. In these data Utah ranks 29th among states in the dollar amount of DOD contracts and 22nd on a per capita basis. Tables 24 and 25 show the 25 firms with the largest total contracts for each of the fiscal years 1983 through 1986. More than 400 Utah firms currently have contracts with the Department of Defense.

From fiscal year 1983 to fiscal year 1986, Defense Department contracts with Utah firms rose by 134 percent from $722 million to $1,689 million. The increase in other defense-oriented states' awards were of the same magnitude.

The series on DOD prime contract awards, while at somewhat lower levels shows a different growth path. Table 24 and Figure 21 shows prime contract awards from 1977 through 1986. This series shows that total awards have risen by more than three times since 1977 with the largest increases occurring in 1981 and again in 1983 and 1984.

Figure 21
Prime Contract Awards to Utah Firms
by the Depart. of Defense: 1977-86



Source: U.S. Department of Defense

The National Aeronautics and Space Administration also publishes a series on prime contract awards by state for each fiscal year. These numbers also exclude procurement of less than $25,000. Table 25 shows that NASA prime contract awards in Utah have grown from $57 million in 1975 to over $335 million in fiscal year 1985. The totals for 1986 interrupted the pattern of continuous growth when they declined slightly to the 1984 levels. While final numbers are not yet available, the year 1987 saw a return to patterns of growth.

Employment and Payrolls

The analysis of activity in terms of contract awards is incomplete for a number of reasons. First, these numbers do not indicate whether the work is actually done in Utah or is subcontracted and performed outside Utah. Secondly, we have no data on the extent to which Utah firms are subcontractors or suppliers to defense contractors in other states. Occasionally payrolls, contracts and grants are added together to arrive at some measure of total federal defense activity. While these series may be useful for some purposes, they do not provide an accurate picture of the federal or the defense and space-supported activity in the Utah economy.

An alternative approach would be to identify the share of employment and payroll in each Utah industry supported directly or indirectly by defense and space spending. An effort to do just that was made in the 1960's by Arrington and Jensen.[3] The basic difference between that period and the present has been the extensive expansion of contracting in the private sector plus the addition of much greater space-related work.

Every sector of the Utah economy has defense and space sales, either directly or indirectly. The sector with the largest direct expenditure is government where the employment at Hill Air Force Base, the Tooele Army Depot, the Defense Depot in Ogden, Dugway, and the National Guard and Reserve activities are recorded. The data generally reported in Utah exclude the full time military personnel of over 6,000 employees and payrolls of $176 million. If military retirement veterans' payments and civilian service retirement payments are added to the payroll figures, this set of activities accounted for civilian employment of over 23,400 in 1986 and payrolls of $604 million. Full-time military personnel increase the number of employees to nearly 30,000 and increase payrolls to $780 million.

Transfer payments to retired Utah military personnel were $95 million in 1986, and two-thirds of the $300 million paid to retirees by the civil service retirement system can be attributed to defense and space activities. Veterans' benefit payments to Utahns in 1986 were over $75 million. Adding these sectors together provides over $1.1 billion in direct payments to Utah households from government and military sectors. These numbers do not include federal employees in non-defense and non-military activities. Total federal employment, excluding full-time Armed Service personnel was over 40,000 in 1986 and total payrolls were over $970 million. These latter numbers do include the 23,000 defense related employees with their $604 million payroll discussed above.

Other sectors with large direct defense and space expenditures are 1)manufacturing, where at least one-third of total sales go to the Department of Defense and the space program; 2) transportation and public utilities -- where public and private defense and space

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[3]George Jensen and Leonard J. Arrington, Impact of Defense Spending on the Economy of Utah, Utah State Planning Program, Economic and Population Studies (Logan, Utah: Utah State University) 1967, p. 84.

work is also the largest customer -- accounting for 20 percent of employment and sales; and 3) all other sectors where between 5 and 10 percent of employment and sales can be attributed to direct sales to defense and space.

In summary, these activities yield an additional $1.2 billion in direct payrolls and over 100,000 jobs. When these activities are all added and a reasonable multiplier of 1.9 to 2.1 is applied, it becomes clear that defense and space spending and other activities of the federal government accounted for over one-third of all income payments to Utah households in 1986. Additional work is required to refine this analysis.

TABLE 21
Percent of Defense Generated Employment in Utah By Industry

Industry	Percent of Defense-Generated Jobs
Shipbuilding, repairs	85.3
Missiles, space vehicles	84.2
Ordance	70.5
Aircraft	62.0
Communications equipment	49.6
Other nonferrous mining	25.7
Optical equipment	24.3
Material handling equipment	14.4
Screw machine products	13.1
Copper mining	13.0
Iron ore mining	12.8
Scientific, control instruments	12.4
Primary nonferrous metals	11.7
Primary aluminum products	11.5
Blast furnaces, steel products	11.3
Iron, steel forgings	11.3
Metalworking machinery	11.1

Source: David K. Henry and Richard P. Oliver "The Defense Buildup, 1977-85: Effects on Production and Employment." Monthly Labor Review, August 1987, pp. 9-10

TABLE 22
Total Value of Defense Contracts Awarded Over $25,000 Ranked By State amd Contracts Awarded Per Capita Fiscal Year 1986 (thousands)

	State Rank		Percent of Total		Ranked Contracts Awarded Per Capita	
1	California	$58,857,765	20.7	1	Connecticut	$3,777.2
2	Texas	22,513,906	7.9	2	Missouri	3,085.4
3	New York	19,983,914	7.0	3	Massachusetts	2,863.5
4	Massachusetts	16,699,749	5.9	4	California	2,181.5
5	Missouri	15,630,595	5.5	5	Alaska	2,033.0
6	Connecticut	12,045,556	4.2	6	Kansas	1,884.9
7	Florida	11,041,738	3.9	7	Maryland	1,869.5
8	Virginia	10,646,718	3.7	8	Virginia	1,839.8
9	Ohio	10,218,421	3.6	9	D.C.	1,700.6
10	Pennsylvania	8,478,730	3.0	10	Washington	1,536.5
11	Maryland	8,343,587	2.9	11	Maine	1,383.8
12	Georgia	7,859,358	2.8	12	Arizona	1,382.5
13	New Jersey	6,857,360	2.4	13	Texas	1,349.4
14	Washington	6,855,653	2.4	14	Georgia	1,287.6
15	Indiana	6,005,442	2.1	15	Mississippi	1,199.1
16	Michigan	5,667,774	2.0	16	New Hampshire	1,164.5
17	Minnesota	4,694,631	1.7	17	New York	1,124.5
18	Kansas	4,636,954	1.6	18	Minnesota	1,114.1
19	Arizona	4,588,545	1.6	19	Hawaii	1,099.8
20	Louisiana	3,891,596	1.4	20	Indiana	1,091.1
21	Colorado	3,539,653	1.2	21	Colorado	1,083.5
22	Illinois	3,352,866	1.2	22	**UTAH**	1,014.4
23	Mississippi	3,147,648	1.1	23	Ohio	950.4
24	Alabama	3,031,676	1.1	24	Florida	945.8
25	Tennessee	2,006,115	0.7	25	New Jersey	900.0
26	N. Carolina	1,984,485	0.7	26	Louisiana	864.6
27	Wisconsin	1,983,485	0.7	27	Rhode Island	832.4
28	Arkansas	1,747,534	0.6	28	Delaware	770.0
29	**UTAH**	1,688,947	0.6	29	Alabama	748.2
30	Maine	1,623,238	0.6	30	Arkansas	736.7
31	Oklahoma	1,406,923	0.5	31	Pennsylvania	713.2
32	Iowa	1,234,541	0.4	32	New Mexico	701.6
33	New Hampshire	1,195,987	0.4	33	N. Dakota	661.5
34	Hawaii	1,168,000	0.4	34	Vermont	620.3
35	Alaska	1,085,646	0.4	35	Michigan	619.8
36	D.C.	1,064,578	0.4	36	Iowa	433.0
37	Kentucky	1,044,198	0.4	37	Wyoming	430.0
38	New Mexico	1,037,665	0.4	38	Oklahoma	425.7
39	S. Carolina	1,002,356	0.4	39	Tennessee	417.7
40	Rhode Island	811,544	0.3	40	Wisconsin	414.5
41	Oregon	566,950	0.2	41	N. Carolina	313.4
42	Delaware	487,394	0.2	42	S. Carolina	296.8
43	N. Dakota	449,181	0.2	43	S. Dakota	291.9
44	Nebraska	405,191	0.1	44	Illinois	290.2
45	Vermont	335,578	0.1	45	Nevada	280.4
46	Nevada	270,012	0.1	46	Kentucky	280.0
47	Wyoming	218,000	0.1	47	Nebraska	253.6
48	S. Dakota	206,697	0.1	48	Oregon	210.1
49	West Virginia	194,915	0.1	49	Montana	201.5
50	Montana	165,019	0.1	50	Idaho	115.2
51	Idaho	115,472	0.0	51	West Virginia	101.6
	Total	$284,089,486			Mean	$1,178.4
					Median	$864.6

Source: U.S. Department of Defense, Prime Contract Awards Over $25,000 by State, County, Contractor and Place, Fiscal Year 1986, Vol. II, (The Pentagon, Washingon, D.C.).

