1997

ECONOMIC REPORT TO THE GOVERNOR

STATE OF UTAH
MICHAEL O. LEAVITT, GOVERNOR

1997 Economic Report to the Governor

Excerpts

State of Utah

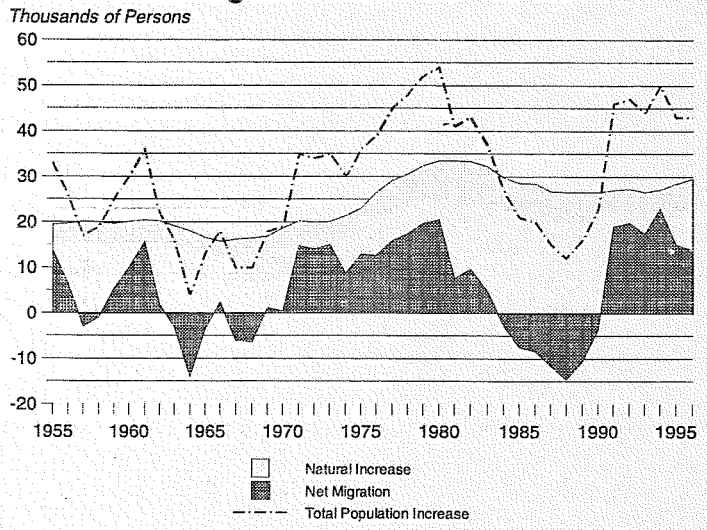
Michael O. Leavitt, Governor

Demographics

- **Population**: passed two million with a rate of growth over twice the national average
- **Natural increase** (the number of births minus the number of deaths): accounted for two-thirds of growth
- **Net in-migration**: accounted for one-third of growth, the sixth consecutive year of net in-migration
- **Median age**: increased from 23 in 1980 to 27 in 1995
- **Minority population**: increasing in share of total population, rising from 7.3% in 1980 to 10.6% in 1994

Total Population	2,002,000
Increase (1995 to 1996)	43,000
Percent Change (1995 to	2.2%
Births	40,371
Deaths	10,918
Net Migration	13,882

Utah Components of Population Change
Net Migration and Natural Increase



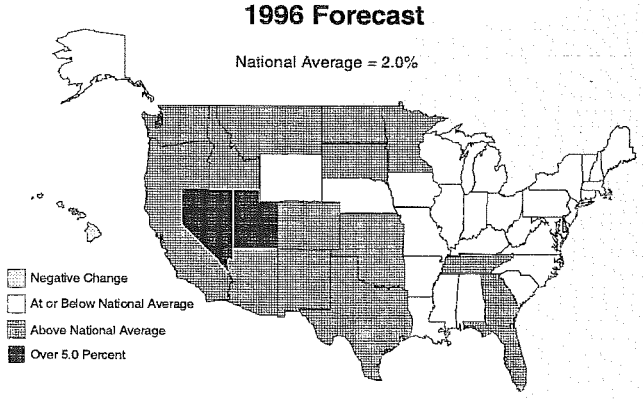
Source: Utah Population Estimates Committee and Utah Bureau of Health Statistics.

Employment

- **Job growth rate**: equaled or exceeded 3.0% for nine consecutive years and 5.0% for four consecutive years
- **Construction jobs**: 11.9% increase outpaced the rate of job growth in all other industries
- **Unemployment rate**: 3.4%, the lowest rate in four decades

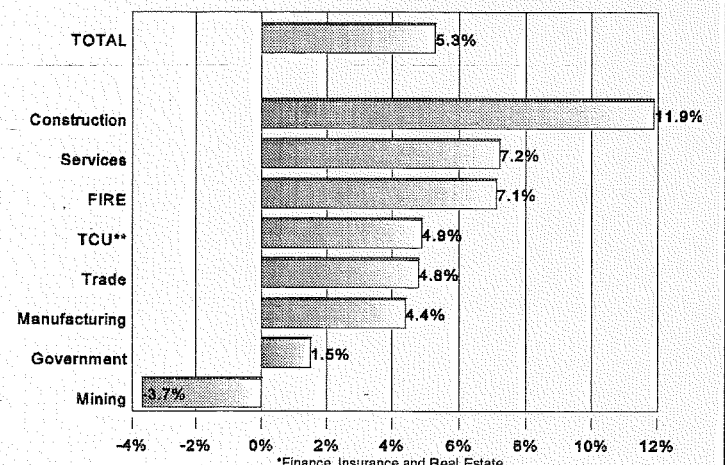
Total Nonagricultural Employment	955,800
Increase (1995 to 1996)	47,900
Percent Change (1995 to 1996)	5.3%
Unemployment Rate	3.4%

Percent Change in Employment by State
1996 Forecast



Source: "Regional Financial Review," November 1996, Volume VII Number 14. Regional Financial Associates, Inc.

Utah Job Growth Rates by Industry: 1995 to 1996



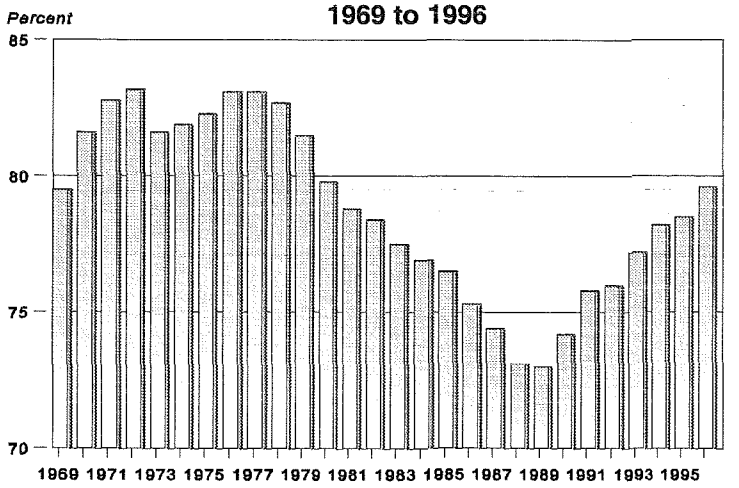
*Finance, Insurance and Real Estate
**Transportation, Communications, and Utilities
Source: Economic Coordinating Council

Wages and Income

- **Average wage per job**: increased faster than the rate of inflation for the second straight year
- **Per capita income**: $19,289, $5,000 lower than the national average, but has been increasing with respect to the nation for seven consecutive years

Total Nonagricultural Wages	$23,121,000
Percent Change (1995 to 1996)	9.6%
Average Wage Per Job	$24,190
Total Personal Income (000)	$38,423,000
Percent Change (1995 to 1996)	8.0%

Utah Per Capita Income as a Percent of U.S. 1969 to 1996

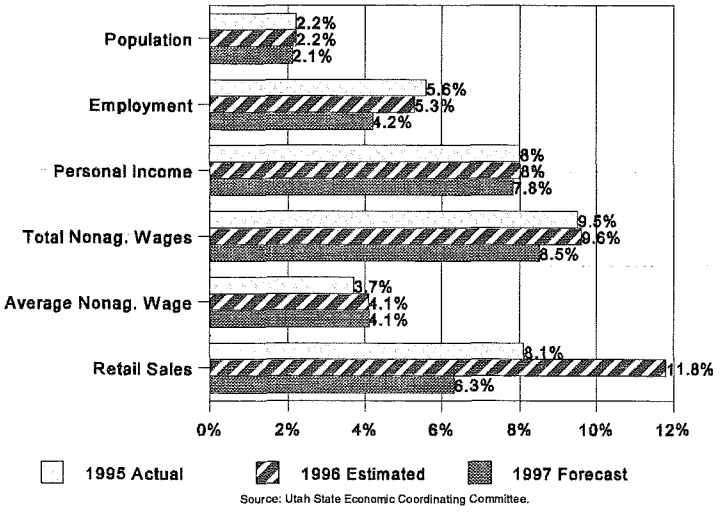


Source: U.S. Department of Commerce, Bureau of Economic Analysis and Governor's Office of Planning and Budget.

Major Findings

- **Economic diversity**: increasing due to decline in jobs in the federal government, defense, and extractive industries while other industries (such as high technology, tourism, and durable manufacturing) emerge and grow
- **Merchandise exports**: $3.6 billion, nearly double the amount exported in 1990
- **High technology sector**: includes 473 companies which employ 40,600 workers
- **Federal defense-related spending**: reduced from 8% of total output in 1987 to less than 4% in 1995
- **Highways**: state investment will top $3.6 billion over the next decade
- **Tourism**: 16 million visitors, approximately $3.8 billion spent, 91,000 jobs supported
- **Construction activity**: sixth consecutive year of boom, record levels in value of residential and nonresidential

Utah Economic Indicators—Annual Percent Change Actual, Estimate and Forecast



Source: Utah State Economic Coordinating Committee.

Significant Utah State Rankings

Population growth rate	3rd	1996
Birth rate	1st	1995
Death rate	50th	1995
Household size in 1995	1st	1995
Urban status	6th	1990
Rate of job growth	2nd	1996
Unemployment rate	4th	1996
Economic diversity	7th	1995
Percentage total economic output from exports	4th	1995
Percentage federal job losses	2nd	1990 to 1994
Value of production of:		
potash and copper	2nd	1995
gold, magnesium	3rd	1995
salt	6th	1995
oil and gas	11th	1995
coal	14th	1995
Rate of increase in housing prices	1st	1996
Rate of home ownership	7th	1995

All data is from the *1997 Economic Report to the Governor*. The *1997 Economic Report to the Governor* is available from the Governor's Office of Planning and Budget on the web page listed on the front of this sheet, or by calling the office at (801)538-1036.

1997

ECONOMIC REPORT TO THE GOVERNOR

STATE OF UTAH
MICHAEL O. LEAVITT, GOVERNOR

Governor's Office of Planning and Budget
116 State Capitol
Salt Lake City, Utah 84114

First Printing
January 1997

Dedicated to
the memory of
Randall William Rogers
1950 - 1996

The Economic Coordinating Committee dedicates the 1997 *Economic Report to the Governor* to the memory of Randall William Rogers who passed away in the Fall of 1996. Randy was a distinguished contributor to the collective understanding of the importance and complexity of Utah economic issues. He was also a close personal friend to many in the state's economic community.

Randy started his economics career in 1976 as a research assistant at the Bureau of Economic and Business Research. He authored or coauthored six articles in the *Utah Economic and Business Review* and worked on numerous Utah data projects. In 1980, after his tenure at the University, Randy became the first economist hired at the Utah Department of Community and Economic Development. During his 16-year career with the Department, he researched a wide variety of public policy issues, with a special focus on public land and tourism issues. In the later years of his life, Randy also worked with the Utah Foundation, a public policy research entity, where he completed research on water, land use, wages, public debt, and health care issues.

Randy brought to his work a warm and friendly personality, a commitment to hard work, and the personal integrity that endeared him to all who knew and worked with him. His unpretentious style, coupled with his sound research, writing, and analytical skills, made him one of the most respected and revered economists in the state. Everyone wanted to be his friend and interact with his engaging wit and wisdom, not only about economic issues, but over a wide range of issues relating to the environment, running, recreation, religion, and his family. Randy left his mark as an esteemed professional and wonderful human being. His presence will be missed by all.

Preface

The *Economic Report to the Governor*, published annually since 1986, is the principal source for data, research, and analysis about the Utah economy. The report includes a national and state economic outlook, a summary of state government economic development activities, an analysis of economic activity based on the standard indicators, and a more detailed review of industries and issues of particular interest. The primary goal of the report is to improve people's understanding about the Utah economy. With an improved economic literacy, decision makers in the public and private sector will then be able to plan, budget, and make policy with an awareness of how their actions are both influenced by and impact economic activity.

State Economic Coordinating Committee. The State Economic Coordinating Committee (ECC) provides guidance for the contents of this report. The ECC is an advisory committee to the Governor and includes representatives from a variety of state and local government agencies, First Security Bank, Key Bank, Utah Foundation, University of Utah, Weber State University, and Brigham Young University. The mission of the ECC is to provide information and analysis that enhances economic decision-making in Utah. This report is the primary means of the ECC to communicate economic information to the general public.

Collaborative Effort/Contributors. This report would not be possible without the participation of over 20 different authors from 11 different public and private entities. Each of the contributors devotes a significant amount of time during the very busiest season of the year to make sure that this report has the very latest economic and demographic information included. While this report is a collaborative effort which results in a consensus forecast for next year, each chapter is the work of the contributing organization with review and comment by the Governor's Office of Planning and Budget. More detailed information about the findings in each chapter can be obtained by contacting the authoring entity (see Contributors list).

Statistics Used in This Report. The statistical contents of this report are from a multitude of sources which are listed at the bottom of each Table and Chart. Statistics are generally for the most recent year or period available as of mid-December 1996. Since there is a quarter or more of lag time before economic data become final, the data for 1996 are preliminary estimates. Final estimates can be obtained later in 1997 from the contributing entities. All of the data in this report are subject to error arising from a variety of factors, including sampling variability, reporting errors, incomplete coverage, non-response, imputations, and processing error. If there are questions about the sources, limitations, and appropriate use of the data included in this report, the relevant entity should be contacted.

Statistics for States and Counties. This report focuses on the state, multi-county, and county geographic level. Additional data at the metropolitan, city, and other sub-county level may be available. For information about data for a different level of geography than shown in this report, the contributing entity should be contacted.

New This Year. While the content of this report, other than introducing a new year of data and analysis, is similar to prior years, several new data series or research efforts are worthy of highlighting. This year's "Utah's Long-Term Projections" chapter includes updated population and employment projections for the state, multi-county districts, and counties. These projections have not been updated since 1994 and represent a major revision. The "Construction and Housing" chapter includes new data on housing price trends and a primer on the economic issues associated with the reconstruction of I-15. The "High Technology" chapter includes results of a new survey of high technology firms in the state. The economic impacts of Salt Lake City hosting the Winter Olympics 2002 are described in the "Tourism" chapter. And finally, population and urbanization trends and the impacts of electric utility restructuring are highlighted in the section on Special Topics.

Electronic Access. This report is available on the Governor's Office of Planning and Budget's Internet homepage at http://www.governor.state.ut.us/gopb.

Suggestions and Comments. Users of the *Economic Report to the Governor* are encouraged to write or call with suggestions that will improve future editions. Suggestions and comments for improving the coverage and presentation of data and quality of research and analysis should be sent to the Governor's Office of Planning and Budget, 116 State Capitol, Salt Lake City, Utah, 84114. The telephone number is (801) 538-1036.

STATE OF UTAH

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OLENE S. WALKER
LIEUTENANT GOVERNOR

January 15, 1997

My Fellow Utahns:

I gratefully accept the 1997 *Economic Report to the Governor.* My economic advisors have personally informed me of the rapid pace of job growth, low unemployment, and rising incomes present in our economy. In many ways, the Utah economy is as strong as it has ever been. I praise Utah residents for their collective contributions to this economic success. I feel fortunate to be in public service during such favorable economic times and I pledge to continue to provide the leadership that will benefit the Utah economy.

A major factor in fostering continued economic success is to make sure government is meeting the infrastructure needs of a growing and prospering economy. These infrastructure needs include the traditional infrastructure of transportation, water, public safety, and education systems, as well as the infrastructure of the future, namely telecommunications and the electronic highway.

During the next four years, Utah will invest heavily in the future. Our public investment portfolio includes a major reconstruction of Interstate 15 through the heart of the Salt Lake metropolitan area. We will also begin the planning for the Legacy Highway project. We are making progress on the completion of the Central Utah Project and many other transportation and water projects. We will build more prison space to keep our society safe and continue on our path to build a world class education system.

In the electronic highway arena, the state will continue to promote electronic commerce. We will utilize our buying power as the largest consumer of telecommunications and our right-of-way assets to stimulate private sector investment in the electronic highway. Our vision is to have the ability to provide more government, education, and health care services electronically. Private sector transactions will follow. This is a lofty goal, but a goal consistent with making the Utah economy competitive and smart in the future.

On January 6, I was sworn in for my second term in office. During this term, Utah will enter a new decade, a new century, and a new millennium. This only happens once every 1,000 years. And as we enter the 21st Century, our economy continues to change from the industrial age to the information age. Everything around us is changing. We cannot rest on our laurels. We must continue to guide the Utah economy into this new age.

Sincerely,

Michael O. Leavitt

Michael O. Leavitt
Governor

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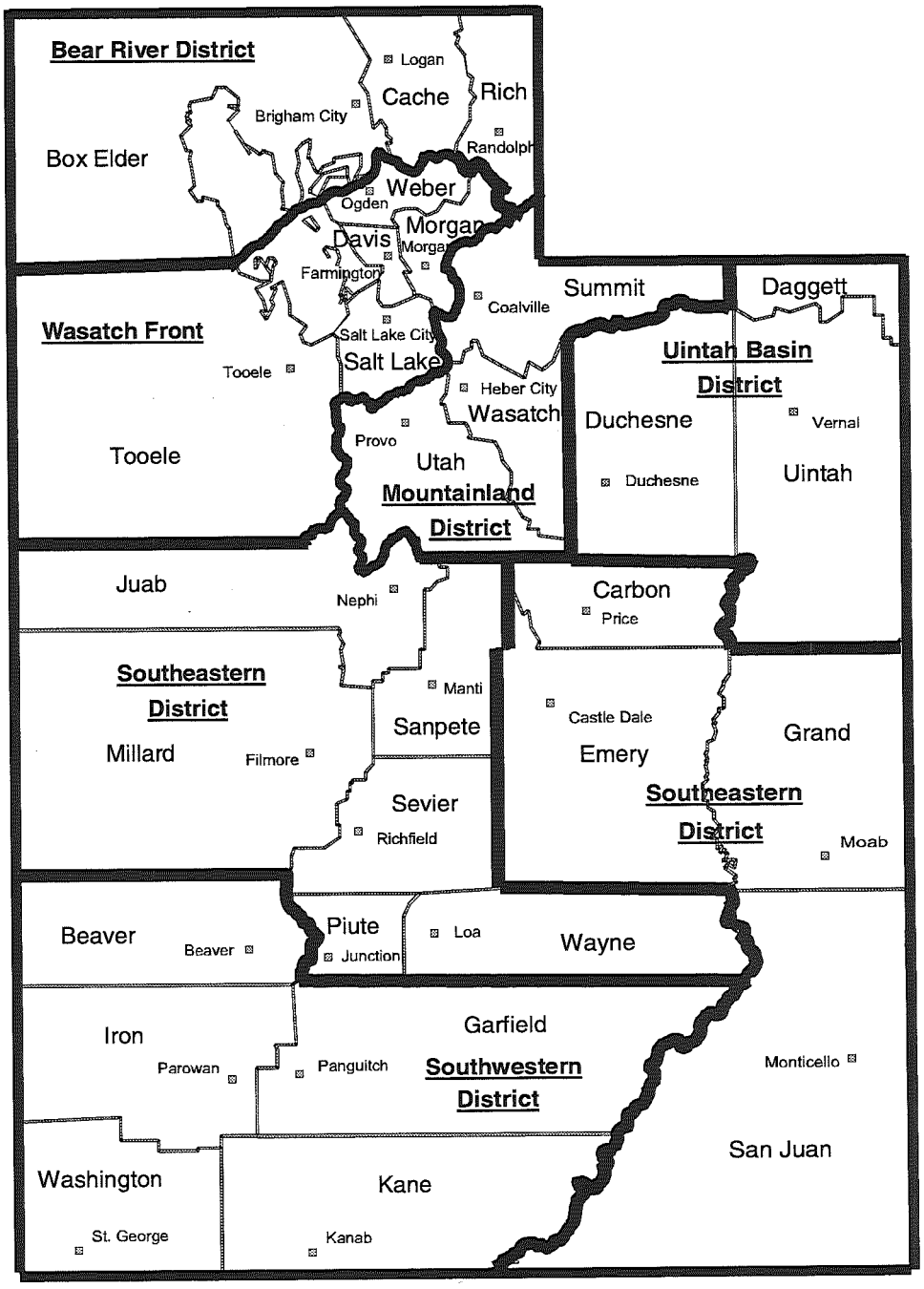


Executive Summary

Executive Summary

Utah begins 1997 with an economy as strong as it has ever been. The current expansion, as measured by near or above average employment growth, is in its ninth year. Annual employment growth during the last four years has exceeded 5.0 percent and more than doubled the equivalent national rate. Rapid job growth means that residents have abundant opportunities to work and, in many cases, increase their incomes. Real wages are rising, unemployment rates are at a four-decade low, and in-migration exceeded out-migration for the sixth consecutive year. Many Utah industries are thriving, including the tourism industry which attracted a record 16 million visitors and the construction industry which added an all-time high of $3.5 billion in new construction during 1996.

While these data demonstrate that these are the best of times for Utah's economy, it is incumbent upon all Utahns, even in prosperous times, to monitor economic performance and identify and manage the present and emerging challenges that impact the economy. Currently, these challenges include the rising costs of conducting business, the availability of labor, rapidly increasing housing prices, and numerous growth issues such as changing land use patterns, environmental quality, and the need for infrastructure investment.

These challenges, coupled with the sustained strength of the Utah economy, point to the underlying theme of the 1997 *Economic Report to the Governor* — the theme of managing change. Utah's economy is performing valiantly and has been for some time. The economic growth presently occurring is providing wealth and opportunity for Utah residents. It is also changing the economic, demographic, and social makeup of the state. As Utah prepares to enter the 21st Century, it is critical that residents understand the historic and geographic context in which changes are occurring and the timing and direction of these changes. Residents should also have sufficient information to determine what actions must be taken to make certain that changes are beneficial.

The 1997 *Economic Report to the Governor* strives to help decision makers in business, government, and elsewhere manage the many changes in the economy by providing detailed information about Utah's past, present, and anticipated future economic performance. The context for understanding these changes is provided through comparisons of Utah's economic performance over time and with other states, the region, and the nation. The timing and direction of change is described through an examination of specific modifications occurring in Utah's economic structure and demographic characteristics. The role of government is also alluded to as the federal government retreats from its historic strong presence in the Utah economy and state government enacts plans to make unprecedented investments in public infrastructure. Finally, an outlook for 1997 is provided. The goal is to help readers make informed decisions about the future that will ultimately improve the economic well-being of all Utahns.

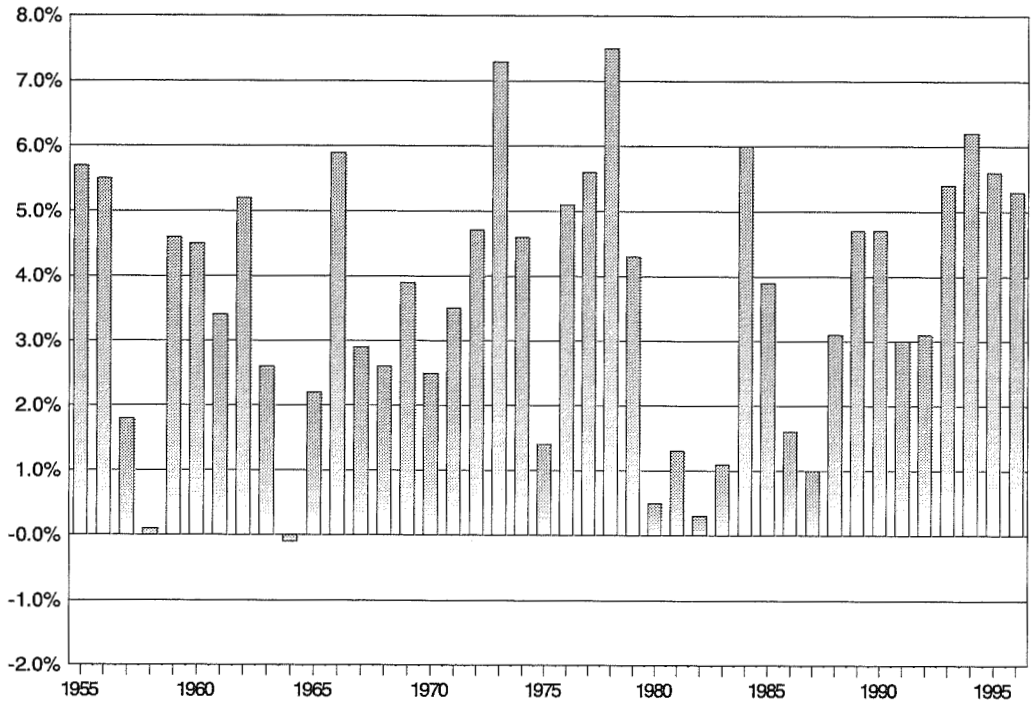
Historic and Geographic Context for Understanding Utah's Changing Economy

Historic. Utah's current employment boom is unprecedented in terms of the number of years and the rates of increase. In 1996, Utah's job growth rate was 5.3 percent, ranking second among all states. Utah's job growth rate has now equaled or exceeded 3.0 percent for nine consecutive years and exceeded 5.0 percent in four straight years. Never before in Utah's post World War II economic history has employment increased at rates this high for such a sustained period. Figure A provides Utah employment growth rates from 1955 to 1996.

During the past ten years, Utah's economy, as measured by the job growth rate, has outpaced the nation and the long term historic average. From 1986 to 1996, Utah's rate of job growth more than doubled the national growth rate. Utah's job growth rate over this time period of 4.2 percent exceeded the equivalent national rate of 1.9 percent and the average growth rate since 1950 in Utah of 3.5 percent.

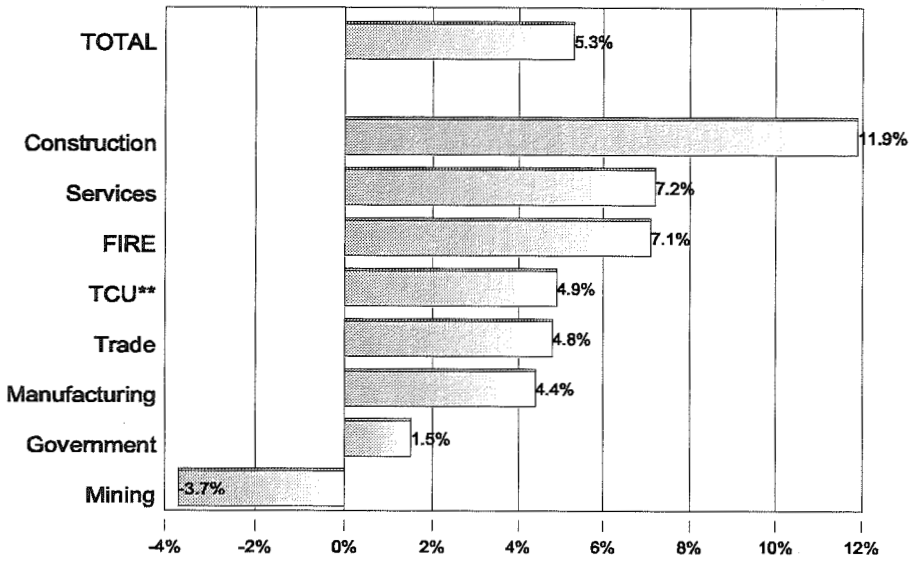
The expansion of private sector jobs has fueled Utah's recent economic prosperity. Since 1986 Utah added 321,700 jobs, with 92 percent of the growth occurring in the private sector. Private sector employment increased from 78 percent of total employment to 83 percent. The fastest growing industry was construction (6.6 percent), followed by services (6.4 percent). Figure B provides 1996 job growth rates by industry.

Figure A
Utah Nonagricultural Employment--Annual Percent Change: 1955 to 1996



Source: Utah Department of Employment Security.

Figure B
Utah Job Growth Rates by Industry: 1994 to 1995



* Finance Insurance and Real Estate
** Transportation, Communications, and Utilities

Source: Utah Department of Employment Security.

Utah's income growth has also exceeded the nation's since 1986. Real per capita income (income that is adjusted for both inflation and population change) in Utah increased 18.2 percent from 1986 to 1996, rising from $16,313 to $19,289. This compares to an 11.9 percent increase in the real per capita income nationally where income grew from $21,660 to $24,243. Utah's per capita income is still less than the nation, but it is gaining ground. Figure C shows Utah's per capita income as a percent of the nation's.

Geographic. Utah's current economic success is not isolated, but part of a broader, regional prosperity and an expanding national economy. California's resurgence from the doldrums experienced in the early 1990s is also important to understanding the context of Utah's current and future economic performance.

National. The U.S. economy begins 1997 amidst a six-year economic expansion that is expected to continue another year. Inflation remains in check; employment growth is modest, but respectable; and interest rates are low. During 1996, the U.S. economy grew at an inflation-adjusted pace of 2.3 percent.

Regional. The economies in all regions of the U.S. performed moderately well during 1996. The Mountain Division[1], however, is in the midst of a five year economic boom and leads the nation in economic vitality and growth. Figure D, which compares employment growth among states with the U.S. average, illustrates the strength of the western and southern regions of the country. Utah ranked second among all states in the rate of job growth from 1995-1996 and was one of only two states with employment growth over 5.0 percent. Employment growth in every state in the West, except Wyoming, Alaska, and Hawaii, exceeded the national average of 2.0 percent.

Reinvention of the California Economy. After bottoming out in mid-1993, employment in California has now reached pre-recession levels. As the economy has recovered, it has reinvented itself by replacing federal defense jobs and contractors with jobs in computer software, biotechnology, and entertainment.[2] This reinvention has important implications for other Western states in general, and Utah in particular. The Center for the New West has recognized this significance by stating that, "The leg bone of California is connected to the hip bone of other Western states ... All Western states have a big stake in California's successful emergence."[3]

California, which has the largest population and economy in the country, is the closest large market for Utah products. Utah's economy flourished during California's recent downturn when many companies and people relocated from California to Utah and propelled the state's job and construction boom. Despite this correlation, over the long term, a strong California economy is important to the health of the Utah economy. Now that California's economy is revitalized, the flow of people and jobs from the west coast to Utah will be reduced. Utah's economy, however, is still poised to perform well because of the many other important factors driving economic performance, such as the attractive business climate, young labor force, quality of life, and economic diversity.

Timing and Direction of Utah's Changing Economy

Changing Economic Structure. The strength of Utah's economy over the past several years has prevailed at the same time that the economy has restructured and become more diversified. While extractive industries and military establishments continue to contribute significantly to the Utah economy, Utah's dependence on these industries has decreased. At the same time, other service and manufacturing industries have emerged. Utah's participation in global markets is also changing Utah's economic structure.

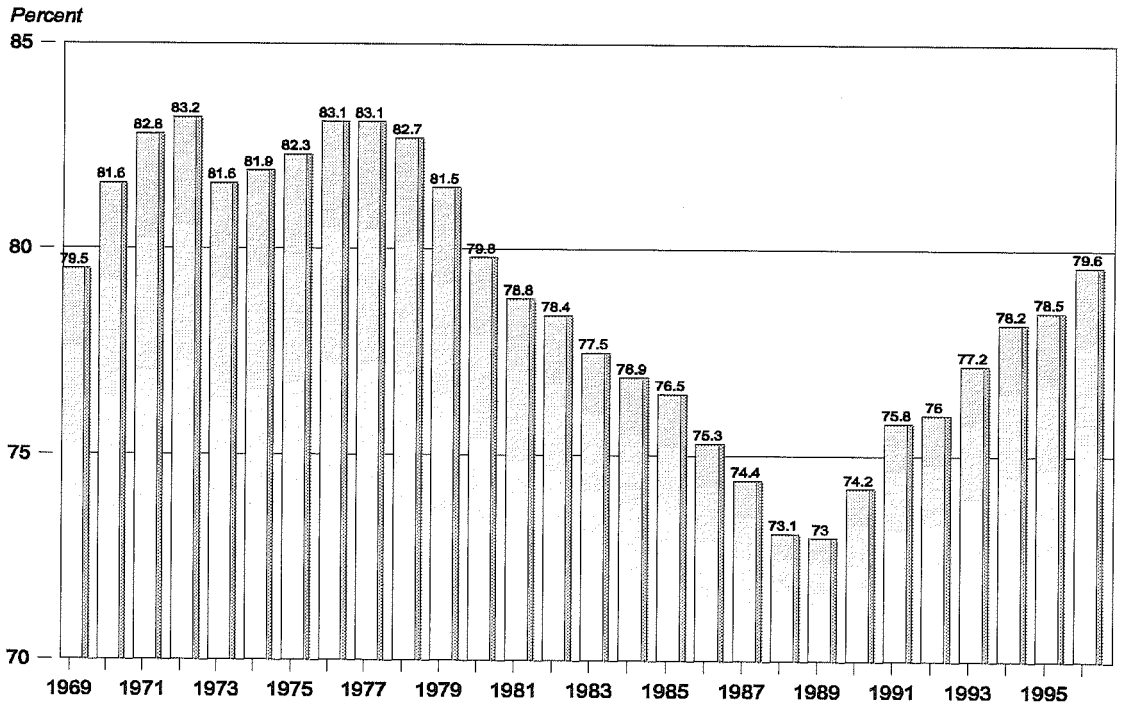
Diversity. The structure of Utah's economy continues to diversify relative to the nation. Economic diversity is measured by relating the industry employment composition in Utah with that of the nation. A more diverse economy, as measured by its similarity to that of the nation, means that it is less specialized and therefore less vulnerable to changes impacting any one industry. Over the past two decades, Utah's industry structure has been profoundly altered by several trends:

[1]As defined by the Bureau of the Census, the Mountain Division includes Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming

[2]Center for the New West, *Points West Chronicle*, Spring/Summer 1996.

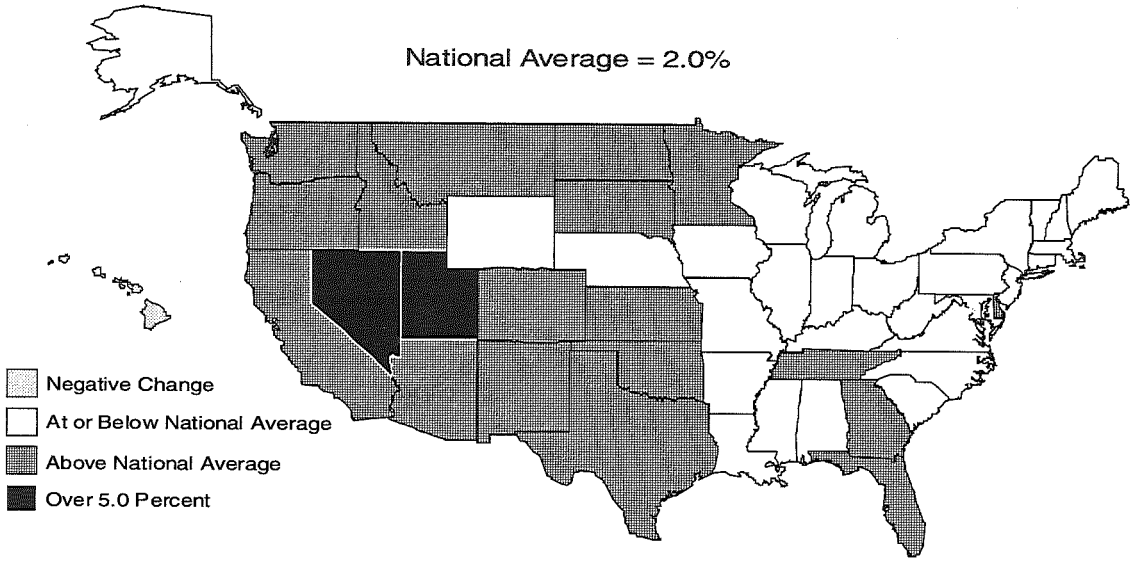
[3]Center for the New West

Figure C
Utah Per Capita Personal Income as a Percent of U.S.: 1969 to 1996



Source: U.S. Department of Commerce,Bureau of Economic Analysis and Governor's Office of Planning and Budget.

Figure D
Percent Change in Employment by State: 1996 Forecast



Source: "Regional Financial Review," November 1996, Volume VII Number 14. Regional Financial Associates, Inc.

- Proportional decline in natural resource employment, particularly metal mining and energy industries;
- Declining significance of federal government employment, particularly federal defense jobs;
- Increasing importance of employment in durable goods manufacturing; and
- Growth in employment in service industries, particularly computer software and tourism.

The emergence of Utah's solid high technology base is a prime example of a relatively new industry that has increased the state's economic diversity. A survey of Utah's high technology industries showed that by the end of 1995, 473 high technology companies employing 40,600 workers were located throughout the state.[1] Employment in the industry itself is diverse, including jobs in software, aerospace, electronic, biomedical/medical, and automotive products. The establishment of high technology has helped the Utah economy to simultaneously grow *and* become more diverse.

The result of these trends is an industrial structure in Utah that closely mimics the nation. As recently as 1975, 27 other states had economies more diverse than Utah. Beginning in 1980, however, Utah's economy started a relentless climb toward a more diverse and stable economy. Now Utah ranks seventh in the nation in economic diversity. Figures E and F show how Utah's economic diversity compares with other states and how it has changed over time.

Restructuring. Industry restructuring has been a recurring theme of the 1990s. Restructuring is occurring as industries strive to compete in a global market. Restructuring is also propelled by technological advances that facilitate the evolution toward an information economy where the location and the processes used to produce and deliver goods and services to customers are changing. The effect of restructuring is most evident in the federal government where the end of the Cold War and persistent deficits are profoundly influencing spending priorities. Restructuring is also impacting corporate America where many companies have chosen to reduce work forces and/or relocate.

[1]This survey was conducted by the Bureau of Economic and Business Research, University of Utah. High technology companies are defined as those with more than 6.3 percent of the workers in technical, scientific, or engineering positions and that spend more than 3.1 percent of net sales for research and development activities.

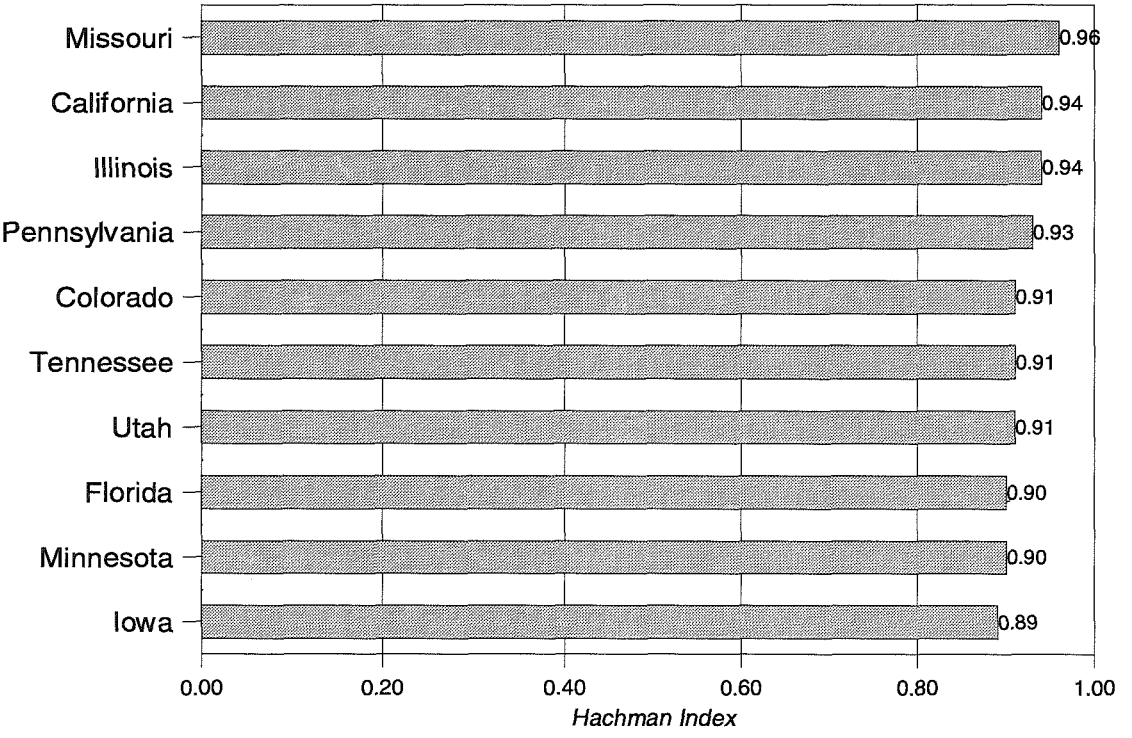
Utah's economy has both benefitted and been harmed by restructuring trends. On the positive side, global markets, business relocations, and many technological changes have been good for Utah. Export data show that Utah has been tapping international markets at record rates, Utah's low cost of doing business has favorably influenced business relocations, and because of advances in technology, Utah is no longer isolated from large markets. On the down side, reductions in employment in Utah's defense and software industries have reduced the flow of income into the economy.

In coming years, the restructuring of the deregulated telecommunications industry and possible deregulation and restructuring of the electric utility industry will have an impact on the state's economy. It is too early to know the likely course of change, but if effective competition emerges, average prices throughout the west could fall and inefficient providers would either reduce their costs or be eliminated by competition over the long run. The effect on Utah's economy will depend upon the direction and magnitude of the change in Utah's average prices before and after restructuring. Ultimately, Utah's tax and regulatory policies may change and the state's telecommunication and electric utility industries will need to be competitive to be profitable.

International Trade. Utah's involvement in global markets also contributes to the state's changing and diversifying economic structure. In 1996, Utah exported an estimated $3.6 billion in merchandise exports, an amount roughly equivalent to 1995, but nearly double the amount exported in 1990. As a percent of gross state product, exports represent 9.3 percent, ranking Utah fourth among all states in the importance of exports to the economy. Figure G shows Utah merchandise exports from 1988 to 1996.

The largest portion of these exports are in primary metal products and metallic ores. Employment in these industries has declined from the most recent peak in 1981. This decline in employment has made the employment structure of Utah's economy more similar to the nation's, and, in the process, made Utah less dependent on metal mining processing as other industries have grown and emerged. The rise in export value in primary metal products and metallic ores is primarily attributable to substantial investments that have increased productivity and sales even with a proportionately smaller work force. The success

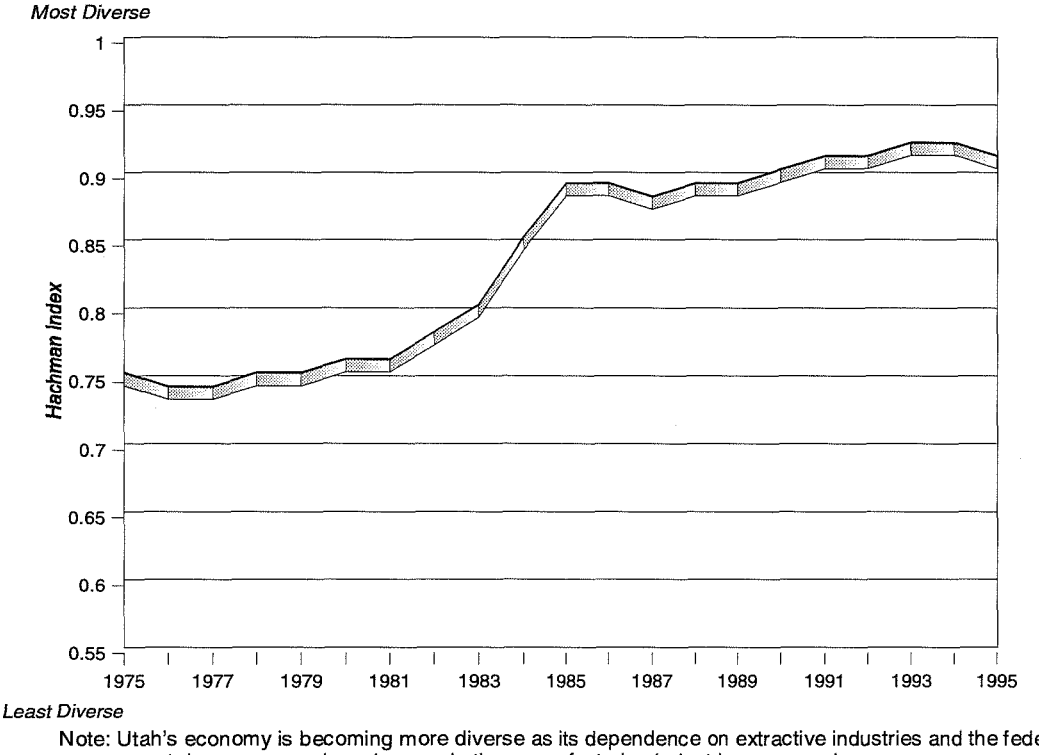
Figure E
Economic Diversity: Top Ten States in 1995



Note: Economic diversity is calculated by comparing the employment structure of each state with that of the nation. A diverse economy is less specialized and therefore less vulnerable to changes impacting any one industry.

Source: Regional Financial Associates.

Figure F
Utah Economic Diversity: 1975 to 1995



Note: Utah's economy is becoming more diverse as its dependence on extractive industries and the federal government decreases, and services and other manufacturing industries grow and emerge.

Source: Regional Financial Associates.

of other industries in the global economy such as scientific instruments (biomed/medical products) and electronic and industrial equipment have also contributed to Utah's increasing economic diversity and exports.

Another important aspect of international trade can be the abruptness and severity of change caused by competition in the world marketplace. In no instance is this more visible than Utah's experience with Micron Technologies, Inc. In March of 1995, Micron announced that Lehi, Utah would be the site for their $1.3 billion memory chip plant. Construction started in late June and by Fall plans for the facility had increased to $2.5 billion. In late December, as memory chip prices started a dramatic plunge, the rapid construction of the facility was slowed. By February of 1996, nearly one year after the heralded announcement, Micron indefinitely postponed construction until a more favorable market exists. During 1996, they spent approximately $600 million to build the outside shell of the facility; today completion of the facility remains discontinued indefinitely.

Changing Demographic Characteristics. Utah's population passed the two million mark during 1996. In comparison to other states, Utah is still relatively small, ranking 34th among all states in population size. Although Utah is still relatively small, the growth, composition, and distribution of the population is unique. Utah's population grows more rapidly, is younger, lives longer, has larger household sizes, and is more urban than the national average. Changes are occurring, however, as the population becomes older, household formation becomes less oriented toward married-couple families, and the population becomes more racially and ethnically diverse. Further, the concentration of the population continues to spread to counties close to the metropolitan areas and to counties in the Southwest region of the state.

Growth. During 1996, Utah's population increased by 2.2 percent, over two times the national average of 0.9 percent. In 1996, Utah had approximately 40,000 births, 11,000 deaths, and net in-migration of 14,000. This means that 67 percent of the population growth in Utah during 1996 occurred because of the natural increase of the indigenous population. Despite the dominance of natural increase in Utah's population growth, the robust economic performance of recent years has also contributed to Utah's current growth challenges. Since 1991, approximately 108,000 more people have moved into the state than have moved away.

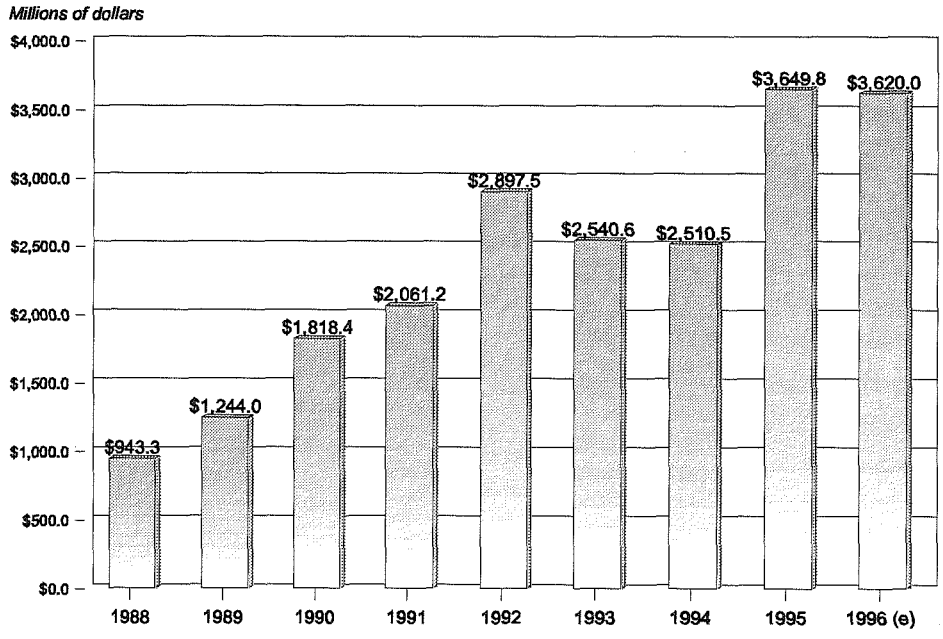
Composition. The 1995 median age in Utah of 27 is the youngest in the nation. The national median age is 34. Utah's total fertility rate of 2.55 is the highest in the country and a major factor influencing the state's age distribution. Utah's young age distribution means that for every 100 Utahns of working age, 13 more persons of non-working age than the national average must be supported. As the baby boomers age, the age composition of both Utah and the nation is changing. Utah's median age has increased from 23 in 1980 to 27 in 1995. It is projected to increase to 30 by the year 2020. The national median age was 30 in 1980, 34 in 1995, and is projected to increase to 37 in the year 2020.

The composition of Utah's population is also changing in the area of household formation. Utah households have always been larger and more likely to be comprised of married couple families than the national average. Utah's household size in 1995 of 3.12 persons per household is the largest in the nation and compares to the U.S. average of 2.64. Married-couple families comprise 65 percent of all Utah households, well beyond the equivalent national figure of 55 percent. Household formation in Utah is gradually changing to have a smaller proportion of married-couple families and married-couple families with children, and a larger proportion of single parents and people living alone.

Utah's minority population, as a percent of total population, is still relatively small. However, the minority population's share is gradually increasing. In 1980, Utah's White population comprised 92.7 percent of the total, compared to 89.4 percent in 1994. This gradual shift in the racial and ethnic composition occurs as minority populations have higher birth rates and/or have been migrating at a more rapid pace than non-minority populations. From 1990 to 1994, Utah's White population increased by an estimated 8.9 percent, compared to 39.3 percent for Asian/Pacific Islanders; 37.8 percent for Hispanics; 30.9 percent for Blacks; and 18.9 percent for American Indians/Alaskan Natives.

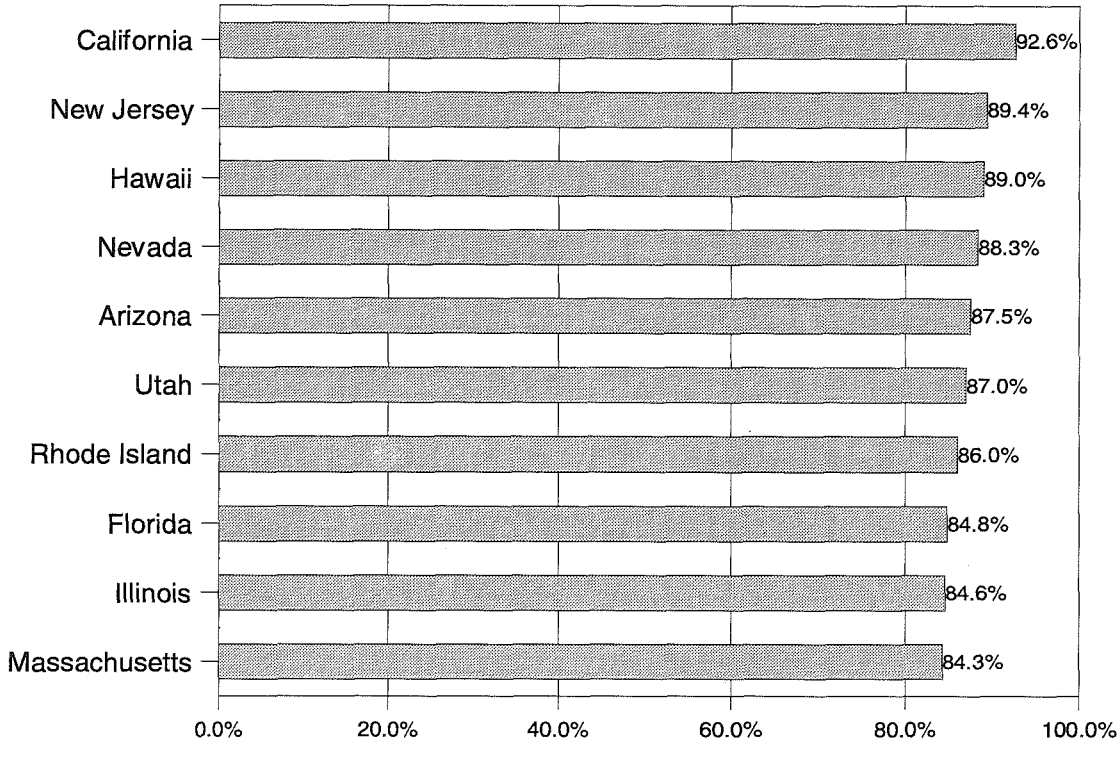
Distribution. Utah's distinction as an urban state occurs because of the concentration of population within the four metropolitan counties of Weber, Davis, Salt Lake, and Utah. Figure H shows the

Figure G
Utah Merchandise Exports: 1988 to 1996



Source: U.S. Bureau of the Census, Foreign Trade Division
and Massachusetts Institute for Social and Economic Research (MISER).

Figure H
Ten Most Urban States in the U.S.: 1990



Note: A person is considered urban if they live in an urbanized area (Utah has four: Logan, Ogden, Salt Lake City, and Provo/Orem) or a city over 2,500 persons.
Source: U.S. Department of Commerce, Bureau of the Census.

top ten most urban states in the country. The U.S. Bureau of the Census classifies 87 percent of Utah's population as urban, compared to 75 percent of the nation's. A person is considered an urban resident if they live in an urbanized area (Utah has four: Logan, Ogden, Salt Lake City, and Provo-Orem) or a city over 2,500 persons. This means that even though Utah is a western state with abundant land and open spaces, the state faces many of the challenges found in urban settings.

Over the past 25 years, Utah's urbanization trends have broadened to include two important areas in addition to the metropolitan counties: (1) counties adjacent to the metropolitan areas, and (2) Southwest Utah. The growth in every county in relative close proximity to the metropolitan areas exceeded the state average of 2.2 percent in 1996. These counties, shown with the 1995-1996 population growth rate, are: Cache, 2.3 percent; Morgan, 2.5 percent; Tooele, 3.2 percent; Summit, 5.3 percent; Wasatch, 3.4 percent; Juab, 3.7 percent; and Sanpete, 4.0 percent. All of these counties are becoming increasingly more integrated into the employment and trade patterns of the four metropolitan counties.

The Southwest region of the state, dominated by the two counties of Washington and Iron, has had the most significant population growth in the state in recent history. In 1996, Washington County's population increased nearly three times faster than the state average. Iron County's rate of population increase nearly doubled the state average. As these two counties continue to grow, their contributions to the economy will increase as well.

Changes in Government. Federal, state, and local government are all striving to meet the demands of a steadily changing population and an evolving economy. At the federal level, the most important change in terms of its impact on the Utah economy is the restructuring of federal military priorities. At the state level, Utah's aggressive public investment plans will alter future economic performance. And, at the local level, providing the most basic of public services such as police, fire, sanitation, water, and roads is proving to be a challenge in this period of growth.

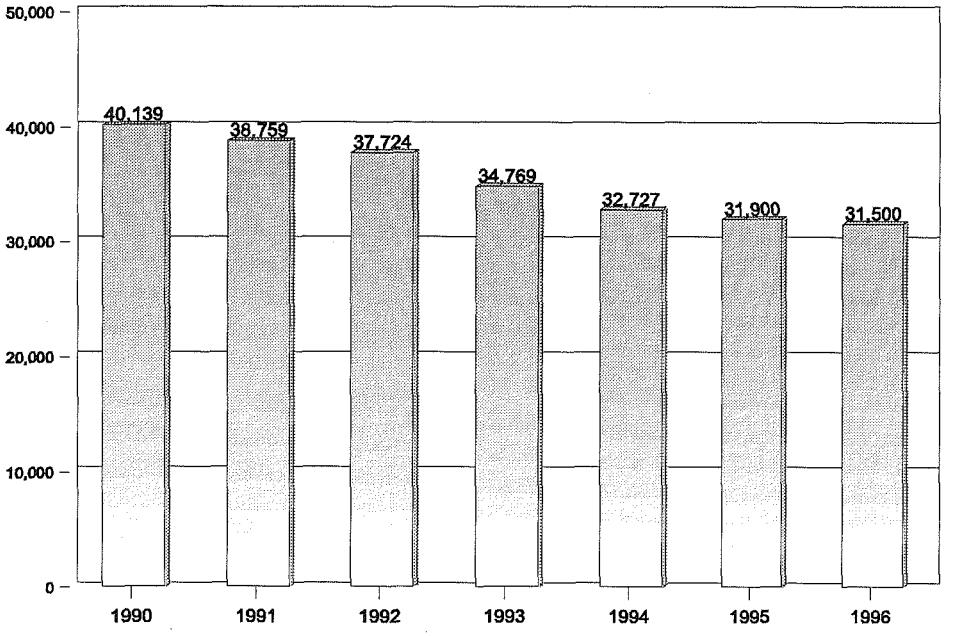
Federal Government Restructuring. The federal government has been an important component of the Utah economy since statehood. This involvement includes the policies and investments of the federal government in building railroads, highways, reclamation projects, national parks and monuments, forest conservation, and defense spending. The federal government's role in the Utah economy, however, is changing substantially as the federal government attempts to slow or eliminate the growth in deficit spending and operate in a post-cold war era. The federal government's shifting of important responsibilities to states will also impact Utah's economy.

The restructuring of the federal government is reflected in both federal employment and defense spending in Utah. Federal government employment has dropped from 40,139 in 1990 to 31,500 in 1996 as shown in Figure I. From 1990 to 1994 federal government employment declined more in Utah (13.4 percent) than in any other state except Maine (19.1 percent). Federal defense-related spending in Utah has also declined. In 1987, defense spending in Utah amounted to almost 8.0 percent of gross state product. By 1995, the defense industry's contribution to state output was less than half the 1987 amount. These magnitudes of change simply could not have been absorbed by the economy without significant pain, were it not for the dramatic job creation in other areas of the Utah economy.

Infrastructure Investment. Utah's rapid population growth has placed significant pressures on state and local governments to provide services and plan for the future. State government is well positioned to meet these challenges because of the state's triple A bond rating, which reduces interest costs, and the favorable growth in tax collections that coincide with the state's current economic expansion. Since federal aid as a percent of total local government revenues has been declining steadily for over a decade, local government is struggling to pay for the increased demand for services related to growth.

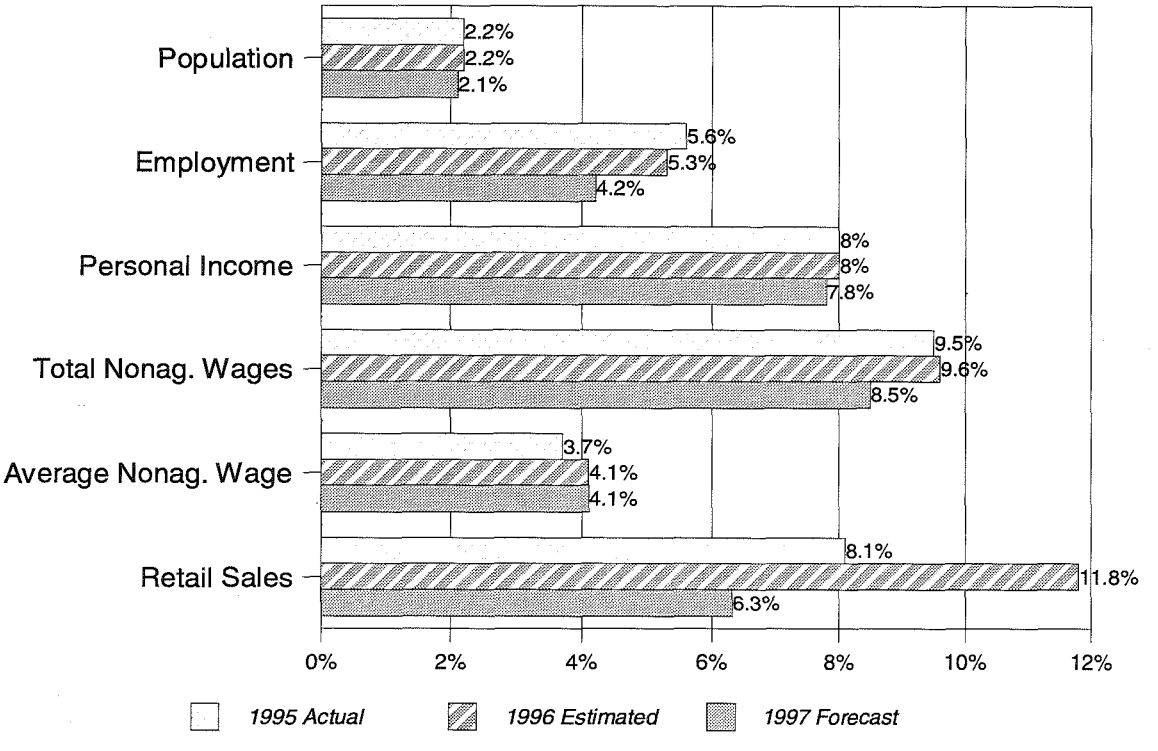
The state has ambitious plans for investment in transportation, water, and corrections infrastructure. The focal point of this investment is transportation. Utah's Centennial Highway Fund will be used to build or rebuild many of Utah's highways and a federal interstate over the next ten years. These projects will be among the largest, most ambitious state infrastructure investments ever. The largest component, the reconstruction of the portion of Interstate 15 that crosses through the center of the Salt Lake City metropolitan area, is currently the largest freeway reconstruction project anywhere in the country. It encompasses all pavements and nearly every structure and

Figure I
Federal Employment in Utah: 1990 to 1996



Source: Utah Department of Employment Security.

Figure J
Utah Economic Indicators—Annual Percent Change: Actual, Estimate, and Forecast



Source: Utah State Economic Coordinating Committee.

interchange from 5th North to 108th South, a 16 mile stretch in Utah's most densely populated county. The expansion will result in five lanes in each direction. Several parallel street improvements and installation of an advanced traffic management system are also part of the project's scope. The reconstruction is scheduled to take place over four-and-one-half years, with construction beginning in April 1997 and ending in October 2001. The final product will carry a $1.3 billion price tag.

The Legacy Highway, which would parallel Interstate 15 from Box Elder County to Juab County, and the extension of the Bangerter Highway, are two other large projects proposed to be largely funded from the Centennial Highway Fund over the next 10 years. The total cost of all the projects expected to be paid for from the Centennial Fund total $2.6 billion and involve projects in every county of the state.

These large public investments will have both short- and long-term economic implications. Over the long run, investment in transportation infrastructure is critical to the competitiveness of the Utah economy. In the short run, the economy will be stimulated by the inflow of the anticipated federal money and bonding which will be used for construction. The invigorating effect of this investment will be tempered by the increase in transportation costs caused by higher congestion during the construction period.

Outlook

Utah's current economic prosperity should continue in 1997. Utah's young and educated work force, strong work ethic, and low business costs help businesses succeed in Utah. Government has also successfully kept business taxes low and fostered a reasonable regulatory environment. The substantial infrastructure investments slated to occur during next year, and subsequently, will benefit the state's economy.

Perhaps the most important feature of the 1997 forecast is the prognosis for Utah's current construction boom which is in its sixth year of double-digit employment growth rates. The State Economic Coordinating Committee expects construction to remain at historically high levels in 1997. Construction projects of $25 million or more that will proceed or begin in 1997 include such large projects as the reconstruction of Interstate 15, completion of the Bangerter Highway, Light Rail, Snowbasin Ski Resort, Kennecott Tailings Project, the State Courts Complex, Huntsman Cancer Institute, Orem Medical Center, and the Central Utah Project. Growth in residential construction is expected to decline in 1997, largely because of less net in-migration, less developable land, and growth restrictions.

While economic growth is expected to slow slightly in 1997, the positive features of the current expansion should more than offset the down-side risks. These risks include continued federal budget and employment cutbacks, building moratoriums and restrictions, lower net in-migration, and a tighter labor market. Less affordable housing, higher apartment and commercial rents, and an improved economic and business climate in California will also dampen economic activity in Utah in 1997.

The State Economic Coordinating Committee expects employment to grow at about 4.2 percent in 1997. Population is forecast to increase at 2.1 percent; total wages, 8.5 percent; and personal income, 7.8 percent. Average wages are expected to grow faster than inflation for the third consecutive year. Figure J illustrates the Utah forecast for key indicators. Table A provides the short-term outlook for Utah and the nation.

Table A
U.S. and Utah Actual and Estimated Economic Indicators: November 1996

U.S. and Utah Indicators	Units	1994 Actual	1995 Actual	1996 Estimates	1997 Forecast	% CHG 1994-95	% CHG 1995-96	% CHG 1996-97
PRODUCTION AND SPENDING								
U.S. Real Gross Domestic Product	Billion Chained $92	6,608.7	6,742.9	6,898.0	7,049.7	2.0	2.3	2.2
U.S. Real Personal Consumption	Billion Chained $92	4,473.2	4,577.9	4,687.8	4,790.9	2.3	2.4	2.2
U.S. Real Fixed Investment	Billion Chained $92	921.1	975.9	1,040.3	1,107.9	5.9	6.6	6.5
U.S. Real Defense Spending	Billion Chained $92	337.0	319.6	313.8	301.6	-5.2	-1.8	-3.9
U.S. Real Exports	Billion Chained $92	712.0	775.4	818.8	868.0	8.9	5.6	6.0
U.S. Industrial Production Index	1987=100	118.1	122.0	125.5	128.8	3.3	2.9	2.6
Utah Coal Production	Million Tons	24.4	25.1	27.3	28.0	2.6	9.1	2.5
Utah Oil Production	Million Barrels	20.7	20.0	19.2	18.4	-3.3	-4.0	-4.0
Utah Natural Gas Production (Sales)	Billion Cubic Feet	161.0	164.1	180.1	189.8	1.9	9.8	5.4
Utah Copper Production	Million Pounds	683.6	650.0	626.0	660.0	-4.9	-3.7	5.4
SALES AND CONSTRUCTION								
U.S. New Auto and Truck Sales	Millions	15.0	14.7	15.0	14.7	-2.0	2.0	-2.0
U.S. Housing Starts	Millions	1.45	1.36	1.47	1.43	-6.2	8.1	-2.7
U.S. Residential Construction	Billion Dollars	287.7	289.8	310.7	324.3	0.7	7.2	4.4
U.S. Nonresidential Structures	Billion Dollars	180.2	199.7	210.1	221.2	10.8	5.2	5.3
U.S. Retail Sales	Billion Dollars	2,227.8	2,342.2	2,464.0	2,609.4	5.1	5.2	5.9
Utah New Auto and Truck Sales	Thousands	75.9	77.6	81.5	85.6	2.2	5.0	5.0
Utah Dwelling Unit Permits	Thousands	19.7	21.6	23.5	20.0	9.6	8.8	-14.9
Utah Residential Permit Value	Million Dollars	1,730.1	1,854.6	2,100.0	1,900.0	7.2	13.2	-9.5
Utah Average Unit Value	Thousands	87.8	85.9	89.4	95.0	-2.2	4.1	6.3
Utah Nonresidential Permit Value	Million Dollars	772.2	832.7	1,000.0	900.0	7.8	20.1	-10.0
Utah Taxable Retail Sales	Million Dollars	12,097	13,080	14,623	15,541	8.1	11.8	6.3
Utah Taxable Business Purchases	Million Dollars	5,590	6,218	6,807	6,937	11.2	9.5	1.9
Utah Taxable Services	Million Dollars	2,802	3,205	3,727	4,164	14.4	16.3	11.7
Utah Total Gross Taxable Sales	Million Dollars	21,527	23,609	26,231	27,886	9.7	11.1	6.3
DEMOGRAPHICS AND SENTIMENT								
U.S. Fiscal Year Population (BEA)	Millions	260.3	262.8	265.1	267.5	0.9	0.9	0.9
U.S. Consumer Sentiment of U.S.	1966=100	92.2	93.7	94.3	95.7	1.7	0.7	1.5
Utah Fiscal Year Population	Thousands	1,916	1,959	2,002	2,044	2.2	2.2	2.1
Utah Fiscal Year Net Migration	Thousands	22.8	15.0	13.9	13.0	na	na	na
Utah Consumer Sentiment of Utah	1966=100	106.1	105.9	105.3	106.8	-0.1	-0.6	1.5
PROFITS AND RESOURCE PRICES								
U.S. Corporate Profits Before Tax	Billion Dollars	531.2	598.9	615.7	637.2	12.7	2.8	3.5
U.S. Domestic Profits Less Fed. Reserve	Billion Dollars	436.0	472.3	501.6	520.2	8.3	6.2	3.7
U.S. Oil Refinery Acquisition Cost	$ Per Barrel	15.5	17.2	20.2	19.9	10.9	17.4	-1.7
U.S. Coal Price Index	1982=100	96.7	95.0	95.2	96.1	-1.8	0.2	1.0
Utah Coal Prices	$ Per Short Ton	20.1	19.1	18.8	19.1	-4.8	-1.9	1.7
Utah Oil Prices	$ Per Barrel	16.1	17.1	19.9	20.3	6.0	16.4	2.0
Utah Natural Gas Prices	$ Per MCF	1.53	1.14	1.35	1.38	-25.5	18.4	2.2
Utah Copper Prices	$ Per Pound	1.07	1.35	0.96	1.00	26.2	-28.9	4.2
INFLATION AND INTEREST RATES								
U.S. CPI Urban Consumers (Not S.A.)	1982-84=100	148.2	152.4	156.8	161.2	2.8	2.9	2.8
U.S. GDP Chained Price Indexes	1992=100	104.9	107.6	109.9	112.7	2.6	2.1	2.5
U.S. Federal Funds Rate	Percent	4.20	5.84	5.29	4.98	na	na	na
U.S. Bank Prime Rate	Percent	7.14	8.83	8.27	8.02	na	na	na
U.S. Prime Less Federal Funds	Percent	2.94	2.99	2.98	3.04	na	na	na
U.S. Prime Less CPI-U	Percent	4.54	6.00	5.37	5.22	na	na	na
U.S. 3-Month Treasury Bills	Percent	4.25	5.49	5.01	4.82	na	na	na
U.S. T-Bond Rate, 30-Year	Percent	7.37	6.88	6.74	6.37	na	na	na
U.S. Mortgage Rates, Fixed FHLMC	Percent	8.4	8.0	7.8	7.3	na	na	na
EMPLOYMENT AND WAGES								
U.S. Establishment Employment (BLS)	Millions	114.2	117.2	119.5	121.6	2.7	2.0	1.7
U.S. Average Annual Pay (BLS)	Dollars	26,939	27,845	28,886	29,703	3.4	3.7	2.8
U.S. Total Wages & Salaries (BLS)	Billion Dollars	3,075	3,263	3,453	3,612	6.1	5.8	4.6
Utah Nonagricultural Employment (DES)	Thousands	859.6	907.9	955.8	995.7	5.6	5.3	4.2
Utah Average Nonagriculture Wage (DES)	Dollars	22,408	23,236	24,190	25,188	3.7	4.1	4.1
Utah Total Nonagriculture Wages (DES)	Million Dollars	19,262	21,096	23,121	25,080	9.5	9.6	8.5
INCOME AND UNEMPLOYMENT								
U.S. Personal Income (BEA)	Billion Dollars	5,740	6,098	6,427	6,710	6.2	5.4	4.4
U.S. Unemployment Rate	Percent	6.1	5.6	5.4	5.5	na	na	na
Utah Personal Income (BEA)	Million Dollars	32,940	35,577	38,423	41,421	8.0	8.0	7.8
Utah Adjusted Gross Income	Million Dollars	24,212	26,507	29,094	31,409	9.5	9.8	8.0
Utah Unemployment Rate	Percent	3.7	3.6	3.4	3.5	na	na	na

Sources: Revenue Assumptions Committee and Economic Coordinating Committee.

Economic Outlook

National Outlook. The current six-year U.S. economic expansion is expected to continue in 1997. Inflation pressures are expected to remain subdued and the rate of inflation should be in the 2.5 percent to 2.8 percent range. Short-term interest rates should be relatively stable and long-term rates are expected to decline. Job creation is expected to remain stable with an anticipated growth of 1.7 percent. The unemployment rate is forecast to be 5.5 percent, a rate very similar to 1996. Regional economic performance is expected be more balanced than in the past. Overall growth, as measured by real gross domestic product, is forecast to be 2.2 percent.

Utah Outlook. The Utah economic outlook remains positive. Employment is forecast to increase 4.2 percent, marking a full decade of job growth rates of 3.0 percent or higher. The average wage is expected to increase faster than inflation in 1997 for the third consecutive year. Wages, personal income, net migration, and population are all expected to show solid growth. Construction should remain strong due to low office, industrial, and apartment vacancy rates; high hotel occupancy rates; new business and government projects; and continued net in-migration. Economic growth is expected to slow slightly from 1996 levels in 1997 because of federal cutbacks; lower net in-migration; a tighter labor market; a less affordable housing market; and an improved economy and business climate in California.

Utah's Long-Term Projections. The demographic attributes that have characterized Utah in the past (the youthful and rapidly growing population) are projected to continue well into the next century. The relative strength of the economy is expected to continue as well. Although there will be some convergence with national demographic and economic trends, Utah's population and employment growth rates are projected to continue to out-pace those of the nation for the 1997 through 2020 period. Utah's population, which was 2.0 million in 1996, is projected to reach 3.3 million by the year 2020, a 65.0 percent increase. This rate of population growth will be sustained by a rapid rate of natural increase and a strong and diversified economy. The majority of the 1.3 million new Utahns will reside on the Wasatch Front. The most rapid rates of growth are expected in the counties in Southwestern Utah, and in Grand County, Summit County and Wasatch County.

Economic Development Activities

Utah has a variety of community and economic development programs that are structured to meet today's challenges and opportunities. While industry targeting and company recruitment remain key economic development activities, the related functions of community and infrastructure planning and development are receiving heightened attention and resources.

Economic Indicators

Demographics. Utah's population surpassed 2 million during 1996. Utah's population grows more rapidly, lives longer, is younger, has larger household sizes, and is more urban than the nation as a whole. During 1996, the population increased 2.2 percent. This growth was the result of 40,000 births, 11,000 deaths, and 14,000 net in-migration. Washington County continues to lead the state in the rate of population increase with a growth rate in 1996 of 6.4 percent. Utah's population is becoming increasingly more racially and ethnically diverse. In 1980, Utah's white population comprised 92.7 percent of the total population, compared to 89.4 percent in 1994, the year of most recent estimates. Utah ranks as the sixth most urban state with a population density of 24.4 persons per square mile.

Employment, Wages, Labor Force. In 1996, Utah added 48,000 new nonfarm jobs for a growth rate of 5.3 percent. This is the fourth consecutive year of job growth rates over 5.0 percent. The state's nonfarm job growth rate more than doubled the U.S. average. The 1996 unemployment rate of 3.4 percent is the lowest level in four decades. Construction registered the highest growth rate of any major industry, increasing by 11.9 percent. Mining was the only major industry to experience employment declines. The average Utah wage increased faster than inflation again in 1996.

Personal Income. Utah's 1996 total personal income is forecast to be $38.4 billion, up 8.0 percent from the 1995 total. The state's 1996 total personal income increased considerably faster than the forecasted U.S. growth of 5.4 percent. Utah's per capita personal income is estimated to be $19,300 in 1996. From 1990 to 1996, Utah's inflation-adjusted per capita income has increased by about $2,600, compared to a $1,300 increase for that of the nation's. Utah's per capita personal income ranks 46th among the states, but Utah's relative ranking improves considerably when adjusting for the young population.

Gross State Product. Utah's 1996 gross state product is estimated by Regional Financial Associates to be $50.7 billion. The most recent estimate of gross state product for Utah released by the U.S. Bureau of Economic Analysis is for 1992 and shows Utah at $35.6 billion.

Gross Taxable Sales. Utah's gross taxable sales are estimated to have increased by 11.4 percent in 1996. This growth continues an eight-year trend of growth in excess of inflation. Estimates for 1996 for the growth rates for the major components of gross taxable sales are 11.8 percent for retail; 9.5 percent for business investment; and 16.3 percent for services. These high rates of growth stem from Utah's current construction boom; construction of the partially-completed and now-on-hold Micron Technology Inc.'s microchip plant; aggressive purchasing by Utah consumers; and robust business investment due to the low cost of capital relative to labor, the flow of capital from stock market growth, and the pressures to invest to increase productivity in a global marketplace.

Tax Collections. Fiscal year 1997 revenues are anticipated to grow in inflation-adjusted terms by 3.1 percent. This growth rate is lower than the average annual constant dollar rate of 3.9 percent for fiscal years 1980 through 1997. The major reasons for lower revenue growth are the tax cuts that were passed in the 1994, 1995, and 1996 general and special legislative sessions. These cuts amount to $270.3 million less revenue on an annualized basis in FY1997. These tax cuts include reductions in the state's sales, income, and state-mandated property taxes.

At the end of FY1996, the state's Budget Reserve Account had a balance of $71.8 million. State appropriations are limited by a formula that reflects the average changes in personal income and combined changes in population and inflation. The Governor's budget recommendations and the final appropriations enacted by the Legislature have been in strict compliance with this law since its inception in FY1989.

International Merchandise Exports. The value of Utah's 1996 international merchandise exports is estimated to be $3.6 billion. The value decreased slightly in 1996 from the record year in 1995. Utah's largest merchandise export industries are primary metals, metallic ores, electrical equipment, and transportation equipment. Utah's largest markets for merchandise exports are in eastern Asia, Canada, and Europe.

Prices, Inflation, and Cost of Living. The pace of inflation remained highly favorable in 1996. Throughout 1996, the year-to-year consumer price index varied between 2.7 to 3.4 percent, for an average annual increase of 2.9 percent. The gross domestic product chain-type price deflator increased 2.1 percent in 1996. Utah's cost-of-living index in selected cities remained near the national average. The second quarter 1996 composite index (national average equals 100) for Salt Lake City was 96.9; Provo-Orem, 102.3; Cedar City, 94.7; St. George, 103.7; and Logan, 106.2.

Social Indicators. A variety of social indicators such as crime levels, educational attainment, vital statistics and health, poverty, public assistance, and home ownership portray useful information about Utah's quality of life and social well-being. Judgements about Utah's performance in these areas can be highly subjective and difficult to analyze. In state-to-state comparisons that are usually based on a composite of indicators by nationally recognized entities, Utah is generally portrayed as a great place to live and conduct business. Individual indicators also show areas for improvement.

Regional/National Comparisons. The 1990s have been a period of sustained economic growth for the Mountain Division. The Mountain Division is in the midst of a five-year economic boom and leads the nation in economic vitality and growth. In 1995, among the eight mountain states, Utah ranked second in nonfarm employment growth, fifth in population growth, fourth in average annual pay as a percent of the U.S. average, and third in personal income per household.

Industry Focus

Agriculture. Agricultural production in Utah during 1996 was impacted by the highest grain prices in more than a decade, a drought in the southern portion of the state, low beef prices, and the activities at the Circle Four Farms facilities in Beaver County. The entire agricultural industry, both locally and nationally, is entering a period of uncertainty because of the passage of the 1996 farm bill, formally titled the Federal Agricultural Improvement and Reform Act of 1996. The act will phase out government subsidies and allow the forces of supply and demand to dictate which commodities are produced. A much greater emphasis will be placed on exporting agricultural products. The full impact of this legislation is only beginning to be known. Other important agricultural issues include the financial stress faced by beef operators in some counties of the state and the preservation of land for farming and open space.

Construction and Housing. The value of construction rose 13.5 percent to $3.5 billion in 1996 compared to $3.1 billion in 1995. Both residential and nonresidential construction reached record levels during 1996 with $2.1 billion in residential construction value and $1.0 billion in nonresidential construction value being permitted. New dwelling unit permits reached a record level of 23,500. Population growth enhanced by net in-migration, strong economic and job growth, low vacancy rates, and low mortgage interest rates, all contributed to this record year. Several large projects contributed to the record year in nonresidential construction. These include projects such as the $34.8 million library at Brigham Young University; the $27 million American Stores office tower; the $24.7 million Prime Option office building; and the $75 million Courts Complex.

Housing prices in Utah over the past five years and in the most recent 12-month period have increased faster than any other state. From 1991 to 1996, Utah's house price index, as published by the Office of Federal Housing Enterprise Oversight, increased by 72.7 percent. The house price index is derived from repeat mortgage transactions on single-family homes whose mortgages have been purchased by the Federal National Mortgage Association and the Federal Home Loan Mortgage Corporation. The median sales price of an existing single family home in the third quarter of 1996 was $123,100 in Utah and $120,500 for the national average. Home ownership in Utah in 1995 ranked seventh highest in the nation at 73.1 percent.

Defense/Aerospace. Utah continues to be negatively impacted by declining defense spending. In 1987, direct defense spending in Utah amounted to almost 8.0 percent of gross state product. By 1995, direct defense spending fell to just under 4.0 percent of gross state product. The worst of the defense cuts appear to be over for Utah.

Energy and Minerals. The value of Utah energy production is estimated to be $1.1 billion in 1996. Coal, valued at $512.6 million, ranks first in value among Utah's primary energy resources and accounts for 45 percent of the total value of all energy produced. Coal production reached an all time high of 27.3 million tons in 1996. Utah's coal industry is currently benefitting from increased demand because of the requirements of the Clean Air Act, extremely high productivity, and higher demand from both Pacific Rim countries and the electric utilities in the eastern United States. The value of crude oil production and net natural gas sales are estimated to be $381.8 million and $243.1 million, or about 34 percent and 21 percent, respectively, of the total value of energy produced in Utah.

The value of mineral production in 1996 is estimated to be $2.3 billion, a decrease of more than $200 million from 1995. Base metals comprised $1 billion of the total, coal, $512.6 million; industrial minerals, $433 million; and precious metals, $331 million. Utah ranks fourth among states in the value of nonfuel minerals produced. In terms of the value of production compared to other states, Utah ranks first in beryllium and gilsonite; second in potash and copper; third in gold, magnesium, and molybdenum; fourth in phosphate rock; sixth in salt; 11th in oil and gas; and 14th in coal.

High Technology. Utah has developed a remarkably solid high tech base over the past ten years. By year-end 1995, 473 high technology companies employing 40,603 workers were located throughout the state. The majority of these companies are privately-held, headquartered in Utah, and located along the Wasatch Front. Most employ fewer than 25 people. The largest components of Utah's high tech sector are software, aerospace, electronics, biomedical/medical, and automotive products.

Tourism, Travel, and Recreation. In 1996, travelers spent approximately $3.8 billion in the Utah economy. This spending supported 91,000 jobs and contributed $276 million in state and local taxes. Over 16 million visitors came to Utah in 1996. Visitation at national parks increased an estimated 6 percent during the past year. Utah's hotel occupancy rate is approximately 74 percent. During the 1995-1996 ski season, 2.95 million lift tickets (adjusted for season pass holders) were sold, Utah's second best ski year ever in terms of skier visits. The designation of the 1.7 million-acre Grand Staircase-Escalante National Monument was a notable event during the year, and Utah continues to prepare for hosting the Winter Olympics in 2002.

Special Topics

Population and Urbanization Trends in Utah. Since 1940, Utah's population has grown at an annual rate of 2.3 percent, while the U.S. population increased by an annual average rate of 1.3 percent. Salt Lake County has accounted for the largest portion of Utah's population growth since 1940, followed by Utah and Davis Counties. This concentration along the Wasatch Front has made Utah the sixth most urban state in the nation. Utah's urban areas are broadening to include counties adjacent to the Wasatch Front and in Southwest Utah. As Utah's population continues to urbanize, state and local governments will need to make the necessary infrastructure investments to accommodate growth and cooperate more effectively to prevent Utah's urban areas from deteriorating like so many others in the nation.

Electric Utility Restructuring. Competitive entry at the generation stage and in the wholesale market for electricity has provided an inroad to competitive electricity markets. These changes are occurring because of institutional changes implemented by the federal government. The full impact of these changes is yet to be determined. The Utah Public Service Commission has a formal proceeding underway to examine the issues associated with competition in electricity markets.

Economic Outlook

1996: The Expansion Continued

Despite periods of political, economic, and global uncertainty, the U.S. economy registered another year of solid performance in 1996. The U.S. expansion entered its sixth year early in 1996, overcoming a series of federal government and winter weather shutdowns. Eventual completion of a piecemeal U.S. budget agreement restored confidence among consumers and financial market players. Following a vigorous 3.4 percent inflation-adjusted (real) annualized growth pace during the first half of the year, U.S. economic performance slowed in the second half of 1996.

A key factor impacting financial market activity throughout 1996 was the fear that continued economic growth and tightening labor markets would lead to a resurgence of inflation. As the year progressed and measures of consumer, producer, and wage inflation remained in check, inflationary concerns subsided. The fast pace of job creation exhibited in the first half of 1996 cooled to a more sustainable rate later in the year. While the U.S. unemployment rate moved to the "full employment" range below 5.5 percent, the lower rate had only limited effect on labor costs/availability in most areas of the country.

Following a period of political uncertainty, the November election results confirmed that the power balance between the Republican Congress and Democratic Administration would continue. This result suggested that fiscal policy changes would be incremental and have only limited impact on overall economic performance. As politics moved out of the spotlight and the mix of economic growth/inflation reports remained positive but not alarmingly strong, financial markets exhibited a renewed confidence. The Dow Jones Industrial Average advanced to record highs, surpassing 6,500 in late November. Long-term interest rates moved steadily lower toward year end, helping to sustain consumer purchasing power and business investment activity.

The 1997 Outlook—Another Year of Growth

The U.S. economy is well-positioned for a healthy performance in 1997. Stability and fiscal restraint arising from the power split between the legislative and executive branches should contribute to real economic growth of 2.2 percent for the year. This pace compares to a solid 2.3 percent real growth rate during 1996, a modest 2.0 percent real growth rate during 1995 and a strong 3.5 percent real growth rate during 1994 (Figure 1). Major components of Gross Domestic Product—personal consumption and business investment—are likely to continue growing at rates of 2.2 percent and 6.5 percent, respectively. The possibility of a recession is remote.

"Full" Employment to Continue

Solid job creation during the first three quarters of 1996 gave way to less robust job market performance toward the end of the year. For 1997, the pace of job creation should ease slightly to 1.7 percent average annual employment growth (Figure 1). The U.S. should continue to add jobs as growth continues to occur in both low-skill, low-wage and high skill, high wage occupations. Education and ongoing training remain vital to obtaining and retaining quality jobs. Unemployment nationwide should remain low, averaging near 5.5 percent for 1997.

More Good News on Inflation

While inflation paranoia occasionally gripped financial markets in 1996, consumer inflation pressures remained under control. Data for the third quarter of 1996 indicated an actual moderation in employment costs. In a majority of industries, tremendous domestic and global competition limited pricing power. As a result, companies will be under additional pressure to reduce operating costs. Consumer inflation is expected to be 2.8 percent into 1997 (Figure 1). Internationally, modest economic performance and enormous competitive pressures should lead to additional declines in global inflation during 1997 as global economic performance improves, but at a moderate rate.

Limited Consumer Buying Power

Consumer spending showed signs of softening in the second half of 1996. Impacted by high levels of consumer debt and modest income growth, many Americans chose to take a breather from the expansive shopping spree of the past several years. Both retailers and consumers—as evidenced by a decline in selected consumer confidence levels late in 1996—have become a bit more cautious about future spending. Lower interest rates, however, should counter any major contraction in consumer spending. U.S. retail sales are expected to grow roughly 5.9 percent in 1997, compared to 5.2 percent in 1996.

Favorable Interest Rates

The decision of the Federal Reserve to keep monetary policy on hold throughout 1996 proved to be a good choice. Economic slowing late in 1996, combined with additional signs of only minimal inflation, created a winning combination for lower intermediate and long-term rates. The Federal Reserve is expected to leave policy unchanged in early 1997, but will be willing to tighten monetary policy if any legitimate signs of inflation become evident later in the year.

Economic slowing during the second half of 1996 allowed long-term rates to decline from the highs of Summer 1996. Additional modest declines are expected in the coming months if the current combination of modest growth and low inflation continues, with 30-year fixed-rate mortgages moving below 7.5 percent in 1997. A new round of mortgage refinancing will likely take hold.

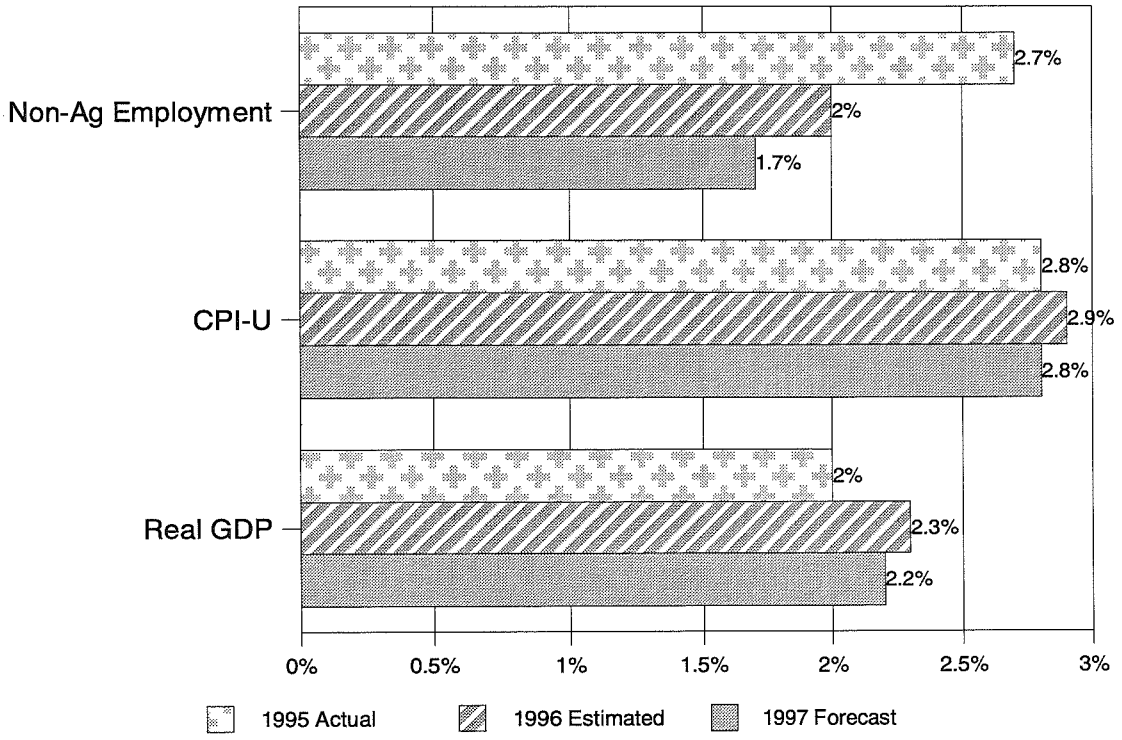
U.S. Regional Performance More Balanced

More regional balance is expected across the U.S. in terms of economic performance than at any time since the late 1970s. The Mountain States economy will slow modestly, but continue to lead the way. Improving fortunes are expected in the Northwest and in California. The Midwest and the South will remain solid. The Northeast is showing modest signs of improvement.

In Summary

The current six-year U.S. economic expansion will continue into 1997 with a modest level of performance. Employment markets should be characterized by stable job creation and low unemployment. Inflation pressures will likely be subdued over the forecast period, as consumer reluctance to pay higher prices and global competition interact to hold down price increases. Short-term interest rates should be relatively stable, with possible additional declines in long-term rates. Regional economic performance is expected to be more balanced than in earlier years, while the global economy may be slightly more prosperous. Overall, U.S. economic performance in 1997 should grow modestly, avoiding recession into 1998.

Figure 1
U.S. Economic Indicators—Annual Percent Change: Actual, Estimate, and Forecast



Source: Utah State Economic Coordinating Committee.

Table 1
National Outlook: 1993 to 1997

Year	Non-Ag Employment	GDP	CPI
1993	2.0%	2.3%	2.7%
1994	3.1%	3.5%	2.7%
1995	2.7%	2.0%	2.8%
1996	2.0%	2.3%	2.9%
1997	1.7%	2.2%	2.8%

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

The Utah economic outlook remains positive. A perspective on this favorable prognosis can be gleaned by considering key economic indicators during the past ten years and currently. In addition to economic indicators, the issues of annual pay and business costs; housing affordability, prices, and ownership; and vacancies are also significant. The near-term outlook draws from the analysis of the past and current indicators and other significant issues to forecast strong, above-average growth in 1997.

The Previous Ten Years

Employment. Total nonagricultural job growth in Utah increased 50.7 percent over the past ten years for an average annual growth rate of around 4.2 percent. This surpasses Utah's average yearly growth rate since 1950 of about 3.5 percent. By comparison, job growth in the nation from 1986 to 1996 was 20.4 percent, for an average of about 1.9 percent per year. Thus, Utah's total percentage increase in job growth was roughly two-and-one-half times that of the nation over this time period.

Structural Changes in Employment. The economy is composed of the private sector and the public (government) sector. The private sector in turn is further made up of goods-producing industries (mining, construction, and manufacturing), and services-producing industries (transportation, communications, and public utilities; wholesale and retail trade; services; and finance, insurance, and real estate).

From 1986 to 1996 both the private and public sectors in the state expanded. Utah added about 321,700 jobs from 1986 to 1996, 92 percent of this growth (296,900 jobs) occurred in private-sector industries. Annual growth in private-sector jobs averaged 4.8 percent over the past ten years.

Private employment increased from 77.7 percent of total jobs to 82.6 percent from 1986 to 1996. By comparison, private employment only made up 70 percent of total employment as recently as 1967.

Goods-Producing Industries. Goods-producing industries as a percentage of total employment remained unchanged at 20.8 percent in 1986 and 1996. This compares to a high of 29.8 percent in 1962, and a low of 19.5 percent in 1992. It should be noted that the base year, 1986, was a year in which mining, construction and durable manufacturing all contracted significantly. The closures of Geneva Steel (August 1986 to September 1987) and Kennecott Copper (September 1985 to June 1987), as well as depressed oil prices contributed to this downturn.

Construction employment increased from 5.1 percent of total employment in 1986 to 6.4 percent in 1996—after hitting a record low (since 1950) of 3.7 percent in 1989. Construction added 29,100 jobs during this period. Construction employment has grown for each of the last eight years (a total of 36,300 jobs were added since 1988). Construction growth has exceeded 10 percent for each of the past six years (every year beginning with 1991).

Manufacturing gained 37,400 jobs from 1986 to 1996, an increase of 40.6 percent. Nonetheless, manufacturing decreased from 14.5 percent of total employment to 13.5 percent over this ten-year period. Manufacturing employment actually grew faster (at 6.2 percent) in 1995 than total nonagricultural employment (at 5.6 percent). Mining remained stable at 7,800 jobs in 1986 and 1996. Still, mining decreased from 1.2 percent of total employment to 0.8 percent. In contrast, mining made up 6.9 percent of total employment in 1957.

Services-Producing Industries. Services-producing industries increased from 56.9 percent in 1986 to 61.8 percent of total employment in 1996. Retail trade grew at an average annual rate of 4.6 percent over the past ten years, and is estimated to have gained 66,100 jobs, increasing from 18.3 percent to 19.1 percent of total employment. Services gained around 117,500 jobs and increased from 21.7 percent of total employment in 1986 to 26.7 percent in 1996. During this period, annual growth in services averaged 6.4 percent, the highest growth rate for all industries except for construction which averaged 6.6 percent.

Public Sector. Governments added about 24,800 jobs but decreased in the share of total jobs from 22.3 percent in 1986 to 17.4 percent in 1996. Local government added 19,900 jobs over this period, but declined from 10.0 percent of total jobs to 8.7 percent. State government added 13,800 jobs, however, its percent of total employment declined from 6.0 percent to 5.4 percent.

Federal employment actually decreased by 8,900 jobs, due to defense cut-backs that began in 1991, and declined from 6.4 percent of total employment to only 3.3 percent. During this period, annual

growth in federal government jobs declined an average of 2.4 percent per year, the lowest growth rate for all industries. According to *State Policy Reports*, between December 31, 1990 and 1994 federal employment declined more in Utah (13.4 percent) than in any other state except Maine (19.1 percent).

Real Per Capita Income. Utah's population grew 19.8 percent, while the nation's population only grew 10.4 percent, from 1986 to 1996 according to the U.S. Bureau of the Census. Consumer-price (CPI-U) inflation-adjusted personal income grew even faster in Utah (41.6 percent) than in the nation (23.6 percent) over this time period. Consequently, the Utah economy grew more than the national economy as measured by inflation and population-adjusted (real per capita) personal income growth from 1986 to 1996. Real per capita (inflation and population-adjusted) personal income grew 18.2 percent from $16,313 to $19,289 in Utah; whereas, it only grew 11.9 percent from $21,660 to $24,243 nationwide (in 1996 dollars).

Utah's real per capita income was 75.3 percent of the nation's in 1986, by 1996 it was 79.6 percent. Real per capita income in Utah as a percent of the nation's showed a record low of 73.0 percent in 1989. Since then it has increased steadily for each of the last seven years.

Real per capita income in Utah should remain considerably below the national average in the foreseeable future due to the large percentage of the population comprised of individuals below the age of 18 and over the age of 64. Most recent (1995) Bureau of the Census data shows that each 100 of Utah's working-age population (those 18 to 64) had to support 13 more dependents than each 100 of the nation's working-age population.

Average Annual Pay. Although real per capita income increased over the past ten years, average annual pay in Utah, adjusted for CPI-U inflation, decreased 3.8 percent from $25,559 to $24,595 in 1996 dollars, as measured by the U.S. Bureau of Labor Statistics (BLS). By comparison, national inflation-adjusted, average annual pay increased 1.1 percent from $28,568 to $28,875 according to BLS data for persons covered under unemployment insurance laws. The growth in inflation-adjusted, average-annual pay in Utah decreased in part due to more part-time and dual-job workers, less unionization, and more entry level (younger) workers in Utah than in the nation.

The median age of Utah's population is 26.8 years and is the lowest in the nation (the national median age is 34.3). According to *State Policy Reports* and Regional Financial Associates, only four states had lower union membership in 1995 than Utah, as measured by the percentage of private sector workers. A November 1996 study by Regional Financial Associates showed that states with high union membership had substantial wage premiums that deterred employment growth in those states.

Recent Conditions

Employment. Total nonagricultural employment in Utah grew 5.6 percent in 1995. This was moderately lower than the 6.2 percent of 1994. Most of the growth in 1995 came from the private sector at 6.6 percent, compared to 1.4 percent for the public sector. Employment growth slowed slightly in 1996 to 5.3 percent with private-sector growth of 6.1 percent and government growth of 1.5 percent. Even with slower employment growth, the unemployment rate declined from 3.6 percent in 1995 to 3.4 percent in 1996. The unemployment rate was 2.9 percent in August 1996 (the lowest recorded in 42 years).

Industries with growth rates above the 5.3 percent average for 1996 include construction at 11.9 percent; finance, insurance and real estate at 7.2 percent; and, services at 7.2 percent. All other industries grew at or below the 5.3 percent rate. Only mining and federal government employment showed losses in employment at -3.7 percent and -1.3 percent respectively.

Income. Average pay in 1996 in Utah grew faster than CPI-U inflation for the second consecutive year in a row. The average wage adjusted for inflation increased 1.2 percent in Utah in 1996. By comparison, the growth in the national average wage also grew faster than inflation over the past two years, but not as fast (0.8 percent) as wage growth in Utah.

New Firm Openings and Expansions. New firm openings and major expansions of existing firms with 100 or more workers in 1996 included, but were not limited to: TheraTech, American Pacific, Paradigm Medical, Fingerhut, Packaging Corp. of America, McDonnell Douglas, Smithfield Foods, American Stores, Paragon Steakhouses, Certified Vacations, Dannon, Roadway Packaging System, CostCo, American Online, Matrixx Marketing, Equifax Payment Services, USANA, Teletrust, Morton International, IRS, Delta Air Lines Reservation Center, Advanta Financial, Monticello Mill, Sprint, American Express, Thanksgiving Point, Unipaq/Data Packaging, Corel, OfficeMax, Westin Hotels & Resorts, EG&G, SuperSports USA, Clarke American Checks, US Voice Mail, Southwest Airlines Reservations, Icon Health & Fitness, Target Stores, Western Wireless, Alamo, I-Link Worldwide, Detroit Diesel, ARAMARK, and Stream Interntional.

Contractions and closures with 100 or more workers in 1996 included, but were not limited to: layoffs at Tooele Army Depot, Hill Air Force Base, Utah Army National Guard, Thiokol, Bureau of Mines, First Security Bank, Novell, NCR Systemedia, Fibertek, Unisys, Lucas Western, Ernst, HealthRider, All-American Gourmet, Ameritech Library Services, and J. H. Harland.

Media Attention and Rankings. Utah continued to receive favorable rankings and press coverage in 1996. *National Geographic* magazine featured Utah in a 30-page profile entitled "Land of Promise, Kingdom of Stone". Utah was one of only five states to receive AAA bond ratings from Moody's Investors Service, Standard and Poor's Rating Group, and Fitch Investors Service.

Forbes magazine listed Provo-Orem and Salt Lake City, as having the fifth and sixth highest rates of metropolitan job growth in the U.S. over the past five-and-one-half years. *Forbes* cited the low cost of doing business in these cities for the strong employment performance. Provo-Orem's costs were 90 percent of the national average cost of doing business and Salt Lake City's costs were 92 percent. Still, the most recent data from Regional Financial Associates show that costs are edging up in Utah. Utah's costs of doing business are now only 3 percent below the national average, and 22 states have lower overall costs of doing business.

Financial World magazine cited Utah as the best place in the nation to locate a business. *Financial World* looked at the costs of doing business, the supply of educated labor, graduation statistics and poverty rates.

Kiplinger's magazine also rated Salt Lake City/Provo first in the nation among large metropolitan areas for starting and succeeding in business. And, *Inc.* magazine rated Utah third in the nation for the number of *Inc.* 500 companies (fastest-growing companies) per million residents.

The Corporation for Economic Development (CED) gave only Utah and Colorado straight A's in its annual Development Report Card Rating of States. CED ranked Utah as having the most diversified economy in the nation. Regional Financial Associates, on the other hand, ranked Utah as having the seventh most diversified economy in the nation in 1995. Diversification rankings differ depending on the method and level of industry aggregation used to measure diversification. The more diversified the Utah economy, the less vulnerable it is to economic downturns.

ReliaStar Financial Corporation rated Salt Lake City first on its Financial Security Index which gauges the ability of residents to support themselves and their families. *U.S. News & World Report* ranked Salt Lake City as the best housing market in the nation for price appreciation for the second straight year. Morgan Quitno ranked Utah as the fourth healthiest state, and as the fifth most livable state in the nation.

A *Wall Street Journal* article cited the linguistic skills of Utahns' as contributing to the state's explosive growth in international trade. Utah ranked ninth in the nation in export growth from 1987 to 1995 according to the U.S. Department of Commerce. And, the Salt Lake-Ogden area ranked 57th in the nation out of 253 metropolitan areas in export sales in 1995 according to the Commerce Department. Regional Financial Associates ranked the State of Utah fourth in the nation in 1995 for the percentage of gross state product that was attributable to export growth.

Furthermore, *State Policy Reports* shows that Utah uses it funds more wisely than other states. It ranks Utah as having the highest level of investments for the future (prevention spending such as public and higher education) relative to safety net programs (damage control spending such as corrections, welfare and Medicaid). Utah has the second highest ranking in the nation for persons over 25 who have at least a high school diploma, and the lowest ranking for births to unwed mothers.

Significant Issues

Annual Pay and Business Costs. National economic research and consulting firms RFA and WEFA have both stated that Utah's strong job performance in recent years has largely been the result of lower-than-national average costs of doing business. Average annual pay data for 1995, for employees covered by unemployment insurance, released by the federal Bureau of Labor Statistics shows that Utah remained a very competitive state when measured by 1995 pay levels.

Utahns' average-annual pay rose 3.6 percent in 1995 to $23,626. This was $4,219 less than the national average of $27,845 (which grew 3.4 percent in 1995). Utahns' average annual pay, adjusted for inflation (1996 dollars), has been more than $4,000 less than the national average since 1989. Average pay, adjusted for inflation, was as little as $1,000 less than the U.S. average as recently as 1981. Lower average wage growth in Utah than in the nation helped stimulate stronger employment growth in Utah.

Housing

Housing is a significant issue in Utah's outlook. The issues of affordability, prices, and ownership and household income are discussed in the following sections.

Affordability. The flip-side of lower than national average-pay levels is that it becomes more difficult for Utahns to purchase homes and pay other bills. First Security Bank recently completed a study which showed that only 40 percent of married, joint-tax-return families had sufficient income levels to qualify for an average-priced, single-family home in Salt Lake County. The National Association of Home Builders (NAHB) reported that only 49 percent of families in Salt Lake City earning the median income could afford the median-priced home in that market. NAHB ranked Salt Lake City 17th out of 174 areas on its least-affordable list for third quarter 1996.

Prices. The average price of the same group of existing houses in Utah increased 72.7 percent in the five-year period ending June 1996, according to the Office of Federal Housing Enterprise Oversight's (OFHEO) Housing Price Index. The OFHEO price index measures the average price in repeat sales of the same houses. Still, home sales in Utah remained strong at 4.2 percent for third quarter 1996 over third quarter 1995, according to the Utah Association of Realtors (UAR). And, UAR's mean-average price for all single-family homes in the Salt Lake County area *decreased* 1.6 percent to $147,665 from the third quarter figure of $150,083 for 1995. The mean-average price is simply the average price for the mix of all homes (new and old) sold in Utah.

Another housing price measure, the median-average home price in the Salt Lake City/Ogden area, increased to $123,100 in the third quarter of 1996, according to the National Association of Realtors (NAR). Median-priced homes in the Salt Lake/Ogden area in the third quarter of 1996 were $2,600 more expensive than the $120,500 national median-existing, home average price. The median-price is the average price above and below which half of all existing (old) homes sold in Utah.

The growth rate in median house prices *decreased* in each of the last two quarters in Utah according to NAR. Median prices increased by 17.7 percent for first quarter 1996 over first quarter 1995, the rate of increase dropped to 11.4 percent for second-quarter 1996 over second-quarter 1995, and the growth rate dropped again to 5.3 percent in the third quarter of 1996 compared to third-quarter 1995. Regional Financial Associates expects median home prices in the Salt Lake area to increase a modest 4.9 percent in 1997 (the fifth highest rate of growth in the nation).

Ownership and Household Income. Despite price increases in recent years, Utah had the seventh highest rate of home ownership in the nation in 1995 at 71.5 percent according to the U.S. Bureau of the Census. And, the Wasatch Front (Ogden to Provo) had the second highest metropolitan-home ownership rate in the nation (at 77.3 percent) in the third quarter of 1996, according to the U.S. Department of Housing and Urban Development. Part of the reason for above-average levels of home ownership, is that median household income levels in Utah are higher than in the nation. Just released 1995 data from the U.S. Bureau of the Census shows that median household income in Utah ranked 13th highest in the nation at $36,480 ($2,404 higher than the national average of $34,076).

Higher median household income despite lower average annual pay is due to larger household sizes in Utah than in the nation. The 1995 Census estimates show 3.1 persons per household in Utah compared to 2.6 persons in national households. Utah has the lowest ranking in the nation for the percent of families with children headed by a single parent. Still, inflation-adjusted household income increased 2.7 percent nationwide in 1995 compared to 1994, while it decreased 0.7 percent in Utah.

Vacancies

Mid-year vacancy rates indicate that most of the Salt Lake City real estate market is not yet overbuilt. Nonetheless, Utah is in the midst of a construction boom and many vacancy rates will increase in subsequent years. A recent CB Commercial Real Estate Group survey reported that downtown office vacancy rates would likely increase in the next few years due to the construction of new office buildings, and commuting difficulties associated with the construction of light rail and the rebuilding of Interstate 15.

CB Commercial Real Estate Group cited Salt Lake area office market vacancy rates at 6.0 percent for third-quarter 1996 over third-quarter 1995. Wallace Associates listed the downtown central business district office vacancy rate at about 2 percent for mid-1996. Office rents, for structures constructed in the past 10 years within a primary location, increased 9.6 percent for mid-1996 over mid-1995 according to Wallace Associates. Central business district office rents increased 15.5 percent to $18.30 per square foot, up from $15.84 a year ago. Salt Lake City office vacancy rates declined to around 5.5 percent in mid-1996 according to Coldwell Banker Commercial Real Estate Group.

According to *U.S. Apartment Market Reports*, apartment vacancies in Salt Lake City were 4 percent at the end of second quarter 1996. CB Commercial gauged industrial space vacancies at only 3.7 percent during third quarter 1996 compared to the previous year's third quarter. PKF Consulting reported that Salt Lake City had the third highest hotel occupancy rates (79.5 percent) in the nation during 1995. The *Rocky Mountain Lodging Report* claims an 85.8 percent occupancy rate for downtown hotels in the first six months of 1996.

Near-Term Outlook

Utah's economy should continue to do well into 1997 for many of the same reasons it did well in 1996. Utah has a pro-business regulatory environment; low business taxes; numerous recreational opportunities; a youthful and educated labor force; good universities; healthy lifestyles; and, a strong work ethic; all of which should continue to favorably influence business location and expansion decisions.

The Utah economy is expected to experience solid, above-average growth in 1997. The State of Utah Economic Coordinating Committee expects employment to grow at about 4.2 percent in 1997. The historic (1950 to 1995) average job growth rate in Utah is about 3.5 percent. Regional Financial Associates (RFA) forecast in November 1996 that Utah would rank first in the nation in job growth for 1997 at 4.7 percent.

Nonagricultural wages, personal income, net migration, and population in Utah are all expected to show solid growth through 1997. Population growth should increase at 2.1 percent, total nonagricultural wages should increase at 8.5 percent, and personal income growth should come in at 7.8 percent in 1997. Average wage growth is also expected to grow faster than CPI inflation in 1997 for the third consecutive year.

Nonetheless, economic growth is expected to slow slightly in Utah in 1997. This slowdown will be due to federal cut-backs; building moratoriums and restrictions (grass-roots, anti-growth movements); lower net in-migration; a tighter labor market; a less-affordable housing market; higher office, apartment and commercial rents; and, an improved economy and business climate in California (the source of most of Utah's in-migration).

