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# **A SocioEconomic Profile Billings Market Area**

**An Economic and Demographic Profile of the Billings Montana Market Area**

Produced by the  
**Economic Profile System (EPS)**

April 12, 2007

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### About The Economic Profile System (EPS)

This profile was produced using the 2004 version of the Economic Profile System (EPS), last updated in September 2006. EPS is designed to allow users to automatically and efficiently produce detailed socioeconomic profiles at a variety of geographic scales using the spreadsheet program Microsoft Excel.

Profiles contain tables and figures that illustrate long-term trends in population; employment and personal income by industry; average earnings; business development; retirement and other non-labor income; commuting patterns; agriculture; and earnings by industry.

Databases used for EPS profiles are from: Bureau of the Census, County Business Patterns, Bureau of Labor Statistics, and the Regional Economic Information System (REIS) of the Bureau of Economic Analysis, U.S. Department of Commerce.

EPS was developed in partnership with the Bureau of Land Management by Ray Rasker, Jeff van den Noort, Ben Alexander and Patty Gude when they were employees of the Sonoran Institute, and continues to be refined and improved by these authors under the auspices of their new organization, Headwaters Economics.

EPS is available for free download from Headwaters Economics ([www.headwaterseconomics.org](http://www.headwaterseconomics.org)).

For technical questions about EPS, contact Jeff van den Noort at [jeff@headwaterseconomics.org](mailto:jeff@headwaterseconomics.org).



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**Headwaters Economics** conducts social science research to understand demographic and socioeconomic trends and their impacts on changing land use patterns. We use this knowledge to assist individuals, organizations and communities to benefit from their competitive advantages.



[www.blm.gov](http://www.blm.gov)

**The Bureau of Land Management (BLM)**, an agency within the U.S. Department of the Interior, administers 262 million surface acres of America's public lands, located primarily in 12 Western States. The BLM sustains the health, diversity, and productivity of the public lands for the use and enjoyment of present and future generations.



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**The Sonoran Institute** promotes community decisions that respect the land and people of the West. Working with communities since 1990, we believe people make the best decisions about their future when they look at the big picture, work collaboratively and create practical, local solutions. The Institute encourages public participation, civil dialogue and practical solutions that benefit each community as a whole. We believe informed and engaged citizens boost the resilience of a community's economic and natural systems.

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There are two related systems for producing socioeconomic profiles: this one, the Economic Profile System (EPS) and the Economic Profile System Community (EPSC). For best results, use both profile systems. Below is a table highlighting how the two systems complement each other.

	<b>EPS</b>	<b>EPSC</b>
Geographic level of detail	Nation Region (metro, non-metro, total) State (metro, non-metro, total) County	Nation, Region, Division, States, Counties, County Subdivisions, Places (Towns), Indian Reservations, Congressional Districts
Databases used	Bureau of the Census (Census) County Business Patterns (CBP) Bureau of Labor Statistics (BLS) Bureau of Economic Analysis (BEA), Regional Economic Information System (REIS)	Bureau of the Census, Decennial Census of Population and Housing, 1990, 2000. (1990 to 2000 comparisons at the county level only)
Time series used	Continuous data from 1970 to as close to the present as possible.	2000. At the county level only 1990 to 2000 comparisons can be made to show changes in age and household income distribution.
Advantages	Long-term trend analysis; changes in employment and personal income by sector, change of businesses establishments by type and size, and non-labor sources of income, like retirement and age-related income.  Counties are compared to states and nation.	Age distribution, race, housing costs, housing affordability, education rates, poverty.  Finer geographic detail.  Allows comparisons to user-selected 'benchmark' areas.
Disadvantages	For some counties employment and personal income data may be suppressed for some industries and for some years. EPS includes a system for estimating these data gaps, and a chapter in the EPS User's Manual profiles step-by-step instructions.	Census data is not suppressed, but it is less useful than REIS data used in EPS for long-term trends by industry; it is only available only for 2000.

**Important notes:**

- 1) Total employment figures from the Bureau of the Census (used in EPSC) and the Regional Economic Information System (used in EPS) can differ for the following reasons:
  - Census employment figures are reported by place of residence, while BEA REIS figures are by place of work.
  - BEA REIS counts all jobs, regardless of whether part-time or whether a person has several jobs. For example, if a person has three part-time jobs, they count it as three jobs.
  - In some areas seasonality may play a role: the census is taken in the spring, a shoulder season for many "resort" areas, while BEA REIS data is an annual average.
- 2) Tables and charts may be copied from Excel into any other program, like Word or PowerPoint: highlight the selection, choose copy from the edit menu, then open Word or PowerPoint and insert by choosing "Paste Special" in the Edit Menu. We recommend that you paste charts as a picture.
- 3) EPS is updated every year with the latest figures.
- 4) This profile also shows business cycles, represented as vertical bars on selected charts.