TABLE 23
Department of Defense Federal Award Contracts in Utah
Fiscal Year Year 1983 and 1984
(thousands)

County	Contractor	Dollars	County	Contractor	Dollars
Salt Lake	Amoco Oil	154,512	Box Elder	Morton Thiokol	278,718
Box Elder	Morton Thiokol Inc.	147,297	Salt Lake	Hercules Inc.	144,612
Salt lake	Hercules Inc.	100,131	Salt Lake	Litton Systems Inc.	42,297
Salt Lake	Litton Systems Inc.	32,703	Salt Lake	Amoco Oil Co.	29,953
Davis	TRW Inc.	21,248	Davis	TRW Inc.	20,037
Davis	Phillips Petroleum Co.	19,354	Salt Lake	Rockwell International Corp.	19,734
Salt Lake	Key Airlines	18,724	Davis	Phillips Petroleum Co.	19,630
Salt Lake	Rockwell International Corp.	12,299	Salt Lake	Eaton Kenway Inc.	17,188
Salt Lake	Sperry Corp.	11,788	Salt Lake	Hercules Inc./Aerospace Division	16,891
Grand	Mc Dougald Oil Co.	8,978	Salt Lake	991759473	14,586
Cache	Utah State University	8,745	Davis	Boeing Company Inc.	11,759
Davis	Eyring Research Institute	8,290	Cache	Utah State University	9,266
Davis	Geokinetics Inc.	7,291	Utah	Eyring Research Institute	9,071
Davis	Utah Power and Light	6,855	Weber	TRW Inc.	8,112
Weber	Williams International Corp.	6,111	Utah	Kitco Inc.	7,225
Davis	Mountain Fuel Supply Co.	5,700	Weber	Flameco Engineering Inc.	7,096
Salt Lake	University of Utah	4,653	Salt Lake	Sperry Corp.	6,636
Salt Lake	E Systems Inc.	4,058	Salt Lake	Varian Associates	6,606
Cache	Logan Manufacturing Co.	3,529	Davis	Mountain Fuel Supply Co.	6,565
Weber	Flameco Engineering Inc.	3,216	Grand	Mc Dougald K E Inc.	5,944
Utah	Kitco Inc.	3,112	Davis	Utah Power and Light	5,938
Davis	Steven's Co.	2,827	Salt Lake	Chevron USA Inc.	5,481
Davis	Valley Design and Construction	2,613	Davis	Logicon	5,402
Weber	Morton Thiokol Inc.	2,574	Davis	Boeing Co./Aerospace Div.	5,207
Tooele	Utah Power and Light	2,499	Davis	9098773	5,188

Source: U.S. Dept. of Defense, Prime Contract Awards Over $25,000 by State, County, Contractor and Place, Fiscal Year 1983 and 1984, Vol. II, (The Pentagon, Washington, D.C.)

TABLE 23 Con't
Department of Defense Federal Award Contracts in Utah
Fiscal Year Year 1985 and 1986
(thousands)

County	Contractor	Dollars	County	Contractor	Dollars
Salt Lake	Hercules Inc.	240,467	Salt Lake	Hercules Inc./Aerospace Division	352,644
Box Elder	Morton Thiokol Inc.	175,237	Box Elder	Morton Thiokol Inc.	222,102
Salt Lake	Hercules Inc./Aerospace Division	80,007	Salt Lake	Amoco Corp.	138,185
Salt Lake	148014822	69,078	Salt Lake	Litton Systems Inc.	119,334
Salt Lake	Litton Systems Inc.	67,460	Salt Lake	115801771	68,720
Davis	TRW Inc.	28,854	Davis	Crysen Corp.	56,722
Salt Lake	Amoco Oil Inc.	25,980	Davis	TRW Inc.	31,814
Davis	44726560	25,596	Salt Lake	Amoco Oil Co.	25,980
Davis	Phillips Petroleum Co.	20,879	Salt Lake	Sperry Corp.	25,433
Salt Lake	Sperry Corp.	15,378	Cache	Utah State University	24,201
Cache	Utah State University	14,871	Davis	Phillips Petroleum Co.	24,129
Salt Lake	Key Airlines Inc.	11,000	Davis	Utah Power and Light	14,805
Salt Lake	121534995	10,000	Davis	Mountain Fuel Supply Co.	13,069
Washington	Kellerwood Co. --Judson Troup	9,574	Utah	Kitco Inc.	12,838
Davis	Utah Power and Light	9,093	Salt Lake	Key Airlines Inc.	11,000
Davis	Mountain Fuel Supply Company	8,480	Salt Lake	12534995	10,000
Salt Lake	Rockwell International	7,834	Washington	Kellerwood Co. -- Judson Troup	9,574
Davis	Utah Const. and Development	7,747	Salt Lake	Rockwell International Inc.	9,545
Utah	Kitco Inc.	7,663	Davis	Beneco Enterprizes	9,385
Davis	Hughes Herm and Sons Inc.	6,186	Davis	Gramoll Construction Co.	9,310
Davis	Beneco Enterprizes	5,839	Salt Lake	University of Utah	8,849
Salt Lake	University of Utah	4,996	Davis	73116881	8,507
Davis	Cache Valley Electric	4,772	Salt Lake	Varian Associates	7,916
Salt Lake	Bemsco Inc.	4,659	Davis	Utah Const. and Development	7,747
Tooele	Hawthorne Aviation	4,629	Tooele	Utah Power and Light	7,093

Source: U.S. Department of Defense, Prime Contract Awards of $25,000 by State, County, Contractor and Place, Fiscal Year 1985 and 1986, Vol. II, (The Pentagon, Washington, D.C.).

TABLE 24
Prime Contract Awards to Utah Firms
By Department of Defense
1977-1986
(millions of dollars)

Year	Prime Contract Awards (in millions)
1977	227
1978	215
1979	226
1980	251
1981	404
1982	562
1983	722
1984	880
1985	789
1986	805

Source: U.S. Department of Defense
Prime Contract Awards by State

TABLE 25
NASA Prime Contract Awards to Utah Firms
1975-1986

Year	NASA Procurement ($ millions)
1975	36.1
1977	57.1
1978	70.8
1979	74.5
1980	72.6
1981	85.5
1982	124.0
1983	253.5
1984	317.7
1985	335.8
1986	316.7

Source: National Aeronautics and Space Administration
Financial and Contract Status
Washington, D.C.

TABLE 26
Department of Defense Federal Contract Awards Over $25,000
By County
Fiscal Years 1983-1986
(thousands)

COUNTY	1986	1985	1984	1983
Box Elder	226,967	179,409	281,643	151,158
Cache	31,376	19,696	10,543	13,780
Carbon	1,844	845	2,270	1,673
Davis	352,129	222,453	145,684	112,951
Grand	451	451	5,944	9,077
Morgan	145	109	0	0
Rich	30	0	0	0
Salt Lake	896,425	596,535	358,195	377,225
San Juan	2,974	2,115	339	1,513
Sevier	1,747	1,126	206	156
Summit	121	92	44	129
Tooele	77,377	32,774	26,055	19,918
Utah	33,928	21,558	23,264	9,813
Washington	9,679	9,679	161	182
Weber	53,754	29,037	31,198	24,649
STATE TOTAL	1,688,947	1,115,879	885,546	722,224

Source: U.S. Department of Defense, Prime Contract Awards Over $25,000 by State, County, Contractor and Place, Fiscal Years 1983-1986, Vol. II, (The Pentagon, Washington, D.C.).

TOURISM

From March 1986 to September 1987 the Utah Travel Council and the Salt Lake Convention and Visitors Bureau funded the Utah Tourism Study. The prime contractor for the study was the U.S. Travel Data Center of Washington, D.C. Dan Jones and Associates and the Bureau of Economic and Business Research were sub-contracted by the U.S. Travel Data Center as part of the research team. The Utah Tourism Study is the largest research project about tourism in Utah that has been undertaken. It provides the state a benchmark study about the extent, economic impact and importance of travel and tourism to the Utah economy.