Work Force Expansions / Contractions. Several companies have announced permanent workforce expansions and new firm openings of 100 or more jobs in 1997. These expansions and openings include, but are not limited to: Megahertz, Software Support, Panel Prints, Interim Technology, American Express, TheraTech, American Pacific, Smithfield Foods, Alliant Techsystems, Hill Air Force Base, Prime Option, Little America, Smead Manufacturing, Detroit Diesel, ZM Direct, Matrixx Marketing, Intel, Knaack Manufacturing, Paunsagaunt Energy, Cardholder Management Services, and US Voice Mail.

Other entities have announced workforce reductions of 100 or more jobs in 1997. These layoffs include, but are not limited to, the Tooele Army Depot, Defense Depot Ogden, Utah Test and Training Range, Ernst Home Centers, Mountain Farms Cheese Factory, and Thiokol. Clear Shield National, Inc. (a manufacturer of plastic cutlery) cited Utah's low unemployment rate for its recent decision to locate a new plant and 150 jobs in Idaho instead of Utah.

Construction Activity. Construction should also remain healthy in 1997 due to low office, industrial, and apartment vacancy rates, high hotel occupancy rates, new business and government projects, and continued net in-migration. Construction projects of $25 million or more that will begin or continue into 1997 include, but are not limited to: the Interstate-15 Rebuild, Bangerter Highway Completion, Light Rail, SnowBasin Resort, Kennecott Tailings Project, State of Utah Courts Complex, Huntsman Cancer Institute, Orem Medical Center, Gateway West Building, American Stores Complex, West Valley Hockey Arena, Salt Lake County Jail, Murray Corporate Center, Diamond Fork Pipeline, Provo Canyon Highway, Geneva Air Separation Plant, Cottonwood Corporate Center, University of Utah Biology Building, Ogden Center Restoration, Lake Park Corporate Centre, Little America Hotel Expansion, the Brigham Young University H. B. Lee Library, and the LDS Assembly Hall.

Residential construction will remain at historically high levels in 1997. However, the growth in residential construction is expected to decline in 1997 largely due reduction in large apartment development and declines in availability of developable lands. Some communities, such as Draper, and Centerville, and Summit County have recently enacted apartment building moratoriums and restrictions.

Utah's Long-Term Projections

The last official long-term economic and demographic projections for the State of Utah and its counties were released in September of 1994. Since that time, significant resources have been applied to the Projections Program to produce long-term projections of even higher quality and greater utility. This program, which currently resides in the Demographic and Economic Analysis Section (DEA) of the Governor's Office of Planning and Budget (GOPB), generates the long-term employment and population projections that represent the state's view of Utah's future and inform a multitude of planning efforts. Substantive improvements have been implemented and are incorporated into these most recently-produced projections.

The results reported here are a provisional and early release of the full projections product, which will incorporate further refinements in the results, an analytical treatment of the projections, and a set of newly- created data products to be distributed largely on the Internet. The release of these more fully- developed products is scheduled for Spring of 1997.

The discussion that follows is a summary of state level results, a short statement of assumptions, and an overview of changes in the Projections Program and process. This discussion is necessarily quite brief and is descriptive rather than analytic in nature; the latter has been deferred until the Spring product release.

Summary of Results

Utah's population is estimated to be 2.0 million in 1996 and is expected to reach 3.3 million by the year 2020; a 65 percent increase (Table 12). This rate of population growth, which exceeds that expected for the nation, will be sustained by: (1) a rapid rate of natural increase (i.e., births exceeding deaths) and, (2) a strong and diversified economy. The state's employment growth rate is also expected to be more rapid than that of the nation. If these rates of economic growth obtain, Utah will experience a sustained net in-migration over nearly the entire projection period. This net-in-migration will occur because job growth will excel faster than internal population growth, even though the state's population is quite young and fertility rates are relatively high. In absolute numbers, the majority of the 1.3 million new Utahns will reside on the Wasatch Front. The most rapid rates of growth are expected in southwestern Utah, Grand County, and the "Wasatch Back" (Summit and Wasatch Counties), shown in Table 9.

Population. The growth rate of Utah's population has historically exceeded that of the nation; this trend is expected to continue throughout the projection period. The average annual rate of growth of Utah's population over the projection period (1995 to 2020) is expected to be 2.1 percent. This rate compares with an average annual rate of growth of 2.3 percent in the historical period (1950 to 1995). Corresponding rates of growth for the nation are 1.2 percent in the historical period and 0.9 percent in the projected period.

Growth Rates. Population growth rates fluctuate over time according to economic conditions, specific events, and population dynamics. Even when Utah experienced difficult economic times in the 1980s, the rate of growth of the population for the decade still exceeded that of the nation. The largest growth rate differential occurred in the 1970s, when Utah's average annual rate of population growth was 3.3 percent while that of the nation was 1.1 percent. A similar, yet smaller differential is projected for the first ten years of the next century, when Utah's annual average population growth rate is projected to be 2.4 percent while the nation's is projected to be 0.8 percent (Figure 2).

Population Increases. In the 1950-to-1996 period, total resident population of the state has consistently increased, although the amounts of annual increase have varied cyclically. Population increased on average by 40,800 persons per year throughout the decade of the 1970s, and by 25,510 in the 1980s. These projections indicate that population will increase by an average amount of 44,341 in the 1990s, by 56,468 in the 2000s, and by 57,411 in the 2010s. So, while rates of population growth are expected to decelerate in the later years of the projection period, absolute amounts of growth are expected to be quite high relative to history (Figure 3 and Table 4).

Natural Increase. Utah's rapid rate of population growth is primarily attributable to natural increase rather than net-in-migration.[1] This rapid rate of natural increase has occurred because the population is quite young (with a greater share of the population in child-bearing years) and fertility rates are quite high. In addition to births and deaths, the third component of population change is net migration. Net in-migration was quite small in the 1950s and net out-migration occurred in the 1960s

[1] The amount of natural increase for a given population is the amount by which the number of births exceeds the number of deaths for a particular year. If deaths exceed births then there is a natural decrease.

and 1980s. Over the last 45 years, with only three exceptions (1954, 1964, and 1988), even in times of net out-migration (the 1980s), Utah's rate of population increase has consistently exceeded that of the nation. These projections indicate that natural increase will contribute 65 percent of the population increase over the next 25 years (Figures 4 and 5).

The relatively rapid rate of natural increase of the Utah population is mostly attributable to the state's young population in combination with a high fertility rate, although a relatively low death rate and high life expectancy have contributed to a lesser extent. Median age for the state has increased from 23 in 1980 to 26 in 1995, and is projected to increase to 30 by the year 2020 (Table 5). The national median age was 30 in 1980, 33 in 1995, and is projected to increase to 37 in the year 2020.

Dependency Ratio. Age structure may be summarized by the dependency ratio, which is the number of people in the population not in the working age group (18 through 64 years old) per 100 working age persons. Utah's dependency ratio is consistently among the highest in the nation. In 1970 it was 90 for Utah compared with 79 for the nation. By 1995 it had fallen to 76 in Utah and 64 for the nation. By 2020, the projected dependency ratio for Utah is 70 and 67 for the nation. The increasing national dependency ratio toward the end of the projection period is attributable to the aging of the Baby Boom generation. For the nation, the retirement component was 33 percent of the dependency group (i.e., the numerator in the dependency ratio) in 1995 and this is projected to increase to 41 percent by 2020. In the case of Utah, the retirement age component of the state's dependency ratio (i.e., the numerator in the dependency ratio) was about 20 percent in 1995 and is projected to increase to 26 percent in 2020. The school-age (ages 5 though 17) portion of the population for the state is projected to decrease from 25 percent in 1995 to 22 percent in 2020. Throughout the projection period, Utah's age structure will maintain its unique character as compared with the nation, although there will be slight tendency to converge (Figures 6 and 7 and Tables 5 through 8).

Employment. Non-agricultural wage and salary employment is projected to increase by about 79 percent from 908,363 in 1995 to 1,629,281 in the year 2020. Total employment for Utah is projected to increase from 1,100,273 in 1995 to 1,977,156 in 2020; an increase of 80 percent.[1]

Growth Rate. The employment growth rate of Utah has quite consistently out-paced that of the nation and this differential is projected to continue. The average annual rate of growth of non-agricultural wage and salary employment from 1950 to 1995 was 3.5 percent for Utah as compared to 2.1 percent for the nation. The projected rates for 1995 through 2020 are 2.4 percent and 1.0 percent respectively. The decade with the highest rate of employment growth for the state was the 1970s, when non-agricultural wage and salary employment increased at an average annual rate of 4.5 percent; this increase compares to the national rate of 2.7 percent. Over the projection period, the 1990s are expected to have an average annual rate of growth of 4.1 percent with rates decelerating over time (Figure 8 and Table 2).

Job Levels. Although the rates of increase of employment are not projected to reach record levels, the numbers of jobs created are projected to reach record levels. The average annual amounts of increase of non-agricultural wage and salary employment peaked in the 1970s at 19,316 jobs. This number is projected to increase to 34,629 in the 1990s, 29,072 for the 2000s, and 26,827 for the 2010s (Figure 3).

Increase in Major Sectors. With the exception of agriculture, employment increases are projected for all major sectors of Utah's economy. Services, non-farm proprietors, TCPU (transportation, communication, and public utilities), trade, and FIRE (finance, insurance, and real estate) are projected to have the most rapid rates of increase (i.e., average annual rates of growth in excess of 2.0 percent in the years 1995 to 2020). Employment is projected to grow more rapidly (or in the case of agriculture decrease less rapidly) in every sector in the state than in the nation. Manufacturing employment is projected to increase in Utah while declining for the national economy (Table 3 and Figure 9). About one-third (31 percent) of all jobs created in Utah in the 1995- to-2020 period are projected to be service jobs, which is now and will continue to be the sector with the largest share of the state's employment. This compares to 46 percent at the national level. A greater share of employment will be created in trade, TCPU, manufacturing, construction, and government in the state as compared to the nation (Figure 10).

Services Sector. At the detailed industry level, the most rapidly growing sectors are business services, transportation services, agricultural services,

[1] Total employment for UPED purposes is non-agricultural wage and salary employment plus agriculture (wage and salary employment and proprietors) plus (continued...)

(...continued)
private household employment plus non-farm proprietors. The latter three are estimated by the Bureau of Economic Analysis.

professional services, medical and health services, repair services, and social services with average annual rates of growth from the 1995-to-2020 projected period to be in excess of 3.1 percent. The industry that is projected to create the largest number of jobs in the next 25 years is non-farm proprietors (156,821 jobs), followed by business services (75,238), medical and health services (73,872), and eating and drinking places (48,481), (Figures 12 and 13).

Diversification. The state's economy has become more diverse (i.e., more similar to the economic structure of the nation) over time as its employment has grown more rapidly in industries in which it was relatively unspecialized. This increasing diversification of the state's economy is evident at both the major industry and detailed industry levels as measured by the Hachman Index[1]. A value of one of this index indicates an identical distribution of employment shares between the subject region (the state) and the reference region (the nation). The increase in the value of the index in the 1980 to 1995 period is primarily the result of the simultaneous occurrence of: (1) the restructuring of the mining and metals industries and the downsizing of the federal government, and (2) emergence and/or growth of service industries (e.g., computer software development / production, financial services, temporary services, telemarketing, etc.), tourism related industries (e.g., hotels and lodging, transportation by air, etc.), and particular types of manufacturing (e.g., motor vehicle parts (air bags), aircraft equipment, sporting goods, etc.). This restructuring and diversification process has nearly run its course. The Hachman Index for the state is approaching one (its theoretical maximum) when calculated at the major industry level and approaching 0.95 at the two-digit detailed industry level. These projections indicate that the industrial structure of the state will become somewhat more diversified (i.e., more similar to that of the nation) over the next 25 years, although a differential as measured by the Hachman Index will be sustained (Figure 11).

County Population and Employment Projections. All 29 counties are expected to gain population and employment in the years 1995 to 2020. The most rapid rates of growth are in southwest Utah, Grand County, and the "Wasatch Back" (Summit and Wasatch Counties). In terms of amounts of population, much of the increase is concentrated in the Wasatch Front counties.

The population of the state is geographically concentrated in the Wasatch Front MCD (Davis, Morgan, Salt Lake, Tooele, and Weber Counties). These counties have 63 percent of the state's population and 67 percent of the state's employment. These proportions are projected to decline somewhat in the next quarter century. The absolute number of persons in the Wasatch Front is projected to increase from 1,233,100 in 1995 to 2,010,354 in the year 2020, for an increase of 777,254 people or 63 percent (Table 9).

The most rapidly-growing counties in the state projected for the 1990-to-2020 period are:

- Washington County (4.4 percent average annual rate of growth (AARG),
- Grand County (4.2 percent AARG),
- Summit County (4.0 percent AARG),
- Iron County (3.2 percent AARG),
- Wasatch County (3.2 percent AARG), and
- Kane County (3.2 percent AARG).

The counties with the largest projected absolute increases in the population from 1995 to 2020 are:

- Salt Lake County (495,094 more persons),
- Utah County (227,047 more persons),
- Davis County (139,041 more persons),
- Weber County (109,072 increase),
- Washington County (109,058 persons), and
- Cache County (51,847 more persons).

Employment growth is projected to be most rapid from 1990 to 2020 for:

- Washington County (5.3 percent AARG),
- Kane County (4.2 percent AARG),
- Iron (3.8 percent AARG),
- Summit County (3.8 percent AARG),
- Beaver County (3.5 percent AARG), and
- Wasatch (3.2 percent AARG).

The largest number of jobs created in the 1995 to 2020 period are shown in Table 10 and are projected for:

- Salt Lake County (385,211 jobs),
- Utah County (119,831 jobs),
- Weber County (79,562 jobs),
- Davis County (73,444 jobs), and
- Washington County (61,973 jobs).

Projection Assumptions

These projections of population, labor force, households and employment for the State of Utah, its multi-county districts (MCDs) and counties were produced using the UPED model system. Besides the assumptions contained within the model structure and logic, the major assumptions contained within the estimates and projections of the

[1] "Diversification of the Utah Economy," pages 207 through 213, *1995 Economic Report to the Governor.*

model's fixed- and time-varying parameters and exogenous variables are as follows:

1. Demographic.

   A. Single year-of-age birth rates by MCD are assumed to remain constant, 1997 to 2020, at their 1990 levels.
   B. Survival rates by sex and single year of age at the state level are assumed to remain constant, 1997 to 2020, at their 1990 levels.
   C. Employment-related migration propensities are assumed to remain constant throughout the entire projection interval. This means the relative likelihood of people (by age and sex), and their dependents and partners, migrating for a job remains constant.
   D. Sex- and age-specific non-employment related out-migration rates by MCD for college students (and their partners and dependents) and LDS missionaries are assumed to remain constant over time.
   E. Sex- and age-specific non-employment related in-migration growth rates by MCD for college students and associated persons are assumed to be functionally related to the growth in college student out-migration from other MCDs.

2. Labor Market.

   A. Generally, sex- and age-specific labor force participation rates by MCD are assumed to increase, particularly female rates, over the projection interval but to maintain their proportional differences with respect to those projected by the U.S. Bureau of Labor Statistics for the nation.
   B. Unemployment rates decline, 1996 to 1997, rise in 1998 and remain constant thereafter. MCD differences in unemployment rates are preserved throughout the projection interval.
   C. The MCD 1990-to-1996 changes in multiple job holding, net commutation and full/part time employment rates are assumed to continue in their current direction, but diminish to zero by 2001 and remain constant thereafter.
   D. Residentiary employment relatives are assumed to remain constant over the projection interval (i.e., population-based residentiary employment location quotients adjusted for age structure). Residentiary employment is employment associated with the production of goods and services for consumption by the population of a region.
   E. National employment by industry per person, 1990-2020, is assumed as per the U.S. Bureau of the Census middle series projections of the U.S. resident population and the U.S. Bureau of Economic Analysis projections of U.S. employment by industry but modified to incorporate 1990 to 1995 estimates and to maintain data series consistency.

3. Basic Employment Growth.

   A. Basic employment estimates, 1990 to 1995, contain an estimate of the total to basic employment multiplier of approximately 2.0 to 2.1 for the state as a whole. Larger MCDs have lesser proportions of basic to total employment than do smaller MCDs.
   B. Long-term future basic employment growth rates by industry and MCD are estimated, 1950 to 1995, as approximately midway between historical linear and exponential rates (i.e., the average of constant amounts and constant rates). Long-term MCD growth is weighted by relative recent growth, 1990 to 1995.
   C. Short-term basic employment growth rates, 1996 to 1998, incorporate the short-term state level, major industry projections of the Revenue Estimates Committee.
   D. These estimates were then normalized, calibrated and smoothed.
   E. Specific assumptions include: (1) the 2002 Winter Olympic Games estimates of direct and indirect employment impacts; (2) a modified Scenario One development of Circle Four Farms in Beaver and Iron Counties; (3) independent projections by the Office of Energy and Resource Planning of the Department of Natural Resources of production and employment for Coal Mining, Oil and Natural Gas Extraction, and Petroleum Refining; and (4) specific assumptions concerning Federal Defense, Primary Metals, Metal Mining, Private Education as well as numerous specific events and developments across the state.

For further information on these and other assumptions see the UPED Model documentation and the forthcoming 1997 *Economic and Demographic Projections Report.*[1]

Projection Program Improvements

The directions for the redesign of the Projections Program were stated in the *1996 Economic Report to the Governor*:

[1] T. Ross Reeve and Pam Perlich, *State of Utah Demographic and Economic Projection Model System,* Governor's Office of Planning and Budget, May 1995. Available at http://www.gvnfo.state.ut.us/dea/pub.htm.

The general areas of innovation in the Projections Program are further development of: (1) the model system; (2) information on local conditions and developments; (3) interpretation, presentation, and distribution of the results of the projections.

Significant new features are outlined below:

1. Model System Improvements.

   A. A new economic driver which
      (1) relates changes in the Utah economy to projected changes in the U.S. economy given observed historical relationships;
      (2) relates changes in the Multi-County District (MCD) economies to the state's economy;
      (3) incorporates the Revenue Estimates Committee's short-term, state level employment growth projections; and
      (4) incorporates the results of special studies and analyses such as Circle Four Farms, Olympics, Office of Energy and Resource Planning of the Department of Natural Resources projections of energy sector employment and production.[1, 2, 3]
   B. Interregional (i.e., MCD) treatment of the college student category of non-employment related migration with college student in-migration (including their partners and dependents) to an area being related to college student out-migration (including their partners and dependents) from other regions of the state.
   C. New data and estimating procedures for improving the accuracy of demographic and labor force composition, employment structure, and the geographic distribution of projected economic variables.[4]
   D. Provision for continual updating of model data and parameter estimates with baseline projections and impact studies routinely produced on demand.

2. Information on Local Conditions and Development.

   A. A County Information System which is used to collect information concerning specific economic events and industry trends at the county level. This includes both historic and anticipatory information.
   B. An internal review process: Review and comments on a provisional set of projections were received from the Governor's Office of Planning and Budget.
   C. An external review process: Comments and review of a preliminary set of projections were requested and received from the following—All seven Associations of Government (these included review from local planners, government officials, business and community representatives, etc.), the Utah Governor's Economic Coordinating Committee, the Projections Technical Advisory Committee, and the Utah Higher Board of Education.

3. Interpretation, Presentation, and Distribution of the Results of the Projections.

   A. Description and analyses of projections results: Accomplishments include construction of a time series of historical and projected model variables, analysis of the U.S., Utah, MCD, and county-detailed employment series, and derivative measures of explanatory factors contributing to the changing relative structures between employment and population over time.
   B. On-Line Analytical Processing system: This currently includes a dynamic query system that allows custom extraction of data, tables, and graphs. It also enables the viewing of dynamic single year-of-age demographic distributions (such as population pyramids) for all variables and parameters across 38 geographic areas (i.e., U.S., Utah, MCDs, and counties). The associated meta-data system is under development.

   C. A data server to disseminate data products to internal and external users via the internet is in the design phase.

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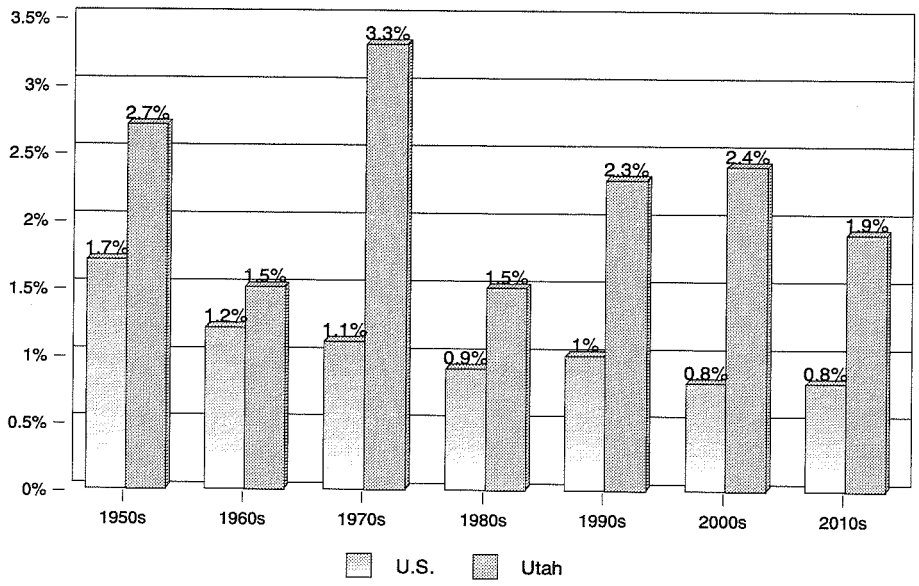
[1] "Economic and Population Impacts of the Circle Four Farms," *Utah Data Guide,* July 1996, Vol. 13, No. 3. Governor's Office of Planning and Budget. Also available at http://www.gvnfo.state.ut.us/dea/pub.htm.

[2] "Energy and Minerals" chapter in this *1997 Economic Report to the Governor.*

[3] "Tourism, Travel and Recreation" chapter in this *1997 Economic Report to the Governor.*

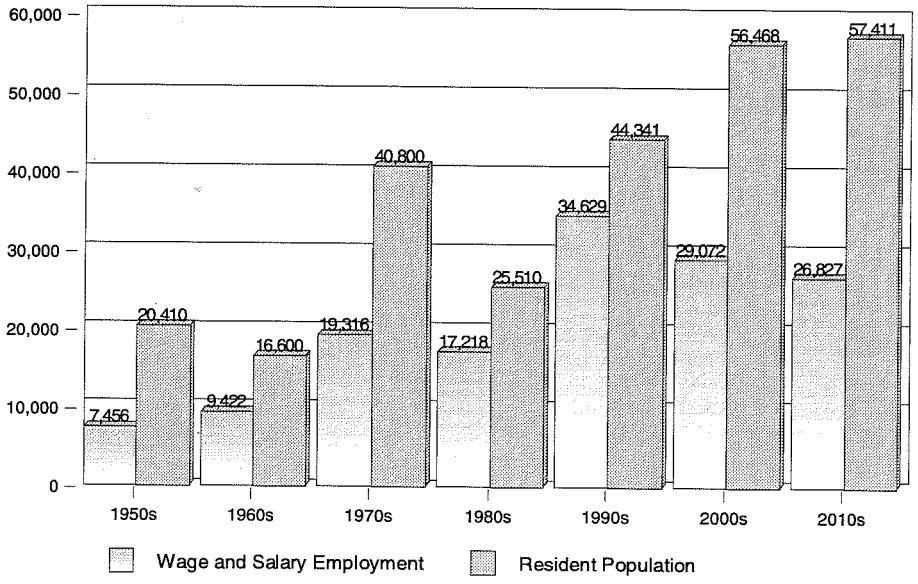
[4] For a discussion of similar issues as applied to the Census Bureau's long term projections see: John F. Long, "Complexity, Accuracy, and Utility of Official Population Projections," pages 203 - 216, *Mathematical Population Studies,* Volume 5(3), 1995.

Figure 2
Decade Average Annual Rates of Change of Population: Utah and U.S.



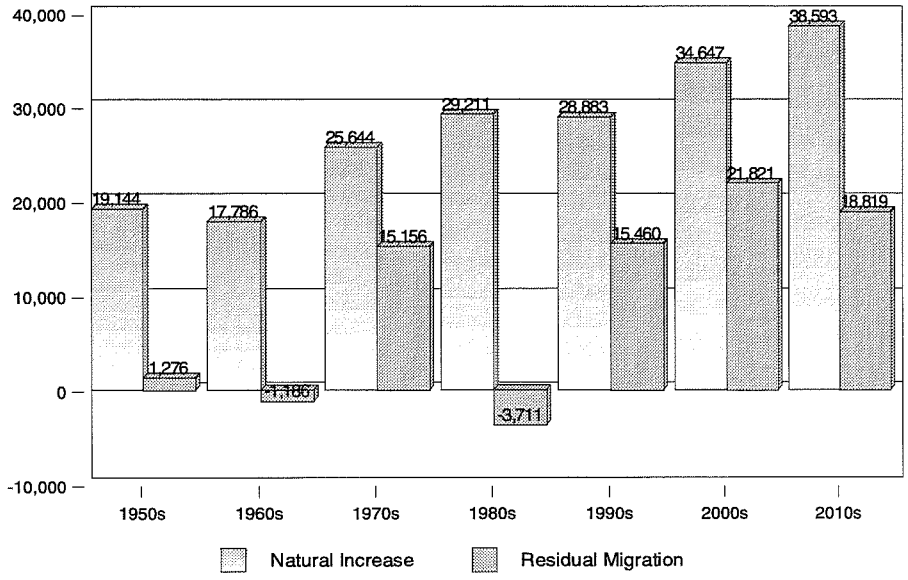
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 3
Decade Average Annual Increase of Population and Wage & Salary Employment: Utah



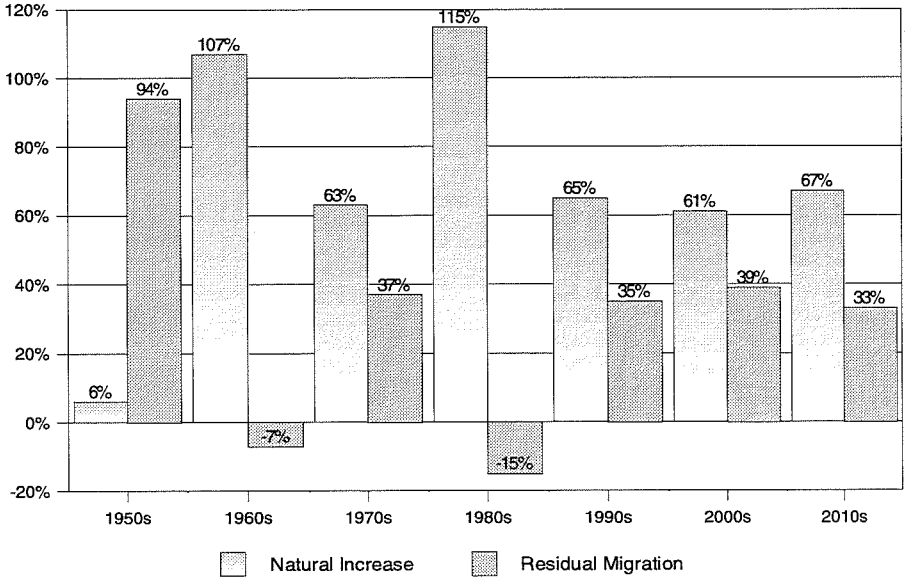
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 4
Utah Historical and Projected Population Increases: Components of Change (Number)



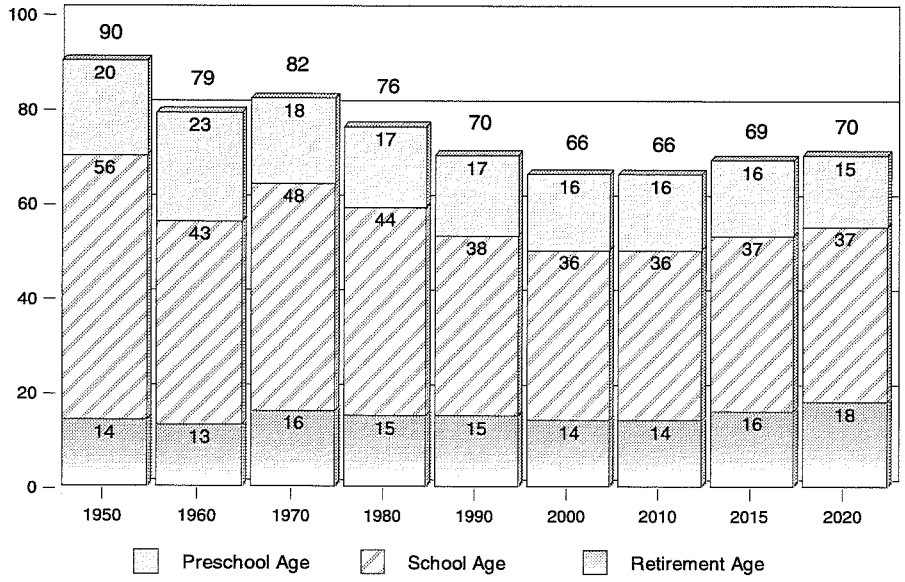
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 5
Utah Historical and Projected Population Increases: Components of Change (Percent)



Source: Governor's Office of Planning and Budget, UPED Model.

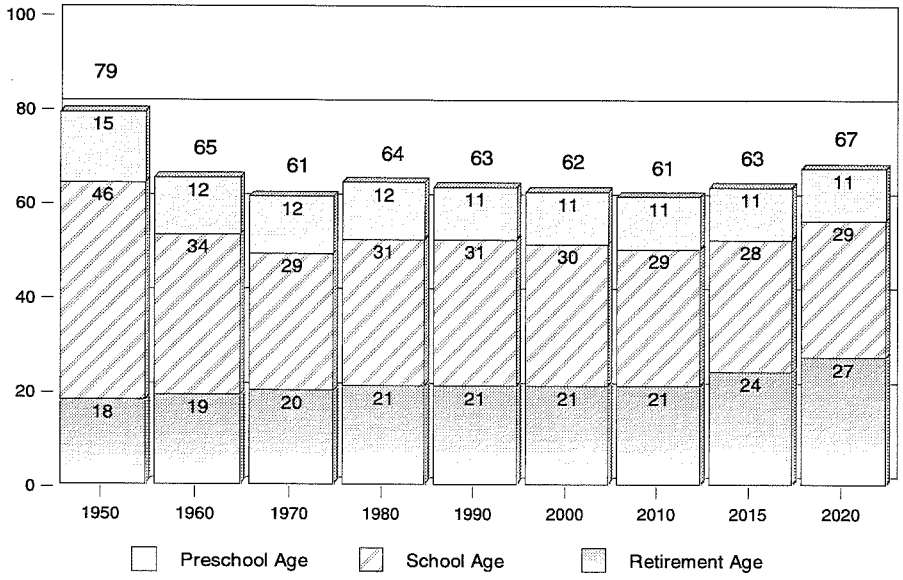
Figure 6
Utah Dependency Ratio Components



Note: These ratios show the number of non-working age persons in each component for every one hundred persons of working-age (ages 16 to 64). A higher ratio means that working-age persons must support relatively more people of working-age.

Source: Governor's Office of Planning and Budget, UPED Model.

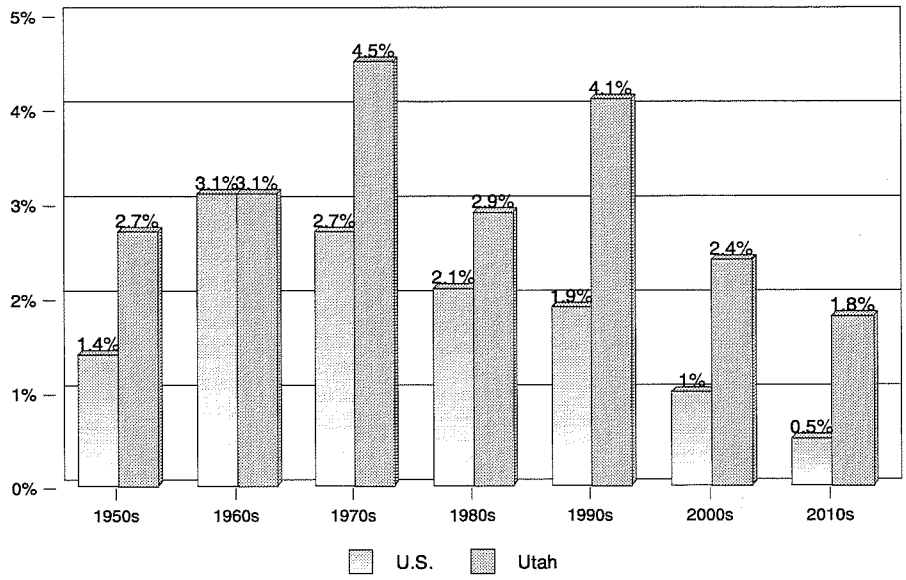
Figure 7
U.S. Dependency Ratio Components



Note: These ratios show the number of non-working age persons in each component for every one hundred persons of working-age (ages 16 to 64). A higher ratio means that working-age persons must support relatively more people of working-age.

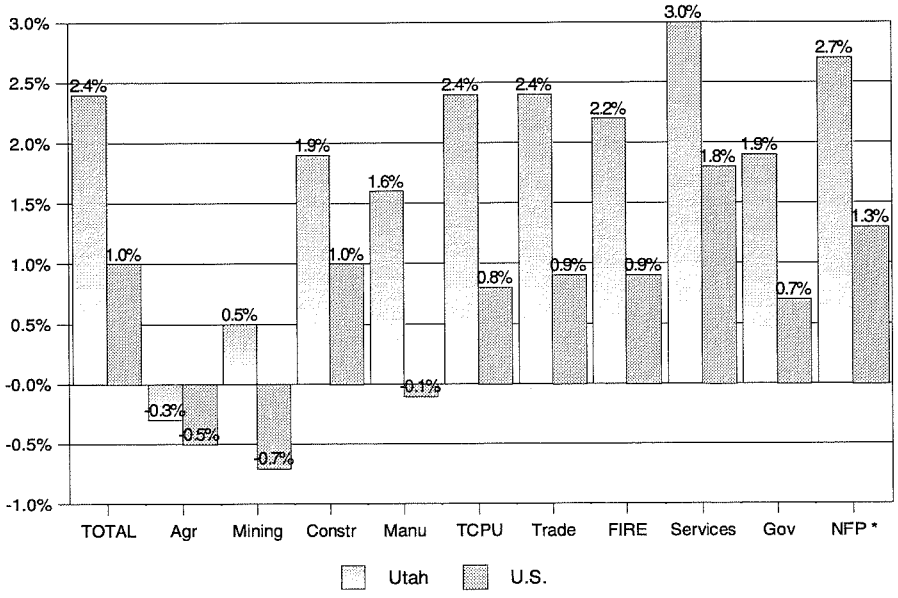
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 8
Decade Average Annual Rates of Change of Wage & Salary Employment: Utah and U.S.



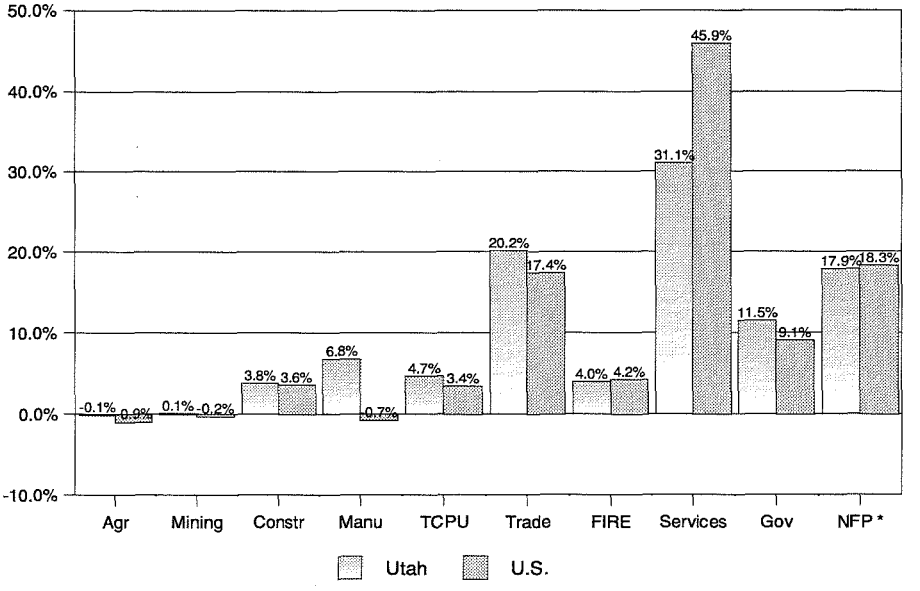
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 9
1995 to 2020 Average Annual Rates of Change of Employment: Utah and U.S.



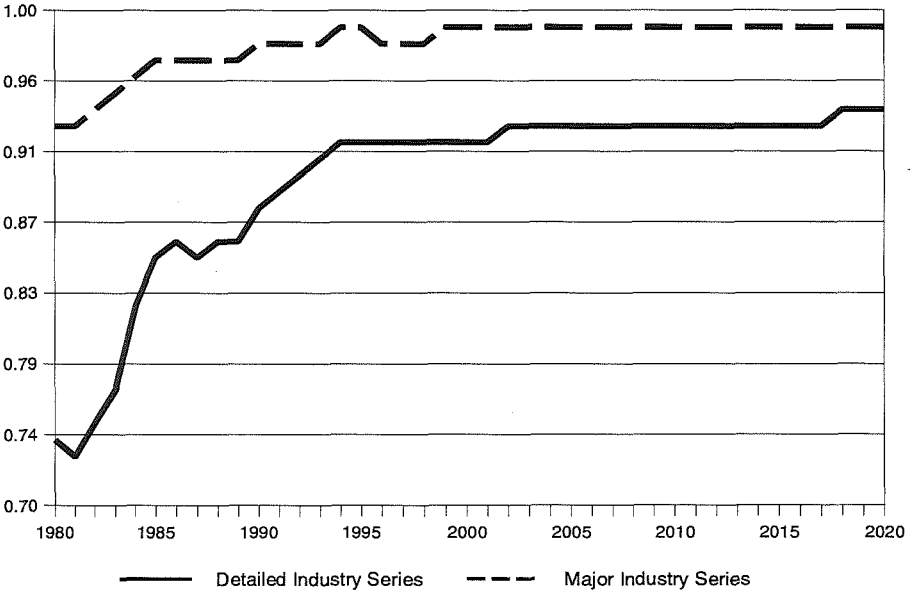
* Non-Farm Proprietors.
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 10
1995 to 2020 Industry Share of Total Employment Increase: Utah and U.S.



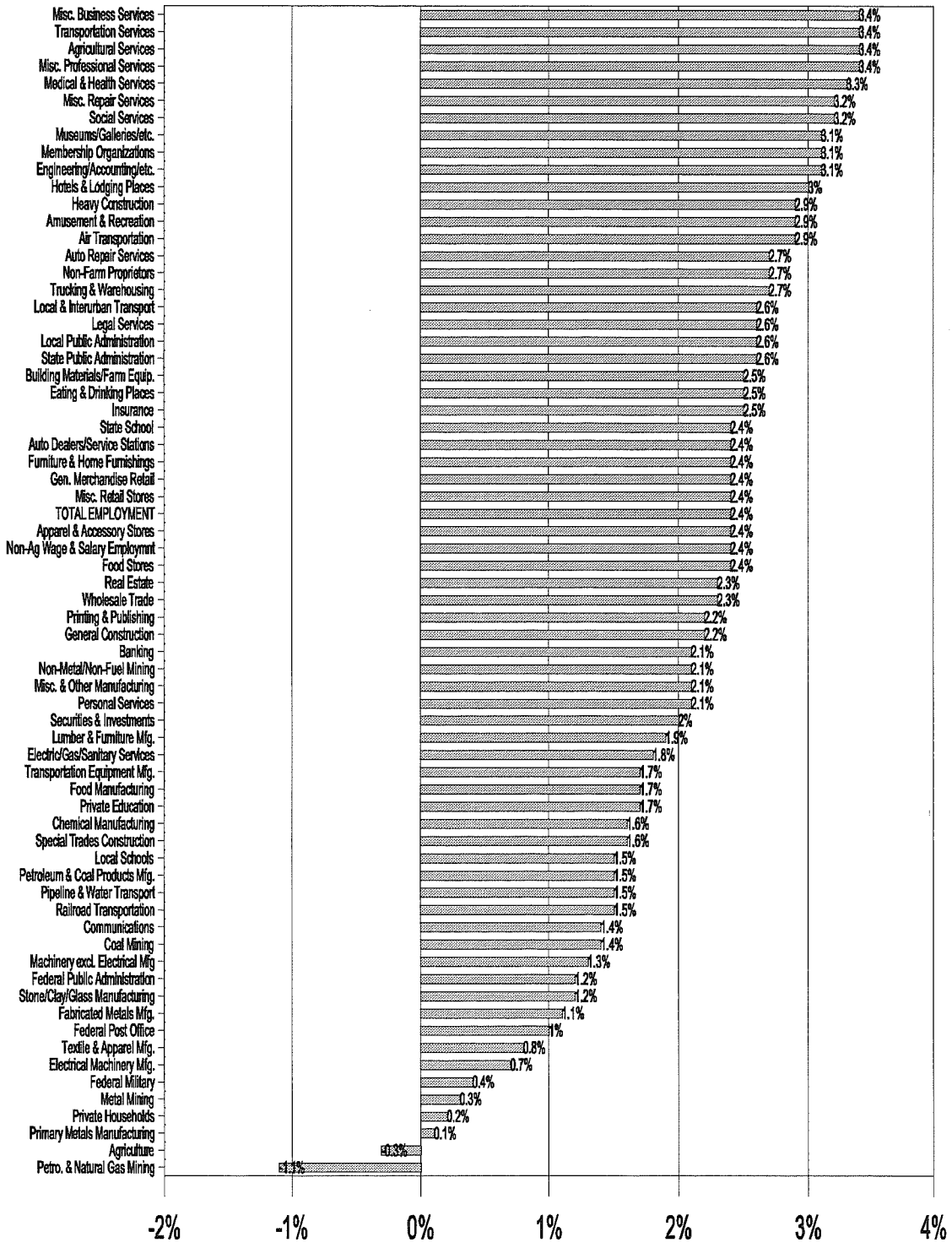
* Non-Farm Proprietors.
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 11
Hachman Index-- Utah Relative to the Nation: Two Non-Agricultural Wage & Salary Employment Series



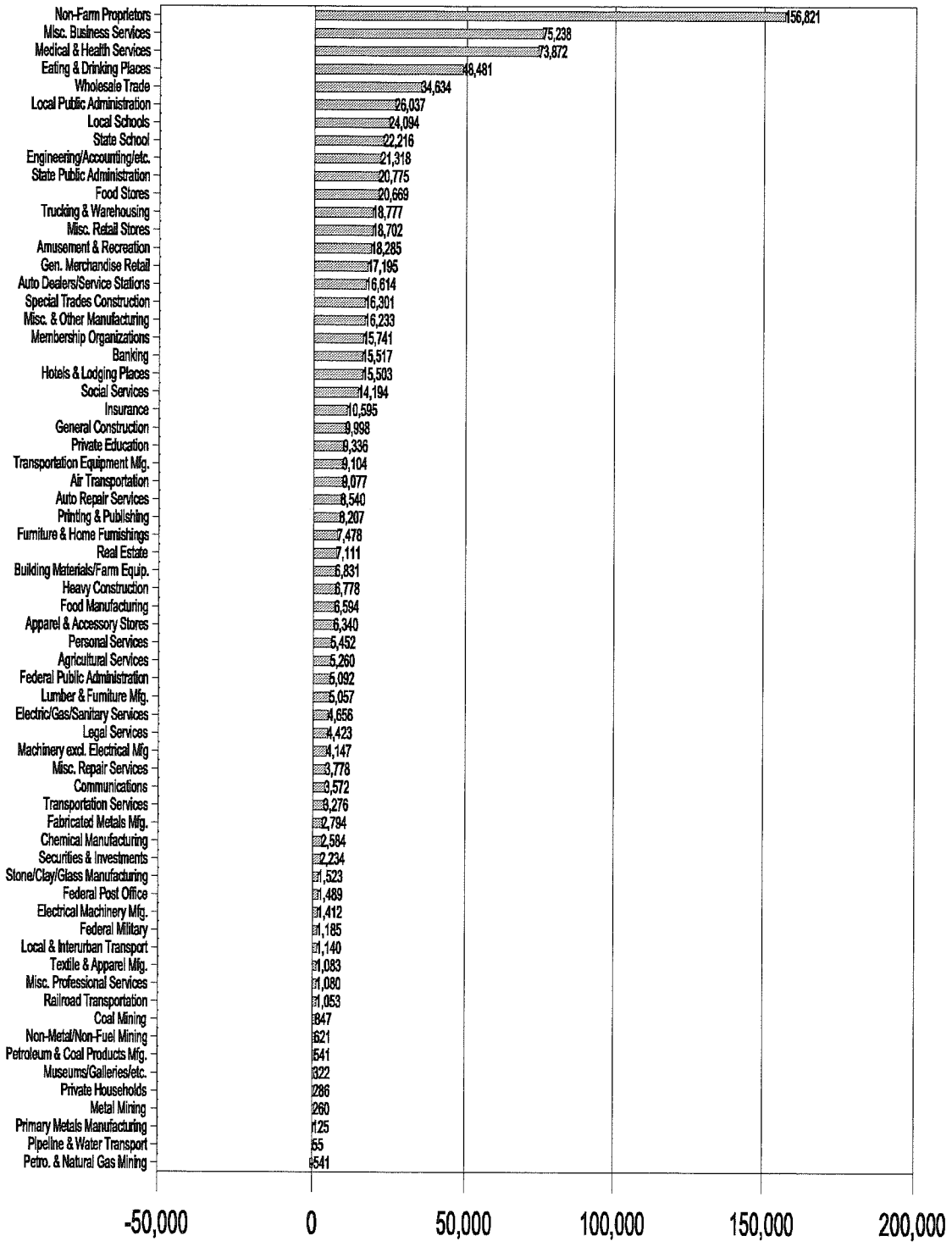
Source: Governor's Office of Planning and Budget, UPED Model.

Figure 12
Utah Industry Employment Ranked by Average Annual Rates of Change: 1995 to 2020



Source: Governor's Office of Planning and Budget, UPED Model.

Figure 13
Utah Industry Employment Ranked by Absolute Amounts of Change: 1995 to 2020



Source: Governor's Office of Planning and Budget, UPED Model.

Table 2
Utah Economic and Demographic Projections Summary: 1990 to 2020

Year	Total Population	Percent Change	School Age Population (Ages 5-17)	Percent Change	Total Employment	Percent Change	Non-Ag. Wage and Salary Employment	Percent Change	Total Households	Percent Change
1990	1,729,100	-----	456,783	-----	889,573	-----	723,998	-----	539,184	-----
1991	1,775,460	2.7	466,403	2.1	920,386	3.5	745,512	3.0	558,149	3.5
1992	1,821,960	2.6	472,728	1.4	951,394	3.4	768,998	3.2	576,176	3.2
1993	1,866,454	2.4	477,444	1.0	994,940	4.6	810,004	5.3	593,887	3.1
1994	1,916,008	2.7	482,767	1.1	1,048,276	5.4	859,911	6.2	613,260	3.3
1995	1,959,011	2.2	484,736	0.4	1,100,273	5.0	908,363	5.6	631,701	3.0
1996	2,001,922	2.2	486,132	0.3	1,146,548	4.2	947,339	4.3	650,926	3.0
1997	2,048,002	2.3	487,696	0.3	1,189,828	3.8	983,733	3.8	670,332	3.0
1998	2,100,561	2.6	488,194	0.1	1,233,396	3.7	1,020,284	3.7	691,980	3.2
1999	2,135,227	1.7	486,069	(0.4)	1,264,856	2.6	1,045,634	2.5	707,269	2.2
2000	2,172,513	1.7	488,630	0.5	1,295,534	2.4	1,070,286	2.4	724,236	2.4
2001	2,216,213	2.0	491,735	0.6	1,328,904	2.6	1,097,469	2.5	743,555	2.7
2002	2,279,828	2.9	500,965	1.9	1,373,068	3.3	1,134,306	3.4	769,238	3.5
2003	2,304,644	1.1	504,548	0.7	1,386,345	1.0	1,142,922	0.8	781,650	1.6
2004	2,361,467	2.5	515,247	2.1	1,422,865	2.6	1,172,702	2.6	804,510	2.9
2005	2,419,984	2.5	527,869	2.4	1,460,131	2.6	1,203,082	2.6	828,328	3.0
2006	2,478,252	2.4	540,737	2.4	1,497,050	2.5	1,233,167	2.5	851,815	2.8
2007	2,539,016	2.5	553,551	2.4	1,534,866	2.5	1,264,007	2.5	875,110	2.7
2008	2,603,784	2.6	567,031	2.4	1,574,006	2.6	1,295,984	2.5	900,155	2.9
2009	2,670,997	2.6	580,989	2.5	1,613,886	2.5	1,328,664	2.5	925,975	2.9
2010	2,737,189	2.5	595,035	2.4	1,653,224	2.4	1,361,008	2.4	951,700	2.8
2011	2,799,816	2.3	609,471	2.4	1,690,780	2.3	1,392,025	2.3	976,129	2.6
2012	2,864,473	2.3	624,173	2.4	1,728,170	2.2	1,422,896	2.2	1,000,789	2.5
2013	2,929,117	2.3	638,259	2.3	1,764,769	2.1	1,453,121	2.1	1,025,571	2.5
2014	2,989,426	2.1	651,482	2.1	1,799,138	1.9	1,481,530	2.0	1,049,011	2.3
2015	3,047,741	2.0	664,012	1.9	1,832,022	1.8	1,508,716	1.8	1,072,236	2.2
2016	3,104,106	1.8	675,720	1.8	1,863,316	1.7	1,534,633	1.7	1,094,812	2.1
2017	3,156,880	1.7	686,264	1.6	1,892,794	1.6	1,559,107	1.6	1,116,135	1.9
2018	3,210,365	1.7	696,677	1.5	1,921,952	1.5	1,583,304	1.6	1,137,932	2.0
2019	3,261,253	1.6	706,333	1.4	1,949,840	1.5	1,606,515	1.5	1,158,887	1.8
2020	3,311,302	1.5	715,361	1.3	1,977,156	1.4	1,629,281	1.4	1,179,767	1.8

Note: The annual projections in this table do not match the short-run forecasts in other tables in this report.

Source: Governor's Office of Planning and Budget, UPED Model.

Table 3
Utah Employment Projections by Major Industry: 1980 to 2020

Industry	1980	1990	1991	1992	1993	1994	1995	1996
Agriculture (4)	19,659	18,918	17,742	18,238	18,193	18,441	18,744	19,400
Mining	18,501	8,603	8,596	8,490	8,323	8,311	8,114	7,994
Construction	31,548	27,926	31,531	34,902	39,715	48,186	54,793	59,842
Manufacturing	87,702	107,100	105,798	106,323	110,462	116,632	123,867	128,874
TCPU (1)	34,126	42,283	42,424	43,870	47,072	49,353	51,493	54,001
Trade	128,688	172,391	178,763	184,448	191,473	205,440	220,025	228,917
FIRE (2)	25,767	34,134	35,850	37,311	41,447	45,918	47,678	49,858
Services (3)	105,836	185,896	193,439	201,707	217,148	229,836	244,054	257,254
Government	124,927	150,556	153,967	156,946	159,445	161,438	163,666	165,955
Non-farm Proprietors (4)	86,526	141,766	152,276	159,159	161,662	164,721	167,839	174,447
Total Employment (5)	663,280	889,573	920,386	951,394	994,940	1,048,276	1,100,273	1,146,548
Non-Ag Wage & Salary Emp.	551,816	723,998	745,512	768,998	810,004	859,911	908,363	947,339

Industry	1997	1998	1999	2000	2005	2010	2015	2020
Agriculture (4)	19,632	19,760	19,910	19,991	19,549	19,029	18,362	17,595
Mining	8,320	8,477	8,497	8,616	8,904	9,359	9,228	9,304
Construction	62,536	64,566	64,692	64,270	65,503	72,585	81,007	87,872
Manufacturing	134,873	140,805	142,967	144,505	152,451	162,112	172,788	183,273
TCPU (1)	56,209	57,945	59,567	61,176	69,319	77,822	85,774	93,093
Trade	237,806	246,456	252,934	259,360	293,528	332,394	367,727	396,981
FIRE (2)	51,698	53,389	54,599	55,762	62,241	69,949	77,272	83,132
Services (3)	269,325	282,555	292,670	302,872	355,557	414,817	470,657	516,690
Government	168,350	171,505	175,110	179,096	200,941	227,493	249,868	264,557
Non-farm Proprietors (4)	181,074	187,930	193,906	199,889	232,134	267,665	299,340	324,660
Total Employment (5)	1,189,828	1,233,396	1,264,856	1,295,534	1,460,131	1,653,224	1,832,022	1,977,156
Non-Ag Wage & Salary Emp.	983,733	1,020,284	1,045,634	1,070,286	1,203,082	1,361,008	1,508,716	1,629,281

(1) Transportation, Communications and Public Utilities.
(2) Finance, Insurance and Real Estate.
(3) Includes Private Household and Agricultural Services employment.
(4) U.S. Bureau of Economic Analysis definition.
(5) Totals may not add due to rounding.

Sources: Utah Department of Employment Security and Governor's Office of Planning and Budget, UPED Model.

Table 4
Utah Components of Population Change: 1991 to 2020

Year	Beginning Population	Births	Deaths	Natural Increase	Residual Migration	Ending Population	Percent Change
1991	1,729,100	36,194	9,424	26,770	19,589	1,775,460	2.7
1992	1,775,460	36,796	9,553	27,243	19,258	1,821,960	2.6
1993	1,821,960	36,738	10,053	26,685	17,810	1,866,454	2.4
1994	1,866,454	37,623	10,406	27,217	22,338	1,916,008	2.7
1995	1,916,008	39,064	10,577	28,487	14,520	1,959,011	2.2
1996	1,959,011	39,929	10,934	28,995	13,915	2,001,922	2.2
1997	2,001,922	40,995	11,208	29,787	16,298	2,048,002	2.3
1998	2,048,002	42,127	11,589	30,538	22,019	2,100,561	2.6
1999	2,100,561	43,367	11,972	31,395	3,276	2,135,227	1.7
2000	2,135,227	43,996	12,281	31,715	5,573	2,172,513	1.8
2001	2,172,513	44,658	12,605	32,053	11,648	2,216,213	2.0
2002	2,216,213	45,556	12,948	32,608	31,005	2,279,828	2.9
2003	2,279,828	47,041	13,367	33,674	(8,858)	2,304,644	1.1
2004	2,304,644	47,292	13,657	33,635	23,194	2,361,467	2.5
2005	2,361,467	48,420	14,059	34,361	24,151	2,419,984	2.5
2006	2,419,984	49,493	14,450	35,043	23,230	2,478,252	2.4
2007	2,478,252	50,394	14,856	35,538	25,227	2,539,016	2.5
2008	2,539,016	51,277	15,266	36,011	28,751	2,603,784	2.6
2009	2,603,784	52,221	15,692	36,529	30,688	2,670,997	2.6
2010	2,670,997	53,164	16,147	37,017	29,171	2,737,189	2.5
2011	2,737,189	54,051	16,604	37,447	25,176	2,799,816	2.3
2012	2,799,816	54,797	17,030	37,767	26,897	2,864,473	2.3
2013	2,864,473	55,607	17,474	38,133	26,506	2,929,117	2.3
2014	2,929,117	56,388	17,939	38,449	21,869	2,989,426	2.1
2015	2,989,426	57,049	18,404	38,645	19,672	3,047,741	2.0
2016	3,047,741	57,663	18,868	38,795	17,567	3,104,106	1.9
2017	3,104,106	58,325	19,350	38,975	13,799	3,156,880	1.7
2018	3,156,880	58,924	19,812	39,112	14,378	3,210,365	1.7
2019	3,210,365	59,571	20,314	39,257	11,631	3,261,253	1.6
2020	3,261,253	60,185	20,836	39,349	10,695	3,311,302	1.5

Note: Births and deaths are to the resident population as defined by the UPED Model. This population is the physically present population plus temporarily absent residents less temporarily present non-residents (missionaries and college students).

Source: Governor's Office of Planning and Budget, UPED Model.

Table 5
Utah Population Projections by Five Year Age Group: 1980 to 2020

Age	1980	1990	1995	2000	2005	2010	2015	2020
0-4	189,962	172,252	190,058	211,906	236,059	262,441	282,447	296,695
5-9	146,187	183,402	178,734	193,621	216,671	245,234	270,155	286,163
10-14	125,681	182,953	189,036	181,987	198,345	225,059	252,081	273,407
15-19	138,903	152,885	190,631	194,618	188,837	209,246	234,303	258,348
20-24	155,676	138,216	172,762	207,710	216,659	216,482	235,198	254,358
25-29	135,087	137,009	146,558	171,457	206,377	224,162	223,030	234,263
30-34	105,688	137,815	145,299	148,494	174,122	214,142	230,552	223,125
35-39	79,178	123,377	146,091	150,243	154,105	183,797	221,631	234,101
40-44	63,628	100,585	129,226	149,667	155,688	162,603	189,934	223,678
45-49	57,021	76,405	104,075	131,113	152,788	162,089	167,044	191,013
50-54	55,845	61,285	78,004	104,553	132,386	156,601	164,828	166,974
55-59	52,701	54,672	62,182	77,822	104,737	134,106	157,467	163,451
60-64	46,260	52,512	54,814	61,279	77,031	104,690	132,768	153,812
65-69	38,183	48,517	51,577	53,061	59,505	75,431	101,594	127,020
70-74	29,637	39,443	45,879	48,007	49,593	56,062	70,480	93,685
75-79	20,242	29,268	34,805	39,705	41,751	43,499	48,831	60,660
80-84	12,306	18,811	23,018	26,943	30,860	32,731	33,856	37,586
85+	8,852	13,443	16,262	20,327	24,470	28,814	31,542	32,963
Total	1,461,037	1,722,850	1,959,011	2,172,513	2,419,984	2,737,189	3,047,741	3,311,302
Median	23	25	26	27	28	29	30	30

Note: 1980 and 1990 populations are April 1 U.S. Census Modified Race, Age, Sex (MARS) populations; all others are July 1 populations.

Sources: U.S. Department of Commerce, Bureau of the Census and Governor's Office of Planning and Budget, UPED Model.

Table 6
Population Projections by Selected Age Groups: 1980 to 2020

Age	1980	1990	1991	1992	1993	1994	1995	1996	1997	1998
0-4	189,962	172,252	175,685	179,891	183,483	187,015	190,058	193,431	197,442	203,173
5-17	350,143	456,783	466,403	472,728	477,444	482,767	484,736	486,132	487,696	488,194
18-29	351,391	337,682	346,234	355,822	365,579	378,986	392,985	408,099	424,319	443,895
30-39	184,866	261,192	271,285	278,853	284,674	289,535	291,390	292,029	293,209	295,081
40-64	275,455	345,459	361,045	375,514	391,986	410,202	428,301	446,684	466,611	487,936
65+	109,220	149,482	154,808	159,152	163,288	167,503	171,541	175,547	178,725	182,282
15-44	678,160	789,887	821,710	849,130	875,510	905,367	930,567	954,440	976,887	1,001,780
Total	1,461,037	1,722,850	1,775,460	1,821,960	1,866,454	1,916,008	1,959,011	2,001,922	2,048,002	2,100,561
Median	23	25	25	25	26	26	26	26	26	26
DPR	80	82	81	80	79	78	76	75	73	71

Age	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
0-4	211,906	216,574	222,605	225,505	230,645	236,059	241,501	246,924	252,100	257,483
5-17	488,630	491,735	500,965	504,548	515,247	527,869	540,737	553,551	567,031	580,989
18-29	460,763	466,618	481,068	481,195	491,396	499,020	505,149	509,936	515,599	521,447
30-39	298,737	305,236	312,414	312,475	319,203	328,227	339,250	353,804	369,527	384,843
40-64	524,434	544,639	567,496	582,976	603,109	622,630	640,569	659,272	676,902	696,383
65+	188,043	191,411	195,280	197,945	201,867	206,179	211,046	215,529	222,625	229,852
15-44	1,022,189	1,035,244	1,058,757	1,056,961	1,076,149	1,095,788	1,114,390	1,136,219	1,158,888	1,184,307
Total	2,172,513	2,216,213	2,279,828	2,304,644	2,361,467	2,419,984	2,478,252	2,539,016	2,603,784	2,670,997
Median	27	27	27	27	27	28	28	28	28	28
DPR	69	68	68	67	67	67	67	67	67	67

Age	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020
0-4	266,844	271,142	275,321	279,050	282,447	285,544	288,401	291,267	293,975	296,695
5-17	609,471	624,173	638,259	651,482	664,012	675,720	686,264	696,677	706,333	715,361
18-29	526,736	532,485	538,097	544,009	550,755	558,076	566,365	575,485	583,517	591,178
30-39	408,209	420,373	433,022	443,936	452,183	458,160	459,267	459,251	459,016	457,226
40-64	746,047	763,557	780,294	796,146	812,041	828,215	846,701	864,331	881,121	898,928
65+	242,509	252,743	264,124	274,803	286,303	298,391	309,882	323,354	337,291	351,914
15-44	1,235,687	1,263,127	1,290,779	1,315,133	1,334,648	1,350,822	1,370,028	1,390,224	1,409,671	1,427,873
Total	2,799,816	2,864,473	2,929,117	2,989,426	3,047,741	3,104,106	3,156,880	3,210,365	3,261,253	3,311,302
Median	29	29	29	29	30	30	30	30	30	30
DPR	67	67	67	68	68	68	69	69	70	70

Notes: Note: 1980 and 1990 populations are April 1 U.S. Census Modified Race, Age, Sex (MARS) populations; all others are July 1 populations. DPR is the dependency ratio, defined as the population ages 0-17 and 65 plus, per 100 persons ages 18-64.

Sources: U.S. Department of Commerce, Bureau of the Census and Governor's Office of Planning and Budget, UPED Model.

Table 7
Utah Population by Selected Age Groups as a Percent of Total: 1980 to 2020

Age	1980	1990	1995	2000	2005	2010	2015	2020
0-4	13.0	10.0	9.7	9.8	9.8	9.6	9.3	9.0
5-17	24.0	26.5	24.7	22.5	21.8	21.7	21.8	21.6
18-29	24.1	19.6	20.1	21.2	20.6	19.2	18.1	17.9
30-39	12.7	15.2	14.9	13.8	13.6	14.5	14.8	13.8
40-64	18.9	20.1	21.9	24.1	25.7	26.3	26.6	27.1
65+	7.5	8.7	8.8	8.7	8.5	8.6	9.4	10.6
15-44	46.4	45.8	47.5	47.1	45.3	44.2	43.8	43.1
Total	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Note: Note: 1980 and 1990 populations are April 1 U.S. Census Modified Race, Age, Sex (MARS) populations; all others are July 1 populations.

Sources: U.S. Department of Commerce, Bureau of the Census and Governor's Office of Planning and Budget, UPED Model.

Table 8
Utah Dependency Ratios: 1980 to 2020

	1980	1990	1995	2000	2005	2010	2015	2020
Dependency Ratio	80	82	77	70	68	68	70	72
Pop 0-4 per 100 Pop age 18-64	23	18	17	17	17	16	16	16
Pop 5-17 per 100 Pop age 18-64	43	48	44	39	37	37	38	38
Pop 65+ per 100 Pop age 18-64	13	16	16	15	14	15	16	18

Note: The dependency ratio is defined as the population ages 0-17 and 65 plus, per 100 persons ages 18-64.

Sources: U.S. Department of Commerce, Bureau of the Census and Governor's Office of Planning and Budget, UPED Model.

Table 9
Provisional Utah Population Projections by County and District: 1980 to 2020

MCD/County	1980	1990	1995	2000	2005	2010	2015	2020	AARC* 1990-2020
Bear River	92,498	108,393	120,900	137,964	150,648	167,689	183,968	195,605	1.99%
Box Elder	33,222	36,485	38,900	42,667	47,016	52,466	57,579	61,290	1.74%
Cache	57,176	70,183	80,200	93,418	101,666	113,126	124,180	132,047	2.13%
Rich	2,100	1,725	1,800	1,879	1,966	2,096	2,210	2,268	0.92%
Wasatch Front	941,172	1,104,356	1,233,100	1,340,966	1,480,984	1,667,555	1,855,657	2,010,354	2.02%
Davis	146,540	187,941	216,000	235,610	262,170	295,187	328,208	355,041	2.14%
Morgan	4,917	5,528	6,500	6,985	7,654	8,573	9,537	10,369	2.12%
Salt Lake	619,066	725,956	806,000	872,375	959,002	1,079,236	1,200,811	1,301,094	1.96%
Tooele	26,033	26,601	29,600	35,280	40,122	46,473	53,320	59,678	2.73%
Weber	144,616	158,330	175,000	190,716	212,036	238,086	263,781	284,172	1.97%
Mountainland	236,827	289,197	342,600	387,832	441,448	503,541	558,195	611,787	2.53%
Summit	10,198	15,518	22,400	27,509	31,578	37,798	44,467	50,728	4.03%
Utah	218,106	263,590	308,000	345,906	392,725	445,500	490,629	535,047	2.39%
Wasatch	8,523	10,089	12,200	14,417	17,145	20,243	23,099	26,012	3.21%
Central	47,087	52,294	59,250	67,367	72,799	81,126	89,734	96,032	2.05%
Juab	5,530	5,817	7,150	8,188	8,871	9,924	11,022	11,846	2.40%
Millard	8,970	11,333	11,900	12,908	13,580	14,738	15,910	16,647	1.29%
Piute	1,329	1,277	1,400	1,670	1,784	1,938	2,077	2,164	1.77%
Sanpete	14,620	16,259	19,200	22,362	24,460	27,568	30,799	33,247	2.41%
Sevier	14,727	15,431	17,300	19,618	21,252	23,752	26,339	28,245	2.04%
Wayne	1,911	2,177	2,300	2,621	2,851	3,207	3,586	3,883	1.95%
Southwest	55,489	83,263	110,950	139,754	167,188	199,415	231,877	261,099	3.88%
Beaver	4,378	4,765	5,350	6,935	7,612	8,398	9,115	9,659	2.38%
Garfield	3,673	3,980	4,300	4,748	5,200	5,730	6,201	6,539	1.67%
Iron	17,349	20,789	26,900	34,371	39,007	44,457	49,718	54,148	3.24%
Kane	4,024	5,169	5,900	7,483	8,780	10,309	11,837	13,194	3.17%
Washington	26,065	48,560	68,500	86,218	106,590	130,521	155,007	177,558	4.42%
Uintah Basin	33,840	35,546	38,550	40,183	42,402	46,565	51,283	54,706	1.45%
Daggett	769	690	750	855	924	1,032	1,153	1,244	1.98%
Duchesne	12,565	12,645	13,500	14,390	14,998	16,308	17,824	18,894	1.35%
Uintah	20,506	22,211	24,300	24,938	26,481	29,225	32,306	34,568	1.49%
Southeast	54,124	49,801	53,650	58,432	64,502	71,275	77,007	81,694	1.66%
Carbon	22,179	20,228	21,100	22,699	24,327	26,031	27,536	28,683	1.17%
Emery	11,451	10,332	10,700	11,211	12,060	12,888	13,140	13,343	0.86%
Grand	8,241	6,620	8,350	10,986	13,757	16,844	19,793	22,395	4.15%
San Juan	12,253	12,621	13,500	13,535	14,358	15,512	16,538	17,273	1.05%
State of Utah	1,461,037	1,722,850	1,959,000	2,172,498	2,419,972	2,737,166	3,047,722	3,311,276	2.20%

*Average Annual Rate of Change

Notes: Note: 1980 and 1990 populations are April 1 U.S. Census Modified Race, Age, Sex (MARS) populations; all others are July 1 populations. Totals may not add due to rounding.

Sources: U.S. Department of Commerce, Bureau of the Census and Governor's Office of Planning and Budget, UPED Model.

Table 10
Provisional Utah Employment Projections by County and District: 1980 to 2020

MCD/County	1980	1990	1995	2000	2005	2010	2015	2020	AARC* 1990-2020
Bear River	41,535	56,332	67,723	82,462	91,098	101,536	111,206	118,275	2.50%
Box Elder	15,155	19,354	21,520	25,315	28,221	31,531	34,543	36,778	2.16%
Cache	25,640	36,205	45,277	56,132	61,804	68,859	75,457	80,259	2.69%
Rich	740	773	926	1,014	1,074	1,146	1,206	1,239	1.59%
Wasatch Front	459,718	606,194	737,901	856,747	960,171	1,082,683	1,196,784	1,287,464	2.54%
Davis	52,895	75,677	88,270	105,028	119,431	135,162	149,886	161,714	2.56%
Morgan	1,787	1,912	2,377	2,613	2,830	3,090	3,321	3,487	2.02%
Salt Lake	329,159	437,064	542,456	625,120	696,469	783,303	863,956	927,667	2.54%
Tooele	11,520	12,434	12,091	15,256	16,992	19,006	20,870	22,327	1.97%
Weber	58,873	79,107	92,707	108,730	124,449	142,122	158,751	172,269	2.63%
Mountainland	82,150	131,431	171,166	202,905	230,580	262,073	289,748	314,026	2.95%
Summit	5,484	11,416	16,712	20,862	23,771	27,706	31,465	34,617	3.77%
Utah	79,022	116,161	149,686	176,153	199,913	226,362	249,287	269,517	2.85%
Wasatch	3,128	3,854	4,768	5,890	6,896	8,005	8,996	9,892	3.19%
Central	19,293	21,909	25,815	30,208	33,463	37,536	41,441	44,368	2.38%
Juab	2,402	2,391	2,898	3,365	3,719	4,165	4,593	4,911	2.43%
Millard	3,746	5,246	5,569	6,336	6,850	7,501	8,101	8,499	1.62%
Piute	508	412	408	472	517	566	607	633	1.44%
Sanpete	5,512	6,207	7,757	9,274	10,421	11,847	13,237	14,325	2.83%
Sevier	6,268	6,723	7,924	9,324	10,383	11,711	12,994	13,973	2.47%
Wayne	857	930	1,259	1,437	1,573	1,746	1,910	2,027	2.63%
Southwest	22,119	36,364	54,761	74,523	90,404	108,699	126,776	142,517	4.66%
Beaver	1,804	1,953	2,553	3,959	4,370	4,818	5,210	5,488	3.50%
Garfield	2,312	2,123	2,590	3,103	3,453	3,842	4,176	4,400	2.46%
Iron	7,311	9,744	13,546	18,407	21,245	24,475	27,513	29,965	3.82%
Kane	1,508	2,222	2,931	4,156	4,956	5,877	6,777	7,551	4.16%
Washington	9,184	20,322	33,141	44,898	56,380	69,688	83,100	95,114	5.28%
Uintah Basin	15,090	15,642	17,823	19,554	21,318	23,671	26,112	28,023	1.96%
Daggett	404	430	493	567	636	720	806	876	2.40%
Duchesne	5,918	5,759	6,583	7,197	7,752	8,526	9,335	9,956	1.84%
Uintah	8,768	9,453	10,747	11,790	12,930	14,425	15,971	17,191	2.01%
Southeast	23,375	21,701	25,084	29,136	33,096	37,025	39,954	42,481	2.26%
Carbon	9,862	9,144	9,758	10,946	11,971	12,865	13,504	14,022	1.44%
Emery	5,385	4,877	4,953	5,404	5,941	6,388	6,455	6,530	0.98%
Grand	3,991	3,333	4,980	6,948	8,873	10,922	12,744	14,380	4.99%
San Juan	4,137	4,347	5,393	5,838	6,311	6,850	7,251	7,549	1.86%
State of Utah	663,280	889,573	1,100,273	1,295,534	1,460,131	1,653,224	1,832,022	1,977,156	2.70%

*Average Annual Rate of Change

Notes: Total employment includes Agriculture and Non-Farm Proprieters employment. Totals may not add due to rounding.

Sources: Utah Department of Employment Security and Governor's Office of Planning and Budget, UPED Model.

Economic Development Activities

Economic Development Activities

In 1992, the Corporation for Enterprise Development published Eight Guidelines for Development Policy in the 1990's. Among them were:

- Set priorities for spending based on what is critical for success for your area's long-term success.
- Consider investments in education, health care, and child development as part of an overall development strategy that needs to be maintained in both good and bad times.
- Use tax incentives judiciously, and only in concert with long-range performance checks.
- Focus on business start-ups and the retention of existing firms.
- Invest in the capacity of community leadership and use limited government resources to direct and leverage other providers of development services.

These guidelines are reflected in the evolution of Utah economic development activities and programs. For almost a decade, the intent of Utah's economic development activities has been to maintain a healthy state economy by fostering the creation of quality, high-paying jobs. To achieve this, the goal has been to assure that the state offers a healthy business climate; with a reasonable regulatory structure, competitive utility rates, low taxes, affordable housing, a trained workforce, an excellent quality of life, and a world class infrastructure. In attempting to fulfill this mission, the most powerful forces under a state's control are:

- the quality of public and higher education;
- the development and maintenance of the infrastructure (roads, water systems, airports, parks, etc.); and
- the provision of a fair and reasonable fiscal, regulatory, and legal environment.

Beyond these basic forces, however, there are other things a government can do to influence the economy. Each of the 50 states and many local governments have chosen not to leave the workings of the economy entirely to the free market system. Quoting from the *1989 Economic Report to the Governor*:

> Twenty-five years ago there was little public sector involvement in the promotion of economic activity apart from crude efforts to attract out-of-state business and advertising to lure tourists. Today, however, all 50 states and thousands of local governments and private organizations are heavily involved in very sophisticated efforts to enhance economic activity within their borders.

In recent years, In addition to the traditional roles of advertising to lure tourists and efforts to attract out-of-state business, these efforts include encouraging technology transfer and research and development linkages between universities and private industry, providing loan guarantees or revolving loan funds for small business, providing a source of "seed" capital for business start-ups, assistance in identifying foreign markets, and many other efforts.

Another aspect of state economic development activities that has grown dramatically in recent years is the use of incentives to attract relocating and expanding businesses. In general, these incentive packages usually include some combination of job creation subsidies and/or preferential tax treatment. A survey by Regional Financial Associates revealed that the average number of state incentive programs surged from 11 in 1975 to 24 in 1995. Incentive packages worth millions of dollars have made headlines as states increasingly engage in competition to attract new firms and retain existing businesses. Four questions naturally arise in this context:

- Are incentives effective in attracting and retaining businesses?
- Is such competition harmful to states and the economy in general?
- What types of businesses and industries should be targeted in this competition?
- How do state and local governments choose an appropriate package of incentives?

Do Economic Development Incentives Matter?

An economic development incentive, in the broadest terms, is anything that attracts a company to locate to a particular site. In general, Utah and its communities rate well in the areas of labor force, education and utility rates. Incentives may also be a favorable tax structure, tax abatements, gifts of real estate or cash, attractive utility rates, community infrastructure, a highly productive labor force, available educational or training opportunities, or any number of other factors which affect the ability of a business to be profitable. In Utah, a new company might also receive job training subsidies for new workers and possibly road and utility improvements or even low-cost land from a city or county. However, with its relatively modest resources, Utah has generally not been willing or

able to offer the kind of incentives that are commonly offered in many states.

Nevertheless, community alarm is often sounded when incentives appear to be gifts of dollar, real estate and/or tax reductions for the benefit of a single company. On the other hand, the local community's infrastructure is too often inadequate to handle larger projects without major upgrades. In giving this type of incentive, community leaders must weigh the benefit of having the company within their boundaries against the cost of the incentives.

Incentive Studies. As a result of the dramatic growth in the number and complexity of incentive packages being offered, research has begun to examine the effectiveness of incentives as an economic development tool. Regional Financial Associates recently concluded that incentives do have a positive impact on a state's employment and income growth. RFA calculated that the addition of a new tax or financial incentive program had the effect of increasing state employment by 0.23 percentage points relative to employment growth in other states. Incentive programs appear to be even more effective in promoting manufacturing. Manufacturing firms have traditionally been the beneficiaries of a variety of tax abatements and financial packages, since manufacturing jobs tend to be relatively well-paying; and because manufacturing tends to bring more income into the local economy, creating demand for supporting goods and services. Adding one tax or financial incentive program will increase the relative growth of manufacturing in a state when compared to other states by 0.43 percentage points.

Another study, conducted by the National Association of State Development Agencies compiled data on the spending of state development agencies for 1990. Like RFA, they found that higher agency spending will induce manufacturers to locate or expand in a state and that higher spending on state economic development programs had a significant effect on increasing manufacturing employment. It was determined that an additional dollar in spending per manufacturing worker on economic development programs in a state will increase manufacturing growth by 0.4 percent relative to other states.

Surveys of business executives have also found that economic incentives offered by state and local governments are important to a business location decision once it is determined that the area has an adequate pool of potential employees, transportation network and infrastructure.

Is State and Local Competition for Jobs Harmful?

To date, the answer to this question is not entirely clear. An economist at the Federal Reserve Bank of San Francisco reviewed the arguments for and against such competition. He began by observing that in some recent cases the size of the incentive package suggests that the amount states spend on tax competition appears to be enormous compared to the amount of job creation involved. Moreover, In addition to the value of the incentives, attracting firms also may involve other costs. In some areas, growth has been so rapid that local government has problems providing adequate public services, such as education, water and sewer, transportation, etc.

Nevertheless, the survey concluded that while arguments against such competition can be made on the basis of the implications for the distribution of income, the limited empirical data available to date suggests that revenue losses from tax competition are at least partly offset by increased taxes from other sources. Further, there is no clear evidence that such competition harms economic efficiency, either by leading firms to inappropriate location or output decisions, or by leading to a less-than-optimal level of government provision of goods and services.

How Do State and Local Officials Choose an Appropriate Package of Incentives?

The discussion and studies noted above indicate that the prudent and targeted use of incentives do support economic development. Once again, the issue is whether the benefits to the state in terms of new jobs and tax revenue from the newly located company and employees, as well as from other companies that may choose to locate near the new company, offset the seemingly escalating costs of the incentive packages.

Utah's Fiscal Impact Model. Until recently, in Utah as in other states, these negotiations for incentives were conducted with very little understanding of the total long-term costs and benefits of each project. In 1990 that began to change as a result of a study of the impact of economic development on the economy undertaken by the Governor's Office of Planning and Budget, the University of Utah's Bureau of Economic and Business Research, and the Department of Community and Economic Development. Two components of the study were detailed case studies and the outline for development of a model that was intended to allow state and local officials to better understand the benefits and costs of proposed developments.

The fiscal impact model resulting from this 1990 study is now used, along with related economic and demographic models, to estimate the state and local costs and benefits associated with every major potential project in Utah. The Utah State and Local Government Fiscal Impact Model estimates the economic, demographic, and fiscal (both revenues and expenditures) impact of economic change. It consists of input-output models for nine separate regions that roughly correspond to the multi-county planning districts. It includes five functional components: economic, revenue, expenditure, demographic, and net present value.

Economic Development Teams. The major component in this process is local capacity building. Besides the fiscal and other economic and demographic impact models used to assess direct business attraction, the state is developing other resources to help local governments. Perhaps one of the potentially most far-reaching of these new economic development initiatives, specifically targeted to the rural areas of the state, is the creation of project and/or area specific economic development teams. Growing out of the Circle Four Hog Farms development, local action teams are being established with members from the local government entities.[1] Local action teams will collect available data and use the information to analyze their communities. In coordination with local industry, the state will project the potential labor force demands and associated populations related to the various growth scenarios, and these will be used to estimate infrastructure and service needs and to forecast the associated impacts for the various communities.

Local Economic Development Initiative. A complementary effort is the Local Economic Development Initiatives (LEDI) program. The LEDI program was begun in 1994 to provide resources to well-defined economic development efforts tied to local strategic plans. LEDI is a project-oriented program. LEDI monies may be used with other funding sources to help achieve high priority local goals. Each project must be: (1) tied to a local county economic development strategic plan; (2) be supported by county elected officials (commissioners); and (3) have specific economic development outcomes (e.g., job creation, new investment, or other community wealth creation).

[1] The Circle Four Farms is a large and expanding pork production facility located in Beaver County, Utah. The firm indicates it might expand operations in the state to include meat processing, as well as livestock production. The magnitude and scope of the proposed operations and labor requirements are quite significant for that area.

What Types of Businesses and Industries Should a State Target?

It is clear that unfocused "smoke-stack chasing" is relatively ineffective in the long term, tends to result in increasingly unjustifiable incentives and inducements for companies to move, and as a result is harmful to the overall state economy. Utah therefore targets specific companies that fit within the state's identified industry clusters and that pay higher-than-average wages. A description of the most important industry clusters follows.

Information Technology. Perhaps the most prominent is the information technologies cluster, one of Utah's original target industries. With more than 34,000 employees, this is a large and diverse group, but is represented by two export sectors; computer equipment manufacturing and software development. It also consists of all or parts of the following industries: communications equipment, electronic components, magnetic recording media, process control instruments, instruments to measure electricity, telephone and telegraph communications, cable TV, wholesale trade in computers and peripherals, wholesale electronic parts and equipment, retail computers and software, and data processing schools.

Transportation. The transportation industries cluster, employing almost 34,000 persons, consists of the export sectors of railroads, trucking and warehousing, and airlines. These industries have several commonalities that make them of vital interest to economic development agencies; they all contribute to and depend on the state's infrastructure, all are uniquely affected by national and interstate regulation, and all transport Utah's (and other states') goods and people.

Metals. The metals mining and manufacturing cluster employs some 9,600 and is led by copper ore mining and primary metals manufacturing.

Aerospace. The aerospace cluster, also one of Utah's original target industries, is centered on the manufacture of aircraft and aircraft parts and guided missiles and parts. It also includes search and navigation equipment manufacturing. The aerospace cluster employs approximately 9,000 Utah workers.

Biomedical. The biomedical cluster, also an early target for early development, is driven by the manufacture of medical instruments and supplies. While medical instruments and supplies manufacturing is at present the only clear export industry within biomed, the cluster currently has about 12,000 employees and has been growing by over 10 percent per year. The biomed cluster also

contains the sectors of drug and pharmaceuticals manufacturers and wholesalers, medical research and testing facilities, and biological and medical research labs.

Environmental Technologies. The environmental technologies cluster is relatively new, both nationally and in Utah. It includes the manufacture of pollution and environmental control equipment, environmental engineering and consulting firms, and waste management systems. Some of the largest customers for environmental control equipment are electric utilities and primary metals manufacturing. Because in many ways this cluster is still in the process of being defined data for analysis are somewhat sketchy. However, it is growing rapidly in Utah (approximately 50 percent per year over the past several years), with relatively high wages and employment of about 9,100. Similarly dramatic projections are made for this cluster both nationally and abroad.

Travel and Recreation/Agribusiness. Finally there is the travel and recreation sector, with employment of approximately 91,000, and agribusiness. Both are obviously significant and vital parts of the Utah economy. However, despite the ski industry in the case of tourism, and livestock and dairy operations in agribusiness sector, neither currently display a pronounced geographic concentration in Utah compared to the rest of the nation. They also have other characteristics associated with them, such as comparatively low wages, or seasonal and climatic limitations, that circumscribe state economic development efforts. However, both population trends and evolving technology may provide the impetus to broaden and deepen the growth of these two clusters.

Conclusion

In conclusion, while industry targeting and company recruitment remain key among economic development activities, the related functions of community and infrastructure planning and development are receiving heightened attention and resources. Utah has structured its economic development activities to match today's challenges and opportunities, following the guidelines that opened this chapter. These initiatives and programs are listed on the following chart.

Table 11
Department of Community and Economic Development:
State of Utah and State-Sponsored Economic Development Activities Summary

Activities/ Programs:	Description:
National Development	Recruits new, relocating, or expanding businesses.
Industrial Assistance Fund	Loans which may be converted to grants for large company expansions or any size company willing to expand to rural areas.
Technology Development/Centers of Excellence	Grants to facilitate technology transfer /commercialization from university to private sector.
Enterprise (Rural Resettlement) Zones	Job creation and renovation tax credits for certain industries locating in rural areas.
Business Development	Promotes the expansion of existing businesses and acts as a liaison between the state and Utah businesses.
Local Economic Development Initiatives (LEDI)	Grants for local economic development coordination and planning.
Utah Technology Finance Corporation	Small business start-up and expansion loans for hi-tech companies.
Utah Business Resource Centers	One-stop small business assistance, training, and referral services.
International Development	Promote and assist Utah companies to export internationally.
Community Development Block Grants	Grants to small cities designed to assist in the development of viable urban communities.
Main Street/ Heritage Regions	Promotes the economic growth of participating communities by revitalizing historic business districts and activities.
Utah Manufacturing Extension Program	Network of field engineers to enhance the productivity and technological performance of small- and medium-sized Utah manufacturers.
Procurement Outreach	Assists Utah firms in obtaining contracts from government and commercial purchasing programs.
Utah Film Commission	Promotes Utah as an attractive and viable location for film, television, and commercial production.
Utah Small Cities, Inc.	A partnership between local rural economic development organizations to address common needs and agendas.
Community Services Block Grant Program	Administered by the state community services office to provide services with a measurable impact on the causes of poverty.
Housing and Homeless Services	Public monies used to leverage state and private resources to meet Utah's housing needs.
Permanent Community Impact Fund	Provide loans and/or grants to state and areas of the state which may be socially or economically impacted by mineral resource development on federal lands.
Private Activity Bond Review Board	Assists private sector entities or government agencies to qualify for certain tax exemptions to foster economic development, housing, and community facilities.
Utah Office of Child Care	Promotes the development of quality child care in all settings.
Office of Energy Services	Initiates and encourages state activities which ensure efficient use of energy resources.
Division of Travel Development	Development and marketing programs designed to increase the economic endowment contributed by visitors to the state.
Custom Fit Training	Company and job specific training provided through the Office of Education.
Office of Job Training	Administers job training partnership act funds as part of the newly created department of work force services.

Source: Utah Department of Community and Economic Development.

Economic Indicators

Demographics

Utah's population surpassed two million during 1996; a milestone in Utah's demographic history. Demographic characteristics play an important role in the analysis of a state's economy. Utah is demographically unique among states for a variety of reasons. The state's population is younger and lives longer, has a higher fertility rate and more persons per household than the nation as a whole. These characteristics tend to reinforce what is perhaps the hallmark of Utah's demographic profile—its rapid rate of population increase.

This chapter will address three basic demographic concepts: growth, composition and distribution of the state's population. The discussion on growth will focus on the components of population change, such as births, deaths, and migration. Next, the discussion on composition will focus on unique characteristics of Utah's population, such as age, race and household formation. Finally, the discussion on distribution will focus on the geographic layout of the population as it relates to county and urban areas.

Growth

State Population Change. Between July 1, 1995 and July 1, 1996, Utah's population grew by approximately 43,334 people—from 1,959,025 to 2,002,359. This preliminary estimate was produced by the Utah Population Estimates Committee and implies a net in-migration of 13,882 persons.[1] As shown in Figure 14, the level of change indicates an annual growth rate of 2.2 percent between 1995 and 1996, which is the same as the 2.2 percent growth rate for the previous year. Table 12 presents population estimates, along with the components of population change—migration and natural increase—for the past 44 years.

County Population Change. Almost every county in Utah experienced population increases between 1995 and 1996. Washington County experienced the largest net in-migration with approximately 3,456 persons. Three other counties—Davis, Salt Lake, and Utah—also experienced net in-migration of at least 1,000 persons. Twenty-six of Utah's 29 counties experienced net in-migration in 1996, compared to 19 in 1995.

In terms of growth rates, Washington County led the state with 6.4 percent growth. Summit and Grand Counties tied for the second fastest growth with 5.3 percent, followed by Beaver County (4.2 percent) and Iron and Sanpete Counties (4.1 percent). In 1996, six of Utah's counties experienced growth of 4 percent or more, compared to four in 1995. Table 15 presents the preliminary 1996 county population estimates, along with the intercensal county estimates for Utah during the 1980s.

Natural Increase. Natural increase is the number of births minus the number of deaths. The number of deaths in Utah has climbed proportionally with the total population. The number of births peaked in 1982 and has declined almost every year, until 1991 and 1992 when the number of births increased slightly. Births fell once again in 1993 and then increased from 1994 to 1996. Utah births and deaths are provided in Table 12.

The total fertility rate is the number of births that a woman would have during her lifetime if, at each year of age, she experienced the birthrate occurring for that specific year. Fertility rates declined in Utah from 3.28 births per woman in 1979 to a low of 2.48 in 1987. Since 1987, Utah's total fertility rate has climbed as high as 2.61 and has remained at 2.55 for the last three years. Utah's total fertility rate is the highest in the nation. The national rate averaged approximately 1.81 births per woman from 1977 through 1986 and has since climbed as high as 2.08, but is 2.05 currently. Historical fertility rates for Utah and the nation are illustrated in Figure 16 and listed in Table 13.

Data on life expectancy, the average remaining lifetime in years for persons who attain a given age, are computed and published annually for the U.S. by the National Center for Health Statistics. Life expectancy tables for states are published every ten years. Table 14 shows life expectancy for Utah and the U.S. for the years 1970, 1980 and 1990. Life expectancy for Utahns has consistently been higher than the national average; while overall, females have a higher life expectancy than males.

[1] Population estimates for Utah by county are prepared annually by both the U.S. Bureau of the Census and the Utah Population Estimates Committee. Because the Estimates Committee utilizes more recent data and has the input of local population analysts, the Committee's estimates are generally preferable to Census estimates for planning and analysis. However, Bureau of the Census population estimates are frequently used for allocating revenues, including transportation funds and local option sales taxes. This section focuses on the estimates generated by the Utah Population Estimates Committee, but concludes with Census Bureau age estimates, race/ethnicity information, and household characteristics.

Migration. Utah has experienced net in-migration for the fifth year in a row. Net migration is derived by calculating the difference between the population change and the natural increase for a given year. Net in-migration occurs when the population increase exceeds the natural increase, while net out-migration occurs when the natural increase exceeds the population increase. During 1996, Utah experienced a net in-migration of 13,882 persons (Figure 15). The last five years account for the only years of net in-migration since 1983. Utah in 1996, as in the previous four years, experienced robust employment growth. However, over the last 40 years, the highest annual migration rates (net in-migration as a percent of total population) were during the 1970s.

While very little is known about the characteristics of migrants, data from the Internal Revenue Service and the 1990 Census illuminate several interesting points:

- California dominates the flow of interstate migration to and from Utah.
- The extended Salt Lake area has strong migration ties with the major metropolitan areas south and/or west of Utah, such as Los Angeles, Phoenix, Portland, Seattle and Las Vegas.
- Employment-related migration accounts for the vast majority of population movement to and from Utah.

These characteristics and other findings are described in more detail in reports published by the Governor's Office of Planning and Budget.

An estimated 76.6 percent of Utah's population is concentrated along the metropolitan area comprised of Salt Lake, Davis, Weber, and Utah Counties. Over the last four years, net migration in non-metropolitan counties has steadily increased. In 1992, counties outside the metropolitan area accounted for roughly one-third (32.4 percent) of Utah's total net in-migration. In 1996, more than half (58.9 percent) of the net in-migration is attributed to non-metropolitan counties.

Composition

Age. The U.S. Bureau of the Census produces annual state population estimates by age group. The most recent data available are for 1995 and are shown in Table 16. These data demonstrate that Utah continues to have a very young population relative to the nation. Utah ranks first in the percent of the population under five years of age—9.4 percent—and first in the percent of the population aged 5 to 17, 25.2 percent. Utah has the youngest median age in the country—26.8 years old—compared to a national median age of 34.3 years old. Median age divides the age distribution into two equal parts: one-half of the cases falling below the median value and one-half above the value. In contrast, Utah ranks 50th in the percent of the population over age 64.

Utah's age characteristics can be summarized in terms of a demographic construct called a dependency ratio. The dependency ratio measures the number of dependents (defined as persons younger than age 18 and older than age 64) per 100 persons of working age (defined as persons in the age group 18 to 64). Utah's dependency ratio is 77 compared to the national average of 64. This means that for every 100 persons of working age in Utah, 13 more dependents than the national average must be supported. Utah's dependency ratio is the highest in the country and even significantly higher than the next closest state. Table 17 provides dependency ratios for every state and the District of Columbia.

Race/Ethnicity. The Utah Department of Employment Security, with review and comment from the Governor's Office of Planning and Budget and others, has prepared provisional 1994 estimates of the population by race and Hispanic origin at the county level in Utah. The estimates were based on Utah public school enrollment data by race from 1970 to 1994, and the modified age, race and sex estimates published by the Bureau of the Census for 1980 and 1990.

Table 19 provides race and ethnic population numbers for 1980 and 1990, along with provisional 1994 estimates. These estimates show that Utah's minority population, as a percent of the total population, is still relatively small. However, the minority population's share is gradually increasing. In 1980, Utah's White population comprised 92.7 percent of the total, compared to 91.2 percent in 1990, and an estimated 89.4 percent in 1994. This gradual shift in the racial and ethnic composition of the state is occurring because Utah's minority populations are increasing at a faster rate than the White population. From 1990 to 1994, Utah's White population increased by an estimated 8.9 percent. In comparison, over the same period, Asian/Pacific Islanders increased by an estimated 39.3 percent; Hispanics by 37.8 percent; Blacks by 30.9 percent; and American Indian/Alaskan Native, 18.9 percent.[1]

Household Characteristics. Table 18 provides household characteristics and rankings from the 1990 Census for the United States, the District of

[1] The growth rates for Utah's minority population are computed from a much smaller population base and relatively small numeric changes can result in high growth rates.

Columbia, and states. Utah ranks first in the percentage of persons living in family households—88.5 percent. A family household is defined by the Census Bureau as a householder and one or more other persons living in the same household who are related to the householder by birth, marriage, or adoption. Utah ranks last in the percentage of persons living in group quarters—1.7 percent. Group quarters include both institutionalized quarters— prisons or nursing homes—and noninstitutionalized quarters—college dormitories or shelters.

According to the 1990 Census, 64.8 percent of Utah households are comprised of married-couple families, which ranks Utah first. Utah has a lower-than-average ranking of single-headed households—11.7 percent of households are comprised of single parents, ranking Utah 41st in the nation. Utah also has the most persons per household nationally, 3.15, and most persons per family, 3.67.

Data on the number of housing units, households, and persons per household in 1995 are shown in Table 20. Utah currently ranks first in the nation with 3.12 persons per household. From 1990 to 1995, Utah was one of ten states that experienced a 10 percent, or larger growth rate in the total number of households, almost twice the national rate. During this time period, Utah's population grew 13.3 percent while the number of households grew 14.9 percent.

Higher growth in households than in population can be explained by significant changes in family formation which have occurred over the past several decades. Figure 17 shows family formation trends in Utah based on 1970, 1980 and 1990 census data. Only single, female-parent families and 'other' families, show growth from 1970 to 1990. Relatives, such as two siblings living together, would be an example of a family classified in the 'other' category. While the number of single-headed households and people living alone has increased, there is a smaller proportion of traditional two-parent families with children.

Distribution

County Trends. Utah's population is heavily concentrated along the Wasatch Front, two metropolitan areas comprised of Salt Lake, Davis, Weber and Utah Counties.[1] Of the state's 29 counties, Salt Lake County is the most heavily populated with 818,860 residents, followed by Utah County (317,879), Davis (219,644) and Weber County (178,068). These counties represent 76.6 percent of the state's total population. Counties in close proximity to the Wasatch Front have shown significant growth over the last several years. The combined population in these counties—Box Elder, Cache, Tooele, Juab, Morgan, Summit, and Wasatch—represents 166,821 residents or roughly 8.0 percent of the state's total population. These counties are currently of great interest because of their proximity to metropolitan Utah and their increasing integration with the employment and trade patterns of the Wasatch Front.

Regional Developments. Cache County to the north and Washington and Iron Counties to the south are important to mention due to the phenomenal growth which has occurred in these two areas since 1990. From 1980 to 1996, the state's population increased at an average annual rate of 1.9 percent. Washington County's population grew an average 6.6 percent, Iron County grew 3.0 percent, and Cache County grew more than 2.0 percent each year. The population concentrated in Washington and Iron Counties represent 5.0 percent of the total population in the state, and 86.3 percent of the state's Southwest region. The Southwest region includes Beaver, Garfield and Kane Counties in addition to Washington and Iron Counties. Cache County represents 4.1 percent of the state's total population, and 66.5 percent of the Bear River region, which is comprised of Cache, Box Elder and Rich Counties.

Urbanization. In comparison to other states, Utah ranks as the sixth most urban state. The U.S. Bureau of the Census classifies 87 percent of Utah's population as urban compared to 75 percent of the nation's. A person is considered urban if they live in an urbanized area (Utah has four: Logan, Ogden, Salt Lake City, and Provo-Orem) or a city over 2,500 persons.

Incorporated/Unincorporated. In 1994, three out of every four Utahns lived in one of the state's 229 incorporated areas. The growth rate of population living in cities has out-paced the unincorporated areas consistently over the past four years, a trend that is likely to continue as cities continue to annex more of the unincorporated areas and residents choose to live in city settings. As of 1994, 1.48 million Utahns lived in incorporated areas. Population estimates for incorporated cities are published by the Bureau of the Census annually and can be obtained from GOPB upon request.

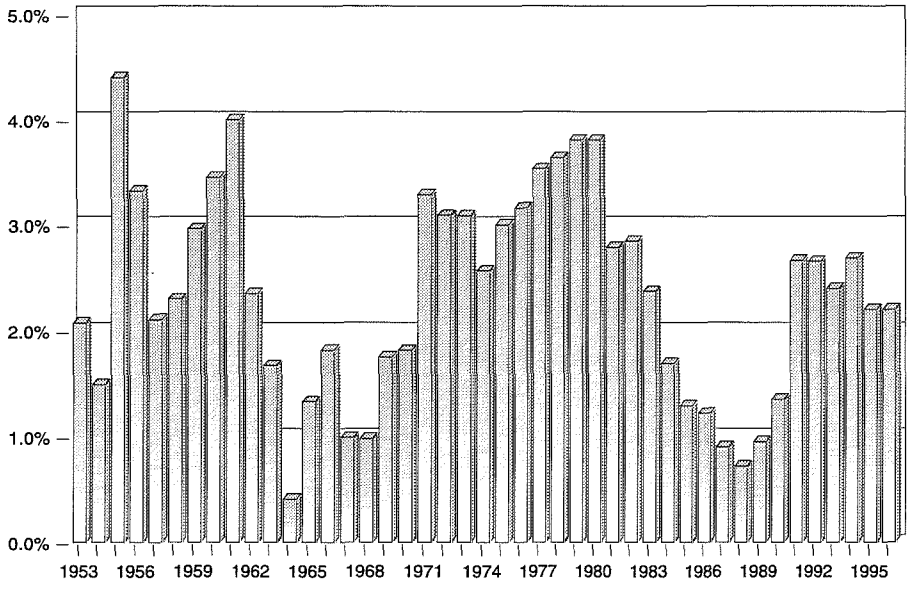
Density. While Utah is considered one of the most urban states in the country, it is one of the least densely populated. Population density indicates the number of persons per square mile in a geographic

[1] The Wasatch Front can also refer to a multi-county district which is comprised of Salt Lake Davis, Weber, Morgan and Tooele counties.

area. It is calculated by dividing the square miles of land area by the area's total population. In 1990, Utah had 21 persons per square mile. In 1996, Utah had approximately 24.4 persons per square mile. Salt Lake County at 1,110.5 persons per square mile, and Davis County, at 721.3, are the most densely populated counties in the state. Weber, Utah and Cache Counties are the next most densely populated counties. These counties are significantly more densely populated than the rest of the state. After these five, Washington County is the most densely populated county. At 0.8 persons per square mile, Garfield is the least densely populated county.

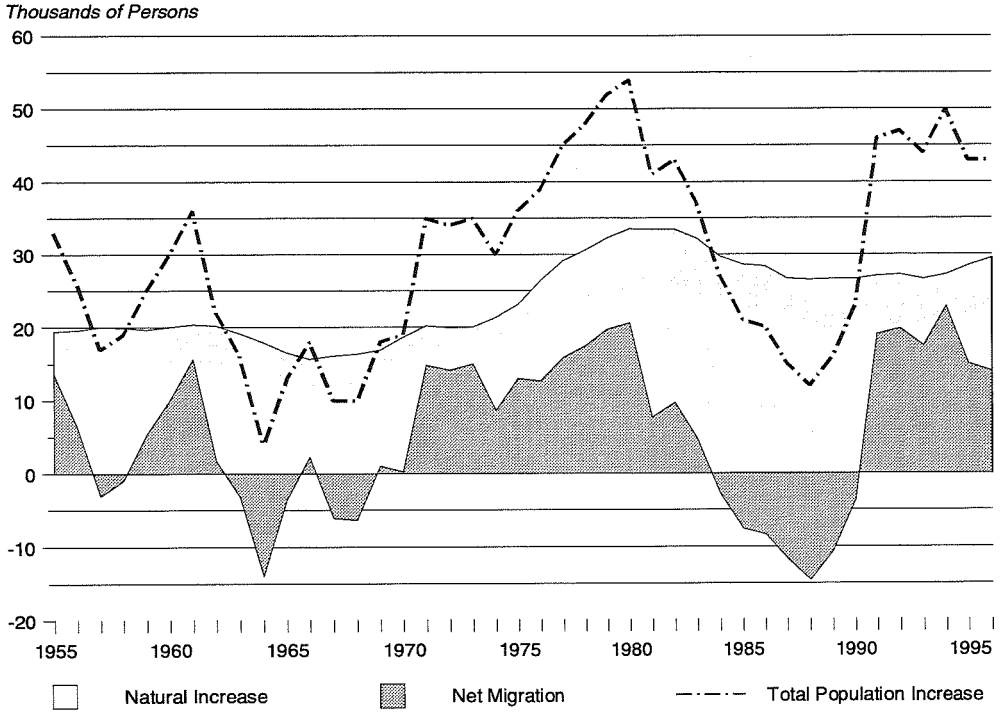
While Utah is much less dense than the rest of the nation, the extensive land ownership of the federal and state governments does impact how and where population development can occur. Approximately one-third of the land in the United States is federally-owned. The federal government owns almost two-thirds (63 percent) of Utah's land area. Alaska and Nevada are the only two states with a higher percentage of federal ownership. Further analysis of federal- and state-owned land may be found in reports published by the Governor's Office of Planning and Budget.

Figure 14
Utah Population-- Annual Percent Change: 1953 to 1996



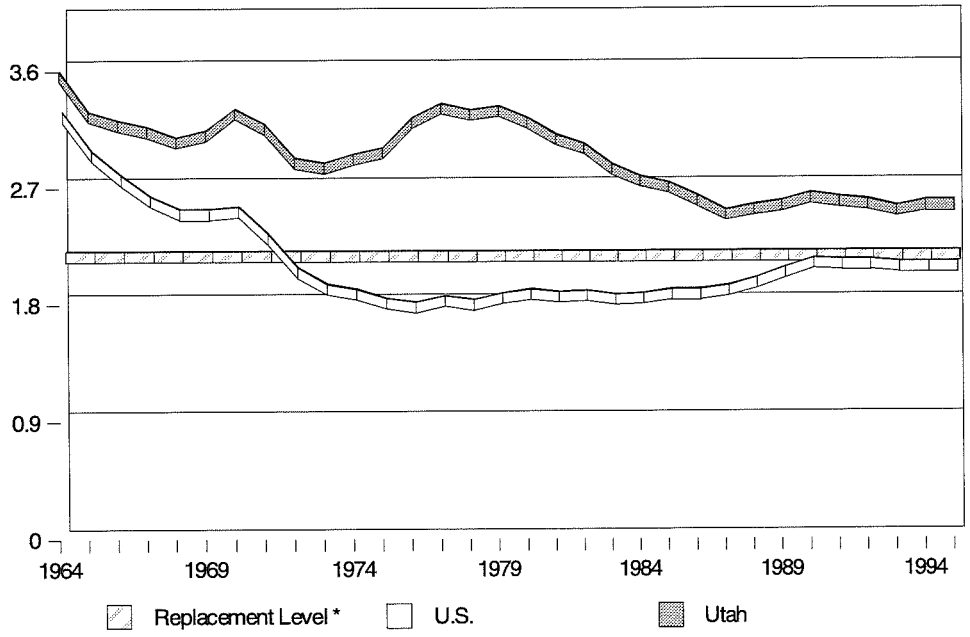
Source: Utah Population Estimates Committee.

Figure 15
Utah Components of Population Change--Net Migration and Natural Increase



Source: Utah Population Estimates Committee and Utah Bureau of Health Statistics.

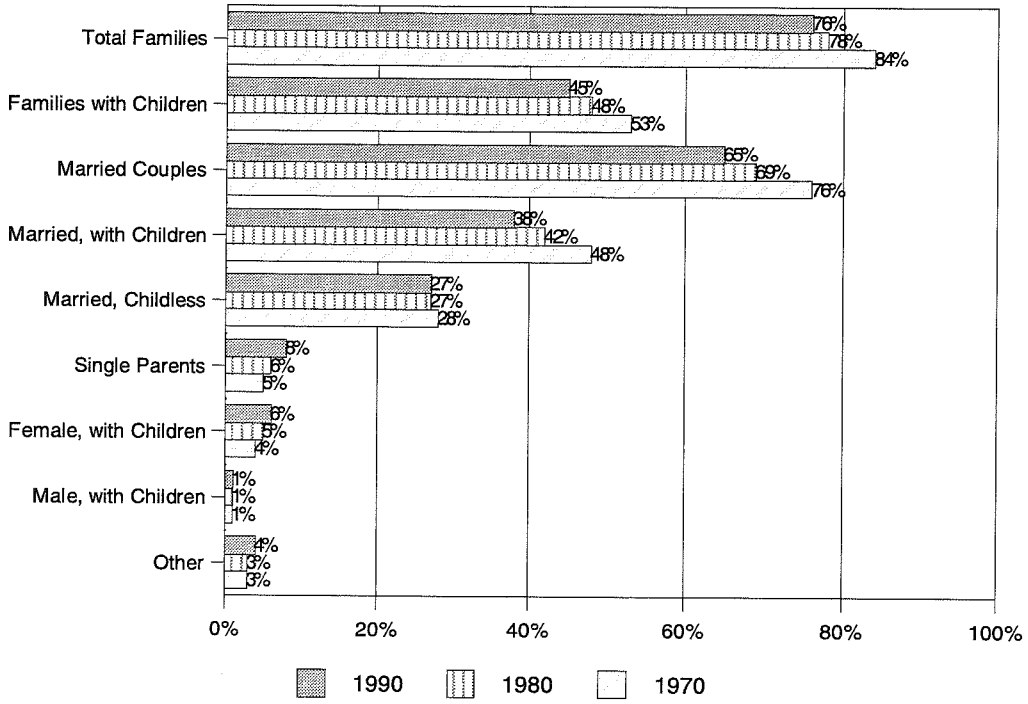
Figure 16
Total Fertility for U.S. and Utah: 1964 to 1995



* Fertility level at which current population is replaced.

Source: National Center for Health Statistics and Governor's Office of Planning and Budget.

Figure 17
Utah Family Characteristics as a Percent of Total Households



Source: U.S. Dept. Of Commerce, Bureau of the Census.

Table 12
Utah Population Estimates, Net Migration, Births and Deaths: 1952 to 1996

Year	July 1st Population	Percent Change	Increase	Net Migration**	Net Migration as a Percent of Prev. Year's Population	Natural Increase	Fiscal Year Births***	Fiscal Year Deaths***
1952	724,000	2.55	18,000	(209)	na	18,209	23,251	5,042
1953	739,000	2.07	15,000	(3,522)	-0.49%	18,522	23,658	5,136
1954	750,000	1.49	11,000	(7,906)	-1.07%	18,906	23,944	5,038
1955	783,000	4.40	33,000	13,589	1.81%	19,412	24,454	5,042
1956	809,000	3.32	26,000	6,372	0.81%	19,629	24,787	5,158
1957	826,000	2.10	17,000	(3,058)	-0.38%	20,058	25,518	5,460
1958	845,000	2.30	19,000	(972)	-0.12%	19,972	25,724	5,753
1959	870,000	2.96	25,000	5,330	0.63%	19,671	25,515	5,844
1960	900,000	3.45	30,000	9,980	1.15%	20,021	25,959	5,938
1961	936,000	4.00	36,000	15,608	1.73%	20,392	26,431	6,039
1962	958,000	2.35	22,000	1,802	0.19%	20,199	26,402	6,203
1963	974,000	1.67	16,000	(3,148)	-0.33%	19,148	25,583	6,435
1964	978,000	0.41	4,000	(13,924)	-1.43%	17,924	24,398	6,474
1965	991,000	1.33	13,000	(3,515)	-0.36%	16,515	23,053	6,538
1966	1,009,000	1.82	18,000	2,330	0.24%	15,670	22,431	6,761
1967	1,019,000	0.99	10,000	(6,092)	-0.60%	16,092	22,775	6,683
1968	1,029,000	0.98	10,000	(6,372)	-0.63%	16,372	23,071	6,699
1969	1,047,000	1.75	18,000	1,124	0.11%	16,876	23,713	6,837
1970	1,066,000	1.81	19,000	327	0.03%	18,674	25,601	6,927
1971	1,101,000	3.28	35,000	14,800	1.39%	20,200	27,407	7,207
1972	1,135,000	3.09	34,000	14,090	1.28%	19,910	27,146	7,236
1973	1,170,000	3.08	35,000	14,955	1.32%	20,045	27,562	7,517
1974	1,200,000	2.56	30,000	8,620	0.74%	21,380	28,876	7,496
1975	1,236,000	3.00	36,000	12,949	1.08%	23,051	30,566	7,515
1976	1,275,000	3.16	39,000	12,605	1.02%	26,395	33,773	7,378
1977	1,320,000	3.53	45,000	15,886	1.25%	29,114	36,709	7,595
1978	1,368,000	3.64	48,000	17,422	1.32%	30,578	38,265	7,687
1979	1,420,000	3.80	52,000	19,712	1.44%	32,288	40,134	7,846
1980	1,474,000	3.80	54,000	20,517	1.44%	33,483	41,591	8,108
1981	1,515,000	2.78	41,000	7,601	0.52%	33,399	41,511	8,112
1982	1,558,000	2.84	43,000	9,630	0.64%	33,370	41,774	8,404
1983	1,595,000	2.37	37,000	4,789	0.31%	32,211	40,557	8,346
1984	1,622,000	1.69	27,000	(2,757)	-0.17%	29,757	38,643	8,886
1985	1,643,000	1.29	21,000	(7,585)	-0.47%	28,585	37,508	8,923
1986	1,663,000	1.22	20,000	(8,355)	-0.51%	28,355	37,145	8,790
1987	1,678,000	0.90	15,000	(11,656)	-0.70%	26,656	35,469	8,813
1988	1,690,000	0.72	12,000	(14,526)	-0.87%	26,526	35,648	9,122
1989	1,706,000	0.95	16,000	(10,633)	-0.63%	26,633	35,549	8,916
1990	1,729,000	1.35	23,000	(3,619)	-0.21%	26,619	35,569	8,950
1991	1,775,000	2.66	46,000	18,961	1.10%	27,039	36,312	9,273
1992	1,822,000	2.65	47,000	19,746	1.11%	27,254	36,813	9,559
1993	1,866,000	2.41	44,000	17,427	0.96%	26,573	36,573	10,000
1994	1,916,000	2.68	50,000	22,831	1.22%	27,169	37,480	10,311
1995	1,959,025	2.25	43,421	14,987	0.78%	28,434	38,907	10,473
1996*(p)	2,002,359	2.21	43,334	13,882	0.71%	29,453	40,371	10,918

(p) = preliminary
na= not available

*In 1996, the Utah Population Estimates Committee changed its convention on rounded estimates so that it now publishes unrounded estimates. Accordingly, the estimates for 1995 and 1996 are not rounded.