The following pages (2-25) contain long-term trends in demographics, employment and income, for types of information **where no disclosure restrictions occur**.

### What is a 'disclosure restriction'?

A disclosure restriction means a gap exists in the data. Information has been suppressed by the U.S. Department of Commerce to avoid disclosure of confidential information. Generally, the smaller the geographic level of analysis and the smaller the population of the county, the higher the chances that industry-specific information is suppressed and that disclosure restrictions will occur.

The last section of this profile contains long-term trends on employment and personal income by industry sector (services, retail trade, manufacturing, etc.). This type of data often has data gaps, or disclosure restrictions. EPS has a built-in system for estimating data gaps through 2000 for the 11 contiguous western states (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY).

### In this section you will learn about:

1. Changes in population, age distribution, household income distribution and housing affordability.
2. Comparisons of the county to the state and the nation.
3. Employment and income by type: proprietors versus wage and salary.
4. Personal income by type: labor versus non-labor income.
5. The role of transfer payments.
6. How well do we recover from recessions?
7. Trends in government employment.
8. Earnings per job versus per capita income.
9. Growth in firms by size and industry type.
10. Unemployment rates.
11. Cross-county flow of dollars via commuting.
12. Trends in agricultural businesses.

### Highlights\*\* - In Billings Market Area:

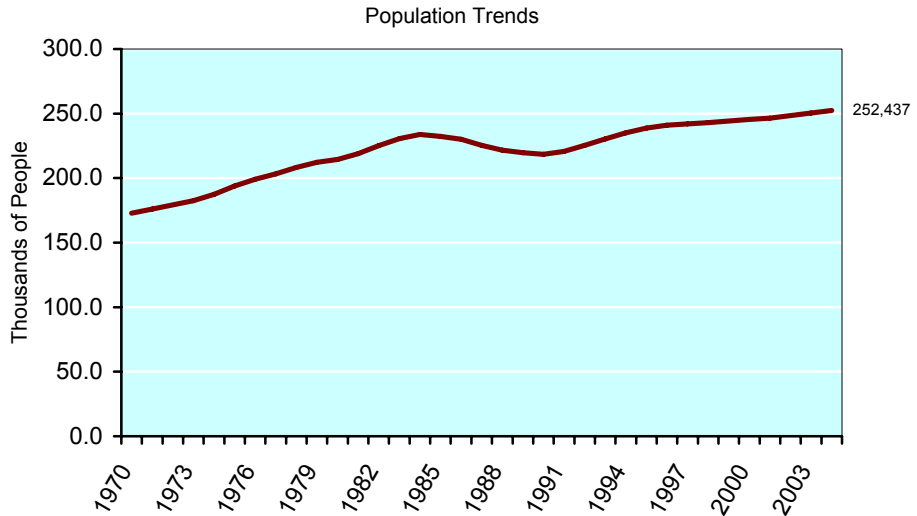
- Population Growth (Annualized rate, 1970-2004) was somewhat fast.
- Employment Growth (Annualized rate, 1970-2004) was somewhat fast.
- Personal Income Growth (Adjusted for Inflation, Annualized rate, 1970-2004) was roughly average.
- Non-labor Income Share of Total in 2004 was roughly average.
- Median Age\* was roughly average.
- Per Capita Income (2004) was somewhat high.
- Average Earnings Per Job (2004) was somewhat high.
- Education Rate (% of population 25 and over who have a college degree)\* was high.
- Employment Specialization\* was somewhat diverse.
- Ratio Rich/Poor (Number of households that made under \$30K for every household that made over \$100K)\* was roughly average.
- Housing Affordability (100 or above means that the median family can afford the median house)\* was somewhat less affordable.
- Government share of Total employment was roughly average.
- Unemployment Rate in 2005\*\* was somewhat low.

\*\*These highlights are based on how this area compares to the distribution of all of the counties in the United States. See the methodology section at the end for more information.