Measures of Tourism's Impact

In 1986, nearly 11 million people visited the State of Utah, an increase of 5.6 percent over 1985. These visitors spent nearly $2 billion dollars while in Utah. The majority of the tourists are from the Rocky Mountain and Pacific Coast States. California is the largest supplier -- accounting for 2.2 million visitors. Summer and Winter are the seasons when most visitors come to Utah. Two-fifths of the total visitors come between July and August, while one-third visit between December and February.

Most visitors to Utah came to experience the beautiful scenery available in the state. The winter visitors are dominated by skiers coming to enjoy the "greatest snow on earth" at Utah ski resorts. The other major activities of visitors to Utah include shopping and visiting historic and cultural sites and events.

Half of Utah's tourists arrive in the state by means of their personal car or truck. One-quarter arrive by air and 15 percent come in vehicles equipped for camping. Nearly 60 percent use hotels or motels for lodging and the average length of stay in Utah was 3.6 nights. The Utah visitors' average age is 44 years and one-third have family incomes greater than $40,000, and are highly educated. Utah also has a large number of retirees who visit the state.

Employment and Wages

As a result of the Utah Tourism study it is estimated that in 1986, 47,000 to 48,000 Utahns are employed in industries involved in tourism. This would make tourism the fifth largest industry sector behind Government, Services, Retail Trade and Manufacturing if it were a separetly defined industry. Total wages and salaries paid to persons employed in tourism were estimated to be $425 million in 1986. The number of people employed and the total wages paid should increase next year as awareness of Utah as a vacation and business convention site improves.

Tax Collections

Tourism, as estimated by the U.S. Travel Data Center's Economic Impact Model, generated $82 million dollars in state tax revenue and $28 million for local governments in 1986. Transient Room Taxes and Sales Tax collections are the major sources of revenue from tourism. Tables 27 and 28 present room tax collections and percent changes in taxable room rents by county and travel region for the years 1978 to 1986. Figure 22 shows the growth in total state room tax collections from 1978 to 1986. Gross Taxable Sales for Utah and the portion attributed to tourism are shown in Table 29.

Visitor Counts

Visitor counts for Utah's state and national parks showed increased numbers of visitors in 1986 as compared to 1985. National parks visitation was up 12.4 percent and state parks visitation increased 11.1 percent. This trend has continued in 1987 with national parks visitation increasing around 10 percent and state park visitation up 1.2 percent. Another major attraction is Temple Square in Salt Lake City. In 1986, it showed a significant increase in visitor traffic of 16.5 percent. In 1987, Temple Square has attracted a record number of visitors. As of November 1987, visitor counts are up 30.9 percent as compared to the same time period a year ago. In early December 1987 the three millionth visitor came to Temple Square. Table 30 shows historical growth in Temple Square visits. Visitor counts must be used with care since they tend to have a higher margin of error than tax or employment data. Still, they are useful indicators of increased or decreased use of tourism resources.

Winter Market

Tourism in Utah for the winter is largely based on skiing. Utah ski resorts last year were down slightly from 1985 due to poor skiing conditions experienced during November and December. Late winter and spring skiing was excellent and helped salvage the 1986 ski season. Most non-resident skiers are from California and Nevada. Ski visitors stayed an average of 3.7 days with 45 percent spending four to nine days per trip. On average, an out-of-state skier to Utah spent $96.00 per day while in the state.

Ski visitors to Utah were very satisfied with the quality of the resort facilities, costs, length of lift lines etc.; and were most dissatisfied by the lack of nightlife and the availability of alcoholic beverages. To increase out-of-state skier visits, the study recommends that more emphasis be directed to markets in Texas and the Midwestern states, since these are areas that produce large numbers of trips by individuals interested in skiing.

Summer Market

The number of Summer visitors is twice the number of ski visitors to the State of Utah, but the summer visitor comes over a longer season and is distributed throughout the state. Summer visitors enjoy the scenic beauty of Utah and often visit one or more of the national parks. Most summer visitors come by private car and spend an average of $22.45 per day while in Utah. The majority of Utah's summer visitors are from the Rocky Mountain States, though increased numbers are coming from east of the Mississippi.

Utah's Tourism Markets

The Rocky Mountain Region is the main source of tourists to Utah. Utah also receives a large share of repeat visitors due to high satisfaction levels from previous visits. The Northern States of Washington, Oregon, Idaho, Montana and neighbor Wyoming are strong suppliers of visitors to Utah, and efforts need to be made to maintain and expand this market. California, Arizona and Nevada are also strong markets presently for Utah; but there is room for increased penetration into these states, which should increase Utah's market share.

Texas, New Mexico and Colorado are states that provide Utah an opportunity to increase the number of visitors from these areas. Emphasis on outdoor recreation opportunities in Utah should be promoted, since they are important factors to visitors from these three states. Another area that generates a large number of trips is the Illinois-Ohio area. Utah should be able to increase the number of visitors from this region as well.

Out-of-the-country visitors account for 300,000 of the total market and Canada is the major supplier. As Utah promotes itself in the foreign markets of Asia and Europe, it should experience increased visitors from these regions. The foreign visitor has very different characteristics than visitors from other states; and European visitors have different characteristics than Asian visitors. The state should look at a joint marketing plan with other western states, to increase foreign visitation to the Rocky Mountain Region.

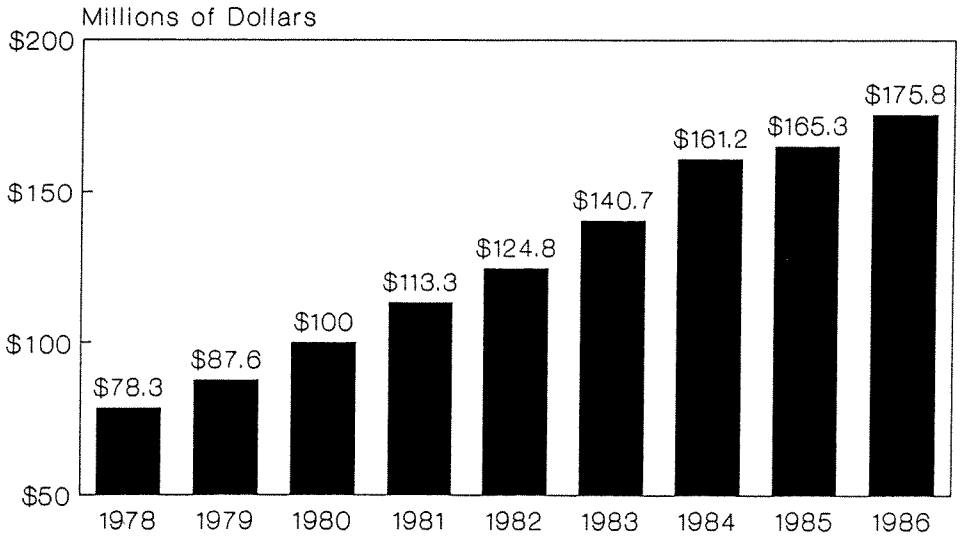
County and Travel Region Data

One of the major difficulties in assessing the impacts of tourism in Utah is that much of the data is difficult to obtain at the county or travel region level. The state should work to make data available in this form so better analysis can be done. One of the major factors that was produced by the research project was that 50 percent of the visitors to Utah pass through the travel region comprising Salt Lake County. This is due largely to the presence of Salt Lake City International Airport, shopping availability, historic sites, lodging availability and nightlife in the area. The study points out the importance of this region, and the role the tourist promotion program needs to play in marketing other parts of the state as tourist destinations.

The importance of tourism to the Utah economy should increase as more people visit the area and return, or encourage others to visit the state. Utah will need to maintain the quality of experience available to visitors to the state as well as to residents.

The recently completed Utah Tourism Study gives the state a data base that will assist it in evaluating its tourism resources; and in its planning on how best to promote the state as a vacation or convention site in the future. Tourism is not the solution to economic problems, but continued growth in employment, wages and tax revenues obtained from tourists will help the state deal with demands for services in the future.