**Previous to 1995, net migration figures are based on rounded population estimates to maintain consistency with the historical database. The migration estimates may differ from those found elsewhere in the report.

***From 1952 to 1970 fiscal year births and deaths are estimated by averaging calendar year births and deaths in the two years that are partially covered by each fiscal year. From 1971 to 1994, actual fiscal year births and deaths are shown. Births and deaths in 1995 are calendar year.

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

Table 12
Total Fertility Rates—Utah and U.S.: 1960 to 1995

Year	Utah	U.S.
1960	4.30	3.65
1961	4.24	3.63
1962	4.18	3.47
1963	3.87	3.33
1964	3.55	3.21
1965	3.24	2.91
1966	3.17	2.72
1967	3.12	2.56
1968	3.04	2.46
1969	3.09	2.46
1970	3.26	2.48
1971	3.14	2.27
1972	2.88	2.01
1973	2.84	1.88
1974	2.91	1.84
1975	2.96	1.77
1976	3.19	1.74
1977	3.30	1.79
1978	3.25	1.76
1979	3.28	1.81
1980	3.19	1.84
1981	3.06	1.82
1982	2.99	1.83
1983	2.83	1.80
1984	2.74	1.81
1985	2.69	1.84
1986	2.59	1.84
1987	2.48	1.87
1988	2.52	1.93
1989	2.55	2.01
1990	2.61	2.08
1991	2.58	2.07
1992	2.56	2.07
1993	2.51	2.05
1994	2.50	2.05
1995	2.55	2.05

Sources: Eileen Brown, "Fertility in Utah: 1960-1985"; Governor's Office of Planning and Budget, UPED/CASA: 1986-1995; U.S. Department of Commerce, Bureau of the Census, Current Population Reports, P25-1130.

Table 13
Life Expectancy for Utah and U.S.: 1970, 1980, and 1990

	Utah		U.S.	
Year	Male	Female	Male	Female
1970	73.0	80.9	67.1	74.7
1980	76.4	82.9	70.0	77.4
1990	79.1	84.5	71.8	78.8

Source: National Center for Health Statistics, Vital Statistics of the United States, and Decennial Life Tables.

Table 15
Utah Population Estimates by County: 1980 to 1996

Multi-County/County	July 1, 1980	July 1, 1981	July 1, 1982	July 1, 1983	July 1, 1984	July 1, 1985	July 1, 1986	July 1, 1987	July 1, 1988	July 1, 1989	July 1, 1990	July 1, 1991	July 1, 1992	July 1, 1993	July 1, 1994	July 1, 1995(a)	July 1, *1996(b)	Avg. Ann. Percent Change 1980-96	Percent Change 1995-96	1996 Percent of Total Population
Bear River	93,350	95,450	97,750	100,450	101,300	102,750	104,300	105,650	106,550	107,450	108,750	110,700	113,250	116,000	118,650	120,890	123,403	1.8	2.1	6.2
Box Elder	33,500	33,800	34,200	34,700	34,900	35,500	36,000	36,300	36,300	36,500	36,500	37,100	37,500	38,100	38,500	38,830	39,484	1.0	1.7	2.0
Cache	57,700	59,400	61,200	63,500	64,300	65,200	66,300	67,500	68,500	69,200	70,500	71,900	74,000	76,100	78,300	80,254	82,097	2.2	2.3	4.1
Rich	2,150	2,250	2,350	2,250	2,100	2,050	2,000	1,850	1,750	1,750	1,750	1,700	1,750	1,800	1,850	1,807	1,822	-1.0	0.8	0.1
Wasatch Front	949,150	973,500	999,800	1,019,900	1,038,250	1,053,550	1,069,250	1,077,450	1,085,850	1,095,950	1,107,250	1,136,850	1,165,650	1,186,250	1,211,650	1,232,472	1,253,758	1.8	1.7	62.6
Davis	148,000	153,000	158,000	162,000	166,000	170,000	175,000	179,000	184,000	186,000	188,000	195,000	201,000	206,000	212,000	214,994	219,644	2.5	2.2	11.0
Morgan	4,950	5,000	5,100	5,100	5,150	5,250	5,250	5,350	5,350	5,450	5,550	5,650	5,850	6,150	6,350	6,527	6,693	1.9	2.5	0.3
Weber	145,000	148,000	151,000	153,000	154,000	154,000	156,000	156,000	157,000	158,000	159,000	162,000	166,000	169,000	172,000	175,150	178,068	1.3	1.7	8.9
Salt Lake	625,000	641,000	659,000	673,000	686,000	697,000	706,000	710,000	713,000	720,000	728,000	747,000	765,000	777,000	792,000	806,280	818,860	1.7	1.6	41.1
Tooele	26,200	26,500	26,700	26,800	27,100	27,300	27,000	27,100	26,500	26,500	26,700	27,200	27,800	28,100	29,300	29,522	30,492	1.0	3.3	1.5
Mountainland	239,050	246,950	252,300	259,300	265,000	267,200	269,850	275,900	279,050	283,100	291,800	299,700	308,200	321,900	331,900	343,142	354,025	2.5	3.2	17.7
Summit	10,400	11,100	11,600	12,200	12,800	13,000	13,400	14,200	14,300	15,100	15,700	17,000	18,400	19,700	21,100	22,367	23,562	5.2	5.3	1.1
Utah	220,000	227,000	232,000	238,000	243,000	245,000	247,000	252,000	255,000	258,000	266,000	272,000	279,000	291,000	299,000	308,607	317,879	2.3	3.0	15.7
Wasatch	8,650	8,850	8,700	9,100	9,200	9,200	9,450	9,700	9,750	10,000	10,100	10,700	10,800	11,200	11,800	12,168	12,585	2.4	3.4	0.6
Central	47,600	48,700	50,150	52,250	54,300	54,900	52,700	51,950	52,000	52,100	52,200	53,750	54,850	55,950	58,150	59,398	60,981	1.6	2.7	3.0
Juab	5,550	5,600	5,700	5,950	6,200	6,300	5,900	5,800	5,800	5,900	5,800	6,000	6,150	6,200	6,800	7,174	7,444	1.9	3.8	0.4
Millard	9,050	9,450	10,100	10,800	12,400	12,900	12,200	11,400	11,300	11,300	11,300	11,600	11,700	11,700	11,900	11,880	11,958	1.8	0.6	0.6
Piute	1,350	1,350	1,250	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,250	1,350	1,350	1,350	1,450	1,462	1,508	0.7	3.2	0.1
Sanpete	14,800	15,200	15,800	16,400	16,400	16,300	15,800	15,900	16,000	16,000	16,300	16,900	17,500	18,100	18,800	19,216	19,999	1.9	4.1	1.0
Sevier	14,900	15,100	15,300	15,600	15,800	15,900	15,300	15,400	15,400	15,400	15,400	15,700	16,000	16,400	16,900	17,350	17,682	1.1	1.9	0.9
Wayne	1,950	2,000	2,000	2,200	2,200	2,200	2,200	2,150	2,200	2,200	2,150	2,200	2,150	2,200	2,300	2,315	2,389	1.3	3.2	0.1
Southwestern	56,050	58,350	61,000	64,200	67,050	70,900	75,050	77,550	79,100	81,650	83,900	87,600	91,750	97,150	103,650	110,968	116,867	4.7	5.3	5.8
Beaver	4,400	4,600	4,650	5,000	5,150	5,050	4,950	4,900	4,800	4,800	4,800	4,850	4,900	5,000	5,150	5,378	5,607	1.5	4.2	0.3
Garfield	3,700	3,700	3,750	3,900	3,900	4,000	4,000	4,000	3,950	4,000	3,950	4,100	4,100	4,200	4,200	4,308	4,386	1.1	1.8	0.2
Iron	17,500	18,100	18,600	19,500	20,000	20,100	20,300	20,300	20,100	20,400	20,900	21,500	22,400	23,800	25,200	26,927	28,031	3.0	4.1	1.4
Kane	4,050	4,050	4,200	4,500	4,700	4,950	5,100	5,150	5,250	5,250	5,150	5,250	5,350	5,450	5,700	5,880	5,956	2.4	1.3	0.3
Washington	26,400	27,900	29,800	31,300	33,300	36,800	40,700	43,200	45,000	47,200	49,100	51,900	55,000	58,700	63,400	68,475	72,888	6.6	6.4	3.5
Uintah Basin	34,150	36,050	39,350	41,150	40,750	40,300	39,000	37,400	36,500	35,650	35,500	36,600	37,200	37,500	38,950	38,670	39,109	0.9	1.1	2.0
Daggett	750	850	850	750	750	700	700	700	700	650	700	700	700	700	750	788	803	0.4	1.9	0.0
Duchesne	12,700	13,100	13,700	14,400	14,800	14,700	14,300	13,700	13,100	12,800	12,600	12,800	12,900	13,200	13,500	13,646	14,032	0.6	2.8	0.7
Uintah	20,700	22,100	24,800	26,000	25,200	24,900	24,000	23,000	22,700	22,200	22,200	23,100	23,600	23,600	24,700	24,235	24,275	1.0	0.2	1.2
Southeastern	54,650	56,000	57,650	57,750	55,350	53,400	52,850	52,100	50,950	50,100	49,700	50,300	51,050	51,700	53,050	53,486	54,216	-0.0	1.4	2.7
Carbon	22,400	23,000	24,300	24,100	23,100	22,800	22,300	21,700	21,100	20,400	20,200	20,600	20,600	20,700	21,100	21,051	21,420	-0.3	1.8	1.1
Emery	11,600	12,000	12,700	12,700	11,900	11,100	11,100	10,900	10,500	10,400	10,300	10,200	10,200	10,400	10,600	10,669	10,810	-0.4	1.3	0.5
Grand	8,250	8,400	8,150	8,050	7,750	7,200	7,050	6,900	6,750	6,700	6,600	6,800	7,150	7,500	7,950	8,352	8,797	0.4	5.3	0.4
San Juan	12,400	12,600	12,500	12,900	12,600	12,300	12,400	12,600	12,600	12,600	12,600	12,700	13,100	13,100	13,400	13,414	13,188	0.4	-1.7	0.7
State	1,474,000	1,115,750	1,558,000	1,595,000	1,622,000	1,643,000	1,663,000	1,678,000	1,690,000	1,706,000	1,729,000	1,775,000	1,822,000	1,866,000	1,916,000	1,959,025	2,002,359	1.9	2.2	100.0

(r) Revised
(p) Preliminary

Note: Prior to 1995, totals may not add due to rounding. State total is not the sum of the rounded county estimates, it is the rounded sum of the unrounded county estimates.

*In 1996, the Utah Population Estimates Committee, changed its convention on rounded estimates so that it now publishes unrounded estimates. Accordingly, the estimates for 1995 and 1996 are not rounded.

Source: Utah Population Estimates Committee.

Table 16
Rankings of States by Selected Age Groups as a Percent of Total Population: July 1, 1995

Rank	Under Age 5 State	Population (thousands)	Percent of Total	Ages 5-17 State	Population (thousands)	Percent of Total	Ages 18-64 State	Population (thousands)	Percent of Total	Ages 65+ State	Population (thousands)	Percent of Total	All Ages State	Population (thousands)	Percent of Total	State	Median Age
	United States	19,591	7.5%	United States	49,149	18.7%	United States	160,483	61.1%	United States	33,532	12.8%	United States	262,755	100.0%	United States	34.3
1	Utah	184	9.4%	Utah	491	25.2%	District of Columbia	362	65.4%	Florida	2,631	18.6%	California	31,589	100.0%	Utah	26.8
2	California	2,810	8.9%	Alaska	136	22.6%	Virginia	4,268	64.5%	Pennsylvania	1,916	15.9%	Texas	18,724	100.0%	Alaska	31.3
3	Alaska	53	8.8%	Idaho	258	22.2%	Colorado	2,389	63.8%	Rhode Island	156	15.7%	New York	18,136	100.0%	Texas	32.2
4	Texas	1,582	8.4%	Wyoming	104	21.7%	Alaska	385	63.7%	West Virginia	279	15.3%	Florida	14,166	100.0%	Mississippi	32.5
5	Arizona	356	8.4%	New Mexico	362	21.5%	Maryland	3,199	63.4%	Iowa	432	15.2%	Pennsylvania	12,072	100.0%	California	32.5
6	New Mexico	138	8.2%	South Dakota	154	21.1%	Georgia	4,559	63.3%	Arkansas	359	14.5%	Illinois	11,830	100.0%	Louisiana	32.7
7	Hawaii	96	8.1%	Louisiana	903	20.8%	Vermont	368	62.9%	North Dakota	93	14.5%	Ohio	11,151	100.0%	Idaho	32.7
8	Nevada	119	7.8%	Montana	179	20.6%	Tennessee	3,288	62.5%	South Dakota	105	14.4%	Michigan	9,549	100.0%	New Mexico	32.9
9	Illinois	921	7.8%	Mississippi	553	20.5%	Nevada	957	62.5%	Connecticut	467	14.3%	New Jersey	7,945	100.0%	Georgia	33.0
10	Louisianna	336	7.7%	Texas	3,819	20.4%	North Carolina	4,497	62.5%	Massachusetts	861	14.2%	Georgia	7,201	100.0%	Arizona	33.3
11	Mississippi	209	7.7%	Nebraska	329	20.1%	Delaware	448	62.4%	District of Columbia	77	13.9%	North Carolina	7,195	100.0%	South Carolina	34.0
12	Idaho	89	7.7%	Minnesota	925	20.1%	New Hampshire	717	62.4%	Missouri	740	13.9%	Virginia	6,618	100.0%	South Dakota	34.0
13	Georgia	551	7.7%	North Dakota	129	20.1%	Washington	3,385	62.3%	Nebraska	228	13.9%	Massachusetts	6,074	100.0%	Illinois	34.1
14	New York	1,360	7.5%	Kansas	510	19.9%	South Carolina	2,289	62.3%	Maine	172	13.9%	Indiana	5,803	100.0%	Minnesota	34.2
15	Maryland	368	7.3%	Arizona	837	19.9%	Massachusetts	3,781	62.3%	New Jersey	1,090	13.7%	Washington	5,431	100.0%	Kansas	34.3
16	New Jersey	577	7.3%	Oklahoma	648	19.8%	Kentucky	2,401	62.2%	Kansas	351	13.7%	Missouri	5,324	100.0%	Michigan	34.3
17	District of Columbia	40	7.2%	Wisconsin	1,009	19.7%	Indiana	3,583	61.7%	Oregon	426	13.6%	Tennessee	5,256	100.0%	Virginia	34.3
18	Delaware	52	7.2%	Michigan	1,837	19.2%	West Virginia	1,127	61.7%	Oklahoma	442	13.5%	Wisconsin	5,123	100.0%	North Carolina	34.4
19	Colorado	269	7.2%	Arkansas	477	19.2%	New York	11,175	61.6%	Ohio	1,490	13.4%	Maryland	5,042	100.0%	Wyoming	34.4
20	South Dakota	52	7.2%	Georgia	1,372	19.1%	Alabama	2,620	61.6%	New York	2,424	13.4%	Minnesota	4,610	100.0%	Delaware	34.5
21	South Carolina	263	7.2%	New Hampshire	219	19.0%	Maine	764	61.6%	Wisconsin	682	13.3%	Louisiana	4,342	100.0%	Nevada	34.5
22	Michigan	683	7.1%	Iowa	541	19.0%	New Jersey	4,892	61.6%	Arizona	561	13.3%	Alabama	4,253	100.0%	Nebraska	34.5
23	North Carolina	514	7.1%	Missouri	1,012	19.0%	Connecticut	2,010	61.4%	Montana	114	13.1%	Arizona	4,218	100.0%	Indiana	34.5
24	Kansas	183	7.1%	Washington	1,033	19.0%	Hawaii	728	61.3%	Alabama	552	13.0%	Kentucky	3,860	100.0%	North Dakota	34.5
25	Washington	386	7.1%	Colorado	712	19.0%	Michigan	5,848	61.2%	Delaware	91	12.6%	Colorado	3,747	100.0%	Hawaii	34.6
26	Alabama	301	7.1%	California	5,984	18.9%	California	19,333	61.2%	Indiana	733	12.6%	South Carolina	3,673	100.0%	Alabama	34.6
27	Indiana	408	7.0%	Vermont	110	18.8%	Oregon	1,918	61.1%	Hawaii	150	12.6%	Oklahoma	3,278	100.0%	Colorado	34.6
28	Oklahoma	230	7.0%	Ohio	2,087	18.7%	Illinois	7,220	61.0%	Kentucky	487	12.6%	Connecticut	3,275	100.0%	Washington	34.6
29	Virginia	464	7.0%	Oregon	587	18.7%	Ohio	6,800	61.0%	Illinois	1,484	12.5%	Oregon	3,141	100.0%	Oklahoma	34.6
30	Nebraska	114	7.0%	Illinois	2,205	18.6%	Texas	11,409	60.9%	Tennessee	658	12.5%	Iowa	2,842	100.0%	Maryland	34.6
31	Minnesota	321	7.0%	Indiana	1,079	18.6%	Minnesota	2,791	60.5%	North Carolina	899	12.5%	Mississippi	2,697	100.0%	Wisconsin	34.6
32	Tennessee	365	7.0%	Maine	230	18.6%	Wyoming	291	60.5%	Minnesota	573	12.4%	Kansas	2,565	100.0%	Kentucky	34.7
33	Connecticut	228	7.0%	South Carolina	682	18.6%	Wisconsin	3,087	60.3%	Michigan	1,182	12.4%	Arkansas	2,484	100.0%	New Hampshire	34.7
34	Arkansas	173	6.9%	Kentucky	712	18.4%	Rhode Island	596	60.3%	Mississippi	331	12.3%	Utah	1,951	100.0%	District of Columbia	34.9
35	Missouri	369	6.9%	Alabama	779	18.3%	Missouri	3,202	60.1%	Vermont	70	12.0%	West Virginia	1,828	100.0%	New York	34.9
36	Ohio	773	6.9%	Nevada	279	18.3%	Louisiana	2,609	60.1%	South Carolina	440	12.0%	New Mexico	1,685	100.0%	Tennessee	35.0
37	Florida	968	6.8%	Hawaii	213	18.0%	Pennsylvania	7,246	60.0%	New Hampshire	137	11.9%	Nebraska	1,637	100.0%	Missouri	35.0
38	Rhode Island	68	6.8%	Tennessee	945	18.0%	Montana	520	59.8%	Washington	628	11.6%	Nevada	1,530	100.0%	Arkansas	35.0
39	Massachusetts	413	6.8%	Maryland	904	17.9%	Oklahoma	1,957	59.7%	Nevada	175	11.4%	Maine	1,241	100.0%	Ohio	35.0
40	Kentucky	261	6.8%	North Carolina	1,285	17.9%	Mississippi	1,604	59.5%	Idaho	133	11.4%	Hawaii	1,187	100.0%	Massachusetts	35.1
41	Wyoming	32	6.7%	Delaware	127	17.7%	New Mexico	1,002	59.4%	Louisiana	494	11.4%	Idaho	1,163	100.0%	Vermont	35.3
42	Wisconsin	344	6.7%	Pennsylvania	2,125	17.6%	Arkansas	1,475	59.4%	Maryland	572	11.3%	New Hampshire	1,148	100.0%	Rhode Island	35.4
43	Oregon	210	6.7%	New York	3,177	17.5%	Kansas	1,521	59.3%	Virginia	737	11.1%	Rhode Island	990	100.0%	New Jersey	35.7
44	New Hampshire	76	6.6%	New Jersey	1,386	17.4%	Iowa	1,685	59.3%	Wyoming	53	11.1%	Montana	870	100.0%	Iowa	35.7
45	Montana	57	6.5%	Connecticut	570	17.4%	Nebraska	966	59.0%	California	3,463	11.0%	South Dakota	729	100.0%	Montana	35.9
46	North Dakota	42	6.5%	Virginia	1,149	17.4%	North Dakota	378	59.0%	New Mexico	183	10.9%	Delaware	717	100.0%	Connecticut	35.9
47	Pennsylvania	784	6.5%	West Virginia	315	17.3%	Idaho	683	58.7%	Texas	1,914	10.2%	North Dakota	641	100.0%	Oregon	36.0
48	Iowa	184	6.5%	Rhode Island	170	17.2%	Arizona	2,464	58.4%	Colorado	376	10.0%	Alaska	604	100.0%	Maine	36.1
49	Vermont	37	6.3%	Florida	2,403	17.0%	Florida	8,164	57.6%	Georgia	718	10.0%	Vermont	585	100.0%	Pennsylvania	36.6
50	Maine	75	6.0%	Massachusetts	1,019	16.8%	South Dakota	418	57.3%	Utah	172	8.8%	District of Columbia	554	100.0%	Florida	37.3
51	West Virginia	106	5.8%	District of Columbia	75	13.5%	Utah	1,105	56.6%	Alaska	30	4.9%	Wyoming	480	100.0%	West Virginia	37.4

Source: U.S. Bureau of the Census, Population Estimates Branch

Table 17
Dependency Ratios for States: July 1, 1995

Rank	State	Pre-School per 100 of Working Age	State	School Age per 100 of Working Age	State	Retirement Age per 100 of Working Age	State	Total Dependents per 100 of Working Age
	United States	12	United States	31	United States	21	United States	64
1	Utah	17	Utah	44	Florida	32	Utah	77
2	California	15	Idaho	38	Pennsylvania	26	South Dakota	75
3	Arizona	14	South Dakota	37	Rhode Island	26	Florida	74
4	Texas	14	New Mexico	36	Iowa	26	Arizona	71
5	New Mexico	14	Wyoming	36	South Dakota	25	Idaho	70
6	Alaska	14	Alaska	35	West Virginia	25	North Dakota	70
7	Hawaii	13	Louisiana	35	North Dakota	25	Nebraska	69
8	Idaho	13	Mississippi	34	Arkansas	24	Iowa	69
9	Mississippi	13	Montana	34	Nebraska	24	Kansas	69
10	Louisiana	13	Nebraska	34	Connecticut	23	Arkansas	68
11	Illinois	13	North Dakota	34	Missouri	23	New Mexico	68
12	South Dakota	13	Arizona	34	Kansas	23	Mississippi	68
13	Nevada	12	Kansas	34	Massachusetts	23	Oklahoma	67
14	New York	12	Texas	33	Arizona	23	Montana	67
15	Georgia	12	Minnesota	33	Oklahoma	23	Pennsylvania	67
16	Kansas	12	Oklahoma	33	Maine	23	Louisiana	66
17	Florida	12	Wisconsin	33	New Jersey	22	Missouri	66
18	Nebraska	12	Arkansas	32	Oregon	22	Rhode Island	66
19	New Jersey	12	Iowa	32	Wisconsin	22	Wisconsin	66
20	Oklahoma	12	Missouri	32	Ohio	22	Wyoming	65
21	Arkansas	12	Michigan	31	Montana	22	Minnesota	65
22	Michigan	12	California	31	New York	22	Texas	64
23	Missouri	12	Ohio	31	District of Columbia	21	Ohio	64
24	Delaware	12	Oregon	31	Alabama	21	Illinois	64
25	Maryland	12	Illinois	31	Mississippi	21	Oregon	64
26	Minnesota	11	New Hampshire	31	Hawaii	21	California	63
27	South Carolina	11	Washington	31	Illinois	21	Michigan	63
28	Alabama	11	Maine	30	Minnesota	21	Hawaii	63
29	North Carolina	11	Indiana	30	Indiana	20	Connecticut	63
30	Washington	11	Georgia	30	Kentucky	20	New Jersey	62
31	Indiana	11	Vermont	30	Delaware	20	Maine	62
32	Ohio	11	Colorado	30	Michigan	20	Alabama	62
33	Rhode Island	11	South Carolina	30	Tennessee	20	New York	62
34	Connecticut	11	Alabama	30	North Carolina	20	West Virginia	62
35	Colorado	11	Kentucky	30	Idaho	19	Indiana	62
36	Wisconsin	11	Florida	29	South Carolina	19	Kentucky	61
37	Tennessee	11	Hawaii	29	Vermont	19	Massachusetts	61
38	Wyoming	11	Pennsylvania	29	New Hampshire	19	South Carolina	60
39	North Dakota	11	Nevada	29	Louisiana	19	Washington	60
40	District of Columbia	11	Tennessee	29	Washington	19	New Hampshire	60
41	Montana	11	North Carolina	29	Wyoming	18	Delaware	60
42	Oregon	11	Rhode Island	29	New Mexico	18	North Carolina	60
43	Massachusetts	11	New York	28	Nevada	18	Nevada	60
44	Iowa	11	Delaware	28	California	18	Tennessee	60
45	Kentucky	11	Connecticut	28	Maryland	18	Vermont	59
46	Virginia	11	New Jersey	28	Virginia	17	Georgia	58
47	Pennsylvania	11	Maryland	28	Texas	17	Maryland	58
48	New Hampshire	11	West Virginia	28	Colorado	16	Alaska	57
49	Vermont	10	Massachusetts	27	Georgia	16	Colorado	57
50	Maine	10	Virginia	27	Utah	16	Virginia	55
51	West Virginia	9	District of Columbia	21	Alaska	8	District of Columbia	53

Source: U.S. Department of Commerce, Bureau of the Census, Population Estimates Branch

Table 18
1990 Census of Population and Housing: Household Characteristics for States

State	All Persons: Total	All Persons: Percent in Family Households	Rank	All Persons: Percent in Group Quarters	Rank	Persons 15 Years and Over: Percent Now Married	Rank	Persons 15 Years and Over: Percent Never Married	Rank	Households: Total	Households: Percent Married-Couple Family	Rank	Households: Percent Single Head-of-Household	Rank	Persons per Household	Rank	Persons per Family	Rank
United States	248,709,873	83.7%	---	2.7%	---	54.8%	---	26.9%	---	91,947,410	55.1%	---	15.0%	---	2.63	---	3.16	---
Alabama	4,040,587	86.3%	3	2.3%	42	56.6%	24	23.9%	38	1,506,790	57.0%	21	16.3%	8	2.62	18	3.13	25
Alaska	550,043	82.7%	38	3.8%	5	56.6%	22	27.2%	17	188,915	56.2%	29	14.2%	27	2.80	3	3.33	3
Arizona	3,665,228	82.9%	34	2.2%	46	55.7%	31	25.5%	26	1,368,843	54.6%	40	14.0%	28	2.62	20	3.16	13
Arkansas	2,350,725	85.9%	6	2.5%	34	59.7%	7	20.7%	51	891,179	59.2%	7	13.9%	30	2.57	31	3.06	41
California	29,760,021	82.8%	37	2.5%	32	51.9%	48	30.1%	4	10,381,206	52.7%	47	16.1%	11	2.79	4	3.32	4
Colorado	3,294,394	81.1%	47	2.4%	36	56.0%	28	25.8%	24	1,282,489	53.8%	44	12.8%	35	2.51	49	3.07	39
Connecticut	3,287,116	83.1%	29	3.1%	14	54.1%	39	29.0%	9	1,230,479	55.6%	34	14.6%	22	2.59	27	3.10	30
Delaware	666,168	83.3%	26	3.0%	17	54.6%	37	27.6%	12	247,497	55.8%	32	15.3%	17	2.61	22	3.09	32
District of Columbia	606,900	66.3%	51	6.9%	1	28.8%	51	47.6%	1	249,634	25.3%	51	23.6%	1	2.26	51	3.15	20
Florida	12,937,926	82.0%	43	2.4%	39	56.3%	27	22.6%	44	5,134,869	54.4%	41	14.0%	29	2.46	50	2.95	51
Georgia	6,478,216	84.9%	15	2.7%	29	54.7%	36	26.2%	22	2,366,615	55.2%	36	17.2%	6	2.66	13	3.16	17
Hawaii	1,108,229	85.2%	14	3.4%	9	55.1%	34	29.8%	5	356,267	59.1%	9	14.9%	20	3.01	2	3.48	2
Idaho	1,006,749	85.8%	9	2.1%	47	62.2%	1	21.2%	49	360,723	62.2%	2	10.8%	47	2.73	9	3.23	10
Illinois	11,430,602	84.0%	21	2.5%	33	53.3%	44	28.8%	10	4,202,240	54.1%	43	15.5%	14	2.65	15	3.23	9
Indiana	5,544,159	84.4%	19	2.9%	22	57.4%	16	24.3%	35	2,065,355	58.2%	13	13.5%	32	2.61	24	3.11	27
Iowa	2,776,755	82.4%	40	3.6%	7	59.5%	8	23.7%	40	1,064,325	59.2%	6	10.4%	50	2.52	48	3.05	47
Kansas	2,477,574	82.9%	32	3.3%	13	59.8%	5	22.7%	43	944,726	58.5%	12	11.2%	46	2.53	42	3.08	37
Kentucky	3,685,296	85.9%	8	2.7%	25	58.7%	13	22.6%	45	1,379,782	59.2%	5	14.4%	25	2.60	25	3.08	38
Louisiana	4,219,973	86.0%	5	2.7%	30	53.0%	45	27.4%	14	1,499,269	53.6%	45	19.1%	3	2.74	6	3.28	5
Maine	1,227,928	82.9%	35	3.0%	16	58.0%	15	24.0%	36	465,312	58.1%	15	12.5%	37	2.56	35	3.03	49
Maryland	4,781,468	84.0%	22	2.4%	38	52.8%	46	29.1%	8	1,748,991	54.2%	42	17.0%	7	2.67	12	3.14	21
Massachusetts	6,016,425	80.8%	48	3.6%	8	50.5%	49	32.8%	2	2,247,110	52.1%	48	15.3%	16	2.58	30	3.15	19
Michigan	9,295,297	84.7%	17	2.3%	43	54.0%	40	27.8%	11	3,419,331	55.1%	37	16.3%	9	2.66	14	3.16	15
Minnesota	4,375,099	82.2%	42	2.7%	28	57.2%	18	27.4%	15	1,647,853	57.2%	19	11.4%	44	2.58	29	3.13	24
Mississippi	2,573,216	86.9%	2	2.7%	27	53.4%	43	26.7%	20	911,374	54.7%	39	19.3%	2	2.75	5	3.27	7
Missouri	5,117,073	83.5%	25	2.8%	24	57.0%	20	23.9%	37	1,961,206	56.3%	28	13.4%	33	2.54	41	3.08	35
Montana	799,065	82.9%	31	3.0%	20	59.8%	4	22.3%	46	306,163	57.7%	17	11.5%	43	2.53	44	3.08	36
Nebraska	1,578,385	82.9%	33	3.0%	18	59.2%	11	24.4%	34	602,363	58.2%	14	10.8%	48	2.54	40	3.11	28
Nevada	1,201,833	80.6%	50	2.0%	49	53.8%	41	23.7%	39	466,297	51.4%	49	14.5%	23	2.53	46	3.06	44
New Hampshire	1,109,252	83.1%	28	2.9%	23	58.2%	14	25.5%	29	411,186	59.7%	4	11.5%	42	2.62	19	3.09	34
New Jersey	7,730,188	85.6%	10	2.2%	45	53.8%	42	29.1%	7	2,794,711	56.5%	25	15.8%	12	2.70	10	3.21	12
New Mexico	1,515,069	85.9%	7	1.9%	50	56.0%	29	25.8%	25	542,709	56.0%	31	16.2%	10	2.74	7	3.26	8
New York	17,990,455	82.5%	39	3.0%	15	49.9%	50	32.1%	3	6,639,322	49.9%	50	17.7%	4	2.63	16	3.22	11
North Carolina	6,628,637	83.9%	23	3.4%	10	56.3%	26	25.1%	31	2,517,026	56.6%	24	15.4%	15	2.54	39	3.03	48
North Dakota	638,800	82.3%	41	3.8%	4	59.7%	6	25.9%	23	240,878	59.1%	8	9.9%	51	2.55	37	3.13	23
Ohio	10,847,115	84.5%	18	2.4%	37	55.9%	30	25.5%	27	4,087,546	56.1%	30	14.7%	21	2.59	26	3.12	26
Oklahoma	3,145,585	84.2%	20	3.0%	19	59.3%	10	20.9%	50	1,206,135	57.7%	16	13.2%	34	2.53	45	3.06	43
Oregon	2,842,321	81.8%	44	2.3%	40	57.3%	17	23.1%	42	1,103,313	55.6%	35	12.5%	39	2.52	47	3.02	50
Pennsylvania	11,881,643	83.6%	24	2.9%	21	54.5%	38	27.3%	16	4,495,966	55.7%	33	14.5%	24	2.57	33	3.10	31
Rhode Island	1,003,464	81.6%	45	3.8%	2	52.4%	47	29.6%	6	377,977	53.5%	46	15.0%	18	2.55	36	3.11	29
South Carolina	3,486,703	85.4%	12	3.3%	12	55.0%	35	26.4%	21	1,258,044	56.4%	27	17.3%	5	2.68	11	3.16	16
South Dakota	696,004	83.0%	30	3.7%	6	59.5%	9	24.4%	33	259,034	58.9%	11	10.7%	49	2.59	28	3.16	14
Tennessee	4,877,185	85.3%	13	2.6%	31	57.1%	19	23.2%	41	1,853,725	57.2%	20	15.6%	13	2.56	34	3.05	46
Texas	16,986,510	85.4%	11	2.3%	41	56.6%	25	25.1%	30	6,070,937	56.6%	23	15.0%	19	2.73	8	3.28	6
Utah	1,722,850	88.5%	1	1.7%	51	60.6%	3	25.5%	28	537,273	64.8%	1	11.7%	41	3.15	1	3.67	1
Vermont	562,758	80.6%	49	3.8%	3	55.5%	33	27.6%	13	210,650	56.4%	26	12.3%	40	2.57	32	3.06	42
Virginia	6,187,358	82.8%	36	3.4%	11	55.7%	32	27.1%	19	2,291,830	56.8%	22	14.3%	26	2.61	23	3.09	33
Washington	4,866,692	81.5%	46	2.5%	35	56.6%	23	24.8%	32	1,872,431	55.0%	38	12.6%	36	2.53	43	3.06	40
West Virginia	1,793,477	86.0%	4	2.1%	48	58.8%	12	22.2%	47	688,557	59.0%	10	13.7%	31	2.55	38	3.05	45
Wisconsin	4,891,769	83.2%	27	2.7%	26	56.7%	21	27.1%	18	1,822,118	57.5%	18	12.5%	38	2.61	21	3.14	22
Wyoming	453,588	84.7%	16	2.3%	44	61.3%	2	21.7%	48	168,839	59.7%	3	11.3%	45	2.63	17	3.16	18

Source: U.S. Department of Commerce, Bureau of the Census, Population Estimates Branch

Table 19
Race and Hispanic Origin by County: 1980, 1990, and Provisional 1994 Estimates

	NOT OF HISPANIC ORIGIN																HISPANIC ORIGIN			
	WHITE				BLACK				AMERICAN INDIAN, ESKIMO, OR ALEUT				ASIAN OR PACIFIC ISLANDER							
County	1980	1990	1994(e)	Percent Change 1990-94	1980	1990	1994(e)	Percent Change 1990-94	1980	1990	1994(e)	Percent Change 1990-94	1980	1990	1994(e)	Percent Change 1990-94	1980	1990	1994(e)	Percent Change 1990-94
Beaver	4,245	4,585	4,889	6.6%	0	5	8	60.0%	24	36	48	33.3%	24	19	17	-10.5%	85	120	188	56.7%
Box Elder	30,279	34,093	35,471	4.0%	11	16	21	31.3%	1,231	368	430	16.8%	402	398	355	-10.8%	1,299	1,610	2,222	38.0%
Cache	55,198	65,769	72,373	10.0%	211	213	261	22.5%	196	525	639	21.7%	863	1,896	2,233	17.8%	708	1,780	2,794	57.0%
Carbon	19,464	17,693	18,634	5.3%	73	55	35	-36.4%	122	123	182	48.0%	97	110	168	52.7%	2,423	2,247	2,080	-7.4%
Daggett	754	665	723	8.7%	0	0	0	0.0%	1	6	6	0.0%	1	4	4	0.0%	13	15	16	6.7%
Davis	136,225	174,273	195,911	12.4%	2,233	2,284	2,508	9.8%	687	997	1,031	3.4%	1,959	3,112	3,538	13.7%	5,436	7,275	9,011	23.9%
Duchesne	12,080	11,633	12,126	4.2%	2	8	15	87.5%	268	623	795	27.6%	38	31	41	32.3%	177	350	524	49.7%
Emery	11,037	10,037	10,207	1.7%	0	4	4	0.0%	118	39	48	23.1%	63	33	20	-39.4%	233	219	321	46.6%
Garfield	3,558	3,868	4,057	4.9%	1	1	1	0.0%	66	68	73	7.4%	12	8	16	100.0%	36	35	53	51.4%
Grand	7,680	6,109	7,337	20.1%	1	6	6	0.0%	163	192	195	1.6%	44	22	15	-31.8%	353	291	396	36.1%
Iron	16,652	19,670	23,679	20.4%	17	40	88	120.0%	364	612	682	11.4%	77	85	211	148.2%	239	382	539	41.1%
Juab	5,419	5,651	6,608	16.9%	1	2	4	100.0%	46	81	83	2.5%	9	10	13	30.0%	55	73	92	26.0%
Kane	3,933	4,962	5,469	10.2%	1	5	5	0.0%	38	77	72	-6.5%	6	24	19	-20.8%	46	101	135	33.7%
Millard	8,499	10,647	10,884	2.2%	1	2	2	0.0%	135	178	189	6.2%	178	104	157	51.0%	157	402	669	66.4%
Morgan	4,820	5,421	6,209	14.5%	0	7	7	0.0%	22	7	4	-42.9%	26	15	11	-26.7%	49	78	118	51.3%
Piute	1,306	1,252	1,410	12.6%	0	0	0	0.0%	5	9	6	-33.3%	1	1	5	400.0%	17	15	29	93.3%
Rich	2,068	1,696	1,808	6.6%	0	1	1	0.0%	8	1	1	0.0%	8	6	7	16.7%	16	21	33	57.1%
Salt Lake	570,182	652,017	688,039	5.5%	3,958	5,214	7,241	38.9%	3,872	5,463	7,024	28.6%	10,187	19,651	28,820	46.7%	30,867	43,647	60,877	39.5%
San Juan	6,197	5,353	5,199	-2.9%	11	10	11	10.0%	5,567	6,782	7,664	13.0%	45	36	32	-11.1%	433	440	494	12.3%
Sanpete	14,097	15,334	17,434	13.7%	24	11	22	100.0%	143	109	115	5.5%	88	245	375	53.1%	268	560	854	52.5%
Sevier	14,350	14,799	16,262	9.9%	0	5	16	220.0%	175	312	251	-19.6%	27	26	26	0.0%	175	289	345	19.4%
Summit	9,919	15,035	20,311	35.1%	5	18	41	127.8%	38	62	49	-21.0%	32	77	101	31.2%	204	326	598	83.4%
Tooele	22,941	22,879	24,706	8.0%	163	224	191	-14.7%	351	354	489	38.1%	183	184	225	22.3%	2,395	2,960	3,690	24.7%
Uintah	17,990	19,187	21,301	11.0%	6	10	15	50.0%	1,882	2,243	2,549	13.6%	63	80	97	21.3%	565	691	739	6.9%
Utah	208,776	249,118	278,002	11.6%	148	359	744	107.2%	1,746	1,759	2,196	24.8%	2,396	3,866	5,532	43.1%	5,040	8,488	12,525	47.6%
Wasatch	8,333	9,753	11,327	16.1%	3	3	9	200.0%	53	62	55	-11.3%	13	18	31	72.2%	121	253	379	49.8%
Washington	25,421	46,680	60,757	30.2%	12	63	118	87.3%	248	679	966	42.3%	86	276	384	39.1%	298	862	1,175	36.3%
Wayne	1,868	2,109	2,222	5.4%	2	1	1	0.0%	15	40	37	-7.5%	2	2	8	300.0%	24	25	33	32.0%
Weber	131,523	141,790	149,377	5.4%	2,184	2,319	2,879	24.1%	677	956	1,179	23.3%	1,662	2,223	2,910	30.9%	8,570	11,042	15,654	41.8%
Percent of Total	92.7%	91.2%	89.4%		0.6%	0.6%	0.7%		1.2%	1.3%	1.4%		1.3%	1.9%	2.4%		4.1%	4.9%	6.1%	
Totals	1,354,814	1,572,078	1,712,732	8.9%	9,068	10,886	14,254	30.9%	18,261	22,763	27,058	18.9%	18,592	32,562	45,371	39.3%	60,302	84,597	116,583	37.8%

(e)=estimate

Note: MARS data were used for the analysis because these data have adjusted the census race categories to eliminate "Other race", divided the Hispanic/non-Hispanic population by race so that Hispanics can be added to the race statistics, and adjusted the 1980 and 1990 census data for errors in age reporting, especially in the 0-2 ages.

Sources: U.S. Bureau of the Census, MARS data by county, Utah, 1980 and 1990. Provisional 1994 estimates were derived by Utah Department of Employment Security with review from Governor's Office of Planning and Budget.

Table 20
Housing Units, Households, and Persons Per Household by State: April 1, 1990 and July 1, 1995 (in Thousands)

State	April 1, 1990 (census) Total Housing Units	Total Households	Persons per Household	Persons per Household Ranking	July 1, 1995 Total Housing Units	Total Households	Persons per Household	Persons per Household Ranking	1990-95 Percent Change: Total Housing Units	Total Households	Persons per Household
United States	102,262	91,946	2.63		108,026	97,061	2.64		5.6%	5.6%	0.4%
Alabama	233	189	2.80	3	239	209	2.81	4	2.6%	10.6%	0.4%
Alaska	1,670	1,507	2.62	19	1,783	1,602	2.60	21	6.8%	6.3%	-0.8%
Arizona	1,001	891	2.57	33	1,059	938	2.59	28	5.8%	5.3%	0.8%
Arkansas	1,659	1,369	2.62	20	1,826	1,551	2.67	11	10.1%	13.3%	1.9%
California	11,183	10,381	2.79	4	11,727	10,925	2.82	3	4.9%	5.2%	1.1%
Colorado	1,477	1,282	2.51	49	1,582	1,461	2.51	49	7.1%	14.0%	0.0%
Connecticut	1,321	1,230	2.59	28	1,353	1,223	2.60	24	2.4%	-0.6%	0.4%
Delaware	278	250	2.26	51	271	232	2.21	51	-2.5%	-7.2%	-2.2%
District of Columbia	290	247	2.61	21	314	269	2.59	26	8.3%	8.9%	-0.8%
Florida	6,100	5,135	2.46	50	6,654	5,527	2.51	50	9.1%	7.6%	2.0%
Georgia	2,638	2,366	2.66	14	2,929	2,645	2.66	14	11.0%	11.8%	0.0%
Hawaii	390	356	3.01	2	425	385	2.98	2	9.0%	8.1%	-1.0%
Idaho	1,144	1,064	2.52	47	1,186	1,090	2.52	48	3.7%	2.4%	0.0%
Illinois	413	361	2.73	8	463	415	2.75	5	12.1%	15.0%	0.7%
Indiana	4,506	4,202	2.65	15	4,679	4,335	2.66	12	3.8%	3.2%	0.4%
Iowa	2,246	2,065	2.61	22	2,401	2,183	2.59	27	6.9%	5.7%	-0.8%
Kansas	1,044	945	2.53	44	1,095	971	2.56	35	4.9%	2.8%	1.2%
Kentucky	1,507	1,380	2.60	25	1,610	1,456	2.58	30	6.8%	5.5%	-0.8%
Louisiana	1,716	1,499	2.74	7	1,761	1,556	2.71	10	2.6%	3.8%	-1.1%
Maine	2,473	2,247	2.58	30	2,521	2,291	2.56	32	1.9%	2.0%	-0.8%
Maryland	1,892	1,749	2.67	12	2,023	1,852	2.66	13	6.9%	5.9%	-0.4%
Massachusetts	587	465	2.56	34	620	476	2.53	44	5.6%	2.4%	-1.2%
Michigan	3,848	3,419	2.66	13	4,021	3,539	2.64	16	4.5%	3.5%	-0.8%
Minnesota	1,849	1,648	2.58	29	1,956	1,732	2.60	20	5.8%	5.1%	0.8%
Mississippi	2,199	1,961	2.53	43	2,337	2,031	2.55	41	6.3%	3.6%	0.8%
Missouri	1,010	911	2.75	5	1,065	961	2.73	8	5.4%	5.5%	-0.7%
Montana	361	306	2.53	42	369	333	2.54	42	2.2%	8.8%	0.4%
Nebraska	2,818	2,517	2.54	40	3,119	2,730	2.55	39	10.7%	8.5%	0.4%
Nevada	276	241	2.55	38	287	243	2.53	46	4.0%	0.8%	-0.8%
New Hampshire	661	602	2.54	39	690	621	2.56	37	4.4%	3.2%	0.8%
New Jersey	504	411	2.62	18	524	429	2.60	22	4.0%	4.4%	-0.8%
New Mexico	3,075	2,795	2.70	10	3,155	2,861	2.72	9	2.6%	2.4%	0.7%
New York	632	543	2.74	6	684	602	2.75	6	8.2%	10.9%	0.4%
North Carolina	519	466	2.53	46	646	587	2.56	36	24.5%	26.0%	1.2%
North Dakota	7,227	6,639	2.63	17	7,332	6,672	2.64	17	1.5%	0.5%	0.4%
Ohio	4,372	4,088	2.59	27	4,545	4,219	2.58	29	4.0%	3.2%	-0.4%
Oklahoma	1,406	1,206	2.53	45	1,442	1,248	2.55	40	2.6%	3.5%	0.8%
Oregon	1,194	1,103	2.52	48	1,309	1,216	2.53	45	9.6%	10.2%	0.4%
Pennsylvania	4,938	4,496	2.57	31	5,107	4,567	2.57	31	3.4%	1.6%	0.0%
Rhode Island	415	378	2.55	37	424	374	2.56	33	2.2%	-1.1%	0.4%
South Carolina	1,424	1,258	2.68	11	1,567	1,351	2.65	15	10.0%	7.4%	-1.1%
South Dakota	292	259	2.59	26	311	269	2.62	18	6.5%	3.9%	1.2%
Tennessee	2,026	1,854	2.56	35	2,184	2,003	2.56	34	7.8%	8.0%	0.0%
Texas	7,009	6,071	2.73	9	7,348	6,677	2.74	7	4.8%	10.0%	0.4%
Utah	598	537	3.15	1	658	617	3.12	1	10.0%	14.9%	-1.0%
Vermont	2,497	2,292	2.61	23	2,705	2,476	2.59	25	8.3%	8.0%	-0.8%
Virginia	271	211	2.57	32	285	223	2.53	43	5.2%	5.7%	-1.6%
Washington	2,032	1,872	2.53	41	2,250	2,084	2.55	38	10.7%	11.3%	0.8%
West Virginia	2,056	1,822	2.61	24	2,188	1,910	2.61	19	6.4%	4.8%	0.0%
Wisconsin	781	689	2.55	36	791	712	2.52	47	1.3%	3.3%	-1.2%
Wyoming	203	169	2.63	16	207	181	2.60	23	2.0%	7.1%	-1.1%

Note: Numbers may not sum due to rounding.

Source: U.S. Department of Commerce, Bureau of the Census.

Employment, Wages, Labor Force

In 1996, for the fourth straight year, Utah's employment growth exceeded 5 percent—a feat unprecedented in the post World War II era. Moreover, Utah has seen nine years of growth above the 3-percent mark. Expansion has slowed somewhat from the boom year of 1994 when job growth reached 6.2 percent, but it has remained remarkably high. Utah's 5.3 percent growth rate meant an additional 48,000 net new jobs on Utah payrolls during 1996.

Utah's strong job gains also meant lower unemployment. Utah's jobless rate dropped from 3.6 percent in 1995 to 3.4 percent in 1996, the lowest level in four decades. On average, 34,000 Utahns were out of work during each month of 1996. Not since 1979 has Utah seen such a small number of unemployed.

In comparison to a national economy which the Federal Reserve Board felt was "heating up," Utah's economic climate virtually sizzled. The state's job growth more than doubled the national average while its rate of employment expansion ranked second only to neighboring Nevada. Utah's unemployment rate also ranked third from the bottom in 1996—registering two points below the comparable U.S. figure.

As in 1995, high job growth, low unemployment, and lower in-migration led to a tight Utah labor market. Temporary shortages emerged particularly in construction and low skilled jobs. Utah attracted enough new jobs with mid-range wages that workers were effectively "sucked" out of the low-wage, low-skilled jobs. Many businesses—particularly in trade, services, and construction—rapidly adjusted wages and other benefits to attract nonworking Utahns into the labor force. For example, average wages for experienced counter attendants in Salt Lake County registered almost $7 an hour during the last part of 1995. Shortages were especially acute in Salt Lake, Summit, Utah, and Washington Counties. And during the Micron push, construction workers were in serious short supply.

Nonfarm Jobs

Between 1995 and 1996, Utah job growth dropped from 5.6 percent to 5.3 percent—slower but still remarkably robust. Expansion remained exceptionally broad-based. The only major sector to lose jobs was mining where employment dropped by 300 positions.

Construction. Construction managed another year of double-digit growth—its sixth straight. Again, this occurrence is unprecedented in the post WW II era (since records have been kept). Construction produced 6,500 new jobs for a growth rate of almost 12 percent during 1996. Some of construction's performance was colored by the Micron project which flourished during the last part of 1995 and died abruptly during the first few months of 1996. However, even with the cessation of this large project, construction employment continued on its vigorous path with continued residential construction and a booming commercial sector. Light-rail, current/upcoming commercial projects, and the Interstate 15 project should keep construction employment growing during 1997.

Manufacturing. While not as dramatic as construction's gains, manufacturing's performance was another signal of the strength of the Utah economy. Over the past year Utah's manufacturing employment grew by over 5 percent. This level certainly ranks in the moderate range for most industries. Yet, compared to a national economy which continues to lose manufacturing positions, this growth rate is clearly notable. Over the past year, Utah has added 5,600 net new manufacturing positions. Most of these gains occurred in the durable goods sector which typically pays higher-than-average wages. And, the industry managed this comparatively strong growth despite some defense-related and food processing layoffs.

Transportation/Communications/Utilities. Employment growth picked up slightly in the transportation/communications/utilities sector which added 2,500 new jobs in 1996 for a moderate growth rate of almost 5 percent. Trucking and warehousing continued to account for the vast majority of new jobs. Utilities and airlines experienced sluggish expansion, while communications performed better during the last half of the year.

Trade. The trade employment trend pulled back from its brisk 7 percent 1995 pace. That year, several large national chains entered Utah and the retail market strained to keep up with residential expansion. Still, growth in trade jobs remained strong at almost 5 percent—up 10,500 positions. This expansion remained broad-based with eating and drinking places showing some of the largest job gains.

Service. The service industry created the largest number of new Utah jobs (17,100) during for a growth rate over 7 percent. Despite some software layoffs, computer services continued to expand at a respectable rate. Other major contributors to this rapid expansion included business services (particularly employee leasing firms, "temp agencies", and telephone marketing businesses), engineering/management services, personal/amusement services, and health services.

Finance/Insurance/Real Estate. Regional and national "call-in" centers kept the finance/ insurance/real estate industry on the fast track. Between 1995 and 1996, this industry added 3,300 new jobs for a growth rate of 7 percent. Several large credit card and financial service centers either located operations in Utah or added substantial numbers of new staff members and proved the primary source of gains in this industry.

Government. In the public sector, while defense employment cutbacks plagued federal employment growth once again in 1996, the losses did begin to moderate. Since the state is growing so rapidly, the main difficulty in losing defense jobs is not to replace the job itself but replacing the higher-than-average wage. State and local government produced only moderate gains—far smaller than the private sector. Just compare the 6 percent-plus growth of private industry with the 1.5 percent expansion in government in 1996. Altogether, government added 2,400 new jobs during 1996.

Wages

Final 1996 figures are expected to show an increase of 9.6 percent in total nonfarm wages. This growth is slightly higher than the 1995 increase of 9.5 percent. Changes in Utah's average annual wage reflected the pattern in total nonfarm wages. The state's 1996 average annual wage is expected to reach $24,190—up over 4 percent from 1995. This increase marks only the third time during the past ten years that average wage increases in Utah have outpaced increases in inflation. Despite a sound economy, growth in wages for Utahns covered under unemployment insurance laws has not kept pace with national wage increases during most of the 1980s and the early 1990s. Utah's annual pay as a percentage of U.S. annual pay has declined from a high of 96 percent in 1981 to a low of 84.4 percent in 1993. However, the declines have moderated substantially during the 1990s. And, Utah's annual pay as a percent of U.S. pay actually increased to 84.7 percent in 1994—the first uptick since 1980. Utah realized another slight gain in 1995 when that ratio rose to 84.8 percent. It increased again in 1996 to 85.2 percent.

The loss of high-paying, goods-producing jobs in the early and mid-1980s helped contribute to this decline. However, Utah's demographics may also play a part, as the state has a large percentage of young people in the labor market and a younger labor force in general. Young people are usually paid less than older workers. Utah also has a higher percentage of individuals working part-time than the U.S. in general, which also tends to pull the average wage down.

Utah's Major Employers

At the end of 1995, with roughly 19,000 employees, the state government held the top employer spot. Other top employers included major universities, school districts, government entities, an airbag manufacturer, a "call-in center," a food store chain, a department store, a software company, and an airline. Hill Air Force Base—for many years Utah's top employer—has gradually dropped to the number six spot. Major retail chains, utilities, health care services, large manufacturing firms, and banks are found often in the top 100 companies. For a full list, consult the tables showing Utah employers, included in this chapter.

Labor Force Characteristics

What was the composition of Utah's labor force in 1995 (the most recent data available)? Roughly 72 percent of the state's civilian, noninstitutionalized population—over the age of 16—participated in the labor force during the year. This "participation rate" ranks significantly higher than the national average of 67 percent. Both Utah women and Utah men are more likely to take part in the labor market than their national counterparts. In addition, Utah teenagers showed a very high propensity toward labor force participation. Roughly 67 percent of Utah's population 16-19 years old are part of the labor force compared to 52 percent nationally. In fact, Utah has the third highest rate of teenage labor force participation in the nation (after Minnesota and Iowa).

Although participation has increased notably since 1990, during 1995 the share of the civilian population in the labor force dropped slightly . Over the past decade, a strong economy and many new jobs have enticed many individuals who had previously removed themselves from the labor force to join those working or looking for work. Many of these individuals have been Utah women. The slight slowdown in participation growth points to a comparable slowdown in job growth.

Who Works?

Data suggest that individuals between the ages of 20 and 54 were most likely to be in the state's work force. Men between the ages of 45 and 54 were the most likely to work. However, women between the ages of 20 and 24 participated in the labor force at the highest female rate.

More Likely to Work

Just why are Utahns more likely to work than their national counterparts? Is it just Utah's much touted work ethic? Utah has a relatively young population, and young people are most likely to work—particularly given recent trends toward early retirement. Plus, Utah's young people are much more likely to work than U.S. teenagers in general. Utah's teenage (16-19 year-olds) participation rate generally runs more than 15 percentage points above the national average. In addition, Utah's relatively large families and lower-than-average wages may require families to embrace more than one wage earner. These factors, coupled with Utahns' relatively higher education levels and "work ethic," account for most of the difference between Utah and U.S. participation rates.

The Marriage Factor

Single (never married) Utahns are most likely to work. However, never married men are less likely to work than married men; while single women are more likely to work than married females. Those in the "other marital status" group (separated, divorced, widowed) are least likely (of both sexes) to be labor force members. Of course, this "other" group includes a larger number of older people—participation rates include those over 65.

Where Do They Work?

Roughly 98 percent of experienced Utah workers (individuals as opposed to jobs which were discussed previously in this narrative) are employed in nonagricultural industries. Agriculture accounts for only 3 percent of experienced workers, while about 7 percent of Utahns are self-employed.

Why Are They Unemployed?

Roughly 37 percent of the unemployed had lost their jobs in 1995—down substantially from 1992 when 46 percent had lost their positions. On the other hand, job leavers increased from 17 percent in 1992 to 20 percent in 1995. Re-entrants skyrocketed as many women took advantage of the strong economy to look for work. In 1992, only about one-fourth of unemployed workers were re-entrants compared to 40 percent in 1995.

Occupational Outlook

Occupational employment projections of jobs in the state reflect the robust nature of the Utah economy. The occupations in demand are directly related to some 300 industries employing over a million employees, working in the nearly 50,000 establishments in Utah.

Occupational Composition of Utah Jobs

Of the eight major occupational categories representing the 700 job title projections, the production, operating, and maintenance group accounts for one in every four jobs. This is by far the largest category in terms of the number of jobs and number of different job titles. Over 43,000 of the total 190,000 new jobs estimated over the 1996 to 2001 period will be in this category. The professional and clerical categories each will account for 16 percent of total employment in Utah, with the professional group contributing over 35,000 new positions, and clerical with 25,000 new jobs over the 1996 to 2001 time period. These three job groups will account for nearly six of every ten jobs.

Service-related occupations claim about 15 percent of the total job pie along with 12 percent in the sales occupational category. Managerial and administrative positions add another 7 percent to the total with the technical and agricultural related occupations accounting for 5.0 and 2.4 percent respectively.

Employment Trends

Rates of job creation vary by occupational category. Occupational categories that will experience rates above average will be service, technical, professional, sales, and managerial. Job groups with less than average employment growth are production, clerical, and agriculture.

Job Openings—The Measure of Labor Demand

The growth of employment in an occupation provides only a portion of the true measure of labor demand in the market. Job openings are vacancies created by growth in employment *and* vacancies resulting from the need to replace workers who leave current employment positions for another occupation. Together, these two components quantify the demand for an occupation. Each year over the next five years over 60,000 job openings will occur. About 38,000 of these will result from employment growth and another 22,000 will originate from the need to replace current workers who change occupations.

In terms of the eight occupational categories, the production-related jobs will offer the most potential with an average of 14,500 job openings per year. Service occupations will add another 11,500 annually with professional, sales, and clerical categories each contributing between 8,000 and 10,000 job opportunities. The managerial and technical groups will each add about 3,000 to 4,000 vacancies per year. Agricultural positions will number just over 1,000.

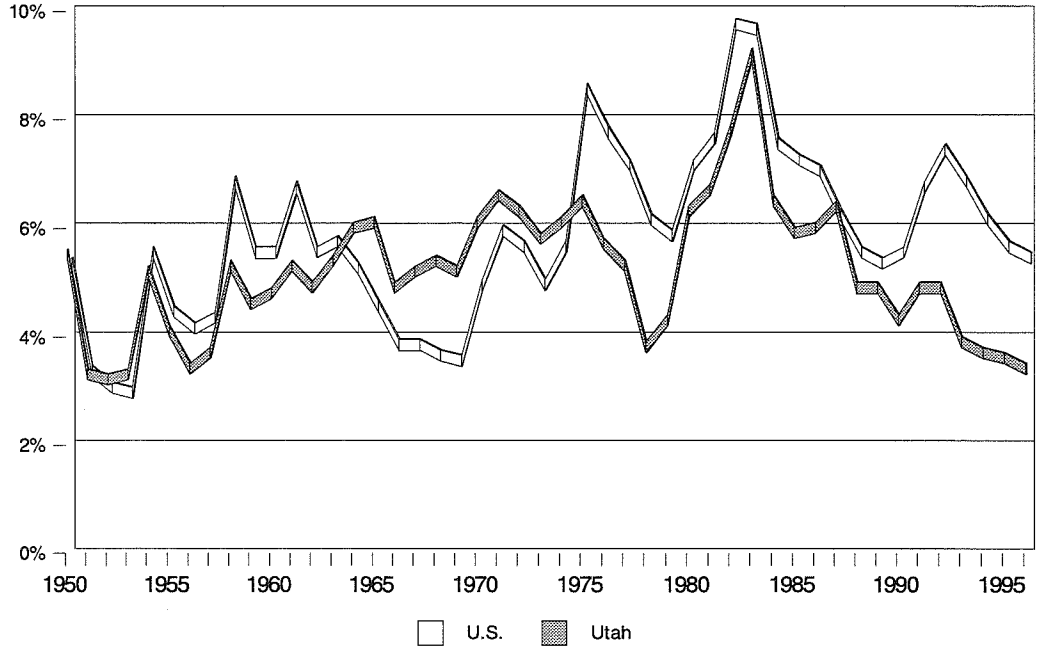
Education, Training, and Experience Requirements of Utah Jobs

About 21 percent of jobs in the state require at least a bachelor's degree or more, based on a new method of assigning training levels to occupations from the Bureau of Labor Statistics. This new education/training/experience classification system, when linked with occupational employment projections for Utah, results in the following percentages of Utah jobs and education, training, and experience requirements: associate degree (4 percent); postsecondary vocational training (6 percent); work-related experience (8 percent); long term (one year or more) on-the-job training (11 percent); moderate term (one month to one year) on-the-job training (12 percent); and short term (less than one month) informal on-the-job training (39 percent).

Conclusion

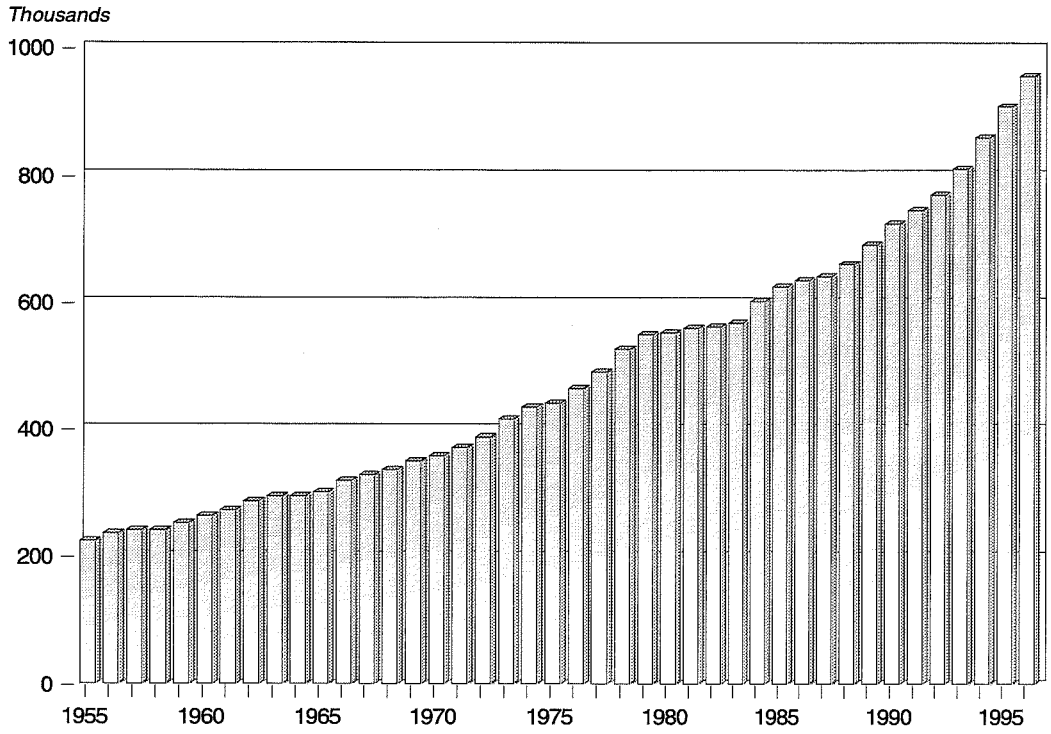
Utah finished 1996 still riding the crest of an economic wave unprecedented in the post WW II period. Job growth slowed slightly but remained above 5 percent and unemployment hit a 40-year low. Wages began to rise for many Utah workers as temporary labor shortages, and the robust nature of Utah's manufacturing and construction sectors indicated the strength of Utah's economy.

Figure 18
U.S. and Utah Unemployment Rates: 1950 to 1996



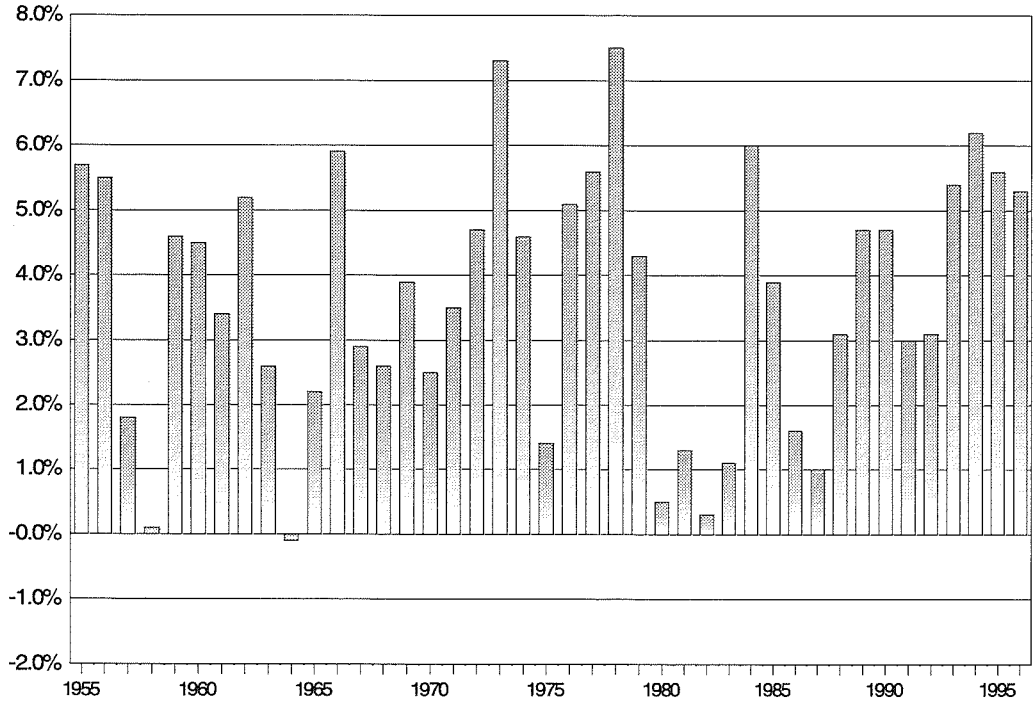
Source: Utah Department of Employment Security.

Figure 19
Utah Nonagricultural Employment: 1955 to 1996



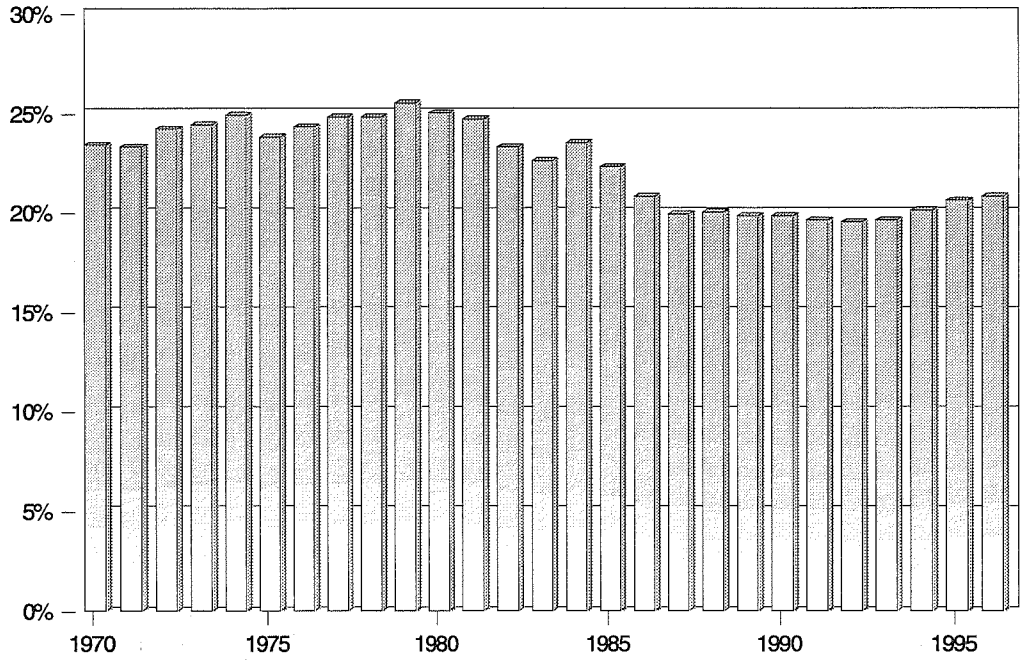
Source: Utah Department of Employment Security.

Figure 20
Utah Nonagricultural Employment--Annual Percent Change: 1955 to 1996



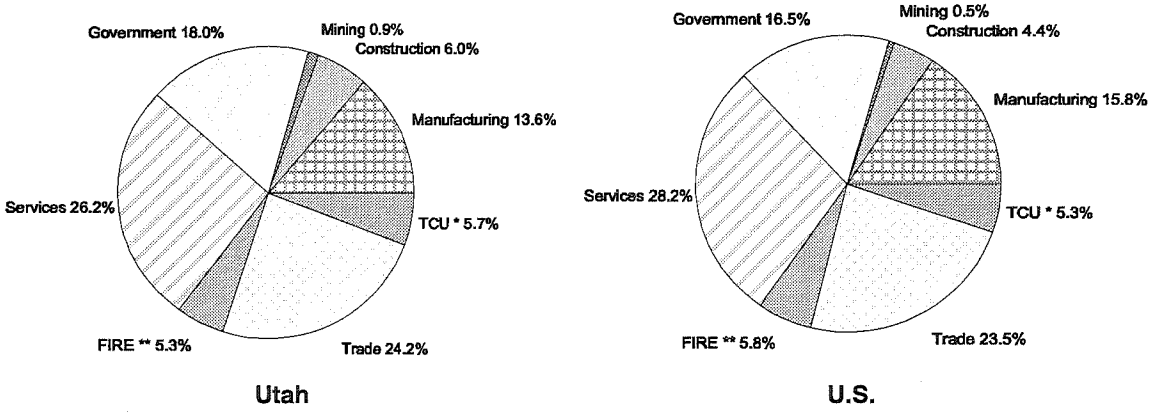
Source: Utah Department of Employment Security.

Figure 21
Percent of Utah Employment in Goods-Producing Industries: 1970 to 1996



Source: Utah Department of Employment Security.

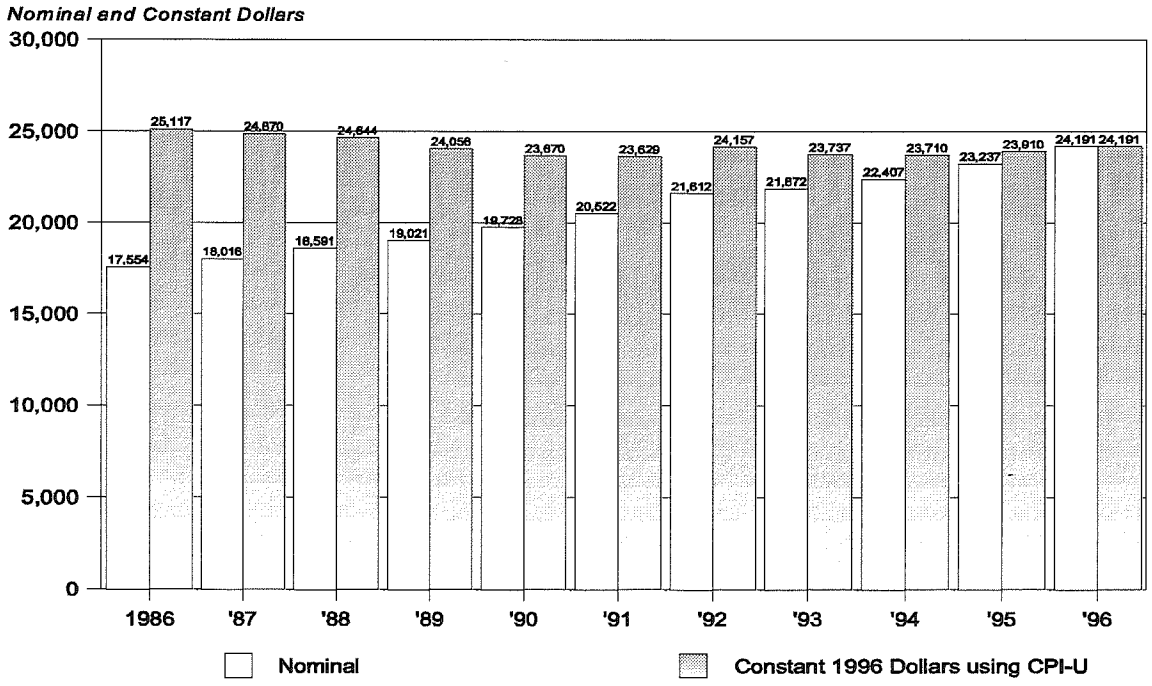
Figure 22
Employment by Industry: 1995



* Transportation, Communications and Utilities.
** Finance, Insurance and Real Estate.

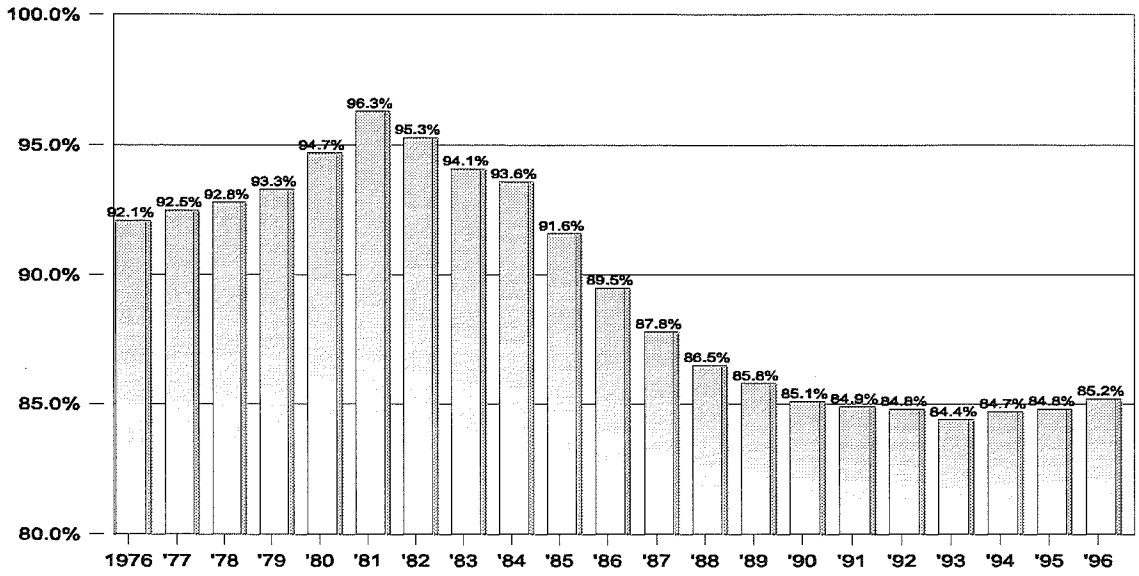
Source: Utah Department of Employment Security.

Figure 23
Utah Nonagricultural Average Annual Wages: 1986 to 1996



Source: Utah Department of Employment Security.

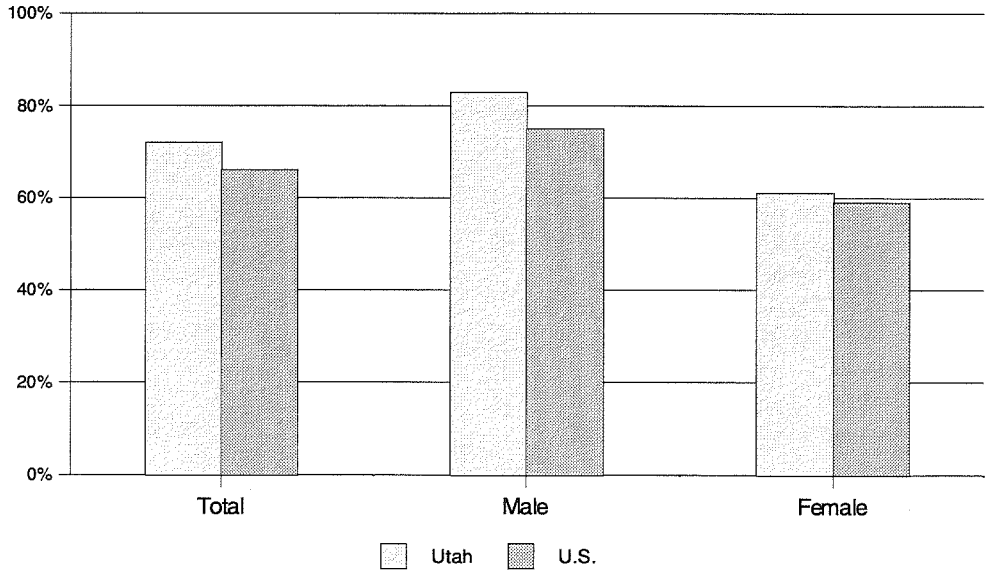
Figure 24
Average Annual Pay as a Percent of U.S.: 1976 to 1996



Note: For workers covered by unemployment insurance.

Source: Utah Department of Employment Security.

Figure 25
Utah and U.S. Labor Force Participation Rates: 1995



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

Table 21
Labor Force, Employed, and Unemployed Persons by District and County: 1995

District/County	Civilian Labor Force	Total Employed	Unemployed	Unemployment Rate
State Total	970,757	936,139	36,000	3.6
Bear River	57,690	55,532	2,083	3.6
Box Elder	17,007	16,204	803	4.7
Cache	39,826	38,506	1,245	3.1
Rich	857	822	35	4.1
Wasatch Front	640,080	618,723	21,357	3.3
North	197,090	189,615	7,475	3.8
Davis	103,843	100,337	3,506	3.4
Morgan	3,255	3,102	153	4.7
Weber	89,992	86,176	3,816	4.2
South	442,990	429,108	13,882	3.1
Salt Lake	432,049	418,785	13,264	3.1
Tooele	10,941	10,323	618	5.6
Mountainland	159,095	154,226	4,869	3.1
Summit	11,386	10,925	461	4.0
Utah	142,357	138,213	4,144	2.9
Wasatch	5,352	5,088	264	4.9
Central	24,188	22,877	1,311	5.4
Juab	3,205	3,047	158	4.9
Millard	4,520	4,299	221	4.9
Piute	468	440	28	6.0
Sanpete	7,420	6,968	452	6.1
Sevier	7,318	6,947	371	5.1
Wayne	1,257	1,176	81	6.4
Southwestern	51,255	49,161	2,094	4.1
Beaver	2,252	2,160	92	4.1
Garfield	2,563	2,248	315	12.3
Iron	12,431	12,005	426	3.4
Kane	2,626	2,400	226	8.6
Washington	31,383	30,348	1,035	3.3
Uintah Basin	15,867	14,619	1,248	7.9
Daggett	426	399	27	6.3
Duchesne	5,527	5,011	516	9.3
Uintah	9,914	9,209	705	7.1
Southeastern	22,583	20,927	1,656	7.3
Carbon	8,757	8,179	578	6.6
Emery	4,064	3,739	325	8.0
Grand	4,747	4,427	320	6.7
San Juan	5,015	4,582	433	8.6

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

Table 22
Utah Unemployment Rates by District and County: 1985 to 1995

District/County	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995(p)
State Total	5.9	6.0	6.4	4.9	4.6	4.3	4.9	4.9	3.9	3.7	3.6
Bear River	4.8	4.3	4.5	3.8	3.8	4.1	3.8	4.3	3.7	3.6	3.6
Box Elder	4.5	4.1	4.3	3.8	3.8	4.4	4.2	5.4	5.1	4.9	4.7
Cache	5.1	4.4	4.5	3.8	3.9	3.9	3.6	3.8	3.0	3.0	3.1
Rich	3.7	5.1	5.8	4.0	2.0	2.0	2.7	3.8	3.0	3.9	4.1
Wasatch Front	5.3	5.4	5.8	4.7	4.5	5.0	4.7	4.8	3.8	3.5	3.3
North	4.9	5.5	6.0	5.1	5.0	4.5	5.0	5.3	4.3	3.9	3.8
Davis	4.0	4.8	5.3	4.4	4.3	3.9	4.5	4.5	3.6	3.5	3.4
Morgan	6.5	7.2	8.3	7.0	8.2	5.1	5.5	5.4	5.3	4.8	4.7
Weber	5.9	6.2	6.7	5.8	5.6	5.0	5.6	6.2	5.0	4.5	4.2
South	5.5	5.3	5.7	4.5	4.3	3.8	4.6	4.6	3.5	3.4	3.1
Salt Lake	5.5	5.3	5.6	4.5	4.3	3.7	4.5	4.6	3.5	3.3	3.1
Tooele	6.0	6.3	7.4	5.6	4.6	5.3	5.8	6.4	5.4	5.8	5.6
Mountainland	6.8	6.7	7.3	4.6	4.6	4.5	5.0	4.6	3.7	3.3	3.1
Summit	7.8	8.6	8.6	6.5	6.2	6.1	7.4	7.0	4.9	4.4	4.0
Utah	6.5	6.3	6.9	4.3	4.3	4.4	4.7	4.3	3.5	3.1	2.9
Wasatch	11.3	13.3	13.5	8.7	8.3	6.3	8.2	7.8	6.1	5.6	4.9
Central	8.9	10.2	10.0	7.9	7.2	6.8	8.1	7.9	5.7	5.5	5.4
Juab	15.5	15.8	15.3	9.7	7.7	4.7	5.6	7.6	5.9	4.7	4.9
Millard	5.5	6.6	7.5	5.6	5.2	4.5	5.4	6.3	5.2	4.8	4.9
Piute	13.3	14.8	12.6	12.7	7.6	7.1	10.4	7.5	5.7	8.6	6.0
Sanpete	13.2	14.9	13.4	11.2	10.4	10.5	11.1	9.6	6.2	6.6	6.1
Sevier	7.4	7.9	7.4	6.0	5.6	5.5	7.8	7.2	5.3	4.8	5.1
Wayne	8.1	9.4	9.4	6.9	6.4	8.5	9.7	8.4	7.2	7.4	6.4
Southwestern	6.0	5.9	6.3	4.9	4.9	4.6	5.6	5.1	4.1	3.8	4.1
Beaver	6.1	6.8	6.3	5.4	5.3	4.0	4.5	5.1	4.6	3.9	4.1
Garfield	13.5	12.3	12.2	8.6	9.5	9.2	11.8	14.0	9.5	10.6	12.3
Iron	6.2	6.3	6.5	4.9	4.7	5.0	5.4	4.0	3.7	3.5	3.4
Kane	8.6	7.1	7.6	6.1	6.9	5.9	7.9	7.9	6.7	9.2	8.6
Washington	4.7	4.8	5.4	4.4	4.3	3.9	4.8	4.4	3.5	2.9	3.3
Uintah Basin	9.1	13.1	13.2	9.2	8.5	6.5	6.8	8.1	7.4	8.2	7.9
Daggett	3.9	4.1	3.4	2.8	2.0	1.7	3.3	4.8	3.9	5.2	6.3
Duchesne	10.5	15.4	16.4	12.0	10.6	8.0	8.1	9.0	8.3	10.0	9.3
Uintah	8.5	12.0	11.8	8.0	7.7	5.8	6.3	7.7	7.1	7.4	7.1
Southeastern	10.9	10.7	10.9	8.6	8.1	7.9	9.2	9.3	7.4	7.6	7.3
Carbon	10.0	10.1	10.3	8.5	8.2	7.7	8.6	9.7	7.2	7.6	6.6
Emery	12.9	12.6	14.9	9.3	7.6	8.1	10.0	9.1	7.9	7.9	8.0
Grand	13.1	12.9	11.0	8.8	9.5	7.2	7.2	7.6	6.2	6.6	6.7
San Juan	9.0	8.2	8.4	7.9	7.4	8.8	11.2	10.4	7.0	8.2	8.6

(p) = preliminary

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

Table 23
Utah Labor Force, Nonagricultural Jobs and Wages: 1990 to 1996

	Absolute Amounts							Percent Changes					
	1990	1991	1992	1993	1994	1995	1996(p)	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96
Civilian Labor Force (thousands)	818.0	842.8	864.8	915.9	973.0	970.8	1,004.0	3.0	2.6	5.9	6.2	-0.2	3.4
Employed	783.0	800.9	821.4	879.8	936.6	936.1	970.0	2.3	2.6	7.1	6.5	-0.1	3.6
Unemployed	35.0	42.0	43.4	36.1	36.4	34.6	34.0	20.0	3.3	-16.8	0.8	-4.9	-1.7
Unemployment Rate	4.3	4.9	4.9	3.9	3.7	3.6	3.4						
Nonagricultural Jobs (thousands)	723.6	745.2	768.6	809.7	859.6	907.9	955.8	3.0	3.1	5.3	6.2	5.6	5.3
Mining	8.6	8.6	8.5	8.3	8.3	8.1	7.8	0.0	-1.2	-2.4	0.0	-2.4	-3.7
Construction	27.8	31.5	34.9	39.7	48.2	54.8	61.3	13.3	10.8	13.8	21.4	13.7	11.9
Manufacturing	107.1	105.7	106.2	110.5	116.6	123.9	129.5	-1.3	0.5	4.0	5.5	6.3	4.5
Trans., Comm., & Pub. Util.	42.3	42.4	43.9	47.1	49.4	51.5	54.0	0.2	3.5	7.3	4.9	4.3	4.9
Trade	172.4	178.8	184.4	191.5	205.4	220.0	230.6	3.7	3.1	3.9	7.3	7.1	4.8
Finance, Ins., & Real Estate	34.1	35.8	37.3	41.4	45.9	47.7	51.1	5.0	4.2	11.0	10.9	3.9	7.1
Services	180.8	188.4	196.4	211.8	224.4	238.3	255.4	4.2	4.2	7.8	5.9	6.2	7.2
Government	150.6	154.0	156.9	159.4	161.4	163.7	166.1	2.3	1.9	1.6	1.3	1.4	1.5
Nonagricultural Wages (millions)	$14,275	$15,294	$16,611	$17,711	$19,262	$21,096	$23,121	7.1	8.6	6.6	8.8	9.5	9.6
Average Annual Wage	$19,728	$20,522	$21,612	$21,872	$22,407	$23,237	$24,191	4.0	5.3	1.2	2.4	3.7	4.1
Adjusted for Inflation (1996 $)	$23,670	$23,629	$24,157	$23,737	$23,710	$23,910	$24,191	-0.2	2.2	-1.7	-0.1	0.8	1.2

(p)=preliminary

Source: Utah Department of Employment Security.

Table 24
Utah Nonagricultural Jobs by Industry and by District and County: 1995

District/County	Total	Mining	Construction	Manufacturing	Trans., Comm., & Utilities	Trade	Finance, Insur., & Real Estate	Services	Government
State Total	907,886	8,112	54,791	123,859	51,489	220,019	47,674	238,276	163,666
Bear River	53,664	37	2,470	19,260	1,403	10,171	1,159	7,695	11,469
Box Elder	16,955	32	634	8,871	370	3,058	294	1,650	2,046
Cache	36,234	5	1,834	10,373	1,017	7,028	821	5,927	9,229
Rich	475	0	2	16	16	85	44	118	194
Wasatch Front	622,862	3,332	36,189	79,389	41,255	153,355	39,720	159,550	110,072
North	149,238	153	9,086	23,080	4,412	35,845	5,530	33,847	37,285
Davis	69,618	146	4,809	10,220	2,208	18,051	2,768	13,754	17,662
Morgan	1,383	0	215	275	12	416	25	82	358
Weber	78,237	7	4,062	12,585	2,192	17,378	2,737	20,011	19,265
South	473,624	3,179	27,103	56,309	36,843	117,510	34,190	125,703	72,787
Salt Lake	463,909	2,966	26,498	55,259	35,542	115,910	34,019	124,386	69,329
Tooele	9,715	213	605	1,050	1,301	1,600	171	1,317	3,458
Mountainland	138,189	204	10,114	18,418	2,643	32,149	4,388	51,033	19,240
Summit	12,076	121	788	964	310	3,920	1,067	3,385	1,521
Utah	122,943	80	8,934	17,329	2,242	27,307	3,236	46,837	16,978
Wasatch	3,170	3	392	125	91	922	85	811	741
Central	18,282	438	685	1,861	1,513	4,555	370	3,196	5,664
Juab	2,192	13	64	290	74	669	32	503	547
Millard	3,554	113	88	200	689	887	52	527	998
Piute	208	0	1	11	19	20	6	8	143
Sanpete	5,448	2	203	830	191	1,094	143	775	2,210
Sevier	6,045	309	284	494	518	1,713	129	1,141	1,457
Wayne	835	1	45	36	22	172	8	242	309
Southwestern	42,755	274	4,083	3,479	1,941	12,479	1,478	10,586	8,435
Beaver	1,687	5	111	92	177	504	40	207	551
Garfield	1,835	23	66	152	101	249	19	708	517
Iron	11,217	87	693	1,200	350	2,892	334	2,537	3,124
Kane	2,197	1	108	43	29	697	47	729	543
Washington	25,819	158	3,105	1,992	1,284	8,137	1,038	6,405	3,700
Uintah Basin	12,418	1,594	434	496	1,123	2,855	225	2,232	3,459
Daggett	409	0	18	2	41	42	1	96	209
Duchesne	4,302	475	153	249	435	920	105	452	1,513
Uintah	7,707	1,119	263	245	647	1,893	119	1,684	1,737
Southeastern	19,716	2,233	816	956	1,611	4,455	334	3,984	5,327
Carbon	8,141	1,000	241	394	490	1,957	177	1,674	2,208
Emery	3,662	867	251	40	758	422	41	390	893
Grand	3,641	97	157	46	102	1,414	77	1,043	705
San Juan	4,272	269	167	476	261	662	39	877	1,521

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

Table 25
Utah's Largest Nonagricultural Employers: December 1995

Rank	Firm Name	Approximate Employment
1	State of Utah	19,000
2	University of Utah	15,000
3	Brigham Young University	15,000
4	Granite School District	7,500
5	Jordan School District	7,500
6	Hill Air Force Base	7,500
7	Utah State University	6,500
8	Davis School District	6,000
9	U.S. Post Office	5,500
10	Smith's Food & Drug Centers	5,500
11	Morton International	5,500
12	Matrixx Marketing	5,000
13	Salt Lake County	4,500
14	U.S. Internal Revenue Service	4,500
15	Wal-Mart Stores	4,500
16	Albertsons, Inc.	4,500
17	ZCMI	4,000
18	Delta Airlines	4,000
19	Alpine School District	4,000
20	Icon Health & Fitness	4,000
21	Thiokol Corporation	4,000
22	Novell	4,000
23	Salt Lake School District	3,500
24	United Parcel Service	3,000
25	K Mart	3,000
26	LDS Hospital	3,000
27	PacifiCorp	3,000
28	U.S. West Communications	3,000
29	Weber School District	3,000
30	IHC Hospitals, Inc.	2,500
31	Geneva Steel, Inc.	2,500
32	JC Penney Company	2,500
33	Sears & Roebuck Company	2,500
34	Shopko Stores	2,500
35	FHP of Utah	2,500
36	Weber State University	2,500
37	Utah Valley Regional Medical Center	2,000
38	First Security Bank of Utah	2,000
39	Kennecott Mining	2,000
40	Zions First National Bank	2,000
41	Unibase Data Entry	2,000
42	McKay-Dee Hospital	2,000
43	Fred Meyer, Inc.	2,000
44	Nebo School District	2,000
45	Provo School District	2,000
46	VA Medical Center	2,000
47	American Express	2,000
48	Salt Lake Community College	2,000
49	Primary Children's Medical Center	2,000
50	CR England & Sons	2,000

Source: Utah Department of Employment Security.

Table 26
Utah's Largest Private Sector Nonagricultural Employers: December 1995

Rank	Firm Name	Approximate Employment
1	Brigham Young University	15,000
2	Smith's Food & Drug Centers	5,500
3	Morton International	5,000
4	Matrixx Marketing	5,000
5	Wal-Mart Stores	4,500
6	Albertsons, Inc.	4,500
7	ZCMI	4,000
8	Delta Airlines	4,000
9	Icon Health & Fitness	4,000
10	Thiokol Corporation	4,000
11	Novell	4,000
12	United Parcel Service	3,000
13	K Mart	3,000
14	LDS Hospital	3,000
15	PacifiCorp	3,000
16	U.S. West Communications	3,000
17	IHC Hospitals, Inc.	2,500
18	Geneva Steel, Inc.	2,500
19	JC Penney Company	2,500
20	Sears & Roebuck Company	2,500
21	Shopko Stores	2,500
22	FHP of Utah	2,500
23	Utah Valley Regional Medical Center	2,000
24	First Security Bank of Utah	2,000
25	Kennecott Mining	2,000
26	Zions First National Bank	2,000
27	Unibase Data Entry	2,000
28	McKay-Dee Hospital	2,000
29	Fred Meyer, Inc.	2,000
30	American Express Service	2,000
31	Primary Children's Medical Center	2,000
32	CR England & Sons	2,000
33	Pizza Hut	2,000
34	Kelly Services	2,000
35	Alliant Techsystems	1,500
36	HCA Health Service	1,500
37	Franklin Quest Company	1,500
38	Harmons	1,500
39	Packard Bell Electronics	1,500
40	IOMEGA	1,500
41	Union Pacific Railroad	1,500
42	Deseret Industries	1,500
43	Discover Card	1,500
44	Abbott Laboratories	1,500
45	O C Tanner Corporation	1,500
46	Nordstrom	1,500
47	RC Willey Home Furniture	1,500
48	Loral Defense System	1,500
49	Snowbird Corporation	1,500
50	Mervyn's	1,500

Source: Utah Department of Employment Security.

Table 27
Utah's Average Monthly Wage by Industry: 1986 to 1995

Industry	Average Monthly Wage									
	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995
Total Nonagricultural Jobs	$1,463	$1,501	$1,549	$1,585	$1,644	$1,710	$1,801	$1,823	$1,867	$1,936
Mining	2,758	2,708	2,820	2,905	2,976	3,002	3,217	3,283	3,318	3,484
Construction	1,636	1,665	1,742	1,799	1,843	1,917	1,878	1,875	1,934	2,042
Manufacturing	1,864	1,896	1,968	2,009	2,066	2,125	2,246	2,250	2,302	2,384
Trans., Comm., & Pub. Util.	2,087	2,175	2,270	2,355	2,424	2,552	2,613	2,643	2,699	2,703
Trade	1,052	1,063	1,103	1,133	1,173	1,231	1,264	1,288	1,351	1,414
Finance, Ins., & Real Estate	1,568	1,641	1,702	1,760	1,818	1,907	2,092	2,177	2,169	2,303
Services	1,226	1,315	1,350	1,385	1,458	1,534	1,682	1,690	1,717	1,789
Government	1,574	1,597	1,625	1,663	1,735	1,805	1,891	1,922	1,983	2,054

Industry	Percent Change								
	1986-87	1987-88	1988-89	1989-90	1990-91	1991-92	1992-93	1993-94	1994-95
Total Nonagricultural Jobs	2.6	3.2	2.3	3.7	4.0	5.3	1.2	2.4	3.7
Mining	-1.8	4.1	3.0	2.4	0.9	7.2	2.1	1.1	5.0
Construction	1.8	4.6	3.3	2.4	4.0	-2.0	-0.2	3.1	5.6
Manufacturing	1.7	3.8	2.1	2.8	2.9	5.7	0.2	2.3	3.6
Trans., Comm., & Pub. Util.	4.2	4.4	3.7	2.9	5.3	2.4	1.1	2.1	0.1
Trade	1.0	3.8	2.7	3.5	4.9	2.7	1.9	4.9	4.7
Finance, Ins., & Real Estate	4.7	3.7	3.4	3.3	4.9	9.7	4.1	-0.4	6.2
Services	7.3	2.7	2.6	5.3	5.2	9.6	0.5	1.6	4.2
Government	1.5	1.8	2.3	4.3	4.0	4.8	1.6	3.2	3.6

Source: Utah Department of Employment Security.

Table 28
Utah and U.S. Labor Force Participation Rates: Selected Years

	1950	1960	1970	1980	1990	1991	1992	1993	1994	1995
UTAH	52.2	57.4	58.4	64.2	70.5	70.8	70.4	72.2	74.3	71.8
Male	82.5	82.3	77.4	79.3	80.5	80.9	80.6	81.2	83.3	82.5
Female	25.3	33.5	41.5	49.8	60.6	61.2	61.0	63.5	65.5	61.2
U.S.	54.0	60.0	58.0	62.0	66.4	65.6	66.3	66.2	66.5	66.6
Male	80.0	83.3	79.7	75.1	76.1	74.7	75.6	75.2	74.9	75.0
Female	30.0	37.7	43.3	49.9	57.5	57.3	57.8	57.9	58.7	58.9

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

Table 29
Characteristics of Utah Unemployed Persons: 1995

Category	Number	Percent
Total Unemployed	35,000	100.0
Men	20,000	57.1
Women	15,000	42.9
Both Sexes, 16-19	10,000	28.6
Unemployment Rate		
Total		3.6
Men		3.6
Women		3.6
Both Sexes, 16-19		10.2
Length of Unemployment		
Total		
Less than 5 Weeks	18,000	51.4
5-14 Weeks	9,000	25.7
15-26 Weeks	4,000	11.4
27 Weeks and Over	3,000	8.6
Males		
Less than 5 Weeks	10,000	50.0
5-14 Weeks	5,000	25.0
15-26 Weeks	3,000	15.0
27 Weeks and Over	3,000	15.0
Females		
Less than 5 Weeks	8,000	53.3
5-14 Weeks	4,000	26.7
15-26 Weeks	2,000	13.3
27 Weeks and Over	1,000	6.7
Full and Part-Time Status		
Total		
Looking for Full-time Work	23,000	65.7
Looking for Part-time Work	11,000	31.4
Reason for Unemployment		
Total		
Job Losers	13,000	37.1
Job Leavers	6,000	17.1
Re-entrants	14,000	40.0
New Entrants	2,000	5.7
Males		
Job Losers	9,000	45.0
Job Leavers	4,000	20.0
Re-entrants	6,000	30.0
New Entrants	1,000	5.0
Females		
Job Losers	4,000	26.7
Job Leavers	2,000	13.3
Re-entrants	7,000	46.7
New Entrants	1,000	6.7

Note: Numbers may not add due to rounding.

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

Table 30
Duration of Unemployment in Utah as a Percent of Total Unemployed: 1981 to 1995

Year	Less than 5 Weeks	5-14 Weeks	15 Weeks +	27 Weeks +
1981	49.6	29.9	20.5	8.9
1982	38.2	36.6	25.3	10.1
1983	37.3	32.0	30.3	15.0
1984	47.3	29.9	22.7	11.1
1985	46.7	32.2	21.1	9.8
1986	45.9	32.2	21.9	10.7
1987	50.2	27.2	22.6	10.2
1988	47.3	34.3	37.6	7.5
1989	47.4	28.9	23.7	7.9
1990	50.0	29.4	20.6	8.8
1991	47.5	31.2	21.3	8.6
1992	45.8	29.0	25.3	11.5
1993	53.6	25.5	20.9	9.5
1994	49.4	33.2	17.3	4.5
1995	51.4	25.7	20.0	8.6

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

Table 31
Reasons for Unemployment in Utah as a Percent of Total Unemployed: 1981 to 1995

Year	Job Losers	Job Leavers	New and Re-entrants
1981	45.0	16.1	38.8
1982	57.5	9.0	36.5
1983	52.9	8.4	38.7
1984	44.3	10.8	44.9
1985	45.0	14.5	40.5
1986	48.5	13.1	38.4
1987	45.7	12.8	41.5
1988	44.2	12.2	43.5
1989	42.1	23.7	34.2
1990	38.2	20.6	38.2
1991	45.2	17.1	37.7
1992	46.5	16.8	37.0
1993	48.0	17.4	34.6
1994	27.8	23.3	48.9
1995	37.1	17.1	45.7

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

Table 32
Utah Employment and Job Openings Summary by Major Occupational Category: 1996 and 2001

Occupational Category	Employment 1996	Employment 2001	Annual Average Job Openings: Due to Growth	Annual Average Job Openings: Due to Replacement	Annual Average Job Openings: Total
Total - All Categories	1,017,710	1,207,770	38,010	22,970	60,980
Managerial and Administrative	72,310	85,970	2,730	1,050	3,780
Professional and Paraprofessional	166,090	201,950	7,170	2,410	9,580
Technical	49,440	60,520	2,220	840	3,060
Sales and Related	125,560	150,740	5,040	4,120	9,160
Clerical and Administrative Support	165,710	191,050	5,070	3,290	8,360
Service	149,810	183,150	6,670	4,740	11,410
Agriculture, Forestry, and Fishing	23,950	26,030	410	660	1,070
Production, Operating, and Maintenance	264,840	308,360	8,700	5,860	14,560

Source: Utah Department of Employment Security, Labor Market Information Services, November 1995.

Personal Income

Total personal income is defined as all income received by all residents of an area. The statistical series comprising the components of total personal income, by area and by year, constitutes the most extensive body of consistent economic information available for the nation, states, counties, and metropolitan areas. This entire data series was developed and is maintained by the Bureau of Economic Analysis (BEA) of the U.S. Department of Commerce. The Utah Department of Employment Security assists BEA in this service by providing wage and employment data by industry for the state and its counties.

Utah's 1996 total personal income (TPI) is forecast to reach $38.4 billion, up 8.0 percent from the 1995 total, which also increased 8.0 percent from the 1994 level. Utah's 1996 TPI grew considerably faster than the forecasted U.S. TPI growth of 5.4 percent. The relative strength of Utah's ongoing economic expansion is clearly reflected in these TPI growth comparisons.

Components of Personal Income

The largest single component of total personal income is "Earnings by Place of Work." As depicted in Table 33, this portion consists of the total earnings from farm and nonfarm industries, including contributions for social insurance. In 1995, earnings by place of work was $27.6 billion, representing 78 percent of TPI. Approximately 8 percent of this figure was proprietors' income, while 92 percent was wages, salaries, and other labor income. Nonfarm earnings ($27.4 billion) was 99 percent of total earnings; farm income comprised only 1 percent. Private sector nonfarm industries accounted for 82 percent of nonfarm earnings, while earnings from public (government) industries made up 17 percent. Although earnings from government employment have been declining as a share of Utah's economy, it is still relatively more important than the U.S. share (17.5 percent to 15.6 percent, respectively).

The other components of TPI are: (1) dividends, interest, and rent (DIR); and (2) transfer payments. In 1995, DIR amounted to $4.7 billion, and transfer payments were $5.1 billion. Some of the major differences between the economic compositions of Utah and the United States can be observed in Table 33. Perhaps the most significant is that Utah DIR comprises a much smaller (13.2 percent vs. 17.3 percent) share of TPI than the national figure. Transfer payments are also relatively smaller. Thus, Utahns must rely to a greater extent on earnings. The problem with this is that Utah's average wage is only 85 percent (in 1995) of the U.S. average. Due to these two factors, Utah's TPI is relatively lower than the U.S. total personal income.

The industrial composition of Utah's TPI has changed in recent years. In 1980, prior to the last two recession periods, goods-producing industries (mining, construction, manufacturing) generated over 31 percent of Utah's total earnings. By 1992 that share had dropped to 22.9 percent, but increased to 24.4 percent in 1995. By comparison, 24.9 percent of U.S. earnings are from goods-producing jobs.

Four major industry sectors generate over three-fourths of Utah's total earnings. The service sector is the leader, providing 27 percent of earnings; government (including military) pays 17 percent. Both manufacturing and trade (wholesale plus retail) account for roughly 16 percent of Utah's total earnings. Following these are transportation/communications/utilities at 8 percent, construction and finance/insurance/real estate at 7 percent and 6 percent respectively, and mining at 1.5 percent of earnings. Agriculture/agricultural services make up the remaining 0.5 percent.

Per Capita Personal Income

Per capita personal income is an area's annual total personal income divided by the total population as of July 1 of that year. Utah's 1996 per capita personal income (PCI) is forecast at approximately $19,300. From 1989 to 1996, Utah's real (inflation-adjusted) PCI (in 1996 dollars) has increased about $2,600, compared to an $1,300 increase in the United States' real PCI. Thus, Utah's percentage of the U.S. PCI has increased by 6.6 percentage points (from 73.0 percent to 79.6 percent) since 1989.

Utah's 1995 per capita personal income of $18,226 ranked only 46th among the 50 states. Because Utah's population has a large number of children (the result of many years of high birth rates), these PCI comparisons portray Utah as a low-income state. However, 1990 adult per capita income improves the Utah's picture considerably: 88 percent of the national figure. Similarly, Utah also compares more favorably to the rest of the U.S. when using household income data. Total personal income per household in 1995 in Utah was $57,690, which is 92 percent of the nation's personal income per household figure of $62,830.

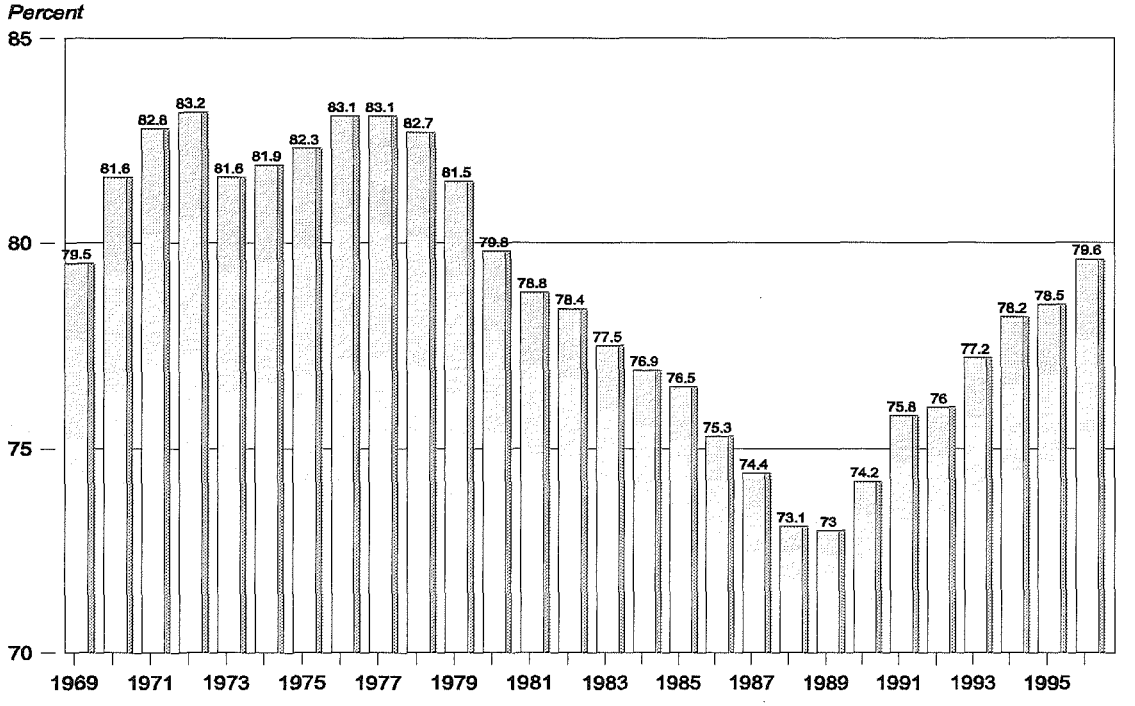
During the 1970s, Utah's PCI ranged between 81 percent and 83 percent of the United States' PCI (Table 34). However, as shown in Figure 26, from 1976 to 1989, this parameter dropped ten percentage points—from 83 to 73 percent. All the following years—1989 through 1996—experienced improvements in this comparison—the 1996 ratio, at 79.6 percent, is the highest level since 1980. Utah's PCI for 1969-1996 is presented in Table 34.

County Personal Income

Twelve of Utah's 29 counties (Table 36) posted double-digit 1994-1995 growth in total personal income, a large improvement over 1994's three counties. Most of these counties had large nonfarm employment increases which led to large wage increases; their total personal income thus increased rapidly also. On the other end of the scale, four counties, Tooele, Millard, Emery, and Duchesne, suffered year-over losses of TPI, the result of slow growth of nonfarm jobs.

With few exceptions, the per capita income estimates in northern Utah's counties are considerably higher than those of the rest of the state. Summit County's $28,900 is the highest in Utah; San Juan County's $10,400 is lowest. Interestingly, only three counties, Summit, Salt Lake, and Weber, have PCI's that exceed the state figure. The 1995 per capita income of the United States, at $23,208, is higher than that of all of Utah's counties except Summit. Table 36 presents, by county and planning district, the TPI and PCI estimates for 1993 through 1995.

Figure 26
Utah Per Capita Personal Income as a percent of U.S.: 1969 to 1996



Source: U.S. Department of Commerce, Bureau of Economic Analysis and Governor's Office of Planning and Budget.