\* from 2000 US Census \*\* from Bureau of Labor Statistics

Population

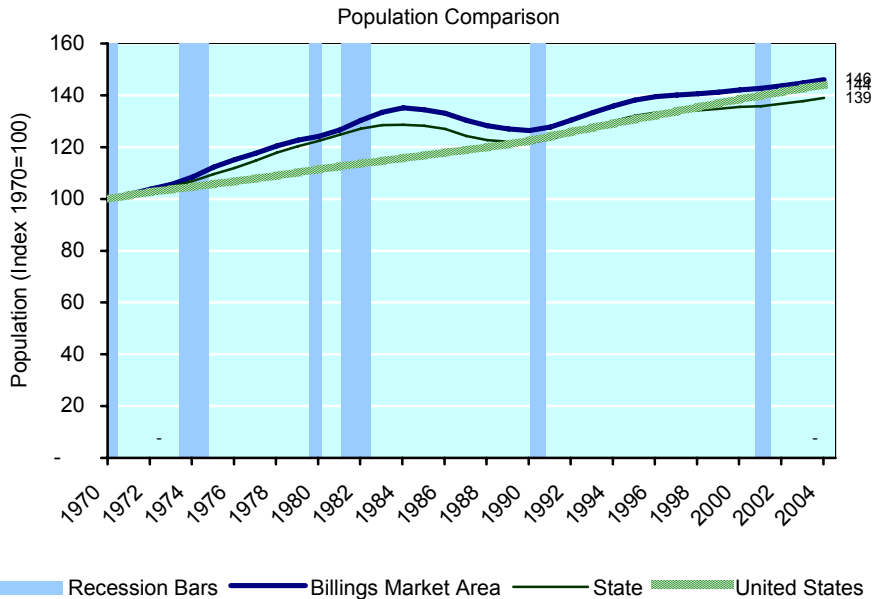
- From 1970 to 2004 population grew by 79,615 people, a 46% increase in population.
- At an annual rate, this represents an increase of 1.1%.



The vertical shaded bars on the figure below represent the last five recession periods: November 1973 to March 1975; January 1980 to July 1980; July 1981 to November 1982; July 1990 to March 1991; March 2001 to November 2001. More information about recessions is available on the next page.

Population Growth Compared to the State and the Nation

- Over the last 34 years population growth in Billings Market Area has outpaced that of the state and the nation.
- Population growth is not generally impacted by national recessions.



Source: BEA REIS 2004 Table CA30

**How well do we recover from recessions?**

An important indicator of economic performance is the ability to recover quickly from recessions.

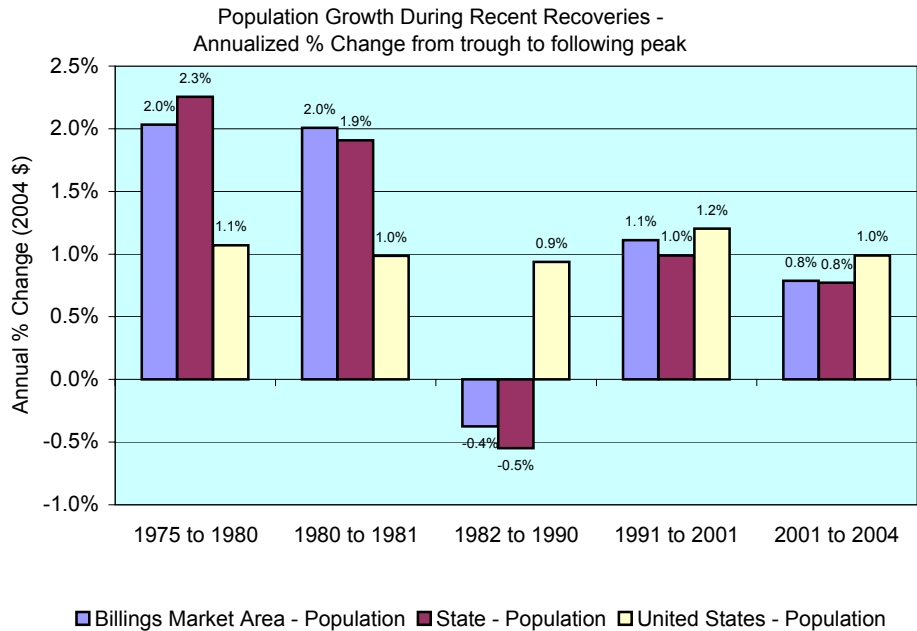
A recession is defined by the National Bureau of Economic Research as “a significant decline in activity spread across the economy, lasting more than a few months, visible in industrial production, employment, real income, and wholesale-retail sales.”

The graph below shows how well we have recovered from the last five recessions. The recovery period used is from the end of one recession (the trough) to the beginning of the next recession (the peak).

This type of graph is repeated throughout the profile to show how the region recovers from recessions compared to the state and the nation.

See <http://www.nber.org/cycles.html> for more information about business cycles.

- In the latest recovery (2001 to 2004), population growth in the United States (up 1.0%) outpaced Billings Market Area and State.
- Similarly, in the last recovery (1991 to 2001), the United States (up 1.2%) grew the fastest.
- In the recovery from 1982 to 1990, the United States (up 0.9%) grew the fastest.