Figure 22
Transient Room Tax Collections in Utah



Source: Ut State Tax Commission

TABLE 27
Transient Room Tax Collections By Travel Region and County 1978-1986

	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86	1986-87
Bridgerland	$1,905,590	$1,878,009	$1,789,672	$1,845,873	$1,972,141	$2,884,354	$2,515,993	$2,050,803	$2,305,822
Cache	1,246,705	1,530,061	1,338,679	1,603,964	1,634,184	2,730,778	2,238,680	1,889,705	1,884,670
Rich	658,885	347,948	450,993	241,909	337,957	153,576	277,313	161,098	421,152
Castle Country	2,258,199	2,166,272	2,283,907	2,378,983	2,725,571	2,518,275	2,462,986	1,884,730	2,662,596
Carbon	1,644,289	1,429,529	1,742,746	1,609,942	2,022,224	1,775,905	1,715,550	1,266,092	2,078,037
Emery	613,910	736,743	541,161	769,041	703,347	742,370	747,436	618,638	584,559
Color Country	11,186,076	11,725,355	12,617,240	14,764,277	16,490,413	18,324,608	20,233,398	22,280,861	25,932,636
Beaver	582,370	599,748	598,062	1,210,476	946,657	922,836	1,185,878	999,259	1,361,713
Garfield	1,453,536	1,665,278	1,424,997	2,366,754	2,325,636	3,520,553	2,416,330	3,091,967	4,043,262
Iron	2,728,333	2,804,772	2,995,158	3,654,528	4,059,205	3,252,605	4,982,448	5,265,888	5,935,627
Kane	1,774,401	1,824,732	1,808,479	1,377,870	2,043,165	2,774,272	2,496,321	2,704,413	3,095,909
Washington	4,647,436	4,830,825	5,790,544	6,154,649	7,115,750	7,854,342	9,152,421	10,219,334	11,496,125
Caynonlands	3,176,852	2,771,712	4,364,416	4,444,737	4,754,009	5,034,407	5,806,324	5,846,801	6,670,918
Grand	2,278,657	1,875,025	3,142,351	3,246,951	3,502,677	3,660,088	4,147,135	4,046,516	4,813,929
San Juan	898,195	896,687	1,222,065	1,197,786	1,251,332	1,374,319	1,659,189	1,800,285	1,856,989
Dinosaurland	2,083,182	2,250,137	2,398,280	4,020,797	4,542,243	4,386,719	4,150,608	3,725,059	3,521,547
Daggett	143,623	148,824	171,121	187,305	150,539	173,810	188,153	233,082	187,344
Duchesne	403,523	499,888	446,038	689,616	1,019,224	896,501	670,133	545,130	440,136
Uintah	1,536,036	1,601,425	1,781,121	3,143,876	3,372,480	3,316,408	3,292,322	2,946,847	2,894,067
Golden Spike Empire	4,131,457	4,196,221	5,730,990	6,034,722	6,478,034	8,067,796	9,199,015	9,287,926	9,562,073
Box Elder	778,644	1,089,905	1,199,360	977,913	810,077	881,880	1,098,015	943,459	997,803
Davis	382,307	410,917	464,087	547,188	575,463	621,156	800,603	1,317,820	1,039,298
Morgan	3,673	2,065	4,268	9,051	26,523	0	0	0	21,157
Weber	2,966,833	2,693,334	4,063,275	4,500,570	5,065,971	6,564,760	7,300,397	7,026,647	7,503,815
Great Salt Lake Country	42,511,311	47,880,891	54,404,687	61,407,261	68,444,448	68,609,365	81,324,032	81,991,068	84,676,440
Salt Lake	41,242,885	46,599,223	52,963,909	59,610,660	66,186,154	66,385,851	78,969,544	79,843,845	82,177,994
Tooele	1,268,426	1,281,668	1,440,778	1,796,601	2,258,294	2,223,514	2,354,488	2,147,223	2,498,446
Mountainland	7,393,837	10,798,978	12,061,361	13,054,996	14,738,918	25,557,266	29,486,525	32,696,571	34,407,508
Summit	3,276,482	5,830,357	7,472,530	7,036,228	9,042,525	17,423,906	23,270,802	23,752,882	25,680,274
Utah	3,448,343	4,243,187	3,852,650	4,923,161	4,886,448	7,168,582	5,378,806	7,852,734	7,962,206
Wasatch	669,012	725,434	736,181	1,095,607	809,945	964,778	836,917	1,090,955	765,028
Panoramaland	3,688,819	3,955,770	4,318,239	5,321,528	4,641,430	5,346,087	6,038,916	5,516,402	6,101,676
Juab	550,201	375,634	625,688	695,594	572,040	659,338	524,627	625,698	576,055
Millard	710,259	1,026,771	970,140	1,158,808	1,253,673	1,333,299	1,977,594	1,966,069	1,879,534
Piute	38,133	26,630	22,982	17,522	11,485	10,458	15,133	13,287	94,204
Sanpete	205,957	222,004	227,073	263,392	204,966	248,370	239,257	256,569	300,741
Sevier	1,923,175	2,065,308	2,279,308	3,032,117	2,418,162	2,889,953	3,021,829	2,463,897	2,973,135
Wayne	261,094	239,423	193,048	154,095	181,104	204,669	260,476	190,882	278,007
TOTAL	$78,335,323	$87,623,345	$99,968,792	$113,273,174	$124,787,207	$140,728,877	$161,217,797	$165,280,221	$175,841,216

Source: Utah State Tax Commission

TABLE 28
Percent Change of Annual Gross Taxable Room Rents By Travel Region and County 1978-1986

	1978-79	1979-80	1980-81	1981-82	1982-83	1983-84	1984-85	1985-86
Bridgerland	-1.45	-4.70	3.14	6.84	46.25	-12.77	-18.49	12.44
Cache	22.73	-12.51	19.82	1.88	67.10	-18.02	-15.59	-0.27
Rich	-47.19	29.62	-46.36	39.70	-54.56	80.57	-41.91	161.43
Castle Country	-4.07	5.43	4.16	14.57	-7.61	-2.20	-23.48	41.27
Carbon	-13.06	21.91	-7.62	25.61	-12.18	-3.40	-26.20	64.13
Emery	20.01	-26.55	42.11	-8.54	5.55	0.68	-17.23	-5.51
Color Country	4.82	7.61	17.02	11.69	11.12	10.42	10.12	16.39
Beaver	2.98	-0.28	102.40	-21.79	-2.52	28.50	-15.74	36.27
Garfield	14.57	-14.43	66.09	-1.74	51.38	-31.37	27.96	30.77
Iron	2.80	6.79	22.01	11.07	-19.87	53.18	5.69	12.72
Kane	2.84	-0.89	-23.81	48.28	35.78	-10.02	8.34	14.48
Washington	3.95	19.87	6.29	15.62	10.38	16.53	11.66	12.49
Caynonlands	-12.75	57.46	1.84	6.96	5.90	15.33	0.70	14.10
Grand	-17.71	67.59	3.33	7.88	4.49	13.31	-2.43	18.96
San Juan	-0.17	36.29	-1.99	4.47	9.83	20.73	8.50	3.15
Dinosaurland	8.01	6.58	67.65	12.97	-3.42	-5.38	-10.25	-5.46
Daggett	3.62	14.98	9.46	-19.63	15.46	8.25	23.88	-19.62
Duchesne	23.88	-10.77	54.61	47.80	-12.04	-25.25	-18.65	-19.26
Uintah	4.26	11.22	76.51	7.27	-1.66	-0.73	-10.49	-1.79
Golden Spike Empire	1.57	36.58	5.30	7.35	24.54	14.02	0.97	2.95
Box Elder	39.97	10.04	-18.46	-17.16	8.86	24.51	-14.08	5.76
Davis	7.48	12.94	17.91	5.17	7.94	28.89	64.60	-21.14
Morgan	-43.78	106.68	112.07	193.04	-100.00	NA	NA	NA
Weber	-9.22	50.86	10.76	12.56	29.59	11.21	-3.75	6.79
Great Salt Lake Country	12.63	13.63	12.87	11.46	0.24	18.53	0.82	3.28
Salt Lake	12.99	13.66	12.55	11.03	0.30	18.96	1.11	2.92
Tooele	1.04	12.41	24.70	25.70	-1.54	5.89	-8.80	16.36
Mountainland	46.05	11.69	8.24	12.90	73.40	15.37	10.89	5.23
Summit	77.95	28.17	-5.84	28.51	92.69	33.56	2.07	8.11
Utah	23.05	-9.20	27.79	-0.75	46.70	-24.97	45.99	1.39
Wasatch	8.43	1.48	48.82	-26.07	19.12	-13.25	30.35	-29.88
Panoramaland	7.24	9.16	23.23	-12.78	15.18	12.96	-8.65	10.61
Juab	-31.73	66.57	11.17	-17.76	15.26	-20.43	19.27	-7.93
Millard	44.56	-5.52	19.45	8.19	6.35	48.32	-0.58	-4.40
Piute	-30.17	-13.70	-23.76	-34.45	-8.94	44.70	-12.20	608.99
Sanpete	7.79	2.28	15.99	-22.18	21.18	-3.67	7.24	17.22
Sevier	7.39	10.36	33.03	-20.25	19.51	4.56	-18.46	20.67
Wayne	-8.30	-19.37	-20.18	17.53	13.01	27.27	-26.72	45.64
TOTAL	11.86	14.09	13.31	10.16	12.78	14.56	2.52	6.39