Table 33
Components of Utah's Total Personal Income: 1993 to 1995

Components	Dollar Amounts (millions) 1993	1994	1995	Percentage Change 1993-94	1994-95	1995 Percentage Distribution Utah	U.S.	Industry Distribution Utah	U.S.
Total personal income	$30,500	$32,940	$35,577	8.0	8.0	100.0	100.0		
Earnings by place of work	23,367	25,324	27,616	8.4	9.0	77.6	70.8		
less: Personal contrb. for social insurance	1,543	1,700	1,852	10.2	9.0	5.2	4.8		
plus: Adjustment for residence	7	8	7	8.2	-7.0	0.0	-0.0		
equals: Net earnings by place of residence	21,832	23,632	25,771	8.2	9.0	72.4	65.9		
plus: Dividends, interest, and rent	4,099	4,571	4,709	11.5	3.0	13.2	17.3		
plus: Transfer payments	4,570	4,736	5,098	3.6	7.6	14.3	16.8		
Components of earnings	23,367	25,324	27,616	8.4	9.0	77.6	56.1		
Wage and salary disbursements	18,917	20,560	22,486	8.7	9.4	63.2	56.1		
Other labor income	2,360	2,573	2,797	9.0	8.7	7.9	6.9		
Proprietors' income	2,090	2,191	2,333	4.8	6.5	6.6	7.7		
Farm proprietors' income	236	151	87	-35.8	-42.6	0.2	0.3		
Nonfarm proprietors' income	1,854	2,039	2,246	10.0	10.1	6.3	7.4		
Earnings by Industry	23,367	25,324	27,616	8.4	9.0	77.6	0.6	100.0	100.0
Farm earnings	305	239	180	-21.5	-24.7	0.5	0.6	0.7	0.8
Nonfarm earnings	23,062	25,085	27,436	8.8	9.4	77.1	70.2	99.3	99.2
Private earnings	18,668	20,505	22,615	9.8	10.3	63.6	59.2	81.9	83.6
Ag. services, forestry, fisheries & other	83	94	109	13.8	16.3	0.3	0.5	0.4	0.7
Mining	399	400	413	0.3	3.1	1.2	0.6	1.5	0.9
Construction	1,489	1,823	2,079	22.5	14.0	5.8	3.9	7.5	5.5
Manufacturing	3,559	3,867	4,259	8.7	10.1	12.0	13.1	15.4	18.5
Durable goods	2,569	2,792	3,058	8.7	9.5	8.6	8.0	11.1	11.3
Nondurable goods	990	1,076	1,201	8.7	11.7	3.4	5.1	4.3	7.2
Transportation and public utilities	1,905	2,032	2,136	6.7	5.1	6.0	4.9	7.7	6.9
Wholesale trade	1,318	1,443	1,607	9.5	11.3	4.5	4.5	5.8	6.3
Retail trade	2,302	2,607	2,925	13.3	12.2	8.2	6.6	10.6	9.3
Finance, insurance, and real estate	1,329	1,469	1,648	10.5	12.2	4.6	5.3	6.0	7.5
Services	6,285	6,770	7,439	7.7	9.9	20.9	19.9	26.9	28.1
Government and government enterprises	4,394	4,580	4,821	4.2	5.3	13.5	11.1	17.5	15.6
Federal, civilian	1,325	1,311	1,315	-1.0	0.3	3.7	2.2	4.8	3.1
Military	257	250	250	-2.7	0.3	0.7	0.8	0.9	1.1
State	1,164	1,261	1,368	8.3	8.5	3.8	2.4	5.0	3.4
Local	1,649	1,758	1,887	6.7	7.3	5.3	5.7	6.8	8.1
Population (thousands)	1,861	1,910	1,952	2.6	2.2				
Per capita personal income (dollars)	$16,389	$17,246	$18,226	5.2	5.7				

Sources: U.S. Department of Commerce, Bureau of Economic Analysis; and Governor's Office of Planning and Budget.

Table 34
Personal Income Trends—Utah and U.S.: 1986, 1991, and 1996

Category	Absolute Amounts			Average Annual Percent Change*			Amount as a Percent of U.S. Total		
	1986	1991	1996(p)	1986-91	1991-96	1986-96	1986	1991	1996
Population (thousands)									
U.S.	240,162	252,131	265,120	1.0	1.0	1.0	100.0	100.0	100.0
Utah **	1,663	1,767	1,992	1.2	2.4	1.8	0.7	0.7	0.8
Total Personal Income (billions)									
U.S.	$3,635.7	$4,950.8	$6,427.3	6.4	5.4	5.9	100.0	100.0	100.0
Utah	$19.0	$26.3	$38.4	6.8	7.9	7.3	0.5	0.5	0.6
Per Capita Personal Income									
U.S.	$15,138	$19,636	$24,243	5.3	4.3	4.8	100.0	100.0	100.0
Utah	$11,401	$14,888	$19,289	5.5	5.3	5.4	75.3	75.8	79.6

* Compounded annually.
**These estimates may not agree with Utah Population Estimates Committee data.
(p)=preliminary

Sources: 1986,1991 - U.S. Department of Commerce, Bureau of Economic Analysis; 1996 - Governor's Office of Planning and Budget.

Table 35
Personal Income and Growth Rates—Utah and U.S.: 1969 to 1996

Year	Total Personal Income (millions of dollars) Utah	Total Personal Income (millions of dollars) U.S.	Growth Rates Utah	Growth Rates U.S.	Per Capita Personal Income Utah	Per Capita Personal Income U.S.	Per Capita Personal Income Utah as a Percent of U.S.
1969	$3,192	$772,027	--	--	$3,048	$3,835	79.5
1970	3,542	829,952	11.0	7.5	3,324	4,072	81.6
1971	3,939	893,604	11.2	7.7	3,579	4,321	82.8
1972	4,430	981,753	12.4	9.9	3,904	4,691	83.2
1973	4,961	1,099,306	12.0	12.0	4,244	5,201	81.6
1974	5,563	1,208,349	12.1	9.9	4,641	5,664	81.9
1975	6,178	1,310,949	11.1	8.5	5,007	6,085	82.3
1976	7,049	1,451,346	14.1	10.7	5,540	6,671	83.1
1977	7,997	1,606,998	13.5	10.7	6,075	7,312	83.1
1978	9,212	1,814,490	15.2	12.9	6,752	8,170	82.7
1979	10,494	2,041,337	13.9	12.5	7,411	9,090	81.5
1980	11,785	2,279,172	12.3	11.7	8,003	10,029	79.8
1981	13,258	2,549,086	12.5	11.8	8,749	11,109	78.8
1982	14,288	2,708,629	7.8	6.3	9,169	11,692	78.4
1983	15,264	2,886,185	6.8	6.6	9,569	12,344	77.5
1984	16,901	3,194,722	10.7	10.7	10,417	13,546	76.9
1985	18,101	3,427,423	7.1	7.3	11,016	14,404	76.5
1986	18,960	3,635,655	4.7	6.1	11,401	15,138	75.3
1987	19,907	3,862,977	5.0	6.3	11,861	15,942	74.4
1988	21,022	4,160,730	5.6	7.7	12,442	17,015	73.1
1989	22,566	4,474,014	7.3	7.5	13,228	18,127	73.0
1990	24,570	4,774,005	8.9	6.7	14,204	19,142	74.2
1991	26,307	4,950,808	7.1	3.7	14,887	19,636	75.8
1992	28,324	5,248,619	7.7	6.0	15,631	20,581	76.0
1993	30,500	5,471,129	7.7	4.2	16,389	21,224	77.2
1994	32,940	5,739,851	8.0	4.9	17,246	22,047	78.2
1995	35,577	6,097,977	8.0	6.2	18,226	23,208	78.5
1996(p)	38,423	6,427,300	8.0	5.4	19,289	24,243	79.6

(p)=preliminary

Sources: U.S. Department of Commerce, Bureau of Economic Analysis; and Governor's Office of Planning and Budget.

Table 36
Total and Per Capita Income by District and County: 1993 to 1995

County/MCD	Total Personal Income (millions of dollars) 1993	1994	1995	Percentage Change 1993-94	1994-95	Per Capita Personal Income 1993	1994	1995	Percentage Change 1993-94	1994-95
State Total	$30,417	$32,761	$35,577	7.7	8.6	$16,355	$17,170	$18,226	5.0	6.2
Bear River	1,719	1,827	1,920	6.3	5.1	15,053	15,673	16,200	4.1	3.4
Box Elder	605	633	636	4.6	0.5	15,898	16,338	16,100	2.8	-1.5
Cache	1,087	1,169	1,255	7.5	7.4	14,587	15,447	16,200	5.9	4.9
Rich	28	26	29	-7.1	11.5	15,975	14,555	15,600	-8.9	7.2
Wasatch Front	20,915	22,492	24,226	7.5	7.7	17,597	18,538	19,600	5.3	5.7
North	6,215	6,670	7,047	7.3	5.7	16,356	17,138	17,700	4.8	3.3
Davis	3,244	3,498	3,694	7.8	5.6	15,783	16,583	17,100	5.1	3.1
Morgan	88	96	114	9.1	18.8	14,531	15,250	17,200	4.9	12.8
Weber	2,883	3,076	3,240	6.7	5.3	17,124	17,876	18,500	4.4	3.5
South	14,700	15,822	17,179	7.6	8.6	18,180	19,200	20,500	5.6	6.8
Salt Lake	14,273	15,370	16,746	7.7	9.0	18,284	19,325	20,700	5.7	7.1
Tooele	427	452	432	5.9	-4.4	15,248	15,718	14,800	3.1	-5.8
Mountainland	4,551	4,948	5,598	8.7	13.1	14,480	15,278	16,800	5.5	10.0
Summit	503	569	673	13.1	18.3	25,266	26,442	28,900	4.7	9.3
Utah	3,887	4,203	4,725	8.1	12.4	13,717	14,444	15,800	5.3	9.4
Wasatch	161	176	200	9.3	13.6	14,675	15,448	17,000	5.3	10.0
Central	718	745	790	3.8	6.0	12,803	12,934	13,400	1.0	3.6
Juab	81	84	89	3.7	6.0	13,344	13,232	13,200	-0.8	-0.2
Millard	153	159	155	3.9	-2.5	13,041	13,330	12,700	2.2	-4.7
Piute	15	16	16	6.7	0.0	11,014	11,329	11,200	2.9	-1.1
Sanpete	218	222	253	1.8	14.0	11,906	11,742	13,100	-1.4	11.6
Sevier	223	235	246	5.4	4.7	13,723	13,993	14,300	2.0	2.2
Wayne	28	29	32	3.6	10.3	12,495	12,935	14,000	3.5	8.2
Southwestern	1,337	1,505	1,773	12.6	17.8	13,696	14,269	15,800	4.2	10.7
Beaver	71	75	84	5.6	12.0	14,212	14,473	15,500	1.8	7.1
Garfield	54	57	64	5.6	12.3	13,396	14,218	15,700	6.1	10.4
Iron	299	329	373	10.0	13.4	12,843	13,462	14,400	4.8	7.0
Kane	78	86	98	10.3	14.0	13,786	14,846	16,400	7.7	10.5
Washington	835	958	1,155	14.7	20.6	14,002	14,489	16,400	3.5	13.2
Uintah Basin	475	499	507	5.1	1.6	12,491	12,859	12,800	2.9	-0.5
Daggett	10	11	12	10.0	9.1	14,786	15,214	15,300	2.9	0.6
Duchesne	178	186	185	4.5	-0.5	13,402	13,665	13,400	2.0	-1.9
Uintah	286	301	310	5.2	3.0	11,905	12,312	12,400	3.4	0.7
Southeastern	702	743	763	5.8	2.7	13,743	14,153	14,400	3.0	1.7
Carbon	318	337	349	6.0	3.6	15,739	16,439	16,900	4.4	2.8
Emery	142	149	146	4.9	-2.0	13,658	14,073	13,700	3.0	-2.7
Grand	107	114	123	6.5	7.9	14,515	14,838	15,800	2.2	6.5
San Juan	135	143	144	5.9	0.7	10,294	10,410	10,400	1.1	-0.1
Salt Lake/Odgen MSA	20,400	21,944	23,680	7.6	7.9	19,007	20,099	19,700	5.7	-2.0
United States	--	--	--	--	--	21,244	22,047	23,208	3.8	5.3

Note: To maintain consistency with county data, 1993-95 state total estimates differ from those in Tables 33 and 35.

Sources: 1993-1995: U.S. Deptartment of Commerce, Bureau of Economic Analysis, May 1996. 1995 state total: U.S. Department of Commerce, Bureau of Economic Analysis, September 1996. 1995 counties: Utah Department of Employment Security, LMI, November 1996.

Gross State Product

Gross State Product (GSP) is the broadest measure of the aggregate production that occurs within a state for a given year and is comparable to Gross Domestic Product (GDP) at the national level. More precisely, GSP is the total market value of final goods and services produced with labor, capital and other factor services located within the state in a year.

GSP by industry is the value added in production, or the value of the industry's output less the cost of the goods and services purchased from other industries. Although GSP by industry is estimated separately for each of the states, these estimates are adjusted so that the national total of GSP by industry is the same as the U.S. GDP by industry, which is also known as Gross Product Originating (GPO) by industry.

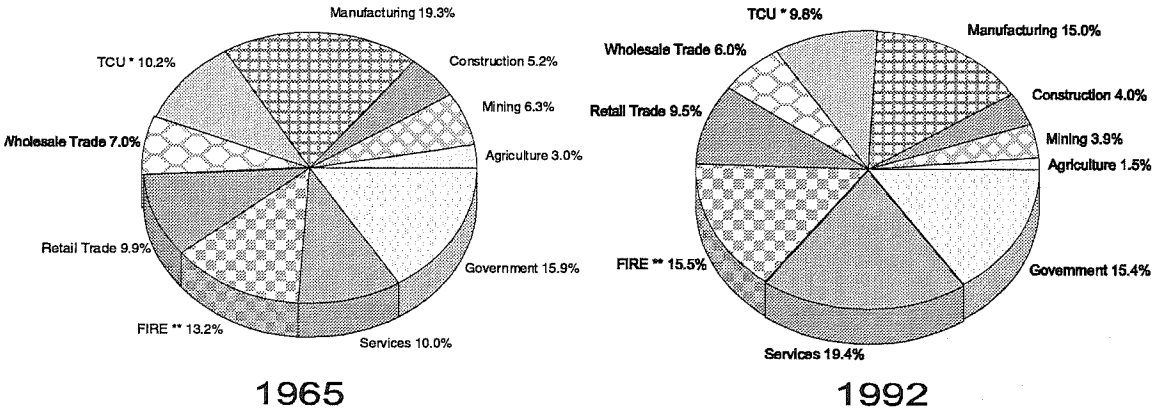
Figures 27 and 28 present the distribution of GSP and GDP by major industrial sector for Utah and the U.S., respectively, in 1965 and 1992. Tables 37 and 38 present Utah's GSP by industry for selected years between 1965 and 1992 in current and inflation-adjusted 1987 dollars, respectively. Table 39 presents Utah's GSP charged to compensation, proprietor's income, indirect business taxes and capital, by industry for 1992. Table 40 presents GSP for each state and region in the nation for selected years between 1965 and 1992 in current dollars. Tables 41 and 42 present U.S. GDP by industry from 1965 to 1992 in current and inflation-adjusted 1987 dollars, respectively.

The GSP series has been produced by the U.S. Department of Commerce, Bureau of Economic Analysis (BEA). Until the 1990s, GSP estimates were issued relatively infrequently, but BEA is attempting to release estimates on an annual basis. For the past several years, BEA has issued estimates in the spring for the GSP produced three years previously. However, because of the recent change in the method used to compute GDP inflation indexes, the estimates for 1993 have been delayed. BEA intends to release GSP estimates for 1993 and 1994 in the spring of 1997. Although BEA's GSP estimates are three years out-of-date when released, Regional Financial Associates (RFA), a private firm providing regional economic analysis, produces current GSP estimates. For 1993, 1994, 1995 and 1996, RFA has estimated Utah's GSP to be $39.3 billion, $43.2 billion, $46.9 billion and $50.7 billion, respectively.

GSP estimates include the allocation of productive income between employee compensation, proprietors' income, indirect business taxes, and capital charges. Employee compensation includes wages and salaries; employer contributions for social insurance, such as employer-paid social security taxes; and other labor income, such as pension and health benefits. Proprietor's income includes the income of sole proprietorships, such as farms and restaurants; partnerships, such as law firms and accounting firms; and tax exempt cooperatives. Indirect business taxes are taxes or charges paid by firms on the goods and services they sell. Examples include the federal excise taxes on gasoline, alcohol and tobacco, federal customs duties, and state and local sales and business receipts taxes. Capital charges represent the cost of using fixed assets, such as plant and equipment, in production. Among other things, these charges include rental income, corporate profits and depreciation.

For the most part, inflation-adjusted GSP estimates are derived with the so-called "double deflation" method. Using double deflation, the price of an industry's output is deflated separately from the prices of the inputs it purchases from other industries. The industry's inflation-adjusted GSP is then the difference between its deflated output and input. Although output and input prices will generally vary by state, BEA does not have the resources to estimate these prices state-by-state. Instead, inflation-adjusted estimates for each of the states are produced with the same national price indexes used to estimate GPO. A more thorough discussion of the sources and methods used to compute inflation-adjusted GPO estimates is contained in the *Survey of Current Business* issued in May 1993 in an article entitled "Gross Product by Industry, 1977-1990." The important point to note is that BEA does not use the implicit GDP price deflator.

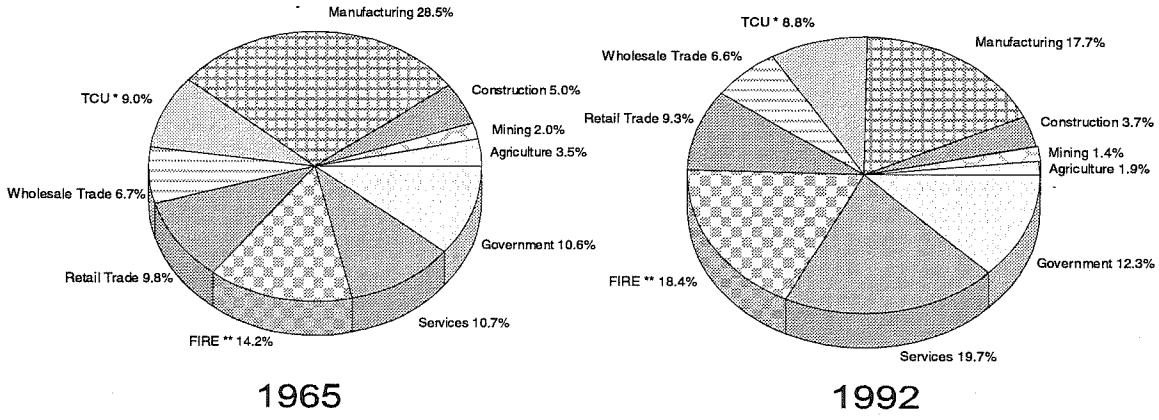
Figure 27
Utah Gross State Product—Percent Share by Industry: 1965 and 1992



* Transportation, Communication and Utilities.
** Finance, Insurance, and Real Estate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Figure 28
U.S. Gross State Product—Percent Share by Industry: 1965 and 1992



* Transportation, Communication and Utilities.
** Finance, Insurance, and Real Estate.

Source: U.S. Department of Commerce, Bureau of Economic Analysis.

Table 37
Utah Gross State Product by Industry (Millions of Current Dollars): Selected Years

Industry	1965	1970	1975	1980	1985	1990	1991	1992
Total	$3,203	$4,366	$7,798	$15,209	$24,009	$30,913	$33,078	$35,590
Private Industries	2,694	3,498	6,476	13,010	20,239	26,072	27,868	30,102
Agriculture, Forestry, and Fisheries	95	133	189	281	339	511	495	542
Farms	89	125	173	250	275	446	419	458
Agricultural Services, Forestry, and Fisheries	6	8	16	32	64	65	76	85
Mining	203	204	385	1,071	1,398	1,436	1,334	1,381
Metal Mining	112	125	111	276	138	376	315	367
Coal Mining	20	22	103	259	253	282	264	299
Oil and Gas Extraction	55	42	149	490	963	736	712	669
Nonmetallic Minerals, Except Fuels	16	14	23	46	44	43	44	47
Construction	166	216	498	915	1,252	1,182	1,322	1,412
Manufacturing	617	676	1,180	2,437	3,612	4,666	5,122	5,350
Durable Goods	449	468	825	1,693	2,616	3,186	3,360	3,504
Lumber and Wood Products	9	14	40	77	85	112	116	120
Furniture and Fixtures	3	6	11	29	69	84	94	106
Stone, Clay, and Glass Products	30	35	68	127	191	148	142	153
Primary Metal Industries	221	168	221	358	308	520	563	566
Fabricated Metal Products	29	45	104	161	206	288	305	357
Industrial Machinery and Equipment	29	72	177	436	650	335	329	426
Electronic and Other Electric Equipment	20	32	44	157	235	469	461	377
Motor Vehicles and Equipment	4	7	17	36	83	121	131	195
Other Transportation Equipment	97	73	106	197	574	732	780	713
Instruments and Related Products	2	8	21	73	87	238	290	322
Miscellaneous Manufacturing Industries	5	7	16	42	127	140	150	170
Nondurable Goods	169	209	354	744	997	1,479	1,762	1,846
Food and Kindred Products	72	90	134	169	262	397	481	498
Tobacco Manufactures	0	0	0	0	0	0	0	0
Textile Mill Products	0	1	1	1	2	7	7	9
Apparel and Other Textile Products	10	22	37	71	76	82	89	95
Paper and Allied Products	4	6	11	16	36	58	61	65
Printing and Publishing	27	31	58	126	228	333	349	376
Chemicals and Allied Products	10	16	43	130	136	208	287	272
Petroleum and Coal Products	40	36	51	190	214	313	402	442
Rubber and Miscellaneous Plastic Products	5	7	17	38	41	80	84	88
Leather and Leather Products	0	1	1	1	1	2	2	3
Transportation, Communication, and Utilities	326	446	801	1,706	2,786	3,219	3,298	3,469
Transportation	168	232	355	704	975	1,431	1,440	1,571
Railroad Transportation	82	95	102	207	292	248	240	264
Local and Interurban Passenger Transit	9	11	15	36	20	22	23	24
Trucking and Warehousing	59	96	182	325	381	611	629	691
Water Transportation	0	0	1	6	1	3	2	2
Transportation by Air	12	20	34	74	207	467	456	485
Pipelines, Except Natural Gas	4	6	10	36	30	13	15	16
Transportation Services	2	4	11	19	43	66	75	88
Communication	77	107	203	380	686	807	855	890
Electric, Gas, and Sanitary Services	81	106	242	622	1,125	982	1,003	1,008
Wholesale Trade	225	317	591	1,091	1,532	1,912	2,086	2,150
Retail Trade	318	456	838	1,379	2,244	2,868	3,058	3,373
Finance, Insurance, and Real Estate	423	582	1,100	2,249	3,616	4,669	5,019	5,502
Depository Institutions	47	84	110	256	473	786	865	1,034
Nondepository Institutions	8	8	12	47	124	114	137	184
Holding Cos. and Investment Services	7	9	14	39	139	133	138	134
Insurance Carriers	22	32	51	133	142	262	320	326
Insurance Agents, Brokers, and Services	16	21	34	67	92	182	204	214
Real Estate	322	430	879	1,707	2,647	3,193	3,354	3,609
Services	321	468	893	1,882	3,459	5,608	6,134	6,922
Hotels and Other Lodging Places	17	25	56	127	201	253	277	288
Personal Services	31	37	53	88	137	177	189	212
Business Services	27	49	109	281	614	1,084	1,272	1,563
Auto Repair, Services, and Garages	21	33	67	132	223	292	306	338
Miscellaneous Repair Services	9	15	31	70	88	124	114	116
Motion Pictures	6	9	15	40	48	75	67	90
Amusement and Recreation Services	15	20	36	70	127	182	214	259
Health Services	83	130	245	542	911	1,577	1,738	1,963
Legal Services	17	22	47	87	180	269	282	312
Educational Services	36	41	74	125	203	312	355	356
Social Services and Membership Organizations	28	44	75	137	435	621	637	673
Other Services	24	34	77	170	272	613	655	723
Private Households	8	8	9	12	19	28	27	31
Government	509	869	1,322	2,198	3,771	4,841	5,210	5,488
Federal Civilian Government	233	405	541	770	1,192	1,481	1,606	1,701
Federal Military Government	34	50	86	164	281	349	379	401
State and Local Government	242	414	695	1,264	2,298	3,011	3,225	3,386

Source: U.S. Bureau of Economic Analysis.

Table 38
Utah Gross State Product by Industry (Millions of Constant 1987 Dollars): Selected Years

Industry	1965	1970	1975	1980	1985	1990	1991	1992
Total	$10,983	$11,925	$14,870	$20,625	$25,111	$27,549	$28,599	$29,968
Private Industries	8,503	8,975	11,915	17,162	20,985	23,380	24,364	25,722
Agriculture, Forestry, and Fisheries	208	244	197	263	329	434	443	516
Farms	187	225	174	227	263	375	374	432
Agricultural Services, Forestry, and Fisheries	21	20	23	36	65	58	69	83
Mining	768	650	686	683	954	1,382	1,433	1,544
Metal Mining	382	359	268	98	139	398	400	464
Coal Mining	82	60	99	193	207	340	329	380
Oil and Gas Extraction	263	196	284	340	562	602	661	654
Nonmetallic Minerals, Except Fuels	41	34	36	53	47	42	43	46
Construction	1,085	825	1,140	1,319	1,459	1,035	1,151	1,280
Manufacturing	1,938	1,658	2,048	2,863	3,586	4,223	4,504	4,629
Durable Goods	1,474	1,188	1,439	2,024	2,551	3,004	3,160	3,240
Lumber and Wood Products	28	34	76	87	90	101	102	95
Furniture and Fixtures	9	13	20	40	72	76	82	94
Stone, Clay, and Glass Products	79	78	111	168	197	152	141	153
Primary Metal Industries	733	460	368	398	305	416	495	515
Fabricated Metal Products	88	116	167	193	207	259	266	304
Industrial Machinery and Equipment	61	126	235	461	583	314	324	446
Electronic and Other Electric Equipment	37	56	64	201	235	498	493	411
Motor Vehicles and Equipment	8	16	39	54	89	129	131	176
Other Transportation Equipment	414	256	292	287	557	720	725	627
Instruments and Related Products	3	16	37	90	87	212	267	273
Miscellaneous Manufacturing Industries	14	18	29	44	129	128	133	146
Nondurable Goods	465	471	610	839	1,035	1,219	1,344	1,389
Food and Kindred Products	168	177	197	210	272	343	395	397
Tobacco Manufactures	0	0	0	0	0	0	0	0
Textile Mill Products	1	1	1	1	2	6	7	8
Apparel and Other Textile Products	19	33	53	84	76	78	82	86
Paper and Allied Products	10	13	18	22	39	52	56	61
Printing and Publishing	111	99	143	203	256	286	279	282
Chemicals and Allied Products	21	34	66	158	136	176	234	215
Petroleum and Coal Products	124	100	106	117	212	201	214	257
Rubber and Miscellaneous Plastic Products	10	12	25	42	41	75	76	79
Leather and Leather Products	1	1	1	2	1	1	2	2
Transportation, Communication, and Utilities	905	1,125	1,564	2,399	2,786	3,130	3,165	3,306
Transportation	481	577	660	803	961	1,404	1,423	1,548
Railroad Transportation	217	218	172	186	257	270	271	298
Local and Interurban Passenger Transit	39	38	37	58	23	19	19	19
Trucking and Warehousing	162	226	323	410	414	576	612	675
Water Transportation	0	0	1	7	1	2	2	2
Transportation by Air	36	53	68	78	194	465	442	470
Pipelines, Except Natural Gas	19	29	38	37	27	14	17	17
Transportation Services	8	13	20	27	47	57	60	66
Communication	159	215	331	522	706	774	821	844
Electric, Gas, and Sanitary Services	265	333	573	1,075	1,118	952	920	913
Wholesale Trade	573	704	931	1,084	1,513	1,683	1,815	1,858
Retail Trade	1,039	1,147	1,556	1,804	2,419	2,659	2,725	2,945
Finance, Insurance, and Real Estate	1,671	1,903	2,804	3,712	4,104	4,117	4,212	4,390
Depository Institutions	255	329	374	489	547	669	652	668
Nondepository Institutions	86	61	61	151	192	98	118	139
Holding Cos. and Investment Services	31	39	44	69	136	140	158	149
Insurance Carriers	98	104	132	221	213	225	257	281
Insurance Agents, Brokers, and Services	84	87	104	102	112	155	164	166
Real Estate	1,118	1,283	2,089	2,680	2,904	2,830	2,863	2,987
Services	1,400	1,544	2,130	3,035	3,835	4,718	4,916	5,255
Hotels and Other Lodging Places	90	99	154	200	221	229	250	246
Personal Services	117	113	122	140	153	152	154	165
Business Services	109	162	253	422	648	943	1,058	1,230
Auto Repair, Services, and Garages	76	101	148	219	264	245	247	257
Miscellaneous Repair Services	36	42	65	106	90	116	103	95
Motion Pictures	22	32	41	60	54	62	53	68
Amusement and Recreation Services	53	53	73	96	140	157	176	207
Health Services	416	468	638	954	1,045	1,250	1,283	1,357
Legal Services	120	123	159	181	212	223	221	232
Educational Services	148	115	150	200	223	263	283	274
Social Services and Membership Organizations	101	121	149	197	474	564	559	572
Other Services	87	96	162	245	292	488	507	526
Private Households	24	18	14	15	19	26	25	26
Government	2,480	2,950	2,954	3,463	4,125	4,169	4,235	4,245
Federal Civilian Government	1,230	1,467	1,217	1,217	1,277	1,296	1,296	1,312
Federal Military Government	166	166	177	246	299	304	310	297
State and Local Government	1,084	1,317	1,560	2,000	2,549	2,569	2,629	2,637

Source: U.S. Bureau of Economic Analysis.

Table 39
Utah Gross State Product by Component and Industry (Millions of Current Dollars): 1992

Industry	Absolute Amounts					Percent of Total				
	Comp-ensation	Proprietor's Income	Capital Charges	Indirect Business Taxes	GSP	Comp-ensation	Proprietor's Income	Capital Charges	Indirect Business Taxes	GSP
Total	$21,418	$3,213	$8,069	$2,889	$35,590	60.2%	9.0%	22.7%	8.1%	100.0%
Private Industries	16,363	3,213	7,636	2,889	30,102	54.4%	10.7%	25.4%	9.6%	100.0%
Agriculture, Forestry, and Fisheries	108	392	19	23	542	19.9%	72.3%	3.5%	4.2%	100.0%
Farms	52	378	9	18	458	11.4%	82.5%	2.0%	3.9%	100.0%
Agricultural Services, Forestry, and Fisheries	56	14	10	4	85	65.9%	16.5%	11.8%	4.7%	100.0%
Mining	406	131	710	134	1,381	29.4%	9.5%	51.4%	9.7%	100.0%
Metal Mining	147	29	157	34	367	40.1%	7.9%	42.8%	9.3%	100.0%
Coal Mining	139	19	93	49	299	46.5%	6.4%	31.1%	16.4%	100.0%
Oil and Gas Extraction	89	81	450	49	669	13.3%	12.1%	67.3%	7.3%	100.0%
Nonmetallic Minerals, Except Fuels	32	3	10	3	47	68.1%	6.4%	21.3%	6.4%	100.0%
Construction	969	295	113	35	1,412	68.6%	20.9%	8.0%	2.5%	100.0%
Manufacturing	3,524	80	1,275	471	5,350	65.9%	1.5%	23.8%	8.8%	100.0%
Durable Goods	2,579	54	663	208	3,504	73.6%	1.5%	18.9%	5.9%	100.0%
Lumber and Wood Products	77	10	21	11	120	64.2%	8.3%	17.5%	9.2%	100.0%
Furniture and Fixtures	80	8	16	2	106	75.5%	7.5%	15.1%	1.9%	100.0%
Stone, Clay, and Glass Products	110	1	16	25	153	71.9%	0.7%	10.5%	16.3%	100.0%
Primary Metal Industries	272	1	263	30	566	48.1%	0.2%	46.5%	5.3%	100.0%
Fabricated Metal Products	226	12	94	24	357	63.3%	3.4%	26.3%	6.7%	100.0%
Industrial Machinery and Equipment	358	7	47	14	426	84.0%	1.6%	11.0%	3.3%	100.0%
Electronic and Other Electric Equipment	315	10	34	18	377	83.6%	2.7%	9.0%	4.8%	100.0%
Motor Vehicles and Equipment	139	0	19	37	195	71.3%	0.0%	9.7%	19.0%	100.0%
Other Transportation Equipment	641	3	36	32	713	89.9%	0.4%	5.0%	4.5%	100.0%
Instruments and Related Products	214	2	104	3	322	66.5%	0.6%	32.3%	0.9%	100.0%
Miscellaneous Manufacturing Industries	147	1	12	10	170	86.5%	0.6%	7.1%	5.9%	100.0%
Nondurable Goods	945	26	612	264	1,846	51.2%	1.4%	33.2%	14.3%	100.0%
Food and Kindred Products	305	8	158	27	498	61.2%	1.6%	31.7%	5.4%	100.0%
Tobacco Manufactures	0	0	0	0	0	–	–	–	–	–
Textile Mill Products	(D)	(D)	(D)	0	9	0.0%	0.0%	0.0%	0.0%	100.0%
Apparel and Other Textile Products	76	3	12	3	95	80.0%	3.2%	12.6%	3.2%	100.0%
Paper and Allied Products	59	0	1	4	65	90.8%	0.0%	1.5%	6.2%	100.0%
Printing and Publishing	232	14	119	11	376	61.7%	3.7%	31.6%	2.9%	100.0%
Chemicals and Allied Products	125	1	130	16	272	46.0%	0.4%	47.8%	5.9%	100.0%
Petroleum and Coal Products	64	0	177	201	442	14.5%	0.0%	40.0%	45.5%	100.0%
Rubber and Miscellaneous Plastic Products	74	0	11	2	88	84.1%	0.0%	12.5%	2.3%	100.0%
Leather and Leather Products	(D)	(D)	(D)	0	3	0.0%	0.0%	0.0%	0.0%	100.0%
Transportation, Communication, and Public Utilities	1,763	101	1,232	373	3,469	50.8%	2.9%	35.5%	10.8%	100.0%
Transportation	1,085	63	313	109	1,571	69.1%	4.0%	19.9%	6.9%	100.0%
Railroad Transportation	175	0	78	11	264	66.3%	0.0%	29.5%	4.2%	100.0%
Local and Interurban Passenger Transit	18	2	3	1	24	75.0%	8.3%	12.5%	4.2%	100.0%
Trucking and Warehousing	470	60	134	27	691	68.0%	8.7%	19.4%	3.9%	100.0%
Water Transportation	0	0	2	0	2	0.0%	0.0%	100.0%	0.0%	100.0%
Transportation by Air	362	(11)	68	66	485	74.6%	-2.3%	14.0%	13.6%	100.0%
Pipelines, Except Natural Gas	4	0	10	2	16	25.0%	0.0%	62.5%	12.5%	100.0%
Transportation Services	56	12	18	3	88	63.6%	13.6%	20.5%	3.4%	100.0%
Communication	286	21	498	86	890	32.1%	2.4%	56.0%	9.7%	100.0%
Electric, Gas, and Sanitary Services	392	17	420	179	1,008	38.9%	1.7%	41.7%	17.8%	100.0%
Wholesale Trade	1,269	96	317	469	2,150	59.0%	4.5%	14.7%	21.8%	100.0%
Retail Trade	2,082	237	473	581	3,373	61.7%	7.0%	14.0%	17.2%	100.0%
Finance, Insurance, and Real Estate	1,150	818	2,877	656	5,502	20.9%	14.9%	52.3%	11.9%	100.0%
Depository Institutions	367	2	613	52	1,034	35.5%	0.2%	59.3%	5.0%	100.0%
Nondepository Institutions	123	1	37	23	184	66.8%	0.5%	20.1%	12.5%	100.0%
Holding Cos. And Investment Services	151	4	(29)	8	134	112.7%	3.0%	-21.6%	6.0%	100.0%
Insurance Carriers	228	0	30	68	326	69.9%	0.0%	9.2%	20.9%	100.0%
Insurance Agents, Brokers, and Services	125	66	15	7	214	58.4%	30.8%	7.0%	3.3%	100.0%
Real Estate	156	745	2,210	497	3,609	4.3%	20.6%	61.2%	13.8%	100.0%
Services	5,092	1,063	621	146	6,922	73.6%	15.4%	9.0%	2.1%	100.0%
Hotels and Other Lodging Places	193	18	55	22	288	67.0%	6.3%	19.1%	7.6%	100.0%
Personal Services	117	63	23	9	212	55.2%	29.7%	10.8%	4.2%	100.0%
Business Services	1,047	261	222	31	1,563	67.0%	16.7%	14.2%	2.0%	100.0%
Auto Repair, Services, and Garages	149	68	87	34	338	44.1%	20.1%	25.7%	10.1%	100.0%
Miscellaneous Repair Services	72	18	14	12	116	62.1%	15.5%	12.1%	10.3%	100.0%
Motion Pictures	54	11	20	5	90	60.0%	12.2%	22.2%	5.6%	100.0%
Amusement and Recreation Services	140	66	44	9	259	54.1%	25.5%	17.0%	3.5%	100.0%
Health Services	1,530	310	109	14	1,963	77.9%	15.8%	5.6%	0.7%	100.0%
Legal Services	249	57	4	1	312	79.8%	18.3%	1.3%	0.3%	100.0%
Educational Services	319	25	8	4	356	89.6%	7.0%	2.2%	1.1%	100.0%
Social Services and Membership Organizations	656	4	11	2	673	97.5%	0.6%	1.6%	0.3%	100.0%
Other Services	536	161	22	4	723	74.1%	22.3%	3.0%	0.6%	100.0%
Private Households	31	0	0	0	31	100.0%	0.0%	0.0%	0.0%	100.0%
Government	5,056	0	432	0	5,488	92.1%	0.0%	7.9%	0.0%	100.0%
Federal Civilian Government	1,623	0	78	0	1,701	95.4%	0.0%	4.6%	0.0%	100.0%
Federal Military Government	401	0	0	0	401	100.0%	0.0%	0.0%	0.0%	100.0%
State and Local Government	3,031	0	355	0	3,386	89.5%	0.0%	10.5%	0.0%	100.0%

(D) Not shown to avoid disclosure of confidential information.

Source: U.S. Bureau of Economic Analysis.

Table 40
Gross State Product by Region and State (Millions of Current Dollars): Selected Years

Region/State	1965	1970	1975	1980	1985	1990	1991	1992
United States	$695,784	$1,001,793	$1,571,442	$2,684,793	$4,037,830	$5,518,482	$5,690,865	$5,994,063
New England	40,361	58,665	83,310	141,197	230,020	327,043	331,974	343,875
Connecticut	11,794	16,972	23,965	40,633	65,743	94,329	96,384	98,873
Maine	2,769	3,887	5,857	10,053	15,593	23,007	23,241	24,085
Massachusetts	19,609	28,520	40,234	67,049	109,880	154,208	156,090	161,966
New Hampshire	2,007	3,066	4,770	9,106	16,675	23,616	24,404	25,524
Rhode Island	2,941	4,302	5,728	9,547	14,675	20,664	20,657	21,582
Vermont	1,241	1,916	2,757	4,810	7,454	11,219	11,198	11,844
Mideast	159,989	231,220	328,345	511,026	775,366	1,084,371	1,114,620	1,167,946
Delaware	2,137	3,075	4,655	7,371	11,929	19,664	21,274	23,666
District of Columbia	5,230	8,115	12,437	17,867	25,771	36,646	38,160	40,441
Maryland	11,696	18,250	28,578	45,103	73,790	109,202	111,874	116,169
New Jersey	26,572	38,457	55,281	89,343	143,980	207,449	212,822	223,146
New York	74,097	106,902	145,134	221,815	341,015	466,827	475,961	497,555
Pennsylvania	40,257	56,421	82,260	129,527	178,881	244,584	254,528	266,969
Great Lakes	157,251	208,691	307,681	482,583	680,384	891,410	913,777	971,639
Illinois	45,806	63,495	95,385	144,657	202,306	270,503	279,283	294,449
Indiana	19,409	25,068	37,718	58,861	82,033	111,164	114,211	121,647
Michigan	37,930	46,677	65,781	103,083	152,334	187,155	189,445	204,421
Ohio	39,350	53,171	77,312	122,803	170,335	223,058	228,109	241,604
Wisconsin	14,756	20,280	31,484	53,178	73,376	99,530	102,729	109,517
Plains	53,299	75,032	121,041	195,083	278,893	367,980	379,866	402,903
Iowa	9,569	12,917	21,665	33,775	41,510	54,800	56,032	59,457
Kansas	7,237	10,018	16,958	27,817	40,240	51,691	53,281	56,164
Minnesota	12,293	18,252	28,599	49,049	72,248	99,751	103,301	110,276
Missouri	15,725	22,059	32,626	52,528	78,983	103,172	106,214	111,604
Nebraska	4,730	6,893	11,661	17,687	25,378	33,648	35,281	37,213
North Dakota	1,890	2,371	5,044	7,625	10,837	11,990	12,045	13,057
South Dakota	1,855	2,522	4,487	6,602	9,697	12,929	13,712	15,131
Southeast	118,886	179,833	303,157	538,158	829,972	1,156,954	1,208,921	1,283,225
Alabama	8,699	12,215	20,517	35,296	52,267	70,594	73,956	78,137
Arkansas	4,497	6,485	11,551	19,873	28,852	38,376	40,561	43,994
Florida	17,344	29,541	52,989	95,851	163,508	244,527	255,129	268,609
Georgia	12,603	19,173	31,373	55,608	96,154	137,064	143,643	153,534
Kentucky	9,811	13,883	22,744	36,553	50,110	67,028	69,839	75,561
Louisiana	11,440	16,794	29,543	64,652	84,864	91,784	95,377	96,245
Mississippi	4,836	6,956	11,870	22,062	30,655	39,471	41,481	44,298
North Carolina	14,464	22,138	34,939	59,067	95,305	140,630	147,520	159,637
South Carolina	6,198	9,566	15,514	27,315	42,492	63,706	66,408	69,810
Tennessee	10,562	15,541	25,990	45,077	67,892	95,234	100,804	108,894
Virginia	13,126	20,449	34,345	58,037	94,745	140,362	145,189	153,808
West Virginia	5,306	7,090	11,781	18,768	23,128	28,180	29,014	30,699
Southwest	49,902	77,482	141,661	293,713	438,607	533,961	553,604	582,977
Arizona	4,782	8,104	14,680	29,542	48,702	67,752	69,767	74,060
New Mexico	3,101	4,163	7,806	16,352	23,064	27,101	30,250	31,863
Oklahoma	7,217	10,857	18,704	38,143	51,176	56,942	57,914	60,188
Texas	34,802	54,357	100,471	209,677	315,665	382,167	395,673	416,867
Rocky Mountain	15,913	22,998	42,531	82,635	118,547	147,820	156,395	167,325
Colorado	6,802	10,504	19,628	37,387	57,103	72,669	76,921	82,463
Idaho	2,215	3,071	5,600	9,749	13,001	18,156	19,047	20,860
Montana	2,251	3,055	5,402	9,284	10,986	13,406	14,419	15,227
Utah	3,203	4,366	7,798	15,209	24,009	30,913	33,078	35,590
Wyoming	1,442	2,003	4,104	11,006	13,448	12,675	12,931	13,186
Far West	100,184	147,872	243,714	440,397	686,041	1,008,942	1,031,709	1,074,173
Alaska	1,224	2,189	6,387	15,619	25,753	27,303	26,212	25,957
California	75,887	111,631	179,858	319,804	511,087	752,665	763,577	787,896
Hawaii	2,564	4,566	7,743	12,351	17,985	29,087	30,802	33,203
Nevada	1,934	3,055	5,322	11,721	18,283	31,830	33,322	36,816
Oregon	6,985	9,726	16,610	30,022	39,582	56,217	58,799	62,724
Washington	11,590	16,705	27,794	50,879	73,352	111,839	118,997	127,578

Source: U.S. Bureau of Economic Analysis.

Table 41
U.S. Gross Domestic Product by Industry (Millions of Current Dollars): Selected Years

Industry	1965	1970	1975	1980	1985	1990	1991	1992
Total	$695,784	$1,001,793	$1,571,442	$2,684,793	$4,037,830	$5,518,482	$5,690,865	$5,994,063
Private Industries	622,266	875,361	1,368,264	2,370,240	3,570,831	4,862,148	4,992,795	5,255,834
Agriculture, Forestry, and Fisheries	24,209	29,854	56,329	66,711	84,343	112,018	108,630	115,510
Farms	21,892	26,297	50,261	56,106	67,100	85,096	78,846	85,569
Agricultural Services, Forestry, and Fisheries	2,317	3,557	6,068	10,605	17,243	26,922	29,784	29,941
Mining	13,976	18,661	41,255	112,635	130,592	103,059	91,841	85,198
Metal Mining	1,120	1,534	1,618	4,432	2,506	6,183	5,671	6,287
Coal Mining	1,757	3,004	9,052	13,604	13,763	12,738	12,248	13,130
Oil and Gas Extraction	9,534	12,243	27,411	89,085	108,425	76,940	66,745	58,516
Nonmetallic Minerals, Except Fuels	1,565	1,880	3,174	5,514	5,898	7,198	7,177	7,265
Construction	34,673	51,397	76,511	128,657	179,228	240,081	223,394	222,115
Manufacturing	198,396	252,275	357,312	588,286	798,489	1,024,697	1,026,182	1,062,981
Durable Goods	118,433	145,941	206,331	348,883	471,528	563,696	551,423	567,978
Lumber and Wood Products	5,449	7,052	10,422	19,179	23,593	30,778	29,837	31,254
Furniture and Fixtures	3,031	3,786	5,019	8,376	13,551	15,945	15,516	16,601
Stone, Clay, and Glass Products	6,573	8,002	11,532	18,007	23,735	24,937	23,481	24,838
Primary Metal Industries	16,559	18,393	28,522	44,170	35,658	43,972	42,450	39,953
Fabricated Metal Products	13,520	18,181	27,403	45,424	57,366	66,510	65,479	70,065
Industrial Machinery and Equipment	19,992	28,180	41,706	76,748	86,961	109,124	102,209	102,700
Electronic and Other Electric Equipment	16,127	21,536	28,279	54,548	83,502	85,687	88,087	85,527
Motor Vehicles and Equipment	18,516	16,186	19,887	26,791	58,317	46,313	41,076	56,695
Other Transportation Equipment	10,775	13,446	16,844	26,307	48,203	65,117	65,413	60,811
Instruments and Related Products	4,769	7,005	10,189	19,511	26,791	56,368	58,868	59,542
Miscellaneous Manufacturing Industries	3,122	4,174	6,528	9,822	13,851	18,945	19,007	19,992
Nondurable Goods	79,963	106,334	150,981	239,403	326,961	461,001	474,759	495,003
Food and Kindred Products	20,107	26,653	39,135	51,781	71,731	97,121	102,281	103,859
Tobacco Manufactures	3,308	4,112	5,103	7,091	11,196	15,954	17,190	19,316
Textile Mill Products	6,497	8,482	10,072	14,803	17,263	21,940	21,749	24,344
Apparel and Other Textile Products	6,729	9,027	11,499	17,333	20,992	25,330	26,013	27,112
Paper and Allied Products	7,220	9,678	13,875	22,762	32,863	46,222	45,442	46,199
Printing and Publishing	9,373	12,925	18,560	32,662	52,464	72,093	72,904	76,560
Chemicals and Allied Products	14,423	19,074	30,005	47,556	66,958	103,581	105,839	110,826
Petroleum and Coal Products	5,388	6,893	9,857	24,267	23,548	40,116	43,121	43,382
Rubber and Miscellaneous Plastic Products	4,994	7,217	10,406	17,012	26,364	34,618	36,053	38,894
Leather and Leather Products	1,924	2,273	2,469	4,136	3,582	4,026	4,167	4,511
Transportation, Communication, and Utilities	62,563	88,445	141,708	242,236	378,022	481,178	506,017	529,299
Transportation	29,965	40,431	59,207	102,928	136,009	176,777	180,788	193,812
Railroad Transportation	9,014	10,294	12,427	20,630	22,229	22,177	21,724	22,974
Local and Interurban Passenger Transit	2,585	3,031	3,600	5,264	7,357	9,951	10,931	11,403
Trucking and Warehousing	10,997	15,303	24,572	40,323	53,632	73,282	72,788	78,388
Water Transportation	2,237	2,861	3,969	7,179	8,329	10,029	10,735	10,324
Transportation by Air	3,426	6,313	10,045	18,082	27,237	39,833	41,592	45,983
Pipelines, Except Natural Gas	668	1,046	1,528	5,195	6,072	4,205	4,613	4,676
Transportation Services	1,038	1,583	3,066	6,255	11,153	17,300	18,405	20,064
Communication	15,310	24,122	40,017	68,883	112,582	146,720	154,944	162,088
Electric, Gas, and Sanitary Services	17,288	23,892	42,484	70,425	129,431	157,681	170,285	173,399
Wholesale Trade	46,844	68,240	117,484	191,596	276,556	363,042	375,133	394,431
Retail Trade	68,132	100,488	156,235	244,673	390,936	515,712	532,075	557,462
Finance, Insurance, and Real Estate	98,912	145,801	221,676	418,438	681,762	982,370	1,039,707	1,106,114
Depository Institutions	9,887	18,379	25,812	55,952	100,500	158,667	171,814	193,932
Nondepository Institutions	1,216	1,688	3,274	6,659	18,516	20,716	21,207	25,918
Holding Cos. and Investment Services	2,574	3,839	5,722	15,625	41,784	53,674	57,235	62,383
Insurance Carriers	7,248	11,625	17,236	36,924	39,056	69,931	90,059	84,828
Insurance Agents, Brokers, and Services	3,446	4,844	7,793	14,639	22,245	37,697	37,936	40,356
Real Estate	74,541	105,426	161,839	288,639	459,661	641,685	661,456	698,697
Services	74,561	120,200	199,754	377,008	650,903	1,039,991	1,089,816	1,182,724
Hotels and Other Lodging Places	3,939	6,323	10,097	19,631	35,703	49,864	52,040	53,948
Personal Services	7,083	9,274	11,414	17,481	27,884	36,273	36,462	39,042
Business Services	10,558	18,032	30,609	69,279	143,260	198,235	201,762	220,529
Auto Repair, Services, and Garages	4,002	6,256	11,174	19,138	33,304	46,240	47,859	48,775
Miscellaneous Repair Services	1,807	2,688	4,641	8,901	12,234	17,066	16,072	16,903
Motion Pictures	1,595	2,272	3,094	5,989	9,937	18,612	18,419	19,305
Amusement and Recreation Services	3,624	4,753	7,672	14,222	22,624	40,187	44,026	51,070
Health Services	16,961	31,363	57,807	111,460	186,201	304,403	332,963	364,445
Legal Services	4,605	7,260	12,496	24,912	47,968	79,626	81,929	88,697
Educational Services	3,839	7,144	11,424	16,428	25,901	38,123	42,490	45,594
Social Services and Membership Organizations	6,454	10,047	15,907	26,143	38,086	60,636	64,805	70,165
Other Services	6,126	10,287	18,785	37,321	60,460	141,283	141,815	154,104
Private Households	3,968	4,501	4,634	6,103	7,341	9,443	9,174	10,147
Government	73,518	126,432	203,178	314,553	466,999	656,334	698,070	738,229
Federal Civilian Government	17,941	29,658	45,257	70,263	100,950	134,233	146,037	153,425
Federal Military Government	10,755	18,037	25,366	35,496	55,183	67,172	71,057	77,035
State and Local Government	44,822	78,737	132,555	208,794	310,866	454,929	480,976	507,769

Source: U.S. Bureau of Economic Analysis.

Table 42
U.S. Gross Domestic Product by Industry (Millions of Constant 1987 Dollars): Selected Years

Industry	1965	1970	1975	1980	1985	1990	1991	1992
Total	$2,214,606	$2,627,051	$3,006,556	$3,697,140	$4,270,981	$4,888,324	$4,883,224	$5,001,445
Private Industries	1,866,676	2,208,733	2,554,540	3,202,709	3,759,219	4,324,161	4,315,114	4,430,686
Agriculture, Forestry, and Fisheries	54,115	55,958	59,321	63,199	81,885	95,759	97,377	110,307
Farms	46,136	47,469	50,713	50,973	64,181	71,604	70,387	80,799
Agricultural Services, Forestry, and Fisheries	7,978	8,489	8,607	12,226	17,704	24,155	26,990	29,508
Mining	60,754	74,183	69,790	79,917	83,347	91,836	91,525	88,950
Metal Mining	3,817	4,402	3,912	1,567	2,513	6,553	7,192	7,955
Coal Mining	7,138	8,206	8,729	10,122	11,292	15,348	15,286	16,691
Oil and Gas Extraction	45,766	57,004	52,313	61,805	63,204	62,929	61,992	57,250
Nonmetallic Minerals, Except Fuels	4,033	4,571	4,836	6,423	6,338	7,006	7,055	7,054
Construction	226,648	196,531	174,851	185,393	208,972	210,154	194,522	201,373
Manufacturing	523,384	570,629	617,337	725,428	810,486	928,483	908,011	924,617
Durable Goods	317,478	334,093	356,725	424,333	468,115	536,998	525,513	533,611
Lumber and Wood Products	16,958	17,731	19,798	21,572	24,928	27,745	26,219	24,940
Furniture and Fixtures	8,134	8,072	8,944	11,601	14,254	14,314	13,538	14,683
Stone, Clay, and Glass Products	17,265	17,763	18,723	23,801	24,548	25,612	23,447	24,895
Primary Metal Industries	54,856	50,389	47,388	49,181	35,323	35,162	37,353	36,390
Fabricated Metal Products	40,598	46,777	44,280	54,573	57,578	59,673	57,191	59,667
Industrial Machinery and Equipment	42,311	49,499	55,591	81,237	77,948	102,406	100,766	107,588
Electronic and Other Electric Equipment	30,035	37,227	40,692	69,820	83,359	90,937	94,214	93,114
Motor Vehicles and Equipment	41,879	35,529	45,133	39,767	62,753	49,444	41,022	51,273
Other Transportation Equipment	45,872	47,021	46,274	38,261	46,708	64,107	60,803	53,486
Instruments and Related Products	10,781	13,700	18,003	24,151	26,651	50,314	54,107	50,382
Miscellaneous Manufacturing Industries	8,788	10,386	11,900	10,369	14,065	17,284	16,853	17,193
Nondurable Goods	205,907	236,536	260,612	301,095	342,371	391,485	382,498	391,006
Food and Kindred Products	46,687	52,318	57,520	64,270	74,655	83,863	83,923	82,910
Tobacco Manufactures	14,619	16,830	19,337	19,657	14,362	9,362	8,334	7,768
Textile Mill Products	10,678	12,777	11,712	17,314	17,993	21,038	20,549	22,498
Apparel and Other Textile Products	13,299	13,774	16,474	20,412	20,853	24,077	24,094	24,567
Paper and Allied Products	19,252	22,406	24,127	30,937	35,684	41,942	41,963	43,657
Printing and Publishing	38,292	41,828	45,468	52,686	58,861	61,870	58,256	57,472
Chemicals and Allied Products	30,187	39,706	45,374	57,540	66,963	87,627	86,382	87,834
Petroleum and Coal Products	16,660	19,235	20,275	14,981	23,289	25,827	22,954	25,245
Rubber and Miscellaneous Plastic Products	10,614	12,822	15,349	18,528	26,122	32,271	32,386	35,127
Leather and Leather Products	5,618	4,840	4,975	4,770	3,589	3,608	3,657	3,928
Transportation, Communication, and Utilities	177,871	227,728	278,947	336,306	381,793	462,640	478,087	494,510
Transportation	89,910	104,391	113,247	120,211	137,362	168,929	173,010	183,672
Railroad Transportation	23,761	23,563	20,895	18,473	19,562	24,141	24,563	25,991
Local and Interurban Passenger Transit	11,048	9,875	8,752	8,465	8,267	8,706	9,135	8,978
Trucking and Warehousing	30,044	36,208	43,630	50,821	58,236	68,999	70,755	76,610
Water Transportation	6,938	7,947	8,207	9,319	8,405	7,963	8,238	7,597
Transportation by Air	10,259	16,863	19,830	19,223	25,511	39,686	40,351	44,540
Pipelines, Except Natural Gas	3,648	5,129	6,037	5,254	5,382	4,476	5,182	4,827
Transportation Services	4,212	4,808	5,895	8,656	11,999	14,958	14,786	15,129
Communication	31,641	48,247	65,113	94,447	115,812	140,827	148,782	153,763
Electric, Gas, and Sanitary Services	56,320	75,090	100,586	121,648	128,619	152,884	156,295	157,075
Wholesale Trade	119,389	151,453	184,952	190,512	273,021	319,543	326,372	340,880
Retail Trade	222,596	252,568	289,947	320,134	421,372	478,080	474,137	486,689
Finance, Insurance, and Real Estate	386,107	476,886	576,041	692,808	776,367	868,306	878,390	893,446
Depository Institutions	53,679	72,214	87,582	107,074	116,157	135,076	129,450	125,325
Nondepository Institutions	12,587	13,735	16,701	21,412	28,824	17,853	18,283	19,528
Holding Cos. and Investment Services	11,301	17,291	18,047	27,616	40,920	56,507	65,327	69,277
Insurance Carriers	32,016	38,154	45,251	61,122	58,657	60,083	72,241	73,038
Insurance Agents, Brokers, and Services	17,965	20,549	24,055	22,537	27,083	32,057	30,600	31,270
Real Estate	258,559	314,944	384,404	453,047	504,726	566,730	562,489	575,008
Services	322,461	399,329	478,206	609,012	721,976	869,360	866,693	889,914
Hotels and Other Lodging Places	20,835	24,843	27,969	31,008	39,211	45,047	46,881	46,007
Personal Services	26,830	28,537	26,244	27,620	31,117	30,991	29,544	30,381
Business Services	42,343	59,325	71,214	103,885	151,186	172,573	167,901	173,653
Auto Repair, Services, and Garages	14,913	19,205	24,712	31,736	39,339	38,860	38,669	37,058
Miscellaneous Repair Services	7,124	7,634	9,636	13,530	12,551	15,942	14,412	13,923
Motion Pictures	6,270	7,714	8,284	8,951	11,139	15,535	14,646	14,563
Amusement and Recreation Services	12,581	12,902	15,933	19,545	24,903	34,598	36,203	40,752
Health Services	85,461	113,123	150,486	196,095	213,557	241,357	245,784	252,004
Legal Services	32,905	39,705	42,321	51,530	56,516	66,120	64,094	65,974
Educational Services	15,903	20,049	23,041	26,255	28,442	32,098	33,859	35,065
Social Services and Membership Organizations	23,233	27,503	32,008	37,767	41,435	54,990	56,831	59,614
Other Services	22,023	29,006	39,283	53,902	65,074	112,341	109,641	112,150
Private Households	12,039	9,783	7,075	7,188	7,506	8,908	8,228	8,770
Government	347,930	418,318	452,016	494,431	511,762	564,163	568,110	570,759
Federal Civilian Government	94,621	107,474	101,834	111,058	108,207	117,417	117,853	118,341
Federal Military Government	52,206	60,157	52,532	53,102	58,685	58,536	58,174	56,979
State and Local Government	201,103	250,687	297,650	330,271	344,870	388,210	392,083	395,439

Source: U.S. Bureau of Economic Analysis.

Gross Taxable Sales

Gross taxable sales consist of all final sales of tangible personal property in the state, except for various exempted items. Taxable sales of selected services such as hotel and lodging; leases, rents, and repairs to tangible property; and admissions to most amusement and recreation services are also taxable. In 1996 gross taxable sales totaled $26.2 billion. The three basic components of these sales are retail trade which amounted to $14.6 million in 1996; business equipment investment, $6.8 million; and taxable services, $3.7 million.

Retail Trade

After rising more than 10 percent for three years in a row, retail trade sales increased 8.1 percent in 1995 (Table 43). This was primarily due to a softening of retail durable sales following two to three years of double-digit growth in both motor vehicle dealer and building and garden store sales.

During the first half of 1996 retail trade charged back into double-digit growth rates. This growth was due to three factors: first, the residential construction boom was stimulated by a surge in refinancing; second, the construction of Micron Technology, Inc.'s $600 million microchip plant (later put on hold) was responsible for increased demand in the south part of Salt Lake County and the north part of Utah County; and third, wages and salary growth topped 10 percent, in part due to the first two factors. So, during the first half of 1996, retail sales rose 13.2 percent as durable goods growth of almost 15 percent out-paced unusually strong nondurable goods growth of 12 percent.

The double-digit durable retail sales gains were common between 1992 and 1994. Quarterly data from 1981 was seasonally-adjusted for both retail durable goods sales (those items lasting three years or more) and retail nondurable goods sales (less than three years). As expected, nondurable retail sales are a much smoother, upward-trending series. One reason for this is that food and clothing spending is not as sensitive to swings in the business cycle, since they are necessities. Much more cyclical and sensitive to interest rates, consumer confidence and steady employment growth, are retail durable goods. Sales of automobiles and housing materials are sensitive not only to demographic trends and wage and salary growth, but also to the above-cited business cycle variables.

Nondurable Retail Sales. Nondurable retail sales, including sales in the food, general merchandise, apparel, food, eating and drinking, and retail shopping goods store sectors, comprise almost 35 percent of gross taxable sales and almost two-thirds of retail trade sales. Nondurable sales increased on average 7.5 percent between 1991 and 1995, varying between 6.7 percent and 8.4 percent. These percentages are remarkably steady, except for the consideration that food and clothes are the necessities of life. The 11 percent surge in 1996 sales over-shot the 9.5 percent forecast, but not by a large amount (Table 44). During the first half of 1996 nondurable sales rose a robust 12.3 percent. Year-end sales growth is estimated to be 11.2 percent, given the somewhat strong Christmas quarter outlook. For 1997, nondurable sales are expected to drift downward toward the 7.5 percent average for the years 1991 to 1995, rising 8.1 percent as the economy plateaus somewhat after four years of booming conditions.

In 1996, general merchandise and apparel store sales are expected to fall back to historic growth levels, between 7 percent and 8 percent. Similarly, food store sales which jumped almost 10 percent are expected to retreat to a 6 percent trended growth rate. Eating and drinking place sales, which are expected to rise 11 percent in 1996, will fare better, and will continue to grow close to 10 percent in 1997.

Miscellaneous shopping goods store sales, which include but are not limited to drug, liquor, sporting goods, book, stationery, jewelry, hobby, toy, camera, gift, luggage, florist, sewing, and tobacco stores, may also continue into double-digits. If 1996 is as strong as it appears to be, these sales will grow 13 percent. The proliferation of retail outlets is part of the story—the number of miscellaneous shopping stores grew from 6,078 in the second quarter of 1994 to 6,913 in the same period in 1996—a 13.7 percent gain in two years. Liquor, sporting goods, toy, and miscellaneous store sales saw double-digit gains during the first half of 1996.

Durable Goods Retail Sales. Durable retail sales consist of sales by Utah's motor vehicle dealers and sales related to housing and home improvements and electronics (building, garden and furniture store sales). Following three years of large, double-digit gains (15.5 percent in 1992, 20.4 percent in 1993 and 15.2 percent in 1994), these sales slowed to a 7.7 percent in 1995. The first half of 1996 proved to be a resumption of boom conditions as durable

sales rose just under 15 percent. Twenty percent to 30 percent gains in residential construction permit values, following a spike in refinancing during the last quarter of 1995 and the first quarter of 1996, were part of the cause. In addition, the construction of the Micron plant in northern Utah County may have proved to be a catalyst for the peaking of consumer sentiment and business expansion decisions.

The 1996 expectation for a modest gain in retail durable sales clearly missed the mark, given the large gain in the first half of the year. However, the second half will be weaker. Of the three retail durable sectors, only furniture and home furnishing sales appear to continue double-digit growth during the third quarter. Building and garden store sales declined in September 1996 relative to the prior September.

Notwithstanding the "high mesa" leveling of Utah construction values in 1996, the ride has been exciting. The boom in residential and nonresidential construction over the past four years has affected a doubling of taxable sales in the retail "building and garden" and "furniture and home furnishings" sectors. Sales in the building and garden sector have risen from $575 million in 1990 to an estimated $1.36 billion in 1996 (Table 44). Once the homes are built, new furnishings are usually necessary. Furniture and home furnishings stores sales have risen from $498 million in 1990 to an estimated $1.38 billion in 1996. Evidence of the housing boom is reflected in the growth of new single-family permits, which have risen from 6,099 in 1990 to almost 15,000 in 1996. It is no surprise then that sales in these two subsectors have more than doubled since 1990.

Why have furniture and home furnishing store sales risen faster? The story lies in double-digit gains in sales of electronics, big screen televisions, VCR's, direct broadcast satellites, pagers, fax machines. For example, during the first half of 1996, radio, TV and electronic store sales rose 88 percent compared to the first half of 1995. Computer and software store sales rose almost 34 percent in the first half of 1996. Twenty percent annual gains are not only evident in Utah, but also nationwide. Because furniture store sales rose less than 8 percent in the first half of 1996, overall furniture and home furnishings sector sales (including electronic and computer stores) totaled 23 percent. For the entire year, these sales are expected to maintain a pace of more than 20 percent.

Meanwhile, sales by lumber, building and garden stores rose 13.5 percent in the first half of 1996. These sales fell flat in the third quarter, leading to a forecast of a 10 percent gain for the year. Lumber and other building material store sales rose 18 percent in the first half of 1996 in response to strong demand by new residential building permits. Hardware store sales rose less than 9 percent. And paint, glass and wallpaper store sales increased less than 4 percent, perhaps due to increased competition from "big-box" department stores, which compete directly for the same goods.

Larger than both the building and furniture store sectors combined are motor vehicle dealer sales. These sales include new car dealers (who also market used autos), used-only car dealers, auto and home supply stores, gasoline service station sales of non-fuel items, and boat, motorcycle and recreational trailer dealer sales. More than 60 percent of the sales in this sector are attributable to taxable sales and repairs by new car dealers. New car dealer sales and services rose almost 9 percent in the first half of 1996 on unit sales which were up almost 7 percent. Because of the weaker 4 percent gain in the third quarter, unit sales of new cars and trucks appear to be headed for a 5 percent overall gain in 1996. In contrast, used car dealer sales were up more than 25 percent in the first half of 1996. And, to punctuate the concept above that Utahns like their toys when times are good, boat and motorcycle dealers (who also market all-terrain vehicles, snowmobiles and jet skis), had sales that rose 14 percent and 39 percent in the first half of 1996, respectively.

Motor vehicle dealer sales are estimated to increase by 10 percent in 1996. But 1997 sales growth is expected to narrow. Nationally, new car and truck sales are expected to fall from 15.0 million units to 14.7 million units. In Utah, just under 5 percent unit sales growth is expected. A pause in the construction boom, in addition to slightly lower wage growth and consumer sentiment will provide the impetus for softer sales.

Business Equipment Investment and Utility Purchases

Taxable business equipment investment and utility sales and purchases increased by an estimated 9.5 percent in 1996. The big growth sector since 1990 has been the wholesale trade sector. Final sales of wholesalers have risen from $1.27 billion in 1990 to an estimated $2.86 billion in 1996. This amounts to a 20 percent per year average growth rate for the six years in this decade. Final sales by wholesalers are taxable and include sales that might normally be considered "retail", such as sales by new truck dealers and electrical lighting stores. But, because in the past their sales have been primarily to contractors, manufacturers and mining companies, these stores are located within the "wholesale" sector under the Standard Industrial

Classification system. These sales not only track with construction activity, but also with business investment in durable and nondurable goods. First half gains of just under 11 percent have been followed by double-digit gains in the third quarter. However, third-quarter durable goods sales appeared to be headed for single digits. Given the construction plateau in 1997 and the slowdown in U.S. business equipment spending from double- to single-digit growth, this sector may grow less than 2 percent in 1997.

Utah's vibrant manufacturing sector also reinvested in its plants and equipment during 1996. Taxable purchases of replacement equipment (new and expanding equipment is exempt) and supplies were up almost 21 percent in the first half, and purchases appear to be running about 9 percent in the third quarter. According to the Bureau of Labor Statistics, Utah's 5.2 percent gain in manufacturing employment for September 1996 was the second best gain in the nation. Several factors continue to influence Utah manufacturers' decisions to invest in plant and equipment year-over-year for the past six years:

- Boom times for manufacturers selling to Utah's residential sector,
- Low cost of capital relative to labor,
- The influx of capital from profits obtained from the stock market,
- The increase in the ability of manufacturers to finance projects through commercial paper,
- The upgrading of communications equipment, from coaxial cables to mobile phones,
- Continued globalization which increases competitive pressures and forces manufacturers to upgrade equipment, and
- Relatively low wages stimulate investment here rather than in the East or on the West Coast.

In addition, the Utah Legislature passed Senate Bill 105 in 1995, which will exempt "normal operating replacements" from the taxable base. In a recent special session, the Legislature clarified the interpretation of replacements and limited them to machinery and equipment which have three years or more economic life, are used in the manufacturing process, contribute to the economic life of the machine to which they are attached and exclude repairs and maintenance. Due to the July 1, 1996 startup date and the 30 percent and 60 percent phase-ins over the first two years, it is estimated this will drop taxable manufacturing purchases by $80 million in 1996 and $266 million in 1997. So, instead of 15 and 9 percent respective gains in 1996 and 1997, a 9 percent gain in 1996 may be followed by a 3 percent drop in 1997. For Utah's manufacturers, however, this will be a long awaited boon.

Another strong sector has been taxable communication sales. These sales have risen 76 percent in six years, from $444 million in 1990 to an estimated $780 million in 1996. Driving these sales have been impressive disposable income gains, in addition to consumer attachment to new technologies, such as fax machines, pagers, mobile telephones and satellite TV dishes. After growing only 2 percent in the first quarter of 1996, these sales grew 12 percent in the second quarter. Third-quarter sales will probably run more than 20 percent ahead of 1995's third quarter, in part because the saturation points for these technologies are still well below 100 percent.

The forecast for only a 1.9 percent gain in taxable business investment during 1997 is based on the decline in residential construction permit values for several quarters, the implementation of the normal operating replacement exemption for manufacturers, and a drop in the U.S. producers' durable equipment spending from double-digit levels over the past four years to 6 percent in 1997. Hedging up this outlook will be booming nonresidential construction values after the second half of 1997. The reconstruction of Interstate 15, high demand for more hotel space and continued low vacancy rates in office, retail and industry space may dictate a higher level of business investment growth than the 1.9 percent forecast.

Taxable Services

Only about 40 percent of the service sector is charged a sales tax. Even though this sector constitutes only 13 percent of taxable sales, services and purchases, it has been a fast-growing sector in the past few years. Taxable services have more than doubled over the past six years from $1.83 billion in 1990 to an estimated $3.73 billion in 1996 (Table 44), averaging 17 percent per year. Only a portion of the growth can be explained by the approximately $200 million base broadening for the definition of "admissions" on July 1, 1994.

The 16.3 percent estimate for 1996 taxable services appears to be well under the 18 percent pulse in the first half. But third-quarter growth of 7 percent will steer in the overall gain for the year toward 16 percent. Taxable services should approach 12 percent in 1997 as demands moderate in most subsectors.

Several factors mentioned above have led to this conclusion. First, permanent nonfarm wages and salaries will edge lower in 1997 to 8.5 percent. Second, taxable leases by Utah's consumer installment credit businesses will fall from 32 percent growth this year to about 20 percent next year, since consumers have reached record

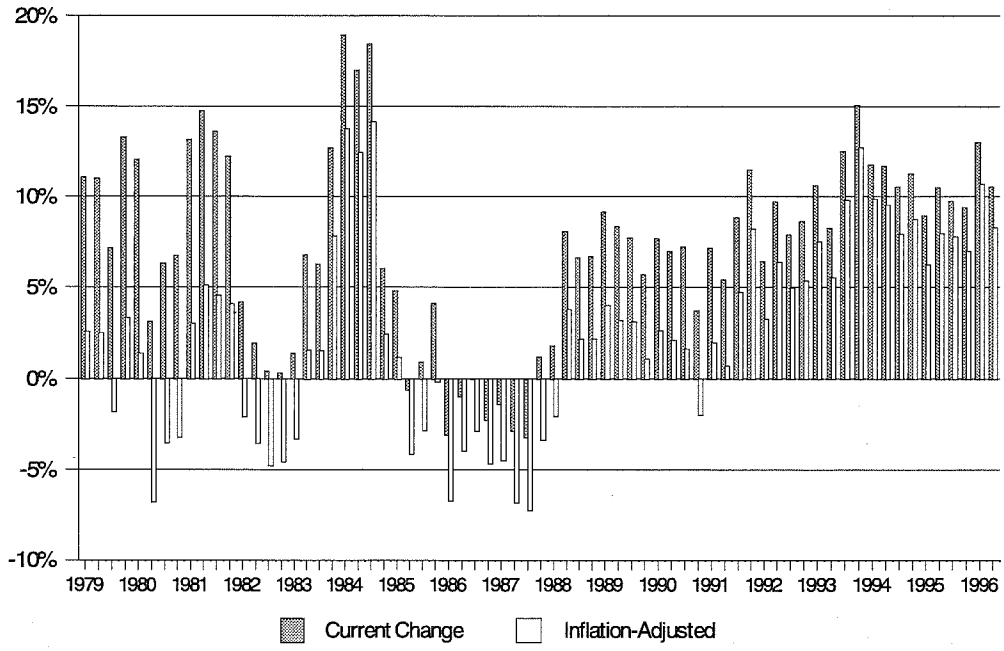
consumer debt levels. These taxable credit sales include, but are not limited to, the leasing of automobiles and condominiums, and selling other consumer durable goods in installments. Double-digit gains between 10 percent and 12 percent are still expected in hotel, personal, education, auto repair and business services during 1997.

Auto rentals and repair reported sales of $506 million in the first half of 1996, up 20 percent. This unanticipated strength was probably due to two factors:

- Utah's strong tourist sector pushed up auto rentals 41 percent, and
- An expanding, more expensive automobile stock forced up auto repairs 13 percent.

Taxable amusement and recreation sales were up 12 percent in the first half of 1996. Ski resort sales and purchases were flat compared to the first half of 1995. Miscellaneous amusement services, including Utah's theme parks, saw sales rise 27 percent in the first half. A substantial portion of this gain was due to the increase in the tax base due to the 1994 Legislature's redefining "admissions", which included activities such as golf, tennis, bowling, river running and a broad range of recreational and cultural activities. This sector is expected to continue to see strong growth due to increasing compliance with the expanded "admissions" definition and due to expected strong income gains and tourist activity during 1997.

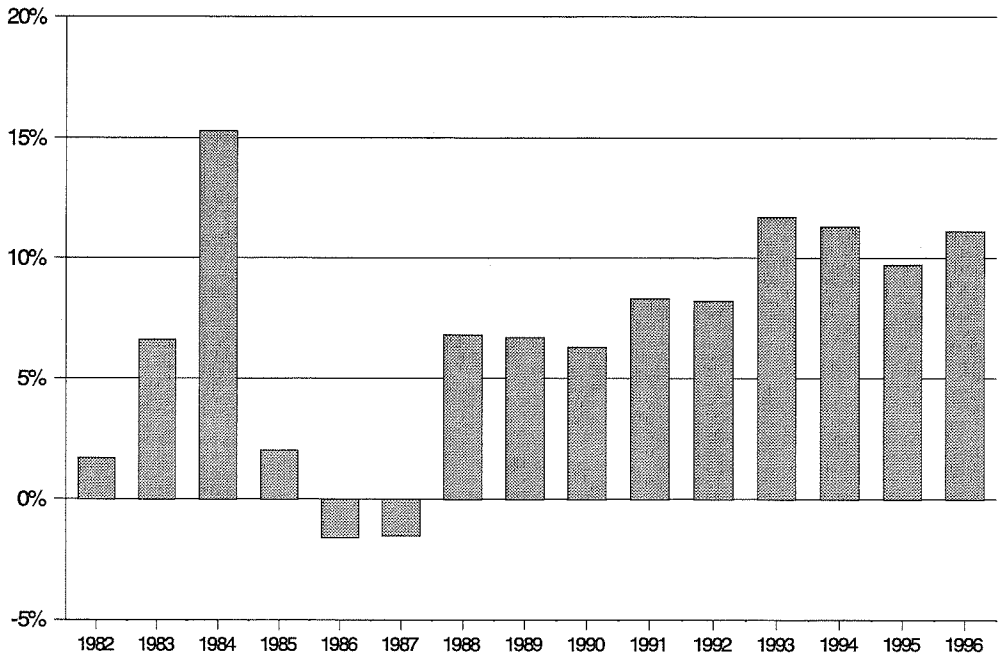
Figure 29
Quarterly Percent Change in Gross Taxable Sales: 1979 to Second Quarter 1996



Note: All data includes prior-period adjusted sales.

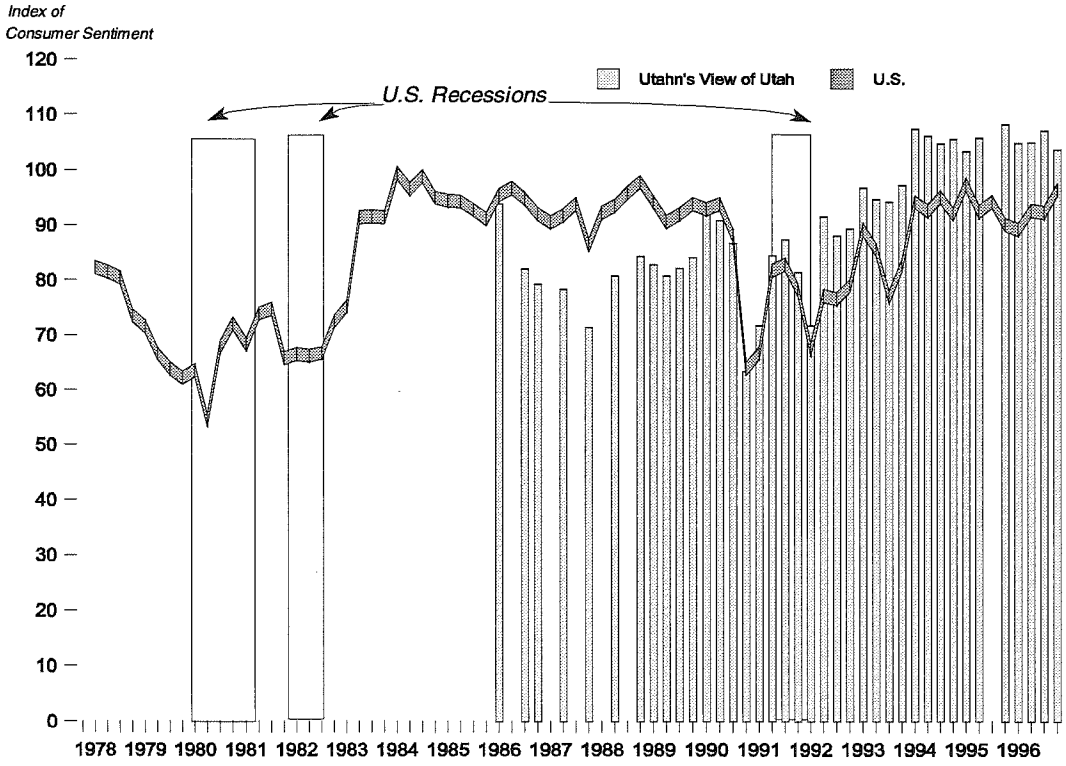
Source: Utah State Tax Commission.

Figure 30
Annual Percent Change in Gross Taxable Sales: 1982 to 1996



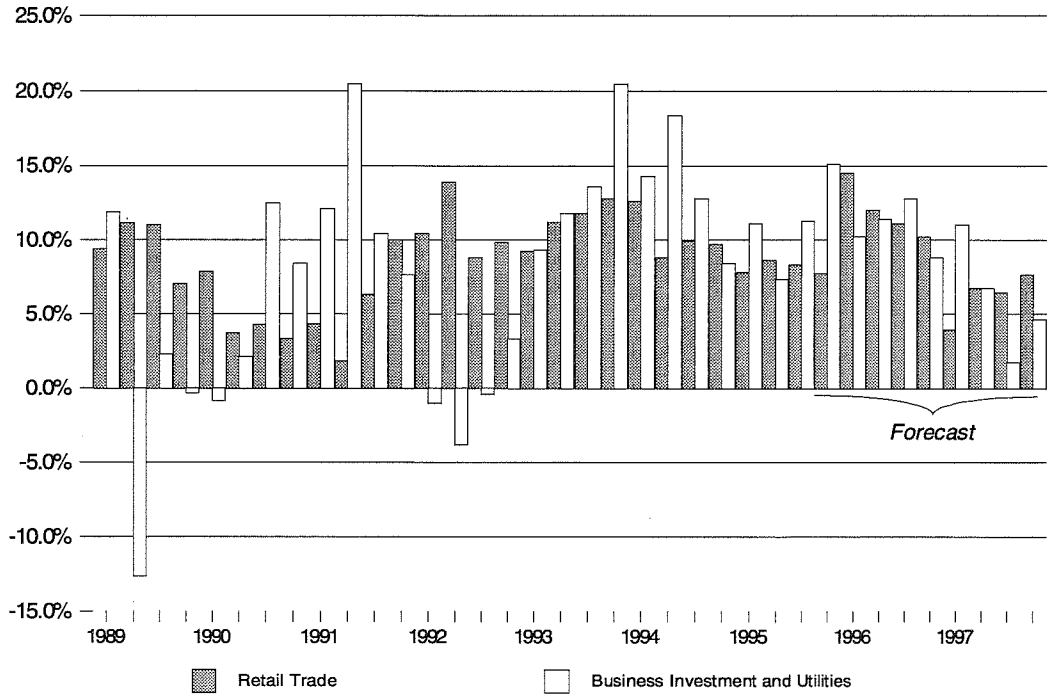
Source: Utah State Tax Commission.

Figure 31
Consumer Sentiment Indices—Utah and U.S.: 1978 to 1996



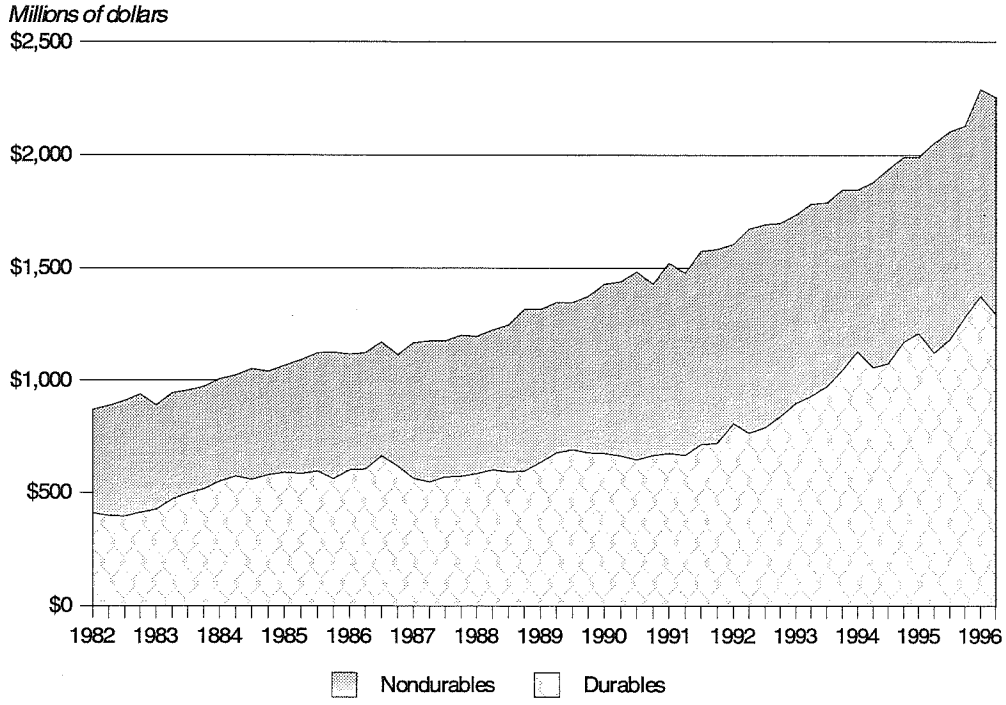
Sources: U.S.--University of Michigan, Utah--Valley Research.

Figure 32
Growth in Retail Sales vs. Business Investment & Utilities



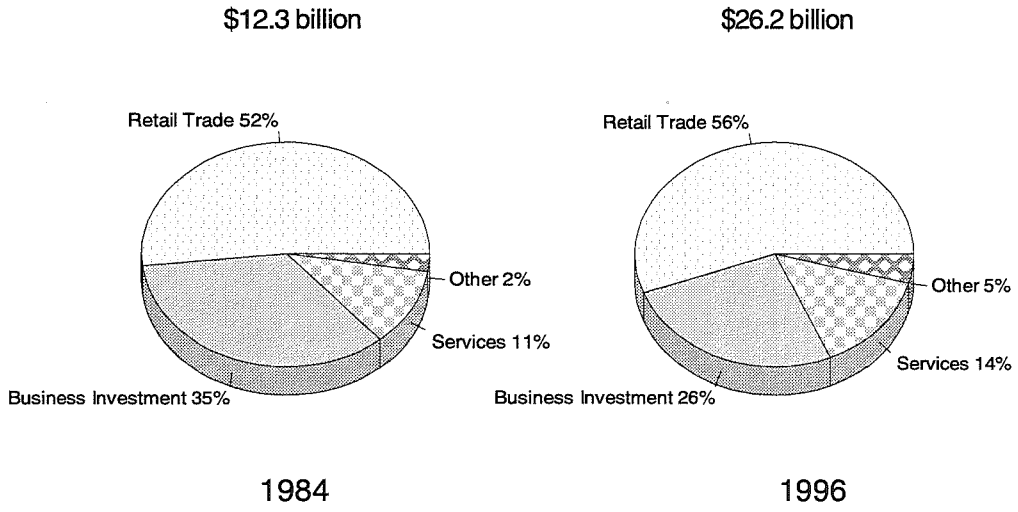
Source: Utah State Tax Commission.

Figure 33
Utah Retail Sales—Durables and Nondurables (Seasonally Adjusted): 1982 to 1996



Source: Utah State Tax Commission.

Figure 34
Shares of Utah's Sales Tax Base—Four Major Sectors: 1984 and 1996



Source: Utah State Tax Commission.

Table 43
Utah Gross Taxable Sale by Component: 1982 to 1997

Dollar Amounts (millions)

Calendar Year	Retail Sales	Investment Purchases	Taxable Services	All Other	Total Gross Taxable Sales
1982	$5,200	$3,513	$1,062	$244	$10,020
1983	5,638	3,648	1,138	262	10,686
1984	6,401	4,254	1,385	284	12,324
1985	6,708	4,122	1,440	304	12,574
1986	7,010	3,689	1,414	265	12,378
1987	6,951	3,398	1,587	252	12,188
1988	7,346	3,684	1,718	269	13,017
1989	8,048	3,675	1,849	320	13,892
1990	8,407	3,864	1,829	674	14,774
1991	8,918	4,345	2,040	695	15,998
1992	9,860	4,329	2,223	901	17,313
1993	10,994	4,933	2,499	915	19,341
1994	12,097	5,590	2,802	1,039	21,527
1995	13,080	6,218	3,205	1,106	23,609
1996 (e)	14,623	6,807	3,727	1,074	26,231
1997 (f)	15,541	6,937	4,164	1,244	27,886

Percent Change

Calendar Year	Retail Sales	Business Investment Purchases	Taxable Services	All Other	Total Gross Taxable Sales
1982	6.1	(8.0)	15.6	12.6	1.7
1983	8.4	3.8	7.2	7.4	6.6
1984	13.5	16.6	21.7	8.5	15.3
1985	4.8	(3.1)	4.0	7.0	2.0
1986	4.5	(10.5)	(1.8)	(12.7)	(1.6)
1987	(0.8)	(7.9)	12.3	(5.0)	(1.5)
1988	5.7	8.4	8.2	6.7	6.8
1989	9.6	(0.2)	7.6	18.8	6.7
1990	4.5	5.1	(1.1)	111.0	6.3
1991	6.1	12.4	11.5	3.1	8.3
1992	10.6	(0.4)	9.0	29.7	8.2
1993	11.5	14.0	12.4	1.5	11.7
1994	10.0	13.3	12.1	13.5	11.3
1995	8.1	11.2	14.4	6.5	9.7
1996 (e)	11.8	9.5	16.3	(2.9)	11.1
1997 (f)	6.3	1.9	11.7	15.8	6.3

(e) = estimate
(f) = forecast

Source: Utah State Tax Commission.

Table 44
Gross Taxable Retail Sales by Sector: 1990 to 1997

Category	Dollar Amounts (millions)								Percent Change						
	1990	1991	1992	1993	1994	1995	1996(e)	1997(f)	1990-91	1991-92	1992-93	1993-94	1994-95	1995-96	1996-97
Retail Nondurables	$5,757	$6,144	$6,657	$7,140	$7,656	$8,297	$9,223	$9,967	6.7	8.3	7.3	7.2	8.4	11.2	8.1
General Merchandise	1,362	1,484	1,619	1,717	1,816	2,033	2,287	2,458	8.3	9.1	6.1	5.8	11.9	12.5	7.5
Apparel	415	452	506	581	591	614	675	731	7.3	6.1	14.8	1.7	3.9	10.0	8.2
Food Stores	2,161	2,226	2,374	2,496	2,677	2,784	3,048	3,231	7.2	5.8	1.7	7.3	4.0	9.5	6.0
Eating and Drinking	861	935	1,025	1,140	1,234	1,349	1,498	1,641	8.4	11.9	3.9	4.0	9.3	11.0	9.6
Miscellaneous Shopping Goods	958	1,047	1,133	1,206	1,338	1,517	1,714	1,906	11.2	12.5	10.0	9.5	11.0	13.0	11.2
Retail Durables	2,650	2,774	3,203	3,854	4,441	4,784	5,400	5,574	8.1	7.5	8.2	6.0	9.6	11.2	3.2
Motor Vehicles	1,577	1,591	1,783	2,140	2,331	2,431	2,662	2,742	0.9	12.1	20.0	8.9	4.3	9.5	3.0
Building & Garden	575	630	764	941	1,160	1,241	1,359	1,370	9.6	21.3	23.2	23.3	7.0	9.5	0.8
Furniture & Home Furnishings	498	553	656	773	950	1,112	1,379	1,462	11.0	18.6	17.8	22.9	17.1	24.0	6.0
Business Investment	3,864	4,345	4,329	4,933	5,590	6,218	6,807	6,937	12.4	(0.4)	14.0	13.3	11.2	9.5	1.9
Mining	150	186	153	142	149	176	158	177	24.0	(17.7)	(7.2)	4.9	18.1	(10.0)	12.0
Construction	203	207	228	247	290	343	370	393	2.0	10.1	8.3	17.4	18.3	8.0	6.0
Manufacturing	889	936	1,000	1,083	1,155	1,368	1,489	1,357	5.3	6.8	8.3	6.6	18.4	8.9	(8.9)
Transportation, Comm. & Utilities	1,351	1,644	1,407	1,552	1,657	1,776	1,927	2,105	21.7	(14.4)	10.3	6.8	7.2	8.5	9.2
Wholesale Trade	1,271	1,372	1,541	1,909	2,339	2,555	2,862	2,905	7.9	12.3	23.9	22.5	9.2	12.0	1.5
Services	1,829	2,040	2,223	2,499	2,802	3,205	3,727	4,164	11.5	9.0	12.4	12.1	14.4	16.3	11.7
Hotels & Lodging	307	351	373	400	423	473	538	597	14.3	6.3	7.2	5.8	11.8	13.8	11.0
Amusement & Recreation	194	228	256	303	378	451	519	586	17.5	12.3	18.4	24.8	19.3	15.0	13.0
Personal	91	99	110	130	146	167	182	200	8.8	11.1	18.2	12.3	14.4	9.0	10.0
Health	76	68	77	85	84	91	89	91	(10.5)	13.2	10.4	(1.2)	8.3	(2.0)	2.0
Education, Legal & Social	111	126	137	144	160	175	205	227	13.5	8.7	5.1	11.1	9.4	17.0	10.8
Auto Rental & Repairs	525	572	601	677	763	901	1,036	1,141	9.0	5.1	12.6	12.7	18.1	15.0	10.1
Business	446	502	564	625	645	711	846	948	12.6	12.4	10.8	3.2	10.2	19.0	12.0
Finance Insurance & Real Estate	79	94	105	135	203	236	312	374	19.0	11.7	28.6	50.4	16.3	32.0	20.0
All Other	674	695	901	915	1,038	1,105	1,075	1,244	3.1	29.6	1.6	13.4	6.5	(2.7)	15.7
Grand Total Taxable Sales	$14,774	$15,998	$17,313	$19,341	$21,527	$23,609	$26,231	$27,886	8.3	8.2	11.7	11.3	9.7	11.1	6.3

(e) = estimate
(f) = forecast

Source: Utah State Tax Commission, Economic and Statistical Unit.

Tax Collections

Overview of Recent Events

Tax collections were reduced by $270.3 million dollars (on an annualized basis) due to tax cuts that came out of the 1994, 1995, and 1996 general and special legislative sessions. The 1994 general legislative session enacted tax reductions amounting to $18.8 million. The sales tax rate was reduced by 1/8th cent as of fiscal year 1995, and several sales tax exemptions were eliminated (which partially offset the tax rate reduction). The property tax residential exemption was raised from 29.5 percent to 32 percent, and the minimum school program property tax rate was lowered from .004275 to .00422.

A second round of cuts during the 1995 general legislative session reduced taxes another $141.9 million. The largest tax reduction was a $150.1 million property tax cut. Property taxes were reduced by raising the residential exemption from 32 percent to 45 percent, by lowering the minimum school program rate from .00422 to .00264, and by setting certified levy limits for state-mandated property taxes. Gross receipts taxes were increased $9.4 million to offset the property tax decrease accruing to electric utilities.

Taxes were reduced another $109.6 million during the 1996 general and special legislative sessions. The basic tax rate for school district participation in the state-supported minimum school program was reduced for the third time (in as many years) from .00264 to .002138 to accommodate an additional $30 million property tax cut. Individual income taxes were decreased $45 million by reducing tax rates and by increasing the deductibility of health care insurance, effective January 1, 1996.

Several sales tax exemptions that were eliminated in the 1994 general session were reinstated in the 1996 general legislative session. These included exemptions for taxicabs, coin-operated devices, car washes, and laundromats. The 1995 general session gross receipts tax increase on electric utilities was also partially reversed. Effective January 1, 1996 gross receipts tax rates on electric utilities were reduced 53 percent or $4.8 million.

The November 1996 special legislative session modified a manufacturing sales tax exemption bill that was passed out of the 1995 general session. This "normal operating replacements" exemption will be phased in over three years. As of July 1996, 30 percent of the exemption is allowed; as of July 1997, 60 percent is allowed; and as of July 1998 (fiscal year 1999), 100 percent is allowed. The revenue loss from this exemption was originally estimated at $28.6 million for fiscal year 1999. The State Tax Commission subsequently ruled that all parts (in addition to depreciable equipment and parts) were eligible for the exemption. That ruling raised the revenue loss for fiscal year 1999 to $71.3 million. In November 1996 the special session modified this replacements exemption to restore the fiscal impact to $28.6 million.

Finally, the 1996 general session reduced general fund sales tax collections by $36 million (1/8th cent) beginning in fiscal year 1998. This earmarks (redistributes) these taxes for local water and local transportation projects. The earmarking was not a tax reduction since the 1/8th cent will be collected and deposited into a restricted account. This earmarking did reduce available state funding for other purposes.

Previous 10-Year Tax Collection Highlights

Tax Increases. Ten years ago Utah was experiencing an increase in net out-migration and declining employment growth. The closures of Geneva Steel (August 1986) and Kennecott Copper (September 1985), the completion of the Intermountain Power Project (May 1987), and depressed oil prices contributed to this downturn. Table 45 shows that real revenue growth (adjusted for inflation) turned negative at -0.5 percent and -0.4 percent for fiscal years 1986 and 1987.

Because of this economic downturn, tax increases totaling approximately $150 million became effective in the winter and spring of 1987. The tax increases included repealing the deductibility of federal income taxes paid against state income taxes owed ($50 million); a ½ cent increase in sales taxes ($50 million); an 11-cents per pack increase in cigarette taxes ($10 million); and, a 5-cents per gallon increase in motor and special fuels taxes ($40 million). These tax increases, increased oil prices, and the reopening of Geneva (September 1987) and Kennecott (June 1987) contributed to fiscal year 1988 revenue growth of 11.2 percent (7.7 percent in constant dollars).

Tax Decreases. Growth in revenue receipts continued to improve throughout fiscal year 1989. Receipts increased 9.4 percent, with inflation-adjusted growth of 5.0 percent. Large income tax receipts prompted a special session of the

Legislature in July 1988 to reduce income tax rates by 5 percent, and to allow one-third of federal income taxes paid to be deducted against state income taxes owed (for a tax reduction of $73 million). A second special session of the Legislature in September 1989 reduced income tax rates another 2 percent and increased the deductibility of federal taxes allowed against state taxes from 33.3 percent to 50 percent (this reduced taxes another $35 million). Taxes were further reduced in fiscal year 1990 by decreasing the sales tax rate by 7/64ths of a cent. Sales tax earmarking for the Olympics also began in fiscal year 1990 with 1/64th of a cent each coming from state and local governments.

1994 Legislative Session Tax Cuts. Strong tax collections prompted the Legislature in its 1994 general session to enact tax decreases of $18.8 million. As shown on Table 52, the sales tax rate was reduced by 1/8th cent, while several sales tax exemptions were eliminated (which partially offset the tax rate reduction). The property tax residential exemption was raised (from 29.5 percent to 32 percent), and the minimum school program property tax rate was lowered (from .004275 to .00422) for a tax cut of $8.5 million.

1995 Legislative Session Tax Cuts. A second round of cuts occurred during the 1995 general legislative session. A net reduction of taxes totaling $141.9 million resulted from this session. The largest tax reduction was a $150.1 million property tax cut. Property taxes were reduced $141.4 million by raising the residential exemption from 32 to 45 percent and by lowering the minimum school program rate from .00422 to .00264. Property taxes were lowered another $8.7 million due to newly imposed certified levy limits on state-mandated property taxes. The certified levy sets a tax rate which restricts revenue increases to the growth in assessed valuations that is not attributable to inflation. Prior to setting these certified levy limits state property tax revenues were allowed to increase if assessed valuations increased due to inflation. This 'new growth only' requirement is the same as that under which cities, counties, and school districts operate. A newspaper notice must be published if the levy exceeds the certified rate.

Income taxes increased $4.5 million in fiscal year 1996 due to lower property tax deductions claimed on income tax forms as a result of the property tax cuts. Gross receipts taxes increased $9.4 million to offset the property tax decrease accruing to electric utilities. The $4 million sales tax exemption for construction materials used in public education building projects that was eliminated in the 1994 general session was also reinstated. And, a $1.4 million sales tax exemption for mobile homes (which exempts 45 percent of the sales price of any new mobile or manufactured home, and 100 percent of the resale price), was passed out of the legislature in 1995.

1996 General and Special Legislative Session Tax Cuts. A third round of tax cuts during the 1996 general and special legislative sessions reduced taxes another $109.6 million, bringing total tax reductions to $270.3 million dollars (on an annualized basis) during the last three years (as shown on Table 52). The basic tax rate for school district participation in the state-supported minimum school program was reduced for the third time (in as many years) from .00264 to .002138 in the 1996 general session. This rate reduction took effect May 1, 1996 in order to accommodate an additional $30 million property tax cut for fiscal year 1997.

Individual income taxes were decreased $45 million by reducing tax rates and by increasing the deductibility of health care insurance, effective January 1, 1996. The top rate was reduced from 7.2 percent to 7.0 percent, on taxable incomes over $7,500, and the minimum rate was reduced from 2.55 percent to 2.3 percent. Sixty percent of health care insurance, not already deductible against federal taxes, became deductible against state income taxes owed.

Several sales tax exemptions that were eliminated in the 1994 general session were reinstated during the 1996 general legislative session. These included exemptions for taxicabs, coin-operated devices, car washes, and laundromats for a combined reduction in sales taxes of $1.53 million. The 1995 general legislative session gross receipts tax increase on electric utilities was also partially reversed in the 1996 general session. Effective January 1, 1996, gross receipts tax rates were reduced 53 percent or $4.75 million.

Manufacturing Replacements Exemption. The November 1996 special legislative session modified a manufacturing sales tax exemption bill for "normal operating replacements" that was passed out of the 1995 general session. This exemption will be phased in over three years. The sales tax exemption for normal operating replacements is phased in as follows: (1) beginning July 1, 1996, 30 percent of the exemption is allowed; (2) beginning July 1, 1997, 60 percent of the exemption is allowed; and (3) beginning July 1, 1998 (fiscal year 1999), 100 percent of the exemption is allowed. The revenue loss from this exemption was originally estimated at $28.6 million for fiscal year 1999. The State Tax Commission subsequently ruled that all parts (in addition to depreciable equipment and parts) were eligible for the exemption. That ruling raised the revenue loss for fiscal year 1999 to

$71.3 million and created the need for a special session of the Legislature.

In November 1996 the special session modified the normal operating replacements exemption to restore the fiscal impact to $28.6 million. In order to qualify for the exemption under House Bill 3001, normal operating replacements must: (1) have an economic life of three or more years; (2) be used in the manufacturing process in a manufacturing facility in Utah; (3) be used to replace or adapt an existing machine to extend the normal estimated useful life of the machine; and (4) not include repairs or maintenance. Vendors are to grant the phase-in of the exemption at the time of sale by collecting the sales tax only on the portion of the sale that is not exempt. For example, on sales made between July 1, 1996 and June 30, 1997, vendors are to assess sales tax on 70 percent of the sales price of normal operating replacements. House Bill 3001 is retroactive to July 1, 1996.

New and expanding manufacturing machinery and equipment remained 100 percent exempt from sales taxation under House Bill 3001. According to the legislation, a full sales tax exemption is granted for the purchase or lease of machinery and equipment that: (1) is used in the manufacturing process; (2) has an economic life of three or more years; (3) is used to manufacture an item sold as tangible personal property; and (4) is used in new or expanding operations in a manufacturing facility in Utah.

Finally, the 1996 general session reduced general fund sales tax collections by $36 million (1/8th cent) beginning in fiscal year 1998. This earmarks (redistributes) these taxes for local water and local transportation projects. The earmarking was not a tax reduction since the 1/8th cent will be collected and deposited into a restricted account. This earmarking did reduce general fund spending for other purposes.

Bills from the 1996 General and Special Legislative Sessions

Tax bills coming out of the 1996 general and special sessions are described in the following, and where possible include the estimated revenue impacts.

H.B. 145 Sales Tax Exemption for Coin-operated Laundromats. Exempts coin-operated laundry machines from the sales tax. Estimated loss of revenue is $263,000.

H.B. 230 Severance Tax—Indian Tribes. Creates the Navajo Revitalization Fund. The legislation provides that a portion of severance tax monies derived from oil and gas wells on the Navajo reservation (33 percent on wells existing on or before June 30, 1996 and 80 percent on wells beginning production on or after July 1, 1996) be diverted to the fund to be used for loans and grants for projects benefitting Navajos. Estimated loss of revenue is $400,000.

H.B. 241 Transient Room Tax Amendments. Expands the purposes and uses of the transient room tax to include paying for solid waste disposal operations, emergency medical services, search and rescue activities, and law enforcement activities as required to mitigate the impact of recreational, tourism, or convention activities. There is no fiscal impact.

H.B. 274 Oil and Gas Amendments. Defines and reduces the tax rate for incremental production which is achieved from an enhanced recovery project. There is no fiscal impact.

H.B. 291 Sales Tax Exemption—Coin-operated Car Wash. Exempts coin-operated car wash machines from the sales tax. Estimated loss of revenue is $345,000.

H.B. 309 Sales Tax Exemption for Certain Coin-operated Amusement Devices. Exempts certain coin-operated amusement devices from the sales tax. Estimated loss of revenue is $462,700.

H.B. 349 Gross Receipts Taxes—Modifications. Reduces the rates of the two gross receipts taxes by 53 percent. Estimated loss of revenue is $4,750,000.

H.B. 362 Sales Tax Exemption for Home Medical Equipment and Supplies. Provides that sales of eyeglasses, contact lenses, hearing aids, and other equipment or accessories relating to vision or hearing are taxable under the sales and use tax. This has an estimated fiscal impact of $2 million.

H.B. 404 Income Tax—Health Care Insurance Deduction. Provides a personal income tax deduction as of January 1, 1996, for 60 percent of the amount paid by a taxpayer for health care insurance expenses under certain circumstances and clarifies that a deduction is not allowed: (1) for amounts that are reimbursed or funded in whole or in part by government; and (2) for a taxpayer who is eligible to participate in a health plan that is funded in whole or in part by the taxpayer's employer. Estimated loss of revenue is $4 million.

H.B. 405 Minimum School Program Act Amendments. The basic tax rate for school district participation in the state supported minimum school program is reduced from .00264 to .002138. Estimated loss of revenue is $30 million.

H.B. 461 Municipal Energy Sales and Use Tax Law. Creates a municipal energy sales and use tax act which provides procedures for imposing, reporting and collecting the tax, and distributing revenues generated by the tax; and, subjects the municipal energy sales and use tax to interim study. The bill takes effect July 1, 1997. The estimated fiscal impact is $5.3 million.

H.B. 1003 College Savings Incentive Program. Establishes the Utah Educational Savings Plan Trust which allows for investment of money deposited in a public trust for future application to the payment of post-secondary educational costs at an institution of higher education. The property of the trust and its income from operations and investments are exempt from all state taxation. Income tax deductible, but not to exceed $1,200 per beneficiary per year. Estimated loss of revenue is $240,000.

H.B. 3001 Sales Tax—Manufacturing Exemption Modifications. Clarified the criteria for qualifying as manufacturing machinery, equipment, or normal operating replacements. Normal operating replacements must now have an economic life of three or more years; be used in a manufacturing process in a manufacturing facility; be used to replace or adapt an existing machine to extend the normal useful life of the machine; and not include repairs or maintenance. Estimated loss of revenue is $28.6 million.

S.B. 50 Sales Tax on Taxicab Amendments. Exempts taxicab trips from the sales and use tax. Estimated loss of revenue is $117,600

S.B. 94 Sales Tax—County Option for Public Recreation Facilities. Modifies the purposes and uses of 1/10 of 1 percent county-option sales tax to include supporting recreational facilities. There is no fiscal impact.

S.B. 102 Income Tax—Adoption Expenses Deduction. Increases the deduction amount for adoption expenses and provides for retrospective operation. Estimated loss of revenue is $140,000.

S.B. 195 Income Tax—Credit for Education Costs. Provides an income tax credit of up to $100 for 25 percent of the costs of tutoring a disabled dependent attending a public or private school, grades kindergarten through 12. The credit may be claimed for tax years beginning on or after January 1, 1996. Estimated loss of revenue is $750,000.

S.B. 237 Income Tax Reductions. Reduces the individual income tax in fiscal year 1996-1997 by adjusting tax rates. The top rate drops from 7.2 percent to 7.0 percent effective January 1, 1996. Other rates are further adjusted in fiscal year 1997-1998 to ensure that the tax reduction is ongoing. Estimated loss of revenue is $41 million.

S.B. 239 Tax Credits for Rural Economic Resettlement Zones. Expands enterprise zones to include qualifying municipalities in addition to qualifying counties and modifies the powers of the Department of Community and Economic Development and the eligibility criteria and tax credit provisions for enterprise zones. Estimated loss of revenue is $275,000.

S.B. 275 Sales Tax—Ski Exemption. Exempts from the sales and use tax sales to a ski resort of snow making equipment, ski slope grooming equipment, passenger tramways, and electricity to operate a passenger tramway. Estimated loss of revenue is $338,000.

S.B. 1004 Sales and Use Tax Exemption—Steel Mill Contracts and Orders. Expands the sales and use tax exemption for certain items used in steel mills to include contracts entered into or orders placed on or before January 1, 1996 to purchase or lease those items if the contract or order constitutes: (1) a legal obligation to purchase or lease those items; and (2) a sale or lease under Utah State Code Section 59-12-102 on or before June 30, 1997. Estimated loss of revenue is $1.5 million.

Revenues Outlook

Employment growth and overall economic activity should show solid, above average growth in fiscal year 1997. The outlook for fiscal year 1997 revenue collections, on the other hand, is for below-average growth in inflation-adjusted receipts of around 3.1 percent. This growth rate is lower than the average annual constant dollar rate of 3.9 percent for fiscal years 1980 through 1997. The reason for the decline in the growth rate for fiscal year 1997 revenue receipts is due almost entirely to (1) income tax cuts ($45 million); (2) gross receipts tax cuts ($4.8 million); (3) the start up of the manufacturing sales tax exemption for normal operating replacements ($8.7 million at 30 percent allowed); and, (4) the diversion of drivers' license fees from the unrestricted transportation fund to a restricted account ($10.8 million).

Budget Reserve Account, School Trust Fund and Appropriations Limitation

The state maintains a Budgetary Reserve Account (the "Rainy Day Fund") which can only be used to cover operating deficits or retroactive tax refunds. Established by the Legislature in fiscal year 1987, this fund can retain a maximum of 8 percent of the general fund appropriation for the year. The "Rainy

Day" balance at the end of fiscal year 1996 was $71.8 million. The fund's current maximum allowable level is $110.8 million.

The permanent School Trust Fund was established via a constitutional amendment in fiscal year 1988. Prior to fiscal year 1988, school trust land monies were deposited into the uniform school fund as a funding source for public education budgets. Only real (inflation-adjusted) interest earnings from the permanent fund are currently deposited into the uniform school fund. The permanent fund balance at the end of fiscal year 1996 was $105.3 million. This fund does not have a maximum allowable limit.

The 1996 April special legislative session earmarked at least 25 percent of the Budgetary Reserve Account to cover public education operating deficits (H.B. 1007). This earmarking takes effect January 1, 1997 as a result of voter approval of Proposition No. 6 (Resolution Amending the Revenue and Taxation Article and Education Article for the Support of the Public Education and Higher Education Systems) on November 5, 1996. Proposition No. 6 amends the State Constitution to allow for income tax monies to be used to fund higher education.

Appropriations from tax collections are limited by the "State Appropriations and Tax Limitation Act". This law limits state appropriations from the general fund, uniform school fund and transportation fund based upon a formula that reflects the average of changes in personal income and the combined changes in population and inflation. Capital developments, debt service payments, mineral lease revenues, and all restricted revenues such as dedicated credits and federal funds, are exempt from this limitation.

Significant amendments to the State Appropriations and Tax Limitation Act occurred in the 1996 general legislative session. First, H.B. 458 exempted $110 million for the Centennial Highway Trust Fund from the appropriations limit; second, H.B. 401 exempted monies appropriated to fund the costs of construction of capital developments as defined by 63A-5-103(4) from the limit; third, transfers or appropriations made to the Budgetary Reserve Account were exempted from the limit: and fourth, contingent appropriations were specifically included under the limit.