NA= Not applicable

Source: Utah State Tax Commission

TABLE 29
Gross Taxable Sales Collected by Industry Sector
1981-1986

	1981	1982	1983	1984	1985	1986
Agriculture	$9,149,471	$8,001,119	$8,120,332	$9,708,568	$8,801,193	$9,260,238
Mining	252,139,856	228,482,390	207,155,947	195,603,318	129,436,006	102,908,626
Construction	208,684,581	197,336,272	233,587,869	332,070,792	347,567,909	225,721,561
Manufacturing	876,829,734	752,210,447	861,519,653	947,633,826	972,709,636	831,725,142
Transportation Communication & Public Utilites	896,571,477	955,969,214	968,422,822	1,214,666,283	1,212,624,301	1,217,175,683
Wholesale Trade	1,539,379,389	1,332,722,696	1,307,428,585	1,457,729,635	1,389,911,200	1,233,076,195
Retail Trade	4,901,408,489	5,200,694,598	5,667,915,913	6,370,541,811	6,708,222,782	7,010,163,884
Finance, Insurance & Real Estate	44,535,357	40,991,858	46,781,177	48,371,427	60,675,869	71,572,171
Services	873,865,124	1,021,381,965	1,091,665,745	1,336,606,378	1,378,807,266	1,342,385,726
Government	46,961,722	46,701,234	69,682,154	106,659,591	70,018,979	78,255,140
Other	207,333,512	235,755,199	253,823,976	274,445,951	295,075,349	256,133,059
Total	9,856,858,712	10,020,246,992	10,716,104,173	12,294,037,580	12,573,850,490	12,378,377,425
Percent Change		1.66	6.94	14.72	2.28	-1.55

Estimated Gross Taxable Sales Collected by Industry Sector Related to Tourism, 1981-1986

	1981	1982	1983	1984	1985	1986
Agriculture	$0	$0	$0	$0	$0	$0
Mining	0	0	0	0	0	0
Construction	13,564,498	12,826,858	15,183,211	21,584,601	22,591,914	14,671,901
Manufacturing	13,152,446	11,283,157	12,922,795	14,214,507	14,590,645	12,475,877
Transportation Communication & Public Utilites	145,244,579	154,867,013	156,884,497	196,775,938	196,445,137	197,182,461
Wholesale Trade	50,799,520	43,979,849	43,145,143	48,105,078	45,867,070	40,691,514
Retail Trade	862,647,894	915,322,249	997,553,201	1,121,215,359	1,180,647,210	1,233,788,844
Finance, Insurance & Real Estate	0	0	0	0	0	0
Services	102,242,220	119,501,690	127,724,892	156,382,946	161,320,450	157,059,130
Government	845,311	840,622	1,254,279	1,919,873	1,260,342	1,408,593
Other	0	0	0	0	0	0
Total	1,188,496,468	1,258,621,438	1,354,668,018	1,560,198,302	1,622,722,768	1,657,278,320
Percent Change		5.90	7.63	15.17	4.01	2.13
Percent of Total	12.06	12.56	12.64	12.69	12.91	13.39

Calculated for totals, using the ratios provided by the Utah State Office of Planning and Budget and the Utah Department of Employment Security

Source: Utah State Tax Commission, Fourth Quarter and Calander Year 1984-1986 Gross Taxable Retail Sales and Purchases in the State of Utah, (Salt Lake City, Utah), April 1985 and 1987.

TABLE 30
Temple Square Monthly Visitor Traffic
1984-1987

	1984	1985	1986	1987	Percent Change 84-85	85-86	86-87
January	92,134	90,976	111,110	130,991	-1.26	22.13	17.89
February	95,813	83,390	115,789	116,911	-12.97	38.85	0.97
March	126,381	143,821	171,170	155,602	13.80	19.02	-9.10
April	164,118	181,059	182,632	266,002	10.32	0.87	45.65
May	161,300	160,151	194,802	221,258	-0.71	21.64	13.58
June	248,994	245,916	293,430	406,639	-1.24	19.32	38.58
July	307,659	279,983	346,173	496,959	-9.00	23.64	43.56
August	311,365	286,844	326,917	465,941	-7.88	13.97	42.53
September	215,916	177,650	200,089	284,240	-17.72	12.63	42.06
October	164,820	167,230	174,721	200,797	1.46	4.48	14.92
November	140,954	138,015	158,173	233,610	-2.09	14.61	47.69
December	274,914	276,943	324,435	NA	0.74	17.15	NA
Total	2,304,368	2,231,978	2,599,441	2,978,950	-3.14	16.46	14.60

Source: Temple Square, unpublished data, December, 1987

ECONOMIC OUTLOOK

NATIONAL OUTLOOK

Short-term predictions regarding the U.S. economy have suddenly become very controversial. The increased uncertainty is the result of substantial devaluations in stock values. Between August 25 and October 19 stocks fell by 36 percent from a high of 2722 in the Dow Jones industrial average to a low of 1738. There appears to be little consensus on what caused the decline, what should be done about it, or what effect the crash and government policy responses to the crash will have on the economy.

Current Conditions

It is quite possible that no single event triggered the historic 508 point Dow average drop on October 19 or subsequent increases and declines in stock values. Stock devaluations may have occurred due to a combination of events. Many arguments have been put forward which suggest both emotional and intellectual explanations.

Some of the more common arguments include: 1) stocks were overvalued and a correction was overdue; 2) international cooperation and coordination between the Group of Seven nations had broken down; 3) investors had grown impatient with the size of, and progress on reducing, the trade and budget deficits; 4) government, businesses, and consumers were overextended with debt burdens; 5) a bill had just been drafted by the Ways and Means Committee to reduce business takeovers that had been boosting the stock market; 6) increased commodity prices, and the declining dollar, increased inflationary expectations and fears of interest rate hikes; 7) the Federal Reserve raised the discount rate and tightened liquidity prior to the crash (which increased fears of recession) and then loosened liquidity after the crash (which increased fears of inflation); 8) media coverage about a potential recession and stock market crash helped make that possibility a reality; and finally, 9) portfolio insurance, index arbitraging, and computerized program trading exacerbated the downswing.

Just as there is controversy over what caused the crash, there is much controversy over what should be done about it. Some analysts argue that taxes should be raised to reduce the federal deficit. Others argue that the deficit is a spending problem, not a revenue problem, and that raising taxes could increase the risk of a recession. Many want to reduce the growth in, or actually cut, government spending; while others fear that reducing government spending could throw the economy into a recession.

The desirability of raising or lowering the discount rate is also contested. Certain analysts believe that interest rates need to be increased to halt the decline in the value of the dollar. Others feel that to do so increases the risk of a domestic recession and further declines in the stock market. And, some observers want to increase the supply of money to stimulate the post-crash economy, while others fear that this would be inflationary and lead to further declines in market values. Finally, there are those who argue in favor of protectionism to reduce our trade deficit, while many believe that this would lead to a trade war and be counterproductive.

Much confusion currently exists concerning the trade and budget deficits. The trade deficit is not the same type of deficit as the federal budget deficit. The trade deficit does not represent a debt owed by Americans to foreigners (except for the purchase of U.S. government securities by foreigners). Thus, only part of the trade deficit represents money owed to others; whereas, the entire federal deficit represents borrowing. Goods and services purchased from foreigners are paid for in cash.

Dollars received by foreigners return to the U.S. either as investments or spending on American goods and services. Many foreign investments in this country, including purchases of U.S. government securities, create jobs for American workers. Foreign investments in U.S. government securities have allowed private U.S. investment to proceed despite the capital consumption demands of the federal budget deficit.

Another area of confusion centers around the dollar value of the trade deficit as opposed to the flow of real goods and services. The trade deficit can worsen even when the flow of goods out of the country exceeds the flow of goods into the country. This can occur when the price of imports goes up more than the volume of imports decreases. By increasing the price of imports a lower dollar can initially worsen the trade deficit. Eventually, however, a lower dollar should reduce the trade deficit by reducing the volume of imports and increasing the volume of exports.

Congress and the administration have recently agreed to a budget deficit reduction package in an attempt to soothe financial markets. This package includes a combination of tax increases and reduced spending from an inflated baseline (as opposed to actual cuts in spending). The agreement is designed to reduce the federal budget deficit by $76 billion over a two-year period.

Spending cuts would be less severe under this agreement than under Gramm-Rudman; and, while this pleases some analysts, it angers others. Some observers believe that the tax increases and spending cuts are small enough that they will not be recessionary.

Just as many arguments have been presented to explain the recent stock market crash, many explanations have been given for the crash of 1929 and the ensuing depression. Reasons for the depression of the 1930's include: 1) the 1929 stock market crash, 2) the passage of protectionist tariff legislation, 3) the lowering of the money supply and increasing of interest rates by the Federal Reserve, 4) sizable tax and tax rate increases, 5) overproduction and underconsumption, and 6) wage rates adjusted for inflation and productivity that were too high to provide for full employment.

As of this writing, stock market prices have not been able to sustain a rally since the October crash. The Federal Reserve has, however, not repeated the mistake of reducing liquidity or increasing interest rates. Significant protectionist legislation and sizable tax increases have also not been enacted. Overproduction has become less of a problem as many commodity gluts, such as steel and copper supplies, have turned to shortages as factories are increasingly unable to fill orders.

Wage rates have risen, due to labor shortages and a close to full employment economy, but productivity has also increased accordingly. Finally, reduced government spending, if offset by expansionary monetary policies, need not be recessionary. Britain, for example, cut its deficit in 1981 during a recession and was then able to pull its economy out of a recession by lowering interest rates and the value of the pound.

It may be some time before analysts can discern whether or not the economy has been adversely affected by the devaluation of stock prices or fears of inflation and recession. Different indicators signal different directions for the economy. Some indicators may be signaling a slowdown. The index of leading indicators fell in October after remaining flat in September. Surveys have registered declines in consumer confidence, the trade deficit worsened in November, and retail sales in November appear to have been flat despite deep discounting.

Other indicators, however, point to a strong economy. The unemployment rate continued to decline through November, industrial production was at 81.7 percent of capacity in November (the highest rate since August 1984), the average workweek in manufacturing in October was the highest in 21 years, export industries are currently experiencing a mini-boom, and the growth in imported goods has been reduced. A recent survey conducted by the 12 district banks of the Federal Reserve uncovered only a "slight decline in optimism" of retailers and capital-goods producers since the October 19 stock market crash.

Outlook

As of November the economy continued into its 60th month of recovery which began in November of 1982. A revived manufacturing sector is currently driving economic growth. A weakened dollar has helped boost exports and reduce the flow of imports. Foreign investors appear to remain bullish on American investments, but fearful of a lower dollar. Recent decreases in interest rates in West Germany and other European nations have increased the attractiveness of U.S. investments by increasing the interest rate spread between U.S. and European government securities. This increased spread should help strengthen the dollar and reduce risks of inflation and recession.

Recession risks should be diminished since the increased spread takes pressure off the Federal Reserve to raise its discount rate in order to attract foreign investors to buy U.S. securities. Inflation risks are diminished since a stronger dollar means lower prices on imported goods. And, while a stronger dollar may weaken demands for U.S. exports, this weakening can be offset by lower interest rates which should stimulate economic growth abroad and spur the demand for American products.

The outlook for the U.S. economy in 1988 is for slow growth, but not a recession. The slowing will be consumer led and will reflect increased uncertainty brought on by the recent stock market crash and fears of a recession. This modestly optimistic outlook presumes that the Fed, Congress and the President will not engineer a recession through policy mistakes. It also assumes that the upturn in exports will continue into 1988 with no further significant declines in the dollar or consumer confidence. The risks remain on the downside, however, and a recession cannot be completely ruled out.

UTAH OUTLOOK

Utah is part of the national and international economy. Accordingly, the increased uncertainty resulting from worldwide stock devaluations has affected the outlook for the Utah economy. A recent poll taken by Dan Jones & Associates found that twenty-one percent of Utahns said that they were negatively impacted by the recent stock market crash. It will be several months before the effect of the crash on retail sales and consumer confidence is known in Utah. Preliminary surveys indicate, however, that consumer confidence has declined nationwide and that retail sales when adjusted for inflation have been generally flat.

Current Conditions

Economic indicators are giving mixed signals regarding the health of the Utah economy. Unemployment insurance claims are down and the unemployment rate declined from 6.9 percent in March of 1987 to 5.4 percent in November. Growth in employment, wages and incomes has also been showing improvement. Approximately 8,900 jobs were created between November 1986 and November 1987. This is up significantly from the 2,700 jobs generated between January 1986 and January 1987.

The decline in the unemployment rate would appear on the surface to be good news. This decline may, however, be largely the result of 13,500 Utahns migrating out of the state during 1987. Increased out-migration may also be a factor contributing to Utah's construction slump, and lower housing and car sales. The decline in the number of building permits issued for 1987 is the sharpest in Utah's post war history. Home sales have continued to decline for the 7th consecutive month in the Salt Lake area. Car and truck sales fell 17.4 percent in the second quarter of this year compared to the previous year. And, foreclosures by the Department of Housing and Urban Development in 1987 are expected to be almost double the figure for 1986.

The economy received a boost from increased demand and prices for copper, gold and other metals in 1987. Investment decisions of foreign companies also helped the economy as both British Petroleum and the Canadian-based company American Barrick Resources spent millions of dollars upgrading and expanding the Kennecott and Mercur mining operations. As a result of the startup of BP Minerals (formerly Kennecott), Sunshine Mining Company re-opened the Trixie mine near Eureka and an Australian company began a drilling program in that area. Consequently, total mining employment is up despite employment decreases in oil and coal mining.

Manufacturing employment is up significantly due to the re-opening of Geneva Steel. Geneva's immediate future appears promising as prices and the demand for steel continue to show strength. Geneva has also benefited from a foreign company relationship. A German firm has a five-year contract with Geneva to buy 40 percent of its output. And, as a result of the Geneva re-opening, a tentative agreement has developed to buy and re-open the McNally Mountain States Steel fabrication plant.

Other signs of improvement include the opening of AT&T's new credit management center in Murray; expansions at the airport by McDonnell Douglas and Delta airlines; the opening of a telemarketing center by NICE Corporation in Cedar City; expansions by the All American Gourmet Company in Clearfield and Stouffer Foods in Springville; plans to construct a wax refinery in North Salt Lake; and, the winning of sizable defense contracts by both Thiokol and Hercules.

Negative factors include continued job losses in construction due to overbuilding and the completion of the IPP project; layoffs at Iomega; declines in oil mining due to depressed prices; job losses due to UP&L's closure of three underground coal mines; layoffs at Eastern and Continental airlines; job losses at Union Pacific; planned layoffs early next year at BP minerals; and, job losses that should result from spending cutbacks under the federal budget deficit reduction accord. The economic ramifications of the recent INF treaty on Utah remain unknown.

The federal deficit reduction package could be more positive than negative for Utah, however, if reductions in the deficit allows the Federal Reserve to keep a lid on interest rates. The recent decline in oil prices (if sustained) may also have a silver lining for Utah if it leads to the expectation of lower inflation, higher stock market prices, and increased consumer confidence.

Outlook

The economic outlook for Utah is one of improved but slow growth. Population, wages, employment and incomes are all expected to show slight gains in 1988. Out-migration is expected to continue, however, for the fifth consecutive year. Population should grow by 18,000 in 1988 compared to an increase of only 13,000 in 1987. Employment is expected to increase by approximately 11,100 jobs in 1988 compared to 6,400 jobs in 1987.

Increases in productivity and inflation, and a lower unemployment rate, should help improve wages and incomes in 1988. The average nonagricultural wage is expected to increase by 2.2 percent next year compared to 2.0 percent this year. And, personal income should increase by 4.2 percent in 1988 compared to 3.4 percent for 1987.

Improvements in the general economy should help increase housing and car sales, and give a much needed boost to construction. Dwelling unit permits are expected to increase from 7,300 in 1987 to 8,000 in 1988, and car and truck sales should increase from 57,000 units to 68,000. The modest drop in office vacancy rates is also expected to continue.

Much of the prosperity in Utah is affected by national and international forces largely beyond the control of Utahns. Improved commodity prices and the confidence of foreign investors have helped to revive the manufacturing and mining industries in Utah. Utah should avoid a recession in 1988 if the national and global economies do not deteriorate significantly.