The appropriations limitations law also restricts the amount of outstanding general obligation debt to 20 percent of the maximum allowable appropriations limit. The appropriations limit in effect for fiscal year 1996 was $2.81 billion. The Governor's budget recommendations, and the final appropriations enacted by the Legislature, have been in strict compliance with this law since its inception in fiscal year 1989.

Tax Collection Tables

Historic tax collections are presented in tables in current (not adjusted for inflation) dollars and in constant (inflation-adjusted) dollars. Collections are also adjusted for tax rate and base changes, windfalls and payment accelerations, transfers between revenue categories, and the occurrence of large construction projects in order to ascertain the true underlying trends in revenue collections when compared to general economic activity.

The tables below also show the distribution of unrestricted revenue funds as a percent of total revenues and total personal income. The table below show that unrestricted general fund, transportation fund, and mineral lease monies have generally declined as a percent of total revenues and of personal income, while the uniform school fund percentages have increased. This is largely due to stronger historic growth in sales tax-exempt services industries than in taxable goods industries; tax credits and exemptions, income tax bracket creep; increased fuel efficiency of vehicles; and, the transfer of unrestricted general fund and transportation fund monies to restricted accounts.

Table 45
Distribution of Unrestricted Revenue Funds as a Percent of Total Revenues and Personal Income: FY1980 to FY1997

Fiscal Year	Total Unrestricted Revenues (thousands)	Fiscal Year Personal Income (millions)	Percent of Personal Income	General Fund (thousands)	Percent of Total Revenues	Percent of Personal Income	Uniform School Fund (thousands)	Percent of Total Revenues	Percent of Personal Income	Trans-portation Fund (thousands)	Percent of Total Revenues	Percent of Personal Income	Mineral Lease Payments (thousands)	Percent of Total Revenues	Percent of Personal Income
1980	$841,315	$11,090	7.6%	$403,410	48%	3.6%	$333,179	40%	3.0%	$89,794	11%	0.8%	$14,933	2%	0.1%
1981	901,574	12,404.5	7.3%	437,153	48%	3.5%	359,518	40%	2.9%	86,750	10%	0.7%	18,153	2%	0.1%
1982	1,020,704	13,772.8	7.4%	499,345	49%	3.6%	392,978	39%	2.9%	101,490	10%	0.7%	26,891	3%	0.2%
1983	1,045,236	14,659.8	7.1%	486,988	47%	3.3%	409,909	39%	2.8%	112,177	11%	0.8%	36,162	3%	0.2%
1984	1,280,109	16,061.3	8.0%	657,399	51%	4.1%	468,734	37%	2.9%	116,508	9%	0.7%	37,468	3%	0.2%
1985	1,409,793	17,409.0	8.1%	705,088	50%	4.1%	529,594	38%	3.0%	140,921	10%	0.8%	34,190	2%	0.2%
1986	1,445,594	18,454.5	7.8%	706,012	49%	3.8%	560,809	39%	3.0%	146,195	10%	0.8%	32,578	2%	0.2%
1987	1,479,883	19,221.5	7.7%	679,076	46%	3.5%	622,973	42%	3.2%	155,449	11%	0.8%	22,385	2%	0.1%
1988	1,645,921	20,263.8	8.1%	759,554	46%	3.7%	665,082	40%	3.3%	192,449	12%	0.9%	28,836	2%	0.1%
1989	1,800,179	21,715.3	8.3%	823,704	46%	3.8%	728,259	40%	3.4%	197,416	11%	0.9%	50,800	3%	0.2%
1990	1,871,433	23,490.8	8.0%	869,059	46%	3.7%	767,181	41%	3.3%	200,252	11%	0.9%	34,941	2%	0.1%
1991	1,960,264	25,486.3	7.7%	893,950	46%	3.5%	826,524	42%	3.2%	207,412	11%	0.8%	32,378	2%	0.1%
1992	2,073,408	27,239.5	7.6%	936,499	45%	3.4%	890,048	43%	3.3%	214,336	10%	0.8%	32,526	2%	0.1%
1993	2,214,107	29,380.3	7.5%	1,021,413	46%	3.5%	938,239	42%	3.2%	224,168	10%	0.8%	30,287	1%	0.1%
1994	2,461,039	31,692.3	7.8%	1,129,699	46%	3.6%	1,061,826	43%	3.4%	236,178	10%	0.7%	33,336	1%	0.1%
1995	2,716,502	34,207.0	7.9%	1,240,662	46%	3.6%	1,198,043	44%	3.5%	248,743	9%	0.7%	29,054	1%	0.1%
1996	2,963,958	36,960.3	8.0%	1,340,601	45%	3.6%	1,327,482	45%	3.6%	261,156	9%	0.7%	34,719	1%	0.1%
1997(e)	3,121,800	40,022.0	7.8%	1,430,800	46%	3.6%	1,397,500	45%	3.5%	262,500	8%	0.7%	31,000	1%	0.1%
Average			7.8%		47%	3.6%		41%	3.2%		10%	0.8%		2%	0.1%

(e)= estimate

Note: These revenues were not adjusted for tax rate or base changes. As such they include historical changes to the tax structure, including all tax rate and tax base changes. These monies are cash collections as reported by the Tax Commission. They are not the modified accrual collections used for budgeting.

Sources: Utah Department of Finance, Utah State Tax Commision, and Governor's Office of Planning and Budget.

Table 46
Cash Collection Unrestricted Revenues (Thousands of Current Dollars): FY1980 to FY1997

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997(e)
General Fund (GF)														
Sales and Use Tax	$320,454	$555,415	$558,581	$558,998	$617,624	$667,403	$707,443	$740,307	$802,391	$881,917	$978,248	$1,055,125	$1,162,525	$1,257,000
Liquor Profits	15,054	18,867	19,008	17,177	15,918	15,984	16,602	17,571	16,596	18,132	17,893	20,080	22,155	23,900
Insurance Premiums	14,718	22,262	26,077	27,762	28,223	26,406	30,020	27,845	30,175	33,998	38,167	40,942	40,134	41,000
Beer, Cigarette, and Tobacco	12,445	21,314	21,052	24,000	29,190	30,733	30,182	31,008	34,581	34,282	36,427	37,661	37,784	39,000
Severance Taxes	10,568	46,880	43,797	21,548	29,156	28,135	30,096	31,016	18,160	19,267	18,873	21,403	20,358	17,900
Inheritance Tax	1,695	4,786	4,725	2,318	3,443	9,766	7,593	4,811	3,975	7,627	8,189	24,956	8,326	7,500
Investment Income	22,370	14,368	12,020	3,836	10,688	19,236	17,893	10,959	7,002	4,358	6,370	12,321	16,814	14,000
Other	8,990	23,409	22,237	24,679	26,464	27,437	32,593	33,946	27,687	26,016	30,010	32,904	37,154	35,000
Circuit Breaker Credits	(2,884)	(2,213)	(1,485)	(1,242)	(1,152)	(1,396)	(3,363)	(3,513)	(4,069)	(4,185)	(4,477)	(4,730)	(4,649)	(4,500)
Subtotal GF	403,410	705,088	706,012	679,076	759,554	823,704	869,059	893,950	936,499	1,021,413	1,129,699	1,240,662	1,340,601	1,430,800
Uniform School Fund (USF)														
Individual Income Tax	265,328	435,510	454,290	533,288	569,853	615,604	647,593	717,600	784,430	842,275	925,302	1,026,895	1,139,080	1,210,000
Corporate Franchise Tax	40,377	65,918	84,048	68,898	78,806	92,982	99,693	87,766	80,945	79,472	121,062	153,512	168,431	173,000
School Land Income	10,728	18,409	11,227	7,940	0	0	0	0	0	0	0	0	0	0
Permanent Fund Interest	0	0	0	0	2,075	3,110	4,533	4,593	4,721	6,491	4,417	4,897	3,159	2,500
Gross Receipts Tax	0	0	0	510	4,498	2,814	4,172	3,685	3,577	4,505	4,128	4,389	8,351	8,400
Federal Revenue Sharing	14,045	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	2,701	9,757	11,244	12,337	9,850	13,749	11,189	12,880	16,375	5,496	6,918	8,350	8,461	3,600
Subtotal USF	333,179	529,594	560,809	622,973	665,082	728,259	767,181	826,524	890,048	938,239	1,061,826	1,198,043	1,327,482	1,397,500
Transportation Fund (TF)														
Motor Fuel Tax	60,451	89,337	92,164	99,985	129,370	131,220	132,475	131,056	136,352	141,306	150,387	155,453	163,169	168,000
Special Fuel Tax	10,470	17,791	19,369	20,626	27,555	29,305	29,092	36,786	33,405	35,564	36,210	40,662	43,735	48,000
Other	18,873	33,793	34,662	34,838	35,524	36,891	38,685	39,570	44,579	47,298	49,581	52,628	54,252	46,500
Subtotal TF	89,794	140,921	146,195	155,449	192,449	197,416	200,252	207,412	214,336	224,168	236,178	248,743	261,156	262,500
Mineral Lease Payments	14,933	34,190	32,578	22,385	28,836	50,800	34,941	32,378	32,526	30,287	33,336	29,054	34,719	31,000
Total	$841,315	$1,409,793	$1,445,594	$1,479,883	$1,645,921	$1,800,179	$1,871,433	$1,960,264	$2,073,408	$2,214,107	$2,461,039	$2,716,502	$2,963,958	$3,121,800

(e)= estimate

Note: These revenues were not adjusted for tax rate or base changes. As such they include historical changes to the tax structure, including all tax rate and tax base changes. These monies are cash collections as reported by the Tax Commission. They are not the modified accrual collections used for budgeting.

Sources: Utah Department of Finance, Utah State Tax Commission, and Governor's Office of Planning and Budget.

Table 47
Cash Collection Unrestricted Revenues (Current Dollar Percent Changes): FY1980 to FY1997

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997(e)
General Fund (GF)														
Sales and Use Tax	na	5.6	0.6	0.1	10.5	8.1	6.0	4.6	8.4	9.9	10.9	7.9	10.2	8.1
Liquor Profits	na	-3.1	0.7	-9.6	-7.3	0.4	3.9	5.8	-5.5	9.3	-1.3	12.2	10.3	7.9
Insurance Premiums	na	11.4	17.1	6.5	1.7	-6.4	13.7	-7.2	8.4	12.7	12.3	7.3	-2.0	2.2
Beer, Cigarette, and Tobacco	na	6.6	-1.2	14.0	21.6	5.3	-1.8	2.7	11.5	-0.9	6.3	3.4	0.3	3.2
Severance Taxes	na	29.4	-6.6	-50.8	35.3	-3.5	7.0	3.1	-41.5	6.1	-2.0	13.4	-4.9	-12.1
Inheritance Tax	na	53.3	-1.3	-50.9	48.5	183.6	-22.3	-36.6	-17.4	91.9	7.4	204.8	-66.6	-9.9
Investment Income	na	28.2	-16.3	-68.1	178.6	80.0	-7.0	-38.8	-36.1	-37.8	46.2	93.4	36.5	-16.7
Other	na	1.6	-5.0	11.0	7.2	3.7	18.8	4.2	-18.4	-6.0	15.3	9.6	12.9	-5.8
Circuit Breaker Credits	na	21.3	-32.9	-16.4	-7.2	21.2	140.9	4.5	15.8	2.9	7.0	5.7	-1.7	-3.2
Subtotal GF	na	7.3	0.1	-3.8	11.9	8.4	5.5	2.9	4.8	9.1	10.6	9.8	8.1	6.7
Uniform School Fund (USF)														
Individual Income Tax	na	11.4	4.3	17.4	6.9	8.0	5.2	10.8	9.3	7.4	9.9	11.0	10.9	6.2
Corporate Franchise Tax	na	23.8	27.5	-18.0	14.4	18.0	7.2	-12.0	-7.8	-1.8	52.3	26.8	9.7	2.7
School Land Income	na	-3.0	-39.0	-29.3	na	na	na	na	na	na	na	na	na	na
Permanent Fund Interest	na	na	na	na	na	49.9	45.8	1.3	2.8	37.5	-32.0	10.9	-35.5	-20.9
Gross Receipts Tax	na	na	na	na	782.0	-37.4	48.3	-11.7	-2.9	25.9	-8.4	6.3	90.3	0.6
Federal Revenue Sharing	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Other	na	73.9	15.2	9.7	-20.2	39.6	-18.6	15.1	27.1	-66.4	25.9	20.7	1.3	-57.5
Subtotal USF	na	13.0	5.9	11.1	6.8	9.5	5.3	7.7	7.7	5.4	13.2	12.8	10.8	5.3
Transportation Fund (TF)														
Motor Fuel Tax	na	29.5	3.2	8.5	29.4	1.4	1.0	-1.1	4.0	3.6	6.4	3.4	5.0	3.0
Special Fuel Tax	na	23.1	8.9	6.5	33.6	6.4	-0.7	26.4	-9.2	6.5	1.8	12.3	7.6	9.8
Other	na	2.2	2.6	0.5	2.0	3.8	4.9	2.3	12.7	6.1	4.8	6.1	3.1	-14.3
Subtotal TF	na	21.0	3.7	6.3	23.8	2.6	1.4	3.6	3.3	4.6	5.4	5.3	5.0	0.5
Mineral Lease Payments	na	-8.7	-4.7	-31.3	28.8	76.2	-31.2	-7.3	0.5	-6.9	10.1	-12.8	19.5	-10.7
Total	na	10.1	2.5	2.4	11.2	9.4	4.0	4.7	5.8	6.8	11.2	10.4	9.1	5.3
Average Annual Growth Rates	na	10.9	9.4	8.4	8.8	8.8	8.3	8.0	7.8	7.7	8.0	8.1	8.2	8.0

(e)= estimate
na= not available

Sources: Utah Department of Finance, Utah State Tax Commision, and Governor's Office of Planning and Budget.

Table 48
Cash Collection Unrestricted Revenues (Thousands of Constant 1996 Dollars): FY1980 to FY1997

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997(e)
General Fund (GF)														
Sales and Use Tax	$603,864	$781,498	$762,996	$743,257	$795,195	$824,622	$840,200	$841,543	$883,707	$946,369	$1,025,451	$1,079,753	$1,162,525	$1,230,543
Liquor Profits	28,368	26,547	25,964	22,839	20,495	19,749	19,717	19,974	18,278	19,457	18,756	20,549	22,155	23,397
Insurance Premiums	27,735	31,324	35,620	36,913	36,337	32,626	35,653	31,653	33,233	36,483	40,009	41,898	40,134	40,137
Beer, Cigarette, and Tobacco	23,451	29,990	28,756	31,911	37,582	37,973	35,846	35,248	38,086	36,787	38,185	38,540	37,784	38,179
Severance Taxes	19,914	65,963	59,825	28,651	37,539	34,763	35,744	35,258	20,000	20,675	19,783	21,903	20,358	17,523
Inheritance Tax	3,194	6,734	6,454	3,082	4,433	12,067	9,018	5,469	4,378	8,184	8,584	25,539	8,326	7,342
Investment Income	42,154	20,217	16,419	5,100	13,761	23,767	21,251	12,458	7,712	4,676	6,677	12,609	16,814	13,705
Other	16,941	32,938	30,375	32,814	34,073	33,900	38,709	38,588	30,493	27,918	31,458	33,672	37,154	34,263
Circuit Breaker Credits	(5,435)	(3,114)	(2,028)	(1,651)	(1,483)	(1,725)	(3,994)	(3,993)	(4,481)	(4,491)	(4,693)	(4,840)	(4,649)	(4,405)
Subtotal GF	760,186	992,096	964,380	902,916	977,931	1,017,742	1,032,144	1,016,197	1,031,405	1,096,059	1,184,210	1,269,621	1,340,601	1,400,685
Uniform School Fund (USF)														
Individual Income Tax	499,985	612,786	620,539	709,072	733,690	760,620	769,118	815,731	863,926	903,830	969,950	1,050,864	1,139,080	1,184,533
Corporate Franchise Tax	76,087	92,751	114,806	91,609	101,464	114,886	118,402	99,768	89,148	85,280	126,903	157,095	168,431	169,359
School Land Income	20,216	25,902	15,336	10,557	0	0	0	0	0	0	0	0	0	0
Permanent Fund Interest	0	0	0	0	2,672	3,843	5,384	5,221	5,199	6,965	4,630	5,011	3,159	2,447
Gross Receipts Tax	0	0	0	678	5,791	3,477	4,955	4,189	3,940	4,834	4,327	4,491	8,351	8,223
Federal Revenue Sharing	26,466	0	0	0	0	0	0	0	0	0	0	0	0	0
Other	5,090	13,729	15,359	16,404	12,682	16,988	13,289	14,641	18,034	5,898	7,252	8,545	8,461	3,524
Subtotal USF	627,843	745,167	766,039	828,320	856,299	899,814	911,148	939,550	980,247	1,006,808	1,113,062	1,226,007	1,327,482	1,368,086
Transportation Fund (TF)														
Motor Fuel Tax	113,914	125,702	125,892	132,943	166,565	162,131	157,335	148,978	150,170	151,633	157,644	159,081	163,169	164,464
Special Fuel Tax	19,730	25,033	26,457	27,425	35,477	36,208	34,551	41,816	36,790	38,163	37,957	41,611	43,735	46,990
Other	35,564	47,549	47,347	46,321	45,737	45,581	45,945	44,981	49,097	50,755	51,973	53,856	54,252	45,521
Subtotal TF	169,208	198,283	199,696	206,689	247,779	243,921	237,831	235,775	236,057	240,551	247,574	254,549	261,156	256,975
Mineral Lease Payments	28,139	48,107	44,500	29,764	37,127	62,767	41,498	36,806	35,822	32,500	34,944	29,732	34,719	30,348
TOTAL	$1,585,376	$1,983,654	$1,974,615	$1,967,688	$2,119,136	$2,224,244	$2,222,620	$2,228,327	$2,283,532	$2,375,918	$2,579,790	$2,779,908	$2,963,958	$3,056,094

(e)= estimate

Note: These revenues were not adjusted for tax rate or base changes. As such they include historical changes to the tax structure, including all tax rate and tax base changes. These monies are cash collections as reported by the Tax Commission. They are not the modified accrual collections used for budgeting.

Sources: Utah Department of Finance, Utah State Tax Commision, and Governor's Office of Planning and Budget.

Table 49
Cash Collection Unrestricted Revenues (Constant 1996 Dollar Percent Changes): FY1980 to FY1997

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997(e)
General Fund (GF)														
Sales and Use Tax	na	1.9	-2.4	-2.6	7.0	3.7	1.9	0.2	5.0	7.1	8.4	5.3	7.7	5.9
Liquor Profits	na	-6.5	-2.2	-12.0	-10.3	-3.6	-0.2	1.3	-8.5	6.5	-3.6	9.6	7.8	5.6
Insurance Premiums	na	7.5	13.7	3.6	-1.6	-10.2	9.3	-11.2	5.0	9.8	9.7	4.7	-4.2	0.0
Beer, Cigarette, and Tobacco	na	2.9	-4.1	11.0	17.8	1.0	-5.6	-1.7	8.0	-3.4	3.8	0.9	-2.0	1.0
Severance Taxes	na	24.9	-9.3	-52.1	31.0	-7.4	2.8	-1.4	-43.3	3.4	-4.3	10.7	-7.1	-13.9
Inheritance Tax	na	48.0	-4.2	-52.2	43.8	172.2	-25.3	-39.4	-20.0	87.0	4.9	197.5	-67.4	-11.8
Investment Income	na	23.8	-18.8	-68.9	169.8	72.7	-10.6	-41.4	-38.1	-39.4	42.8	88.8	33.4	-18.5
Other	na	-2.0	-7.8	8.0	3.8	-0.5	14.2	-0.3	-21.0	-8.4	12.7	7.0	10.3	-7.8
Circuit Breaker Credits	na	17.1	-34.9	-18.6	-10.2	16.3	131.6	-0.0	12.2	0.2	4.5	3.1	-4.0	-5.2
Subtotal GF	na	3.5	-2.8	-6.4	8.3	4.1	1.4	-1.5	1.5	6.3	8.0	7.2	5.6	4.5
Uniform School Fund (USF)														
Individual Income Tax	na	7.5	1.3	14.3	3.5	3.7	1.1	6.1	5.9	4.6	7.3	8.3	8.4	4.0
Corporate Franchise Tax	na	19.5	23.8	-20.2	10.8	13.2	3.1	-15.7	-10.6	-4.3	48.8	23.8	7.2	0.6
School Land Income	na	-6.4	-40.8	-31.2	na	na	na	na	na	na	na	na	na	na
Permanent Fund Interest	na	na	na	na	na	43.8	40.1	-3.0	-0.4	34.0	-33.5	8.2	-37.0	-22.5
Gross Receipts Tax	na	na	na	na	754.0	-40.0	42.5	-15.5	-5.9	22.7	-10.5	3.8	85.9	-1.5
Federal Revenue Sharing	na	na	na	na	na	na	na	na	na	na	na	na	na	na
Other	na	67.8	11.9	6.8	-22.7	34.0	-21.8	10.2	23.2	-67.3	23.0	17.8	-1.0	-58.3
Subtotal USF	na	9.0	2.8	8.1	3.4	5.1	1.3	3.1	4.3	2.7	10.6	10.1	8.3	3.1
Transportation Fund (TF)														
Motor Fuel Tax	na	25.0	0.2	5.6	25.3	-2.7	-3.0	-5.3	0.8	1.0	4.0	0.9	2.6	0.8
Special Fuel Tax	na	18.8	5.7	3.7	29.4	2.1	-4.6	21.0	-12.0	3.7	-0.5	9.6	5.1	7.4
Other	na	-1.4	-0.4	-2.2	-1.3	-0.3	0.8	-2.1	9.1	3.4	2.4	3.6	0.7	-16.1
Subtotal TF	na	16.7	0.7	3.5	19.9	-1.6	-2.5	-0.9	0.1	1.9	2.9	2.8	2.6	-1.6
Mineral Lease Payments	na	-11.9	-7.5	-33.1	24.7	69.1	-33.9	-11.3	-2.7	-9.3	7.5	-14.9	16.8	-12.6
Total	na	6.3	-0.5	-0.4	7.7	5.0	-0.1	0.3	2.5	4.0	8.6	7.8	6.6	3.1
Average Annual Growth Rates	na	4.6	3.7	3.1	3.7	3.8	3.4	3.1	3.1	3.2	3.5	3.8	4.0	3.9

(e)= estimate
na= not available

Sources: Utah Department of Finance, Utah State Tax Commision, and Governor's Office of Planning and Budget.

Table 50
Rate and Base Adjusted Cash Collection Unrestricted Revenues (Thousands of Constant 1996 Dollars): FY1980 to FY1996

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
General Fund (GF)													
Sales and Use Tax	$731,336	$803,965	$790,750	$753,478	$755,029	$783,036	$804,052	$817,906	$848,181	$909,358	$981,366	$1,071,008	$1,162,525
Liquor Profits	28,368	26,547	25,964	22,839	20,495	19,749	19,717	19,974	18,278	19,457	18,756	20,549	22,155
Insurance Premiums	26,576	30,015	34,132	35,371	34,819	31,263	32,457	31,964	31,845	34,959	38,588	39,657	40,134
Beer, Cigarette, and Tobacco	65,827	52,405	50,434	49,326	41,820	42,315	39,868	39,273	38,086	36,787	38,185	38,540	37,784
Severance Taxes	30,483	49,745	45,500	22,086	31,925	31,118	31,111	28,231	23,583	26,083	20,567	22,098	20,358
Inheritance Tax	3,194	6,734	6,454	3,082	4,433	12,067	9,018	5,469	4,378	8,184	8,584	9,165	8,326
Investment Income	42,154	20,217	16,419	5,100	13,761	23,767	21,251	12,458	7,712	4,676	6,677	12,609	16,814
Other	15,333	29,812	27,492	29,699	30,839	30,683	35,035	34,926	36,357	33,286	32,562	36,233	37,154
Circuit Breaker Credits	(5,435)	(3,114)	(2,028)	(1,651)	(1,483)	(1,725)	(3,994)	(3,993)	(4,481)	(4,491)	(4,693)	(4,840)	(4,649)
Subtotal GF	937,835	1,016,326	995,116	919,331	931,638	972,272	988,515	986,206	1,003,938	1,068,300	1,140,593	1,245,018	1,340,601
Uniform School Fund (USF)													
Individual Income Tax	492,631	603,864	611,519	632,514	678,276	725,689	769,118	815,731	863,926	903,830	960,834	1,047,608	1,139,080
Corporate Franchise Tax	95,108	88,062	110,233	87,360	98,616	115,853	109,830	103,487	93,529	96,777	116,520	144,685	168,431
School Land Income	20,216	25,902	15,336	10,557	0	0	0	0	0	0	0	0	0
Permanent Fund Interest	0	0	0	0	2,672	3,843	5,384	5,221	5,199	6,965	4,630	5,011	3,159
Gross Receipts Tax	0	0	0	678	5,791	3,477	4,955	4,189	3,940	4,834	4,327	4,491	8,351
Federal Revenue Sharing	26,466	0	0	0	0	0	0	0	0	0	0	0	0
Other	5,090	13,729	15,359	16,404	12,682	16,988	13,289	14,641	18,034	5,898	7,252	8,545	8,461
Subtotal USF	639,511	731,556	752,447	747,513	798,037	865,849	902,576	943,269	984,629	1,018,304	1,093,562	1,210,340	1,327,482
Transportation Fund (TF)													
Motor Fuel Tax	240,485	170,595	170,853	172,302	166,565	162,131	157,335	148,978	150,170	151,633	157,644	159,081	163,169
Special Fuel Tax	46,998	38,334	40,515	38,943	40,031	40,856	38,986	38,590	36,790	38,163	37,957	41,611	43,735
Other	36,803	49,204	48,995	47,934	47,330	47,168	47,544	46,547	49,097	50,755	51,973	53,856	54,252
Subtotal TF	324,286	258,133	260,364	259,179	253,926	250,156	243,865	234,115	236,057	240,551	247,574	254,549	261,156
Mineral Lease Payments	29,702	50,778	46,971	31,416	39,188	40,169	43,802	41,329	40,225	36,495	39,239	36,144	34,719
Total	$1,931,334	$2,056,794	$2,054,898	$1,957,439	$2,022,789	$2,128,446	$2,178,758	$2,204,919	$2,264,849	$2,363,649	$2,520,968	$2,746,051	$2,963,958

Note: These revenues were adjusted for tax rate and base changes. As such they DO NOT include historical changes to the tax structure. These monies are cash collections as reported by the Tax Commission. They are not the modified accrual collections used for budgeting.

Source: Governor's Office of Planning and Budget.

Table 51
Rate and Base Adjusted Cash Collection Unrestricted Revenues (Constant 1996 Dollar Percent Changes): FY1980 to FY1996

	1980	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996
General Fund (GF)													
Sales and Use Tax	na	6.2	-1.6	-4.7	0.2	3.7	2.7	1.7	3.7	7.2	7.9	9.1	8.5
Liquor Profits	na	-6.5	-2.2	-12.0	-10.3	-3.6	-0.2	1.3	-8.5	6.5	-3.6	9.6	7.8
Insurance Premiums	na	7.5	13.7	3.6	-1.6	-10.2	3.8	-1.5	-0.4	9.8	10.4	2.8	1.2
Beer, Cigarette, and Tobacco	na	1.1	-3.8	-2.2	-15.2	1.2	-5.8	-1.5	-3.0	-3.4	3.8	0.9	-2.0
Severance Taxes	na	-5.4	-8.5	-51.5	44.5	-2.5	-0.0	-9.3	-16.5	10.6	-21.1	7.4	-7.9
Inheritance Tax	na	48.0	-4.2	-52.2	43.8	172.2	-25.3	-39.4	-20.0	87.0	4.9	6.8	-9.2
Investment Income	na	23.8	-18.8	-68.9	169.8	72.7	-10.6	-41.4	-38.1	-39.4	42.8	88.8	33.4
Other	na	-2.0	-7.8	8.0	3.8	-0.5	14.2	-0.3	4.1	-8.4	-2.2	11.3	2.5
Circuit Breaker Credits	na	17.1	-34.9	-18.6	-10.2	16.3	131.6	-0.0	12.2	0.2	4.5	3.1	-4.0
Subtotal GF	na	5.2	-2.1	-7.6	1.3	4.4	1.7	-0.2	1.8	6.4	6.8	9.2	7.7
Uniform School Fund (USF)													
Individual Income Tax	na	7.5	1.3	3.4	7.2	7.0	6.0	6.1	5.9	4.6	6.3	9.0	8.7
Corporate Franchise Tax	na	6.7	25.2	-20.7	12.9	17.5	-5.2	-5.8	-9.6	3.5	20.4	24.2	16.4
School Land Income	na	-6.4	-40.8	-31.2	na	na	na	na	na	na	na	na	na
Permanent Fund Interest	na	na	na	na	na	43.8	40.1	-3.0	-0.4	34.0	-33.5	8.2	-37.0
Gross Receipts Tax	na	na	na	na	754.0	-40.0	42.5	-15.5	-5.9	22.7	-10.5	3.8	85.9
Federal Revenue Sharing	na	na	na	na	na	na	na	na	na	na	na	na	na
Other	na	67.8	11.9	6.8	-22.7	34.0	-21.8	10.2	23.2	-67.3	23.0	17.8	-1.0
Subtotal USF	na	7.6	2.9	-0.7	6.8	8.5	4.2	4.5	4.4	3.4	7.4	10.7	9.7
Transportation Fund (TF)													
Motor Fuel Tax	na	-1.8	0.2	0.8	-3.3	-2.7	-3.0	-5.3	0.8	1.0	4.0	0.9	2.6
Special Fuel Tax	na	-6.6	5.7	-3.9	2.8	2.1	-4.6	-1.0	-4.7	3.7	-0.5	9.6	5.1
Other	na	-1.4	-0.4	-2.2	-1.3	-0.3	0.8	-2.1	5.5	3.4	2.4	3.6	0.7
Subtotal TF	na	-2.5	0.9	-0.5	-2.0	-1.5	-2.5	-4.0	0.8	1.9	2.9	2.8	2.6
Mineral Lease Payments	na	-11.9	-7.5	-33.1	24.7	2.5	9.0	-5.6	-2.7	-9.3	7.5	-7.9	-3.9
Total	na	4.5	-0.1	-4.7	3.3	5.2	2.4	1.2	2.7	4.4	6.7	8.9	7.9
Average Annual Growth Rates	na	1.3	1.0	0.2	0.6	1.1	1.2	1.2	1.3	1.6	1.9	2.4	2.7

na= not available

Source: Governor's Office of Planning and Budget.

Table 52
Total Budget Tax Increases and Decreases from 1994, 1995 and 1996 Legislative Sessions*

Bill and Effective Year	Subject	Tax Change
FY 1995		
H.B. 145	Sales Tax Exemption - Replacement Parts for Steel Mills	($516,700)
H.B. 162	Sales Tax - Repeal of Flood Tax Authorization	(23,600,000)
H.B. 205	Tax Credit for Low-Income Housing	(226,600)
H.B. 279	Sales Tax - Container Exemption	380,000
H.B. 302	Sales Tax - Vending Machines	310,400
H.B. 346	Sales Tax Exemption - Pollution Control Facilities	1,400,000
S.B. 090	Property Tax Rate and Residence Exemption Changes	(8,500,000)
S.B. 093	Corporate Tax Revisions	50,000
S.B. 191	Treatment of Admission and User Fees	3,290,000
S.B. 205	Sales Tax Exemptions - Transportation Services	600,000
S.B. 211	Sales Tax Exemptions - Coin Operated Devices	1,103,100
S.B. 238	Sales Tax Exemptions - Building Materials	6,920,000
	Subtotal FY 1995	**($18,789,800)**
FY 1996		
H.B. 020	Tax Incentives to Employ Persons with Disabilities	($64,400)
H.B. 056	Sales Tax - Home Medical Equipment	(288,000)
H.B. 120	Sales Tax - Authorized Carrier Exemption	(150,000)
H.B. 274	Sales Tax on Construction Projects	(2,000,000)
S.B. 043	Agricultural Sales Tax Exemptions	275,000
S.B. 254	Gross Receipts Taxes	9,400,000
S.B. 56 and 254	Property Taxes (1)	(141,440,833)
S.B. 56 and 254	Income Taxes (1)	4,500,000
S.B. 273	Sales Tax Exemption on School Fund Raisers	(50,000)
S.B. 289	Sales Tax - Mobile Homes	(1,400,000)
	Subtotal FY 1996	**($131,218,233)**
FY 1997		
S.B. 56 and 254 (1995 Session)	Property Taxes (Restricted to New Growth, 1995 Session) (1)	(8,703,800)
H.B. 274 (1995 Session)	Additional Sales Tax on Construction Projects (1995 Session)	(2,000,000)
H.B. 58	Driving Under the Influence – Repeat Offenders (2)	258,000
H.B. 145	Reinstate Sales Tax Exemption on Coin-Operated Laundromats	(263,000)
H.B. 291	Reinstate Sales Tax Exemption on Coin-Operated Car Washes	(345,000)
H.B. 309	Reinstate Sales Tax Exemption on Coin-Operated Amusement Devices	(462,700)
H.B. 349	Gross Receipts Taxes - Modifications (3)	(4,750,000)
H.B. 404	Income Tax - Health Care Insurance Deduction (4)	(4,000,000)
H.B. 405	Minimum School Program Act (Property Taxes)	(30,000,000)
H.B. 405	Income Taxes (1)	1,500,000
H.B. 1003 (1996 April Session)	College Savings Incentive Program (Tax Deduction, 1996 April Session)	(120,000)
H.B. 3001 (1996 November Session)	Sales Tax - Manufacturing Exemption Modifications (1996 November Session) (5)	($8,700,000)
S.B. 50	Reinstate Sales Tax Exemption on Taxicabs	(117,600)
S.B. 102	Income Tax - Adoption Expenses Deduction	(140,000)
S.B. 195	Income Tax - Credit for Disabled Education Costs	(750,000)
S.B. 237	Income Tax Rate Reductions (6)	(41,000,000)
S.B. 275	Sales Tax - Ski Exemption (7)	(338,000)
	Subtotal FY 1997	**($99,932,100)**
FY 1998		
S.B. 218	Reauthorization and Enhancement of Clean-Fuel Incentives (Tax Credits)	(10,000)
S.B. 239	Tax Credits for Rural Economic Resettlement Zones (Tax Credits)	(275,000)
H.B. 249	Recycling Market Development Zones (Tax Credits)	(20,000)
H.B. 1003 (1996 April Session)	Additional College Savings Incentive Program (Tax Deduction, 1996 April Session)	(120,000)
H.B. 3001 (1996 November Session)	Additional Sales Tax - Manufacturing Exemption Modifications (1996 November Session) (5)	($8,700,000)
	Subtotal FY 1998	**($9,125,000)**
FY 1999		
H.B. 3001 (1996 November Session)	Additional Sales Tax - Manufacturing Exemption Modifications (1996 November Session) (5)	($11,200,000)
	Grand Total FY 1995-1999 (8)	**($270,265,133)**

*This table shows the fiscal notes for state tax impacts only, changes in local or federal taxes are not included. (1) In 1995 the Legislature and Tax Commission increased the residential exemption from 32% to 45%, decreased the basic school rate from .00422 to .00264, and reduced the state assessing and collecting rate from .0003 to .000281. The 1995 Legislature also restricted the growth in taxable valuations to new growth only, effective in fiscal year 1997. In 1996 the Legislature further ordered the Tax Commission to reduce the basic school rate to a level sufficient to generate a $30 million tax cut. Income tax collections will increase due to lower property tax deductions on income tax forms. (2) Increased fines and surcharges. (3) Effective January 1, 1996, reduced gross receipts tax rates 53 % to benefit electric utilities. (4) Effective January 1, 1996, allows 60 % of health care insurance, not already deductible against federal taxes, to be deducted against state taxes owed. (5) As of July 1996 (FY97) 30% exemption allowed, as of July 1997 60% allowed, and as of July 1998 100% allowed. The original fiscal note for FY99 was $28.6 million. The Tax Commission subsequently ruled that parts (in addition to equipment) were eligible for the exemption which raised the fiscal note for FY99 to $71.3 million. In November 1996 a special session of the legislature meet to modify the law in order to restore the fiscal note to $28.6 million in FY99. (6) Reduced effective income tax rates as of January 1, 1996. Reduced top rate from 7.2 % to 7.0 % on taxable incomes over $7,500. The minimum income tax rate will be reduced from 2.55% to 2.30%. (7) This is a concensus estimate. The Fiscal Analyst's estimate is $65,000. (8) Total state impacts do NOT include local tax changes or transfers within the total state budget due to earmarking or other tax changes. For example, H.B. 230 reduced general fund severance tax revenues $0.4 million beginning in FY1998 by setting up a restricted Navajo Revitalization Fund; but total severance taxes were not reduced. Similarly, H.B. 393 will reduce general fund sales tax revenues by $36 million beginning in FY1998 in order to earmark sales taxes to water and local transportation projects; but, total budget sales taxes were not reduced. By repealing S.B.49 (1995), however, H.B. 393 did reduce state transportation restricted funding. These funds now go exlusively to local B&C road funds. Finally, the April 1996 Special Session of the Legislature passed SB1004 (Sales and Use Tax Exemption - Steel Mill Contracts and Orders) to partially extend the sales tax exemption for steel mills. The original exemption (H.B. 145, 1994 Session) expires in FY1997.

Sources: Governor's Office of Planning and Budget, Utah State Tax Commission, Legislative Research Office, and Legislative Fiscal Analyst Office.

International Merchandise Exports

Merchandise exports from Utah companies to international markets reached an estimated $3.62 billion in 1996. This is slightly lower than the record year of 1995 when merchandise exports totaled $3.65 billion. Since final data are not yet available for 1996, the focus here is on the detailed information available for the 1995 record year.

The 1995 increase in merchandise exports of 45.4 percent is the largest increase ever recorded since data began being compiled in 1988. The record increase means that over $1 billion more money flowed into the state from exports in 1995 than in 1994. This money circulated within the economy helping to pay for compensation, liabilities, investment, savings and other categories of spending. The value of merchandise exports for 1995 has surpassed the record 1992 level of $2.89 billion. This record performance, in such a large industry, provides another important explanation for Utah's vibrant economic performance during 1995.

The Value of Utah's Exports

The State of Utah has become more integrated into the world economy as the value of merchandise exports has grown from $943 million in 1988 to $3.65 billion in 1995, an increase of $2.7 billion or 287 percent. Over this same period, Gross State Product (GSP), the broadest measure of the productive activity in the state, increased from $27.0 billion to an estimated $46.9 billion. Thus merchandise exports have gained in share of GSP from 3.5 percent in 1988 to 7.8 percent in 1995.

As stated above, the value of Utah's merchandise exports reached $2.89 billion in 1992, an increase of 40.6 percent from 1991 (Figure 35). The state's merchandise exports decreased in value terms by 1.2 percent in 1994 to $2.51 billion, and increased by 45.4 percent in 1995 to $3.65 billion.

The fluctuations in the value of Utah's international merchandise exports are primarily attributable to price fluctuations in the primary metal market, which continues to be Utah's largest merchandise export industry in value terms. For 1991 through 1995, primary metal products have represented between 30 percent and 45 percent of the total value of Utah's merchandise exports. Over this time period, the value of primary metal exports ranged from $0.6 billion to $1.3 billion.

With a total value of $3.65 billion, Utah's merchandise export sector is now more than two times the size of Utah's federal defense industry. Defense-related spending in 1995 amounted to $1.5 billion. A comparison of the trends within the two industries demonstrates the changing composition of the Utah economy. Defense-related spending in Utah peaked in 1987 at $2.1 billion and has now dropped to $1.5 billion. In contrast, merchandise exports were first estimated in 1988 at $943.3 million and have now increased to a record $3.6 billion. In value terms, the decline in Utah's defense industry has been more than offset by Utah's participation in global markets.

Industry Composition of Utah's Merchandise Exports

In 1995, primary metal products represented 34.3 percent of the value of Utah's international merchandise exports. Other major export industries in 1995 were metallic ores (11.6 percent), electrical and electronic equipment (8.9 percent), industrial machinery (8.5 percent), and transportation equipment (6.8 percent). This composition is shown in Table 53 and Figure 36.

The largest contributors of the overall increase in exports from 1994 to 1995 in terms of industries were primary metal products (representing 29.6 percent), followed by scrap and waste products (17.3 percent) and metallic ores and concentrates (12.4 percent). Utah ranks second nationally in copper production. Copper prices increased from $1.07 per pound in 1994 to $1.35 per pound in 1995, helping to bolster the value of metallic exports.

Destination of Utah's Merchandise Exports

Utah's largest markets for merchandise exports are in eastern Asia, Canada, and Europe. In 1995 the top five destination countries for Utah's merchandise exports accounted for $2.26 billion of the $3.65 billion total, or 62.1 percent of total exports. Further, these top five destination markets purchased 59.4 percent of primary metal exports, 89.0 percent of coal exports, 35.5 percent of metallic ore exports, 28.1 percent of electrical and electronic machinery exports, 50.4 percent of instruments and related product exports, 67.1 percent of chemicals and allied products, and 50.5 percent of transportation equipment exports from Utah in 1995 (Tables 54, 55, and Figure 37).

Japan, Utah's third largest export market in 1994, was the state's largest export market in 1995. The great bulk of the $555.6 million in purchases (26.0 percent or $144.7 million) were concentrated in metallic ores and concentrates.

The United Kingdom was the second largest market for Utah exports in 1995, purchasing a total of $372.2 million of merchandise. Exports to the United Kingdom were disbursed across industries with significant purchases of primary metal products (71.2 percent or $327.2 million), fabricated metal products (13.9 percent or $64.0 million), industrial machinery (4.2 percent or $19.2 million), electronic machinery (3.1 percent or $14.1 million), and instruments and related products (1.9 percent or $8.8 million).

Canada was Utah's third largest merchandise export destination in 1995 and also had purchases distributed across a range of industries. Of total Utah merchandise exports to Canada in 1995, $73.4 million (17.9 percent) was transportation equipment, $59.2 million (14.1 percent) was primary metal products, and $50.5 million (12.3 percent), electronic machinery.

France, Utah's 17th largest export market for 1994, was the fourth largest export market in 1995. About 65 percent ($182.3 million) of this was scrap and waste products, $68.2 million (24.2 percent) was primary metal products, and $9.3 million (3.3 percent), instruments and related products.

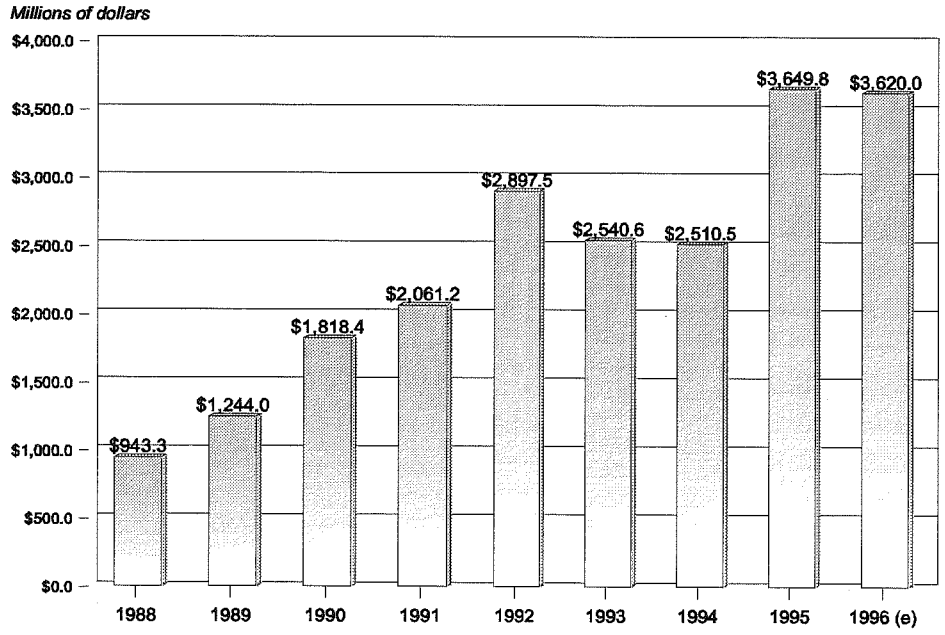
Utah's fifth largest trading partner was Taiwan, China. Nearly two-thirds (63.4 percent) of Utah's exports was primary metal products ($174.0 million).

The United Kingdom was responsible for 34.8 percent of the overall increase in exports from 1994 to 1995, followed by France (22.8 percent) and Japan (17.7 percent).

Limitations of These Export Data

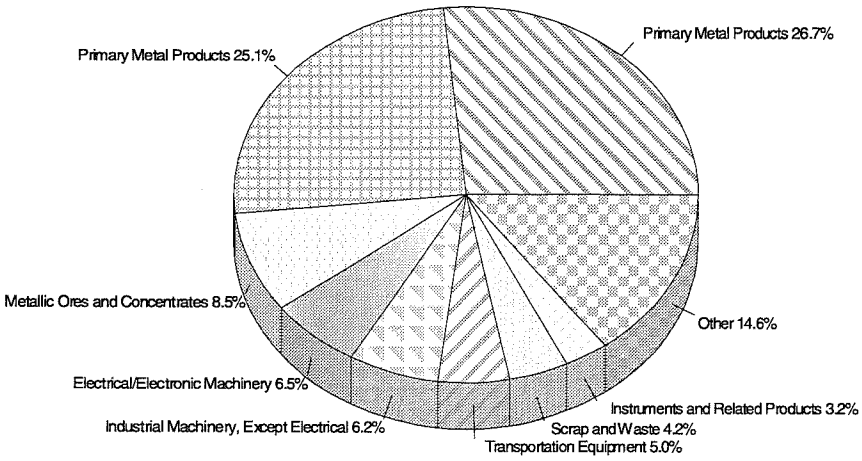
The export data presented here have been generated by the U.S. Census Bureau, Foreign Trade Division and have been adjusted by the Massachusetts Institute for Social and Economic Research (MISER). The series, called "Origin of Movement," is designed to measure the transportation origin of exports, and accounts for the value of merchandise exports but not service exports. This means that exports of business services (such as financial services or computer software), educational services (such as international students paying tuition to purchase a Utah education), tourist services (such as purchases made by international travelers in Utah), and other services sold in international markets are not included in the value of these exports. Further, data on international imports by state are not compiled, making it impossible to determine a balance of trade for Utah.

Figure 35
Utah Merchandise Exports: 1988 to 1996



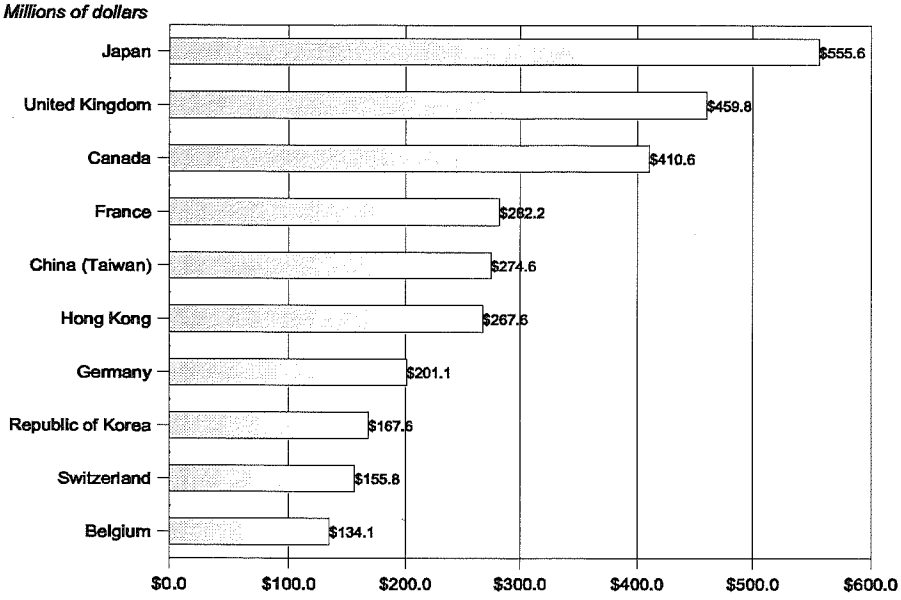
Source: U.S. Bureau of the Census, Foreign Trade Division and Massachusetts Institute for Social and Economic Research (MISER).

Figure 36
Utah Merchandise Exports by Industry: 1995



Source: U.S. Bureau of the Census, Foreign Trade Division
and Massachusetts Institute for Social and Economic Research (MISER).

Figure 37
Utah Merchandise Exports to Selected Countries: 1995



Source: U.S. Bureau of the Census, Foreign Trade Division
and Massachusetts Institute for Social and Economic Research (MISER).

Table 53
Utah Merchandise Exports by Industry (Thousands of Dollars): 1988 to 1995

SIC Code	Industry Description	1988	1989	1990	1991	1992	1993	1994	1995	Industry as a Percent of 1995 Total	Percent Change 1991-92	1992-93	1993-94	1994-95
1	Agricultural Products	$278.6	$1,687.1	$1,864.1	$1,477.2	$1,057.6	$2,900.1	$4,229.1	$1,992.7	0.1	-28.4	174.2	45.8	-52.9
2	Livestock and Livestock Products	501.8	562.0	153.6	98.4	173.8	486.4	87.4	576.2	0.0	76.6	179.9	-82.0	559.1
8	Forestry Products	189.0	32.2	52.5	5.0	74.2	23.3	43.3	48.6	0.0	1394.4	-68.7	86.4	12.1
9	Fishing, Hunting, and Trapping	3,521.2	213.2	572.0	732.4	334.7	1,279.3	1,097.7	2,583.2	0.1	-54.3	282.3	-14.2	135.3
10	Metallic Ores and Concentrates	15,668.7	213,167.4	209,220.6	196,613.3	282,205.1	224,861.2	283,769.2	424,845.9	11.6	43.5	-20.3	26.2	49.7
12	Bituminous Coal and Lignite	32,775.4	80,003.3	64,021.2	84,073.2	78,485.8	81,193.1	81,921.4	132,691.5	3.6	-6.6	3.4	0.9	62.0
13	Crude Petroleum and Natural Gas	0.0	0.0	0.0	2.6	0.0	0.0	0.0	7.4	0.0	0.0	0.0	0.0	0.0
14	Nonmetallic Minerals, Except Fuels	1,842.7	10,265.9	5,166.0	7,833.0	11,766.7	8,153.6	8,962.7	10,174.5	0.3	50.2	-30.7	9.9	13.5
20	Food and Kindred Products	33,230.1	53,931.7	57,903.5	54,963.2	60,006.5	74,419.4	72,801.8	136,959.4	3.8	9.2	24.0	-2.2	88.1
21	Tobacco Manufacturers	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
22	Textile Mill Products	1,577.8	2,240.1	2,162.2	1,644.9	1,590.6	2,107.2	2,836.0	3,062.3	0.1	-3.3	32.5	34.6	8.0
23	Apparel and Related Products	10,967.0	3,077.6	3,368.5	4,969.3	7,538.9	6,276.2	8,154.2	13,427.0	0.4	51.7	-16.8	29.9	64.7
24	Lumber and Wood Products, Except Furniture	572.9	594.7	1,687.3	947.0	3,098.8	917.0	894.3	1,976.9	0.1	227.2	-70.4	-2.5	121.1
25	Furniture and Fixtures	1,364.5	2,093.4	1,806.4	2,964.6	6,742.7	3,766.4	2,845.8	3,630.1	0.1	127.4	-44.1	-24.4	27.6
26	Paper and Allied Products	10,495.0	10,691.9	12,563.5	6,650.0	3,175.0	9,241.3	3,184.0	3,794.4	0.1	-52.3	191.1	-65.5	19.2
27	Printing, Publishing, and Allied Products	9,053.1	24,885.4	34,539.9	19,731.5	22,619.8	26,359.0	26,808.8	30,323.8	0.8	14.6	16.5	1.7	13.1
28	Chemicals and Allied Products	22,224.5	40,406.4	66,567.4	60,072.8	94,803.4	98,883.0	157,377.4	148,209.9	4.1	57.8	4.3	59.2	-5.8
29	Petroleum Refining and Related Products	2,124.7	530.6	3,925.5	758.8	289.5	454.7	108.4	253.4	0.0	-61.8	57.1	-76.2	133.7
30	Rubber and Misc. Plastic Products	27,050.7	11,242.0	9,675.8	23,318.5	8,724.5	11,544.2	14,732.0	30,061.9	0.8	-62.6	32.3	27.6	104.1
31	Leather and Leather Products	584.2	395.2	1,404.0	2,413.5	3,902.0	2,709.8	3,965.3	4,905.8	0.1	61.7	-30.6	46.3	23.7
32	Stone, Clay, Glass, and Concrete Products	7,366.1	3,366.5	3,676.3	3,552.2	5,477.2	8,610.1	4,702.8	4,780.2	0.1	54.2	57.2	-45.4	1.6
33	Primary Metal Products	200,209.8	95,443.0	322,645.9	616,094.1	1,313,756.9	931,868.6	915,393.7	1,252,373.5	34.3	113.2	-29.1	-1.8	36.8
34	Fabricated Metal Products, Except Mach./Tran.	21,653.2	33,571.1	36,721.2	65,105.2	62,682.0	51,831.0	38,392.7	106,340.8	2.9	-3.7	-17.3	-25.9	177.0
35	Industrial Machinery, Except Electrical	117,563.4	146,628.1	202,848.0	195,040.1	153,313.0	214,509.6	204,532.0	308,919.6	8.5	-21.4	39.9	-4.7	51.0
36	Electrical/Electronic Machinery, Equip., and Supplies	281,318.0	287,844.1	446,497.0	402,726.3	325,596.4	329,298.6	228,041.7	323,976.5	8.9	-19.2	1.1	-30.7	42.1
37	Transportation Equipment	25,825.0	68,319.4	144,321.3	140,653.5	277,191.4	253,965.1	214,563.0	248,791.5	6.8	97.1	-8.4	-15.5	16.0
38	Instruments and Related Products	85,323.9	116,766.7	128,715.6	109,561.9	111,647.5	124,175.8	141,979.5	156,699.0	4.3	1.9	11.2	14.3	10.4
39	Misc. Manufactured Commodities	18,348.1	19,649.8	22,642.4	31,033.1	39,975.9	47,299.8	67,586.0	77,294.2	2.1	28.8	18.3	42.9	14.4
91	Scrap and Waste	8,633.2	7,482.0	20,099.5	14,665.8	8,700.7	12,598.5	10,622.1	208,184.3	5.7	-40.7	44.8	-15.7	1859.9
92	Used or Second-Hand Merchandise	451.1	66.1	4,653.4	2,871.5	1,001.9	1,871.5	1,608.1	4,594.5	0.1	-65.1	86.8	-14.1	185.7
98	Special Classification Provisions	2,606.4	8,843.5	5,299.5	5,234.5	7,715.0	6,084.8	4,836.1	4,646.1	0.1	47.4	-21.1	-20.5	-3.9
99	GDS Imported from Canada and Returned UN	0.0	0.0	3,101.8	5,433.7	3,811.6	2,848.8	4,389.3	3,671.8	0.1	-29.9	-25.3	54.1	-16.3
	Statistical Adjustment	0.0	0.0	569.5	0.0	0.0	4.2	0.0	0.0					
	TOTAL	$943,320.1	$1,244,000.4	$1,818,445.4	$2,061,241.3	$2,897,458.8	$2,540,541.4	$2,510,465.8	$3,649,796.8	100.0	40.6	-12.3	-1.2	45.4

Notes: In 1988 and 1989, Special Classification Provisions' SIC Code was 99, After which it became 98 and GDS Imported from Canada and Returned UN assumed SIC Code 99.

Sources: U.S. Bureau of the Census, Foreign Trade Division; and Massachusetts Institute for Social and Economic Research.

Table 54
Utah Merchandise Exports to Selected Countries (Thousands of Dollars): 1988 to 1995

Rank	Country	1988	1989	1990	1991	1992	1993	1994	1995	Country as a Percent of 1995 Total	Percent Change 1991-92	1992-93	1993-94	1994-95
1	Japan	$77,782.7	$257,319.9	$210,624.8	$211,503.0	$315,343.6	$313,588.3	$353,372.2	$555,628.5	15.2	49.1	-0.6	12.7	57.2
2	U.K.	61,267.9	70,707.0	130,598.1	366,163.4	450,659.2	79,709.7	63,369.9	459,829.0	12.6	23.1	-82.3	-20.5	625.6
3	Canada	209,526.1	183,645.5	430,093.0	303,256.0	361,432.4	362,147.6	360,681.3	410,620.3	11.3	19.2	0.2	-0.4	13.8
4	France	24,320.3	30,668.4	33,710.1	30,109.9	23,334.4	19,516.0	21,926.0	282,154.3	7.7	-22.5	-16.4	12.3	1186.8
5	China (Taiwan)	41,495.1	46,815.4	45,885.8	68,049.2	421,116.6	380,309.4	203,319.8	274,597.0	7.5	518.8	-9.7	-46.5	35.1
6	Hong Kong	10,778.8	15,645.5	55,429.4	131,887.4	417,473.7	223,950.8	463,716.0	267,629.2	7.3	216.5	-46.4	107.1	-42.3
7	Germany	59,402.5	59,061.3	115,135.6	119,862.5	103,195.9	166,260.9	197,784.3	201,090.1	5.5	-13.9	61.1	19.0	1.7
8	Korea (Republic)	65,823.1	86,556.0	121,126.2	89,940.4	114,535.9	63,535.2	94,484.5	167,580.6	4.6	27.3	-44.5	48.7	77.4
9	Switzerland	25,235.1	15,598.6	20,377.4	101,678.9	28,871.3	244,614.2	98,340.8	155,797.2	4.3	-71.6	747.3	-59.8	58.4
10	Belgium	13,862.2	51,909.8	38,469.5	23,238.8	25,478.0	34,228.4	85,052.2	134,067.5	3.7	9.6	34.3	148.5	57.6
11	Singapore	17,750.3	39,690.4	33,487.1	42,522.0	68,324.8	50,894.3	27,524.4	88,968.3	2.4	60.7	-25.5	-45.9	223.2
12	Netherlands	23,571.4	26,029.3	28,070.4	27,577.9	69,175.7	145,810.0	119,164.6	87,840.2	2.4	150.8	110.8	-18.3	-26.3
13	Thailand	100,516.3	92,671.0	163,010.4	162,290.2	104,182.8	71,509.5	51,686.6	72,138.8	2.0	-35.8	-31.4	-27.7	39.6
14	Mexico	50,985.2	31,758.3	40,081.8	39,340.2	26,609.7	51,301.4	112,413.5	71,738.3	2.0	-32.4	92.8	119.1	-36.2
15	Chile	1,767.0	5,110.9	8,003.4	11,300.5	12,177.9	17,797.0	17,987.0	69,044.5	1.9	7.8	46.1	1.1	283.9
16	Philippines	1,949.7	10,095.6	12,532.3	32,604.1	27,458.1	28,025.9	32,761.8	66,773.9	1.8	-15.8	2.1	16.9	103.8
17	Australia	15,186.8	24,604.7	30,566.0	28,420.1	42,526.2	31,615.0	29,646.0	37,031.9	1.0	49.6	-25.7	-6.2	24.9
18	China (mainland)	11,554.8	10,557.5	47,251.6	44,359.7	49,673.7	20,219.4	17,181.0	33,137.8	0.9	12.0	-59.3	-15.0	92.9
19	Ireland	4,187.8	3,659.6	5,532.7	6,559.0	7,541.6	16,510.0	22,294.3	24,805.6	0.7	15.0	118.9	35.0	11.3
20	Italy	9,659.9	14,562.5	34,905.4	16,722.1	20,324.3	12,584.3	13,015.8	17,280.8	0.5	21.5	-38.1	3.4	32.8
21	Colombia	823.1	1,251.7	846.9	1,106.6	1,312.8	2,837.6	5,526.0	11,450.7	0.3	18.6	116.1	94.7	107.2
22	Russia	0.0	0.0	0.0	0.0	6,645.3	4,392.5	2,603.1	10,305.4	0.3	0.0	-33.9	-40.7	295.9
23	Malaysia	30,221.1	41,250.1	33,545.3	38,066.2	37,586.7	66,874.7	14,802.1	9,580.5	0.3	-1.3	77.9	-77.9	-35.3
24	Israel	0.0	5,291.1	31,983.1	10,509.7	5,001.2	6,617.7	3,432.2	8,629.5	0.2	-52.4	32.3	-48.1	151.4
25	Indonesia	1,450.2	2,912.2	2,270.9	2,999.7	4,593.2	5,478.7	6,359.5	8,500.7	0.2	53.1	19.3	16.1	33.7
26	Spain	13,982.4	7,966.9	11,144.3	23,656.0	27,290.3	8,587.8	6,284.2	8,184.5	0.2	15.4	-68.5	-26.8	30.2
27	Brazil	3,139.5	47,612.5	22,473.7	34,426.8	2,107.2	7,730.7	8,293.2	7,984.1	0.2	-93.9	266.9	7.3	-3.7
28	Dominican Republic	65.1	171.1	93.0	32.6	168.0	1,232.1	2,545.9	7,647.9	0.2	414.8	633.5	106.6	200.4
29	India	1,465.8	3,134.9	5,540.9	1,356.1	1,373.2	4,064.7	2,156.6	7,166.4	0.2	1.3	196.0	-46.9	232.3
30	New Zealand	2,139.1	3,523.4	3,733.9	6,524.9	7,866.1	6,468.8	7,804.6	6,555.8	0.2	20.6	-17.8	20.7	-16.0
31	Sweden	2,955.1	9,105.1	13,927.7	5,235.6	5,978.0	5,014.6	6,797.9	6,364.8	0.2	14.2	-16.1	35.6	-6.4
32	Austria	1,682.6	1,979.5	3,573.2	5,068.1	4,212.1	4,978.9	4,971.2	5,204.7	0.1	-16.9	18.2	-0.2	4.7
33	Norway	4,300.1	2,037.4	56.1	3,634.6	4,738.6	4,326.9	3,659.5	5,204.7	0.1	30.4	-8.7	-15.4	42.2
34	Peru	218.7	2,938.5	519.3	1,005.1	347.5	3,620.9	4,467.8	5,121.5	0.1	-65.4	942.1	23.4	14.6
35	Republic of S. Africa	3,167.7	3,178.9	4,922.0	5,220.2	3,883.4	3,603.6	2,877.4	4,482.8	0.1	0.0	-7.2	-20.2	55.8
36	Venezuela	2,655.6	1,355.6	2,101.6	2,433.8	3,683.0	2,511.5	2,507.8	3,488.7	0.1	51.3	-31.8	-0.1	39.1
37	Saudi Arabia	2,486.0	1,902.4	2,146.5	1,824.3	7,461.1	4,740.2	2,961.9	3,425.5	0.1	309.0	-36.5	-37.5	15.7
38	Denmark	1,950.8	2,846.9	2,983.5	2,736.9	2,521.5	3,136.7	3,795.1	2,226.8	0.1	-7.9	24.4	21.0	-41.3
39	Turkey	4,680.6	694.3	1,146.6	13,512.8	39,798.6	22,398.8	2,534.6	2,010.9	0.1	194.5	-43.7	-88.7	-20.7
40	United Arab Emirates	936.5	1,153.5	1,156.8	1,390.3	2,062.4	2,604.7	2,130.7	1,712.6	0.0	48.3	26.3	-18.2	-19.6
	Balance of Countries	38,376.6	27,027.0	69,389.7	43,115.6	39,392.9	35,192.1	28,232.6	46,794.4	1.3	-8.6	-10.7	-19.8	65.7
	Total (All Countries)	$943,319.6	$1,244,000.2	$1,818,446.0	$2,061,241.3	$2,897,458.8	$2,540,541.4	$2,510,465.8	$3,649,796.8	100.0	40.6	-12.3	-1.2	45.4

Sources: U.S. Bureau of the Census, Foreign Trade Division; and Massachusetts Institute for Social and Economic Research (MISER).

Table 55
Utah Top Five Export Markets by Top Five Industries (Thousands of Dollars): 1995

Country	Industry Group	Dollar Value	Percent of Total
Japan	Metallic Ores and Concentrates	$144,724.1	26.0
	Primary Metal Products	114,909.0	20.7
	Bituminous Coal and Lignite	95,247.4	17.1
	Transportation Equipment	43,982.9	7.9
	Instruments and Related Products	41,192.4	7.4
	All Others	115,572.8	20.8
	Total	555,628.5	100.0
United Kingdom	Primary Metal Products	$327,190.7	71.2
	Fabricated Metal Products, Except Mach./Tran.	64,054.8	13.9
	Industrial Machinery, Except Electrical	19,239.8	4.2
	Electrical/Electronic Machinery, Equip., and Supplies	14,118.1	3.1
	Instruments and Related Products	8,852.0	1.9
	All Others	26,373.7	5.7
	Total	459,829.0	100.0
Canada	Transportation Equipment	$73,393.2	17.9
	Primary Metal Products	59,229.8	14.4
	Electrical/Electronic Machinery, Equip., and Supplies	50,538.6	12.3
	Industrial Machninery, Except Electrical	50,179.3	12.2
	Chemicals and Allied Products	38,920.5	9.5
	All Others	138,358.9	33.7
	Total	410,620.3	100.0
France	Scrap and Waste	$182,311.0	64.6
	Primary Metal Products	68,228.9	24.2
	Instruments and Related Products	9,306.4	3.3
	Electrical/Electronic Machinery, Equip., and Supplies	8,145.4	2.9
	Industrial Machninery, Except Electrical	7,561.8	2.7
	All Others	6,600.9	2.3
	Total	282,154.3	100.0
China (Taiwan)	Primary Metal Products	$173,977.3	63.4
	Bituminous Coal and Lignite	22,833.8	8.3
	Chemicals and Allied Products	19,767.3	7.2
	Food and Kindred Products	19,360.1	7.1
	Industrial Machinery, Except Electrical	10,422.1	3.8
	All Others	28,236.3	10.3
	Total	274,597.0	100.0

Source: U.S. Bureau of the Census, Foreign Trade Division.

Prices, Inflation, Cost of Living

Measuring and understanding price changes over time and cost of living for a point in time are critical to understanding economic issues. In Utah there is no statistically significant, statewide measure of inflation (price change over time). The federal Bureau of Labor Statistics does sample price changes in Utah as part of the national indices of inflation, but the sample size is too small to render meaningful results at the state level. Consequently, monetary measures in Utah are generally adjusted for inflation using national indices such as the Consumer Price Index (CPI) and Gross Domestic Product Deflators.

Cost-of-Living comparisons (price differences for a point in time) are published by the American Chamber of Commerce Research Association. These data are collected for five areas in Utah: Salt Lake City, Cedar City, Logan, Provo-Orem, and St. George. Both federal price indices and the Chamber of Commerce cost-of-living comparisons are described in this chapter.

Consumer Price Index

The pace of inflation, as measured by the Consumer Price Index for all urban consumers (CPI-U), remained generally stable in 1996. Throughout 1996, the year-to-year Consumer Price Index increase varied between 2.7 percent to 3.4 percent (Figure 38). The 1996 annual average increase is estimated at 2.9 percent (Table 56).

The outlook for inflation in 1997 is for price increases of 2.8 percent. Capacity utilization rates, currently at 82.7, are below year-ago levels. The national unemployment rate in October was 5.2 percent, representing full employment.

The Employment Cost Index in third-quarter 1996 was up 2.9 percent, reflecting a 3.3 percent gain in wages and salaries and a 1.8 percent increase in benefits. Productivity gains continued in the 1996 first half, and accordingly, unit labor costs were essentially unchanged from the 1995 average. Growth in the nation's money supply, while hard to interpret, generally continues at a modest pace.

CPI Overestimation. The adequacy of the Consumer Price Index as a measure of inflation has long been debated among economists. This debate is now receiving increased attention because of a report commissioned by the Senate Finance Committee. This report, authored by the Congressional Advisory Commission on the Consumer Price Index and headed by Michael Boskin, a professor of economics at Stanford University, concludes that the CPI overestimates inflation by 1.1 percentage points each year. The Commission decomposes this overestimate as follows: 0.6 percentage point is due to inadequate accounting for the quality improvements in products, 0.4 percentage point is due to the substitution effect of consumers altering consumption patterns in response to price changes, and 0.1 percentage point is due to increased shopping at discount stores.

Many economists challenge the results of the Commission's report. Some say the overstatement is even higher, while others, including the WEFA Group, suggest that the overestimate of 1.1 percentage points is an exaggeration. The debate is significant since measuring inflation accurately is paramount to almost every economic issue. Approximately 30 percent of the federal budget, including many entitlements, is indexed to the CPI, as are many private contracts. Revising the CPI would essentially require a rewriting of contemporary economic history and could vastly alter inflation adjusted trends in Utah referred to throughout this report.

The debate, however, is not new. It will continue and possibly even intensify during the coming year. The 1997 *Economic Report to the Governor* continues to utilize the standard measures of inflation, such as the CPI and Gross Domestic Product Deflators, to adjust for price changes over time. Economists in the state will continue to monitor the current debate about overestimation and determine whether future adjustments are necessary.

Gross Domestic Product Deflators

In 1996, the Gross Domestic Product (GDP) chain-type price deflator is estimated to increase 2.1 percent compared with 2.6 percent in 1995. The GDP personal consumption deflator in 1996 rose approximately 2.2 percent, compared to 2.4 percent in 1995. Beginning in 1996, the Real Gross Domestic Product was reported using a chain-weighted inflation index. Under this method, the composition of economic output (the weights) is updated each year (Table 57).

Utah Cost of Living

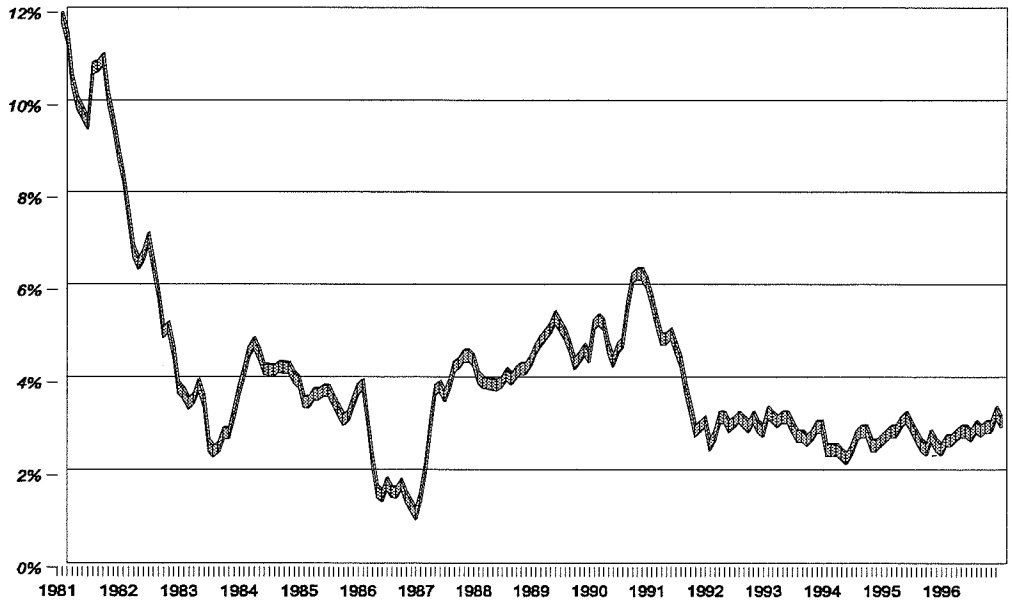
The American Chamber of Commerce Researchers Association (ACCRA) Cost of Living Index is prepared quarterly and includes comparative data

for approximately 270 urban areas (Figure 39). The index consists of price comparisons for a single point in time and does not measure inflation of price changes over time. The cost of consumer goods and services in the urban areas are measured and compared with the national average of 100.

The composite index is based on six components: grocery items, housing, utilities, transportation, health care, and miscellaneous goods and services. The Salt Lake Area Chamber of Commerce is a member of ACCRA and submits quarterly data for the local area. Additional Utah specific price information can be obtained through First Security Bank or Weber State University.

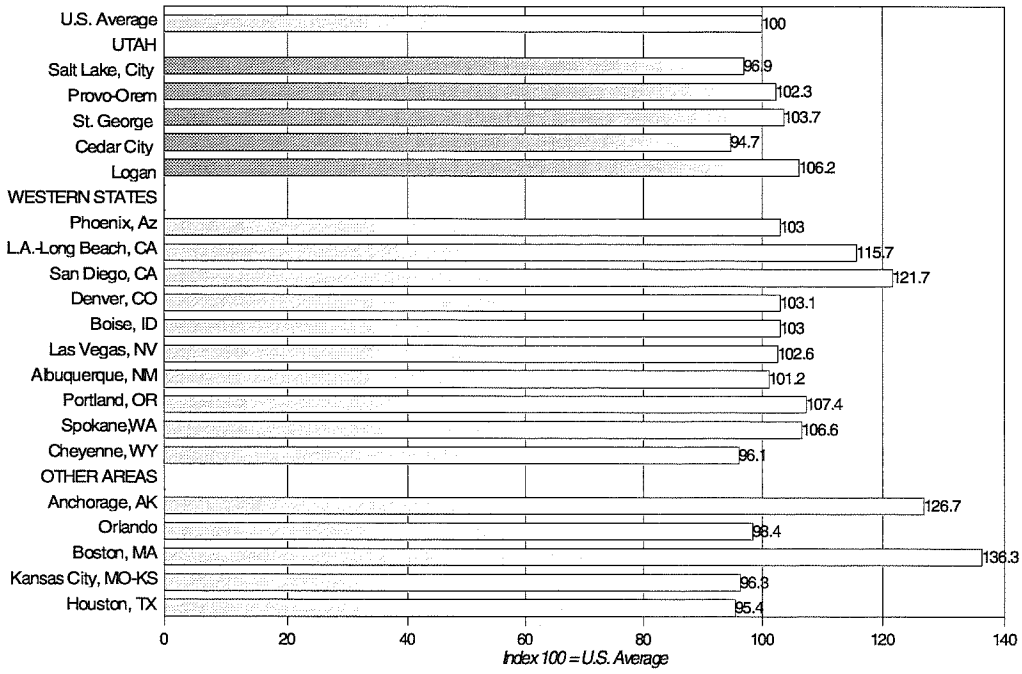
The second-quarter 1996 composite index for Salt Lake City was 96.9, virtually the same as the national average for the quarter. Other Utah cities included in the survey were Cedar City (94.7), Logan (106.2), Provo-Orem(102.3) and St. George (103.7), as found in Table 58. Historical figures by component for the Salt Lake City area may be found in Table 59.

Figure 38
Increase in Prices Measured by CPI: Monthly from 1981 to 1996



Source: U.S. Department of Labor.

Figure 39
Cost of Living Comparisons for Selected Metropolitan Areas: Second Quarter 1996



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

Table 56

U.S. Consumer Price Index for All Urban Consumers (1982-1984=100): 1954 to 1996 (Not Seasonally Adjusted)

Year	Jan.	Feb.	Mar.	Apr.	May	June	July	Aug.	Sep.	Oct.	Nov.	Dec.	Annual Avg.	Dec.-Dec.	Annual Avg.
1954	26.9	26.9	26.9	26.8	26.9	26.9	26.9	26.9	26.8	26.8	26.8	26.7	26.9	-0.7	0.7
1955	26.7	26.7	26.7	26.7	26.7	26.7	26.8	26.8	26.9	26.9	26.9	26.8	26.8	0.4	-0.4
1956	26.8	26.8	26.8	26.9	27.0	27.2	27.4	27.3	27.4	27.5	27.5	27.6	27.2	3.0	1.5
1957	27.6	27.7	27.8	27.9	28.0	28.1	28.3	28.3	28.3	28.3	28.4	28.4	28.1	2.9	3.3
1958	28.6	28.6	28.8	28.9	28.9	28.9	29.0	28.9	28.9	28.9	29.0	28.9	28.9	1.8	2.8
1959	29.0	28.9	28.9	29.0	29.0	29.1	29.2	29.2	29.3	29.4	29.4	29.4	29.1	1.7	0.7
1960	29.3	29.4	29.4	29.5	29.5	29.6	29.6	29.6	29.6	29.8	29.8	29.8	29.6	1.4	1.7
1961	29.8	29.8	29.8	29.8	29.8	29.8	30.0	29.9	30.0	30.0	30.0	30.0	29.9	0.7	1.0
1962	30.1	30.1	30.1	30.2	30.2	30.2	30.3	30.3	30.4	30.4	30.4	30.4	30.2	1.3	1.0
1963	30.4	30.4	30.5	30.5	30.5	30.6	30.7	30.7	30.7	30.8	30.8	30.9	30.6	1.6	1.3
1964	30.9	30.9	30.9	30.9	30.9	31.1	31.1	31.0	31.1	31.1	31.2	31.2	31.0	1.0	1.3
1965	31.2	31.2	31.3	31.4	31.4	31.6	31.6	31.6	31.6	31.7	31.7	31.8	31.5	1.9	1.6
1966	31.8	32.0	32.1	32.3	32.3	32.4	32.5	32.7	32.7	32.9	32.9	32.9	32.4	3.5	2.9
1967	32.6	32.9	33.0	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	33.4	3.0	3.1
1968	34.1	34.2	34.3	34.4	34.5	34.7	34.9	35.0	35.1	35.3	35.4	35.5	34.8	4.7	4.2
1969	35.6	35.8	36.1	36.3	36.4	36.6	36.8	37.0	37.1	37.3	37.6	37.7	36.7	6.2	5.5
1970	37.8	38.0	38.2	38.5	38.6	38.8	39.0	39.0	39.2	39.4	39.6	39.8	38.8	5.6	5.7
1971	39.8	39.9	40.0	40.1	40.3	40.6	40.7	40.8	40.8	40.9	40.9	41.1	40.5	3.3	4.4
1972	41.1	41.3	41.4	41.5	41.6	41.7	41.9	42.0	42.1	42.3	42.4	42.5	41.8	3.4	3.2
1973	42.6	42.9	43.3	43.6	43.9	44.2	44.3	45.1	45.2	45.6	45.9	46.2	44.4	8.7	6.2
1974	46.6	47.2	47.8	48.0	48.6	49.0	49.4	50.0	50.6	51.1	51.5	51.9	49.3	12.3	11.0
1975	52.1	52.5	52.7	52.9	53.2	53.6	54.2	54.3	54.6	54.9	55.3	55.5	53.8	6.9	9.1
1976	55.6	55.8	55.9	56.1	56.5	56.8	57.1	57.4	57.6	57.9	58.0	58.2	56.9	4.9	5.8
1977	58.5	59.1	59.5	60.0	60.3	60.7	61.0	61.2	61.4	61.6	61.9	62.1	60.6	6.7	6.5
1978	62.5	62.9	63.4	63.9	64.5	65.2	65.7	66.0	66.5	67.1	67.4	67.7	65.2	9.0	7.6
1979	68.3	69.1	69.8	70.6	71.5	72.3	73.1	73.8	74.6	75.2	75.9	76.7	72.6	13.3	11.3
1980	77.8	78.9	80.1	81.0	81.8	82.7	82.7	83.3	84.0	84.8	85.5	86.3	82.4	12.5	13.5
1981	87.0	87.9	88.5	89.1	89.8	90.6	91.6	92.3	93.2	93.4	93.7	94.0	90.9	8.9	10.3
1982	94.3	94.6	94.5	94.9	95.8	97.0	97.5	97.7	97.9	98.2	98.0	97.6	96.5	3.8	6.2
1983	97.8	97.9	97.9	98.6	99.2	99.5	99.9	100.2	100.7	101.0	101.2	101.3	99.6	3.8	3.2
1984	101.9	102.4	102.6	103.1	103.4	103.7	104.1	104.5	105.0	105.3	105.3	105.3	103.9	3.9	4.3
1985	105.5	106.0	106.4	106.9	107.3	107.6	107.8	108.0	108.3	108.7	109.0	109.3	107.6	3.8	3.6
1986	109.6	109.3	108.8	108.6	108.9	109.5	109.5	109.7	110.2	110.3	110.4	110.5	109.6	1.1	1.9
1987	111.2	111.6	112.1	112.7	113.1	113.5	113.8	114.4	115.0	115.3	115.4	115.4	113.6	4.4	3.6
1988	115.7	116.0	116.5	117.1	117.5	118.0	118.5	119.0	119.8	120.2	120.3	120.5	118.3	4.4	4.1
1989	121.1	121.6	122.3	123.1	123.8	124.1	124.4	124.6	125.0	125.6	125.9	126.1	124.0	4.5	4.8
1990	127.4	128.0	128.7	128.9	129.2	129.9	130.4	131.6	132.7	133.5	133.8	133.8	130.7	6.1	5.4
1991	134.6	134.8	135.0	135.2	135.6	136.0	136.2	136.6	137.2	137.4	137.8	137.9	136.2	3.1	4.2
1992	138.1	138.6	139.3	139.5	139.7	140.2	140.5	140.9	141.3	141.8	142.0	141.9	140.3	2.9	3.0
1993	142.6	143.1	143.6	144.0	144.2	144.4	144.4	144.8	145.1	145.7	145.8	145.8	144.5	2.7	3.0
1994	146.2	146.7	147.2	147.4	147.5	148.0	148.4	149.0	149.4	149.5	149.7	149.7	148.2	2.7	2.6
1995	150.3	150.9	151.4	151.9	152.2	152.5	152.5	152.9	153.2	153.7	153.6	153.5	152.4	2.5	2.8
1996	154.4	154.9	155.7	156.3	156.6	156.7	157.0	157.3	157.8	158.3	158.6	158.3(e)	156.8(e)	3.1(e)	2.9(e)

(e) = estimate

Sources: U.S. Bureau of Labor Statistics and Governor's Office of Planning and Budget.

Table 57
Gross Domestic Product Implicit and Chain-Type Price Deflators (1992=100): 1960 to 1997

Year	Gross Domestic Product (Implicit) Deflator	Change from Previous Year	Gross Domestic Product (Chain-Type) Deflator	Change from Previous Year	Personal Consumption Expenditures (Chain-Type) Deflator	Change from Previous Year
1960	23.3	1.7%	23.3	1.3%	23.2	1.8%
1961	23.6	1.3%	23.6	1.3%	23.4	0.9%
1962	23.9	1.3%	23.9	1.3%	23.7	1.3%
1963	24.2	1.3%	24.2	1.3%	24.0	1.3%
1964	24.5	1.2%	24.6	1.7%	24.3	1.2%
1965	25.0	2.0%	25.0	1.6%	24.7	1.6%
1966	25.7	2.8%	25.7	2.8%	25.3	2.4%
1967	26.5	3.1%	26.6	3.5%	26.0	2.8%
1968	27.7	4.5%	27.7	4.1%	27.0	3.8%
1969	29.0	4.7%	29.0	4.7%	28.2	4.4%
1970	30.6	5.5%	30.6	5.5%	29.5	4.6%
1971	32.2	5.2%	32.1	4.9%	30.8	4.4%
1972	33.5	4.0%	33.5	4.4%	31.9	3.6%
1973	35.4	5.7%	35.4	5.7%	33.6	5.3%
1974	38.5	8.8%	38.5	8.8%	37.0	10.1%
1975	42.2	9.6%	42.2	9.6%	40.0	8.1%
1976	44.6	5.7%	44.6	5.7%	42.3	5.8%
1977	47.4	6.3%	47.5	6.5%	45.1	6.6%
1978	51.0	7.6%	50.9	7.2%	48.4	7.3%
1979	55.3	8.4%	55.3	8.6%	52.8	9.1%
1980	60.4	9.2%	60.4	9.2%	58.5	10.8%
1981	65.9	9.1%	66.1	9.4%	63.7	8.9%
1982	70.1	6.4%	70.2	6.2%	67.4	5.8%
1983	73.1	4.3%	73.2	4.3%	70.5	4.6%
1984	75.9	3.8%	75.9	3.7%	73.1	3.7%
1985	78.4	3.3%	78.6	3.6%	75.8	3.7%
1986	80.6	2.8%	80.6	2.5%	78.0	2.9%
1987	83.1	3.1%	83.1	3.1%	81.0	3.8%
1988	86.1	3.6%	86.1	3.6%	84.3	4.1%
1989	89.7	4.2%	89.7	4.2%	88.4	4.9%
1990	93.6	4.3%	93.6	4.3%	92.9	5.1%
1991	97.3	4.0%	97.3	4.0%	96.8	4.2%
1992	100.0	2.8%	100.0	2.8%	100.0	3.3%
1993	102.6	2.6%	102.6	2.6%	102.7	2.7%
1994	104.9	2.3%	104.9	2.2%	105.1	2.3%
1995	107.6	2.5%	107.6	2.6%	107.6	2.4%
1996(e)	109.8	2.0%	109.9	2.1%	110.0	2.2%
1997(e)	112.5	2.5%	112.7	2.5%	112.7	2.5%

(e) = estimate

Sources: U.S. Department of Commerce, Bureau of Economic Analysis and Governor's Office of Planning and Budget.

Table 58
American Chamber of Commerce Researchers Association Cost of Living Comparisons for Selected Metropolitan Areas: Second Quarter 1996

Component Index Weights:	100% All Items	16% Groceries	28% Housing	8% Utilities	10% Trans-portation	5% Health Care	33% Misc. Goods & Services
U.S. Average	100.0	100.0	100.0	100.0	100.0	100.0	100.0
Utah Areas							
Salt Lake City	96.9	99.4	94.8	86.9	100.4	106.2	97.3
Cedar City (nonmetro)	94.7	107.4	84.3	72.5	102.0	97.2	100.3
Logan (nonmetro)	106.2	103.6	119.0	88.2	99.5	108.4	102.5
Provo-Orem	102.3	95.6	114.9	85.2	101.8	119.6	95.9
St George (nonmetro)	103.7	105.5	111.4	85.1	105.0	97.9	101.6
Western Areas							
Phoenix AZ	103.0	104.3	99.3	109.8	113.3	115.2	98.8
Los Angeles-Long Beach CA	115.7	113.5	129.1	110.9	113.2	117.3	107.0
San Diego CA	121.7	112.2	152.5	99.7	126.6	121.6	104.1
Denver CO	103.1	98.4	117.7	72.9	106.2	121.8	96.0
Boise ID	103.0	101.3	108.2	75.7	94.0	114.0	106.4
Las Vegas NV	102.6	105.6	106.7	74.8	110.0	119.9	99.1
Albuquerque NM	101.2	99.2	103.4	99.8	99.6	104.3	100.6
Portland OR	107.4	101.0	119.5	81.8	107.3	119.9	104.1
Spokane WA	106.6	100.4	123.1	61.1	94.5	123.9	106.8
Cheyenne WY	96.1	102.7	92.5	81.9	97.3	99.4	98.5
Other Areas							
Anchorage AK	126.7	123.6	140.8	104.8	105.3	168.9	119.7
Orlando FL	98.4	96.7	93.5	116.3	98.5	108.7	97.2
Boston MA	136.3	116.2	186.1	135.5	117.6	135.3	109.4
Kansas City MO-KS	96.3	94.9	92.3	93.0	98.6	112.4	97.7
Houston TX	95.4	91.9	86.9	97.5	111.4	104.1	97.9

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

Table 59
American Chamber of Commerce Researchers Association Cost of Living Index for Salt Lake Metropolitan Area: Second Quarter 1981-1996

Compontent Index Weights*	100% All Items	16% Groceries	28% Housing	8% Utilities	10% Trans-portation	5% Health Care	33% Misc. Goods & Services
U.S. Average:	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1981	100.1	96.1	107.3	80.7	107.8	100.9	101.8
1982	100.9	101.2	107.5	89.4	103.5	100.6	99.0
1983	96.0	96.2	104.9	88.0	95.2	98.6	92.2
1984	98.0	100.3	97.4	88.2	97.5	106.8	98.9
1985	101.7	100.6	97.9	95.3	102.2	103.2	107.1
1986	101.4	102.9	94.4	97.2	98.6	105.3	107.5
1987	99.3	95.4	94.0	96.2	105.5	101.6	103.4
1988	98.3	94.6	88.4	94.0	105.4	106.1	104.4
1989	95.6	94.8	86.9	89.8	101.1	100.9	100.9
1990	92.0	88.8	81.5	84.4	97.0	93.7	101.9
1991	93.8	95.4	81.5	93.4	100.4	93.3	99.2
1992	96.9	105.3	84.8	92.8	104.8	101.1	101.6
1993**	96.8	99.7	86.0	89.4	104.0	99.6	103.7
1994	97.5	101.8	96.6	93.7	95.0	108.6	95.8
1995	99.6	96.5	99.3	93.1	98.6	109	101.4
1996	96.9	99.4	94.8	86.9	100.4	106.2	97.3

*Second Quarter 1996: Weight percentages may differ from year to year
** First Quarter 1993:Salt Lake City not included in Second Quarter 1993 ACCRA Report.

Note: These data are collected by local chambers of commerce and conflict at times with data from other sources.

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

Social Indicators

Utah's quality of life is part of the explanation for many of the state's economic successes that are described throughout this report. In turn, economic conditions impact quality of life to such an extent that almost any measure of economic performance can be regarded as a measure of quality of life.

Because quality of life is a subjective notion, it is very difficult to measure. The choice and interpretation of indicators can lead to different, even contradictory results. For example, *U.S. News and World Report* ranks Salt Lake City as the "best" housing market because Salt Lake's home prices rose an average of 12.8 percent per year from 1993 to 1996. A booming housing market can be lauded as an indicator of a booming economy—people are moving in, demand for housing is up and prices are climbing—but the rising cost of housing can jeopardize the economic well-being of low- to moderate-income families. As mentioned in the Construction and Housing chapter of this report, there is also the potential for housing price increases to affect the rate of net in-migration and new household formations, and threaten the residential construction boom.

Another example of a controversial indicator is the number of vehicle miles traveled. An increase in the number of vehicle miles traveled daily can be assessed negatively, in that congestion causes increased travel times and because air pollution is likely to increase. Or, it may be assessed to be a positive indicator in that individuals are affluent enough to have vehicles, and increased opportunities are associated with mobility.

This chapter cites studies that have been completed in the past year that compare Utah to other states. Efforts to track the quality of life in Utah are then presented. The chapter also offers data on socioeconomic indicators of crime, education, health, poverty, public aid, and housing. The data are not interpreted or analyzed, rather they are presented here to provide readers a glimpse of quality-of-life indicators in the context of a strong economy.

State-to-State Comparisons

Over the past year Utah has been recognized in varying ways as a great place to live. Several organizations choose a variety of indicators to compare conditions from state-to-state or by metro area. The strength of these studies is that the final rankings are based on a composite of indicators.

Utah has been named among the best in several studies, including:

- Morgan Quitno Press found Utah to be the fifth healthiest state based on a study which includes 23 categories, among them: adult smoking percentages, infant mortality, childhood immunization rates, health insurance coverage, per capita spending on health care, and others.
- The same organization ranked Utah as the fifth most livable state. This study used 42 factors including crime rates, personal income, state and local taxes, public library offerings per capita, days with sunshine, educational attainment, infant mortality, homeownership, and others.
- The Corporation for Enterprise Development gave Utah the second highest grades of any state on its "economic report card". The Corporation used indicators in the domains of economic performance, business vitality, and development capacity.
- Utah ranks sixth in caring for its children according to the Annie E. Casey Foundation. The Foundation uses 10 indicators: low birth weight babies, infant mortality, child death rate, teen violent death rates, teen birth rates, juvenile violent crime arrest rates, high school dropouts, idle teens, poverty, and single-parent headed families.
- The Salt Lake Area was ranked number one as the place offering residents the greatest financial security. Reliastar Financial Corp's financial security index is based on 15 factors: household income, education, household net assets, cost of living, health insurance, retirement savings, life insurance, income support programs, unemployment rate, low-income households, crime rate, cost of community services, job quality, job creation, and housing costs.

Utah Quality of Life Information

Utah Kids Count Project. A collection of indicators is reported on in *Measures of Child Well-Being in Utah: 1997*[1]. The Utah Kids Count Project tracks data on children for each of the counties in the state and produces the report annually. The data fall into the domains of health, education, safety and economic security—with 20 measures.

[1] Utah Children, *Measures of Child Well-Being in Utah: 1997*. Salt Lake City, Utah. 1997.

Information about child well-being is a critical part of understanding standard of living. Maintaining Utah's quality of life in the 21st century, will depend heavily on the ability to build human capital—preserving the welfare of children is a crucial first step in this process.

Utah Tomorrow. Utah's future success also requires the continued development of sound public policies. Utah Tomorrow is a planning effort "designed to enable all segments of Utah society to focus on and measure progress toward specific goals for Utah's future and to move away from reactive methods of public policy-making toward more visionary proactive approaches."[1] The goals are clustered around the following topics: culture; economic development; education; environment, natural resources and agriculture; free enterprise and regulatory systems; government; health and safety; human services; infrastructure; and justice.

The *Utah Tomorrow Strategic Plan*, updated annually, reports on the goals in each topic, as well as related objectives. The report lists over 700 performance measures and provides data detailing the progress on those measures.

Consumer Survey. The *Utah Consumer Survey* was conducted by Valley Research, Inc. Interviews were conducted by telephone during July 1996 with 508 randomly selected adults throughout the State of Utah. The survey report details respondents answers to questions such as, "What is the most important issue facing Utah today?," and valuable information about consumer sentiment.

Social Indicators

As mentioned above the data items shown as social indicators in this chapter have not been interpreted or analyzed. They are presented here to stimulate thought on the interaction of economic performance and social well-being. No effort has been made to give weights to the measure, or to develop a composite index that would allow the data to be compared over time or by geographic area.

Current Population Survey Data. It should also be noted that the source of the data on educational attainment, poverty, public aid, health insurance coverage, and home ownership is the U.S. Bureau of the Census and U.S. Bureau of Labor Statistics. These agencies provide state rankings from the *Current Population Survey*. The *Current Population Survey* is a monthly survey of approximately 50,000 households nationwide. The sampling variability in state estimates from the survey is problematic because of the small sample size. Precise estimates about rank (and changes in ranks over time) are not possible, but the data provide a general indication of the relative level of indicators from state to state.

This caution does not apply to the crime statistics, or vital statistics (which are obtained from government records) or to the median price of housing.

Crime. Statistics for 1995 from the FBI's uniform crime reports show the rate of violent crimes per 100,000 persons to be 328.8 in Utah, less than half the U.S. rate of 684.6. Eleven states had lower rates than Utah (Table 60).

Utah also compared favorably to other states for statistics on the number of federal and state prisoners per 10,000 population in 1995, ranking 45th from the highest, with a rate of 17.7. The number for the U.S. as a whole was 42.9 (Table 60).

Education. Table 60 provides 1995 educational attainment percentages from the *Current Population Survey*. Utah had the fourth highest percentage of persons age 25 and over with at least a high school degree (90.2 percent). Utah is ranked 18th for the percentage with a bachelor's degree or higher (24.0 percent). Although the numbers presented in the table are higher, and the ranks lower than 1990 Census numbers, it should be noted that sampling at the 90 percent confidence interval makes the statistics incomparable (see discussion on CPS data above).

Vital Statistics and Health. Utah's age composition affects its ranking among other states on many vital statistics. As discussed in the Demographics chapter of this report, Utah has the highest percentage of the population under 18 years of age (34.6 percent in 1995) of any state and lowest median age (26.8 in 1995). Utah also has among the lowest percentage of the population over age 64 (8.8 percent in 1995). The statistics in this domain, excluding health insurance coverage, are from the National Center for Health Statistics

Births. The birth rate in 1995 was estimated the highest of all states at 20.3 births per 1,000 people. California had the second highest rate at 17.8. The U.S. average is 14.8.

Deaths. The infant mortality rate (deaths to infants less than 1 year-old per 1,000 live births) was 6.2 in Utah in 1994 and five states had lower rates.

Utah's age composition means that most Utah residents are not yet old enough to get cancer or heart disease; consequently, Utah ranks among the

[1] Utah Tomorrow Strategic Planning Committee, Office of Legislative Research and General Counsel. *Utah Tomorrow Strategic Plan, 1996 Annual Report.* Salt Lake City, Utah

best (49th highest) for death from these causes. The death rate per 100,000 people in 1992 from heart disease was 151.8 and from cancer, 108.3.

Health Insurance Coverage. In 1995, approximately 11.7 percent of the population was without health insurance coverage. Utah is ranked 37th from the highest. The U.S. average is 15.4 percent.

Poverty. Utah is among the states with the lowest poverty rates. Statistics from the *Current Population Survey* show the percentage of the population in poverty in Utah for 1995 to be 8.4, the same figure as the 5-to-17-year olds population in poverty. Approximately 8.4 percent of children (who live in households where they are related to the householder) lived in poverty in 1995.

Public Assistance. Only 3.6 percent of the population were recipients of public aid in Utah in 1994, according to *Current Population Survey* data. With that figure Utah ranks 48th from the highest. The U.S. average was 7.7 percent.

Home Ownership. Home ownership rates show that Utah has the seventh highest percent of home owners at 71.5 percent. The average for the nation is 64.7 percent. The lowest rates were in Hawaii, New York and California.

Information about the median sales price of single-family homes is available from the National Board of Realtors. Table 63 shows the median sales price of existing single-family homes in the Salt Lake City area. Data indicate that the sales prices have been appreciating at a rate that is among the highest in the U.S.; however, the prices have recently decreased slightly. In the Salt Lake City/Ogden metropolitan area the median sales price of an existing single-family home in the third quarter of 1996 was $123,100, and in the U.S. as a whole, $120,500.

The three metropolitan areas with the highest median sales price of existing single-family homes were: Honolulu, HI ($335,000); San Francisco Bay Area, CA ($273,000); and Orange County, CA ($215,900). The three metropolitan areas with the lowest prices in the third quarter of 1996 were: Saginaw/Bay City/Midland, MI ($66,000); Ocala, FL ($64,300); and Waterloo/Cedar Falls, IA ($58,200)

Table 60
Social Indicators in Domains of Crime and Education

	CRIME						EDUCATION			
							Educational Attainment, Persons 25 Years Old and Over, 1990:			
	Violent Crime* per 100,000 People,1995 (1)		Federal and State Prisoners per 10,000 People, 1995 (2)		Child Abuse Cases Reported (1,000), 1993 (2)		High School or Higher (3)		Bachelor's Degree or Higher (3)	
	Rate	Rank	Rate	Rank	(1,000)	Rank	Percent	Rank	Percent	Rank
U.S.	684.6	–	42.9	–	1,936	–	75.2	–	20.3	–
Alabama	632.4	21	48.7	9	27	23	66.9	47	15.7	45
Alaska	770.9	11	58.1	4	10	40	86.6	1	23.0	12
Arizona	713.5	13	50.6	8	30	20	78.7	20	20.3	23
Arkansas	553.2	23	37.8	20	17	33	66.3	48	13.3	50
California	966.0	6	42.9	15	343	1	76.2	28	23.4	10
Colorado	440.2	29	29.5	27	33	17	84.4	3	27.0	4
Connecticut	405.9	32	45.2	12	18	31	79.2	17	27.2	2
Delaware	725.0	12	67.0	2	5	46	77.5	23	21.4	17
District of Colombia	2,661.4	–	176.8	–	6	–	73.1	39	33.3	1
Florida	1,071.0	1	45.1	13	105	4	74.4	37	18.3	30
Georgia	657.1	19	47.6	11	53	10	70.9	42	19.3	26
Hawaii	295.6	41	30.0	26	5	45	80.1	14	22.9	13
Idaho	322.0	40	28.6	31	12	38	79.7	16	17.7	35
Illinois	996.1	3	31.8	24	72	6	76.2	28	21.0	20
Indiana	524.7	24	27.8	32	40	13	75.6	31	15.6	46
Iowa	354.4	38	20.8	40	21	30	80.1	14	16.9	41
Kansas	420.7	31	27.5	33	25	28	81.3	10	21.1	19
Kentucky	364.7	35	31.2	25	37	15	64.6	50	13.6	49
Louisiana	1,007.4	2	58.6	3	27	22	68.3	44	16.1	43
Maine	131.4	47	11.7	48	4	48	78.8	18	18.8	28
Maryland	986.9	4	42.5	16	29	21	78.4	22	26.5	5
Massachusetts	687.2	15	19.1	42	32	19	80.0	15	27.2	2
Michigan	687.8	14	43.1	14	53	9	76.8	25	17.4	37
Minnesota	356.1	37	10.5	49	17	34	82.4	6	21.8	16
Mississippi	502.8	26	48.2	10	18	32	64.3	51	14.7	48
Missouri	663.8	18	36.0	22	52	11	73.9	38	17.8	33
Montana	170.6	46	20.5	41	9	41	81.0	11	19.8	25
Nebraska	382.0	33	19.0	43	8	42	81.8	8	18.9	27
Nevada	945.2	7	51.1	7	13	37	78.8	18	15.3	47
New Hampshire	114.5	49	17.5	46	6	44	82.2	7	24.4	8
New Jersey	599.8	22	34.1	23	65	7	76.7	26	24.9	6
New Mexico	819.2	9	24.9	37	25	26	75.1	33	20.4	22
New York	841.9	8	37.8	20	139	2	74.8	34	23.1	11
North Carolina	646.4	20	40.8	18	58	8	70.0	43	17.4	37
North Dakota	86.7	50	9.5	50	5	47	76.7	26	18.1	31
Ohio	482.5	28	40.1	19	93	5	75.7	30	17.0	40
Oklahoma	664.1	16	55.4	5	26	24	74.6	36	17.8	33
Oregon	522.4	25	25.1	36	25	25	81.5	9	20.6	21
Pennsylvania	427.3	30	26.8	34	25	27	74.7	35	17.9	32
Rhode Island	368.0	34	29.3	28	8	43	72.0	41	21.3	18
South Carolina	981.9	5	53.4	6	21	29	68.3	44	16.6	42
South Dakota	207.5	45	25.7	35	10	39	77.1	24	17.2	39
Tennessee	771.5	10	28.9	30	33	18	67.1	46	16.0	44
Texas	663.9	17	68.2	1	111	3	72.1	40	20.3	23
Utah	328.8	39	17.7	45	16	35	85.1	2	22.3	15
Vermont	118.3	48	18.3	44	3	50	80.8	12	24.3	9
Virginia	361.5	36	41.9	17	36	16	75.2	32	24.5	7
Washington	484.3	27	21.4	39	40	14	83.8	4	22.9	13
West Virginia	210.2	44	13.7	47	13	36	66.0	49	12.3	51
Wisconsin	281.1	42	21.9	38	49	12	78.6	21	17.7	35
Wyoming	254.2	43	29.3	28	4	49	83.0	5	18.8	28

Note: Rank is highest value to lowest. When states share the same rank, the next lower rank is omitted.
* Violent crimes are offenses of murder, forcible rape, robbery, and aggravated assault.

Sources: (1) Federal Bureau of Investigation, "Crime in the United States, 1995"; (2) Bureau of the Census, Statistical Abstract of the United States, 1996; (3) U.S. Bureau of the Census, 1990 Census of Population and Housing.

Table 61
Social Indicators in the Health Domain

	VITAL STATISTICS AND HEALTH											
	Births per 1,000 People, 1995 (1)		Deaths per 1,000 People, 1995 (1)		Infant Deaths per 1,000 Live Births, 1994 (1)		Death Rate per 100,000 People, 1992: Heart Disease (2)		Death Rate per 100,000 People, 1992: Cancer (2)		Persons Without Health Insurance, 1995 (2)	
	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Rate	Rank	Percent	Rank
U.S.	14.8	–	8.8	—	8.0	—	281.4	—	204.1	—	15.4	—
Alabama	14.3	21	9.9	8	10.1	4	311.7	14	218.6	15	13.5	27
Alaska	17.0	5	4.0	51	7.6	29	88.1	50	88.1	50	12.5	33
Arizona	17.2	4	8.4	34	7.8	23	243.1	34	194.2	36	20.4	5
Arkansas	14.2	23	10.7	3	9.2	9	344.0	6	244.2	5	17.9	11
California	17.8	2	7.1	47	7.0	36	217.2	44	162.1	44	20.6	3
Colorado	14.5	17	6.6	48	7.0	36	178.1	48	143.0	48	14.8	18
Connecticut	13.8	33	8.9	27	7.9	21	294.6	22	217.5	16	8.8	47
Delaware	14.3	21	9.0	25	6.8	40	266.9	31	223.5	12	15.7	13
District of Colombia	15.9	8	12.6	1	18.2	—	314.1	—	260.9	—	17.3	—
Florida	13.3	40	10.7	3	8.1	19	351.0	4	260.9	1	18.3	9
Georgia	15.8	9	8.0	38	10.2	3	243.4	33	174.2	41	17.9	10
Hawaii	15.7	10	6.2	49	6.7	41	184.8	47	151.9	47	8.9	46
Idaho	15.5	12	7.5	42	6.9	39	218.1	42	169.1	43	14.0	24
Illinois	15.7	10	9.1	20	9.3	7	296.8	19	212.0	23	11.0	40
Indiana	14.5	17	9.1	20	8.8	12	295.2	20	212.6	20	12.6	31
Iowa	12.9	44	9.8	10	7.5	30	327.5	10	229.5	8	11.3	38
Kansas	14.7	15	9.1	20	7.7	26	295.1	21	200.1	35	12.4	35
Kentucky	13.4	39	9.7	12	7.8	23	313.8	13	227.7	10	14.6	21
Louisiana	15.5	12	9.0	25	10.6	2	284.1	25	207.0	26	20.5	4
Maine	11.2	51	9.4	13	6.2	45	280.0	27	237.8	6	13.5	26
Maryland	14.2	23	8.2	35	9.0	10	241.6	36	202.4	32	15.3	14
Massachusetts	12.3	48	9.1	20	6.0	49	284.8	24	236.7	7	11.1	39
Michigan	13.9	31	8.7	31	8.6	14	285.1	23	204.6	29	9.7	43
Minnesota	13.6	35	8.0	38	7.0	36	229.4	40	191.3	38	8.0	49
Mississippi	15.3	14	10.0	7	11.0	1	349.1	5	212.6	20	19.7	6
Missouri	13.9	31	10.2	6	8.1	19	341.9	7	227.5	11	14.6	19
Montana	12.8	45	8.6	33	7.4	32	231.9	39	207.6	25	12.7	30
Nebraska	14.2	23	9.3	16	7.7	26	329.6	9	202.4	32	9.0	45
Nevada	16.4	6	8.2	35	6.5	44	232.1	38	200.4	34	18.7	8
New Hampshire	13.0	43	7.8	41	6.2	45	240.7	37	204.7	28	10.0	41
New Jersey	13.7	34	9.1	20	7.7	26	304.5	16	228.5	9	14.2	23
New Mexico	16.0	7	7.3	45	8.3	16	187.5	46	157.4	46	25.6	1
New York	14.6	16	9.3	16	7.8	23	354.0	3	213.3	19	15.2	16
North Carolina	14.2	23	8.9	27	10.0	5	277.8	28	204.0	31	14.3	22
North Dakota	13.5	38	9.2	19	7.2	33	300.0	17	215.0	17	8.3	48
Ohio	14.0	28	9.3	16	8.7	13	308.7	15	220.7	14	11.9	36
Oklahoma	14.0	28	9.9	8	8.5	15	339.1	8	211.3	24	19.2	7
Oregon	13.6	35	8.9	27	7.1	34	245.3	32	212.5	22	12.5	32
Pennsylvania	12.5	46	10.6	5	8.2	18	360.2	2	252.7	3	9.9	42
Rhode Island	12.5	46	9.4	13	5.0	50	323.0	12	251.4	4	12.9	29
South Carolina	13.6	35	8.8	30	9.3	7	268.0	30	194.1	37	14.6	20
South Dakota	14.4	19	9.4	13	9.6	6	323.8	11	222.0	13	9.4	44
Tennessee	14.0	28	9.8	10	8.9	11	298.8	18	214.4	18	14.8	17
Texas	17.5	3	7.4	44	7.1	34	229.0	41	170.2	42	24.5	2
Utah	20.3	1	5.5	50	6.2	45	151.8	49	108.3	49	11.7	37
Vermont	11.7	49	8.2	35	7.5	30	277.4	29	204.1	30	13.2	28
Virginia	14.1	27	8.0	38	8.3	16	242.4	35	187.8	39	13.5	25
Washington	14.4	19	7.5	42	6.2	45	217.5	43	184.0	40	12.4	34
West Virginia	11.6	50	11.1	2	6.7	41	382.9	1	255.1	2	15.3	15
Wisconsin	13.2	41	8.7	31	7.9	21	281.5	26	206.8	27	7.3	50
Wyoming	13.2	41	7.3	45	6.7	41	194.1	45	160.7	45	15.9	12

Note: Rank is highest value to lowest. When states share the same rank, the next lower rank is omitted.

Sources: (1) National Center for Health Statistics, "Monthly Vital Statistics Report"; (2) Bureau of the Census, "Statistical Abstract of the United States, 1996".