TABLE 31
Forecast of Salient Economic Indicators
December 1987

Utah and United States Indicators	Units	1986 Actual	1987 Forecast	1988 Forecast	% CHG 86-87	% CHG 87-88
PRODUCTION						
U.S. Gross National Product	Billion Dollars	4,235.0	4,472.8	4,730.4	5.6	5.8
U.S. Real GNP	1982$	3,713.3	3,810.8	3,895.6	2.6	2.2
U.S. Nonagricultural Employment	Millions	99.61	101.92	103.41	2.3	1.5
U.S. Auto Sales	Milions	11.4	10.3	10.2	(9.6)	(1.0)
U.S. Housing Starts	Millions	1.82	1.66	1.58	(8.8)	(4.8)
U.S. Industrial Production	1967=100	125.1	129.5	133.4	3.5	3.0
Utah Coal Production	Million Tons	14.2	16.0	16.0	12.7	0.0
Utah Oil Production	Million Barrels	39.6	36.0	34.5	(9.1)	(4.2)
Utah Copper Production	Million Pounds	0.0	130.0	400.0	NA	207.7
Utah Retail Sales	Million Dollars	7,022	6,883	7,090	(2.0)	3.0
Utah Car & Truck Sales	Thousands	75.9	57.0	68.0	(24.9)	19.3
Utah Dwelling Unit Permits	Thousands	13.4	7.3	8.0	(45.5)	9.6
Utah Residential Construction	Million Dollars	715.5	510.0	575.0	(28.7)	12.7
Utah Nonresidential Construction	Million Dollars	439.9	400.0	360.0	(9.1)	(10.0)
SOCIAL INDICATORS						
Utah Population	Thousands	1,665.0	1,678.0	1,696.0	0.8	1.1
PRICES						
CPI	1967=100	328.4	340.3	355.2	3.6	4.4
GNP Deflator	1982=100	114.1	117.4	121.8	2.9	3.7
U.S. Unit Labor Cost	1977=100	169.3	173.6	180.3	2.5	3.9
Utah Crude Oil Prices	$ Per Barrel	13.0	17.5	16.0	34.6	(8.6)
Utah Coal Prices	$ Per Ton	31.1	29.1	28.5	(6.4)	(2.1)
Domestic Copper Prices	$ Per Pound	0.62	0.75	0.90	21.0	20.0
FINANCING						
U.S. 3-Month Treasury Bills	Percent	5.97	5.79	6.55	(3.0)	13.1
Home Mortgage Rates	Percent	10.73	10.39	11.24	(3.2)	8.2
U.S. Corporate Profits	Billion Dollars	231.9	259.3	253.3	11.8	(2.3)
UTAH EMPLOYMENT AND WAGES						
Nonagricultural Employment	Thousands	634.1	640.5	651.6	1.01	1.73
Average Nonagriculture Wage	Dollars	17,546	17,892	18,286	1.97	2.20
Total Nonagriculture Wages	Million Dollars	11,126	11,460	11,915	3.00	3.97
Utah Personal Income	Million Dollars	18,288	18,900	19,700	3.35	4.23

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. This revised projection scenario is slightly lower than last year's projection, due primarily to lower than expected economic growth in 1987. These projections are based on a crucial set of assumptions which include:

Declining fertility rates through 1990.

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 33 presents total population and employment projections for the state through the year 2010. The state is projected to reach a population just over 2.4 million in the year 2010. This represents an average annual rate of growth of 1.7 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 33 shows, this 1.7 percent growth per year average is not evenly distributed throughout the three decades between 1980 and 2010. The early 1980's averaged an annual growth rate of over 2 percent, while the next ten years are expected to average less than 1.5 percent per year. For a few years beginning in 1995, population is expected to grow at less than one percent annually. Population growth is then projected to start increasing, averaging over 2 percent per year by the 2005-2010 period.

As mentioned above, employment growth has slowed considerably during the past year, averaging 1.0 percent. However, job growth is not anticipated to be as slow throughout the next several decades. Between 1987 and the year 2010 jobs are expected to grow by 2.1 percent per year, while the national rate of growth is projected to be 1.5 percent. Table 34 also shows total employment increasing from 617,000 jobs in 1980 to 1,188,000 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. However, analysis of the birth data has shown 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 projection of over 910,000 births to Utah residents for the period 1987-2010. While the number of births is expected to taper off for the next few years, another surge of births is expected in the late 1990's as another generation begins to age into the 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 is projected to increase from 5.5 in 1980 to 7.4 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, but this same age group is projected to account for 14.2 percent of the population by 2010.

Net Migration

Migration is typically the most volatile component of population change because it varies with demographic changes and economic conditions. There was no net out-migration experienced from 1968 to 1983. However, out-migration has been experienced in recent years. Another period of net out-migration is projected to occur around the turn of the century and then a turn around, with substantial net in-migration occurring in the period 2005-2010. Although out-migration is created when the economy is not growing fast enough to provide enough jobs for the growing labor force, population growth frequently occurs during these periods of net out-migration.

School Age Population

Figure 23 shows that although school age population is still increasing, it will be growing at an average of 1.2 percent per year through 1993. This translates into 33,000 more school age children than were in the state in 1987. This growth is substantially less than the 3.3 percent annual rate of the early 1980's. Beginning in 1994 , the next ten years are expected to show an actual decline in the school age group. This decline will continue through the year 2003, at which time a new demographic cycle and another period of rapid growth begins. Over the 23 year projection interval (1987-2010), school age population is projected to increase by over 65,000 children, an increase of 15 percent.

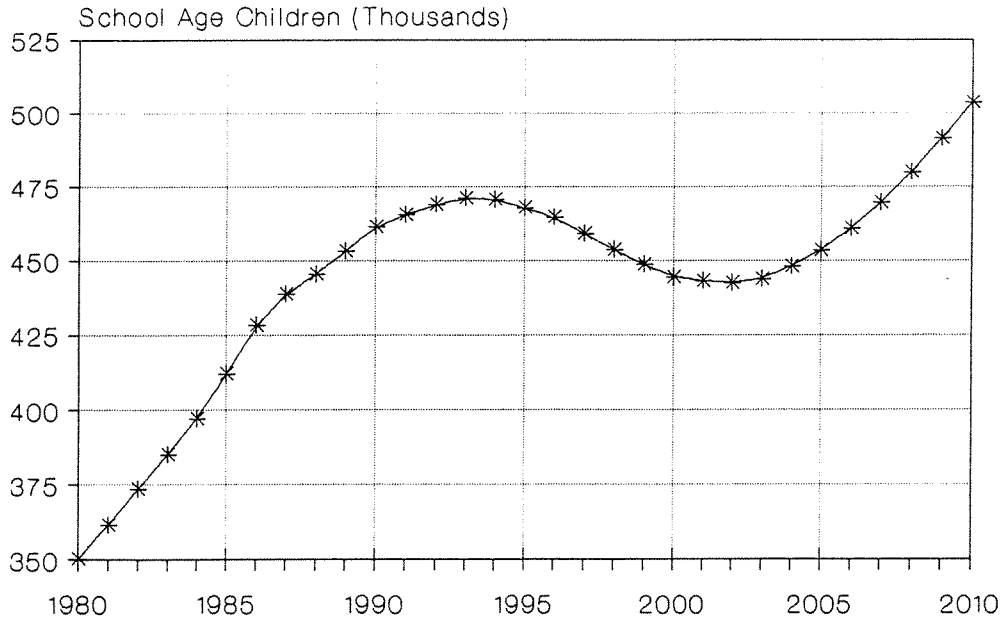
Employment by Industry

Table 34 and Figure 25 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. The wholesale and retail trade and services sectors are expected to increase their proportions of total Utah jobs. 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, and health services.