Table 62
Indicators of Public Assistance/Poverty and Homeownership

	POVERTY				PUBLIC ASSISTANCE		HOME OWNERSHIP	
	All Ages in Poverty 1995 (1)		Related Children 5 to 17 Years in Poverty, 1995 (1)		Public Aid Recipients 1994 (2)		Home Ownership Rates 1995 (2)	
	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank
U.S.	13.8	–	19.0	–	7.7	–	64.7	–
Alabama	20.1	3	22.6	11	6.8	23	70.1	15
Alaska	7.1	49	6.7	49	7.4	15	60.9	44
Arizona	16.1	12	24.2	6	6.5	27	62.9	41
Arkansas	14.9	15	21.7	13	6.6	26	67.2	28
California	16.7	8	23.4	9	11.7	1	55.4	48
Colorado	8.8	45	10.7	42	4.7	41	64.6	39
Connecticut	9.7	40	17.8	19	6.4	29	68.2	21
Delaware	10.3	35	16.6	24	5.2	37	71.7	6
District of Colombia	22.2	–	31.5	–	16.7	–	38.2	–
Florida	16.2	11	22.1	12	6.8	23	66.6	32
Georgia	12.1	26	15.6	29	8.2	12	66.6	32
Hawaii	10.3	35	14.2	35	6.9	22	50.2	50
Idaho	14.5	17	16.7	23	3.4	50	72.0	5
Illinois	12.4	21	20.3	14	8.3	11	66.4	34
Indiana	9.6	41	14.5	32	5.2	37	71.0	13
Iowa	12.2	22	15.5	30	5.4	35	71.4	9
Kansas	10.8	33	10.7	42	4.7	41	67.5	24
Kentucky	14.7	16	19.3	17	9.3	6	71.2	11
Louisiana	19.7	5	24.4	5	9.7	4	65.3	37
Maine	11.2	39	14.3	34	7.4	15	76.7	1
Maryland	10.1	39	13.3	36	5.9	33	65.8	36
Massachusetts	11.0	32	16.8	22	7.5	14	60.2	45
Michigan	12.2	22	14.8	31	9.1	7	72.2	4
Minnesota	9.2	44	10.4	45	5.4	35	73.3	2
Mississippi	23.5	2	36.4	1	10.9	2	71.1	12
Missouri	9.4	43	9.8	46	7.0	20	69.4	18
Montana	15.3	14	19.0	18	5.6	34	68.7	20
Nebraska	9.6	41	11.9	39	4.0	45	67.1	29
Nevada	11.1	31	11.1	41	3.8	47	58.6	46
New Hampshire	5.3	50	4.3	50	3.5	49	66.0	35
New Jersey	7.8	48	9.5	47	6.0	32	64.9	38
New Mexico	25.3	1	34.9	2	8.7	9	67.0	30
New York	16.5	10	23.6	8	10.0	3	52.7	49
North Carolina	12.6	19	20.2	15	7.2	17	70.1	15
North Dakota	12.0	27	13.2	37	3.9	46	67.3	27
Ohio	11.5	28	17.1	21	8.1	13	67.9	23
Oklahoma	17.1	7	24.2	6	6.2	31	69.8	17
Oregon	11.2	29	16.2	28	5.1	39	63.2	40
Pennsylvania	12.2	22	16.5	26	7.2	17	71.5	7
Rhode Island	10.6	34	16.4	27	8.6	10	57.9	47
South Carolina	19.9	4	31.7	3	6.7	25	71.3	10
South Dakota	14.5	17	17.3	20	4.4	44	67.5	24
Tennessee	15.5	13	19.6	16	9.0	8	67.0	30
Texas	17.4	6	23.1	10	6.3	30	61.4	43
Utah	8.4	47	8.4	48	3.6	48	71.5	7
Vermont	10.3	35	13.0	38	7.0	20	70.4	14
Virginia	10.2	38	14.5	32	4.8	40	68.1	22
Washington	12.5	20	16.6	24	7.1	19	61.6	42
West Virginia	16.7	8	25.8	4	9.6	5	73.1	3
Wisconsin	8.5	46	11.2	40	6.5	27	67.5	24
Wyoming	12.2	22	10.6	44	4.5	43	69.0	19

Note: Rank is highest value to lowest. When states share the same rank, the next lower rank is omitted.

Sources: (1) "Annual Demographic Survey, March Supplement", U.S. Bureau of the Census, Bureau of Labor Statistics; (2) U.S. Bureau of the Census, "Statistical Abstract of the United States, 1996".

Table 63
National Board of Realtors® Median Sales Price of Existing Single-Family Homes: 1992 to Third Quarter 1996
(thousands of dollars)

Metropolitan Area*	1992	1993	1994	1995	1995 Quarter I	1995 Quarter II	1995 Quarter III	1995 Quarter IV	1996 Quarter I	1996 Quarter II	1996 Quarter III(p)
Utah Areas											
Salt Lake City	76.5	84.9	98.0	113.7	103.0	111.5	116.9	119.2	121.2	124.2	123.1
Western Areas											
Phoenix AZ	86.8	89.1	91.4	96.8	91.6	94.8	99.3	99.1	102.6	103.8	107.9
Los Angeles Area CA	210.8	195.4	189.1	179.9	177.1	176.3	177.8	175.9	172.1	172.4	171.6
San Diego CA	183.1	176.9	176.0	171.6	172.1	170.0	173.9	170.2	173.8	173.6	176.0
Denver CO	96.2	104.7	116.8	127.3	120.8	125.5	130.8	128.5	130.5	132.3	136.5
Boise ID	83.1	91.4	99.0	98.9	98.0	96.8	101.1	99.5	99.4	101.2	101.6
Las Vegas NV	104.3	108.2	110.5	113.5	111.6	110.5	117.0	114.1	117.6	117.8	120.0
Portland OR	97.7	106.0	116.9	128.4	120.6	127.2	131.5	131.2	135.8	139.4	144.5
Other Areas											
Orlando FL	87.6	90.1	90.7	89.2	89.1	89.2	89.0	89.3	89.7	93.7	94.7
Boston MA	171.1	173.2	179.3	179.0	175.1	179.0	183.2	177.4	187.3	195.3	195.3
Kansas City MO-KS	79.5	83.6	87.1	91.7	88.5	90.3	93.5	93.8	96.9	98.2	99.9
Philadelphia PA-NJ	117.0	118.0	119.5	118.7	113.4	117.1	123.3	118.4	na	na	na
Houston TX	80.3	80.9	80.5	79.2	77.2	78.0	82.2	78.6	80.9	84.1	87.2

* All areas are metropolitan statistical areas (MSA) as defined by the U.S. Office of Management and Budget as of 1992. They include the named central city and surrounding areas.

(p)= preliminary
na= not available

Source: National Board of Realtors

Regional / National Comparisons

The 1990s have been a period of sustained economic growth for the Mountain Division.[1] The mountain region is in the midst of a five-year economic boom and leads the nation in economic vitality and growth. An examination of basic demographic and economic statistics demonstrates the relatively-favorable economic conditions among most mountain states compared to the national economy.

Population Growth

Population growth in the mountain states continues at a relatively rapid rate about three times as fast as experienced nationally.[2] In 1995, the population growth rate was 2.7 percent. The favorable economic conditions in the mountain west will support continued above-average population growth. From 1994 to 1995, the population in Mountain Division states increased by 412,000, to a total of 15,645,000 inhabitants, a growth of 2.7 percent compared a 0.9 percent increase nationally (Figure 40, Table 64). From 1990 to 1995 the six fastest growing states (in terms of percent increase), were Nevada, Idaho, Arizona, Colorado, Utah, and New Mexico. In 1996, the mountain states continued to attract in-migrants to the area. Net in-migration has been quite strong since 1990 and continues, given the sustained above-average economic performance of the mountain region.

Personal Income Growth

Total personal income for the region grew at an average annual rate of 7.3 percent from 1990 to 1995, as compared to the national rate of 5.0 percent. Utah's average annual growth of personal income was 7.7 percent during this period. All eight states in the mountain region have had personal income growth rates above the national average since 1990 (Table 65).

From 1994 to 1995, income grew by 8.3 percent in the mountain states compared to 6.2 percent in the U.S. The most recent data show that income growth is quite strong in this region relative to the nation. Personal income grew by 7.7 percent and 5.5 percent in the mountain states and the U.S., respectively. from the second quarter of 1995 to the second quarter of 1996. During this same time, personal income grew 9.1 percent in Nevada, 8.8 percent in Arizona, and 8.6 percent in Utah; the first, second and third largest percent increases of all 50 states.

Six of the eight mountain states experienced an increase in per capita personal income relative to the U.S. average from 1990 to 1995. Per capita personal income for a region can change relative to the U.S. average because the region's total personal income, its population, or both, grow at a faster or slower rate than the U.S. average. From 1990 to 1995, income in the mountain region grew 45 percent faster than the national rate, while population grew two-and-one-half times the U.S. rate. The result is that per capita income for the mountain states has increased relative to national per capita income (Table 66). In 1990, per capita income in the mountain region was $16,818 or 87.9 percent of the national figure of $19,142. By 1995, per capita income for the mountain states was 90.3 percent of the national figure—$20,949 compared to $23,208.

Per capita total personal income is one statistic that is used to measure relative economic prosperity between states. In Utah, on average, the birth rate is higher and household size is larger than found in other states. With 34.6 percent of Utah's population under the age of 18 compared to 26.2 percent nationally, Utah's per capita income is just 78.6 percent of the national figure of $23,208 for 1995. This rate of 78.6 percent is the second lowest of any state in the region (Figure 41.

Another measure of relative economic prosperity, total personal income per household, recognizes that most people live in households and not as individuals. In 1995, Utah's per household income ($57,690) was third out of the eight mountain states, and 91.8 percent of the national figure of $62,830 (Figure 42, Table 67). Total personal income per household in the mountain region at $57,030 was 90.8 percent of the U.S. average.

Wages

The most complete measure of relative wages paid between states is average annual pay for all workers covered either by state or federal unemployment insurance programs. Wage growth for the intermountain region and the U.S. averaged 3.4 percent per year from 1990 to 1995 (Table 68). Wages increased slightly from 89.6 percent of the

[1] As defined by the Bureau of the Census, the Mountain Division includes: Arizona, Colorado, Idaho, Montana, Nevada, New Mexico, Utah and Wyoming.

[2] The U.S. Bureau of the Census released 1996 population estimates for all states on December 30, 1996. These estimated were released too late to be included in this report, but can be obtained by contacting the Governor's Office of Planning and Budget.

U.S. average in 1990 to 89.8 percent by 1995. As a percent of the national average, wages dropped a little in Utah, 85.1 percent to 84.8 percent over this five-year period. In 1995, average pay in Utah of $23,626 was fourth among the eight mountain states, and 35th nationally (Figure 43). The most recent data available show wages increasing among mountain states relative to wages nationally—from 89.5 percent of the U.S. average in 1994 to 89.8 percent in 1995. This is the second year to show that the strong regional economy is putting upward pressure on wages. Relative wage increases occurred in 1994 and 1995, and are likely for 1996 and 1997.

Labor Market Activity

From 1990 to 1995, the mountain region's employment growth rate was a little more than three times that of the nation. Nonagricultural job growth in the region averaged 4.0 percent per year, while the national rate was 1.3 percent. Among the eight states of the region, job growth per year was the highest in Nevada (4.9 percent), Utah (4.7 percent), and Idaho (4.4 percent). These rates were the fastest job growth rates for all 50 states over this five-year period. During this period, every mountain state increased in employment at a faster rate than the national growth rate (Table 69).

The most recent complete year for which data are available is 1995. From 1994 to 1995, nonagricultural employment growth in the mountain region was 5.0 percent, compared to the national rate of 2.3 percent. Of the 50 states, Nevada, Utah, Arizona, New Mexico, and Colorado led the way with job increases ranging from 6.9 percent to 4.7 percent.

Latest available information for all states, October 1995 to October 1996, indicates that the job picture in the mountain region, while slowing from last year's rapid pace, is by far the strongest of any region of the country. Four states, Nevada, Utah, Arizona, and Idaho, are out-pacing all other states with net new job creation of between 6.2 percent to 4.4 percent (Figure 44). Nonagricultural job growth averaged 3.7 percent for mountain states, and for the nation, 2.1 percent for this period.

The latest data indicate that unemployment in this region is about 4.6 percent compared to 4.9 percent for the U.S. (October 1996 - not seasonally adjusted, Table 70). This relatively favorable unemployment situation for the mountain states is indicative of the economic strength this region has maintained during the 1990s.

Broad-Based Strength

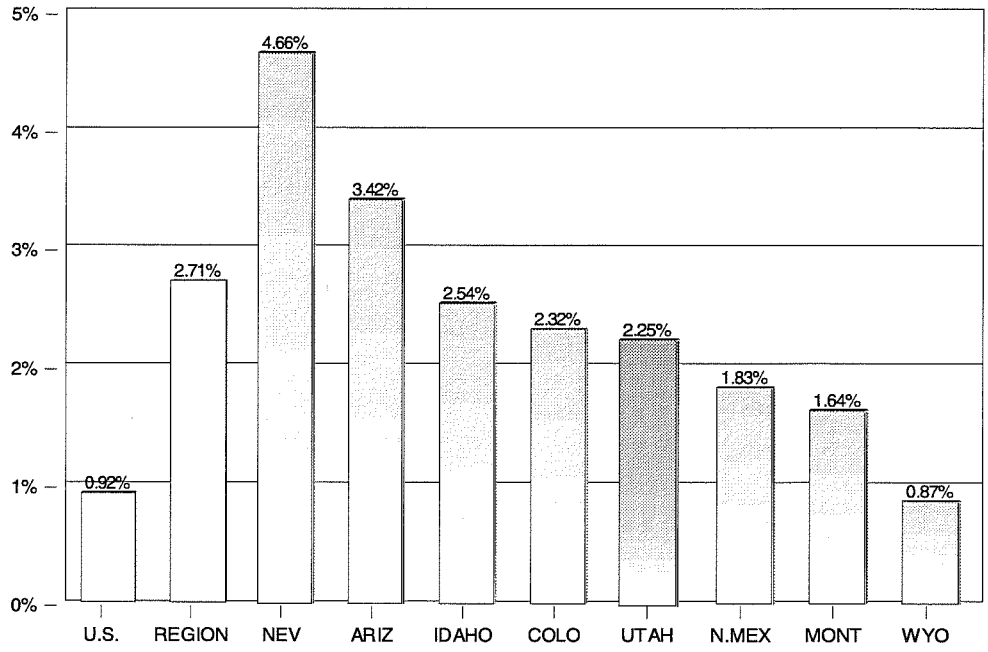
Economic conditions in the mountain region are stronger than that of any other region in the United States. The states of the intermountain west have been recognized nationally as having a favorable business climate, including moderate business taxes, less government regulation, a relatively youthful and educated populace, lower wages, and affordable housing. In addition, the quality of life in the mountain states with lower crime, functioning schools, and abundant recreational opportunities, has been praised. For the past few years there has been a noticeable migration of jobs and people into this region. The largest number of these jobs and people have been relocating from California.

The California economy has rebounded from the doldrums experienced earlier in the 1990s. In 1995 nonagricultural employment grew at the same rate as the nation as a whole, 2.3 percent. Currently, the California economy out-paces the U.S. with 2.5 percent job growth (October 1995 to October 1996) compared to 2.1 percent. With a revitalized economy, there will likely be a reduction in the flow of people and jobs from the west coast into the mountain states. Irregardless of a reduced migration of people and jobs from California, the favorable business climate, youthful and energetic labor force, economic strength and diversity, and the quality of life will continue to attract migrants into the mountain states from around the country and internationally.

The continuing influx of people and jobs has helped to fuel increased economic activity in manufacturing, residential and nonresidential construction, wholesale and retail trade, service industries, and government throughout the mountain west. Regional employment growth is broad-based across most of the mountain states and most of the major industries. Montana and Wyoming are the only mountain states in which job growth is below the rate of growth nationally.

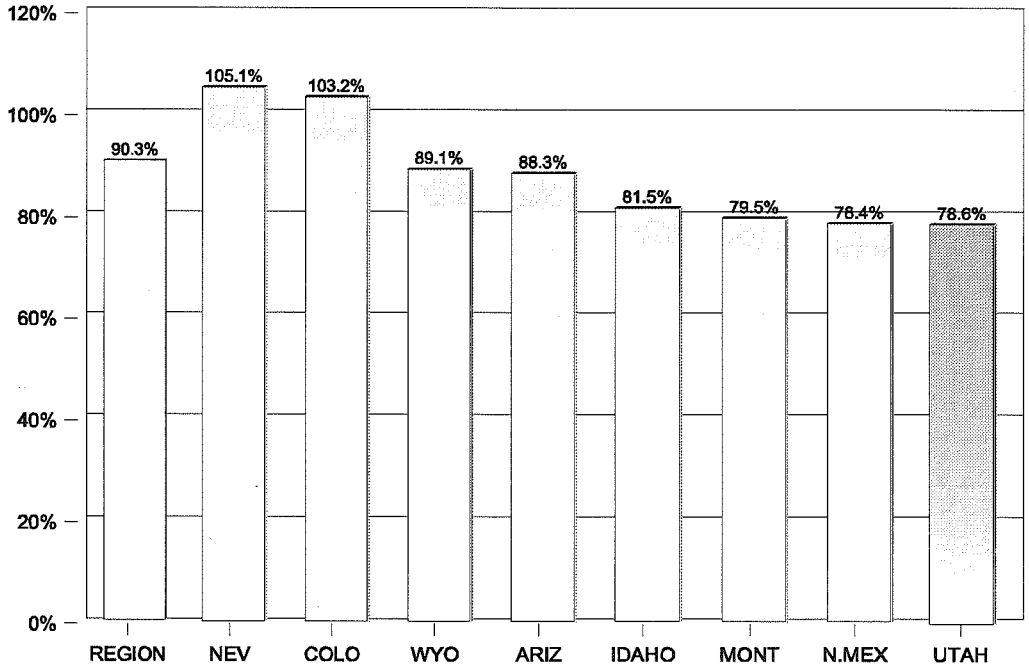
The national economy is expanding at a moderate pace as 1997 begins. Mountain Division state economies are experiencing the fifth straight year of an unprecedented, broad-based expansion. While the mountain states have been able, to this point, to expand economically without developing serious labor shortages or other bottlenecks, there are signs that rapid growth has begun to put inevitable strains on infrastructures and resources. These signs include increasing housing prices, low rates of unemployment, labor shortages (particularly among skilled construction workers) and upward pressure on wages. Regardless, the states in the Mountain Division will continue to outperform the nation as a whole during 1997.

Figure 40
Population Growth Rates—U.S. and Mountain Division States: 1994-1995



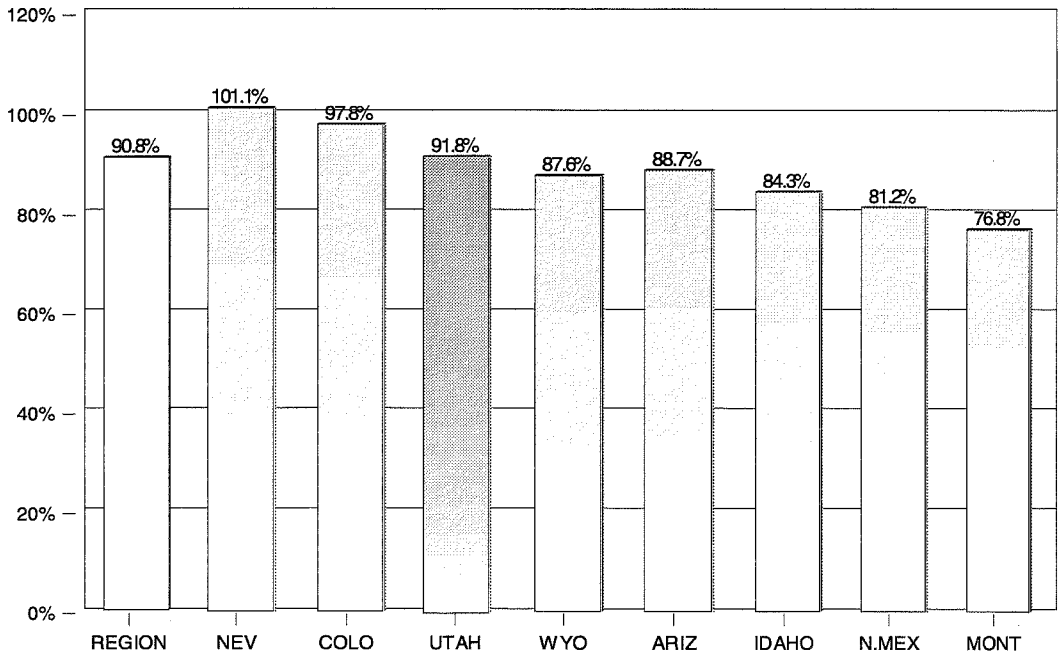
Source: U.S. Department of Commerce, Bureau of the Census.

Figure 41
Per Capita Income as a Percent of U.S.—Mountain Division States: 1995



Source: U.S. Department of Commerce, Bureau of Economic Analysis.

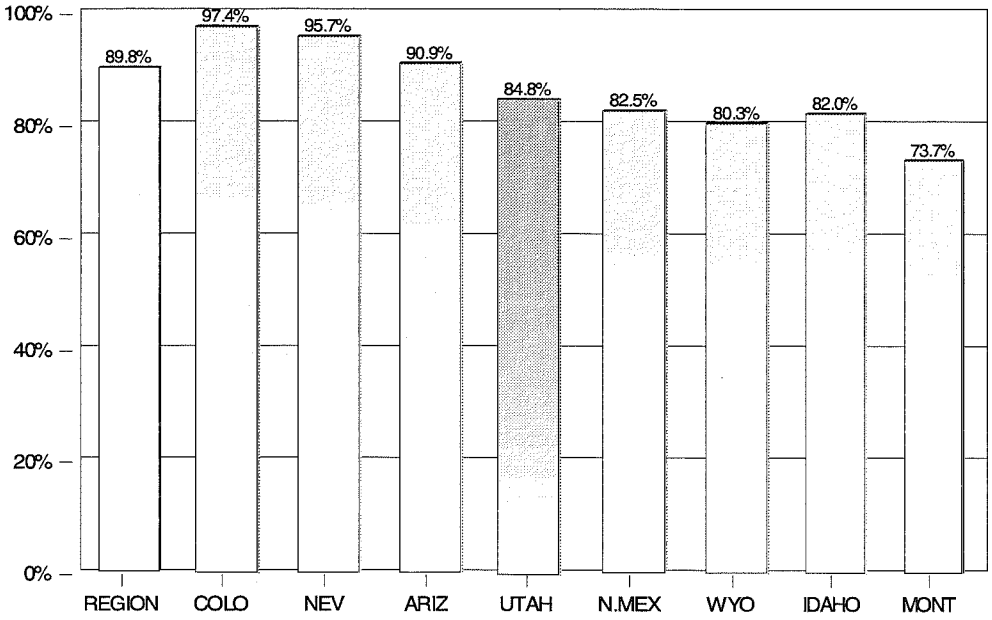
Figure 42
Personal Income per Household as a Percent of U.S.—Mountain Division States: 1995



* Personal income per household estimate calculated by Utah Foundation.

Source: Base data from the U.S. Department of Commerce, Bureau of the Census and tureau of Economic Analysis.

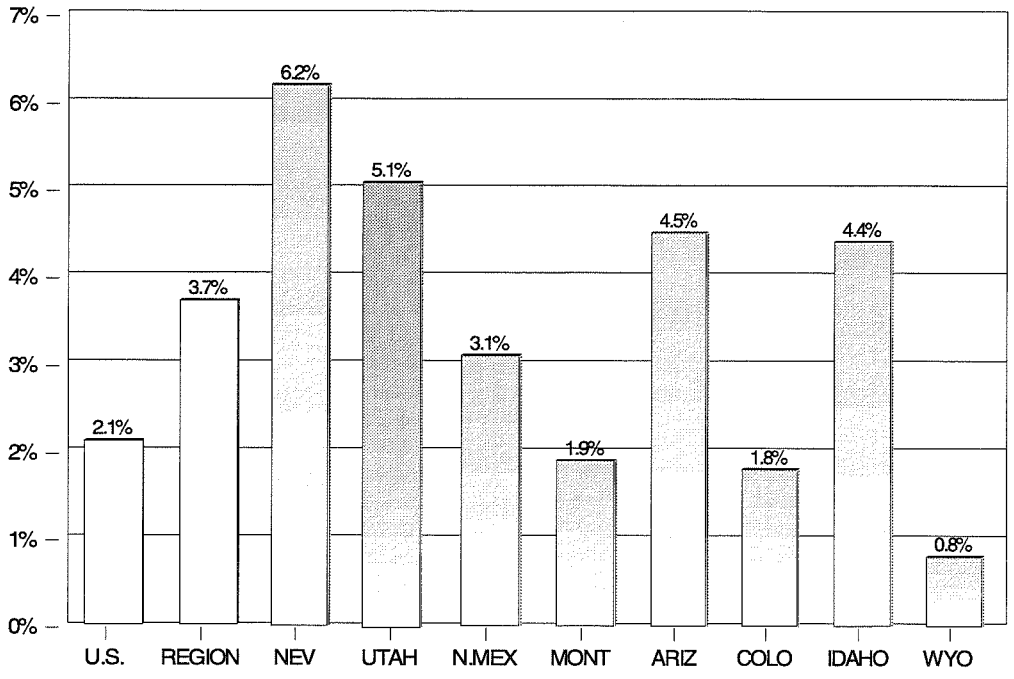
Figure 43
Average Annual Pay as a Percent of U.S.—Mountain Division States: 1995



* For workers covered by unemployment insurance.

Source: U.S. Bureau of Labor Statistics.

Figure 44
Nonagricultural Employment Growth—U.S. and Mountain Division States: Oct. 1995 to Oct. 1996



Source: U.S. Bureau of Labor Statisitcs.

Table 64
Population and Households—U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Population (July 1 Estimates) 1990 (thousands)	1994 (thousands)	1995 (thousands)	Rates of Population Change: Avg. Ann. Growth Rate 1990-95	Percent Change 1994-95	Households (July 1 Estimates) 1995 (thousands)	Persons per Household	Rankings: Rank by Population 1995	Rank by Avg. Ann. Growth Rate 1990-95	Rank by Percent Change 1994-95	Rank by Persons per Household 1995
United States	249,403	260,350	262,755	1.0%	0.9%	97,061	2.64				
Mountain States	13,716	15,233	15,645	2.7%	2.7%	5,747	2.68				
Arizona	3,679	4,079	4,218	2.8%	3.4%	1,551	2.66	23	3	2	14
Colorado	3,304	3,662	3,747	2.5%	2.3%	1,461	2.52	25	4	4	48
Idaho	1,012	1,134	1,163	2.8%	2.5%	415	2.75	41	2	3	7
Montana	800	856	870	1.7%	1.6%	333	2.56	44	12	12	38
Nevada	1,219	1,462	1,530	4.7%	4.7%	587	2.56	38	1	1	40
New Mexico	1,520	1,655	1,685	2.1%	1.8%	602	2.77	36	6	7	5
Utah	1,730	1,909	1,951	2.4%	2.2%	617	3.13	34	5	5	1
Wyoming	453	476	480	1.2%	0.9%	181	2.62	51	19	21	20
Other States											
Alabama	4,048	4,220	4,253	1.0%	0.8%	1,602	2.61	22	24	31	22
Alaska	553	603	604	1.8%	0.1%	209	2.81	48	11	46	4
Arkansas	2,354	2,453	2,484	1.1%	1.2%	938	2.58	33	21	16	30
California	29,904	31,408	31,589	1.1%	0.6%	10,925	2.83	1	20	37	3
Connecticut	3,289	3,275	3,275	-0.1%	0.0%	1,223	2.60	28	49	48	25
Delaware	669	708	717	1.4%	1.3%	269	2.59	46	16	15	29
D.C.	604	567	554	-1.7%	-2.2%	232	2.24	50	51	51	51
Florida	13,019	13,958	14,166	1.7%	1.5%	5,527	2.50	4	13	14	50
Georgia	6,506	7,058	7,201	2.0%	2.0%	2,645	2.67	10	8	6	11
Hawaii	1,113	1,178	1,187	1.3%	0.7%	385	2.99	40	17	32	2
Illinois	11,448	11,759	11,830	0.7%	0.6%	4,335	2.66	6	36	36	15
Indiana	5,555	5,755	5,803	0.9%	0.8%	2,183	2.59	14	30	23	28
Iowa	2,780	2,831	2,842	0.4%	0.4%	1,090	2.52	30	42	42	49
Kansas	2,481	2,551	2,565	0.7%	0.6%	971	2.56	32	35	38	41
Kentucky	3,693	3,828	3,860	0.9%	0.8%	1,456	2.59	24	28	24	27
Louisiana	4,217	4,316	4,342	0.6%	0.6%	1,556	2.72	21	38	35	9
Maine	1,231	1,239	1,241	0.2%	0.2%	476	2.54	39	46	45	44
Maryland	4,798	5,000	5,042	1.0%	0.9%	1,852	2.67	19	22	22	12
Massachusetts	6,019	6,041	6,074	0.2%	0.5%	2,291	2.57	13	45	40	34
Michigan	9,311	9,492	9,549	0.5%	0.6%	3,539	2.65	8	41	34	16
Minnesota	4,387	4,568	4,610	1.0%	0.9%	1,732	2.60	20	23	20	24
Mississippi	2,577	2,670	2,697	0.9%	1.0%	961	2.74	31	26	19	8
Missouri	5,126	5,279	5,324	0.8%	0.8%	2,031	2.56	16	32	25	39
Nebraska	1,581	1,624	1,637	0.7%	0.8%	621	2.56	37	34	28	37
New Hampshire	1,112	1,135	1,148	0.6%	1.1%	429	2.61	42	37	17	21
New Jersey	7,740	7,903	7,945	0.5%	0.5%	2,861	2.72	9	40	39	10
New York	18,002	18,153	18,136	0.1%	-0.1%	6,672	2.64	3	47	49	17
North Carolina	6,657	7,070	7,195	1.6%	1.8%	2,730	2.55	11	14	8	42
North Dakota	637	639	641	0.1%	0.3%	243	2.54	47	48	43	45
Ohio	10,862	11,104	11,151	0.5%	0.4%	4,219	2.59	7	39	41	26
Oklahoma	3,147	3,257	3,278	0.8%	0.6%	1,248	2.56	27	31	33	36
Oregon	2,858	3,087	3,141	1.9%	1.7%	1,216	2.53	29	9	10	47
Pennsylvania	11,896	12,062	12,072	0.3%	0.1%	4,567	2.57	5	44	47	32
Rhode Island	1,005	994	990	-0.3%	-0.5%	374	2.57	43	50	50	33
South Carolina	3,499	3,643	3,673	1.0%	0.8%	1,351	2.66	26	25	26	13
South Dakota	697	723	729	0.9%	0.8%	269	2.63	45	27	27	18
Tennessee	4,891	5,176	5,256	1.5%	1.5%	2,003	2.57	17	15	13	31
Texas	17,046	18,413	18,724	1.9%	1.7%	6,677	2.75	2	10	11	6
Vermont	565	580	585	0.7%	0.8%	223	2.54	49	33	29	43
Virginia	6,214	6,551	6,618	1.3%	1.0%	2,476	2.60	12	18	18	23
Washington	4,901	5,338	5,431	2.1%	1.7%	2,084	2.56	15	7	9	35
West Virginia	1,792	1,824	1,828	0.4%	0.2%	712	2.53	35	43	44	46
Wisconsin	4,902	5,083	5,123	0.9%	0.8%	1,910	2.62	18	29	30	19

Source: U.S. Department of Commerce, Bureau of the Census.

Table 65
Total Personal Income—U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Total Personal Income 1990 (millions)	Total Personal Income 1994 (millions)	Total Personal Income 1995 (millions)	Rates of Total Personal Income Change: Avg. Ann. Growth Rate 1990-95	Rates of Total Personal Income Change: Percent Change 1994-95	Total Personal Income (saar): 2nd Quarter 1995 (millions)	Total Personal Income (saar): 2nd Quarter 1996 (millions)	Total Personal Income (saar): Percent Change 1995-96	Rankings: Rank by Total Personal Income 1995	Rankings: Rank by Avg. Ann. Growth Rate 1990-95	Rankings: Rank by Percent Change 1994-95	Rankings: Rank by Percent Change (saar*) 1995-96
United States	4,774,005	5,739,851	6,097,977	5.0%	6.2%	6,058,094	6,393,138	5.5%				
Mountain States	230,678	302,636	327,749	7.3%	8.3%	323,730	348,502	7.7%				
Arizona	60,851	79,010	86,420	7.3%	9.4%	85,273	92,785	8.8%	23	3	2	2
Colorado	63,518	83,009	89,771	7.2%	8.1%	88,649	94,921	7.1%	22	5	4	10
Idaho	15,499	20,559	21,993	7.3%	7.0%	21,760	23,355	7.3%	43	4	13	8
Montana	12,031	15,158	16,052	5.9%	5.9%	15,879	16,696	5.1%	46	15	29	26
Nevada	24,524	34,112	37,319	8.8%	9.4%	36,894	40,263	9.1%	34	1	1	1
New Mexico	21,949	28,338	30,685	6.9%	8.3%	30,362	32,336	6.5%	38	6	3	13
Utah	24,570	32,940	35,577	7.7%	8.0%	35,013	38,031	8.6%	35	2	5	3
Wyoming	7,736	9,509	9,932	5.1%	4.4%	9,900	10,115	2.2%	51	27	45	50
Other States												
Alabama	61,637	77,018	81,578	5.8%	5.9%	80,993	85,129	5.1%	25	17	28	27
Alaska	11,642	14,131	14,488	4.5%	2.5%	14,466	14,864	2.8%	47	37	51	49
Arkansas	33,035	42,142	44,958	6.4%	6.7%	44,690	47,354	6.0%	33	12	16	17
California	636,593	715,923	760,431	3.6%	6.2%	757,233	798,150	5.4%	1	49	20	22
Connecticut	86,749	98,434	104,056	3.7%	5.7%	103,359	108,549	5.0%	21	47	31	32
Delaware	14,515	17,579	18,843	5.4%	7.2%	18,658	19,844	6.4%	44	25	11	15
D.C.	15,469	18,068	18,541	3.7%	2.6%	18,470	19,025	3.0%	45	48	50	48
Florida	248,746	304,114	326,668	5.6%	7.4%	323,822	346,253	6.9%	4	19	9	12
Georgia	113,064	145,420	156,555	6.7%	7.7%	154,679	166,464	7.6%	12	8	8	6
Hawaii	23,741	28,304	29,184	4.2%	3.1%	29,175	29,687	1.8%	40	42	48	51
Illinois	234,619	281,732	298,413	4.9%	5.9%	296,212	312,019	5.3%	5	33	27	24
Indiana	95,404	117,815	124,384	5.4%	5.6%	123,878	129,238	4.3%	16	23	34	44
Iowa	47,140	57,073	59,453	4.8%	4.2%	58,919	62,434	6.0%	30	35	46	16
Kansas	44,620	53,255	56,028	4.7%	5.2%	55,628	58,661	5.5%	31	36	41	21
Kentucky	55,711	68,620	72,762	5.5%	6.0%	72,451	76,556	5.7%	26	22	25	18
Louisiana	62,252	78,050	82,422	5.8%	5.6%	81,892	85,539	4.5%	24	16	33	42
Maine	21,137	23,703	24,957	3.4%	5.3%	24,907	25,774	3.5%	41	51	40	47
Maryland	107,872	126,637	132,784	4.2%	4.9%	132,307	137,571	4.0%	14	41	43	45
Massachusetts	139,644	159,142	170,185	4.0%	6.9%	168,572	176,994	5.0%	10	45	15	33
Michigan	174,211	214,473	228,369	5.6%	6.5%	226,301	238,513	5.4%	9	21	19	23
Minnesota	84,996	104,783	110,494	5.4%	5.5%	109,399	117,240	7.2%	20	24	37	9
Mississippi	32,757	42,458	44,998	6.6%	6.0%	44,628	46,824	4.9%	32	9	26	34
Missouri	90,511	108,952	116,154	5.1%	6.6%	115,548	121,120	4.8%	17	28	17	35
Nebraska	27,858	33,366	35,161	4.8%	5.4%	34,763	37,608	8.2%	36	34	38	4
New Hampshire	22,984	27,390	29,381	5.0%	7.3%	29,317	30,641	4.5%	39	29	10	40
New Jersey	192,924	224,474	237,155	4.2%	5.6%	236,676	247,279	4.5%	8	43	32	41
New York	416,421	476,626	501,965	3.8%	5.3%	500,108	523,652	4.7%	2	46	39	36
North Carolina	110,926	141,017	151,841	6.5%	7.7%	150,784	162,543	7.8%	13	10	7	5
North Dakota	9,767	11,620	11,945	4.1%	2.8%	11,945	12,547	5.0%	50	44	49	30
Ohio	196,880	236,614	251,037	5.0%	6.1%	249,448	262,165	5.1%	7	31	24	28
Oklahoma	49,042	58,254	60,901	4.4%	4.5%	60,574	63,619	5.0%	29	39	44	31
Oregon	49,841	62,938	67,870	6.4%	7.8%	66,981	71,647	7.0%	28	11	6	11
Pennsylvania	230,361	269,632	284,386	4.3%	5.5%	283,197	296,404	4.7%	6	40	36	37
Rhode Island	19,782	22,145	23,601	3.6%	6.6%	23,521	24,342	3.5%	42	50	18	46
South Carolina	53,956	65,735	69,786	5.3%	6.2%	69,263	72,487	4.7%	27	26	22	38
South Dakota	10,824	13,702	14,272	5.7%	4.2%	14,117	15,168	7.4%	48	18	47	7
Tennessee	79,690	103,398	110,579	6.8%	6.9%	109,729	114,535	4.4%	19	7	14	43
Texas	293,503	370,561	397,067	6.2%	7.2%	394,038	419,315	6.4%	3	13	12	14
Vermont	9,987	11,733	12,415	4.4%	5.8%	12,312	12,989	5.5%	49	38	30	20
Virginia	124,252	150,305	158,669	5.0%	5.6%	157,686	165,639	5.0%	11	30	35	29
Washington	95,980	121,606	129,117	6.1%	6.2%	128,287	135,410	5.6%	15	14	21	19
West Virginia	25,411	30,806	32,333	4.9%	5.0%	32,179	33,668	4.6%	37	32	42	39
Wisconsin	86,869	107,469	114,042	5.6%	6.1%	113,254	119,173	5.2%	18	20	23	25

*Seasonally adjusted annual rate.

Source: U.S. Department of Labor, Bureau of Economic Analysis.

Table 66
Per Capita Personal Income-U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Per Capita Personal Income 1990	Per Capita Personal Income 1994	Per Capita Personal Income 1995	Rates of Per Capita Personal Income Change: Avg. Ann. Growth Rate 1990-95	Rates of Per Capita Personal Income Change: Percent Change 1994-95	Per Capita Personal Income as a Percent of U.S. Per Capita Personal Income 1990	Per Capita Personal Income as a Percent of U.S. Per Capita Personal Income 1994	Per Capita Personal Income as a Percent of U.S. Per Capita Personal Income 1995	Rankings: Rank by Per Capita Personal Income 1995	Rankings: Rank by Average Annual Growth Rate 1990-95	Rankings: Rank by Percent Change 1994-95
United States	19,142	22,047	23,208	3.9%	5.3%	100.0%	100.0%	100.0%			
Mountain States	16,818	19,891	20,949	4.5%	5.3%	87.9%	90.2%	90.3%			
Arizona	16,542	19,389	20,489	4.4%	5.7%	86.4%	87.9%	88.3%	36	20	14
Colorado	19,224	22,707	23,961	4.5%	5.5%	100.4%	103.0%	103.2%	16	17	18
Idaho	15,317	18,145	18,906	4.3%	4.2%	80.0%	82.3%	81.5%	42	24	41
Montana	15,042	17,707	18,445	4.2%	4.2%	78.6%	80.3%	79.5%	46	29	43
Nevada	20,124	23,412	24,390	3.9%	4.2%	105.1%	106.2%	105.1%	11	36	42
New Mexico	14,441	17,138	18,206	4.7%	6.2%	75.4%	77.7%	78.4%	48	9	3
Utah	14,204	17,264	18,232	5.1%	5.6%	74.2%	78.3%	78.6%	47	6	16
Wyoming	17,061	19,977	20,684	3.9%	3.5%	89.1%	90.6%	89.1%	35	35	47
Other States											
Alabama	15,225	18,256	19,181	4.7%	5.1%	79.5%	82.8%	82.6%	39	11	29
Alaska	21,047	23,344	24,002	2.7%	2.8%	110.0%	105.9%	103.4%	13	50	49
Arkansas	14,032	17,182	18,101	5.2%	5.3%	73.3%	77.9%	78.0%	49	4	20
California	21,287	22,778	24,073	2.5%	5.7%	111.2%	103.3%	103.7%	12	51	13
Connecticut	26,375	30,054	31,776	3.8%	5.7%	137.8%	136.3%	136.9%	2	41	11
Delaware	21,696	24,784	26,273	3.9%	6.0%	113.3%	112.4%	113.2%	7	37	5
D.C.	25,628	31,860	33,452	5.5%	5.0%	133.9%	144.5%	144.1%	1	2	30
Florida	19,106	21,799	23,061	3.8%	5.8%	99.8%	98.9%	99.4%	21	40	9
Georgia	17,378	20,612	21,741	4.6%	5.5%	90.8%	93.5%	93.7%	26	13	19
Hawaii	21,333	24,016	24,590	2.9%	2.4%	111.4%	108.9%	106.0%	10	49	50
Illinois	20,494	23,974	25,225	4.2%	5.2%	107.1%	108.7%	108.7%	9	28	24
Indiana	17,174	20,482	21,433	4.5%	4.6%	89.7%	92.9%	92.4%	29	15	36
Iowa	16,959	20,172	20,921	4.3%	3.7%	88.6%	91.5%	90.1%	34	25	46
Kansas	17,988	20,851	21,841	4.0%	4.7%	94.0%	94.6%	94.1%	24	33	34
Kentucky	15,088	17,931	18,849	4.6%	5.1%	78.8%	81.3%	81.2%	43	14	27
Louisiana	14,761	18,088	18,981	5.2%	4.9%	77.1%	82.0%	81.8%	41	5	32
Maine	17,167	19,111	20,105	3.2%	5.2%	89.7%	86.7%	86.6%	37	48	25
Maryland	22,483	25,318	26,333	3.2%	4.0%	117.5%	114.8%	113.5%	6	47	44
Massachusetts	23,203	26,343	28,021	3.8%	6.4%	121.2%	119.5%	120.7%	4	39	2
Michigan	18,710	22,584	23,915	5.0%	5.9%	97.7%	102.4%	103.0%	17	7	7
Minnesota	19,374	22,942	23,971	4.4%	4.5%	101.2%	104.1%	103.3%	15	22	39
Mississippi	12,710	15,906	16,683	5.6%	4.9%	66.4%	72.1%	71.9%	51	1	33
Missouri	17,656	20,644	21,819	4.3%	5.7%	92.2%	93.6%	94.0%	25	23	12
Nebraska	17,624	20,555	21,477	4.0%	4.5%	92.1%	93.2%	92.5%	28	30	38
New Hampshire	20,671	24,093	25,587	4.4%	6.2%	108.0%	109.3%	110.3%	8	21	4
New Jersey	24,925	28,400	29,848	3.7%	5.1%	130.2%	128.8%	128.6%	3	44	28
New York	23,132	26,228	27,678	3.7%	5.5%	120.8%	119.0%	119.3%	5	45	17
North Carolina	16,664	19,949	21,103	4.8%	5.8%	87.1%	90.5%	90.9%	32	8	10
North Dakota	15,324	18,204	18,625	4.0%	2.3%	80.1%	82.6%	80.3%	44	32	51
Ohio	18,125	21,312	22,514	4.4%	5.6%	94.7%	96.7%	97.0%	22	18	15
Oklahoma	15,584	17,880	18,580	3.6%	3.9%	81.4%	81.1%	80.1%	45	46	45
Oregon	17,437	20,393	21,611	4.4%	6.0%	91.1%	92.5%	93.1%	27	19	6
Pennsylvania	19,365	22,372	23,558	4.0%	5.3%	101.2%	101.5%	101.5%	20	31	21
Rhode Island	19,691	22,217	23,844	3.9%	7.3%	102.9%	100.8%	102.7%	18	38	1
South Carolina	15,421	17,941	18,998	4.3%	5.9%	80.6%	81.4%	81.9%	40	26	8
South Dakota	15,538	18,934	19,576	4.7%	3.4%	81.2%	85.9%	84.4%	38	10	48
Tennessee	16,295	19,979	21,038	5.2%	5.3%	85.1%	90.6%	90.6%	33	3	22
Texas	17,219	20,163	21,206	4.3%	5.2%	90.0%	91.5%	91.4%	31	27	26
Vermont	17,691	20,221	21,231	3.7%	5.0%	92.4%	91.7%	91.5%	30	42	31
Virginia	19,996	22,944	23,974	3.7%	4.5%	104.5%	104.1%	103.3%	14	43	37
Washington	19,583	22,759	23,774	4.0%	4.5%	102.3%	103.2%	102.4%	19	34	40
West Virginia	14,177	16,902	17,687	4.5%	4.6%	74.1%	76.7%	76.2%	50	16	35
Wisconsin	17,720	21,148	22,261	4.7%	5.3%	92.6%	95.9%	95.9%	23	12	23

Source: U.S. Department of Labor, Bureau of Economic Analysis.

Table 67
Total Personal Income per Household—U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Total Personal Income per Household 1990	1994	1995	Rates of Change for Total Personal Income per Household: Avg. Ann. Growth Rate 1990-95	Percent Change 1994-95	Total Personal Income per Household as a Percent of U.S. Personal Income per Household 1990	1994	1995	Rankings: Rank by Total Personal Income per Household 1995	Rank by Average Annual Growth Rate 1990-95	Rank by Percent Change 1994-95
United States	51,780	59,830	62,830	3.9%	5.0%	100.0%	100.0%	100.0%			
Mountain States	45,620	54,200	57,030	4.6%	5.2%	88.1%	90.6%	90.8%			
Arizona	44,320	52,660	55,710	4.7%	5.8%	85.6%	88.0%	88.7%	33	11	5
Colorado	49,340	58,320	61,430	4.5%	5.3%	95.3%	97.5%	97.8%	20	14	14
Idaho	42,690	50,830	52,990	4.4%	4.2%	82.4%	85.0%	84.3%	39	16	39
Montana	39,220	46,500	48,270	4.2%	3.8%	75.7%	77.7%	76.8%	48	27	43
Nevada	51,940	60,800	63,550	4.1%	4.5%	100.3%	101.6%	101.1%	16	31	34
New Mexico	40,290	48,050	50,990	4.8%	6.1%	77.8%	80.3%	81.2%	43	10	2
Utah	45,460	54,900	57,690	4.9%	5.1%	87.8%	91.8%	91.8%	27	7	22
Wyoming	45,740	53,340	55,010	3.8%	3.1%	88.3%	89.2%	87.6%	36	39	47
Other States											
Alabama	40,770	48,630	50,910	4.5%	4.7%	78.7%	81.3%	81.0%	44	13	27
Alaska	61,290	67,990	69,390	2.5%	2.1%	118.4%	113.6%	110.4%	10	51	51
Arkansas	37,010	45,570	47,940	5.3%	5.2%	71.5%	76.2%	76.3%	49	2	17
California	61,140	65,990	69,600	2.6%	5.5%	118.1%	110.3%	110.8%	9	50	10
Connecticut	70,460	80,650	85,080	3.8%	5.5%	136.1%	134.8%	135.4%	1	38	9
Delaware	58,380	66,550	70,130	3.7%	5.4%	112.7%	111.2%	111.6%	8	41	12
D.C.	62,100	76,420	79,870	5.2%	4.5%	119.9%	127.7%	127.1%	3	4	35
Florida	48,250	55,860	59,100	4.1%	5.8%	93.2%	93.4%	94.1%	25	30	4
Georgia	47,550	56,320	59,200	4.5%	5.1%	91.8%	94.1%	94.2%	24	15	21
Hawaii	66,240	74,190	75,740	2.7%	2.1%	127.9%	124.0%	120.5%	4	49	50
Illinois	55,730	65,450	68,840	4.3%	5.2%	107.6%	109.4%	109.6%	11	23	18
Indiana	46,030	54,590	56,970	4.4%	4.4%	88.9%	91.2%	90.7%	29	22	37
Iowa	44,250	52,710	54,530	4.3%	3.5%	85.5%	88.1%	86.8%	37	26	46
Kansas	47,210	55,210	57,720	4.1%	4.5%	91.2%	92.3%	91.9%	26	32	32
Kentucky	40,270	47,710	49,970	4.4%	4.7%	77.8%	79.7%	79.5%	45	19	26
Louisiana	41,440	50,590	52,960	5.0%	4.7%	80.0%	84.6%	84.3%	40	5	28
Maine	45,330	50,070	52,390	2.9%	4.6%	87.5%	83.7%	83.4%	41	48	29
Maryland	61,480	69,220	71,700	3.1%	3.6%	118.7%	115.7%	114.1%	7	47	45
Massachusetts	62,130	70,180	74,290	3.6%	5.9%	120.0%	117.3%	118.2%	6	44	3
Michigan	50,850	61,260	64,530	4.9%	5.3%	98.2%	102.4%	102.7%	13	8	13
Minnesota	51,460	61,190	63,810	4.4%	4.3%	99.4%	102.3%	101.6%	15	20	38
Mississippi	35,840	44,760	46,810	5.5%	4.6%	69.2%	74.8%	74.5%	50	1	30
Missouri	46,080	54,190	57,180	4.4%	5.5%	89.0%	90.6%	91.0%	28	17	8
Nebraska	46,200	54,230	56,650	4.2%	4.5%	89.2%	90.6%	90.2%	30	28	36
New Hampshire	55,860	64,770	68,470	4.2%	5.7%	107.9%	108.3%	109.0%	12	29	7
New Jersey	68,950	79,030	82,890	3.8%	4.9%	133.2%	132.1%	131.9%	2	40	25
New York	62,680	71,530	75,230	3.7%	5.2%	121.1%	119.6%	119.7%	5	43	19
North Carolina	43,900	52,740	55,620	4.8%	5.5%	84.8%	88.1%	88.5%	34	9	11
North Dakota	40,570	48,030	49,070	3.9%	2.2%	78.4%	80.3%	78.1%	46	36	49
Ohio	48,060	56,490	59,500	4.4%	5.3%	92.8%	94.4%	94.7%	22	21	15
Oklahoma	40,630	47,030	48,800	3.7%	3.8%	78.5%	78.6%	77.7%	47	42	44
Oregon	44,960	52,760	55,790	4.4%	5.7%	86.8%	88.2%	88.8%	31	18	6
Pennsylvania	51,160	59,230	62,260	4.0%	5.1%	98.8%	99.0%	99.1%	18	33	20
Rhode Island	52,300	59,230	63,170	3.8%	6.7%	101.0%	99.0%	100.5%	17	37	1
South Carolina	42,680	49,400	51,660	3.9%	4.6%	82.4%	82.6%	82.2%	42	35	31
South Dakota	41,750	51,470	53,040	4.9%	3.1%	80.6%	86.0%	84.4%	38	6	48
Tennessee	42,840	52,620	55,220	5.2%	4.9%	82.7%	87.9%	87.9%	35	3	24
Texas	48,150	56,510	59,460	4.3%	5.2%	93.0%	94.5%	94.6%	23	24	16
Vermont	47,240	53,320	55,740	3.4%	4.5%	91.2%	89.1%	88.7%	32	46	33
Virginia	54,020	61,590	64,080	3.5%	4.0%	104.3%	102.9%	102.0%	14	45	41
Washington	50,990	59,540	61,950	4.0%	4.0%	98.5%	99.5%	98.6%	19	34	40
West Virginia	36,840	43,670	45,430	4.3%	4.0%	71.1%	73.0%	72.3%	51	25	42
Wisconsin	47,570	56,850	59,720	4.7%	5.0%	91.9%	95.0%	95.1%	21	12	23

Source: Base data from the U.S. Department of Commerce, Bureau of the Census and the U.S. Department of Labor, Bureau of Economic Analysis; Personal income per household estimate calculated by Utah Foundation.

Table 68
Average Annual Pay For All Workers Covered by Unemployment Insurance—U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Average Annual Pay 1990	Average Annual Pay 1994	Average Annual Pay 1995	Rates of Change for Average Annual Pay: Avg. Ann. Growth Rate 1990-95	Rates of Change for Average Annual Pay: Percent Change 1994-95	Average Annual Pay as a Percent of U.S. Average Annual Pay 1990	Average Annual Pay as a Percent of U.S. Average Annual Pay 1994	Average Annual Pay as a Percent of U.S. Average Annual Pay 1995	Rankings: Rank by Average Annual Pay 1994	Rankings: Rank by Avg. Ann. Growth Rate 1990-95	Rankings: Rank by Percent Change 1994-95
United States	23,602	26,939	27,845	3.4%	3.4%	100.0%	100.0%	100.0%			
Mountain States	21,153	24,110	24,991	3.4%	3.7%	89.6%	89.5%	89.8%			
Arizona	21,443	24,276	25,324	3.4%	4.3%	90.9%	90.1%	90.9%	27	31	2
Colorado	22,908	26,155	27,122	3.4%	3.7%	97.1%	97.1%	97.4%	15	28	16
Idaho	18,991	21,938	22,839	3.8%	4.1%	80.5%	81.4%	82.0%	43	13	8
Montana	17,895	20,218	20,516	2.8%	1.5%	75.8%	75.1%	73.7%	49	47	48
Nevada	22,358	25,700	26,647	3.6%	3.7%	94.7%	95.4%	95.7%	20	17	17
New Mexico	19,347	22,351	22,960	3.5%	2.7%	82.0%	83.0%	82.5%	41	23	42
Utah	20,074	22,811	23,626	3.3%	3.6%	85.1%	84.7%	84.8%	35	36	23
Wyoming	20,049	22,054	22,351	2.2%	1.3%	84.9%	81.9%	80.3%	46	50	49
Other States											
Alabama	20,468	23,616	24,396	3.6%	3.3%	86.7%	87.7%	87.6%	32	16	31
Alaska	29,946	32,657	32,685	1.8%	0.1%	126.9%	121.2%	117.4%	5	51	51
Arkansas	18,204	20,898	21,590	3.5%	3.3%	77.1%	77.6%	77.5%	47	24	29
California	26,180	29,878	30,716	3.2%	2.8%	110.9%	110.9%	110.3%	7	40	41
Connecticut	28,995	33,811	35,127	3.9%	3.9%	122.8%	125.5%	126.2%	2	7	14
Delaware	24,423	27,952	29,120	3.6%	4.2%	103.5%	103.8%	104.6%	11	14	6
D.C.	33,717	40,919	42,453	4.7%	3.7%	142.9%	151.9%	152.5%	1	1	15
Florida	21,030	23,918	24,710	3.3%	3.3%	89.1%	88.8%	88.7%	30	39	30
Georgia	22,115	25,313	26,303	3.5%	3.9%	93.7%	94.0%	94.5%	23	21	12
Hawaii	23,167	26,746	26,977	3.1%	0.9%	98.2%	99.3%	96.9%	16	42	50
Illinois	25,312	29,107	30,099	3.5%	3.4%	107.2%	108.0%	108.1%	9	22	27
Indiana	21,699	24,908	25,571	3.3%	2.7%	91.9%	92.5%	91.8%	26	32	44
Iowa	19,224	22,189	22,875	3.5%	3.1%	81.5%	82.4%	82.2%	42	18	37
Kansas	20,238	22,907	23,709	3.2%	3.5%	85.7%	85.0%	85.1%	34	41	26
Kentucky	19,947	22,747	23,490	3.3%	3.3%	84.5%	84.4%	84.4%	37	35	34
Louisiana	20,646	23,178	23,894	3.0%	3.1%	87.5%	86.0%	85.8%	33	44	38
Maine	20,154	22,389	23,117	2.8%	3.3%	85.4%	83.1%	83.0%	40	46	35
Maryland	24,730	28,416	29,133	3.3%	2.5%	104.8%	105.5%	104.6%	10	34	45
Massachusetts	26,699	31,024	32,352	3.9%	4.3%	113.1%	115.2%	116.2%	6	6	3
Michigan	25,376	29,541	30,543	3.8%	3.4%	107.5%	109.7%	109.7%	8	12	28
Minnesota	23,121	26,422	27,383	3.4%	3.6%	98.0%	98.1%	98.3%	14	26	18
Mississippi	17,718	20,382	21,120	3.6%	3.6%	75.1%	75.7%	75.8%	48	15	21
Missouri	21,716	24,628	25,669	3.4%	4.2%	92.0%	91.4%	92.2%	25	30	5
Nebraska	18,577	21,500	22,368	3.8%	4.0%	78.7%	79.8%	80.3%	45	11	10
New Hampshire	22,609	25,555	26,602	3.3%	4.1%	95.8%	94.9%	95.5%	21	37	9
New Jersey	28,449	33,439	34,534	4.0%	3.3%	120.5%	124.1%	124.0%	4	3	33
New York	28,873	33,439	34,938	3.9%	4.5%	122.3%	124.1%	125.5%	3	9	1
North Carolina	20,220	23,460	24,402	3.8%	4.0%	85.7%	87.1%	87.6%	31	10	11
North Dakota	17,626	19,893	20,492	3.1%	3.0%	74.7%	73.8%	73.6%	50	43	39
Ohio	22,844	26,134	26,867	3.3%	2.8%	96.8%	97.0%	96.5%	19	38	40
Oklahoma	20,288	22,293	22,671	2.2%	1.7%	86.0%	82.8%	81.4%	44	49	47
Oregon	21,332	24,780	25,833	3.9%	4.2%	90.4%	92.0%	92.8%	24	8	4
Pennsylvania	23,457	26,950	27,904	3.5%	3.5%	99.4%	100.0%	100.2%	12	19	24
Rhode Island	22,387	25,454	26,375	3.3%	3.6%	94.9%	94.5%	94.7%	22	33	22
South Carolina	19,668	22,477	23,292	3.4%	3.6%	83.3%	83.4%	83.6%	39	27	19
South Dakota	16,430	19,255	19,931	3.9%	3.5%	69.6%	71.5%	71.6%	51	4	25
Tennessee	20,611	24,106	25,046	4.0%	3.9%	87.3%	89.5%	89.9%	29	2	13
Texas	22,700	25,959	26,900	3.5%	3.6%	96.2%	96.4%	96.6%	17	25	20
Vermont	20,532	22,964	23,583	2.8%	2.7%	87.0%	85.2%	84.7%	36	45	43
Virginia	22,750	26,035	26,894	3.4%	3.3%	96.4%	96.6%	96.6%	18	29	32
Washington	22,646	26,362	27,453	3.9%	4.1%	95.9%	97.9%	98.6%	13	5	7
West Virginia	20,715	22,959	23,489	2.5%	2.3%	87.8%	85.2%	84.4%	38	48	46
Wisconsin	21,101	24,324	25,099	3.5%	3.2%	89.4%	90.3%	90.1%	28	20	36

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

Table 69
Employees on Nonagricultural Payrolls—U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Employees on Nonagricultural Payrolls (in thousands) 1990	1994	1995	Rates of Change for Employees on Nonagricultural Payrolls: Avg. Ann. Growth Rate 1990-95	Percent Change 1994-95	Employees on Nonagricultural Payrolls (not seasonally adjusted): October 1995 (thousands)	October (p) 1996 (thousands)	Percent Change 1995-96	Rankings: Employees on Non-agricultural Payrolls 1995	Average Annual Growth Rate 1990-95	Percent Change 1994-95	Percent Change 1995-96*
United States	109,419.0	114,034.0	116,607.0	1.3%	2.3%	118,664.0	121,203.0	2.1%				
Mountain States	5,812.2	6,720.9	7,057.0	4.0%	5.0%	7,193.1	7,458.4	3.7%				
Arizona	1,485.7	1,692.2	1,783.1	3.7%	5.4%	1,809.1	1,891.0	4.5%	23	5	3	3
Colorado	1,520.9	1,755.9	1,839.2	3.9%	4.7%	1,867.6	1,901.1	1.8%	21	4	5	23
Idaho	384.9	460.9	476.9	4.4%	3.5%	489.0	510.5	4.4%	43	3	10	4
Montana	297.3	340.2	350.6	3.4%	3.1%	358.1	364.9	1.9%	46	8	15	20
Nevada	620.9	738.0	789.1	4.9%	6.9%	814.6	864.9	6.2%	36	1	1	1
New Mexico	580.4	657.2	689.7	3.5%	4.9%	700.5	722.3	3.1%	37	7	4	7
Utah	723.6	859.7	908.4	4.7%	5.7%	930.0	977.6	5.1%	34	2	2	2
Wyoming	198.5	216.8	220.0	2.1%	1.5%	224.2	226.1	0.8%	51	22	44	38
Other States												
Alabama	1,635.7	1,758.5	1,803.4	2.0%	2.6%	1,821.7	1,833.0	0.6%	22	27	26	42
Alaska	238.1	259.3	262.1	1.9%	1.1%	263.3	265.8	0.9%	50	29	47	37
Arkansas	923.5	1,034.1	1,068.6	3.0%	3.3%	1,085.4	1,104.0	1.7%	33	9	12	26
California	12,499.9	12,159.5	12,433.8	-0.1%	2.3%	12,584.8	12,903.7	2.5%	1	46	35	13
Connecticut	1,632.9	1,543.7	1,563.9	-0.9%	1.3%	1,582.5	1,598.1	1.0%	27	50	46	36
Delaware	347.6	356.0	366.1	1.0%	2.8%	369.7	376.9	1.9%	45	39	21	16
D.C.	686.1	658.8	643.3	-1.3%	-2.4%	641.9	628.3	-2.1%	39	51	51	51
Florida	5,387.4	5,799.4	6,000.4	2.2%	3.5%	6,043.3	6,212.3	2.8%	4	21	11	8
Georgia	2,991.8	3,265.9	3,416.6	2.7%	4.6%	3,478.9	3,574.3	2.7%	11	11	6	10
Hawaii	528.4	536.2	532.7	0.2%	-0.7%	529.2	523.2	-1.1%	42	43	50	50
Illinois	5,288.3	5,462.9	5,598.6	1.1%	2.5%	5,674.4	5,757.4	1.5%	5	38	30	33
Indiana	2,521.9	2,712.7	2,780.7	2.0%	2.5%	2,820.4	2,835.6	0.5%	14	26	29	46
Iowa	1,226.3	1,319.9	1,357.2	2.0%	2.8%	1,378.4	1,400.2	1.6%	29	24	22	27
Kansas	1,088.5	1,165.8	1,200.5	2.0%	3.0%	1,222.9	1,241.4	1.5%	31	25	18	31
Kentucky	1,470.5	1,597.2	1,643.2	2.2%	2.9%	1,666.2	1,691.4	1.5%	26	16	19	32
Louisiana	1,589.9	1,722.1	1,774.5	2.2%	3.0%	1,806.1	1,816.4	0.6%	24	18	16	44
Maine	534.9	531.6	541.6	0.2%	1.9%	556.5	556.6	0.0%	40	42	40	47
Maryland	2,171.2	2,145.8	2,181.0	0.1%	1.6%	2,199.8	2,212.0	0.6%	20	44	42	45
Massachusetts	2,984.8	2,903.8	2,974.4	-0.1%	2.4%	3,021.9	3,058.6	1.2%	13	45	32	34
Michigan	3,969.6	4,146.8	4,251.9	1.4%	2.5%	4,323.2	4,404.7	1.9%	8	34	28	21
Minnesota	2,129.5	2,310.4	2,374.1	2.2%	2.8%	2,412.9	2,466.5	2.2%	18	20	23	14
Mississippi	936.6	1,055.5	1075.1	2.8%	1.9%	1,086.2	1,079.9	-0.6%	32	10	41	49
Missouri	2,345.0	2,470.5	2,520.6	1.5%	2.0%	2,556.4	2,600.5	1.7%	16	32	37	25
Nebraska	730.1	796.1	815.1	2.2%	2.4%	826.8	839.8	1.6%	35	17	34	28
New Hampshire	508.0	523.1	538.8	1.2%	3.0%	548.9	559.5	1.9%	41	36	17	17
New Jersey	3,634.7	3,552.8	3,605.8	-0.2%	1.5%	3,643.5	3,672.8	0.8%	9	47	43	39
New York	8,212.4	7,818.7	7,871.3	-0.8%	0.7%	7,947.0	8,008.5	0.8%	3	49	49	40
North Carolina	3,117.7	3,358.9	3,454.6	2.1%	2.8%	3,510.7	3,574.8	1.8%	10	23	20	22
North Dakota	265.9	294.9	302.1	2.6%	2.4%	308.2	316.3	2.6%	48	13	31	12
Ohio	4,882.3	5,076.0	5,232.1	1.4%	3.1%	5,314.3	5,368.9	1.0%	7	33	14	35
Oklahoma	1,193.2	1,279.5	1,314.3	2.0%	2.7%	1,330.8	1,367.9	2.8%	30	28	24	9
Oregon	1,251.9	1,362.9	1,417.0	2.5%	4.0%	1,456.5	1,514.2	4.0%	28	14	7	6
Pennsylvania	5,170.1	5,192.4	5,248.2	0.3%	1.1%	5,305.4	5,340.5	0.7%	6	41	48	41
Rhode Island	451.2	434.2	440.5	-0.5%	1.5%	449.2	448.8	-0.1%	44	48	45	48
South Carolina	1,545.0	1,607.2	1,648.2	1.3%	2.6%	1,665.0	1,696.7	1.9%	25	35	27	19
South Dakota	288.7	332.0	344.2	3.6%	3.7%	350.2	356.9	1.9%	47	6	8	18
Tennessee	2,193.2	2,423.0	2,502.7	2.7%	3.3%	2,548.2	2,602.9	2.1%	17	12	13	15
Texas	7,100.9	7,750.9	8,026.7	2.5%	3.6%	8,139.6	8,361.8	2.7%	2	15	9	11
Vermont	257.5	263.8	270.2	1.0%	2.4%	277.4	281.7	1.6%	49	40	33	29
Virginia	2,896.3	3,003.6	3,068.2	1.2%	2.2%	3,102.2	3,155.9	1.7%	12	37	36	24
Washington	2,152.1	2,304.3	2,348.5	1.8%	1.9%	2,363.4	2,458.1	4.0%	19	30	39	5
West Virginia	630.1	674.6	687.6	1.8%	1.9%	701.1	705.4	0.6%	38	31	38	43
Wisconsin	2,291.5	2,490.8	2,554.9	2.2%	2.6%	2,590.0	2,629.4	1.5%	15	19	25	30

(p)=preliminary
*Unadjusted

Note: These data vary slightly from data reported by the Utah Department of Employment Security.

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

Table 70
Unemployment Rates—U.S., Mountain Division, and States: 1990, 1994, and 1995

Division/State	Unemployment Rate 1990	Unemployment Rate 1994	Unemployment Rate 1995	Unemployment Rate Percent Change 1990-95	Unemployment Rate Percent Change 1994-95	Unemployment Rate (not seasonally adjusted) October 1995	Unemployment Rate (not seasonally adjusted) October (p) 1996	Rank by Unemployment Rate 1990	Rank by Unemployment Rate 1994	Rank by Unemployment Rate 1995	Rank by Unemployment Rate 1995*	Rank by Unemployment Rate 1996*
United States	5.6	6.1	5.6	0.0	-0.5	5.2	4.9					
Mountain States	4.8	5.3	4.9	0.1	-0.4	4.6	4.6					
Arizona	5.3	6.4	5.1	-0.2	-1.3	5.2	6.0	26	14	28	21	8
Colorado	4.9	4.2	4.2	-0.7	0.0	3.9	3.5	49	45	43	41	43
Idaho	5.8	5.6	5.4	-0.4	-0.2	4.4	4.0	15	25	24	33	35
Montana	5.8	5.1	5.9	0.1	0.8	5.6	4.4	18	35	14	16	29
Nevada	4.9	6.2	5.4	0.5	-0.8	4.8	4.8	35	18	21	26	18
New Mexico	6.3	6.3	6.3	0.0	0.0	6.1	6.7	9	15	11	7	4
Utah	4.3	3.7	3.6	-0.7	-0.1	3.3	3.0	43	48	47	45	46
Wyoming	5.4	5.3	4.8	-0.6	-0.5	4.0	4.0	28	33	36	40	34
Other States												
Alabama	6.8	6.0	6.3	-0.5	0.3	6.4	5.1	7	19	10	6	15
Alaska	6.9	7.8	7.3	0.4	-0.5	6.9	6.8	4	5	4	5	3
Arkansas	6.9	5.3	4.9	-2.0	-0.4	4.2	4.8	5	30	32	37	19
California	5.6	8.6	7.8	2.2	-0.8	7.5	6.5	21	2	2	2	6
Connecticut	5.1	5.6	5.5	0.4	-0.1	5.1	4.6	33	26	18	24	26
Delaware	5.1	4.9	4.3	-0.8	-0.6	4.4	4.9	29	36	39	35	16
D.C.	6.6	8.2	8.9	2.3	0.7	8.5	7.8	8	3	1	1	1
Florida	5.9	6.6	5.5	-0.4	-1.1	5.6	5.1	14	11	19	15	14
Georgia	5.4	5.2	4.9	-0.5	-0.3	5.2	4.6	24	32	30	20	24
Hawaii	2.8	6.1	5.9	3.1	-0.2	5.9	5.5	50	20	16	11	11
Illinois	6.2	5.7	5.2	-1.0	-0.5	4.8	4.7	12	24	26	27	21
Indiana	5.3	4.9	4.7	-0.6	-0.2	4.3	3.5	27	37	37	36	42
Iowa	4.2	3.7	3.5	-0.7	-0.2	2.8	2.7	45	49	48	48	47
Kansas	4.4	5.3	4.4	0.0	-0.9	4.1	3.9	41	31	40	38	39
Kentucky	5.8	5.4	5.4	-0.4	0.0	5.3	4.6	16	29	20	18	23
Louisiana	6.2	8.0	6.9	0.7	-1.1	6.1	6.8	10	4	6	8	2
Maine	5.1	7.4	5.7	0.6	-1.7	4.7	4.2	32	6	17	28	31
Maryland	4.6	5.1	5.1	0.5	0.0	5.2	4.6	40	34	27	22	25
Massachusetts	6.0	6.0	5.4	-0.6	-0.6	4.8	3.6	13	21	22	25	41
Michigan	7.5	5.9	5.3	-2.2	-0.6	4.5	4.2	2	22	23	32	32
Minnesota	4.8	4.0	3.7	-1.1	-0.3	3.3	3.2	38	46	45	44	45
Mississippi	7.5	6.6	6.1	-1.4	-0.5	5.6	5.2	3	10	12	14	13
Missouri	5.7	4.9	4.8	-0.9	-0.1	3.7	3.5	17	38	33	42	44
Nebraska	2.2	2.9	2.6	0.4	-0.3	2.5	2.5	51	51	51	49	49
New Hampshire	5.6	4.6	4.0	-1.6	-0.6	3.2	3.9	19	43	44	46	40
New Jersey	5.0	6.8	6.4	1.4	-0.4	6.0	5.8	34	9	7	10	9
New York	5.2	6.9	6.3	1.1	-0.6	6.1	5.7	31	8	9	9	10
North Carolina	4.1	4.4	4.3	0.2	-0.1	4.1	4.0	46	44	42	39	37
North Dakota	3.9	3.9	3.3	-0.6	-0.6	2.4	1.9	47	47	49	50	51
Ohio	5.7	5.5	4.8	-0.9	-0.7	4.5	4.3	20	27	34	29	30
Oklahoma	5.6	5.8	4.7	-0.9	-1.1	4.5	4.0	22	23	35	30	36
Oregon	5.5	5.4	4.8	-0.7	-0.6	4.5	4.8	23	28	31	31	20
Pennsylvania	5.4	6.2	5.9	0.5	-0.3	5.5	4.5	25	17	15	17	27
Rhode Island	6.7	7.1	7.0	0.3	-0.1	7.0	4.5	6	7	5	4	28
South Carolina	4.7	6.3	5.1	0.4	-1.2	5.2	6.1	39	16	29	23	7
South Dakota	3.7	3.3	2.9	-0.8	-0.4	2.3	2.3	48	50	50	51	50
Tennessee	5.2	4.8	5.2	0.0	0.4	5.3	4.7	30	40	25	19	22
Texas	6.2	6.4	6.0	-0.2	-0.4	5.7	4.9	11	12	13	13	17
Vermont	5.0	4.7	4.2	-0.8	-0.5	3.7	4.0	37	41	41	43	38
Virginia	4.3	4.9	4.5	0.2	-0.4	4.4	4.1	44	39	38	34	33
Washington	4.9	6.4	6.4	1.5	0.0	5.9	5.4	36	13	8	12	12
West Virginia	8.3	8.9	7.9	-0.4	-1.0	7.1	6.5	1	1	3	3	5
Wisconsin	4.4	4.7	3.7	-0.7	-1.0	3.2	2.6	42	42	46	47	48

(p)=preliminary
*Unadjusted

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

Industry Focus

Little doubt exists that passage of the 1996 farm bill (the Federal Agricultural Improvement and Reform Act of 1996, which is commonly referred to as FAIR) has the potential to have the largest impact on agriculture in the United States of any event that happened this year. This legislation was not passed until after many decisions had been made by many mid-western farmers. As a result, its full impact will not be felt for at least a year. While this act contains many provisions that are beyond the scope of this chapter, the major provisions are important to understand. First, there is a clear signal that government subsidies are to be phased out—almost all will be eliminated by the time Utah hosts the Winter Olympics in 2002. The forces of supply and demand will dictate which crops are grown instead of various government programs. Farmers now have almost total "freedom to farm". This will release nearly 30 million acres for production that has been in some type of set-aside program (it is anticipated that the total acres in the Conservation Reserve Program or CRP will not change greatly). Most of these lands either were or will be planted to crops in 1996 or 1997. Much greater emphasis will be placed on exporting agricultural production to countries throughout the world. The provisions of FAIR will have their greatest impact on grain producers in the central part of the United States, but these impacts will also be felt by producers and consumers in Utah.

Passage of this act followed a year when grain prices soared to the highest levels in more than a decade. These high prices were viewed very favorably by grain producers, but had a dramatic and negative impact on livestock producers. For example, the net returns obtained by dairy producers declined dramatically in late 1995 and early 1996 for two interrelated reasons. First, more than 50 percent of the costs of milk production is feed, and the increase in grain prices had a dramatic effect on the price of all feeds. Second, the high price of feed coupled with a large supply of meat animals drove beef prices (including the price of cull dairy cows and calves) to new lows in 1996. Dairy producers responded to this situation by reducing the use of high-priced feeds which caused the average production per cow to decline for the first time in many years. This reduction in production coupled with a reduction in cow numbers reduced the supply of milk. As a result, milk prices rose to new all time highs in the late summer of 1996. However, by late fall grain prices had dropped and milk production grew rapidly. This increase in production was followed by falling milk prices in October and November, which fell faster than in any period in recorded history. This situation (more volatile prices and income) is an indication of what is likely to happen in the future as agriculture production responds to market forces.

Utah Production

The provisions of FAIR and national market forces affect Utah agriculture, but some impacts are rather unique to the state. For example, weather in Utah had a dramatic effect on production. Southern Utah, especially San Juan County experienced one of the worst droughts in recorded history. Had the area not received some much needed moisture in the fall, it is likely that grain production in 1997 would have been nonexistent. The area is still suffering from the effects of drought at this time, however, there is some hope for 1997. Production in Northern Utah was satisfactory because there was adequate water for irrigation and a wet spring assisted the production of hay and grain. Hay production in most areas of Northern Utah was especially good as the lack of summer rains resulted in high quality hay. Many farmers were able to put up every crop of hay without any being "rained on" for the first time in many years.

Beef production has been the leading sector in Utah agriculture for a number of years (Figure 45). However, this sector has been plagued by low beef prices for the last couple of years. As a result, many beef producers in the state are under severe financial stress. This situation will probably not change very soon. As a result, it is likely that some producers will be forced out of the industry; and this may be particularly true in Southern Utah, where the drought of 1996 had a very detrimental effect on range forage production and the cost of obtaining alternative feed. The price of beef is expected to increase in 1997, but it is likely that many beef producers will continue to struggle financially because the price increases may not be large.

The returns received by dairy operators would have been as poor as those received by beef operators in 1996, had the price of milk not increased dramatically during the summer. The prices received by some producers were the highest ever received. This period of record prices has been followed by rapid decreases which will likely continue. However, the decline in grain prices has also reduced the cost of feed, which will help milk producers keep a relatively healthy bottom line. However, dairymen will need to watch the market closely. One of the major provisions of FAIR was the reduction in the number of milk marketing

orders. It is not known at this time how these orders will be restructured, but it is likely that the prices received will be affected by these changes.

Completion of the new Dannon yogurt plant, which is located in the southwestern part of the Salt Lake valley, has been delayed beyond is original opening date. The plant is now expected to be in production by next fall. This plant is a state-of-the-art facility, and has the capacity to handle a large portion of the state's dairy production and is designed to provide products for the western United States.

The dairy industry is not the only sector of Utah agriculture that will likely be affected by marketing orders. For a number of years, Utah has been one the nation's leading states in the production of tart cherries. The prices received by growers has been especially volatile. For example, the prices in 1995 were so low that many producers could not afford to pick. As a result, most cherries were left on the tree. A new marketing order is being developed that will likely result in more stable prices in the future.

The Circle Four hog operation, located in Beaver County is one of the most publicized activities in Utah agriculture. This operation has not expanded as rapidly as some projected, but the pace of expansion will likely increase in 1997 as the price of pork increases.

The one sector in Utah that has faced more price variability than any other during the last decade is the sheep and lamb industry. The historic low prices of the late 1980s and early 1990s and elimination of wool subsidy payments forced many producers out of business. As a result, sheep and lamb numbers declined by nearly 3 million head nationally between 1991 and 1996; while sheep numbers in Utah declined nearly 20 percent during this same period. This large decrease in numbers resulted in increased prices in 1996. Predator losses (primarily due to coyotes and mountain lions) are taking a heavy toll on those producers that remain in the industry.

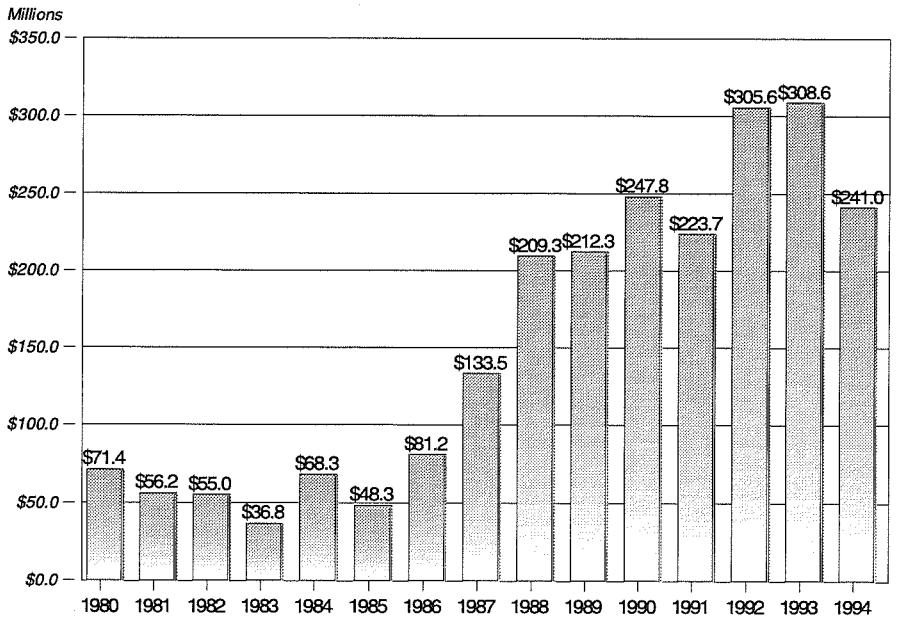
The value of all wheat production increased from $25.6 million in 1994 to more than $41 million in 1995, due to price and production increases over levels that existed previously. Final estimates for 1996 are not yet available, but it is likely that the value of production will decrease from the highs in 1995 due to the decline of pries and production (grain production in southern Utah, especially San Juan county, was down significantly). Grain producers will likely see further reductions in price during 1997, because grain production in the midwest may increase dramatically as lands that have been in various set-aside programs are brought into production.

County Perspective

No county in Utah will be affected to a greater degree by the continued financial stress faced by beef operators than Rich County, as it is by far the most agriculturally-dependent county and one of the most heavily dependent on beef production. Other counties that will be adversely affected by the decline in the beef sector are located in Southern Utah, where the drought had a devastating effect on forage production. The higher grain prices mentioned above have shifted the relative portion of livestock versus crop production in some counties from past patterns (e.g., Box Elder County), but this will likely change again in 1997 if grain prices fall and livestock prices increase. Precipitation received during the fall and early winter of 1996-1997 should provide adequate water for irrigation in 1997. Coupled with increases in beef prices, the result should be increased net farm income in 1997.

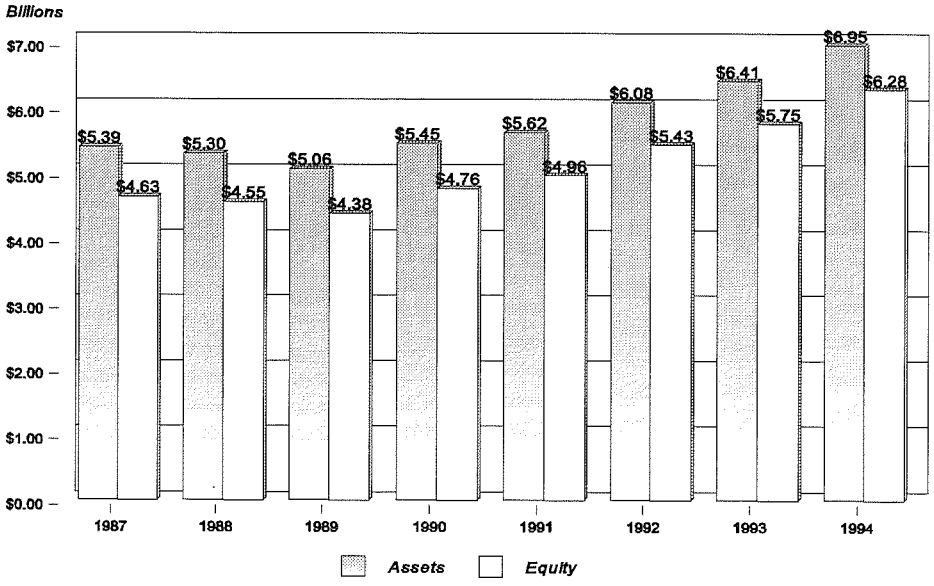
One area of increasing concern in some counties is the preservation of land for farming and open space. All of the high growth counties (primarily counties along the Wasatch Front and Washington County) are considering measures that would preserve lands for agriculture and open space. This concern will become an increasingly hot topic in counties where urban development is occurring. This pressure has allowed the value of agricultural land to increase, which has maintained the net worth of most farmers. But, some farmers are finding it difficult to operate in these urban areas; as a result, some are selling farm land for development. This suggests that the open space issue and use of farm land in urban counties will become more important as is happening in rural counties.

Figure 45
Net Farm Income in Utah: 1980 to 1994



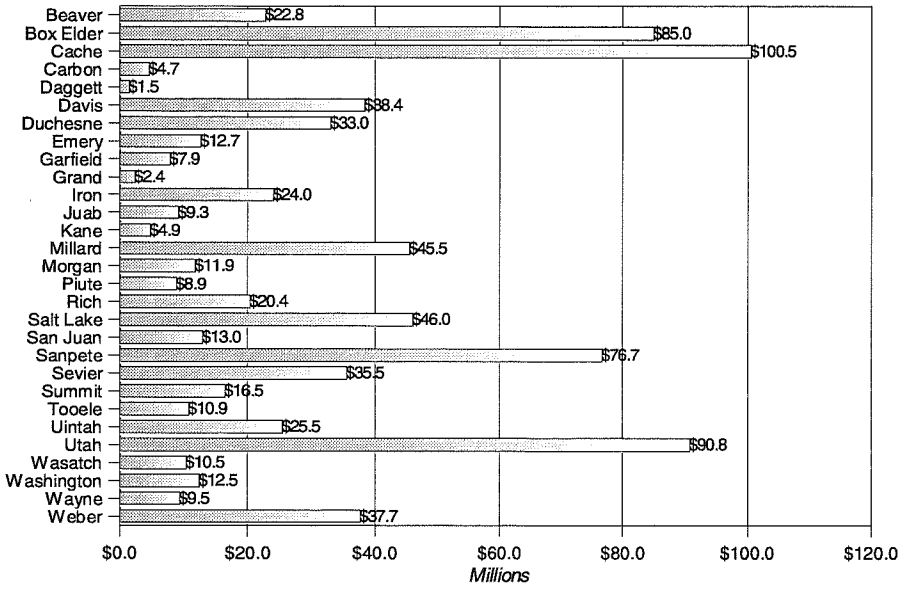
Source: U.S. Department of Agriculture.

Figure 46
Farm Assets and Net Worth in Utah: 1987 to 1994



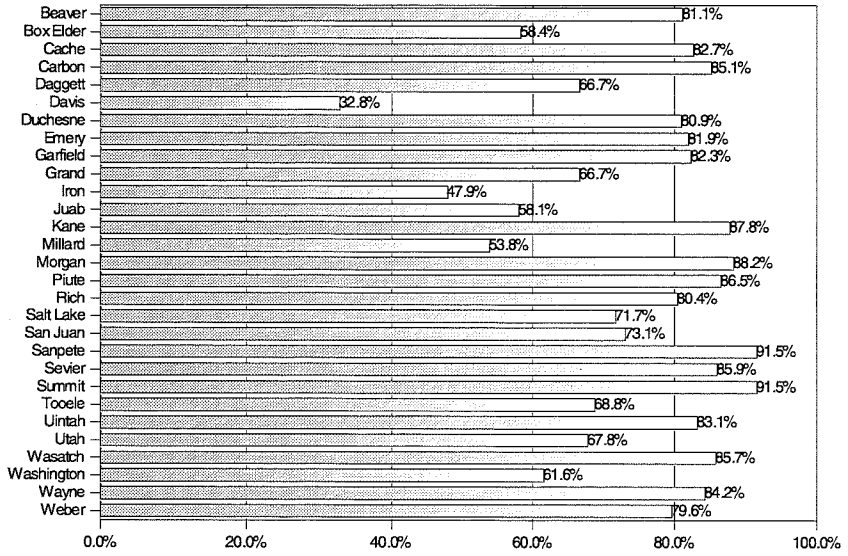
Source: Utah Agricultural Statistics.

Figure 47
Farm Cash Receipts by County in Utah: 1994



Source: Utah Agricultural Statistics.

Figure 48
Livestock and Products as a Percent of Total Farm Receipts by County: 1994



Source: Utah Agricultural Statistics.

Table 71
Farm and Nonfarm Earnings (Thousands of Dollars)—Counties: 1980, 1990, and 1994

County	1980 Farm	1980 Non-farm	1980 Total	1990 Farm	1990 Non-farm	1990 Total	1994 Farm	1994 Non-farm	1994 Total
Beaver	$1,365	$16,541	$17,906	$11,295	$26,266	$37,561	$11,002	$42,138	$53,140
Box Elder	12,101	205,175	217,276	30,739	499,961	530,700	24,913	599,905	624,818
Cache	15,569	239,901	255,470	29,493	564,103	593,596	28,680	799,906	828,586
Carbon	771	154,072	154,843	2,670	202,042	204,712	913	229,638	230,551
Daggett	636	5,264	5,900	684	6,675	7,359	682	11,383	12,065
Davis	7,499	815,373	822,872	16,060	1,674,144	1,690,204	21,247	2,105,910	2,127,157
Duchesne	3,340	69,866	73,206	14,445	93,135	107,580	10,805	112,799	123,604
Emery	432	101,858	102,290	6,840	120,971	127,811	1,702	142,749	144,451
Garfield	949	23,843	24,792	5,231	28,767	33,998	2,630	38,594	41,224
Grand	744	53,282	54,026	782	49,390	50,172	502	82,408	82,910
Iron	1,283	73,880	75,163	12,864	154,329	167,193	13,059	233,851	246,910
Juab	328	23,070	23,398	4,587	32,137	36,724	3,716	43,102	46,818
Kane	382	12,213	12,595	1,913	27,976	29,889	605	43,604	44,209
Millard	8,153	25,914	34,067	16,592	94,176	110,768	15,055	108,141	123,196
Morgan	2,053	17,330	19,383	4,741	25,080	29,821	3,635	36,082	39,717
Piute	1,239	3,308	4,547	3,050	3,416	6,466	2,454	4,880	7,334
Rich	1,217	4,207	5,424	6,886	5,694	12,580	6,019	8,602	14,621
Salt Lake	11,474	4,712,579	4,724,053	12,477	9,526,423	9,538,900	17,053	13,497,917	13,514,970
San Juan	2,048	55,548	57,596	5,902	68,955	74,857	2,680	97,860	100,540
Sanpete	2,139	34,911	37,050	19,998	75,703	95,701	19,769	106,663	126,432
Sevier	3,829	73,229	77,058	10,583	114,577	125,160	16,285	146,512	162,797
Summit	3,498	54,395	57,893	9,074	165,540	174,614	3,070	323,502	326,572
Tooele	2,152	171,706	173,858	6,262	304,141	310,403	2,497	354,525	357,022
Uintah	3,190	130,614	133,804	12,900	175,574	188,474	6,431	210,080	216,511
Utah	8,620	911,262	919,882	23,743	2,120,998	2,144,741	12,872	3,063,944	3,076,816
Wasatch	1,486	29,939	31,425	4,226	52,283	56,509	1,273	68,685	69,958
Washington	3,031	80,418	83,449	4,819	314,586	319,405	1,713	616,770	618,483
Wayne	917	7,328	8,245	3,241	10,084	13,325	3,129	16,617	19,746
Weber	4,261	717,303	721,564	10,762	1,519,717	1,530,479	15,260	2,009,217	2,024,477
State	$104,706	$8,824,329	$8,929,035	$292,859	$18,056,843	$18,349,702	$249,651	$25,145,984	$25,395,635

Source: Utah Agricultural Statistics.

Table 72
Cash Receipts by Source—Counties (Millions of Dollars): 1990 to 1994

County	1990 Livestock	1990 Crops	1990 Total	1991 Livestock	1991 Crops	1991 Total	1992 Livestock	1992 Crops	1992 Total	1993 Livestock	1993 Crops	1993 Total	1994 Livestock	1994 Crops	1994 Total
Beaver	$3.9	$17.1	$21.0	$3.2	$16.9	$20.1	$17.8	$2.8	$20.6	$20.0	$3.2	$23.2	$18.5	$4.3	$22.8
Box Elder	26.4	47.3	73.7	26.2	44.5	70.7	46.0	30.5	76.5	51.2	29.8	81.0	49.6	35.4	85.0
Cache	13.4	78.6	92.0	12.6	74.9	87.5	80.0	13.7	93.7	80.8	13.4	94.2	83.1	17.4	100.5
Carbon	0.6	4.3	4.9	0.6	3.6	4.2	3.5	0.5	4.0	4.1	0.6	4.7	4.0	0.7	4.7
Daggett	0.2	1.7	1.9	0.2	1.4	1.6	1.0	0.3	1.3	1.5	0.3	1.8	1.0	0.5	1.5
Davis	22.4	12.4	34.8	11.6	23.7	35.3	11.8	29.7	41.5	14.4	22.1	36.5	12.6	25.8	38.4
Duchesne	4.4	26.0	30.4	3.8	25.2	29.0	25.3	3.5	28.8	28.5	4.4	32.9	26.7	6.3	33.0
Emery	2.0	10.6	12.6	1.7	10.6	12.3	10.8	1.5	12.3	11.4	1.8	13.2	10.4	2.3	12.7
Garfield	1.2	7.7	8.9	1.0	7.4	8.4	7.0	0.9	7.9	8.3	1.0	9.3	6.5	1.4	7.9
Grand	0.6	2.1	2.7	0.6	1.5	2.1	1.6	0.7	2.3	1.5	0.7	2.2	1.6	0.8	2.4
Iron	9.7	12.1	21.8	8.6	11.8	20.4	10.5	10.5	21.0	12.4	10.2	22.6	11.5	12.5	24.0
Juab	2.9	5.3	8.2	2.4	5.2	7.6	5.1	2.7	7.8	6.2	2.6	8.8	5.4	3.9	9.3
Kane	0.4	4.0	4.4	0.3	3.4	3.7	3.7	0.4	4.1	4.5	0.4	4.9	4.3	0.6	4.9
Millard	21.5	27.8	49.3	18.9	26.0	44.9	24.4	16.5	40.9	28.1	18.2	46.3	24.5	21.0	45.5
Morgan	1.3	11.5	12.8	1.1	10.5	11.6	10.9	1.0	11.9	10.3	1.2	11.5	10.5	1.4	11.9
Piute	1.0	7.0	8.0	0.9	5.6	6.5	6.4	0.9	7.3	7.3	1.1	8.4	7.7	1.2	8.9
Rich	1.7	17.1	18.8	1.3	18.4	19.7	16.7	2.2	18.9	18.7	2.7	21.4	16.4	4.0	20.4
Salt Lake	9.0	23.1	32.1	9.3	24.4	33.7	24.6	13.7	38.3	34.6	9.6	44.2	33.0	13.0	46.0
San Juan	1.6	8.1	9.7	1.6	7.1	8.7	7.0	2.7	9.7	8.0	2.6	10.6	9.5	3.5	13.0
Sanpete	4.7	75.7	80.4	4.1	71.5	75.6	70.7	3.8	74.5	79.3	4.7	84.0	70.2	6.5	76.7
Sevier	4.2	24.1	28.3	3.5	25.7	29.2	25.4	3.2	28.6	29.4	4.1	33.5	30.5	5.0	35.5
Summit	0.9	15.6	16.5	0.8	14.7	15.5	13.5	0.9	14.4	14.9	1.1	16.0	15.1	1.4	16.5
Tooele	2.9	8.7	11.6	2.5	7.7	10.2	7.4	3.0	10.4	8.3	2.8	11.1	7.5	3.4	10.9
Uintah	3.9	20.2	24.1	3.4	18.1	21.5	19.2	3.2	22.4	21.3	3.4	24.7	21.2	4.3	25.5
Utah	22.5	56.5	79.0	32.4	55.2	87.6	58.7	32.0	90.7	64.3	23.0	87.3	61.6	29.2	90.8
Wasatch	1.3	9.9	11.2	1.1	9.5	10.6	9.5	1.3	10.8	9.9	1.2	11.1	9.0	1.5	10.5
Washington	6.0	7.6	13.6	5.0	6.5	11.5	6.9	4.3	11.2	8.7	3.4	12.1	7.7	4.8	12.5
Wayne	1.5	8.6	10.1	1.2	8.9	10.1	8.7	1.2	9.9	9.4	1.3	10.7	8.0	1.5	9.5
Weber	6.6	25.4	32.0	6.3	24.8	31.1	23.8	7.3	31.1	29.0	6.3	35.3	30.0	7.7	37.7
State	$178.7	$576.1	$754.8	$166.2	$564.7	$730.9	$557.9	$194.9	$752.8	$626.3	$177.2	$803.5	$597.6	$221.3	$818.9

Source: Utah Agricultural Statistics.

Table 73
Personal Income from Farming as Percent of Total Personal Income—Counties: 1980, 1990 and 1994

County	1980	1990	1994	Percent Change 1980-1994
Beaver	7.62	30.07	20.70	13.1
Box Elder	5.57	5.79	3.99	(1.6)
Cache	6.09	4.97	3.46	(2.6)
Carbon	0.50	1.30	0.40	(0.1)
Daggett	10.78	9.29	5.65	(5.1)
Davis	0.91	0.95	1.00	0.1
Duchesne	4.56	13.43	8.74	4.2
Emery	0.42	5.35	1.18	0.8
Garfield	3.83	15.39	6.38	2.6
Grand	1.38	1.56	0.61	(0.8)
Iron	1.71	7.69	5.29	3.6
Juab	1.40	12.49	7.94	6.5
Kane	3.03	6.40	1.37	(1.7)
Millard	23.93	14.98	12.22	(11.7)
Morgan	10.59	15.90	9.15	(1.4)
Piute	27.25	47.17	33.46	6.2
Rich	22.44	54.74	41.17	18.7
Salt Lake	0.24	0.13	0.13	(0.1)
San Juan	3.56	7.88	2.67	(0.9)
Sanpete	5.77	20.90	15.64	9.9
Sevier	4.97	8.46	10.00	5.0
Summit	6.04	5.20	0.94	(5.1)
Tooele	1.24	2.02	0.70	(0.5)
Uintah	2.38	6.84	2.97	0.6
Utah	0.94	1.11	0.42	(0.5)
Wasatch	4.73	7.48	1.82	(2.9)
Washington	3.63	1.51	0.28	(3.4)
Wayne	11.12	24.32	15.85	4.7
Weber	0.59	0.70	0.75	0.2
State	1.17	1.60	0.98	(0.2)

Source: U.S. Department of Labor, Bureau of Economic Analysis

Table 74
Utah Farm Balance Sheet (Millions of Dollars) December 31,1987 to December 31, 1994

Category	1987	1988	1989	1990	1991	1992	1993	1994
Assets	5,390.3	5,296.3	5,063.0	5,452.2	5,621.8	6,081.3	6,406.4	6954.5
Real Estate	4,197.0	4,112.7	3,881.0	4,160.1	4,433.6	4,841.2	5,172.8	5725.4
Livestock and Poultry	484.4	536.5	572.0	582.7	566.3	637.9	626.9	626.4
Machinery and Motor Vehicles	429.1	428.7	444.6	459.1	472.5	471.0	465.2	472.4
Crops	112.4	123.5	94.9	114.6	95.0	90.6	116.2	1115.9
Purchased inputs	7.6	12.2	12.4	15.5	20.8	28.9	27.9	23.4
Financial	159.8	82.7	58.1	93.1	32.4	12.0	(2.7)	-9
Claims	756.3	743.0	683.1	661.9	660.8	652.2	652.3	674.6
Real Estate Debt	447.0	428.2	390.3	372.7	355.8	352.9	338.3	337.4
Non- Real Estate Debt	309.3	314.8	292.8	289.2	305.0	299.4	314.0	337.2
Equity	4,634.0	4,553.3	4,379.9	4,763.3	4,961.0	5,429.1	5,754.1	6280
Debt/ Equity	16.3	16.3	15.6	13.9	13.3	12.0	11.3	10.7

Source: Utah Agricultural Statistics

Residential Construction

Residential construction continued its strong expansion during 1996, the seventh consecutive year for growth in residential building. Multifamily construction and single-family construction both reported significant growth, particularly along the Wasatch Front. Utah's continued strong economic growth, net in-migration, lower mortgage interest rates, and low vacancy rates continued to bolster demand for residential construction. Residential units are estimated to be a record 23,500, exceeding the previous recorded high of 23,280 reported in 1977, an increase of 8.8 percent over 1995 data.[1] The value of residential construction is estimated to reach $2.1 billion, an increase of 13.2 percent.

At the end of 1995 it appeared that residential construction had just about peaked and only a slight increase in activity was anticipated in the coming year. However, residential construction in 1996 benefitted from mild winter weather (which allowed construction to begin earlier than usual), in-migration remained strong, mortgage interest rates decreased and employment and economic growth remained strong. These factors caused an early surge in residential construction and helped push 1996 activity to record levels. Multifamily construction in Salt Lake and Davis Counties increased more than anticipated because of low vacancy rates and population growth. Strong demand for high-density housing also occurred in Summit, Washington, Iron and Cache Counties. Utah County, which had experienced two years of strong growth, slowed slightly in 1996 in response to market conditions, but still accounted for a large share of multifamily development. Single-family construction responded to economic and population growth, as well as lower mortgage interest rates, and home building accelerated during the first six months of 1996.

Residential construction will have peaked in 1996 and will decline in 1997. Demand for multifamily housing will soften in 1997. Since 1993, nearly 22,000 multifamily units have received authorization for construction and most of the major projects planned are built, or under construction. Fewer large projects and softer demand will reduce the need for multifamily housing in 1997. Single-family construction will also decrease as economic and employment growth moderate. Other factors that will slow the demand for housing include the rising inventory of unsold listed homes, the rapid escalation in prices, and slowing rates of in-migration as the West Coast economy improves. Mortgage interest rates should remain stable as long as inflation rates remain in check. An estimated 20,000 new units will be authorized in 1997 and residential vacuolation will be $1.9 billion. Residential construction will be concentrated along the Wasatch Front and in the Southwest area. Residential construction activity since 1970 is presented in Table 75 and Figure 49.

Nonresidential Construction

Another year and another record is established for nonresidential construction in 1996. The value of nonresidential construction rose 20.1 percent to $1.0 billion[2]. Major increases were experienced in nonresidential categories, especially office buildings and hotel and motel construction. The value of office buildings rose to $260.0 million in 1996 compared to $153.5 million in 1995, while the valuation of hotels and motels rose from $41.5 million in 1995, to $80.0 million in 1996. Even though industrial buildings and retail building showed slight declines, they still remained very active.

With all the new construction during the last three years, vacancy rates have slowly begun to rise. Currently, vacancy rates for office space is around 6 percent, while industrial rates are reported to be close to 4 percent and retail space shows a vacancy rate of 6 percent. Demand for hotel and motel buildings is strong. The benefits from the Salt Palace expansion were apparent with more and larger conventions and trade shows. Hotel and motel construction also benefited from increased tourism throughout Utah as well. Religious buildings showed the largest declines while public buildings had a slight increase in valuation. Nonresidential buildings in 1997 will remain strong for hotel and motels in response to increased demand and in preparation for the 2002 Winter Olympics. Office, industrial and retail construction will tail off slightly in 1997 due to higher vacancy rates and more moderate rates of growth in the Utah economy.

[1] Through the first three quarters of 1996 (January - September), a total of 18,756 units were authorized. An additional 4,744 units are estimated to be added to this figure during the fourth quarter of 1996 (October - December).

[2] Nonresidential data and estimations do not include the $600.0 million spent thus far for the Micron facility in Lehi or the $80.0 million Courts Complex in Salt Lake City since no permits have been issued for these projects.

Nonresidential construction valuations by major sector are presented in Table 76.

Several major projects contributed to the strong performance of nonresidential construction in 1996. Among these were the $34.8 million Harold B. Lee Library at Brigham Young University, the $27.0 million new office building in Salt Lake City and $12.0 million for a parking structure for the American Stores building. West Valley City had the $25.7 million Prime Option office building and $21.7 million West Valley Arena. Several other large projects also impacted nonresidential construction, including the Micron facility in Lehi and the Courts Complex in Salt Lake City. It should be remembered that the economic impacts of nonresidential construction projects extend outward due to the longer time frame required to build large projects. It is not unusual for these impacts to be stretched out over several months (or longer) during the construction phase.

Nonresidential construction will decrease in 1997 to $900.0 million. Moderate economic and job growth, and slightly higher vacancy rates for office, industrial and retail buildings will help slow demand for nonresidential construction. Even with these factors, nonresidential building will experience another good year. Several large hotel and motel projects will help boost nonresidential construction as will the new LDS meeting facility, proposed near Temple Square in Salt Lake City.

Additions, Alterations, and Repairs

Additions, alterations and repairs increased 1.5 percent in 1996 to $415.0 million. Strong economic growth, rising incomes and lower interest rates have helped sustain demand for additions, alterations and repairs for both residential and nonresidential buildings. Renovation activity will decrease slightly in 1997 to approximately $400.0 million as economic growth moderates.

Total Construction Activity

The value of construction rose 13.5 percent to $3.5 billion in 1996 compared to the $3.1 billion in 1995. The value of construction by component is shown in Figure 50. The total value of construction is projected to decline to $3.0 billion in 1997 because of lower levels of residential and nonresidential construction. Slower rates of growth and fewer large projects will lower construction activity in Utah for the first time in seven years. Even with decreased activity, permit-authorized construction in Utah will remain healthy and will respond to market conditions and demand.

Nonbuilding Construction / I-15 Interstate Reconstruction

Nonbuilding construction is an important contributor to Utah's construction industry. Major projects such as highways, bridges, dams, and power plants are included in this category. Most of these construction activities do not require a permit so data are not readily available. Nonbuilding construction values were obtained by telephone interviews with personnel from the Utah Department of Transportation, Utah Department of Water Resources, Utah Division of Facilities Management and Construction, and the Bureau of Reclamation.

Nonbuilding construction grew slightly in 1996 to $600 million and will experience a significant jump in 1997. Highway and other transportation projects will boost nonbuilding construction significantly, to close to $800 million in 1997. Light rail construction and I-15 freeway repairs will be major contributors to nonbuilding activity in 1997 and for the next several years to follow. Infrastructure improvements will be sustained to meet the new demand created by the recent strong growth in population.

Centennial Highway Fund Projects. Utah's Centennial Highway Fund will be used to build or rebuild many of Utah's highways and a federal interstate. These projects, proposed to be built over the next ten years, will be among the largest, most ambitious state infrastructure investments ever. The largest component, the reconstruction of the portion of Interstate 15 that crosses through the center of the Salt Lake City metropolitan area, is currently the largest freeway reconstruction project anywhere in the country. It encompasses all pavements and nearly every structure and interchange from 10800 South to 600 North. Several parallel street improvements and installation of an advanced traffic management system are also part of the project's scope. The reconstruction is scheduled to take place over four-and-one-half years, with construction beginning in April 1997 and ending in October 2001. The final product will include five lanes in each direction and a $1.3 billion price tag.

The Legacy Highway, which would parallel Interstate 15 from Box Elder County to Juab County, and the extension of the Bangerter Highway are two other large projects proposed to be paid for from the Centennial Highway Fund. The total project is expected to cost $2.6 billion. In addition, another $1 billion of construction will occur over the next ten years with existing funding. This means that approximately $3.6 billion of total highway construction will occur during the next decade. This large public investment will have both short- and long-term economic implications.

Long Term Benefit. Investment in highway infrastructure is critical to the long-term viability of the Utah economy. The question is how much to invest, when to do it, and how to pay for it. Interstate 15, which represents half of the Centennial Highway Fund, was originally designed and built in the 1960s with a 20-year life expectancy.[1] The most congested and damaged portions of Interstate 15 must be rebuilt or the cost of transporting goods and people will become too high for Utah to remain competitive. Ultimately, improvements must occur or the major transportation arteries serving Utah would deteriorate and reach a level of congestion that would harm the state's economic performance.

Economic Impact. The short-term economic impact of highway construction from the Centennial Highway Fund has three main components: (1) the stimulus from anticipated federal and borrowed dollars; (2) the increased transportation costs caused by congestion during construction; and (3) the redistribution of economic activity within the area. The impacts have the added characteristic of changing the current composition of the construction labor market. In addition, several businesses and residences will need to be relocated.

Stimulus. The federal money that is estimated to enter the Utah economy to help pay for highway construction will be a major stimulus during the next ten years. The state estimates that the federal government will pay $450 million of the total construction bill. This infusion of outside money will create 11,000 direct, indirect, and induced jobs and $340 million in earnings. The total amount of economic activity (expenditures generated from sources within and from outside the economy) from highway construction over the next ten years is estimated to be 59,000 jobs and $1.8 billion in earnings.[2] This federal money, however, has not yet been committed to Utah. Without federal funding there would be less short-run economic stimulus because internal sources of funding are simply a redistribution.

Increased Transportation Costs. The stimulating effect of the anticipated federal money will be tempered by the increase in transportation costs caused by higher congestion during the construction period. Commuting times on Interstate 15, for instance, are estimated to increase by an average of 20 percent to 30 percent during the reconstruction period, unless car pooling and flexible work schedules are more fully utilized.[3] The actual amount of congestion experienced will vary significantly depending upon the route taken and the time of travel.

The potential negative short-term economic impacts from congestion will be tempered by numerous mitigation efforts to keep traffic moving during the construction period. In the case of Interstate 15 these include the following:

- Improvements to parallel streets (State Street, 7th East, and Redwood Road);
- Maintaining two lanes of traffic open in each direction during the day;
- Keeping freeway-to-freeway movements;
- Providing at least two primary accesses to downtown;
- Keeping adjacent interchanges open while one is closed for construction;
- Utilizing an aggressive communication; campaign to keep businesses and the public informed of the construction schedule; and
- Increasing the use of telecommunications, flex time, mass transit, and car pooling.

Redistribution. The reconstruction of Interstate 15 will redistribute economic activity within the metropolitan area. The precise nature of this redistribution is unknown. Many economists expect suburban retailers and business interests to benefit during the four-and-one-half years of construction, at the expense of businesses along the corridor and downtown. When construction is completed, the activity will likely shift back to resemble the current distribution of economic activity. Many analysts even anticipate an enhanced position for businesses along the corridor and downtown once construction ends.

Labor Market. Most of the jobs created from the federal money will be in the heavy construction industry. The impact of these jobs varies significantly from jobs in other construction sectors. The Federal Highway Administration estimates that six to nine direct jobs are created for every million dollars of construction spending for highways. Comparatively, residential and non-residential construction are significantly more labor intensive because they include so many craftspeople and special trades. Because the ratio of heavy construction jobs to expenditures is more than twice that of residential and non-residential construction to expenditures, an equivalent amount of spending will result in smaller wage and job impacts.[4]

[1] *Certification Report*, July 1 1996, Utah Department of Transportation, p.4.

[2] Figures computed by the Governor's Office of Planning and Budget utilizing the Utah Multi-Regional Input Output model, December 1996.

[3] Steve Meier, Sear Brown Engineering.

[4] Calculated by the Governor's Office of Planning and Budget by utilizing ratios from the Federal Highway

(continued...)

Another important labor market consideration is the availability of jobs for local residents. The large national consortium that wins the bid for Interstate 15 will bring employees in from out-of-state. Analysts estimate that 50 percent or more of the jobs for Interstate 15, however, will be filled by local residents.[1] Utah's local labor market in heavy construction will have unparalleled opportunities for work because of the reconstruction of Interstate 15 and other large projects such as the Bangerter Highway, light rail, Legacy Highway, and the Central Utah Project, that will occur concurrently and shortly after.

Relocations. An estimated 24 commercial properties and five residential properties will be relocated to accommodate the Interstate 15 corridor project. A small amount of relocations may also occur for several of the other projects that will be paid for out of the Centennial Highway Fund.

Utah's Construction Cycle and Housing Prices

Residential dwelling unit construction activity in Utah will increase by 8.8 percent in 1996, completing the seventh consecutive year of residential construction expansion. The duration of the current boom is the longest in Utah's history, surpassing the six-year expansion of the 1967 to 1972 period. A number of favorable conditions converged to create this expansion but none more important than in-migration. Since 1990 there has been a net in-migration of more than 35,000 new households to Utah. Each one of these households required a dwelling unit. The demand generated by this net in-migration comprises a substantial portion of the housing demand for the 110,000 new dwelling units built in Utah since 1990.

The expansion represents only part of the construction cycle. Utah's residential construction cycles since 1950 are identified in Table 75 and Figure 49. A construction cycle is measured from peak year to peak year and includes both the period of contraction and expansion, e.g., 1977 to 1984. Since 1950 there have been seven residential construction cycles in Utah. A closer look at these cycles shows that in recent years, the cycle has become not only longer in duration but also steeper, i.e., the contractions have been more severe and the expansions more robust.

Between 1950 and 1970 residential construction cycles in Utah were approximately four years to five years in duration. But since 1970 the cycles have become more extended as both the duration of contractions and expansions have increased. The present cycle, measured from peak to peak, is now completing its 12th year.

Like the current cycle, previous residential construction cycles have each had their special characteristics. The 1977 to 1984 cycle was a severe national recession, followed by a surge in apartment construction. The 1972 to 1977 cycle was characterized by speculative home building fueled by rapidly-rising housing prices. The expansionary period of the current cycle is a response to in-migration occurring in recent years. Although speculative building is not part of the current expansion, rapidly-rising housing prices have been a characteristic of the Utah housing market over the past several years.

Housing Price Trends in Utah, 1980-1996

The rising cost of housing has become an important economic, social and political issue in Utah, but the consequences of rising costs have been difficult to assess. In the past, the primary data source has been the local real estate multiple listings service. However, these data—though widely used—may not accurately measure the increase in housing prices since the average home price is determined from a different set of sold homes each year. Measuring price increases on the same home at two points in time is a formidable research task. However, a federal agency has recently published data that do measure average price changes in repeat sales or refinancings on the *same* home.

The Office of Federal Housing Enterprise Oversight, using data provided by the Federal National Mortgage Association (Fannie Mae) and the Federal Home Loan Mortgage Corporation (Freddie Mac), now publishes a quarterly House Price Index (HPI) for states, regions and the nation. The index is derived from repeat mortgage transactions on single-family properties whose mortgages have been purchased by Fannie Mae or Freddie Mac since January 1975. The HPI is updated each quarter as additional mortgages are purchased by Fannie Mae and Freddie Mac. The new mortgage acquisitions are used to identify repeat transactions for the most recent quarter and for each quarter since 1975.

The quarterly HPI for Utah is shown in Table 77. The HPI begins in 1980 with an index number of 100.00. By the second quarter of 1996, Utah's index number had increased to 215.96. Thus, according to the HPI, a house in Utah that sold for $100,000 in 1980 would sell for $215,960 in 1996, an increase of 116 percent. How does Utah compare to the nation? Over the same period housing prices nationally

[4](...continued)
Administration for heavy construction and local data on construction value and jobs.
[1]Governor's Office of Planning and Budget

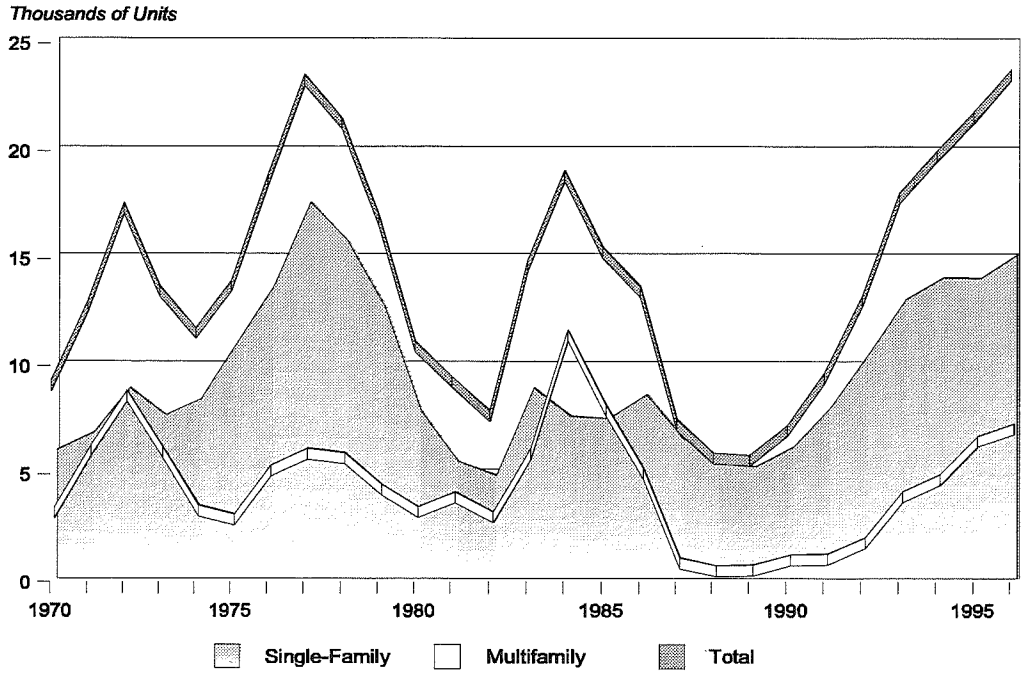
increased at a slower pace. Between 1980 and 1996, the national HPI increased from 100.00 to 200.15. A comparison of price trends in Utah and the nation is shown in Figure 51.

As shown in Figure 51, the most distinctive feature of housing price trends in Utah is the 72.7 percent increase in the index since 1991. In the last five years, housing prices in Utah have increased faster than in any other state. Oregon ranks second with a percent increase in their Housing Price Index of 55.8 percent, significantly lower than Utah's increase. A look at the last 12 months, July 1995 to July 1996, shows that Utah also led the nation during this period, with an increase of 11.4 percent, Table 78.

This rapid rise in housing prices is, in part, a response to the sluggish price performance of the 1980s, i.e., the market in Utah is adjusting for a period of decline, in real terms, in housing prices. This price correction has been fueled by the high levels of net in-migration and job growth. But the remarkable price increase since 1991 appears to have overcorrected for the 1980s. From 1980 to the present, 13 states have exceeded Utah in housing price increases. Oregon, Washington and Hawaii are among those states with faster price increases over the 1980 to 1996 period, but no other western states have experienced such high rates of increase.

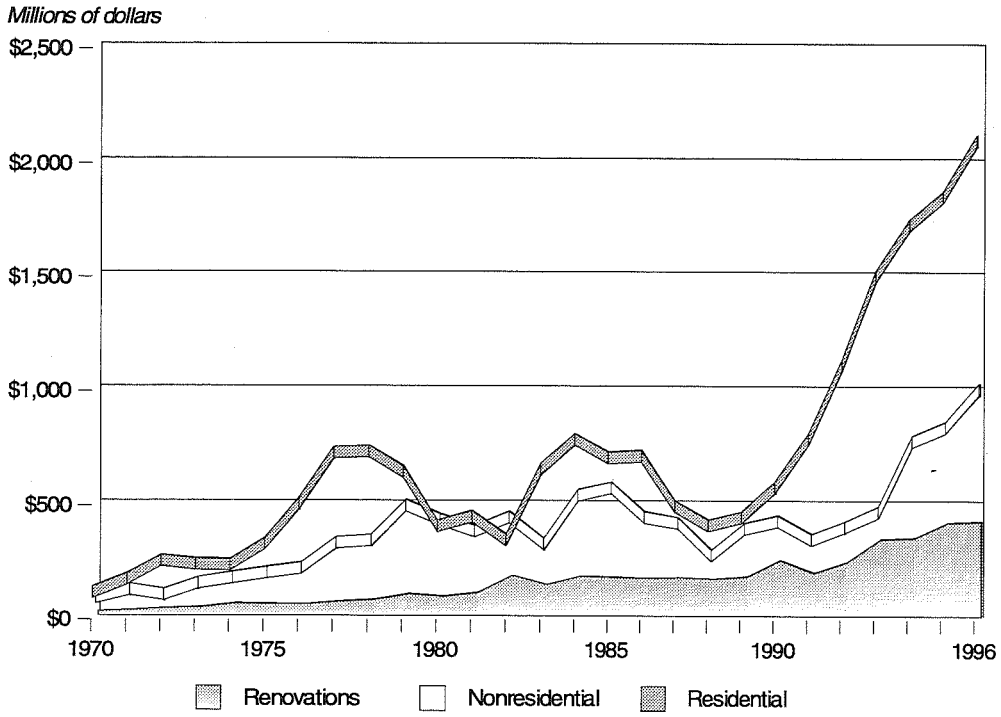
There is a growing potential for housing price increases in Utah to affect the rate of net in-migration and new household formations, threaten the residential construction boom and jeopardize the economic well-being of low- to moderate- income families. The extent of this threat will be determined by housing price increases in the next 12 to 24 months.

Figure 49
Utah Residential Construction Activity: 1970 to 1996



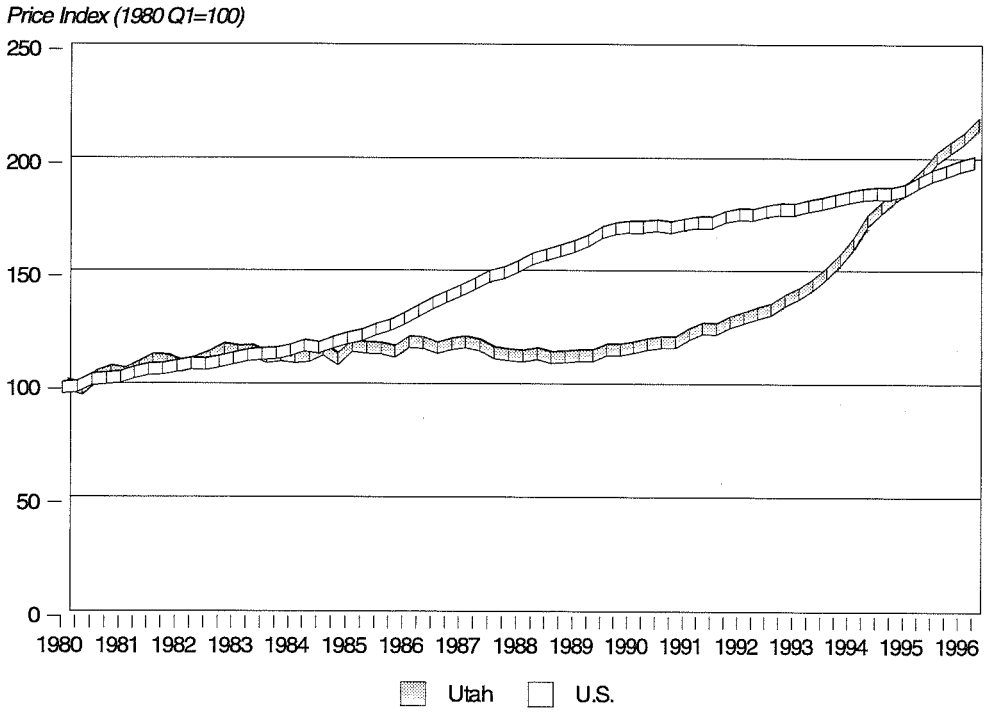
Source: University of Utah, Bureau of Economic and Business Research.

Figure 50
Value of New Construction: 1970 to 1996



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

Figure 51
Housing Price Index for Utah and the U.S.: 1980 to 1996



Source: Office of Federal Housing Enterprise Oversight, "House Price Index", Washington D.C. 1996.

Table 75
Residential and Nonresidential Construction Activity in Utah: 1970 to 1996

Year	Single Family Units	Multi-Family Units	Mobile Homes/ Cabins	Total Units	Construction Value* (millions of dollars) Residential	Nonresidential**	Renovations	Total Valuation
1970	5,962	3,108	na	9,070	$117.0	$87.3	$18.0	$222.3
1971	6,768	6,009	na	12,777	176.8	121.6	23.9	322.3
1972	8,807	8,513	na	17,320	256.5	99.0	31.8	387.3
1973	7,546	5,904	na	13,450	240.9	150.3	36.3	427.5
1974	8,284	3,217	na	11,501	237.9	174.2	52.3	464.4
1975	10,912	2,800	na	13,712	330.6	196.5	50.0	577.1
1976	13,546	5,075	na	18,621	507.0	216.8	49.4	773.2
1977	17,424	5,856	na	23,280	728.0	327.1	61.7	1,116.8
1978	15,618	5,646	na	21,264	734.0	338.6	70.8	1,143.4
1979	12,570	4,179	na	16,749	645.8	490.3	96.0	1,232.1
1980	7,760	3,141	na	10,901	408.3	430.0	83.7	922.0
1981	5,413	3,840	na	9,253	451.5	378.2	101.7	931.4
1982	4,767	2,904	na	7,671	347.6	440.1	175.7	963.4
1983	8,806	5,858	na	14,664	657.8	321.0	136.3	1,115.1
1984	7,496	11,327	na	18,823	786.7	535.2	172.9	1,494.8
1985	7,403	7,844	na	15,247	706.2	567.7	167.6	1,441.5
1986	8,512	4,932	na	13,444	715.5	439.9	164.1	1,319.5
1987	6,530	775	na	7,305	495.2	413.4	166.4	1,075.0
1988	5,297	418	na	5,715	413.0	272.1	161.5	846.6
1989	5,179	453	na	5,632	447.8	389.6	171.1	1,008.5
1990	6,099	910	na	7,009	579.4	422.9	243.4	1,245.7
1991 (r)	7,911	958	572	9,441	791.0	342.6	186.9	1,320.5
1992	10,375	1,722	904	13,001	1,113.6	396.9	234.8	1,745.3
1993	12,929	3,865	1,010	17,804	1,504.4	463.7	337.3	2,305.4
1994	13,947	4,646	1,154	19,747	1,730.1	772.2	341.9	2,844.2
1995	13,904	6,425	1,229	21,558	1,854.6	832.7	409.0	3,096.3
1996 (e)	15,000	7,000	1,400	23,500	$2,100.0	$1,000.0	$415.0	$3,515.0

(r) = revised to be comparable to 1992 data.
(e) = estimate
na = not available

*Excludes nonbuilding construction (such as highways).
**Nonresidential valuations do not include $600 million in current valuation out of $2 billion for the Micron Plant in Lehi or the $80 million Courts Complex in Salt Lake City since no permits have been issued.

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, November, 1996.

Table 76
Utah Nonresidential Construction by Sector (Millions of Dollars): 1992 to 1996

Sector	1992	1993	1994	1995	1996(e)	Average Percent of Total(a)
Hotels and Motels	$15,342.1	$15,712.1	$19,056.2	$41,452.3	$80,000.0	5.0
Churches and Religious Buildings	39,355.3	32,169.3	55,304.9	37,021.8	20,000.0	5.3
Industrial Buildings(b)	108,116.8	128,789.4	174,855.1	206,150.3	195,000.0	23.5
Offices, Banks and Professional Buildings	56,780.1	48,906.5	114,362.0	153,515.7	260,000.0	18.3
Stores and Other Mercantile Buildings	68,432.7	49,294.7	132,495.1	161,048.2	140,000.0	15.9
Publicly-Owned Buildings (c)	26,654.5	41,970.6	128,934.6	70,415.2	80,000.0	10.0
Other Nonresidential Construction	82,248.1	146,811.7	147,205.3	163,084.6	225,000.0	22.1
Total Nonresidential Construction	$396,929.6	$463,654.3	$772,213.2	$832,688.1	$1,000,000.0	100.0

(e) = estimate
(a) = Data represents five-year average, 1992 to 1996.
(b)= Data does not include $600 million spent thus far for the Micron Plant in Lehi since no permit has been issued.
(c) = Includes only those structures built by public agencies such as state and local governments, for which permits were issued. Not all local entities require public projects to obtain a permit such as the $80 million Courts Complex in Salt Lake City.

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, November, 1996.

Table 77
Housing Price Index for Utah: 1980 to Second-Quarter 1996

Year	Index
1980	100.0
1981	108.7
1982	111.7
1983	113.8
1984	113.0
1985	116.2
1986	118.0
1987	116.1
1988	112.8
1989	114.4
1990	118.3
1991	125.2
1992	133.2
1993	147.7
1994	174.6
1995	195.8
1995.1Q	183.2
1995.2Q	193.8
1995.3Q	200.9
1995.4Q	205.4
1996	--
1996.1Q	209.7
1996.2Q	216.0

Source: Office of Federal Housing Enterprise Oversight, "House Price Index", Washington D.C. 1996.

Table 78
Percent Change in House Prices by State: Period Ending June 30, 1996

	Percent Change 1995-1996	National Ranking	Percent Change 1991-1996	Percent Change 1980-1996
United States	4.7	--	15.3	100.1
Alabama	6.2	12	26.0	84.2
Alaska	5.7	19	24.3	62.3
Arizona	6.5	9	27.0	70.5
Arkansas	5.1	29	28.1	69.9
California	0.9	50	-9.6	106.0
Colorado	7.0	6	52.0	101.3
Connecticut	4.3	35	-2.4	139.1
Delaware	2.9	47	3.5	135.8
District of Columbia	4.7	32	2.4	98.0
Florida	4.8	31	15.8	76.7
Georgia	6.3	10	19.1	95.4
Hawaii	-1.0	51	1.4	164.9
Idaho	5.2	27	45.6	84.1
Illinois	4.3	36	22.6	106.3
Indiana	6.9	8	28.0	85.1
Iowa	5.2	26	31.5	60.5
Kansas	5.3	24	25.8	54.6
Kentucky	5.3	22	27.0	86.1
Louisiana	7.2	4	32.1	40.8
Maine	4.5	33	2.5	122.2
Maryland	3.1	45	6.8	118.0
Massachusetts	4.0	40	6.6	210.3
Michigan	8.4	3	29.9	99.6
Minnesota	5.9	16	25.4	83.4
Mississippi	6.9	7	27.2	56.2
Missouri	5.3	23	20.9	79.5
Montana	5.2	28	54.0	90.3
Nebraska	5.9	15	31.8	72.9
Nevada	3.4	42	18.2	77.5
New Hampshire	4.0	39	-0.5	107.6
New Jersey	3.0	46	6.1	144.9
New Mexico	4.2	37	37.9	94.5
New York	2.7	49	4.5	182.3
North Carolina	6.1	13	23.0	104.5
North Dakota	5.8	17	29.3	63.5
Ohio	6.3	11	27.7	92.4
Oklahoma	5.2	25	21.9	25.8
Oregon	9.1	2	55.8	119.9
Pennsylvania	3.3	44	10.1	119.5
Rhode Island	2.9	48	-0.8	152.9
South Carolina	5.0	30	19.3	87.9
South Dakota	6.0	14	37.0	81.6
Tennessee	7.1	5	26.7	91.7
Texas	3.4	43	15.7	35.1
Utah	11.4	1	72.7	116.0
Vermont	4.3	34	8.2	125.8
Virginia	3.6	41	9.4	110.4
Washington	4.2	38	22.9	127.0
West Virginia	5.7	20	29.2	57.3
Wisconsin	5.8	18	37.1	93.8
Wyoming	5.3	21	43.4	38.6

Source: Office of Federal Housing Enterprise Oversight, "House Price Index", Washington D.C. 1996.

Defense / Aerospace

Overview

As time passes, it seems more likely the 1990s will mark the beginning of a new order of international tranquility. If this era of tranquility continues, declining U.S. defense spending will be a consequence. Current budget projections developed by the Congressional Budget Office and the Office of Management and Budget have U.S. defense spending declining from the $272 billion recorded in 1995 to around $255 billion in 1999. Although defense spending is projected to increase after 1999, it will not reach the 1995 level until 2002. Further, as a percent of gross domestic product (GDP), defense spending is projected to decline continuously from 3.8 percent in 1995 to 2.9 percent in 2006. While this new era bodes well for the world economy in general, and the U.S. budget deficit in particular, it means the importance of defense in Utah's economy will continue to diminish. Historical federal defense spending throughout the United States is presented in Table 79 and Figure 52.

In 1987, defense spending in Utah amounted to almost 8 percent of gross state product (GSP) directly, and may have been as much as 15 percent after considering the multiplier effects of the direct spending. But by 1995, direct defense spending was down to under 4 percent of GSP. Given that the importance of defense spending in the national economy is projected to decline about 25 percent over the next decade (from 3.8 percent of GDP in 1995 to 2.9 percent in 2006), it appears the relative importance of defense spending in Utah will continue to decline. Historical federal defense spending in Utah is presented in Table 80 and Figure 53.

Contracting Activity

During the cold war build-up of the mid-1980s, a number of defense contractors in Utah routinely received contracts in the $50 million range on an annual basis. Both Thiokol and Hercules, for example, received contracts in the $200 million range for several years during the 1980s. As Table 80 demonstrates, however, by 1995 total procurement from Utah contractors had fallen from $1.2 billion in 1987 to $496 million. Thiokol's contracts declined from a peak of $587 million in 1987 to $63 million in 1995 and Hercules declined from a high of $353 million in 1986 to $13 million in 1995. Barring a period of prolonged military build-up, defense contracting in Utah will probably not come anywhere near the levels achieved during the 1980s.

Geographic Distribution of Spending

Table 81 presents the components of 1995 Utah defense spending by county and compares the 1995 total with the 1994 total. Defense spending is concentrated in Davis, Salt Lake, Tooele, and Weber Counties, with significant spending occurring in Box Elder, Utah, and Cache Counties. Payroll and procurement at Hill Air Force Base (HAFB) account for over 90 percent of defense spending in Davis County. Contracting activity associated with a variety of weapons systems and other projects accounts for most of the defense spending in Salt Lake County. Payroll and procurement at Tooele Army Depot (TAD), along with environmental engineering at the Depot, account for essentially all defense spending in Tooele County. Payroll and procurement at Defense Depot Ogden (DDO) account for over 80 percent of defense spending in Weber County.

Military Facilities

Although not as bright as it could be, the future of Utah's military facilities is now clearer than a few years ago. The three main facilities, HAFB, TAD, and DDO, have all taken major cuts since the peak levels of the mid-1980s. DDO will be closed September 1997, while TAD has had most of its responsibilities transferred to out-of-state facilities. Employment at TAD should stabilize around 800 as the facility continues its conventional munitions storage and chemical demilitarization roles. A silver lining for the Tooele economy is that the main vehicle maintenance facility was purchased by a private firm and employment at the facility should increase to about 600 by the turn of the century.

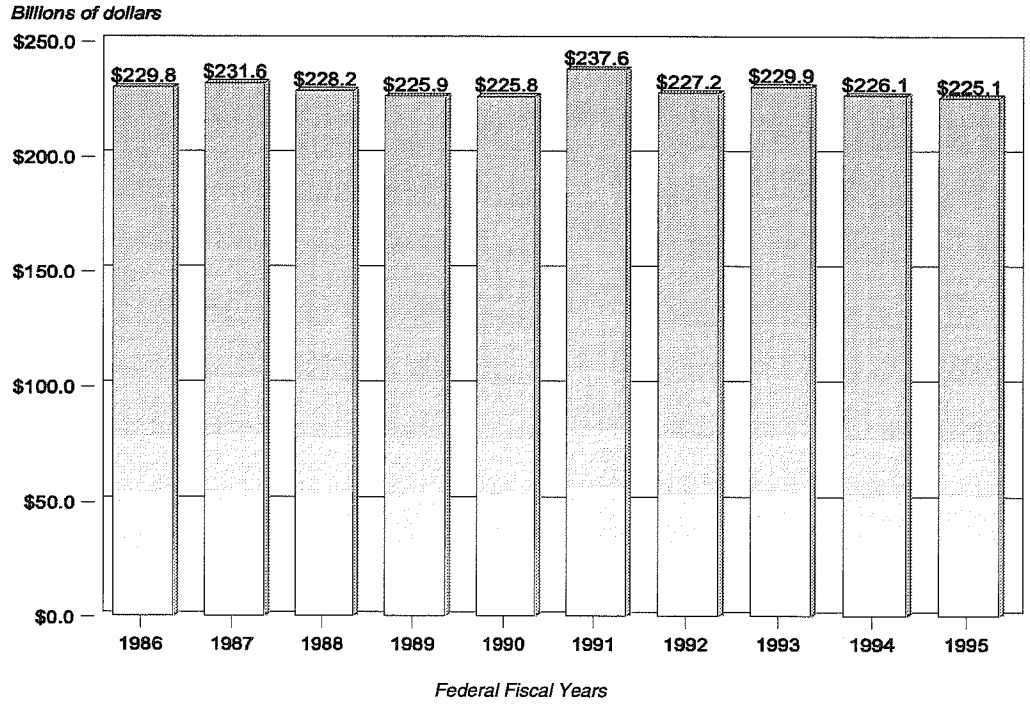
HAFB is the bright spot in the realignment of Utah's military facilities. The base will continue most of its missions with employment stabilizing around 10,000. Spending at HAFB during 1995 totaled $549 million, which included $442 million of payroll and $107 million of procurement. Barring future rounds of base closures, HAFB's current presence in the Utah economy will continue.

Outlook

Barring an extended major military conflict such as Korea or Vietnam, defense spending will continue to decline relative to the overall economy. Absolute spending should start increasing in the next few years, but the number of people serving in the U.S. military will likely remain stable throughout the next 10 to 20 years. For Utah, this means employment in

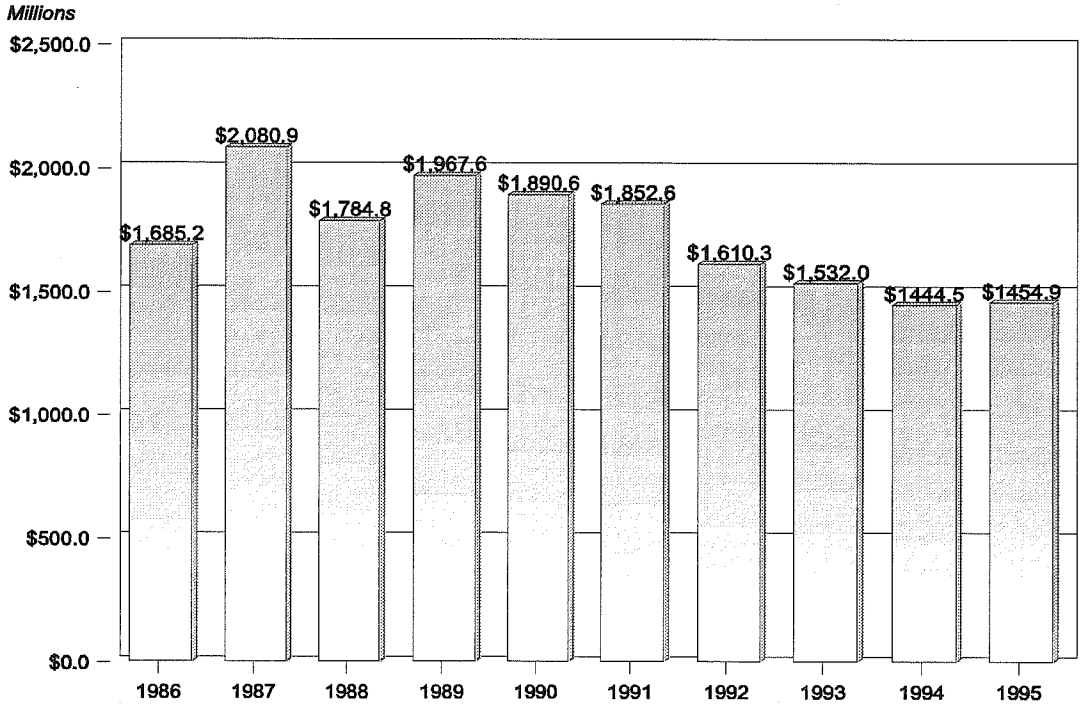
the defense sector will remain at or slightly below its current level, but the size of the defense sector relative to the economy will steadily shrink. The worst of the defense cuts appear to be over for Utah. Utah's defense sector will remain an important part of the Utah economy as well as a significant contributor to the nation's defense.

Figure 52
Primary Federal Defense-Related Spending in U.S.: 1986 to 1995



Sources: U.S. Department of Commerce, Bureau of the Census and the Department of Defense.

Figure 53
Federal Defense-Related Spending in Utah: FY 1986 to FY 1995



Source: U.S. Department of Commerce, Bureau of the Census.

Table 79
Primary U.S. Federal Defense-Related Spending (Selected Categories)—All States and Territories (Thousands of Dollars): FY 1986 to FY 1995

Fiscal Year	Wages and Salaries*	Procurement Contract Awards	Military Retirement	State/ Local Grants	Total
1986	$61,900,746	$150,055,345	$17,769,127	$111,366	$229,836,584
1987	65,097,948	147,616,385	18,732,723	127,430	231,574,486
1988	67,270,619	142,175,108	18,640,881	113,637	228,200,245
1989	72,771,040	132,259,473	20,669,532	172,125	225,872,170
1990	69,103,253	135,259,039	21,235,041	175,978	225,773,311
1991	75,254,721	139,570,721	22,669,073	111,454	237,605,969
1992	73,851,077	129,124,509	24,024,591	223,899	227,224,076
1993	73,947,670	129,996,047	25,752,104	241,816	229,937,637
1994	73,470,136	125,982,520	26,478,356	212,466	226,143,478
1995	71,192,209	126,003,863	27,695,928	244,824	225,136,824
Percent Change					
1986-1995	15.0%	-16.0%	55.9%	119.8%	-2.0%
Absolute Change					
1986-1995	$9,291,463	($24,051,482)	$9,926,801	$133,458	($4,699,760)

* Does not include fringe benefits.

Source: U.S. Department of Commerce, Bureau of the Census.

Table 80
Federal Defense-Related Spending—Utah Total (Thousands of Dollars): FY 1986 to FY 1995

Fiscal Year	Wages and Salaries*	Procurement Contract Awards	Military Retirement	State/ Local Grants	Total**
1986	$784,567	$805,747	$94,612	$301	1,685,227
1987	794,294	1,182,097	98,743	5,766	2,080,900
1988	817,787	866,782	98,876	1,318	1,784,763
1989	870,295	979,116	108,005	10,186	1,967,602
1990	890,892	883,014	115,442	1,232	1,890,580
1991	922,035	804,404	125,526	598	1,852,563
1992	852,772	614,286	134,844	8,431	1,610,333
1993	847,053	532,269	146,743	5,932	1,531,997
1994	763,608	524,001	152,426	4,514	1,444,549
1995	794,333	495,771	161,964	2,845	1,454,913
Percent Change					
1986-1995	1.2%	-38.5%	71.2%	845.2%	-13.7%
Absolute Change					
1986-1995	$9,766	($309,976)	$67,352	$2,544	($230,314)

* Does not include fringe benefits.
** The totals here will not match Table 81 because the data sources and concepts are slightly different.

Source: U.S. Department of Commerce, Bureau of the Census.

Table 81
Federal Defense-Related Spending in Utah by County (Thousands of Dollars): FY 1994 and FY 1995

County	1995 Wages*	1995 Procurement	1995 Other	1995 Total**	1994 Total**	Change in Total Spending from 1994 to 1995 Absolute	Change in Total Spending from 1994 to 1995 Percentage
Beaver	$711	$0	$341	$1,052	$902	$150	16.6%
Box Elder	9,134	65,834	2,840	77,808	53,696	$24,112	44.9%
Cache	2,143	23,169	5,956	31,268	32,105	($837)	-2.6%
Carbon	181	2,370	981	3,532	5,980	($2,448)	-40.9%
Daggett	0	0	73	73	67	$6	9.0%
Davis	511,982	118,617	42,071	672,670	662,712	$9,958	1.5%
Duchesne	0	0	422	422	737	($315)	-42.7%
Emery	0	0	372	372	344	$28	8.1%
Garfield	0	0	199	199	195	$4	2.1%
Grand	0	0	354	354	359	($5)	-1.4%
Iron	497	130	1,780	2,407	2,291	$116	5.1%
Juab	1	0	258	259	280	($21)	-7.5%
Kane	0	0	500	500	468	$32	6.8%
Millard	292	0	550	842	1,329	($487)	-36.6%
Morgan	0	0	824	824	767	$57	7.4%
Piute	0	0	149	149	154	($5)	-3.2%
Rich	0	0	97	97	90	$7	7.8%
Salt Lake	99,095	145,370	65,013	309,478	262,847	$46,631	17.7%
San Juan	170	0	223	393	1,220	($827)	-67.8%
Sanpete	967	0	984	1,951	1,772	$179	10.1%
Sevier	459	0	1,256	1,715	1,704	$11	0.6%
Summit	2,671	1,902	2,039	6,612	24,919	($18,307)	-73.5%
Tooele	80,351	111,082	3,029	194,462	249,394	($54,932)	-22.0%
Uintah	216	75	845	1,136	2,189	($1,053)	-48.1%
Utah	7,242	12,394	16,546	36,182	37,533	($1,351)	-3.6%
Wasatch	0	0	557	557	480	$77	16.0%
Washington	728	159	7,903	8,790	8,357	$433	5.2%
Wayne	0	0	57	57	40	$17	42.5%
Weber	77,493	14,669	28,650	120,812	100,189	$20,623	20.6%
Undistributed	0	0	0	0	4,514	($4,514)	-100.0%
State Total	$794,333	$495,771	$184,869	$1,474,973	$1,457,634	$17,339	1.2%

* Does not include fringe benefits.
** The totals here will not match Table 80 because the data sources and concepts are slightly different.

Source: U.S. Department of Commerce, Bureau of the Census.

Utah primary energy production in 1996 is estimated at 976.8 trillion Btu. Coal accounts for 628.8 trillion Btu, while natural gas and crude oil contribute 238.0 trillion and 110.1 trillion Btu, respectively. As a percentage breakdown, coal production is responsible for 64.3 percent, natural gas contributes 24.4 percent, and an additional 11.3 percent is from crude oil.

At the point of extraction, the value of Utah primary energy production is estimated to be $1.138 billion in 1996. Coal, valued at $512.6 million, ranks first in value among Utah's primary energy resources and accounts for 45.0 percent of the total value of all energy produced. The value of crude oil production and net natural gas sales is projected to be $381.8 million and $243.1 million, or about 33.6 percent and 21.4 percent, respectively.

Crude Oil

The average annual crude oil price increased for the first time since 1990. After reaching a five-year monthly low of $13.73 per barrel in March 1994, the field or wellhead price of crude oil marched above $22.79 a barrel in April 1996. This price increase mirrored a run-up in crude oil prices in the world crude oil market. The Utah average annual crude oil wellhead price in 1996 is projected to be $19.90 per barrel, which is an increase of 16.4 percent over $17.10 in the previous year.

Drilling activity in Utah held steady in 1996 as the average number of active rotary rigs and well completions remained at or near the 1995 level. Oil well completions almost tripled between 1994 and 1995 and remain considerably higher than during the 1987-1994 time period. In Duchesne County, oil well completions in recent years have been made by Inland Resources and Equitable Resources in Monument Butte. In San Juan County, oil well completions have been dominated by Mobile E&P and Texaco E&P. Uintah County has seen Chevron and Equitable oil well completions, among others. Drilling permits in 1996 are projected to increase about 15 percent above their 1994-1995 level. Overall, oil and gas drilling, as measured by drilling permits, the rig count, and well completions, while not as strong as in the early 1980s, has increased considerably from the 1987-1990 time period.

Utah crude oil production continues the decade-long decline that began in 1986. This decline is due to the increased geologic difficulty associated with extracting crude from older, semi-depleted fields. Utah operators continue to produce from mature fields. Production from oil wells will fall to a projected 19.2 million barrels in 1996, a decrease of 4 percent from the 1995 level of 20 million barrels. San Juan County again leads all Utah counties with an estimated 6.4 million barrels of production. Duchesne County remains the second largest producing county with 5.4 million barrels; followed by Summit County, whose production is projected to be 3.5 million barrels in 1996. Uintah County production is anticipated to remain stable at an estimated 3.3 million barrels. All other counties combined amount to about 2 percent of total Utah production. Utah crude oil production in San Juan County is exported to petroleum refineries in New Mexico and Texas.

Relatively few companies are expected to be responsible for about 80 percent of crude oil production in 1996. Of the ten largest producers, Mobil should produce the largest share, approximately 20 percent; while Coastal, Amoco Rocmount and Texaco will follow closely behind with 15 percent, 12 percent, and 8 percent, respectively. Coastal dramatically increased its share of production, nearly tripling its 1995 share of 5.6 percent to an expected 15 percent in 1996. The remaining top ten producers are: Pennzoil, Chevron, Inland, Flying J, Union Pacific and Equitable, and production should hover at around 5 percent each; while Inland will show the only significant change from 1995 by nearly doubling its share and becoming one of the top ten producers.

Petroleum Products

Crude oil is imported by Amoco and Chevron pipelines and refined into petroleum products in Utah petroleum refineries. While crude oil imports from Colorado have slowly declined in recent years, imports of Wyoming crude oil have noticeably increased. An interesting development in recent years has seen crude oil arriving from as far away as Canada.

The petroleum industry in Utah has undergone several changes over the past few years. Pennzoil's Roosevelt petroleum refinery closed in 1994, leaving five petroleum refineries in the state. Utah petroleum refineries have upgraded numerous facilities in order to increase capacity. By 1996, the capacity of Utah's five petroleum refineries should more than make up for the loss of refining capability at the Pennzoil refinery. Although refinery utilization rates in 1996 have generally increased, overall refinery production of petroleum products is projected to remain steady. The production of

petroleum products by Utah's five refineries is projected to come close to 48 million barrels (or about 2 billion gallons) in 1996.

Refineries face increased technical challenges associated with a decline in crude oil quality. Refinery inputs are increasingly sour (high sulfur content) and require more effort to produce clean burning products.

A strong demand for petroleum products in Utah continued in 1996. Utahns are projected to consume a record 900 million gallons of motor fuel, 389 million gallons of distillate fuels, and 248 million gallons of aviation fuels in 1996. Imports of petroleum products on the Pioneer pipeline continued to increase in 1996. Refined product imports are mostly motor gasoline (63 percent), but some distillate (26 percent) and jet engine fuel (11 percent) are imported as well. Utah remains a net exporter of refined petroleum products, sending some 850 million gallons by pipeline to Idaho and Washington in 1996.

Motor fuel prices reached their highest level since 1990, reflecting higher crude oil prices. However, after adjusting for inflation, motor fuel prices are still lower than they were in 1960.

Natural Gas

Natural gas well completions have fallen off somewhat from the intense drilling during the 1992-1993 time period, although the number of completed natural gas wells is expected to increase in 1996. The projected 67 natural gas well completions in 1996 represents a 20 percent increase from 1995. In recent years, many of these completions have been in Carbon County, with several companies exploring and developing the coalbed gas fields southwest of Price along the Sandstone Fairway. River Gas, for example, has completed over 80 wells in the Drunkards Wash field since September 1993. Other drilling and exploration efforts are currently underway by Inland Production and Equitable Resources in Duchesne County, Anadarko Petroleum and Texaco in Emery County, and Texaco in San Juan County. In addition, the Conoco operation at Natural Buttes in Uintah County has resulted in successful gas well completions.

The wellhead natural gas price improved somewhat in 1996 to a projected $1.35 per thousand cubic feet, up from $1.14 per thousand cubic feet in the previous year. Deregulation of the natural gas industry has led to more volatility in prices, speculation in futures markets, and a distinction between sales and transported natural gas. The relatively low price in 1996 reflects the availability of low-cost supplies of Canadian natural gas and generally abundant supplies of natural gas in the Rocky Mountain region. Lack of pipeline access to Midwest markets also limits demand for Rocky Mountain gas and precludes upward price pressure. In addition, natural gas finding costs have fallen as a result of technological advancements, and this also puts downward pressure on wellhead prices. Energy markets in the West are dominated by California end-use energy consumption, and natural gas from Alberta, New Mexico, and West Texas flows through interstate natural gas pipelines to California markets. It remains to be seen how much Utah natural gas will be exported to California. Due to a large supply potential and relatively low cost, Utah natural gas is well-positioned to compete in the fiercely-competitive California market.

As with crude oil, Utah production of natural gas will also decline in 1996. A nine-year-low of 275 billion cubic feet of natural gas is expected to be produced by Utah natural gas wells in 1996. This represents a 9 percent decrease over gross production in 1995. Net production, gross production less reinjected and flared gas, is also expected to decline this year to 209 billion cubic feet. Nevertheless, while gross natural gas production is down from earlier years, the share of natural gas that is sold and marketed is much higher. Marketed natural gas increased 9.8 percent to 180.1 billion cubic feet in 1996.

In Summit County, Anschutz Ranch East entered its "blow down" phase in June 1995. Prior to this time, nitrogen was stripped from the natural gas produced from the field and reinjected to maintain reservoir pressure. This enhanced the recovery of both crude oil and natural gas. In the blow down phase, nitrogen is no longer being reinjected. Hence, the gross production of both crude oil and natural gas has declined.

Ten large companies produce nearly 90 percent of Utah's natural gas. Of the gas produced by those ten, Amoco will be responsible for approximately 52 percent in 1996, down from 59 percent in 1995. The shares produced by the next three high-ranking companies, Coastal, Union Oil of California and River Gas is expected to rise slightly from 9 percent, 5 percent, and 3 percent to 11 percent, 6 percent, and 5 percent, respectively. During the coming decade River Gas should greatly increase its share of the total with coalbed methane production in Carbon County, while Amoco will likely produce a diminishing share due to geologic decline in the Anschutz area.

Coal

Utah coal production in 1996 is expected to exceed 27.3 million short tons. Coal is produced in Carbon,

Emery, and Sevier Counties. Emery County accounts for some three-fifths of total Utah production, while Carbon and Sevier Counties have roughly comparable shares. The vast majority of Utah coal, some 95 percent, is produced on Federal land. The value of coal produced in 1996 is projected at $512.6 million. The average mine price for Utah coal has fallen precipitously since 1982 and by 1996 is approximately $18.75 per short ton. During the next few years the current-dollar price of coal should start to go up; however, on an inflation-adjusted basis, prices are expected to continue their downward trend.

Higher demand on the part of East Central U.S. electric utilities, as well as Pacific Rim countries, will lead to increased Utah production. In order to comply with the Clean Air Act Amendments of 1990, East Central U.S. electric utilities are beginning to switch to Utah coal, which has a much lower sulfur content than the coal found in the East Central United States. Exports of Utah coal in 1996, primarily to Pacific Rim countries, will continue to increase.

By the end of the decade, the Utah coal industry is expected to be exporting 8 million tons of coal to Pacific Rim countries. Almost 70 percent of Utah coal production will be consumed by electric utilities in the United States. Approximately 20 percent of Utah coal production will be exported overseas, with the remaining production consumed by industrial consumers, as well as residential and commercial consumers in Utah and other states.

As a result of a high degree of mechanization and a highly skilled work force, productivity continues to rise in the Utah coal industry. Productivity in Utah coal mines, which was just under 2 tons per miner-hour (tpmh) in 1980 and 1981, is expected to reach a new high of 6.95 tpmh in 1996. Rising worker productivity leads to more competitive prices for Utah coal and bodes well for the future of the Utah coal industry.

Electric Power

Electric power generation is projected to be down from the record year of 1994. In 1996, Utah is projected to generate about 29,300 gigawatthours of electric power and consume about 20,000 gigawatthours. The difference is exported to California. Coal-fired sources account for 95 percent of total generation, followed by hydroelectric power generation (4 percent), and petroleum and natural gas (almost 1 percent). Renewable resources, such as solar energy, account for the remainder. Electric power sales to end-use sectors continue to increase at over 5 percent a year. Indications are that the increase in total electric power sales to Utah consumers will be well above the trend of the past few years.

While Utah consumption of electric power continues to track population growth and increase at a rapid pace, out-of-state demand for Utah electricity is quite volatile. In 1996 Utah is expected to send only 10,000 gigawatthours of electric power to out-of-state users, down significantly from the 17,000 gigawatthours exported in 1994. Several factors explain this reduced demand. Lower average summer temperatures during 1995 and 1996 were responsible for reduced demand for cooling power. In addition, wet weather in the Northwest has increased availability of cheap hydroelectric power. Inexpensive natural gas also provided an alternative fuel for power generation in 1995 and 1996 and, together with abundant hydro power, encouraged distributors to shun Utah generation in favor of cost-efficient power sources.

Electric utilities are the current focal point of efforts to deregulate the energy industry. A growing number of electric utility buyers and sellers, as well as power marketers and brokers, are demanding greater access to electricity markets in an effort to secure better prices and contract terms. As a consequence, the Federal government has introduced regulatory guidance to facilitate the introduction of competition into wholesale electric power markets. The Utah Public Service Commission is currently considering electric power deregulation. Further discussion of electric utilities occurs in a chapter in the Special Topics section of this report.

Uranium

During 1996, Energy Fuels Nuclear continued its operation of uranium ore processing in its White Mesa Mill. The ore was shipped mostly from the Arizona Strip and also from the Colorado Plateau near Uravan, Colorado, located just east of LaSal. This operation continued to the end of February, producing a total of 455,000 pounds of U_3O_8. White Mesa Mill was idle from March to June. In July, the mill started processing calcium fluoride, which had been received from Allied Signal located in Metropolis, Illinois. During July, August and September 1996, White Mesa produced 203,000 pounds of U_3O_8 and was idled for the remainder of the year.

The White Mesa Mill, which was the only one operating in the State of Utah, produced a total of 658,000 pounds of U_3O_8 in 1996. The price of uranium at the beginning of the year stood at $12.50 to $13.00 per pound of restricted and about $10.75 to $11.00 per pound of unrestricted. These prices increased with some fluctuation to a high of $16.60 per pound in May. By the end of 1996, the price of a

pound of U_3O_8 stood at $15.00 of restricted and $14.50 of unrestricted. These prices, even though slightly lower than a few months ago, are still at a level that could stimulate further production from state-licensed facilities.

There is a good possibility that the White Mesa Mill will produce about 150,000 pounds of U_3O_8 during the early months of 1997 from potassium hydroxide which will be shipped to Blanding from Allied Signal of Metropolis, Illinois. There is also a strong possibility that ore will be shipped to the White Mesa Mill from the Arizona Strip, Colorado Plateau and also from U.S. Energy Corporation's underground velvet uranium mine, located just 20 miles northeast of Monticello, throughout 1997 to be milled toward the end of that year or early 1998.

It is also very likely that the U.S. Fuel Corporation will start its Ticaboo Mill in Utah and start processing ores from Utah to produce possibly as much as 1,000,000 pounds of U_3O_8 in 1997.

Energy Industry Employment

Employment in Utah's energy industry is projected to decline to about 12,500 workers in 1996, down 3.2 percent from 1995. This measure of total employment includes the entire flow of energy, from production through processing and transportation to distribution. As a percent of total Utah nonagricultural employment, 1996 employment in Utah's energy industry accounts for an estimated 2 percent. The energy industry's share of total Utah nonagricultural employment has been declining since the early 1980's, when it reached a peak of 4 percent. Much of this decline is due to technological change, with fewer workers required to produce a given amount of energy.

Employment in the three primary energy-producing sectors, oil/gas, coal, and uranium decreased in 1996 by roughly 7.7 percent. Employment gains in the coal sector partially offset a small employment loss in the oil and gas sector and a larger employment loss in the uranium sector.

Employment in the oil and gas production sector reached a 11-year high in 1993 of 3,600. Although the highest level since 1985, it was still 39 percent less than the peak employment year of 1981. Employment in 1996 is projected at 1,945 workers, which represents a 46 percent decline from the 1993 level. Employment in the Utah coal industry has fallen from a high of 4,296 workers in 1982 to a projected 2,013 in 1996, with rising productivity and a reduction in the number of operating mines as the contributing factors.

Employment in the electric power industry has slowly declined since 1986, which was primarily the result of the Utah Power/Pacific Power merger. This decline in employment is expected to continue to slow, since the price reductions required by the merger agreement have been realized and the majority of personnel cost reductions made possible by the merger have been accomplished.

Minerals Summary

The value of Utah's mineral production in 1996 is estimated to be $2.3 billion, a decrease of more than $200 million from 1995, making 1996 the second-highest year in total value. Contributions from each of the major industry segments are:

- base metals, $1 billion (45 percent of total);
- coal, $513 million (22 percent of total);
- industrial minerals, $433 million (19 percent of total); and
- precious metals, $331 million (13 percent of total).

The changes in Utah's mineral valuation by industry segment for 1994-1996 is shown in Figure 55. Compared to 1995, the 1996 values of base metal production declined $162 million, and coal production declined $27 million. Industrial mineral production increased $4 million, and precious metal production increased $21 million in 1996. Prices decreased for most base metals (beryllium, copper, and magnesium) and coal in 1996 while precious metal prices were mixed; silver prices increased while gold prices decreased. Industrial mineral prices increased modestly for some commodities and declined for other commodities.

Outlook

The outlook for 1997 continues to be favorable. Utah has established record-level and near record-level production and valuation in each industry segment for the past three years. Whereas a new record is not expected in 1997, the value of total mineral production will remain at near-record levels. The value of mineral production statewide has increased substantially over the past three years, due mostly to a rise in metal prices. Operator surveys indicate that in 1997, base metal and precious metal production will decline slightly while industrial mineral production is expected to make modest gains. Production will continue to increase in some industrial mineral commodities, such as gypsum, salt, phosphate, cement, limestone, and sand and gravel, and will remain level in most other commodities. The demand for most industrial minerals largely depends on local and regional economies where the products are consumed. Due to strong economies in Utah and neighboring states,

the market for many industrial minerals will continue to expand. Coal production statewide has set new records for the past three years and is expected to establish another record in 1997.

The value of precious metals is expected to decline modestly in 1997 due to declining production levels from nearly all producers. USMX's Goldstrike mine in Washington County completed heap-leaching operations and closed in 1996. American Barrick's Mercur mine in Tooele County is beginning to scale down its operation due to reserve depletion and will produce substantially less each year until the mine closes in 1999. Kennecott's Bingham Canyon mine in Salt Lake County, which produces more than half of Utah's precious metals as a byproduct, will produce slightly less gold and silver in 1997. Kennecott's Barneys Canyon mine in Salt Lake County is scheduled to produce more gold in 1997.

New Mine Permits

Through mid-November 1996, the Utah Division of Oil, Gas and Mining received nine Regular Mine permit applications (five acres and larger disturbance) and 34 new Small Mine permit applications (less than five acres disturbance). Five applications were made to change from Small Mine to Regular Mine status. These numbers represent an increase of three Regular Mine permit applications and a decrease of two Small Mine permit applications compared to 1995.

Active Regular Mine permits can be subdivided into the following categories:

- base metals (4),
- precious metals (4),
- coal (12),
- industrial minerals (50).

National Rankings

The U.S. Bureau of Mines ranked Utah fourth in the nation (up from sixth) in the value of nonfuel minerals produced in 1995. Utah accounted for nearly 5 percent of the U.S. total nonfuel mineral production value. Utah ranked:

- first in beryllium and gilsonite;
- second in potash and copper;
- third in gold, magnesium, and molybdenum;
- fourth in phosphate rock and silver;
- sixth in salt;
- 11th in oil and gas; and
- 14th in coal.

Nonfuel Minerals Production Trends

According to the U.S. Bureau of Mines, between 1985 and 1995 the value of nonfuel mineral production in Utah increased from $313 million to over $1.8 billion (Figure 56). The total for 1995 represents an all-time high for nonfuel mineral valuation for the state, exceeding 1994's total by $320 million. The Utah Geological Survey's estimate for nonfuel mineral production value for 1996 is $1.8 billion.

Mineral exploration statewide has increased modestly compared to 1995. Twenty-eight Notices of Intent (NOI) to explore on public lands were filed with the Division of Oil, Gas and Mining through early December 1996, compared to 22 for all of 1995, 34 for 1994, 54 for 1993, and 65 for 1992. Exploration continues to increase and the number of applications for Regular Mine permits (nine) is the highest in the past three years. Several Small Mine permits have been issued to operators who plan to expand to a Regular Mine permit once exploratory and initial development work has been completed. These new mines will increase the total number of producing operations and will have a moderate effect on the total value of production.

Base and Precious Metals

Copper. Copper is the largest contributor to the value of nonfuel minerals in the state. Significant price increases in 1994 and 1995 pushed the value of copper to historic highs and the value of base-metal production statewide to over $1 billion for the first time. Copper production from Kennecott's Bingham Canyon mine in Salt Lake County will decrease slightly in 1996 from 1995 production of about 325,000 tons of copper metal. Since 1990, annual copper production has ranged from a low of 250,000 tons to a high of more than 340,000 tons. With the completion of the modernization and expansion program that began in 1988, Kennecott's copper production will stabilize at a rate of around 330,000 tons annually.

Magnesium Metal. Magnesium metal was the second-largest contributor to the value of base metals in 1996. Magnesium metal is produced from Great Salt Lake brines by Magnesium Corporation of America (Magcorp) at its electrolytic plant at Rowley in Tooele County. The plant has a capacity to produce 42,000 tons of magnesium metal (99.9 percent purity) annually and is the fourth-largest magnesium plant in the world. Utah magnesium production remained steady in 1996 while prices declined due primarily to increased foreign competition.

Beryllium. Utah continued to be the nation's leading producer of beryllium metal. Beryllium ore (bertrandite) is mined at Brush Wellman's Topaz mine in Juab County and processed with domestic and imported beryl at the company's plant a few miles north of Delta in Millard County. In 1996, more than 400,000 pounds of beryllium hydroxide were produced at the Delta plant and sent to the company-owned refinery and finishing plant in Ohio. Production of beryllium hydroxide in 1996 is projected to be similar to 1995 production. The demand for beryllium alloys and beryllium oxide has increased modestly over the past several years as alloys are being introduced into components for the automobile and electronics industries. The demand for beryllium metal has decreased as national defense requirements have declined.

Molybdenum. The sole molybdenum producer in Utah is Kennecott's Bingham Canyon mine, which will produce about 20,000 tons of molybdenum concentrate in 1996. The Bingham Canyon mine was one of only 10 molybdenum producers in the United States in 1995. Molybdenum is recovered as a byproduct from the milling operation. A continued strong demand for molybdenum is forecast for 1997.

Iron Ore. The only iron ore production in Utah is from Geneva Steel's operation west of Cedar City in Iron County. The ore is used in Geneva's steel-making facility at Vineyard, Utah County. In 1996, the company did not produce any iron ore. The change from an open-hearth process to the new Q-BOP process for steel making at the Geneva plant has increased the use of higher iron, lower silica-content taconite pellets from Minnesota, and decreased the use of lower iron-content ore from their Cedar City mine over the past several years. The process change has also decreased the use of limestone from the company's Utah County limestone quarry.

Gold. Gold production statewide in 1996 is estimated to be about 775,000 Troy ounces, 20,000 Troy ounces more than 1995. Gold is produced from four surface mines, three which are primary producers and one byproduct operation. In descending order of production they are: (1) Kennecott's Bingham Canyon mine, (2) Kennecott's Barneys Canyon mine, (3) American Barrick's Mercur mine, and (4) USMX's Goldstrike mine. North Lily Mining Company's North Lily mine-dump leach operation closed in 1996. In 1996, only one mine had an increase over 1995 production and three mines experienced a decrease in production. In 1995, the Bingham Canyon mine was the fourth-largest gold producer in the United States.

The Goldstrike mine in Washington County discontinued mining operations in 1994; however, a small amount of gold was recovered from active leach dumps before the mine closed in mid-1996. The Mercur mine in Tooele County will phase out its mining operation during the next several years due to reserve depletion and will produce at lower levels until mining and leaching are completed.

Silver. In 1996, silver production statewide is estimated at about 4.8 million Troy ounces, approximately 700,000 Troy ounces more than in 1995. Silver is produced as a secondary metal by all but one (Barneys Canyon mine) of the primary gold producers and as a byproduct metal by Kennecott's Bingham Canyon mine. Kennecott is by far the largest silver producer in the state.

Industrial Minerals. Industrial minerals continued to be an important contributor to Utah's mineral industry. Major commodities produced include:

- salt,
- magnesium chloride,
- potash (potassium chloride) and sulfate of potash (SOP),
- sand and gravel,
- crushed stone,
- Portland cement,
- lime,
- limestone,
- dolomite,
- phosphate,
- gilsonite,
- clay and bentonite, and
- gypsum.

Commodities produced in lesser amounts include fuller's earth, building stone, decorative stone, lightweight aggregate, masonry cement, and gemstones.

Salt, Magnesium Chloride, Potash (Potassium Chloride), and Sulfate of Potash. Salt and brine-derived products are the largest contributors to the value of industrial minerals in Utah. In addition to salt, other brine-derived products include magnesium chloride, potash (potassium chloride) and Sulphate of Potash (SOP).

The production of salt and brine-derived products statewide is estimated to be 3.1 million tons in 1996, the same as in 1995. Salt production alone is estimated to be 2.4 million tons in 1996, with most of the production coming from three operators using brine from Great Salt Lake. These operators are, in descending order of production: (1) GSL Minerals, Inc., (2) Morton Salt Company, and (3) Akzo Nobel Salt, Inc. In addition, three other companies produce salt and/or potash from operations not related to Great Salt Lake: (1) Reilly Chemical Company at Wendover in Tooele County, (2) Moab Salt

Company near Moab in Grand County, and (3) Redmond Clay and Salt Company near Redmond in Sanpete County (salt only). Potash is produced by two operators, Reilly Chemical Company and Moab Salt Company at their above-mentioned facilities. Potash production is estimated at nearly 175,000 tons in 1996, about 25,000 tons more than 1995 production. The production of salt and brine-derived products is expected to continue to expand over the next several years. GSL Minerals, the largest SOP producer in North America, plans to double production from the current level of 300,000 tons per year within the next five years. Potash production is expected to remain at its current level.

Sand and Gravel, and Crushed Stone. Sand and gravel, and crushed stone are the second-highest value industrial minerals produced in 1996. These materials are produced by commercial operators, and by state and county agencies in every county in Utah. Due to the large number and diversity of operators, companies are not sent Utah Geological Survey production questionnaires. However, data are compiled by the U.S. Geological Survey. The latest yearly production data show that in 1995 over 19.8 million tons of sand and gravel and 4.8 million tons of crushed stone were produced with a total value of $80.6 million. Mid-1996 data indicated that production has increased slightly above the mid-1995 level.

Portland Cement, Lime, Limestone, and Dolomite. Portland cement and lime were respectively the third- and fourth-highest value industrial minerals produced in 1996. Two operators produce Portland cement in Utah: Holnam, Inc. and Ash Grove Cement Company. Holnam's Devil's Slide plant is east of Morgan in Morgan County, and Ash Grove's Leamington plant is east of Lynndyl in Juab County. The two plants have a combined capacity of more than 1 million tons of cement annually.

Lime usage continues to expand. Continental Lime, Inc, which produces high-calcium lime, and Chemical Lime of Arizona, which produces dolomitic lime, are the two suppliers of calcined limestone (quick lime) and hydrated lime in Utah, with a combined capacity of more than 1 million tons per year. Both operations serve markets in Utah and surrounding states. Continental Lime's plant is located in the Cricket Mountains, approximately 35 miles southwest of Delta in Millard County, and is rated one of the 10 largest lime plants in the United States. Chemical Lime of Arizona's plant is located near Grantsville in Tooele County.

Two companies produced less than 100,000 tons of limestone in 1996. In descending order of production they are Cotter Corporation's Papoose mine in San Juan County and Emery Industrial Resources' Cherry Hill Park mine in Utah County. Limestone is used primarily for reducing flue-stack emissions in electric power generation plants, and for aggregate in the construction industry. This production compares to over 180,000 tons of limestone produced in 1995 by five operators. Three of the five operators who produced limestone in 1995 were idle in 1996.

Geneva Steel also produces about 200,000 tons of dolomite from a quarry located near the southeast end of Utah Lake in Utah County. The majority of the dolomite is used in the blast furnace operation at the Geneva plant while the remainder is crushed to a fine powder and marketed as "rock dust" for use as a coal-dust suppressant in underground coal mines.

Phosphate. Utah's only phosphate operation, SF Phosphates Limited Company's Vernal phosphate operation, is located 11 miles north of Vernal in Uintah County. SF Phosphates Limited is a partnership comprising Farmland Industries of Kansas City, Missouri and J. R. Simplot, Inc. of Boise, Idaho. The company mines roughly 2.5 million tons of ore annually, which is processed into about 1 million tons of concentrate and transported in slurry form to the company's Rock Springs, Wyoming fertilizer plant via a 90-mile-long, underground pipeline. The mine operates at a nearly constant annual rate since its product is used exclusively in its company-owned manufacturing facility. Production for 1996 is the highest in the past several years.

Gilsonite. Gilsonite production for 1996 is estimated at about 60,000 tons, the same as in 1995. Gilsonite is an unusual solid hydrocarbon which has been mined in Utah for more than 100 years. The three operations which produce gilsonite are all near the town of Bonanza in Uintah County. In descending order of production they are: (1) American Gilsonite Company's Bonanza mine, (2) Zeigler Chemical and Minerals Company's Zeigler mine, and (3) Lexco, Inc.'s Lexco mine. Gilsonite is used in over 150 products ranging from printing inks to explosives, and is marketed worldwide.

Clay and Bentonite. Nearly 180,000 tons of structural clay and over 40,000 tons of bentonite were produced by four companies in 1996. This represents a decrease from the nearly 300,000 tons of clay produced in 1995. Bentonite production was essentially the same as last year. In descending order of production the companies are: (1) Interstate Brick Company, (2) Redmond Clay and Salt Company, (3) Interpace Industries, and (4) Western Clay Company. ECDC Environmental LC, a major producer in 1994, did not produce clay in

1995 or 1996 due to stockpiled resources. Clay is used primarily in the manufacture of bricks and as a sealant for open-pit storage of drilling fluids and oil, heap-leach pads in the mining industry, irrigation ditches, and industrial- and municipal-waste landfills. Bentonite is used primarily as a drilling mud in the oil and gas industry, a pet-waste absorbent, and as a sealant in civil-engineering applications.

Gypsum. Nearly 360,000 tons of gypsum were produced by six companies in 1996, 60,000 tons more than 1995 production. In descending order of production they are: (1) U.S. Gypsum Company, (2) Georgia Pacific Corporation, (3) Thomas J. Peck & Sons, (4) D.K. Gypsum Industries, (5) H.E. Davis & Sons, Inc., and (6) Western Clay Company. In 1995, Georgia Pacific Corporation re-opened its wall-board plant, which had been idle since 1992, located near Sigurd in Sevier County. The majority of gypsum produced in Utah is used for making wall-board, but several small operators supply raw gypsum to regional cement companies where it is used as an additive to retard the setting time of cement, and to the agriculture industry for use in animal feed.

Factors Affecting Utah's Mining Industry

The creation of the Grand Staircase-Canyons of the Escalante National Monument in southern Utah makes the future of coal mining in the Kaiparowits Plateau doubtful. Although work is continuing on the environmental impact statement for Andalex Resources' Smoky Hollow mine, the future of the mine is uncertain. A management plan for the monument should be completed by the Bureau of Land Management (BLM) within three years which should clarify the status of mining within the monument.

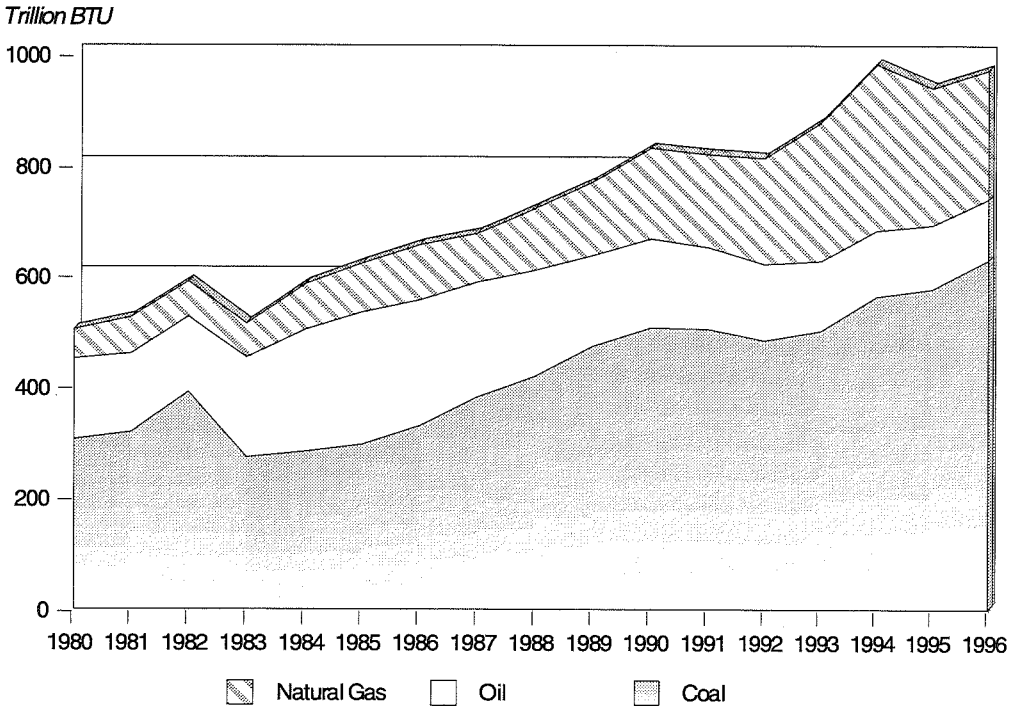
Utah may have two new copper mines in the near future. The BLM released the Draft Environmental Impact Statement for Summo Minerals' Lisbon Valley copper project in San Juan County. The BLM's "preferred alternative" is very similar to the mine plan proposed by Summo Minerals. The mine is predicted to produce over 30 million pounds of cathode copper per year over a ten-year mine life. A positive feasibility study has been completed for Centurion Mines Corporation's OK mine in Beaver County and work is progressing on detailed mine planning and permitting. If developed, the mine would produce about 8 million tons of cathode copper per year over a minimum four-year mine life from an open-pit, heap-leach, solvent-extraction operation.

Utah may also have a primary lead-zinc-silver operation. Continued drilling and exploration at the Burgin mine in Utah County by the joint venture of Chief Consolidated Mining, Akiko Gold Mining and Korean Zinc has increased reserves at the property. A preliminary feasibility study has been completed which estimates annual production levels at 4 million to 5 million ounces of silver, 100 million pounds of lead and 20 million pounds of zinc. In a related development, Chief Consolidated Mining Company has acquired South Standard Mining Company. The merged company has a large, consolidated land position in the Tintic and East Tintic districts which should encourage more efficient exploration and development activity.

Recent announcements suggest the possibility of a modest revival of the uranium industry in Utah. U.S. Energy Corporation filed an application to begin operation of the Shootaring Canyon uranium mill in Garfield County. Initial feed would be from stockpiled ore at the mill and the nearby Tony M mine with subsequent feed coming from other uranium mines in southeastern Utah. In addition, negotiations are continuing for the sale of Energy Fuels Nuclear which owns the White Mesa uranium mill near Blanding in San Juan County.

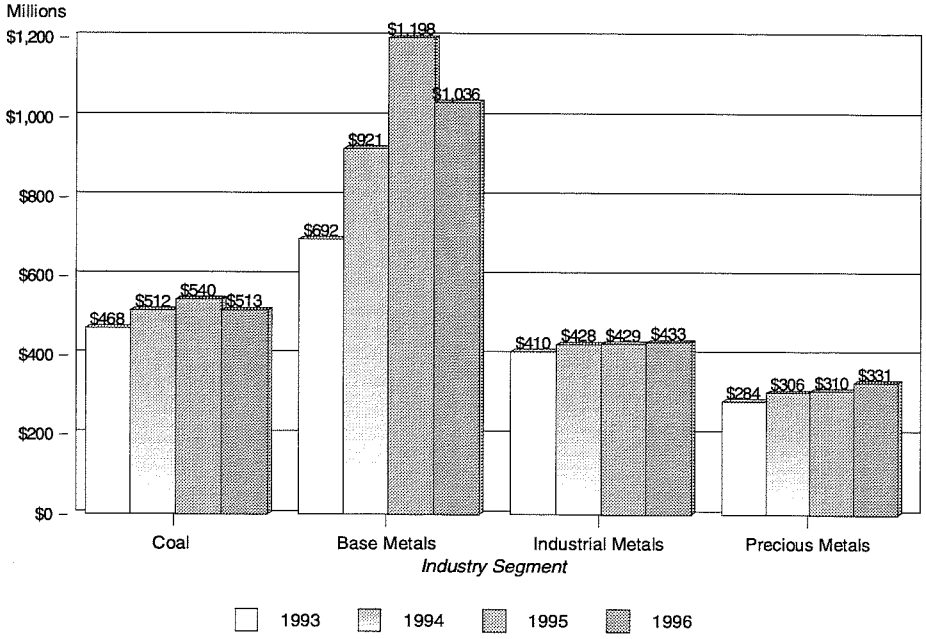
Uncertainty by mining companies about the status of the 1872 Mining Law and the future of Wilderness Study Areas (WSAs) continues to affect mineral exploration in Utah. Many companies are taking a cautious, wait-and-see attitude until these issues are resolved.

Figure 54
Utah Energy Production by Primary Source: 1980 to 1996



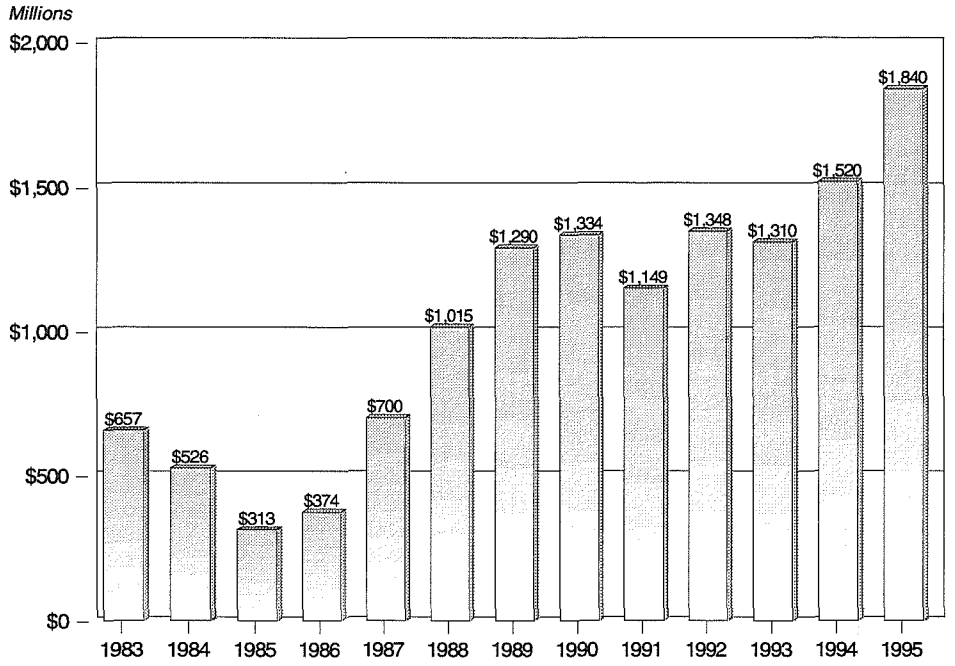
Source: Utah Office of Energy and Resource Planning.

Figure 55
Mineral Valuation--Gross Value Estimate: 1993 through 1996



Source: Utah Geological Survey.

Figure 56
Value of Nonfuel Minerals: 1983 through 1995



Source: Bureau of Mines.

Table 82
Supply and Disposition of Crude Oil (Thousand Barrels) in Utah: 1980 to 1996

	Supply			Disposition			
Year	Field Production	Colorado Imports	Wyoming Imports	Utah Crude Exports	Refinery Receipts	Refinery Inputs	Refinery Stocks
1980	24,979	15,846	12,233	8,232	45,516	45,599	665
1981	24,309	14,931	11,724	7,866	43,700	42,673	762
1982	23,595	13,911	12,033	7,826	41,246	40,368	614
1983	31,045	14,696	7,283	8,316	43,615	43,185	632
1984	38,054	13,045	6,195	13,616	43,672	43,746	607
1985	41,144	13,107	6,827	14,597	45,549	45,021	695
1986	39,244	12,567	7,574	15,721	45,132	45,034	559
1987	35,835	13,246	7,454	12,137	45,664	44,483	612
1988	33,346	12,783	14,739	8,411	48,882	47,618	599
1989	28,513	13,861	18,380	6,179	46,775	46,767	609
1990	27,693	14,494	18,844	7,725	49,104	48,985	656
1991	25,930	14,423	20,113	8,961	48,646	48,852	749
1992	24,075	13,262	21,949	6,901	50,079	49,776	513
1993	21,826	11,575	22,279	7,758	48,554	48,307	645
1994	20,662	10,480	26,227	8,048	48,802	48,506	806
1995	19,988	9,929	24,916	7,861	46,695	46,666	767
1996 (e)	19,188	9,714	25,611	8,061	44,815	44,684	798

(e) = estimate

Source: Energy Data Information System, Utah Office of Energy and Resource Planning.

Table 83
Supply and Consumption of Petroleum Products (Thousand Gallons) in Utah: 1980 to 1996

	Supply			Consumption by Product					
Year	Refined in Utah	Imports	Refinery Stocks	Motor Fuel	Aviation Fuel	Distillates	Other	Total	Exports
1980	1,694,260	313,903	93,954	652,428	116,592	357,126	390,600	1,516,746	929,710
1981	1,617,812	367,721	89,754	653,016	107,688	304,626	232,890	1,298,220	992,451
1982	1,508,690	434,236	92,778	663,306	120,834	278,460	227,430	1,290,030	929,006
1983	1,790,822	340,139	77,746	670,068	142,254	270,690	278,670	1,361,682	1,062,499
1984	1,651,342	422,376	83,244	678,342	146,622	291,606	268,338	1,384,908	1,013,079
1985	1,765,248	394,479	80,430	681,912	163,884	250,824	251,874	1,348,494	981,323
1986	1,776,367	337,091	78,246	736,722	186,690	308,112	234,570	1,466,094	839,288
1987	1,797,929	349,466	66,402	749,784	212,856	285,516	245,616	1,493,772	870,198
1988	1,918,644	361,879	75,936	763,224	213,738	308,826	244,776	1,530,564	979,726
1989	1,913,310	393,766	91,980	726,726	218,442	259,980	272,412	1,477,560	937,692
1990	1,929,270	503,917	72,786	698,376	226,254	308,784	252,546	1,485,960	1,069,984
1991	1,593,121	477,078	76,566	721,812	253,470	327,852	277,200	1,580,334	1,105,248
1992	1,931,817	442,428	67,998	752,178	241,080	338,772	245,910	1,577,940	1,105,889
1993	1,948,257	449,694	71,064	790,902	236,544	336,378	242,424	1,606,248	1,024,397
1994	1,919,848	485,310	90,426	816,480	225,036	353,220	250,824	1,645,560	1,153,457
1995	1,949,717	516,138	84,630	857,304	236,288	370,881	263,365	1,727,838	861,490
1996(e)	1,947,795	529,032	72,414	900,169	248,102	389,425	276,533	1,814,230	824,789

(e) = estimate

Source: Energy Data Information System, Utah Office of Energy and Resource Planning.

Table 84
Supply and Consumption of Natural Gas (Million Cubic Feet) in Utah: 1980 to 1996

	Supply			Consumption by End-Use					
Year	Gross Production	Lease Use	Net Production	Residential	Commercial	Industrial	Electric Utilities	Other	Total
1980	87,766	39,909	47,857	40,578	17,391	43,545	5,133	8,445	115,092
1981	90,936	32,071	58,865	38,592	16,540	42,779	3,087	1,232	102,230
1982	100,628	44,260	56,368	47,452	20,336	39,804	3,023	7,091	117,706
1983	96,933	42,233	54,700	44,047	18,877	40,246	1,259	5,756	110,185
1984	183,062	109,908	73,154	44,246	18,962	42,709	271	9,390	115,578
1985	208,803	129,897	78,906	47,062	20,170	37,448	235	10,202	115,117
1986	239,411	148,375	91,036	13,603	18,687	28,264	230	14,391	75,175
1987	262,045	165,685	96,360	41,536	14,811	23,884	263	18,493	98,987
1988	278,463	176,538	101,925	42,241	17,911	30,365	196	18,251	108,964
1989	278,437	157,992	120,445	45,168	16,522	33,963	636	17,248	113,537
1990	323,151	173,757	149,394	43,424	16,220	35,502	907	20,594	116,647
1991	329,470	179,175	150,295	50,572	19,276	43,120	5,190	14,602	132,760
1992	317,755	143,904	173,851	44,701	16,584	40,878	6,576	13,895	122,634
1993	337,852	110,781	227,071	51,779	22,588	42,301	6,305	15,039	138,012
1994	347,832	76,161	271,671	48,922	26,501	36,618	8,900	16,080	137,021
1995	303,233	18,520	222,770	48,975	26,857	42,434	8,707	16,080	143,053
1996 (e)	274,544	21,620	209,371	52,904	28,942	40,426	2,972	16,080	141,588

(e) = estimate

Source: Energy Data Information System, Utah Office of Energy and Resource Planning.

Table 85
Oil and Natural Gas Development in Utah: 1980 to 1996

Year	Drilling Permits	Average Active Rotary Rigs	Wells Completions Oil	Gas	Dry	Total
1980	523	43	71	99	140	310
1981	678	68	199	168	205	572
1982	664	41	172	136	156	464
1983	588	36	167	110	150	427
1984	622	46	228	80	141	449
1985	392	28	201	71	102	374
1986	219	13	109	53	57	219
1987	195	8	55	24	46	125
1988	165	6	62	27	44	133
1989	97	5	44	16	23	83
1990	252	5	49	16	28	93
1991	402	11	80	92	37	209
1992	372	13	62	177	48	287
1993	171	6	63	131	28	222
1994	307	7	56	81	28	165
1995	307	7	143	56	29	228
1996 (e)	354	7	161	30	39	230

(e) = estimate

Source: Energy Data Information System, Utah Office of Energy and Resource Planning.

Table 86
Supply and Consumption of Coal (Thousand Short Tons) in Utah: 1980 to 1996

Year	Supply: Utah Production	Marketed Production	Imports	Exports	Consumption by End-Use: Residential & Commercial	Coke Plants	Industrial	Electric Utilities	Total
1980	13,236	13,014	1,215	6,728	237	1,528	446	4,895	7,106
1981	13,808	14,627	1,136	8,764	196	1,567	714	4,956	7,433
1982	16,912	15,397	797	8,261	177	841	822	4,947	6,787
1983	11,829	12,188	937	6,133	191	839	629	5,223	6,882
1984	12,259	12,074	1,539	6,432	259	1,386	548	5,712	7,905
1985	12,831	14,361	1,580	6,549	252	1,288	438	6,325	8,303
1986	14,269	13,243	1,145	5,366	191	814	351	6,756	8,112
1987	16,521	16,989	1,165	5,633	123	231	276	11,175	11,805
1988	18,164	18,244	2,448	5,925	196	1,184	589	12,544	14,513
1989	20,517	20,289	2,367	7,283	231	1,178	686	12,949	15,044
1990	22,012	21,680	2,137	7,467	181	1,318	676	13,563	15,738
1991	21,875	21,673	2,007	7,954	320	1,310	535	12,829	14,994
1992	21,015	21,339	2,155	8,332	347	1,182	497	13,136	15,162
1993	21,723	21,935	2,100	8,761	228	1,089	614	13,343	15,274
1994	24,422	23,441	2,588	10,188	157	1,198	647	13,839	15,841
1995	25,051	25,443	1,841	12,848	182	1,062	642	12,550	14,436
1996 (e)	27,338	28,207	2,110	15,961	100	1,060	672	12,524	14,356

(e) = estimate

Source: F.R. Djahanbani, Utah Office of Energy and Resource Planning.

Table 87
Energy Prices in Utah: 1980 to 1996

Year	Field Price (dollars per unit) Coal (tons)	Crude Oil (barrels)	Natural Gas (MCF)	Average End-Use Price (dollars per unit) Coal (tons)	Electricity (Kwh)	Petroleum Products No. 2 Distillate (gallons)	Motor Fuel (gallons)	Aviation Fuel (gallons)	Natural Gas (MCF)
1980	$25.63	$19.79	$1.86	$29.63	$0.05	--	--	--	$2.97
1981	26.87	34.14	1.87	32.79	0.05	--	--	--	3.27
1982	29.42	30.50	2.47	33.38	0.05	--	--	--	3.03
1983	28.32	28.12	2.56	30.64	0.05	0.83	0.86	--	3.82
1984	29.20	27.21	3.16	30.64	0.06	0.85	0.82	--	4.66
1985	27.69	23.98	3.23	32.34	0.07	0.80	0.81	0.84	4.27
1986	27.64	13.33	2.90	32.32	0.07	0.50	0.53	0.55	3.88
1987	25.67	17.22	1.80	30.95	0.07	0.63	0.58	0.57	4.43
1988	22.85	14.24	1.70	29.50	0.06	0.52	0.56	0.53	4.21
1989	22.01	18.63	1.61	28.05	0.06	0.63	0.65	0.63	4.29
1990	21.78	22.61	1.70	26.80	0.06	0.73	0.75	0.80	4.48
1991	21.56	19.99	1.54	27.40	0.05	0.65	0.68	0.77	4.47
1992	21.83	19.44	1.63	27.54	0.05	0.65	0.69	0.74	4.46
1993	21.17	16.25	1.85	27.34	0.05	0.68	0.64	0.71	4.24
1994	20.07	16.13	1.53	26.10	0.05	0.61	0.60	0.67	3.81
1995	19.11	17.10	1.14	25.27	0.05	0.65	0.63	0.70	3.53
1996 (e)	$18.75	$19.90	$1.35	$24.50	$0.05	$0.74	$0.74	$0.81	$3.81

(e) = estimate

Source: Energy Data Information System, Utah Office of Energy and Resource Planning.

Table 88
Supply and Consumption of Electricity (Gigawatthours) in Utah: 1980 to 1996

Year	Supply Fossil Fuel	Hydro	Other	Total	Consumption by End-Use Residential	Commercial	Industrial	Other	Total
1980	11,291	823	-	12,114	3,293	3,569	3,800	512	11,174
1981	11,139	623	-	11,762	3,476	3,909	3,930	530	11,845
1982	10,867	1,024	-	11,891	3,630	3,033	4,610	745	12,018
1983	11,030	1,394	-	12,424	3,678	3,375	4,786	769	12,608
1984	12,359	1,391	38	13,788	3,825	3,935	4,656	950	13,366
1985	14,283	1,019	109	15,411	3,996	4,272	4,663	658	13,589
1986	15,235	1,413	171	16,819	3,984	4,262	4,583	662	13,491
1987	25,326	856	164	26,346	3,991	4,127	4,570	784	13,472
1988	28,870	593	174	29,637	4,186	4,356	5,259	765	14,566
1989	29,761	562	173	30,496	4,134	4,365	5,622	782	14,902
1990	31,622	486	152	32,260	4,188	4,713	5,553	772	15,225
1991	29,368	604	186	30,160	4,458	5,009	5,674	722	15,862
1992	32,155	580	186	32,921	4,458	5,170	6,085	668	16,381
1993	32,494	818	148	33,461	4,687	5,130	6,093	921	16,831
1994	33,544	716	195	34,455	5,031	5,561	6,322	945	17,860
1995	31,036	926	140	32,101	5,056	5,503	7,018	781	18,358
1996 (e)	29,459	1,211	275	30,945	5,458	6,109	7,522	943	20,026

(e) = estimate

Source: Energy Data Information System, Utah Office of Energy and Resource Planning.

Table 89
Energy Employment in Utah: 1980 to 1996

Year	Uranium	Coal	Oil/Gas Production	Petroleum Refineries	Petroleum Distribution	Electricity	Natural Gas Distribution	Total
1980	1,532	--	4,519	879	2,075	3,777	2,863	--
1981	1,471	4,166	5,915	939	2,363	3,948	2,769	21,571
1982	1,113	4,296	5,401	875	2,302	4,163	2,960	21,110
1983	744	2,707	4,493	859	2,236	4,249	2,992	18,280
1984	376	1,525	3,962	811	1,952	4,736	2,809	16,171
1985	281	2,563	3,845	816	1,997	5,031	2,451	16,984
1986	353	2,881	2,426	794	1,933	5,262	2,360	16,009
1987	344	2,650	1,903	778	1,677	5,046	2,308	14,706
1988	290	2,559	2,023	788	1,418	4,687	2,279	14,044
1989	261	2,471	1,891	826	1,452	4,592	2,233	13,726
1990	235	2,791	2,138	897	1,371	4,452	2,238	14,122
1991	96	2,292	2,451	905	1,390	4,386	2,243	13,764
1992	91	2,106	2,455	843	1,379	4,172	2,212	13,257
1993	44	2,161	3,600	1,013	1,298	4,168	2,262	14,545
1994	66	2,024	2,338	997	1,248	4,232	2,342	13,247
1995	110	1,989	2,234	940	1,228	4,161	2,245	12,906
1996 (e)	47	2,013	1,945	949	1,180	4,015	2,373	12,523

(e) = estimate

Sources: Energy Data Information System, Utah Office of Energy and Resource Planning. Coal employment: F.R. Djahanbani, Utah Office of Energy and Resource Planning.

Activity in Utah's High Technology Sector: 1986 to 1995

In 1986, the Bureau of Economic and Business Research (BEBR) at the University of Utah began tracking Utah's high technology sector. The primary objectives of the original study were: (1) to identify those companies which comprised the high tech sector, (2) to identify the individual high tech subsectors, and (3) to monitor changes and trends within each research subsector.

Defining High Technology

The term ``high technology" carries a considerable degree of ambiguity. In concept, it defines companies that are actively engaged in the research process and in the non-routine production of prototypes and specialty products. The term "high technology" does not include companies whose work force is primarily engaged in the production of high-tech goods, the result of which is often a low-paid, low-skilled labor force.

Operationally, high technology companies can be defined as those enterprises that have proportionally higher scientific, technical, and engineering workers than other enterprises in the same industry. In 1982, the average proportion of technology-oriented workers was 6.3 percent.[1]

Another standard criterion for defining high tech is the level of financial commitment for research and development. Generally this determination is made by evaluating research and development spending as a proportion of total net sales. The average proportion of R&D spending as a proportion of net sales in 1980 was 3.1 percent. Therefore, companies which have higher than average levels of R&D spending proportionate to net sales are defined as high technology.[2]

The Bureau of Economic and Business Research has combined both of the above-described criteria to define high technology. Using BEBR's definition, companies must have, as a proportion of total work force, more than 6.3 percent of its workers in technical, scientific, or engineering positions *and* spend the equivalent of more than 3.1 percent of its net sales for research and development activities. Therefore, BEBR's definition may be less inclusive than that used by other organizations.

[1] Eisinger, Peter K. *The Rise of the Entrepreneurial State: State and Local Economic Development Policy*. University of Wisconsin Press, Madison, Wisconsin.

[2] Bureau of Labor Statistics, *Monthly Labor Review*, November 1983.

High Tech in Utah—1995

Utah has developed a remarkably solid high tech base over the past ten years. By year-end 1995, 473 high technology companies employing 40,603 workers were located throughout the state (Table 1). The majority of these companies are privately-held, headquartered in Utah, and located along the Wasatch Front. Most employ fewer than 25 people.

The largest research area, in terms of employment, is software with 9,549 workers. Aerospace is the second largest area (6,797), followed by electronics (4,417), biomedical/medical products (4,383) and automotive products (4,250). In terms of establishments, the software subsector is the largest with 224 companies.

Total employment grew steadily from 1986 through 1990 when it peaked at 43,482. A slight decline occurred in 1991 as the result of employment losses in aerospace and composite materials. Despite further reductions in aerospace and a rapidly eroding electronics subsector, strong growth in software helped push employment back into the 43,000-worker range in 1992.

Employment in the software subsector peaked in 1992, and started to decline in 1993. Although software employment remained stable in 1994, a large drop in 1995 contributed significantly to the high tech sector's overall employment decline in 1995.

Only two areas in the high tech sector have posted employment increases during each of the past nine years—automotive products and pharmaceuticals. The combined employment increases in these two research areas since 1986 topped 5,000.

High Tech History, 1986 to 1995

Comparative characteristics of Utah's high tech companies for 1986 and 1995 appear in Table 2. As the table shows, the nature of high tech in Utah has changed considerably since 1986; primarily with regard to subsector employment concentrations. Other changes include a decline in the number of companies with fewer than 25 employees and a modest drop in the number of companies headquartered in Utah.

Changes in Employment Concentrations

From 1986 through 1988, fully one-third of all high tech employment in Utah was concentrated in the

aerospace subsector. Table 3 lists 15 of the principal high tech sectors where companies are operating in Utah, as defined by the BEBR criteria. Ranging from the low hundreds to thousands of employees, the 1995 total was 40,603. Employment declines in aerospace that started in 1989 have continued unabated, resulting in a net loss of 7,310 jobs since 1986. A small portion of the employment loss was the result of reclassification and reporting changes. In 1986, the employees of both Hercules and Morton Thiokol were accounted for in the aerospace subsector employment base. In 1990, Hercules separated its composite activities from its aerospace activities with a resultant drop in aerospace employment and a dramatic increase in employment in the composite materials subsector. On a much smaller scale the same situation occurred in 1989 when Morton Thiokol split its activities, forming two separate companies—Morton International and Thiokol Corporation. A portion of the employment reported by Morton Thiokol in the aerospace subsector was allocated to the automotive subsector after the division.

While reclassifications account for part of the job loss in the aerospace sector, most of the losses have been the result of cutbacks in defense-related activity. Taking into consideration the employment reclassifications described above, jobs lost in the aerospace subsector since 1986 total nearly 6,000 workers.

High Tech Grows Up

Utah's high tech companies are getting larger. Between 1986 and 1995, the number of companies with fewer than 25 employees dropped from 74.2 percent of the total to 63.2 percent of the total. This change occurred largely because of activity in the software subsector. In 1986, 84.4 percent, or 163 of 193 software companies had fewer than 25 employees. By year-end 1995, although there were more software companies doing business in Utah, only 73.0 percent employed fewer than 25 people.

High Tech Is Home Grown

The vast majority (87.8 percent) of Utah's high tech companies are home grown; that is, they were founded in Utah and have their headquarters here. Even so, the number of high tech companies headquartered in Utah has dropped slightly since 1986 due to national expansions of large companies located outside of Utah. Most of these expansions involved the purchase of an existing Utah-based firm. Only a small portion of this change was the result of non-Utah company relocations.

Aerospace—Hampered by Defense Cutbacks

Beginning in 1987, downsizing and restructuring of the nation's military resulted in defense spending cutbacks especially weapons procurement and missile technology. In 1986, Utah defense contractors received $1.6 billion in procurement awards. By 1994, total procurement awards dropped to $587,195. During this period, weapons procurement dropped nearly two-thirds. Procurement awards for the missile defense program declined significantly, affecting a large number of defense contractors, including Hercules and Thiokol.

Despite substantial downsizing, aerospace continues to be an important component of high tech activities in Utah. Despite the loss of nearly 6,000 employees since 1986, aerospace is still the second largest subsector within the high tech sector. A positive aspect in the structural shift away from defense has been to broaden Utah's high tech base, leaving it less susceptible to economic downturns created by shifts in defense policy.

Electronics

In 1986, Utah's electronics subsector was dominated by three large manufacturing divisions of national firms headquartered outside of Utah, Signetics (1,600 workers), National Semiconductor (1,020 workers), and Varian (750 workers). Although 49 companies were active in the area, these three firms accounted for slightly more than 54 percent of the total reported employment. Activities underway at Signetics and National Semiconductor involved the design and manufacture of semiconductors and wafer fabrication. Between 1986 and 1990, employment in electronics remained strong. However, events that began in 1985 eventually took a toll on the electronics sector.

In 1985 the U.S. electronics industry entered an era of heightened foreign competition, aggressive pricing and shorter product life cycles. Price wars split the industry in two, driving many U.S. companies out of the mass-production end of the memory chip business and forcing them to concentrate on higher value-added chips such as microprocessors.[1]

The development focus of Utah's high tech electronics firms insulated them from accelerated employment declines in the short-term; hence the stability in the electronics subsector up to 1990. However, a massive oversupply of memory chips relative to demand forced both Signetics and National Semiconductor to reduce their Utah work

[1] *The Economist Newspaper*, Ltd. March 23, U.S. edition.

forces beginning in 1991. Subsequently, employment in electronics dropped to 5,686 by year end 1991. A further blow occurred in Spring 1992 when Signetics announced the closure of its Utah facility. Activities formerly undertaken in Utah were transferred to non-Utah plants.

The loss of the Signetics plant, combined with the lassitude of the electronics industry in general, resulted in further erosion of the electronics subsector. By year-end 1995, electronics employment was 4,417; representing a cumulative job loss of 1,802 workers and its lowest point since 1986.

A chronology of the establishment of high tech electronics companies in Utah shows that there have been no major start-ups or relocations during the past nine years. The most promising boost occurred in 1995 when Micron Technologies, America's largest memory chip producer, announced the construction of a $2.5 billion fabrication plant in Lehi, Utah. Unfortunately, plans to bring the facility on line were postponed early in 1996 due to plunging prices for memory chips. At present, Micron's plans for the new plant are uncertain.

Software—A Rapidly Maturing Industry

Compensating for losses in the aerospace and electronics subsectors has been dramatic growth in software. In 1980 the personal computer software industry was in its infancy. Fewer than 400 people were employed in the development of software products and systems. The introduction of IBM's personal computer in 1981 spearheaded a veritable revolution throughout the computer industry. By the mid-1980s, demand for software applications products and networking capabilities for the personal computer fueled the creation of a large and growing industry both nationally and locally.

In Utah, employment in the software/systems subsector jumped to slightly more than 5,200 workers by 1986. The largest single employer was Unisys, a developer of hardware and software applications for mainframe computers. Wicat was the second largest employer in the subsector with approximately 600 employees, followed by Novell (372) and WordPerfect (360).

As the decade of the 1980s progressed, demand for software products reached unprecedented levels and the industry evolved from a fragmented group of companies to one dominated by a few large software firms. Two of those large firms—WordPerfect Corporation and Novell, Inc.—were located in Utah. By 1990, of the 8,895 workers employed by Utah software companies, over 40 percent worked for WordPerfect or Novell.

Although the major markets for business applications software products (word processing, databases and spreadsheets) were controlled by a few firms, niche markets existed for specialty products and computer games. Many of Utah's software companies were developing applications for these markets. Two factors contributed to the plethora of software activity in Utah. First, the role model provided by Novell and WordPerfect was a strong incentive for small, emerging companies to continue developing potential blockbuster software products. Second, the barriers to entry in the software field are low in terms of capital and facility requirements while the potential profits can be extremely high.

By year-end 1992, software displaced aerospace as the state's top high tech subsector with employment topping 11,200 people. The dominant position enjoyed by WordPerfect and Novell continued; almost 54 percent of all software employment was concentrated in these two firms.

In response to mounting competition throughout the software industry, Novell announced its intention to purchase WordPerfect Corporation in February 1994. Consolidation and subsequent restructuring resulted in employment losses totaling almost 2,000 jobs. By the end of 1995 employment in the software subsector as a whole was 9,549 people.

In January 1996, Novell announced the sale of its WordPerfect division to Corel Corporation of Canada. Corel presently leases buildings from Novell and employs approximately 800 workers in Utah. Corel's plans for its Utah work force are not known. Industry analysts expect that Novell's Utah work force will stabilize at approximately 2,500 workers.

Biomedical Products—Steady and Stable

The biomedical/medical products subsector is a well-established part of Utah's economy and one of the most stable components of the high tech sector. Broadly defined, the biomedical/medical subsector consists primarily of companies that design and manufacture medical equipment and supplies. The majority of these companies were founded by Utah entrepreneurs. Many are spin-offs of technology developed at the University of Utah.

The roots of Utah's medical/biomedical sector began in 1956 with the formation of Deseret Pharmaceutical Corporation (now Becton Dickinson), one of the first medical device manufacturing companies in the western U.S. The impact on the biomedical/medical sector of this

company was impressive. At least 14 Utah-based medical supply or services firms can trace their beginnings to Deseret Pharmaceutical.

Throughout the 1960s and early 1970s growth in the state's medical/biomedical sector was slow. In the mid-1970s, rapid expansion in national health care expenditures created significant opportunities for medical manufacturers. It was during this period that many of the existing high tech medical/biomedical companies were formed and the overall technological base broadened. Companies such as Hyclone Labs and Iomed, Inc. made their entrance, moving Utah's medical industry into highly specialized areas of medical research.

By 1986, approximately 3,700 people were employed by one of the 58 high tech biomedical/medical products companies. Spurred by demand for medical devices, many of Utah's medical/biomedical companies focused on new developments in medical instruments and surgical appliances.

Since 1989, employment in the medical/biomedical subsector has exceeded 4,300 workers annually with two exceptions. In 1991, one large medical supply manufacturer ceased R&D operations at its Utah facility. This company was dropped from the high tech base, although it is still an active manufacturing concern in Utah. In 1993, the culmination of small employment drops at several biomedical companies resulted in employment dropping to about 3,800 workers. At present, the largest employers in the subsector are Becton Dickinson (950), Ballard Medical (700), and Merit Medical Systems (480).

A growing component of the biomedical/medical subsector is genetics. One of the most impressive emerging genetics companies is Myriad Genetics. Founded in 1991 using technology developed at the University of Utah and Howard Hughes Medical Institute, Myriad Genetics has received national recognition for its research activities in gene discovery.

Automotive Products—New Growth Industry

A notable addition to Utah's high tech sector is automotive products. The automotive products subsector was virtually nonexistent until the Morton Thiokol Corporation split in 1989. As a result of the split, Morton International established an automotive safety products facility in Utah to develop and manufacture automotive airbags.

Strong demand for airbags has fueled employment growth in this subsector for the past ten years. By the end of 1995, employment in automotive products totaled 4,250, making it the fifth largest subsector in Utah's high tech base. The largest company in the subsector is Morton International with almost 4,000 employees. At present, Morton International is considered the world's leading manufacturer of automotive airbag inflators and modules with 40 percent to 45 percent of the U.S. market.

High Tech Sector Outlook

Overall employment in the high tech sector is expected to range between 40,500 and 41,800 workers over the next two years. Obstacles to growth will continue to come from the software subsector and, to a lesser degree, aerospace and electronics.

Growth in Utah's software subsector likely peaked in 1992 prior to the Novell/WordPerfect merger. The subsequent sale of the WordPerfect division to Corel, a non-Utah based software company, has done little to revitalize this industry. Nationally, the software industry is maturing rapidly. Employment growth in Utah's software subsector could come from expansion in smaller software firms that develop highly specialized products for niche markets. Major expansions at the larger software companies in Utah is not likely.

Aerospace employment is at its lowest point in nine years and could post further employment declines over the next two years in light of federal budget reductions and industry restructuring. Federal money, particularly for defense and NASA activities, is an important source of revenue for Utah's aerospace companies. These funds are becoming more scarce and Utah's aerospace companies will continue to face uncertainties in the short term.

Likewise, in the absence of memory chip price stabilization, little employment growth is expected in the electronics subsector. The memory chip market is highly volatile partly because demand for chips can change rapidly and facilities to manufacture chips require huge capital investments and can take more than a year to build. If memory chip prices increase and Micron completes its fabrication plant, the electronics sector may see significant improvement.

Areas that should either remain stable or grow over the next two years include biomedical/medical products and automotive products.

In large part, the driving force behind growth in Utah's biomedical/medical activities has been escalating health care costs. In response to growing concerns by consumer advocacy groups and others who monitor health care costs, health care providers

are becoming more cost conscious. The effect of these factors on Utah biomedical/medical companies was a general slowdown in economic activity in this sector. However, at the national level, medical equipment and supplies has been one of the best-performing U.S. industries and is expected to grow steadily at an average annual rate of between 8 percent and 9 percent through 1998. Aging populations in the U.S. and the export markets of Japan and Western Europe will be the main influences in demand for medical products. Utah's biomedical/medical companies are well-established and positioned to provide products and services to meet these growing demands. Based on Utah's mix of biomedical/medical product suppliers, this subsector may experience growth of between 3 percent and 4 percent over the next two years.[1]

The area of Utah's high tech sector that is projected to grow most rapidly over the next few years is automotive products; specifically airbags and related products.

Utah's automotive products subsector is dominated by the production of airbag systems; primarily at one company—Morton Automotive Safety Products. Once considered a specialty item, airbags are now a basic commodity. An estimated 57 million airbags valued at $5.1 billion will be installed in automobiles worldwide by the end of 1996. By 2005, the number of airbags installed will climb to 148 million; however industry revenues are expected to fall to $3.7 billion. At the same time that profits are falling, companies are facing some major challenges such as rapid price declines, environmental issues regarding the use of sodium azide as an airbag propellant, manufacturing safety of inflator products and rapid adaptation of airbag technologies in Europe and Asia-Pacific.[2]

Established airbag vendors, such as Morton Automotive Safety Products, will be forced to manage the shift to a more cost-conscious, technology-driven future. Since its inception, Morton Automotive Safety Products has proven its ability to adapt to the changing airbag market and should continue to expand its Utah-based activities in order to meet world demand.

Conclusion

Given its size relative to the states with recognized concentrations of high tech activity, Utah is extremely fortunate to have such a diverse, well-established high tech sector. It has also been surprisingly stable in light of some extreme negative economic pressures. Given Utah's present mix of high tech firms and the challenges facing companies in the larger subsectors, it is anticipated that employment growth in the sector as a whole could range from 2 percent to 3 percent over the next two years.

[1] *Corporate Growth Report* (Weekly), ABI/Inform, June 10, 1996.

[2] Autofacts International Inc., *The Global Airbag Market 1996-2005*.

Table 90
Characteristics of Utah's High Tech Sector: 1986 and 1995

Research Sector	1986 Employment	1986 Number of Companies	1995 Employment	1995 Number of Companies
Aerospace Components	14,107	15	6,797	11
Analytical/Measuring Devices	386	24	532	23
Automotive Products	130	5	4,250	7
Biomedical/Medical Products	3,776	53	4,383	44
Chemicals	452	14	669	14
Communication Products	2,779	28	2,408	25
Composite Materials	147	4	384	6
Computers/Peripherals	2,308	28	3,320	27
Electronic Components	6,219	49	4,417	36
Equipment/Machinery	1,691	22	1,833	21
Lasers/Optics	271	5	195	10
Pharmaceuticals	209	11	1,141	8
Agricultural Products	205	3	na	na
Robotics	51	4	na	na
Software Systems	5,252	193	9,549	224
Other	221	12	725	15
Total	38,204	470	40,603	471

na= not available

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data, 1996.

Table 91
Comparative Characteristics of Utah's High Tech Companies: 1986 and 1995

Category (Number)	1986	Percent of Total	1995	Percent of Total
High tech companies	470	100.0%	471	100.0%
Located along the Wasatch Front (Utah, Salt Lake, Davis, Weber)	422	90.5%	424	91.1%
Headquartered in Utah	424	90.2%	414	87.8%
Privately-held	na	na	372	80.0%
Employing fewer than 25 people	349	74.2%	298	63.2%

na= not available

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data, 1996.

Table 92
Employment Trends in Utah's High Tech Sectors: Selected Years

Research Sector	1986	1989	1992	1995
Aerospace Components	14,107	12,545	9,361	6,797
Analytical/Measuring Devices	386	474	488	532
Automotive Products	130	468	2,817	4,250
Biomedical/Medical Products	3,776	4,354	4,137	4,383
Chemicals	452	460	590	669
Communication Products	2,779	2,558	2,220	2,408
Composite Materials	147	142	682	384
Computers/Peripherals	2,308	2,877	3,194	3,320
Electronic Components	6,219	6,939	5,013	4,417
Equipment/Machinery	1,691	1,834	1,956	1,833
Lasers/Optics	271	321	300	195
Pharmaceuticals	209	427	593	1,141
Agricultural Products	205	185	70	na
Robotics	51	61	57	na
Software Systems	5,252	7,883	11,270	9,549
Other	221	225	353	725
Total	38,204	41,753	43,101	40,603

na= not available

Source: Bureau of Economic and Business Research, David Eccles School of Business, University of Utah, unpublished data, 1996.

Tourism, Travel, and Recreation

Overview

The tourism, travel, and recreation industry contributes significantly to the economic and social well-being of the world, national, and state economies. The WEFA Group (international economic consultants) estimates that travel and tourism accounts for 11 percent of the world GDP and is directly or indirectly responsible for more than one in every ten jobs worldwide. Nationally, domestic and international travelers will generate approximately $433 billion in receipts in 1996 and account for nearly 16 million tourism-related jobs, just over 13 percent of all U.S. nonagricultural employment.[1]

The World Tourism Organization defines the travel and tourism industry as the activities of persons traveling and staying in places outside their usual environment. The travel may be for virtually any purpose but is generally limited to a length of stay of less than one year. The "usual environment" is meant to exclude regular commuting between home and work or other frequently-visited places.

Measurement of the travel and tourism industry is difficult since it is not considered an industry in the traditional sense. Rather, travel and tourism is a combination of several major industries that provide goods and services demanded when traveling away from home. These industries include entertainment, recreation, restaurants, accommodations, retail trade, and transportation services. Additionally, the tourism industry crosses most, if not all, industry lines with construction, manufacturing, services, government, public utilities, real estate, and agriculture. The fact that these goods and services are produced and consumed by both travelers and non-travelers further complicates the measurement task.

Tourism in Utah

Diversity is critical to Utah tourism industry's. The state has five national parks, seven national monuments, seven national forests, two national recreation areas, and a significant national historic site. These nationally-designated attractions are complemented by 45 state parks featuring scenery, recreation, and history. In addition, millions of acres of BLM-administered deserts and rangelands contribute greatly to Utah's "wide open spaces." In an era when open space has become a major concern, the state still provides opportunities for the tourist to experience the vast emptiness and solitude of the West, with the comforts of cities and towns close by. Other attractions which contribute to making Utah a desirable destination include the following:

- The Great Salt Lake
- Numerous historic and prehistoric sites and Native American cultures
- Mountains, deserts, rivers, and diverse geological formations
- Significant paleontological attractions
- Abundant wildlife and wilderness
- Local festivals such as the Shakespearean Festival and Festival of the American West
- LDS Temple Square and Family History Library
- Unique local culture
- Western history emphasizing the "pioneer spirit," banditry, the silver boom, etc.
- Professional sports including NBA basketball, Triple-A baseball, IHL hockey, and World Cup skiing
- Fine arts events and entertainment
- Fourteen ski resorts
- Major metropolitan areas and convention facilities

Economic Impact

The travel and tourism industry continues to be one of the largest and most important economic activities in the state. Since travel and tourism includes portions of activities from other industries, it is difficult to rank it in terms of its economic importance. Given those limitations, however, travel and tourism can be considered one of the top five economic activities, along with trade, services, manufacturing, and government.

In 1996, travelers spent approximately $3.8 billion which translated into $276 million in state and local taxes. Growth in traveler spending increased 7 percent and outpaced the 2.8 percent growth in travel spending nationwide. The travel and tourism industry provided employment for 91,000 workers, an impressive 7.7 increase over last year. In Utah, travel and tourism represents nearly 9.5 percent of the economy in terms of revenue and employment. Additionally, tourism-related employment and wages increased at a faster rate than overall state employment and wages in 1996, another indication of tourism's increasing importance in the state.

[1] Tourism Industry Association Research Department, TIA-Tourism Industries Association.

Rural Economic Resettlement

In addition to its contribution to the prosperity of the entire state, sustainable tourism development assists the state in furthering rural economic resettlement. Tourism is not recommended to be the only solution to extending the state's economic prosperity to rural communities; however, it is one component in a mix of solutions to accomplish the following objectives:

- Diversify the economy.
- Compensate for declining industries that have traditionally provided an economic base for the area.
- Provide quality job opportunities so individuals are not compelled to move away in search for work.
- Enhance, preserve and share native heritage and culture.
- Enhance quality earnings by stimulating interest and demand for natural attractions, destination facilities, and open space.
- Provide opportunities for the rapidly growing young work force of rural Utah.

Review of 1996

Public Lands.

Visitation. Record numbers of visitors are coming to Utah, with over 16 million in 1996. Visitation to the national parks is expected to increase by nearly 6 percent over 1995, with Bryce Canyon specifically showing substantial increases. Timpanogos Cave National Monument and the Golden Spike National Historic Site also had an exceptional year due to an extended season at the cave, and Centennial activities and increased numbers of re-enactment ceremonies at Golden Spike.

Grand Staircase-Escalante National Monument. A notable event in 1996 was the designation of the 1.7 million acre Grand Staircase-Escalante National Monument. The monument is unique because it is the first national monument to be administered by the Bureau of Land Management, rather than the National Park Service. The last place in the continental U.S. to be mapped, the new monument is a rugged and remote region with a spectacular array of scientific, historic, and scenic treasures. Infrastructure within the new monument is limited and primitive, and visitors will be encouraged to use services and facilities in the surrounding communities. During the next three years, national, state, and local officials will work together to develop a management plan. This planning must occur before the new monument will have a significant, *positive* impact on tourism, the environment, and local communities. The State of Utah believes that with proper planning and investment, the Grand Staircase-Escalante National Monument can become a national model for environmental management. The goal will be to preserve the natural setting of the region while providing real and sustainable economic benefits to the local economies.

Recreation Fee Demonstration Program. One of the most significant developments in public land management that will have a profound impact for users of public lands is the Recreation Fee Demonstration Program. In 1996 Congress directed the U.S. Department of the Interior and four of its agencies (Bureau of Land Management, U.S. Forest Service, the National Park Service, and the U.S. Fish and Wildlife) to implement the program. Fee revenues will help the agencies keep up with infrastructure, maintenance, and visitor services demands resulting from increased visitation and spread some of the costs for managing public lands among the people who use them. Significant portions of the fees will be spent directly on behalf of the area in which they are collected, and visitors will see direct results from their participation in the fee program. These results include the following:

- Repairs and improvements to roads, buildings, campgrounds, and trails
- Improved signs and exhibits, educational programs, guided walks and hikes, and other visitor activities
- Natural habitat protection
- Stabilization and restoration of historic structures
- Visitor safety and protection

The Recreation Fee Demonstration Program will begin in 1997 and continue through the year 2000. Several sites in Utah will implement the fee changes as early as the spring of 1997. Visitors to public lands will notice considerable differences such as increased camping fees, higher entrance fees at Bryce Canyon and Zion National Park, and day use fees for the first time at Mirror Lake Highway, American Fork Canyon, Fish Lake, Joe's Valley, Flaming Gorge, and Glen Canyon.

Hotels and Conventions. One indication of Utah's healthy travel and tourism industry is the strong performance of the state's hotel industry. Room rates saw a substantial increase of nearly 8 percent over 1995, and occupancy rates ended the year at about 73.5 percent.[1] The Salt Lake Valley, in particular, is enjoying phenomenal growth, and occupancy rates in Salt Lake are well above national averages.

[1] Jim Hire, Hire & Associates

Success in the convention business has contributed to high occupancy levels and increased rates. A highlight for the year was the renovation and expansion of the Salt Palace Convention Center that reopened in February, 1996. An important impact of the new center, which provides first-class, state-of-the-art facilities, is that it attracts groups which are less rate conscious, use extensive food and beverage service, and have a greater economic impact. During 1996, 30 conventions, comprising approximately 202,000 delegates will have an economic impact of approximately $181 million.[1]

Skiing. Although not a record year due to the late arrival of winter, the 1995-1996 ski season was nonetheless a notable one with an estimated 2.95 million skier visits to Utah resorts. These visits represent a 5 percent increase over the 1992-1993 season, the Utah ski industry's second best year. The 1996-1997 ski season promises to be a good one as early snowstorms and snow-making equipment prompted the opening of three major resorts before the end of October. Although the direct economic impact from the early opening may be minimal because most early-bird skiers were locals skiing on limited terrain, a substantial pay-off could be realized later in the year. Utah slopes received national publicity on evening news programs and the Weather Channel which is expected to increase bookings.