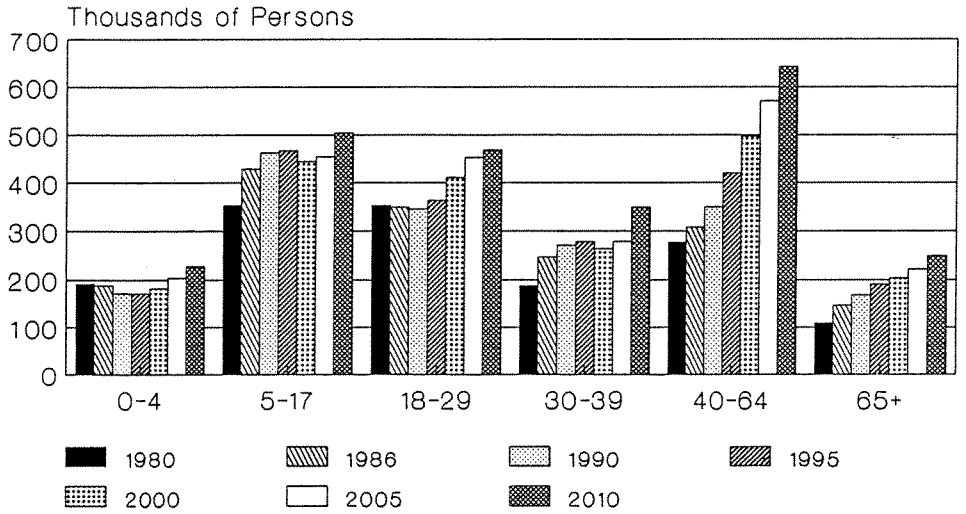
The overall pattern appears to be one of slight movement away from dependence on the state's traditional extractive-heavy manufacturing-government economic base and toward services and trade as driving sectors in the Utah economy.

Figure 23
School Age Population (Ages 5-17)



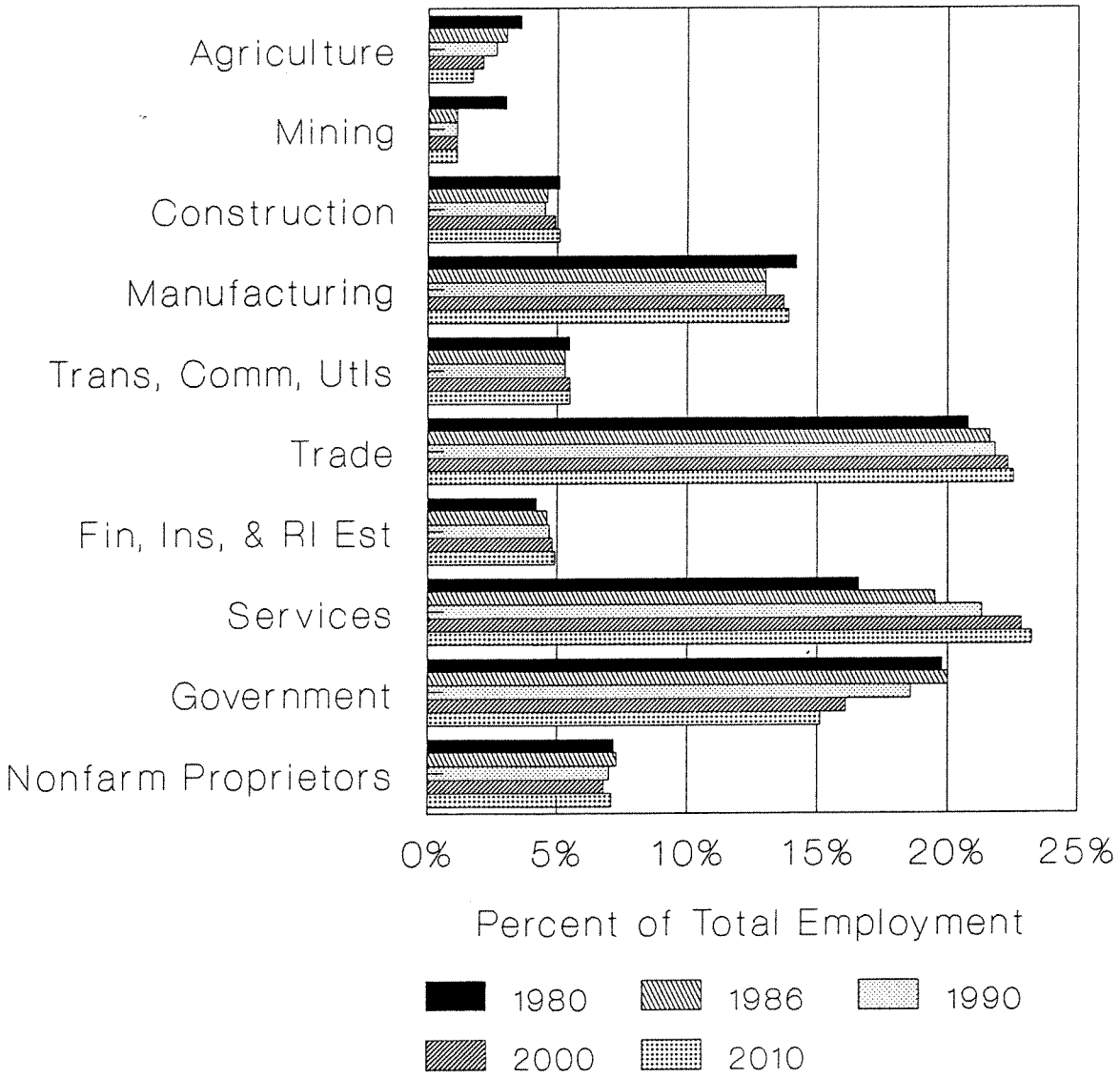
Source: Utah State Office of Planning and Budget

Figure 24
Utah Population by Age Group for Selected Years



Source: State Office of Planning and Budget

Figure 25
Utah Employment by Industry for Selected Years



Source: State Office of Planning and Budget

TABLE 32
Utah Projected Population By Age Group

	1980	1986	1990	1995	2000	2005	2010
0-4	191,000	187,000	171,000	172,000	182,000	203,000	228,000
5-17	354,000	428,000	462,000	468,000	445,000	454,000	504,000
18-29	354,000	349,000	345,000	364,000	411,000	453,000	469,000
30-39	188,000	247,000	271,000	279,000	264,000	279,000	349,000
40-64	277,000	308,000	350,000	420,000	497,000	570,000	643,000
65+	110,000	146,000	168,000	190,000	204,000	221,000	249,000
Total	1,474,000	1,665,000	1,767,000	1,893,000	2,003,000	2,180,000	2,442,000

Population by Age as a Percent of Total

	1980	1985	1990	1995	2000	2005	2010
0-4	12.96%	11.23%	9.68%	9.09%	9.09%	9.31%	9.34%
5-17	24.02%	25.71%	26.15%	24.72%	22.22%	20.83%	20.64%
18-29	24.02%	20.96%	19.52%	19.23%	20.52%	20.78%	19.21%
30-39	12.75%	14.83%	15.34%	14.74%	13.18%	12.80%	14.29%
40-64	18.79%	18.50%	19.81%	22.19%	24.81%	26.15%	26.33%
65+	7.46%	8.77%	9.51%	10.04%	10.18%	10.14%	10.20%
Total	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

Source: Utah Office of Planning and Budget, UPED Model

TABLE 33
Utah Industry Employment as a Percent of Total

	1980	% of Total Employ.	1986	% of Total Employ.	1990	% of Total Employ.	2000	% of Total Employ.	2010	% of Total Employ.
Agriculture	21,966	3.6%	21,340	3.0%	20,331	2.6%	20,276	2.1%	20,307	1.7%
Mining	18,500	3.0%	7,810	1.1%	8,773	1.1%	10,495	1.1%	12,827	1.1%
Construction	31,549	5.1%	32,216	4.6%	35,229	4.5%	46,889	4.9%	60,308	5.1%
Manufacturing	87,700	14.2%	92,085	13.0%	101,798	13.0%	131,575	13.7%	164,802	13.9%
TCPU	34,120	5.5%	37,543	5.3%	41,766	5.3%	52,871	5.5%	65,403	5.5%
Trade	128,678	20.8%	152,440	21.6%	170,266	21.8%	214,561	22.3%	267,120	22.5%
Fire	25,768	4.2%	32,866	4.6%	36,859	4.7%	46,279	4.8%	58,048	4.9%
Services	102,232	16.6%	137,889	19.5%	166,606	21.3%	220,009	22.8%	275,540	23.2%
Government	122,240	19.8%	141,289	20.0%	145,209	18.6%	155,122	16.1%	179,553	15.1%
Nonfarm Proprietor	44,626	7.2%	51,852	7.3%	54,870	7.0%	65,419	6.8%	84,572	7.1%
Total W & S	550,787		634,138		706,506		877,801		1,083,601	
Total Employment	617,379		707,330		781,707		963,496		1,188,480	

Source: Utah Office of Planning and Budget, UPED Model

Appendix

Regular Economic and Demographic Publications

Utah Office of Planning and Budget

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

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, 1987

Utah Energy Office

Data Source (Quarterly)
Utah Energy Statistical Abstract