2002 Winter Olympics. With the approach of 2002, the Olympics will become the most important part of tourism in Utah. The Governor's Office of Planning and Budget is working with the Salt Lake Olympic Committee (SLOC) to estimate and monitor the economic impacts from the winter games. A detailed analysis is forthcoming. Research to date indicates that almost 34,000 additional person-years of employment (one person employed for a year is a person-year of employment) will be generated because of the Olympics. This employment results from the following sources of spending:

- $920 million from SLOC
- $173 million from visitors to the games;
- $44 million from NBC to broadcast the games;
- $215 million of additional federal funding to complete I-15; and
- $173 million of accelerated lodging construction.

As Table 96 demonstrates, most employment impacts from the games will be concentrated in the service (11,529 person-years of employment) and trade (6,297 person-years of employment) sectors, though construction (4,137 person-years of employment) will also have a substantial employment impact. Almost half of the employment impact will occur during 2002, but almost 4,000 jobs will be associated with the games during 1999 and 2000, and over 5,000 jobs during 2001.

SLOC will spend $240 million constructing facilities, spread fairly evenly between 1998 and 2001. Naturally, almost 70 percent of SLOC's operating expenditure will occur during 2002. According to SLOC, about 12 percent of its revenue, or $110 million, will come from corporations and individuals located in Utah. Since this $110 million would have been spent in Utah regardless of the Olympics, it is assumed not to impact the Utah economy. In addition, the $99 million legacy for the Winter Sports Park will not impact the Utah economy since it results from a $59 million diversion of state sales tax revenue. Finally, a portion of the goods and services SLOC purchases will be created outside Utah and so will not impact the state's economy. When all these leakages are accounted for, SLOC's direct impact on the Utah economy will be $550 million.

Calgary's experience was that about 25 percent of tickets to Olympic events were sold to visitors from outside Alberta. If this relationship holds true for the Salt Lake games, it is estimated there will be 952,718 visitor days (one person visiting the state for one day is a visitor day) associated with the Olympics. Since visitors are estimated to spend about $181.31 per visitor day, additional visitor spending will be $173 million. When leakages from this spending are accounted for, the direct impact of visitor spending is estimated to be $109 million.

Because of the Olympics, it is anticipated the federal government will contribute at least $215 million toward the reconstruction of I-15. This money will have a direct impact on the Utah economy since it would not have been available without the Olympics.

The most difficult part of estimating the economic impacts associated with the Games involves lodging construction. While it is clear multi-million dollar hotel projects are not built for two week events such as the Olympics, it is also clear that the marketing advantages associate with the Olympics can impact the timing of hotel projects. Industry analysts anticipate about $690 million of hotel construction in Salt Lake and Summit Counties prior to the games, but no construction in the five-year period after the games. This construction would occur regardless of the games, but without the games it might occur over a ten-year period instead of a five-year period. It is assumed 25 percent of this construction, or $173 million, has been accelerated so that the facilities will be in place prior to the games.

[1] Salt Lake Convention & Visitors Bureau. *1997 Marketing Plan*, 1996, Salt Lake City, Utah

While the economic impacts resulting from putting the games on will be substantial, more significant impacts will likely flow from the recognition the Olympics bring to Utah. Two weeks of non-stop world-wide television exposure is likely to influence tour operators and vacationers. Utah's tourism sector will be larger after 2002 because of the Olympics.

Outlook

With favorable prospects for continued economic expansion, locally and nationally, tourism activity is expected to remain strong and be an important source of growth. Several factors are expected to contribute to tourism growth:

- High levels of consumer confidence and willingness to spend on leisure activities
- Environment of competition among airlines which results in favorable air fares
- Steady, measured growth of the local and national economy
- Increased recognition because of Salt Lake City's selection to host the 2002 Winter Olympics
- Popularity of national parks, the American Southwest, and historic and prehistoric sites
- Growth in the LDS Church
- Favorable exchange rates for foreign travelers
- Increased convention capacity resulting from the renovated Salt Lake Convention Center, and new convention facilities in Ogden (January 1997) and St. George (planned)
- Increasing interest in heritage tourism and ecotourism

Factors that may offset tourism growth include the following:

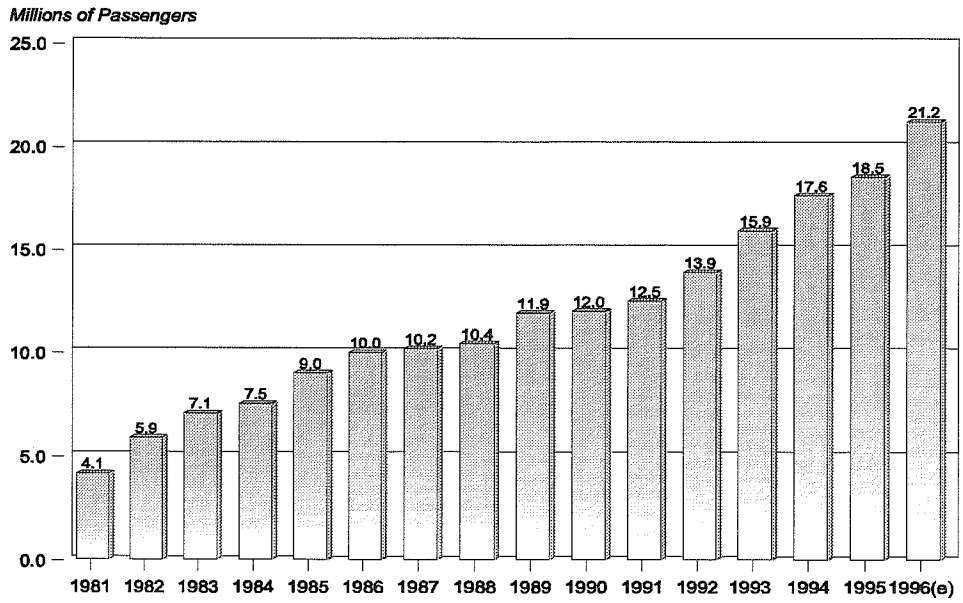
- National and international economic uncertainties such as the volatility of oil prices or U.S. dollar appreciation
- Capacity constraints and overcrowding of popular attractions during the peak season
- National press that perpetuates the perception that the national parks and recreation areas are full, discouraging visitation that could be directed to lesser-used areas or the non-peak season
- Degradation of the natural resources and the visitor experience
- Inability to meet the service expectations of destination travelers with regards to quality, convenience, and availability
- Natural conditions such as fire or inclement weather
- Overhaul of transportation infrastructure

Tourism Planning

The Utah Travel Council produced its long-range strategic plan for tourism development in the spring of 1996. Extensive input from citizens, tourism businesses and leaders, and local government officials was collected in community meetings around the state and used to prepare the document. The plan focuses the state travel development office's activities and programs on improving the quality of life for Utah citizens while increasing the economic impact of tourism in the state.

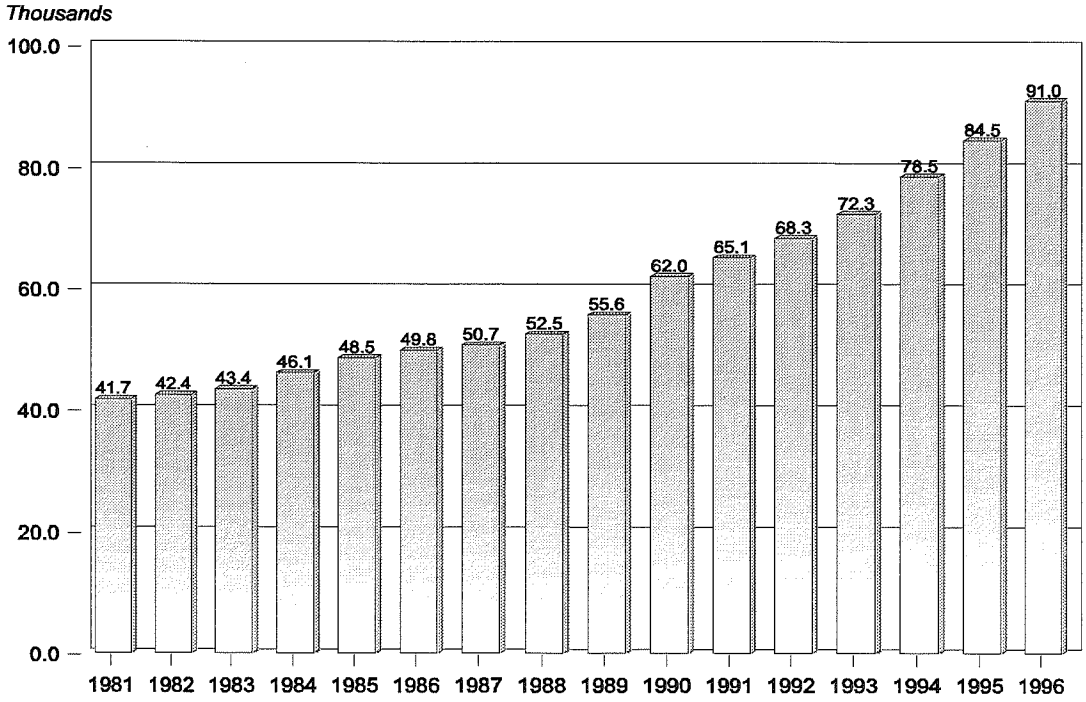
A strategy that will help the Utah Travel Council fulfill its mission is to move away from "windshield" tourism, which is characterized by visitors merely passing through the state, toward destination tourism which emphasizes quality over quantity. The objective of the agency is to focus on attracting tourists who will spend more money and stay longer instead of just bringing more tourists. Other strategies include managing visitors through marketing programs, creating opportunities for year-round visitation, distributing visitors toward attractions with excess capacity, focusing on quality earnings for Utah's tourism communities, advocating the responsible use of natural resources, communicating the value and benefits of destination tourism to a critical audience, and conducting research for decision making, program design, and outcome measurement.

Figure 57
Salt Lake International Airport Passengers: 1981 to 1996



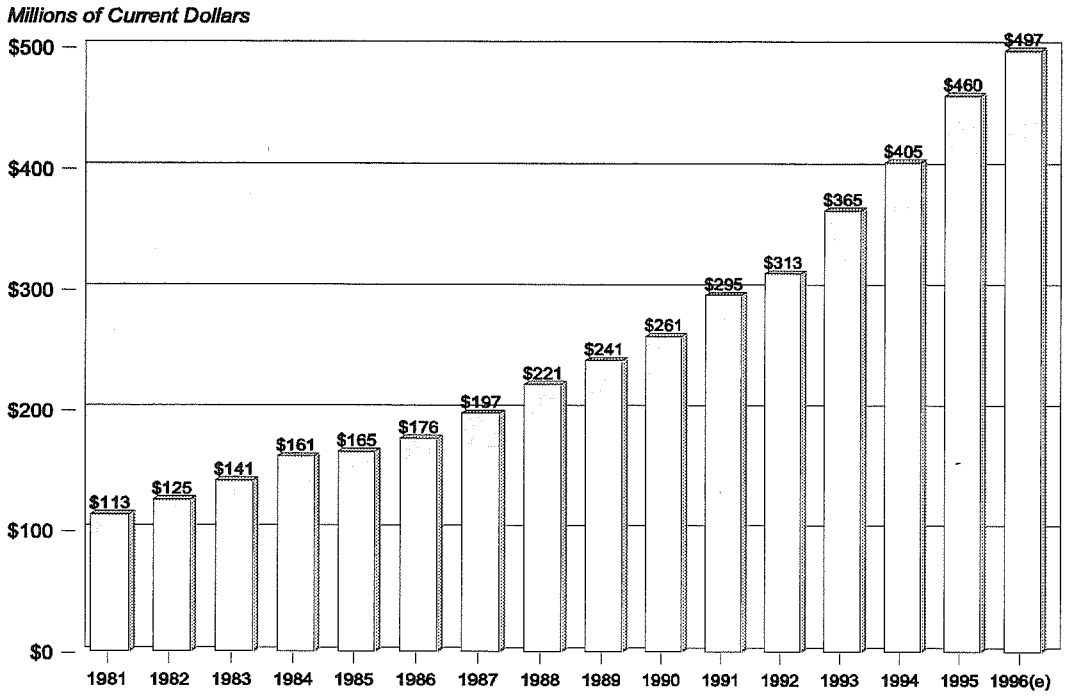
Source: Salt Lake Airport Authority.

Figure 58
Travel-Related Employment in Utah: 1981 to 1996



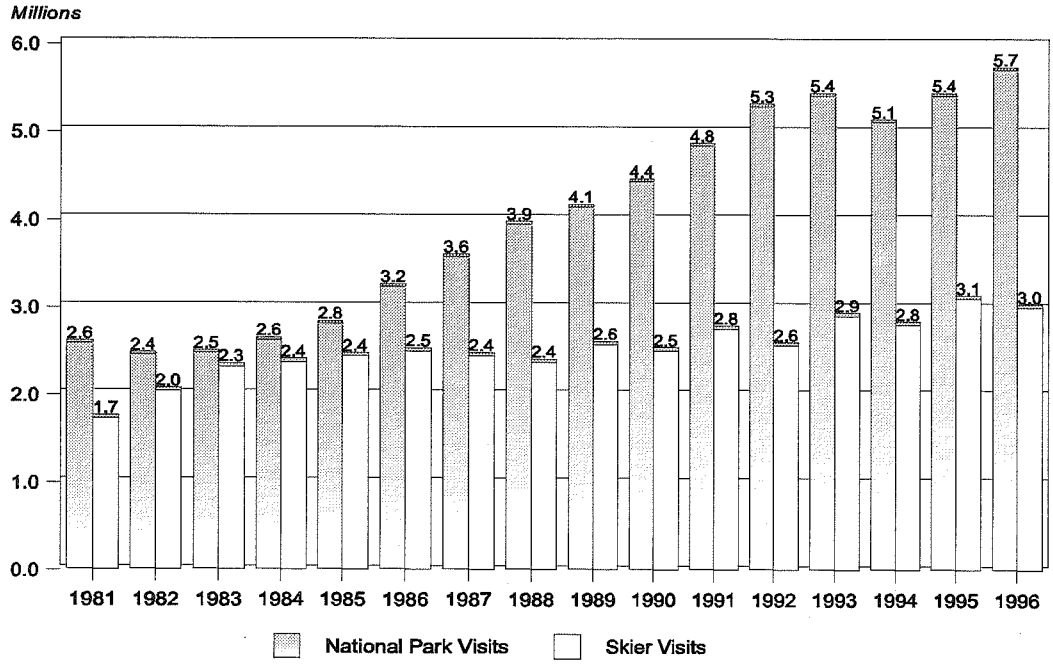
Source: Governor's Office of Planning and Budget.

Figure 59
Utah Tourism Indicators—Hotel Room Rents: 1981 to 1996



Source: Utah State Tax Commission.

Figure 60
Utah Tourism Indicators—National Park and Skier Visits: 1981 to 1996



Source: National Park Service and Utah Ski Association.

Table 93
Profile of the Utah Travel Industry: 1990 to 1996

Category	1990	1991	1992	1993	1994	1995	1996(p)
Total Spending by Tourists and Travelers	$2.7	$2.9	$3.1	$3.3	$3.4	$3.6	$3.8
Total Number of Foreign and Domestic Visitors (millions)	13.0	14.0	14.4	15.0	15.2	15.9	16.5
Number of U.S. Visitors	12.4	13.3	13.6	14.1	14.3	14.9	15.5
Number of Foreign Visitors	0.6	0.7	0.7	0.9	0.9	1.0	1.0
Total Travel and Recreation-Related Employment*	62,000	65,100	68,300	72,300	78,500	84,500	91,000
Percent of All Utah Jobs	8.6%	8.7%	8.9%	8.9%	9.1%	9.3%	9.5%
Total State and Local Taxes Generated by Travel Spending (millions)	$196	$214	$225	$240	$247	$262	$276
State Government Portion	$147	$161	$169	$180	$185	$193	$203
Local Government Portion	$49	$53	$56	$60	$62	$69	$73
Total National Park Recreation Visits (millions)	4.4	4.8	5.3	5.4	5.1	5.4	5.6
Total Skier Visits (millions)	2.5	2.8	2.6	2.9	2.8	3.1	3.0
Taxable Room Rents (millions)	$261	$295	$313	$370	$405	$460	$496
Hotel/Motel Occupancy Rates	63.8%	69.4%	70.3%	71.9%	73.7%	73.5%	73.5%

(p) = preliminary estimate

*As a result of recent research by WEFA and Regional Financial Associates, the estimates of travel and recreation-related employment have been revised for the state to achieve both greater internal consistency and comparability with national estimates.

Sources: Estimates based on information from U.S. Travel Data Center (Washington D.C.), Utah State Tax Commission, Utah Department of Transportation, U.S. National Park Service, and Ski Utah.

Table 94
Utah Tourism Indicators: 1981 to 1996

Year	Hotel Room Rents (Current $)	Hotel Room Rents (1996 $)	National Park and Monument Visits	State Park Visits	Salt Lake Int'l. Airport Passengers	Skier Visits	Travel, Tourism and Recreation Employment
1981	$113,273,174	$197,453,000	3,652,926	6,430,174	4,149,316	1,726,000	41,700
1982	124,787,207	204,824,646	3,591,866	6,436,488	5,861,477	2,038,544	42,400
1983	140,728,877	221,680,582	3,587,902	5,214,498	7,059,964	2,317,255	43,400
1984	161,217,797	243,252,770	3,853,408	4,400,103	7,514,113	2,369,901	46,100
1985	165,280,248	240,948,672	4,021,487	4,846,637	8,984,780	2,436,544	48,500
1986	175,807,344	251,516,459	4,619,483	5,387,791	9,990,986	2,491,191	49,800
1987	196,960,612	271,725,269	4,889,235	5,489,539	10,163,883	2,440,668	50,700
1988	220,687,694	292,467,780	5,410,713	5,072,123	10,408,233	2,368,985	52,500
1989	240,959,095	304,706,664	5,566,752	4,917,615	11,898,847	2,572,154	55,700
1990	261,017,079	313,160,475	5,813,190	5,033,776	11,982,276	2,500,134	62,000
1991	295,490,324	340,230,751	6,276,944	5,425,129	12,477,926	2,751,551	65,100
1992	312,895,967	349,741,180	6,723,246	5,908,000	13,870,609	2,560,805	68,300
1993	364,632,516	395,741,180	6,935,578	6,950,063	15,894,404	2,850,000	72,300
1994	405,342,342	428,776,994	6,879,688	6,953,400	17,564,149	2,800,000	78,500
1995	460,213,064	473,559,243	7,042,593	7,070,702	18,460,000	3,100,000	84,500
1996 (e)	497,030,109	497,030,109	7,297,855	7,560,000	21,200,000	3,000,000	91,000
Percent Change							
1981-96	338.8%	151.7%	99.8%	17.6%	410.9%	73.8%	118.2%
1995-96	8.0%	5.0%	3.6%	6.9%	14.8%	-3.2%	7.7%
Average Annual Rate of Change							
1981-96	10.4%	6.3%	4.7%	1.1%	11.5%	3.8%	5.3%

(e) = estimate

Sources: Utah State Tax Commission, National Park Service, Utah Division of Parks and Recreation, Salt Lake Airport Authority, Utah Ski Association, and Governor's Office of Planning and Budget.

Table 95
National Park and Monument Recreation Visits: 1981 to 1996

National Parks

Year	Arches	Bryce Canyon	Canyonlands	Capitol Reef	Zion	Total National Parks
1981	326,508	474,092	89,915	397,789	1,288,808	2,577,112
1982	339,415	471,517	97,079	289,486	1,246,290	2,443,787
1983	287,875	472,633	100,022	331,734	1,273,030	2,465,294
1984	345,180	495,104	102,533	296,230	1,377,254	2,616,301
1985	363,464	500,782	116,672	320,503	1,503,272	2,804,693
1986	419,444	578,018	172,987	383,742	1,670,503	3,224,694
1987	468,916	718,342	172,384	428,808	1,777,619	3,566,069
1988	520,455	791,348	212,100	469,556	1,948,332	3,941,791
1989	555,809	808,045	257,411	515,278	1,998,856	4,135,399
1990	620,719	862,659	276,831	562,477	2,102,400	4,425,086
1991	705,882	929,067	339,315	618,056	2,236,997	4,829,317
1992	799,800	1,018,200	395,700	675,800	2,390,600	5,280,100
1993	773,678	1,107,951	434,844	660,800	2,361,434	5,338,707
1994	777,200	1,028,100	429,900	605,300	2,270,900	5,111,400
1995	859,374	994,348	448,789	648,864	2,430,162	5,381,537
1996 (e)	846,312	1,203,161	419,169	726,728	2,503,067	5,698,437
Percent Change						
1981-96	159.2%	153.8%	366.2%	82.7%	94.2%	121.1%
1995-96	-1.5%	21.0%	-6.6%	12.0%	3.0%	5.9%
Annual Average Rate of Change						
1981-96	6.6%	6.4%	10.8%	4.1%	4.5%	5.4%

National Monuments

Year	Cedar Breaks	Dinosaur	Golden Spike	Natural Bridges	Rainbow Bridge	Timpanogos Cave	Total National Monuments	Total National Parks and Monuments
1981	402,680	345,784	48,167	60,131	114,555	104,497	1,075,814	3,652,926
1982	374,695	396,938	44,481	55,209	172,126	104,630	1,148,079	3,591,866
1983	329,268	427,375	49,571	56,368	161,551	98,475	1,122,608	3,587,902
1984	353,092	493,140	34,093	59,123	177,971	119,688	1,237,107	3,853,408
1985	385,381	418,187	46,387	61,179	177,038	128,622	1,216,794	4,021,487
1986	425,732	430,891	57,090	73,069	283,597	124,410	1,394,789	4,619,483
1987	430,559	412,089	44,288	88,243	210,708	137,279	1,323,166	4,889,235
1988	477,493	474,452	41,417	98,559	238,307	138,694	1,468,922	5,410,713
1989	480,276	436,303	45,769	103,822	238,307	126,876	1,431,353	5,566,752
1990	417,330	450,368	48,781	101,958	255,420	114,247	1,388,104	5,813,190
1991	456,000	447,781	56,159	124,596	258,346	104,745	1,447,627	6,276,944
1992	392,600	480,400	54,346	139,200	256,200	120,400	1,443,146	6,723,246
1993	557,824	534,274	51,212	151,504	211,254	90,803	1,596,871	6,935,578
1994	710,981	480,576	63,338	137,214	298,651	77,528	1,768,288	6,879,688
1995	540,061	500,509	50,169	146,636	346,151	77,530	1,661,056	7,042,593
1996 (e)	561,663	475,484	58,069	141,330	277,745	85,127	1,599,418	7,297,855
Percent Change								
1981-96	39.5%	37.5%	20.6%	135.0%	142.5%	-18.5%	48.7%	99.8%
1995-96	4.0%	-5.0%	15.7%	-3.6%	-19.8%	9.8%	-3.7%	3.6%
Annual Average Rate of Change								
1981-96	2.2%	2.1%	1.3%	5.9%	6.1%	-1.4%	2.7%	4.7%

(e)=estimate

Source: U.S. National Park Service, Socio-Economic Statistical Unit.

Table 96
Olympics-Related Employment— Impacts by Industry: 1997 to 2002

Sector/ Industry	1997	1998	1999	2000	2001	2002	Total
Agriculture	12	24	29	27	37	99	227
Mining	45	143	145	143	143	5	623
Construction	433	833	1,009	811	805	247	4,137
Manufacturing	173	341	411	352	406	516	2,199
Transportation, Communications and Utilities	79	156	192	209	362	1,052	2,051
Trade	304	599	727	684	964	3,018	6,297
Finance, Insurance and Real Estate	70	140	169	162	238	596	1,375
Services	419	801	991	979	1,774	6,565	11,529
Olympic Committee	66	148	189	367	866	3,414	5,049
Total	1,602	3,183	3,861	3,733	5,594	15,514	33,487

Sources: Governor's Office of Planning and Budget and Salt Lake Olympic Committee

Special Topics

Population and Urbanization Trends in Utah

In June 1996, Utah's population reached two million, quite a milestone for the state, especially in its Centennial year. It took 70 years from statehood for Utah to reach a population of one million (Figure 61), 30 years more to reach two million and projections are that it will be 22 years (2018) for the state to reach three million. With two million inhabitants, it might be appropriate to take a look at national and state population trends and what they may mean for the future.

U.S. Population Growth

The population of the United States in 1995 stood at 262.8 million. The United States is the third most populous country in the world, only behind China (1.2 billion) and India (936.5 million). Despite being the third most populous country, its large size allows the United States to have a relatively low population density. China's population per square mile is 334 and India, 816. The United States has only 75 people per square mile.

The United States has grown by an annual average rate of growth of 1.25 percent since 1940. However, since 1980, that rate has slowed to less than 1 percent (0.98 percent). Of the nation's four major regions—Northeast, Midwest, South and West—the West has grown the fastest and the South, the second fastest. Together, these two regions account for 71.6 percent of the nation's total population growth during this period of time. Demographers have called this the shift from the Frostbelt to the Sunbelt. Table 97 shows the population growth of the 50 states and the District of Columbia, grouped within the four main regions of the country. Between 1940 and 1995, the West has grown from 10.9 percent to 21.9 percent of the nation's population while the South has grown from 31.5 percent to 35.0 percent. By contrast, the Northeast has declined from 27.2 percent to 19.6 percent; and the Midwest from 30.4 percent to 23.5 percent. This shift is even more pronounced if viewed over the last 25 years. Since 1970, the South and West account for 87.2 percent of the nation's entire population increase.

Despite the emphasis on the Frostbelt-to-Sunbelt shift, most of the population increase has occurred in just a few states within these two regions. Three states are of particular importance. Between 1940 and 1995, California has grown by 24.7 million people and increased its share of the nation's population from 5.2 percent to 12.0 percent. California now boasts a population of 31.6 million, almost 13 million more than Texas, the second most populous state. Texas has grown from 6.4 million to 18.7 million and increased its share of the nation's population from 4.9 percent to 7.1 percent. Florida has grown from 1.9 million to 14.2 million and from 1.4 percent to 5.4 percent of the nation's population. Combined, these three states have increased their share of the nation's population from 11.5 percent to 24.5 percent, and account for 37.7 percent of the nation's total population growth since 1940. The growth of these states has been even more pronounced from 1980 to 1995, accounting for 46.5 percent of the nation's population growth.

Several reasons account for the attractiveness of these three states: first, all have warm, sunny climates; second, all have benefitted from federal largess, such as defense contracts and installations during the "Cold War;" and third, all three are border states that have a great deal of migration from Latin American countries—both legal and illegal. A fourth reason, both California and Texas have birth rates above the national average.

Utah's Population Growth

Since 1940, Utah's population has grown at an annual average rate of 2.32 percent while the U.S. population (as mentioned) increased by an annual average rate of 1.25 percent. By growing significantly faster over the last 55 years, Utah has increased its ranking among the states based on population. Utah has risen from 40th among the states in 1940, to 34th in 1995. Unlike the big three Sunbelt states, Utah's population growth is more the result of natural increase and not in-migration. Natural increase is the difference between births and deaths. Utah has the highest birth rate of any of the other states. Natural increase is the driving force in Utah's population growth, accounting for 84 percent of its increase since 1940.

Figure 62 shows that net migration has fluctuated rather substantially over the years. Net migration is highly dependent on the quality of the Utah economy. The state experiences substantial and sustained net in-migration when the state economy is doing well. When the economy is not doing well, the state experiences net out-migration. The state's natural increase, by comparison, is much more stable and predictable. Therefore, the annual makeup of the state's population increase depends on the quality of the state's economy—the better the economy, the more net in-migration accounts for the state's increase in population; the poorer the state economy, the less net migration accounts for the growth.

County Population Trends

Wasatch Front Dominates Population Growth. Just as the nation's population growth has centered in a few states and in just two regions, so has the state's population growth centered in just a few counties and in two regions. Between 1940 and 1995, Utah's population has grown by 1,408,690. Of this amount, Salt Lake County accounts for 594,377 or 42.2 percent of the total growth. Utah County ranks second, accounting for 250,618 or 17.8 percent. Davis County comes in third with 200,216 or 14.2 percent of the total growth. Though Weber County grew at an annual average rate of just less than the state average, its increase ranks fourth with a total growth of 118,286. As Table 98 shows, these four counties account for 82.6 percent of the state's population growth since 1940.

Concentrated growth along the "Wasatch Front" has made Utah one of the most urban states in the nation. In 1990, the Bureau of the Census ranked Utah the sixth most urban state in the country, with 87 percent of the state's population living in urban areas. The five states with higher urban concentrations are: California (92.6 percent), New Jersey (89.4 percent), Hawaii (89.0 percent), Nevada (88.3 percent) and Arizona (87.5 percent). The Bureau of Census defines urban as an area composed of persons living in densely populated areas and in communities of 2,500 people or more outside designated urban areas. Everyone living outside designated urban areas and places of less than 2,500 or in the open countryside is classified as rural.

The growth of these four populous urban counties is causing increasing congestion. One only has to drive along I-15 or any major thoroughfare to know there are problems with the transportation infrastructure that need to be addressed in these counties. Table 98 shows population per square mile figures for Utah counties. Between 1940 and 1995 these counties have increased their population density as follows: Salt Lake County has increased its density from 287.0 people per square mile to 1,093.0; Davis County has increased from 51.8 people per square mile to 709.4; Weber County has increased from 98.5 to 304.0 and Utah County has increased from 28.7 to 154.1.[1] No other county in the state has more than 69 people per square mile.

The Broadening of Utah's Urban Areas. Over the last 25 years, Utah's urbanization trends have broadened somewhat. Several counties adjacent to the four urban counties have shown some significant growth rates. Summit County has had an annual average rate of growth of 5.4 percent since 1970, almost twice as fast as the state average of 2.5 percent for the same period of time. It has grown from a population of 5,879 to an estimated population of 22,400 in 1995. Summit County has been the second fastest growing county in the state since 1970. Wasatch County has also been growing faster than the state average since 1970. At an annual average rate of growth of 2.9 percent, Wasatch County has grown from 5,863 to an estimated 12,200.

Even more recently, two other counties adjacent to the major urban counties are showing some significant growth. Juab County seems to be reaping some of the rapid growth of its northern neighbor, Utah County. In the last five years, Juab has grown by an annual average rate of 4.0 percent, substantially higher than the state average. Though still a relatively small county with 7,150 residents, it is likely that it will continue to benefit from the rapid growth and increasing congestion of Utah County. Morgan County also appears to be benefitting from the growth of Weber County. In the 1990s, this county has grown by an annual average rate of 3.1 percent.

Non-Wasatch Front Counties. There are two areas of the state besides the Wasatch Front where counties have shown impressive growth. Of the two areas, the southwestern region has the most significant growth of anywhere in the state. Since 1970, Washington County has grown by an amazing annual average rate of 6.6 percent. Washington County's increase (from 1970 to 1995) is by far the fastest growth rate of any county in the state and amounts to a total increase in population of just over 400 percent!

Just to the north of Washington County is Iron County, which grew rapidly in the 1970s, modestly in the 1980s and then boomed in the 1990s. Since the 1970s, Iron County has grown by an annual average rate of 3.2 percent, the fifth fastest growth rate in the state. Since 1990, it has increased its growth rate to an annual average rate of 5.0 percent, the third fastest growth rate in the state.

The second non-Wasatch Front area that is growing faster that the state average is Cache County in northern Utah. Cache County has grown by an annual average rate of 2.6 percent. Cache County has almost doubled its population since 1970—from 42,331 to an estimated 80,200.

[1] These figures are based on total square miles of *land* in a county and are not adjusted for areas of federal property such as BLM, Forest Service, Park Service or Military bases or Indian reservations.

National and Utah Aging Trends

Another important trend associated with county population growth rates is that of age. America's population has been aging during this century. In 1900, the nation's median age was 22.9. By 1990, it had increased to 32.8, an increase of ten years. There are two reasons for this aging. First, life spans are increasing because of higher living standards and improvements in health and medical science. Second, the post-World War II baby boomers are reaching middle age. The baby boom's estimated 20 million births temporarily reversed the steady increase in the nation's median age and the long term decline in the nation's fertility rate. The aging of this large group along with longer life spans is having a profound impact on the nation's median age. For example, six years of the ten-year increase in the nation's median age during this century has occurred since 1970.

Utah followed the nation's aging pattern to a degree, but because of a higher birth rate than the nation; the state's median age has been and remains the nation's lowest. Utah's median age increased from 19.2 in 1900 to 25.1 in 1950; then as a result of the baby boom, fell to 22.9 in 1960. By 1990, Utah's median age had increased to 26.2. Though the state's median age has increased by 3.3 years since 1960, it is 6.7 years lower than the nation.

Some counties in Utah have aged much faster for reasons other than previously mentioned. Between 1940 and 1990, Utah's median age increased from 24.3 to 26.2 or an increase of 1.9 years. However, during this time, there were six counties in Utah that aged by 7.8 years or more. Of these six counties, three lost population (Garfield, Piute, and Wayne), and two grew by an annual average rate of less than 1.5 percent (Daggett and Kane). Only Grand County grew at a rate near the state average. These counties have more in common than just declining or slow growth rates. All have populations under 7,000. Only Grand County has an interstate highway and none are contiguous to an urban county. In other words, the counties that are aging at a rate well above the state average are rural, relatively isolated counties, where the population has either declined or grown well below the state average.

By contrast, most of the counties that have growth rates above the state average have aged more slowly than the rural counties mentioned. Davis County, the fastest growing county since 1940, aged by only two years, from 22.7 to 24.7 in 1990. Utah County, the third fastest growing county since 1940, actually saw a decline in its median age from 23 to 22.5. Salt Lake County's median age increased from 26.6 to 27.8. Washington County, the second fastest growing county since 1940, is the one exception. Its median age increased from 20.8 to 28.5, an increase of 7.7 years. The reason for this is that the St. George area has become a very popular retirement community.

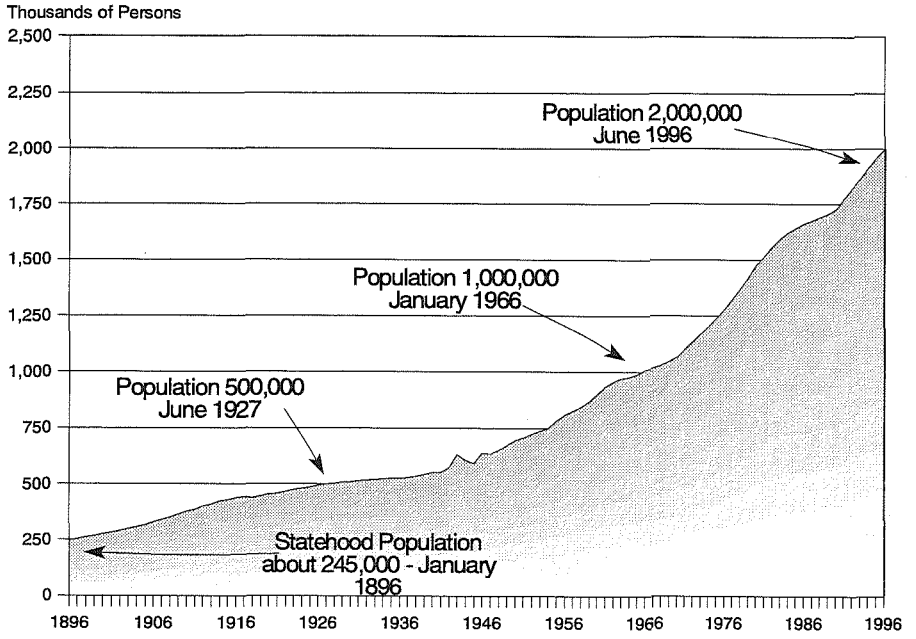
The significant increase in the median age of the counties that are either declining in population or growing very slowly is that, in general, the established people stay and many of the young people leave. The attraction of urban areas is strong and well established. People leave small rural areas for better opportunities. Cities provide a wide variety of services unavailable in most rural areas. Cities are the cultural, religious, educational and entertainment centers. But the strongest force pulling young people to the cities is the opportunity to improve their economic lives.

Challenges of Urbanization

The United States is a very urbanized nation. More than three out of every four citizens live in metropolitan areas and one out of every two live in communities of one million or more people. This tremendous growth of the nation's urban areas has not come without creating serious challenges for local governments. Crime, pollution, congestion, deteriorating infrastructure, declining tax bases and poverty are all concentrated in cities and urban areas across the country. In addition, these local governments provide the most basic of public services: police, fire, sanitation, water and roads. The problems of some metropolitan areas have almost grown beyond the ability of government leaders to solve them.

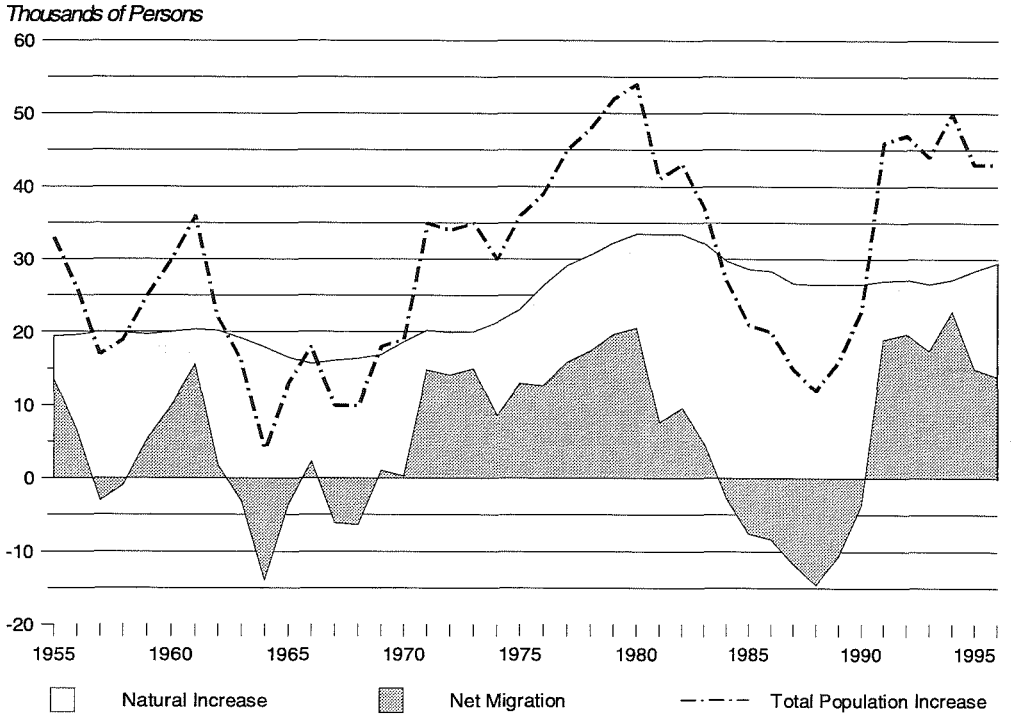
Utah's urban communities have all of these challenges but none of them seem insurmountable at the present. However, if the urban growth trends continue, and there is no indication they will not, then these problems must be considered worthy of serious attention. Not much help can be expected from the federal government given the current state of fiscal matters. In fact, federal aid as a percent of local government revenues has been dropping steadily for over a decade. This means that even greater cooperation will be necessary between state and local governments in order to prevent Utah's urban areas from deteriorating like so many others in the nation.

Figure 61
Population Growth in Utah Since Statehood: 1896 to 1996



Source: U.S. Census Bureau, Utah Population Estimates Committee, and Utah Foundation

Figure 62
Utah Components of Population Change--Net Migration and Natural Increase: 1955 to 1996



Source: Utah Population Estimates Committee and Utah Bureau of Health Statistics.

Table 97
U.S. Population by State: Selected Years

Division/State	Population (in thousands) 1940 April 1st Census	1980 April 1st Census	1990 April 1st Census	1995 July 1st Estimate	Percent of the Total Population 1940	1995	Population Growth from 1940 to 1995 Number (thousands)	Total Percent Growth	AAGR*	Percent of Total Growth	Population Growth from 1980 to 1995 Number (thousands)	Total Percent Growth	AAGR*	Percent of Total Growth
United States	132,165	226,546	248,718	262,755	100.00%	100.00%	130,590	98.8%	1.25%	100.00%	36,209	16.0%	0.98%	100.00%
Northeast	35,977	49,135	50,811	51,466	27.22%	19.59%	15,489	43.1%	0.65%	11.86%	2,331	4.7%	0.30%	6.44%
Connecticut	1,709	3,108	3,287	3,275	1.29%	1.25%	1,566	91.6%	1.18%	1.20%	167	5.4%	0.34%	0.46%
Maine	847	1,125	1,228	1,241	0.64%	0.47%	394	46.6%	0.69%	0.30%	116	10.3%	0.65%	0.32%
Massachusetts	4,317	5,737	6,016	6,074	3.27%	2.31%	1,757	40.7%	0.62%	1.35%	337	5.9%	0.37%	0.93%
New Hampshire	492	921	1,109	1,148	0.37%	0.44%	656	133.4%	1.55%	0.50%	227	24.7%	1.46%	0.63%
New Jersey	4,160	7,365	7,730	7,945	3.15%	3.02%	3,785	91.0%	1.18%	2.90%	580	7.9%	0.50%	1.60%
New York	13,479	17,558	17,991	18,136	10.20%	6.90%	4,657	34.6%	0.54%	3.57%	578	3.3%	0.21%	1.60%
Pennsylvania	9,900	11,864	11,883	12,072	7.49%	4.59%	2,172	21.9%	0.36%	1.66%	208	1.8%	0.11%	0.57%
Rhode Island	713	947	1,003	990	0.54%	0.38%	277	38.8%	0.60%	0.21%	43	4.5%	0.29%	0.12%
Vermont	359	511	563	585	0.27%	0.22%	226	62.9%	0.89%	0.17%	74	14.4%	0.89%	0.20%
Midwest	40,143	58,866	59,669	61,804	30.37%	23.52%	21,661	54.0%	0.78%	16.59%	2,938	5.0%	0.32%	8.11%
Illinois	7,897	11,427	11,431	11,830	5.98%	4.50%	3,933	49.8%	0.73%	3.01%	403	3.5%	0.23%	1.11%
Indiana	3,428	5,490	5,544	5,803	2.59%	2.21%	2,375	69.3%	0.96%	1.82%	313	5.7%	0.36%	0.87%
Iowa	2,538	2,914	2,777	2,842	1.92%	1.08%	304	12.0%	0.20%	0.23%	(72)	-2.5%	-0.16%	-0.20%
Kansas	1,801	2,364	2,478	2,565	1.36%	0.98%	764	42.4%	0.64%	0.59%	201	8.5%	0.54%	0.56%
Michigan	5,256	9,262	9,295	9,549	3.98%	3.63%	4,293	81.7%	1.09%	3.29%	287	3.1%	0.20%	0.79%
Minnesota	2,792	4,076	4,376	4,610	2.11%	1.75%	1,818	65.1%	0.91%	1.39%	534	13.1%	0.81%	1.47%
Missouri	3,785	4,917	5,117	5,324	2.86%	2.03%	1,539	40.6%	0.62%	1.18%	407	8.3%	0.52%	1.12%
Nebraska	1,316	1,570	1,578	1,637	1.00%	0.62%	321	24.4%	0.40%	0.25%	67	4.3%	0.27%	0.19%
North Dakota	642	653	639	641	0.49%	0.24%	(1)	-0.1%	-0.00%	-0.00%	(12)	-1.8%	-0.12%	-0.03%
Ohio	6,908	10,798	10,847	11,151	5.23%	4.24%	4,243	61.4%	0.87%	3.25%	353	3.3%	0.21%	0.97%
South Dakota	643	691	696	729	0.49%	0.28%	86	13.4%	0.23%	0.07%	38	5.5%	0.35%	0.11%
Wisconsin	3,138	4,706	4,892	5,123	2.37%	1.95%	1,985	63.3%	0.89%	1.52%	417	8.9%	0.56%	1.15%
South	41,666	75,372	85,454	91,890	31.53%	34.97%	50,224	120.5%	1.44%	38.46%	16,518	21.9%	1.31%	45.62%
Alabama	2,833	3,894	4,040	4,253	2.14%	1.62%	1,420	50.1%	0.74%	1.09%	359	9.2%	0.58%	0.99%
Arkansas	1,949	2,286	2,351	2,484	1.47%	0.95%	535	27.4%	0.44%	0.41%	198	8.7%	0.55%	0.55%
Delaware	267	594	666	717	0.20%	0.27%	450	168.6%	1.80%	0.34%	123	20.7%	1.24%	0.34%
Dist. of Columbia	663	638	607	554	0.50%	0.21%	(109)	-16.4%	-0.32%	-0.08%	(84)	-13.1%	-0.92%	-0.23%
Florida	1,897	9,746	12,938	14,166	1.44%	5.39%	12,269	646.7%	3.71%	9.39%	4,420	45.3%	2.48%	12.21%
Georgia	3,124	5,463	6,478	7,201	2.36%	2.74%	4,077	130.5%	1.52%	3.12%	1,738	31.8%	1.83%	4.80%
Kentucky	2,846	3,661	3,687	3,860	2.15%	1.47%	1,014	35.6%	0.55%	0.78%	199	5.4%	0.35%	0.55%
Louisiana	2,364	4,206	4,220	4,342	1.79%	1.65%	1,978	83.7%	1.11%	1.51%	136	3.2%	0.21%	0.38%
Maryland	1,821	4,217	4,781	5,042	1.38%	1.92%	3,221	176.9%	1.86%	2.47%	825	19.6%	1.18%	2.28%
Mississippi	2,184	2,521	2,575	2,697	1.65%	1.03%	513	23.5%	0.38%	0.39%	176	7.0%	0.44%	0.49%
North Carolina	3,572	5,882	6,632	7,195	2.70%	2.74%	3,623	101.4%	1.28%	2.77%	1,313	22.3%	1.33%	3.63%
Oklahoma	2,336	3,025	3,146	3,278	1.77%	1.25%	942	40.3%	0.61%	0.72%	253	8.4%	0.53%	0.70%
South Carolina	1,900	3,122	3,486	3,673	1.44%	1.40%	1,773	93.3%	1.20%	1.36%	551	17.7%	1.07%	1.52%
Tennessee	2,916	4,591	4,877	5,256	2.21%	2.00%	2,340	80.2%	1.07%	1.79%	665	14.5%	0.89%	1.84%
Texas	6,415	14,229	16,986	18,724	4.85%	7.13%	12,309	191.9%	1.96%	9.43%	4,495	31.6%	1.82%	12.41%
Virginia	2,678	5,347	6,189	6,618	2.03%	2.52%	3,940	147.1%	1.65%	3.02%	1,271	23.8%	1.41%	3.51%
West Virginia	1,902	1,950	1,793	1,828	1.44%	0.70%	(74)	-3.9%	-0.07%	-0.06%	(122)	-6.2%	-0.42%	-0.34%
West	14,379	43,172	52,784	57,596	10.88%	21.92%	43,217	300.6%	2.54%	33.09%	14,424	33.4%	1.91%	39.84%
Alaska	73	402	550	604	0.06%	0.23%	531	726.9%	3.90%	0.41%	202	50.2%	2.70%	0.56%
Arizona	499	2,718	3,665	4,218	0.38%	1.61%	3,719	745.3%	3.94%	2.85%	1,500	55.2%	2.92%	4.14%
California	6,907	23,668	29,758	31,589	5.23%	12.02%	24,682	357.3%	2.79%	18.90%	7,921	33.5%	1.91%	21.88%
Colorado	1,123	2,890	3,294	3,747	0.85%	1.43%	2,624	233.6%	2.20%	2.01%	857	29.6%	1.72%	2.37%
Hawaii	423	965	1,108	1,187	0.32%	0.45%	764	180.6%	1.88%	0.58%	222	23.0%	1.37%	0.61%
Idaho	525	944	1,007	1,163	0.40%	0.44%	638	121.6%	1.45%	0.49%	219	23.2%	1.38%	0.61%
Montana	559	787	799	870	0.42%	0.33%	311	55.7%	0.80%	0.24%	83	10.6%	0.66%	0.23%
Nevada	110	800	1,202	1,530	0.08%	0.58%	1,420	1291.0%	4.88%	1.09%	730	91.3%	4.34%	2.02%
New Mexico	532	1,303	1,515	1,685	0.40%	0.64%	1,153	216.8%	2.11%	0.88%	382	29.3%	1.70%	1.06%
Oregon	1,090	2,633	2,842	3,141	0.82%	1.20%	2,051	188.1%	1.93%	1.57%	508	19.3%	1.16%	1.40%
Utah	550	1,461	1,723	1,951	0.42%	0.74%	1,401	254.8%	2.32%	1.07%	490	33.6%	1.92%	1.35%
Washington	1,736	4,132	4,867	5,431	1.31%	2.07%	3,695	212.8%	2.09%	2.83%	1,299	31.4%	1.81%	3.59%
Wyoming	251	470	454	480	0.19%	0.18%	229	91.3%	1.18%	0.18%	10	2.2%	0.14%	0.03%

*Average Annual Growth Rate

Source: U.S. Department of Commerce, Bureau of the Census.

Table 98
Utah Population by County for Selected Years

County	1940 April 1st t Census	1970 April 1st Census	1990 April 1st Census	1995 July 1st Estimate	Percent of the Total Population 1940	1970	1995	Population per Square Mile of Land Area 1940	1995	Population Growth from 1940 to1995 Number (thousands)	Total Percent Growth	AAGR*	Percent of Total Growth	Population Growth from 1970 to1995 Number (thousands)	Total Percent Growth	AAGR*	Percent of Total Growth
Beaver	5,014	3,800	4,765	5,350	0.91%	0.36%	0.27%	1.9	2.1	336	6.7%	0.12%	0.02%	1,550	40.8%	1.36%	0.17%
Box Elder	18,832	28,129	36,485	38,900	3.42%	2.66%	1.99%	3.3	6.8	20,068	106.6%	1.32%	1.42%	10,771	38.3%	1.29%	1.20%
Cache	29,797	42,331	70,183	80,200	5.41%	4.00%	4.09%	25.6	68.9	50,403	169.2%	1.81%	3.58%	37,869	89.5%	2.56%	4.21%
Carbon	18,459	15,647	20,228	21,100	3.35%	1.48%	1.08%	12.5	14.3	2,641	14.3%	0.24%	0.19%	5,453	34.9%	1.19%	0.61%
Daggett	564	666	690	750	0.10%	0.06%	0.04%	0.8	1.1	186	33.0%	0.52%	0.01%	84	12.6%	0.47%	0.01%
Davis	15,784	99,028	187,941	216,000	2.87%	9.35%	11.03%	51.8	709.4	200,216	1268.5%	4.85%	14.21%	116,972	118.1%	3.14%	13.00%
Duchesne	8,958	7,299	12,645	13,500	1.63%	0.69%	0.69%	2.8	4.2	4,542	50.7%	0.75%	0.32%	6,201	85.0%	2.47%	0.69%
Emery	7,072	5,317	10,332	10,700	1.29%	0.50%	0.55%	1.6	2.4	3,628	51.3%	0.75%	0.26%	5,383	101.2%	2.81%	0.60%
Garfield	5,253	3,157	3,980	4,300	0.95%	0.30%	0.22%	1.0	0.8	(953)	-18.1%	-0.36%	-0.07%	1,143	36.2%	1.23%	0.13%
Grand	2,070	6,688	6,620	8,350	0.38%	0.63%	0.43%	0.6	2.3	6,280	303.4%	2.56%	0.45%	1,662	24.9%	0.88%	0.18%
Iron	8,331	12,177	20,789	26,900	1.51%	1.15%	1.37%	2.5	8.2	18,569	222.9%	2.14%	1.32%	14,723	120.9%	3.19%	1.64%
Juab	7,392	4,574	5,817	7,150	1.34%	0.43%	0.36%	2.2	2.1	(242)	-3.3%	-0.06%	-0.02%	2,576	56.3%	1.78%	0.29%
Kane	2,561	2,421	5,169	5,900	0.47%	0.23%	0.30%	0.6	1.5	3,339	130.4%	1.52%	0.24%	3,479	143.7%	3.59%	0.39%
Millard	9,613	6,988	11,333	11,900	1.75%	0.66%	0.61%	1.5	1.8	2,287	23.8%	0.39%	0.16%	4,912	70.3%	2.13%	0.55%
Morgan	2,611	3,983	5,528	6,500	0.47%	0.38%	0.33%	4.3	10.7	3,889	148.9%	1.66%	0.28%	2,517	63.2%	1.96%	0.28%
Piute	2,203	1,164	1,277	1,400	0.40%	0.11%	0.07%	2.9	1.8	(803)	-36.5%	-0.82%	-0.06%	236	20.3%	0.73%	0.03%
Rich	2,028	1,615	1,725	1,800	0.37%	0.15%	0.09%	2.0	1.7	(228)	-11.2%	-0.22%	-0.02%	185	11.5%	0.43%	0.02%
Salt Lake	211,623	458,607	725,956	806,000	38.46%	43.29%	41.14%	287.0	1,093.0	594,377	280.9%	2.45%	42.19%	347,393	75.7%	2.26%	38.62%
San Juan	4,712	9,606	12,621	13,500	0.86%	0.91%	0.69%	0.6	1.7	8,788	186.5%	1.92%	0.62%	3,894	40.5%	1.36%	0.43%
Sanpete	16,063	10,976	16,259	19,200	2.92%	1.04%	0.98%	10.1	12.1	3,137	19.5%	0.32%	0.22%	8,224	74.9%	2.24%	0.91%
Sevier	12,112	10,103	15,431	17,300	2.20%	0.95%	0.88%	6.3	9.1	5,188	42.8%	0.65%	0.37%	7,197	71.2%	2.15%	0.80%
Summit	8,714	5,879	15,518	22,400	1.58%	0.55%	1.14%	4.7	12.0	13,686	157.1%	1.72%	0.97%	16,521	281.0%	5.44%	1.84%
Tooele	9,133	21,545	26,601	29,600	1.66%	2.03%	1.51%	1.3	4.3	20,467	224.1%	2.15%	1.45%	8,055	37.4%	1.27%	0.90%
Uintah	9,898	12,684	22,211	24,300	1.80%	1.20%	1.24%	2.2	5.4	14,402	145.5%	1.64%	1.02%	11,616	91.6%	2.61%	1.29%
Utah	57,382	137,776	263,590	308,000	10.43%	13.00%	15.72%	28.7	154.1	250,618	436.8%	3.09%	17.79%	170,224	123.6%	3.24%	18.92%
Wasatch	5,754	5,863	10,089	12,200	1.05%	0.55%	0.62%	4.9	10.3	6,446	112.0%	1.37%	0.46%	6,337	108.1%	2.94%	0.70%
Washington	9,269	13,669	48,560	68,500	1.68%	1.29%	3.50%	3.8	28.2	59,231	639.0%	3.69%	4.20%	54,831	401.1%	6.59%	6.10%
Wayne	2,394	1,483	2,177	2,300	0.44%	0.14%	0.12%	1.0	0.9	(94)	-3.9%	-0.07%	-0.01%	817	55.1%	1.75%	0.09%
Weber	56,714	126,278	158,330	175,000	10.31%	11.92%	8.93%	98.5	304.0	118,286	208.6%	2.06%	8.40%	48,722	38.6%	1.30%	5.42%
Total	550,310	1,059,453	1,722,850	1,959,000	100.00%	100.00%	100.00%	6.7	23.8	1,408,690	256.0%	2.32%	100.00%	899,547	84.9%	2.46%	100.00%

*Average Annual Growth Rate

Sources: U.S. Department of Commerce, Bureau of the Census and Utah State Population Estimates Committee.

Electric Industry Restructuring

Introduction

Lawmakers, utility companies, industrial representatives, regulators and other interested groups are examining and debating the appropriate role of competition in electricity markets. In the United States and worldwide, electricity has traditionally been provided by government-owned utility companies or by private firms who were granted an exclusive monopoly franchise subject to government regulation. Federal as well as state governments are now engaged in a debate over current industry performance and over what form sustainable competition might take in this traditionally monopolistic industry.

On January 24, 1996, the Utah Public Service Commission established a public proceeding, Docket No. 96-999-01, to examine the electric utility industry.[1] The meeting will determine whether changes in Utah state regulation are required to promote the public interest.

Early in the Utah docket, the Utah Public Service Commission formed an Economic Analysis subcommittee. The goal of the subcommittee was to identify the economic forces driving pressure for change in the structure and performance of the electric service industry. This chapter draws on the work of the Economic Analysis subcommittee to provide an overview of the restructuring issue.

Specifically, this paper provides the historical context against which changes are occurring, defines basic "restructuring" concepts, identifies federal reform affecting industry structure, reviews drivers of discontent with current retail market structure, and highlights issues requiring further investigation to determine appropriate state policy to serve the public interest.

Historical Context and Basic Restructuring Concepts

The electric utility industry is an integral part of the nation's and Utah's infrastructure. It is both an important consumer of primary resources and an essential supplier of energy to residential, commercial, and industrial consumers. Because of its importance, the performance of this industry is subject to ongoing public scrutiny. The current electric utility industry structure reflects public policy and industry economics. The following provides a brief description of the electricity market, thus setting the backdrop against which changes are occurring.

Traditional Electric Utility Industry Structure. The provision of electricity to final consumers consists of the multi-stage activities of generation, transmission/coordination, aggregation and distribution.[2] Current industry structure is dominated by firms engaged in all four stages of the production process. These *vertically-integrated firms* typically sell electricity to the final, retail consumer at a single "bundled" price. Vertically-integrated firms also make wholesale sales, i.e., sales to other retail electric firms for resale to final consumers. Federal policy favoring an integrated firm structure was established in 1935 in the Federal Power Act (FPA) and the Public Utilities Holding Company Act (PUCHA). Figure 63 illustrates the current, predominant industry structure.

The *market structure* for the electric utility industry has long been regarded as a natural monopoly. Historically, electric power generation has been characterized by large *economies of scale*. This means that long-run costs per unit of production decline as firms increase in size. Hence, one firm can produce electric power at a lower cost per unit than two or more firms. For a multi-product or "vertically-integrated" firm the concept is a bit more complex; but generally, a single firm can provide a given market with a set of products (e.g., generation, transmission, distribution) at a lower-per-unit cost than could be achieved by several firms sharing the same market. These single-firm markets are called *"natural monopolies"*.

Natural monopolies are allowed to exist to capture economies of scale. Since monopoly markets are characterized by market power which enables the firm to set higher prices and lower output than competitive markets, governments have historically either regulated the price and output of private monopoly firms or have sought governmental ownership. The United States has pursued both policies: regulation of private utilities dominates the quantity of sales but government-owned utilities, such as municipally-owned power companies, are pervasive.

Regulatory Compact. A *regulatory compact* between monopoly providers of electricity and the public interest has developed over time. The

[1] The Utah Public Service Commission regulates Utah Power, a division of PacifiCorp, which is the only investor-owned retail electric firm in the state.

[2] *Coordination* refers to the maintenance of system integrity, minimization of power supply costs, and balancing resource planning with load forecasts.

regulatory compact has taken the following form in retail and wholesale markets:

- Under retail regulation, the utility's monopoly position has typically been sanctioned by the grant of an *exclusive franchise* to sell retail electricity in a given service area.
- Retail regulation has typically *obligated utilities by statute to plan for and serve* all retail customers in their service areas.
- Under wholesale regulation utilities have not been granted an explicit exclusive franchise.
- Regardless of whether a utility's monopoly position has been sanctioned through an exclusive franchise, both retail and wholesale *rate regulation* have been imposed to protect customers from the abuse of the utility's market power.[1]
- Both retail and wholesale rate regulation have typically been *cost-based*. This means that rates have been set to provide an opportunity for the utility to recover prudently incurred costs and earn a return sufficient to attract capital.

Market Participants. The vast majority of electricity in the United States, 79 percent in 1994,[2] is produced by private *investor-owned utilities (IOU's).* IOU retail sales are regulated by state public service commissions and their wholesale sales and associated interstate transmission are regulated by the Federal Energy Regulatory Commission, (FERC). Within Utah, one IOU, Utah Power, a division of PacifiCorp, provides 81 percent of the electricity consumed.[3]

Approximately 19 percent of the electric power consumed in Utah is provided through *publicly-owned utilities (POU's)*, i.e., municipally-owned or cooperatively-owned utilities and federal power marketing agencies.[4] Municipal rates are regulated by consumers through their local government and rural electric cooperative rates are regulated by the member-consumers.

Federal Power Marketing Agencies were created to market power generated at federally-owned facilities (primarily from hydro-electric dams). Federal Power Marketing Agencies primarily operate as wholesale sellers but in some cases they sell power directly to the end-user. By federal law, the power must be marketed first to public or non-profit agencies such as municipalities, rural electric cooperatives, federal and state agencies and other special groups as defined by law. In the West, the Bonneville Power Administration is the largest Federal Power Marketing Agency but the Western Area Power Administration operates to a much greater extent in Utah markets.

Current Composition of Western Electricity Market. Figure 64 illustrates the current composition of the western electricity market by generation ownership. Output is dominated by IOU's followed by federal power marketing agencies.

All demand for electricity is ultimately retail demand, i.e., end-users of electricity. However, it is useful to get a sense of the volume of activity in retail and wholesale markets, because structural change is occurring in the wholesale market and is only the subject of debate in most retail markets. Of total generation in the West, about two-thirds is sold directly to end-users primarily through regulated-monopoly retail market structure; and about one-third is sold in the wholesale market for resale by IOU's and POU's to end-users. Thus, most electricity is provided through retail monopoly firms.

Primarily, wholesale power is generated out of the surplus capacity built to serve retail customers of IOU's and POU's and out of surplus federal power. Figure 65 shows that the majority of wholesale power is generated by Federal Power Marketing Agencies, followed by IOU's. Figure 66 indicates the top five producers in the wholesale power market in the Western U.S. It is interesting to note that three of the five producers, Western Area Power Administration, PacifiCorp, and the Intermountain Power Agency, have a strong presence in Utah. These utilities are likely to experience pressure from wholesale competition.

Link Between Market Structure and Industry Performance. Industrial organization theory tells us that an industry's performance is affected by the strategy and structure of the firms in the industry as well as the structure of the market in which the firms act. Many different market structures exist in free market economies. Economic theory has developed *market structure models* to help analyze the myriad of possible market structures which run from competitive to monopolistic. It is useful to review these models as background for understanding the restructuring issue because the issue is about identifying the most appropriate model to serve the public interest.

Table 99 describes the industry structure and performance characteristics of six market models that exist in the U.S. economy today. The models range from pure monopoly to pure competition. Pure

[1] Recent exceptions relate to certain non-utility generators which were exempted from wholesale rate regulation after the passage of federal law in 1978; and exempt wholesale generators created by federal law in 1992.

[2] *Edison Electric Statistical Yearbook*, 1994, Tables 41a, 42a, Electricity sold by State.

[3] *Edison Electric Statistical Yearbook*

[4] *Edison Electric Statistical Yearbook*

competition is rare in any industry, though 70 percent of the industries in the US can be characterized by *effective competition.* Effective competition is marked by parity among firms and strong mutual pressure among many firms. Generally, there must be at least five comparable firms in order to avert price collusion, no dominance by one or several firms, and reasonably easy entry by new competitors.[1] Effective competition is represented in loose oligopoly, monopolistic competition and pure competition. *Ineffective competition* is characterized by the ability of a firm to raise price above cost and restrict output without threat of competition. Ineffective competition is represented by tight oligopoly, dominant firm, and pure monopoly markets.

Legal and Regulatory Reform in Wholesale Power Markets

The electric utility industry is undergoing structural reform brought about by federal changes in law and regulation primarily governing the integration requirements established in 1935. Federal requirements had encouraged the vertically-integrated structure of investor-owned utilities through rules governing the acquisition of assets and facilities. Over time, federal law and regulatory policy have incrementally loosened such requirements in order to increase competition in wholesale markets. These changes have an impact on the generation and transmission stages of the production process. Change has been incremental and has not required abandonment of the regulatory compact noted previously.

The federal changes essentially reduce entry barriers to the wholesale power market, encourage competition among generators and erode the market power of IOU's and Federal Power Marketing Agencies. These changes have an impact on the wholesale power market and therefore on retail rates through the revenue credit mechanism.[2] The institutional changes came through the following laws and regulatory orders:

- Public Utilities Regulation Policy Act in 1978 (PURPA);
- National Energy Policy Act of 1992 (EPACT);
- Federal Energy Regulatory Commission (FERC) April 23, 1996, Order 888 and 889.[3]

Briefly, federal law in 1978 encouraged entry of non-utility, "qualifying facilities" (QF) into the generation market by removing institutional barriers.[4] Federal law in 1992 encouraged competition in the wholesale power market by removing entry barriers to non-utility generation and other market participants. FERC Orders 888 and 889 published in 1996, provided the terms and conditions under which wholesale competition would proceed.

Generation Stage Impacts. Federal law in 1978 and 1992 increased the supply of non-utility generation especially of cogeneration and other dispersed forms of generation. These non-utility generators, known as Qualifying Facilities (QFs) in PURPA and Exempt Wholesale Generators (EWGs) in EPACT, have no obligation to plan for or serve retail load and thus, have no explicit requirement to serve the public interest. Thus utilities and non-utilities are no longer required to make generation investment decisions based on serving state or local, certificated retail load.

Through ownership of EWGs, federal law in 1992 invited foreign companies, construction contractors, banks, manufacturing companies and combinations thereof to build generation for and engage in domestic wholesale markets. Utilities and non-utilities can own wholesale generators anywhere in the nation and can own retail companies outside the U.S. EPACT also allowed new wholesale market participants, power marketers and power brokers, thus increasing competition for sales and purchases in the wholesale power market.[5]

The laws and subsequent regulatory policies also allowed IOU's and EWG's to use market-based, rather than cost-based prices for wholesale electricity transactions from new generation plants, as well as from existing generation plants subject to federal approval. Loosened restrictions on market entry and pricing in the wholesale market has encouraged competition in this market. Once limited to sales among utilities, the wholesale market contains participants with differing objectives, and IOUs must now compete for sales and purchases, some based at market rates.

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[1] William G. Shephard, *The Economics of Industrial Organization*, Fourth Edition, Prentice Hall, 1996, p 8.

[2] Current regulation of IOUs in Utah assigns the costs associated with wholesale sales to retail sales customers and credits the revenues from wholesale sales to retail customers.

[3] FERC Order 888, "Promoting Wholesale Competition through Open Access Non-Discriminatory Transmission (continued...)

[3](...continued) Services by Public Utilities; Recovery of Stranded Costs by Public Utilities and Transmitting Utilities," and Order 889, "Open Access Same-time Information Systems", were issued on April 24, 1996.

[4] A relatively small generation facility based on renewable resources, waste-products or cogeneration technologies could be certified as a QF.

[5] "Power marketers" buy and sell wholesale power but do not own relevant generating or transmission facilities. "Power brokers" facilitate transactions between buyers and sellers but do not take ownership of the electricity traded.

Non-utility generation has increased since 1978 and now provides about 11 percent of total generation in the West.[1] Although the federal changes provide an inroad to competition, non-utility participation in the West is still relatively small. At about 4 percent of total wholesale sales in 1995, power marketing activity is also fairly small in the West.[2] However, preliminary figures for 1996 indicate that power marketing activity is growing significantly.

Wholesale Price Impacts. The effect of increased wholesale competition on price is more difficult to measure with current data. Some information is available on "spot" wholesale transactions (hour-by-hour sales); however, the majority of wholesale transactions are subject to long-term contracts.

For spot transactions, the Dow Jones began publishing a wholesale market price index in June, 1995. Dow Jones now publishes three wholesale price indexes in the West, one which includes "firm" power transactions which are closer in character to long-term contract prices. The New York Mercantile Exchange also began an electricity futures market in 1996 which again better reflects long-term power transactions than the spot indexes.

Some industry experts argue that spot prices have declined due to increased competition. Some utilities have also reported lower margins on spot sales. However, spot wholesale prices are also influenced by weather and gas prices. The introduction of the indexes and the increases in competition for wholesale sales and purchases has coincided with one of the wettest years on record, producing abundant low-cost hydro power. It is difficult with current data to determine the extent of federal reform on wholesale price.

Transmission Stage Impacts. In order to facilitate transactions by non-utility wholesale market participants, 1992 federal law obligated utility transmission owners to transmit power on FERC order. In Order 888, FERC concluded that vertically-integrated utilities could inhibit competition in the wholesale market through exercise of market power in transmission. The FERC through Orders 888 and 889 has attempted to eliminate such market power, ordering all transmission-owning utilities to file tariffs governing access and use of their transmission facilities. Transmission system users including owners must abide by the tariffs. Order 888 requires IOU's to price transmission and generation services separately for wholesale transactions, this practice is known as *functional unbundling.*

By design these changes remove the strategic value of transmission ownership and could erode some benefits of vertical integration previously captured by monopoly utilities in the wholesale market. Recognition of this loss of strategic value is evident in current attempts to form regional institutions to independently operate the transmission grid. Both PacifiCorp and Bonneville Power Administration, two large transmission owners, are actively involved in the formation of INDEGO, an Independent Grid Operator proposal which would govern transmission facilities in the Northwest and includes Utah. Many utilities in the nation are also reorganizing their corporate structure to better match the provision of separated electricity services.

Factors Driving Desire for Change in Retail Market Structure

Changing retail market structure from a vertically-integrated seller of a bundled electricity product, to a market structure characterized by competition and choice, is commonly referred to as 'retail competition', 'retail wheeling', 'direct access', 'retail access', 'customer choice' or 'retail restructuring'. For the purposes of this discussion, all terms are synonymous and refer to the elimination of the monopolists' exclusive franchise over the generation component of retail electricity sales, thus enabling end-users to choose among electricity suppliers. The transmission and distribution of power would continue to be provided by regulated monopolies, but generation of power and the aggregation of loads and resources would be provided by competing firms. A sample of the new market structure with retail competition is provided in Figure 67. The illustration shows the increases in transactions and the increased complexity of industry structure. This change would require substantial revision of the regulatory compact as outlined on page ***.

The following factors contribute to the drive for retail competition: competitive spillover from federal reform in wholesale markets, changes affecting the generation stage of electricity production, high retail rates, and a general paradigm shift with respect to how society views the role of markets as allocators of scarce resources.

Spillover Effects from Federal Reform. Federal reform in wholesale markets has provided an inroad for competitive electricity markets (discussion on page ***) Although the wholesale market represents only one-third of the total demand for electricity, the federal reforms require IOUs to behave as though they are not vertically-integrated with respect to the generation and transmission of power for wholesale sale. Indeed, utilities are seeking the formation of independent transmission system operation and

[1] North American Electric Reliability Council, Electricity Supply and Demand Database, Western Systems Coordinating Council.
[2] Data from Power Marketers Weekly.

organizing corporate structure to match a more segmented industry.

Further, by opening the wholesale market to non-utilities, entities that were once customers of IOU's and POU's are now also potential competitors. For some customers, the cost of self-generation net of the sale of excess generation in the wholesale market, is competitive with existing retail rates.

Thus, changes in the number and type of market participants and transaction opportunities are affecting the way the industry thinks about making transactions. Even if firms are not required to divest vertically-integrated operations, they may behave differently due to new competitive pressures.

Changes at Generation Stage. Evolutionary changes in the generation and transmission of electricity question the assumption that the generation stage is a natural monopoly. Two developments have contributed to this notion.

First, increases in the efficiency of combined cycle gas-fired turbines coupled with factory-built economies has reduced the capital cost of generating electric power and substantially reduced the size of the most economically efficient generating plant. The *minimum efficient size* plant for generation has declined dramatically from a high of about 400 MW to 1,000 MW for coal and nuclear power plants in the 1970s and 1980s to between 50 MW and 150 MW for gas technologies today.[1] Factory-built economies have also shortened the lead time for new units to come on line.

Also, cogeneration technologies and small power production which were given federal encouragement in 1978 and 1992, have also proven to be lower cost than some large scale power plants.[2] Cogeneration is the pairing of electric power generation with heat-using processes. Most non-utility electricity in the West is generated through cogeneration technologies and this trend is expected to continue.

Employing these technologies coupled with low gas prices, firms may no longer need to generate large amounts of electricity to achieve economies of scale in generation.[3] Indeed, self-generation, and non-utility generation can compete with existing generation in some locales.[4]

The second and perhaps more dramatic change has been an increase in the size of the relevant market for generation. Expanded interconnection of generation plants over time for reliability purposes has effectively increased the relevant size of the market for both existing (large scale) and new (small scale) generation plants. Hence a firm in Washington State can sell its electric power to a utility company in New Mexico. In the West, this market might be as large as the Western Systems Coordinating Council service territory which includes all or portions of the 14 western states; Alberta and British Columbia, Canada; and the northern portion of Baja California, Mexico.

The increased market area for new and existing generation plants coupled with smaller efficient generating plant size and cogeneration opportunities may yield an industry structure which allows more than one firm to efficiently generate electric power and thus may support a competitive market structure.

High Retail Rates. The federal reduction of barriers to non-utility generation and emphasis on demand-side technologies has created competition for retail sales in many locales, especially in states with high rates. The pressure in many states to allow competition and choice among suppliers for retail sales appears to come from (1) regulators concerned about the economic viability of in-state investor-owned utilities (IOU's) given a more competitive electricity market; and, (2) from large retail industrial representatives who would like the opportunity to participate in the competitive market, either as a buyer or a seller. In fact, states that have already made or are in the process of making their electric markets more competitive are the ones that currently face the highest retail rates in their region (i.e., California and Arizona in the West, New Hampshire in the East; Illinois and Michigan in the Midwest).

A review of retail prices among electric service providers, particularly across state borders, illustrates the role of price in the drive for retail competition. Figure 68 shows the state variation in average retail electricity prices that existed in 1994. "Price" here is represented by average revenue per kilowatt hour sold. These retail prices are regulated and reflect the historical cost of generating, transmitting, aggregating and distributing electricity to end-users.

[1] Minimum Efficient Size plant, also known as optimal plant size, refers to the size of the plant that produces the lowest cost power per megawatt-hour.

[2] Western Systems Coordinating Council, *Independent Power Producer Generation Report*, August, 1995.

[3] Charles E. Bayless, "Less is More: Why Gas Turbines will Transform Electric Utilities," *Public Utilities Fortnightly*, December 1, 1994, page 24.

[4] Thomas R. Casten, "Electricity Generation: Smaller is Better," *The Electricity Journal*, December 1995, page 65.

The highest prices are found in New England with a regional average of 10.1 cents per kWh. The Mid-Atlantic states have the next most expensive electricity at 9.6 cents per kWh. The lowest prices are in the Pacific Northwest and Northern Mountain states. Utah ranks ninth lowest in terms of the average retail price of electric power in the nation.

Further illustration depicts prices by different customers in the western region. Figure 69 shows retail residential, commercial and industrial prices of IOU's and POU's in the western states. Average industrial rates are relatively low in Utah, ranking seventh lowest in the nation.

The state IOU price variations are an artifact of retail regulation which is conducted separately in each state. The variation is attributable to several factors, the most important of which is the type and cost of plant used to generate electric power. For example, relatively high retail prices are found in states in which generation is relatively more dependent on nuclear power (e.g., California and Arizona and New England states). This condition results from the high fixed cost associated with the construction of the plants. Lower prices are found in states with a relatively greater abundance of low-cost hydro-generated electric power (e.g., Oregon, Washington and Idaho).

Three consequences of high retail rates may contribute pressure for retail competition.
First, high rate states face the greatest pressure from competitive supply—from cogeneration and demand-side technologies. Loss of load to customer self-generation can create a spiral effect for high-cost incumbent utilities. The spiral effect occurs when revenues lost due to self-generation must be collected from existing customers through higher rates, which in turn increases the value of self-generation for existing customers and induces further losses of load. Indeed, California regulators cited this concern in their 1993 policy analysis "the yellow book" which concluded that current regulatory tools were incompatible with emerging competition in supply in California.[1]

Second, large volume retail customers in high cost areas, seeing the disparity of retail and wholesale price, have placed pressure on government officials to open access to alternative suppliers. Specifically, these customers want the opportunity to either purchase or sell power in a competitive market rather than be restricted to the incumbent utility firm. Competitive opportunities would enable the customer to bypass the local utility and buy from a lower cost utility or to sell cogenerated power in the retail market for better profit than the wholesale market. Either way, the large customer would have the opportunity to reduce total expenditures on electric power.

Third, the electricity price disparity across states could affect a state's ability to attract and maintain industrial and commercial businesses. States with high rates might be concerned about maintaining their economic base and therefore implement policy that results in lower relative rates. California regulators noted this concern in the yellow book.[2]

Paradigm Shift. Another factor affecting the drive for retail competition in the electricity industry is that there appears to be a paradigm change with respect to the perceived role that competitive markets play in allocating society's scarce resources. Specifically, there seems to have been a global shift in the confidence of policy makers to rely on competitive markets to allocate resources rather than relying on regulated markets. Examples of this philosophical shift in public policy include the deregulation of other formerly-regulated industries, i.e., telephone, gas, airlines, banking, and trucking in the U.S. and other nations. This shift is only now building a head of steam in the electric power industry.

Retail Competition and the Public Interest

In the Utah PSC restructuring docket, the Commission articulated four public interest objectives: Equity, Efficiency, Universal Service and Quality of Service. Much of the discussion regarding appropriate retail market structure will hinge on the ability of alternative market structures to achieve these public interest objectives.

The regulated monopoly structure in the U.S. electric industry has been successful over the years in achieving these public interest objectives. It has electrified virtually the entire U.S. The electric system is remarkably reliable and costs and prices constantly declined over time until the past two decades.

However, critics argue that competition promotes efficiency at input, output and pricing levels and can allow customer choice at the retail level. The question is whether greater efficiency will compensate for potential losses with respect to the other public interest objectives.

Efficiency Objective. Proponents of retail competition cite the economic efficiency benefits of a competitive market. They believe that a

[1] Jeffrey Dasovich, William Meyer, Virginia A. Coe, *California's Electric Industry: Perspectives on the Past, Strategies for the Future*, Division of Strategic Planning, California Public Utilities Commission, February 3, 1993, pp. 121-125.

[2] *California's Electric Industry*, pp. 116-119.

competitive market will lead to lower generation costs, more technological innovation and better service. Economists have long articulated the benefits of a *perfectly* competitive market which virtually guarantees economic efficiency. *Economic efficiency* is achieved when net social benefit is maximized. Net social benefit is maximized when the social benefit of an additional unit of output exactly equals its social cost.

In moving from one market structure to another, economic efficiency increases if gains exceed losses. Theoretically, the move from a regulated monopoly market structure to pure competition should increase economic efficiency. However, *pure competition* is a theoretical abstraction and does not exist in reality. Therefore, actual efficiency gains will depend on how close the new market structure resembles a competitive market.

A major concern affecting the number of buyers and sellers in a competitive electricity market is whether market barriers exist which would preclude effective competition and possibly result in a tight oligopoly. Market barriers that may preclude an effectively-competitive market are: utility resistance to purchases; scale and scope economies which may define the size of the firm as being much larger than scale economies would suggest for a single plant owner; government-created market barriers like eminent domain, construction certification and tax policies, which may offer an advantage to public utilities over non-utility generators.

Proponents of retail competition believe that the increased market area for new and existing generation plants coupled with smaller efficient plant size and cogeneration technologies allows more than one firm to efficiently generate electric power in a given locale. However, the changes speak only of the loss of economies of scale in generation and not of the value of economies of scope achieved through vertical integration.

If the generation portion of the market has indeed lost its natural monopoly characteristics, then one may argue that less government regulation of electric power generation may be needed. However, the transmission and distribution stages of the production process will likely continue to have natural monopoly characteristics and, hence, remain regulated. Given the substantial domination of generation markets by vertically-integrated firms, it is not clear what the optimal firm size would be in a competitive electricity market nor whether it would be a vertically-integrated firm or generation only firm. Therefore, it is unclear how many firms a given relevant market can support and thus unclear which type of market structure is likely to emerge.

There is some empirical support that economies of vertical integration in a firm may average 13 percent to 14 percent.[1] This means that the vertically-integrated firm may have a natural and substantial cost advantage which will inhibit retail competition. If the unfettered retail market structure results in less than five firms, be they vertically-integrated or horizontally-integrated (for example, five generation firms in the nation), an oligopoly market structure will prevail, not a competitive market.

Divestiture of the vertically-integrated firm into each stage of the production process may be warranted in order to achieve an effectively-competitive retail marketplace. Indeed, the California retail reform encourages divestiture of 50 percent of incumbent IOU's generation assets. However, this could increase transaction costs to consumers. Industry segmentation results in a loss of vertical economies of scale and higher transaction costs. Here, the issue is whether the efficiency benefits from competitive generation are likely to outweigh increased transaction costs.

Equity Objective. Another important performance criteria is equity or fairness. Even if moving from one market structure to another increases economic efficiency, the move could be considered "unfair" if some gain and some lose. Whether the shift in market structure is considered equitable depends on the perspective in which economic efficiency is measured. For example, the nation may gain but some states might lose; or some utilities within a state may gain and some may lose; or some customers served by a utility may gain and some may lose; or urban customers may gain and rural customers may lose.

Proponents of retail competition are typically large users of electricity who wish to have greater freedom to choose their provider of electric power. Currently, large users have the option to self-generate. Retail competition would expand their options to include bypassing the local utility company and purchasing electric power on the wholesale market. Remaining customers of the local utility may then face rising costs as revenues are lost from departing large customers. However, it is unclear whether all customers want choice or that all customers could benefit from choice if transaction costs relative to use are high.

Retail competition would lead to market-based prices rather than regulated prices. It is not clear that the market price in Utah would be higher or lower than cost-based rates, or that all consumers

[1] John E. Kwoka, Jr., *"Vertical Integration and Its Alternatives for Achieving Cost Efficiency in Electric Power"*, March, 1996, George Washington University.

would be equally affected by the change. Residential, commercial and industrial customers use electricity differently. How and when they use electricity affects the cost to produce and deliver the electricity.

A related issue is the allocation of risk regarding costs incurred in the past. Economic rent occurs when a producer has a particularly productive asset. Under current regulation, such rents are retained for ratepayers; that is, if PacifiCorp owns a low-cost source of supply, it is allowed to recover only its fully embedded (historical) costs. In a competitive market, the producer charges the market price and if its costs are substantially below market price, then stockholders keep the economic rents or profits.

Thus, the move to a competitive market could shift the risk of ownership of assets from the ratepayer to stockholder. If competitive market prices rise above regulated rates then stockholders benefit and ratepayers lose. If competitive rates are below regulated rates then losses can occur and the allocation of these losses becomes an issue. These losses are commonly referred to as "stranded investment" resulting from the transition from one market structure to another. One of the main benefits of a regulated environment is that the benefits of fully depreciated plants are retained by the general ratepayer. Alternatively though, the costs of generation plants that prove to be costly, like nuclear power plants, will be fully recovered by ratepayers even if new resources are shown to be cheaper.

California, a leader in introducing competition to the retail market, has recently addressed the stranded investment issue by allowing utilities to recoup past generation investment (primarily in nuclear assets) over five years from their customers. These costs will be recovered by ratepayers through accelerated depreciation and non-bypassable wires charges. This will delay competitive market entry but does address past regulatory agreements.

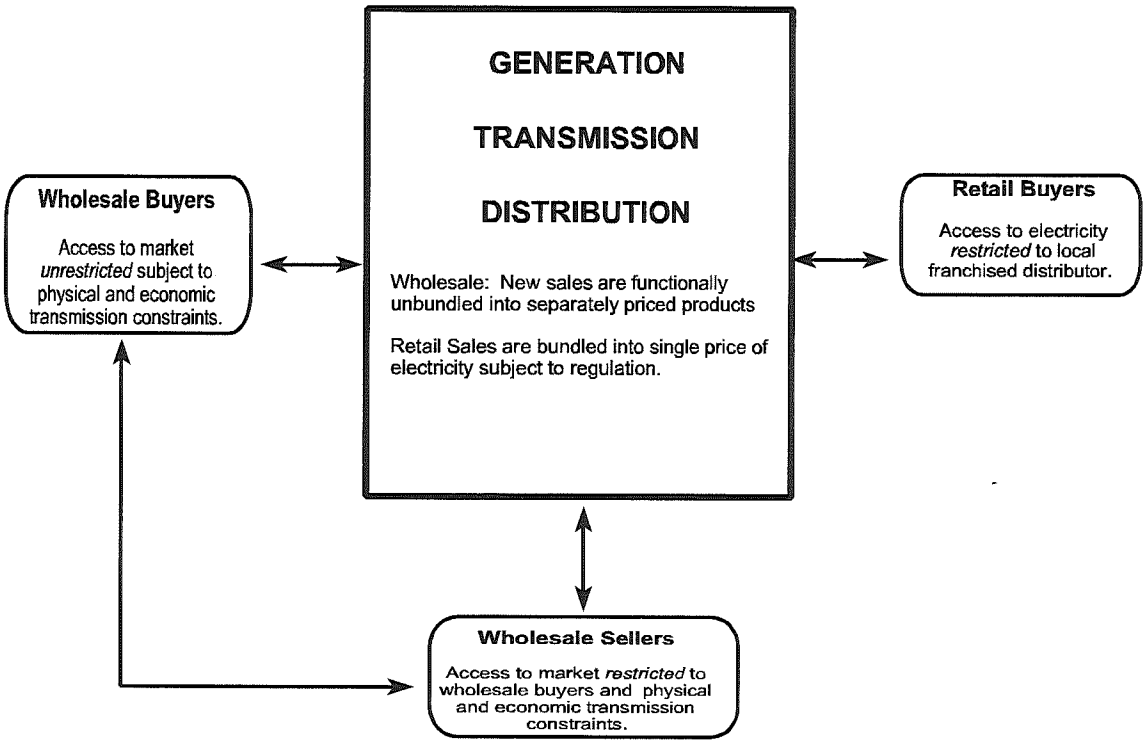
By the very nature of a competitive market, economic rents could be lost to ratepayers or shareholders could suffer losses from stranded investment; it is a public policy issue as to who should benefit from economic rents or who should bear the costs of uneconomic assets occurring over the transition period from one market structure to another. In Utah, it is uncertain that losses will result from competition. Market prices may be higher than regulated prices and thus the allocation of economic rents may be required. This issue is one that requires further investigation.

Universal Service Objective. The regulated monopoly model has been fairly successful at providing universal service. The regulatory compact guarantees the monopolist a retail market and in return, the supplier has accepted an obligation to plan for and serve growing requirements at average rates. Loss of the exclusive franchise would fundamentally alter this compact and require new rules governing universal service.

In a competitive market, average rates would be replaced by price differences caused by supply and demand in a given relevant market. This could affect rural customers disproportionately. Primary determinants of a relevant market include the location of loads and sources of supply and transmission capabilities between them. In a competitive environment, rules on obligation to serve would need to be addressed and a level playing field established for all competitors.

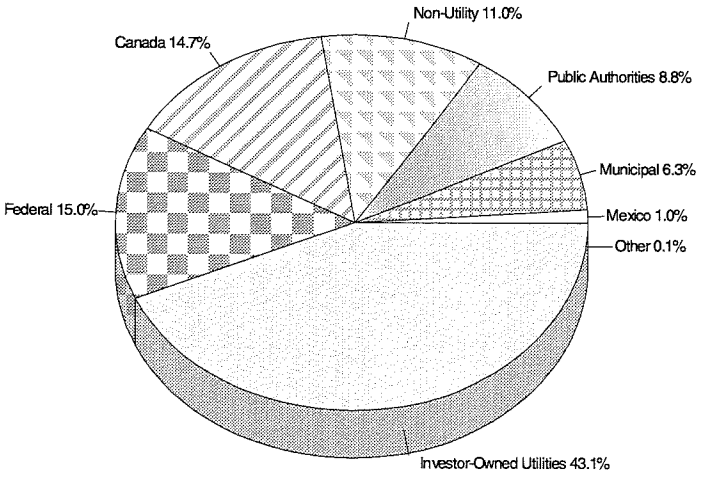
Quality of Service Objective. To date, reliable electric service has been met through cooperation and coordination among utilities who did not compete for retail sales. Competition will add a new dynamic, and cooperation and coordination may no longer be in a firm's interest. New rules would need to be developed that would address this problem and also level the playing field so that new entrants and incumbents face similar responsibilities to provide reliable electricity service.

Figure 63
Current Industry Structure



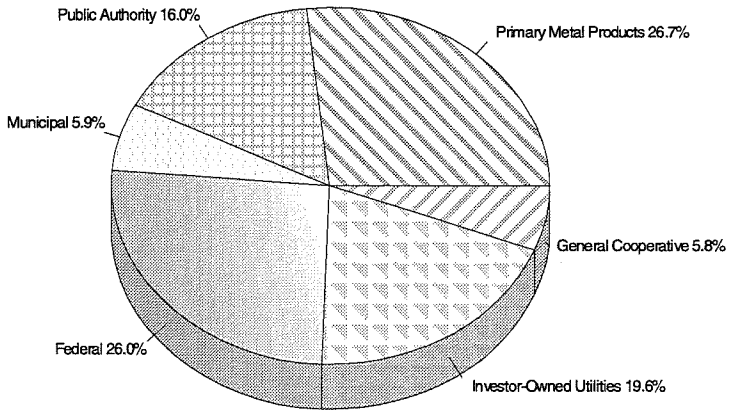
Source: Utah Division of Public Utiltities, December, 1996.

Figure 64
1994 Western Generation: Owner Type Share of 682,973,000 MWh



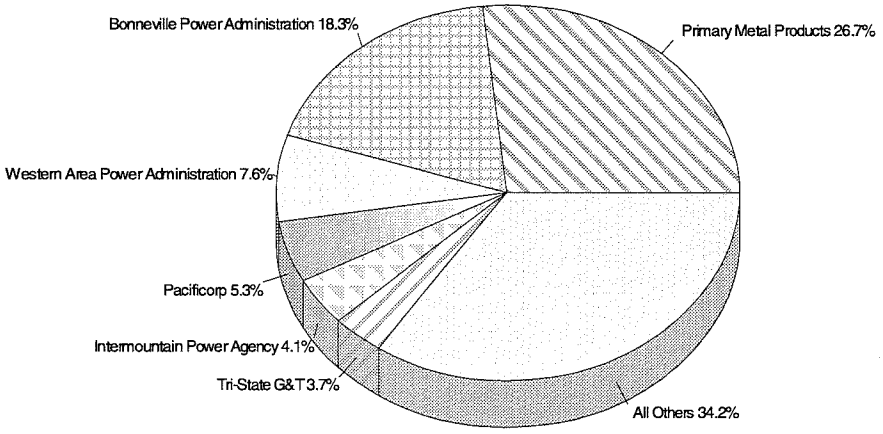
Source: Resource Data International, Boulder, Colorado, Powerdat Database.

Figure 65
1994 Western-U.S. Wholesale Generation: Owner Type Share of 216,000,000 MWh



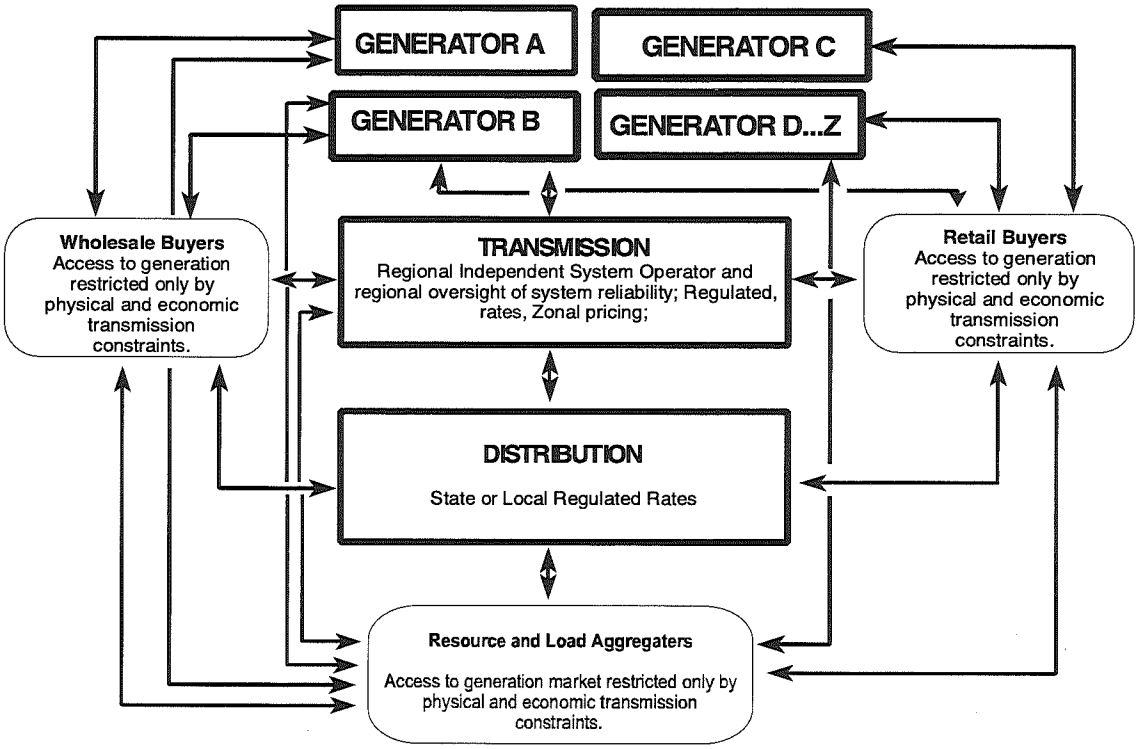
Source: Resource Data International, Boulder, Colorado, Powerdat Database.

Figure 66
1994 Western-U.S. Wholesale Generation: MWh Share by Top Five Owners



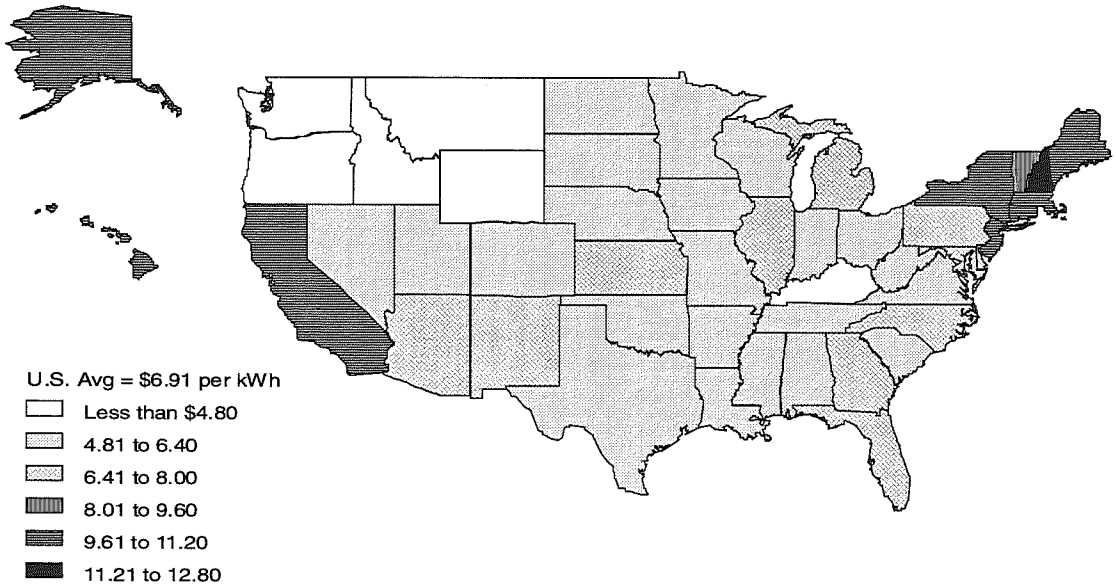
Source: Resource Data International, Boulder, Colorado, Powerdat Database.

Figure 67
Potential Industry Structure



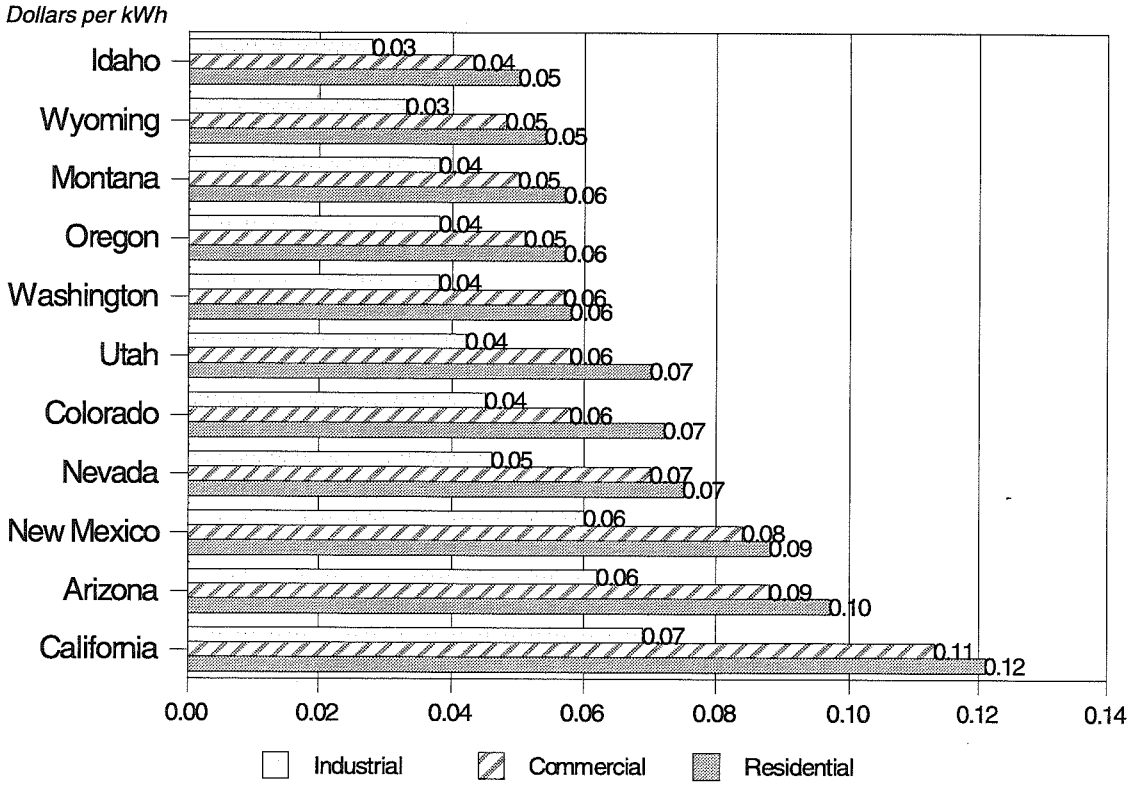
Source: Utah Division of Public Utiltities, December, 1996.

Figure 68
1994 Average Revenue per kWh



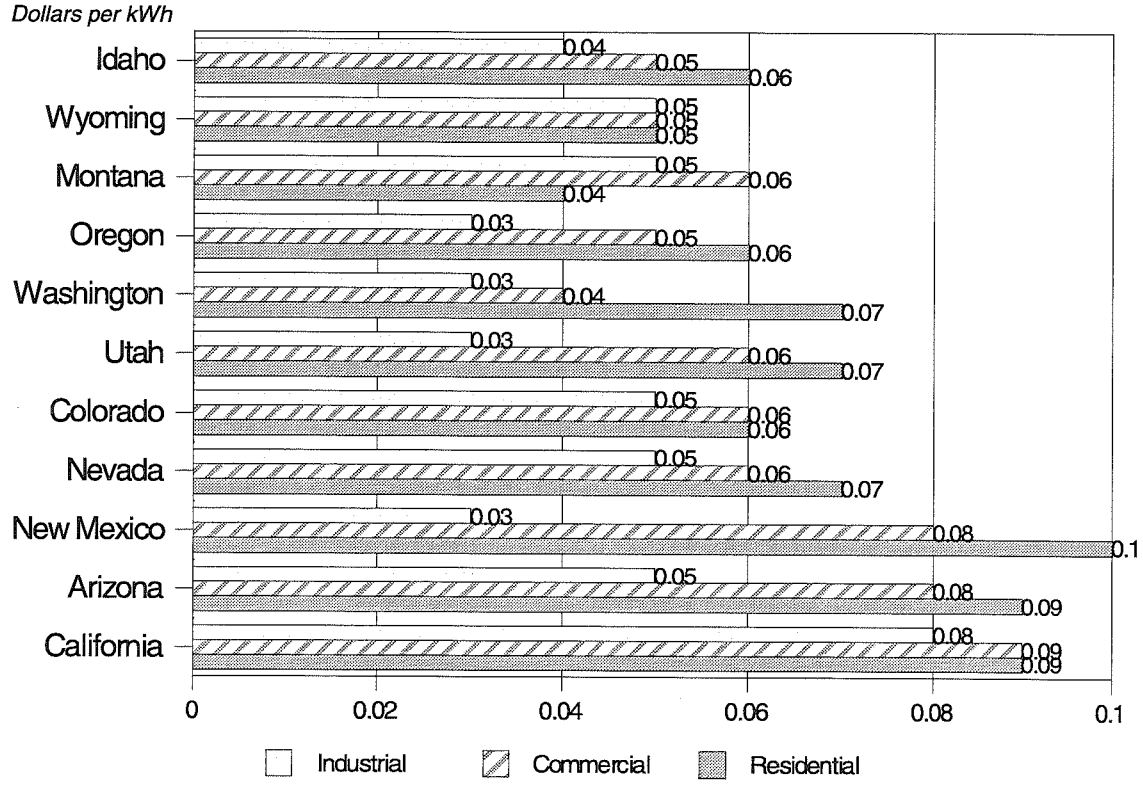
Source: "1994 Statistical Yearbook." Edison Electric Institute

Figure 69
1994 Retail Prices in Western States: Investor-Owned Utilities



Source: Edison Electric Institute, "1994 Statistical Yearbook".

Figure 70
1994 Retail Prices in Western States: Publicly-Owned Utilities



Source: Edison Electric Institute, "1994 Statistical Yearbook".

Table 99
Types of Markets: Shading from Pure Monopoly to Pure Competition

Kind of Competition	Number of Producers	Degree of Product Differentiation	Part of U.S. Economy Where Prevalent	Degree of Control over Price	Methods of Marketing	Performance Outcomes
Pure Monopoly	One firm has 100 percent of the market.	Not applicable.	Local public utilities; local telephone or cable T.V..	Very substantial.	Not applicable.	Price above, output below competitive levels; above normal profit; least economically efficient.
Dominant Firm	One firm has 50-100 percent of the market and no close rival.	Not applicable.	Often local markets; intercity telecommunications.	Substantial.	Price leadership; tacit collusion.	Same as monopoly; degree depends on competitive pressures in market.
Tight Oligopoly	Leading four firms, combined, have 60-100 percent of the market; collusion to fix prices relatively easy. (a)	Little to some.	Steel, aluminum, automobiles.	Significant; 5-10 percent or more.	Product differentiation and advertising; administered prices (price leadership, tacit collusion, etc).	Same as Dominant Firm
Loose Oligopoly	Leading four firms, combined, have 40 percent or less of the market; collusion virtually impossible.	Often little difference; sometimes some differentiation.	Much of manufacturing.	Insignificant to moderate.	Attempts at product differentiation; advertising very heavy.	Same as Dominant Firm
Monopolistic Competition	Many: None has over 10 percent of the market. (b)	Some; products may be similar, or there may be real differences.	Retailing; clothing; some services.	None or very slight.	As above; advertizing and quality rivalry.	Price and output close to pure competition levels; normal profit; relatively high economic efficiency.
Pure Competition	Over 50: None has appreciable market share.	None; products are identical or nearly so.	A few agricultural industries.	None.	Market exchange or auction; little selling expense.	Lowest price, highest output; normal profit; economically efficient.

(a)= The collusion may be "tacit", involving the firms following "cues" of market leaders.
(b)= Some authorities would emphasize that in Monopolistic Competition the competitors differentiate their products so they can attain a minor price advantage, or reach a different market segment. Most retailing and clothing manufactures are considered to fall into this category.

Source: Adapted from David Chessler, Ph.D., "Determining When Competition is 'Workable': A Handbook for State Commissions Making Assessments Required by the Telecommunications Act of 1996", The National Regulatory Research Institute, July 1996, page 5. Adapted from Samuelson, "Economics", Table 26-1, p.489, Shepard, "Industrial Organization", Table 1.2, p.14.

Appendix

Appendix

Select Publications of the Organizations Comprising the Economic Coordinating Committee are shown in this Appendix. This list includes only the reports which are particularly relevant to the *Economic Report to the Governor.* To obtain a complete list of the publications of each entity or copies of reports, contact the appropriate entity.

Governor's Office of Planning and Budget
116 State Capitol, S.L.C., Ut. 84114 (801) 538-1036
www.governor.state.ut.us/gopb

Regular Reports
Economic Report to the Governor (Annually)
Economic and Demographic Projections Report (Periodically)
Budget Recommendations (Annually)
Budget Summary (Annually)
State Planning Report (Periodically)
Utah Data Guide (Quarterly)
Utah Demographic Report (Annually)
Utah Economic and Demographic Profiles (Annually)

Special Reports
Federal Land Payments in Utah: 1995 Update
Land Conservation in Utah: Tools, Techniques and Initiatives
Employment and Population Impacts of Circle Four Farms: Four Development Scenarios
Race and Ethnicity Data: Understanding the Issues, Meeting the Demand in Utah
Microns Utah Valley Plant: The Economic, Demographic, and Fiscal Impacts
Utah Tourism Financing: A Status Report from the Governor's Tourism Finance Committee
Utah Local Government Fiscal Database: An Overview and Evaluation
Utah Migration Database: Sources, Methods, Limitations, and Analysis
The Base Period 1992 Utah Multiregional Input-Output (UMRIO-92) Model: Overview, Data Sources, Methods, Limitations, and Analysis
Exports from Utah's Regional Economies
Fiscal Impact Model: Analytical Foundations, Research Findings, and Sensitivity Analysis
Utah Ski Database
Andalex Resources and the Smoky Hollow Mine: A Fiscal Impact Analysis and Overview
1990 Census Briefs: Age Distribution, Cities and Counties, Equal Employment Opportunity Data, Income and Poverty, Minorities
2002 Utah Winter Olympic Games: Preliminary Economic Impact Analysis

Utah Geological Survey
1594 West North Temple, S.L.C., Ut. 84114 (801) 537-3300
www.nr.state.ut.us

Survey Notes (Quarterly)

Utah Department of Community and Economic Development
324 South State, Suite 500, S.L.C., Ut. 84111 (801) 538-8700
www.ce.ex.state.ut.us

Regular Reports
Legislative Report of the Permanent Community Impact Fund (Annually)
Legislative Report of the Utah Disaster Relief Board (Annually)
Small Cities Community Development Block Grant Program (Annually)
Utah Directory of Business and Industry (Annually)
Utah Export Directory (Bi-Annually)
Utah Facts (Annually)
Environmental Permit Brochure (Annually)
Directory of Agribusiness Financial Resources (Annually)

Special Reports
Going Into Business in Utah
Governor's Blueprint for Utah's Economic Future
Poverty in Utah (Triennially)
Utah's Rural Development Strategy
Tourism Indicators
Zions Capital and Business Resource Guide (Published by Zions Bank)

Utah Department of Employment Security
140 East 300 South, S.L.C., Ut. 84111 (801) 536-7800
www.udesb.state.ut.us

Regular Reports
Annual Report of Labor Market Information
Employment, Wages and Reporting Units by Firm Size (Annually)
Labor Market Information by Planning District (Quarterly)
Occupations in Demand (Semi-Annually)
Utah Job Outlook for Occupations (Biennially)
Utah Labor Market Report (Monthly)

Special Reports
Utah Workforce 2000
Women in the Utah Labor Force
Utah Equal Employment Opportunity Information—1990 Census
Wage and Compensation Surveys
County-Level Demographic Reports

Utah State Tax Commission
210 North 1950 West, S.L.C., Ut. 84134 (801) 297-2200
www.tax.ex.state.ut.us

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

Special Reports
Review of the Sales and Use Tax Exemption for Manufacturing Machinery and Equipment
An Evaluation of Utah's Business Tax Competitiveness
Broadening the Base: An Evaluation of a Sales Tax on Services
Distribution of Local Sales Tax Revenue
Initial Tax Burdens on Business and Households in Ten Western States
Outlook for Utah's Defense Industry in the Post-Cold-War Era
Selected State Tax Rates in the U.S.
The Review of Sales and Use Tax Exemption for Manufacturing Machinery
Salt Lake Valley Zip Code Sales, 1992
Utah Household Taxes: Levels and Burdens

Bureau of Economic and Business Research
University of Utah, S.L.C., Ut. 84112 (801) 581-6333
www.business.utah.edu/BEBR

Regular Reports
Statistical Abstract of Utah (Triennially)
Utah Construction Report (Quarterly)
Utah Economic and Business Review (9 Per Year)

Special Reports
Great Salt Lake Mineral Royalties
The 1990-91 Utah Skier Survey, Final Report
The Brine Shrimp Industry of the Great Salt Lake
Utah's High Technology Directory

Utah Department of Natural Resources, Office of Energy and Resource Planning
1594 West North Temple, S.L.C., Ut. 84114-6480 (801) 538-5428
www.nr.state.ut.us

Regular Reports
Utah Energy Statistical Abstract (Biennially)
Annual Review and Forecast of Utah Coal Production and Distribution
Utah Energy Outlook (Annually)
New Data Source (Quarterly)

Special Reports
The Economic and Fiscal Impacts of Coalbed Gas Drilling in Central Utah, December 1995
Bear Lake Valley Recreation Survey, November 1995

First Security Bank Corporation
79 South Main, #201, P.O. Box 30006, S.L.C., Ut. 84111 (801) 350-5259

Regular Reports
Insights (Quarterly)
Local Index of Leading Economic Indicators (Monthly)
Wasatch Front Cost of Living Index (Monthly)

KeyCorp (parent company of Key Bank of Utah)
Key Bank Tower, 50 South Main, Suite 2001, S.L.C., Ut. 84144 (801) 535-1208

Regular Reports
Dateline: The Economy (Weekly)
The Key Indicator: Economic News of Utah and the Nation (Quarterly)

Utah Foundation
10 West 100 South, Suite 323, S.L.C., Ut. 84101 (801) 364-1837

Regular Reports
Research Briefs (Monthly)
Research Reports (Monthly)
Statistical Review of Government in Utah (Annually)

Special Reports
State and Local Government in Utah
(Textbook published approximately every five years with annual updates in Statistical Review of Government in Utah)

Utah State University
Economics Department, Logan, Ut. 84322-3530 (801) 797-2310
www.usu.edu

Perspectives (Quarterly)