Source: BEA REIS 2004 Table CA30

(From EPSC)

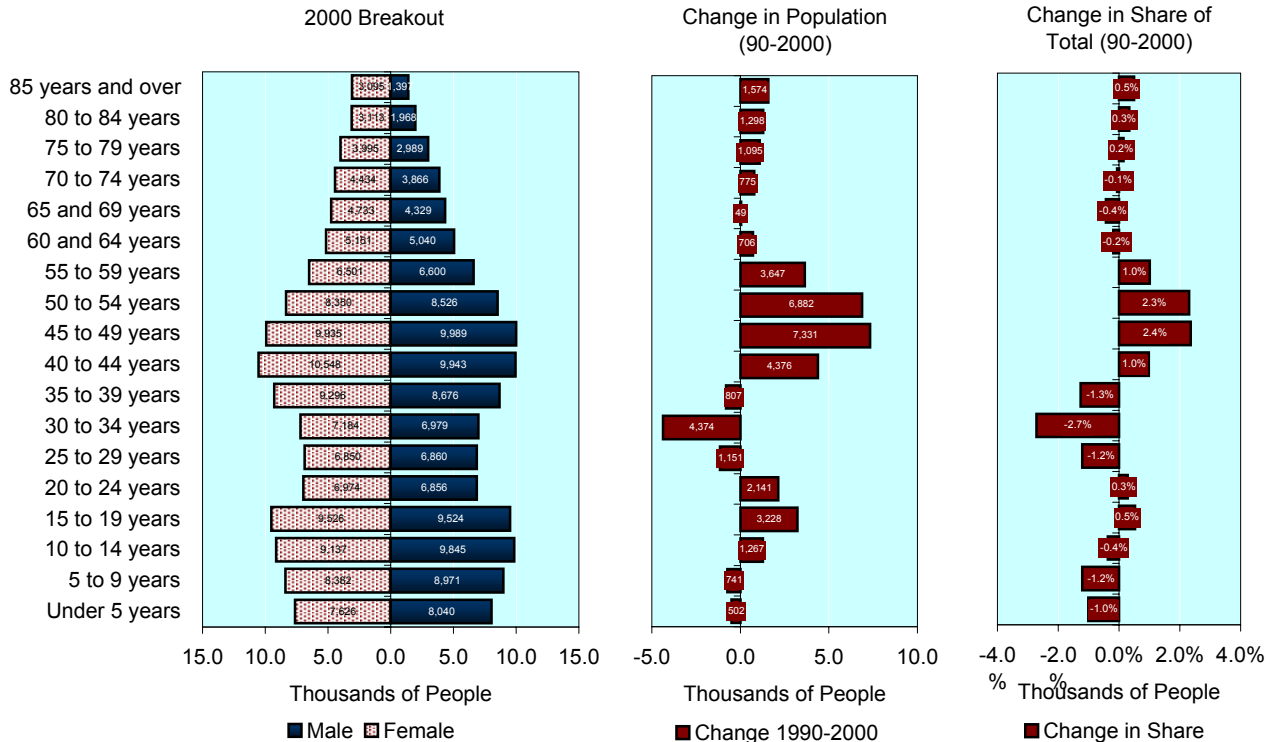
- The population has gotten older since 1990. The median age in 2000 is 37.9 years, up from 34.0 years in 1990.
- The largest age category is 40 to 44 years old (20,491 people or 8.4% of the total).
- Total Population in 2000 was 245,228 people, up 12% from 218,434 in 1990.
- The age group that has grown the fastest, as a share of total, is 45 to 49 years, up 7,331 people. Their share of total rose by 2.4%

Population by Age and Sex									
	Total Number	Under 20 years Number Share		40 - 54 (Baby Boom in 2000) Number Share		65 years and over Number Share		Median Age	Density (Pop. per sq. mi.)
Total Population									
2000	245,228	71,051	29%	57,291	23%	33,919	14%	37.9	7
1990	218,434	67,799	31%	38,702	18%	29,128	13%	34.0	6
10 Yr. Change	26,794	3,252	-2%	18,589	6%	4,791	0%	3.9	1
10 Yr. % Change	12%	5%		48%		16%		11%	12%
2000 Sex Breakout									
Male	120,398	36,380	30%	28,458	24%	14,549	12%	36.9	
Female	124,830	34,671	28%	28,833	23%	19,370	16%	38.7	
Male/Female Split	49% / 51%	51% / 49%		50% / 50%		43% / 57%			

2000 Table SF1 - P12 & 1990 SF1 Table P05 & P12

In the graphs below, changes in population by age are shown two ways. The "Change in Population" graph illustrates how each age bracket has changed in the last 10 years. The "Change in Share" graph illustrates how each category has changed as a share of total. Note that an age bracket can have an increase in population while declining as a share of total. The "Change in Share" graph usually demonstrates how the baby boom has caused a demographic shift in the population (growth in the 40-60 age brackets).

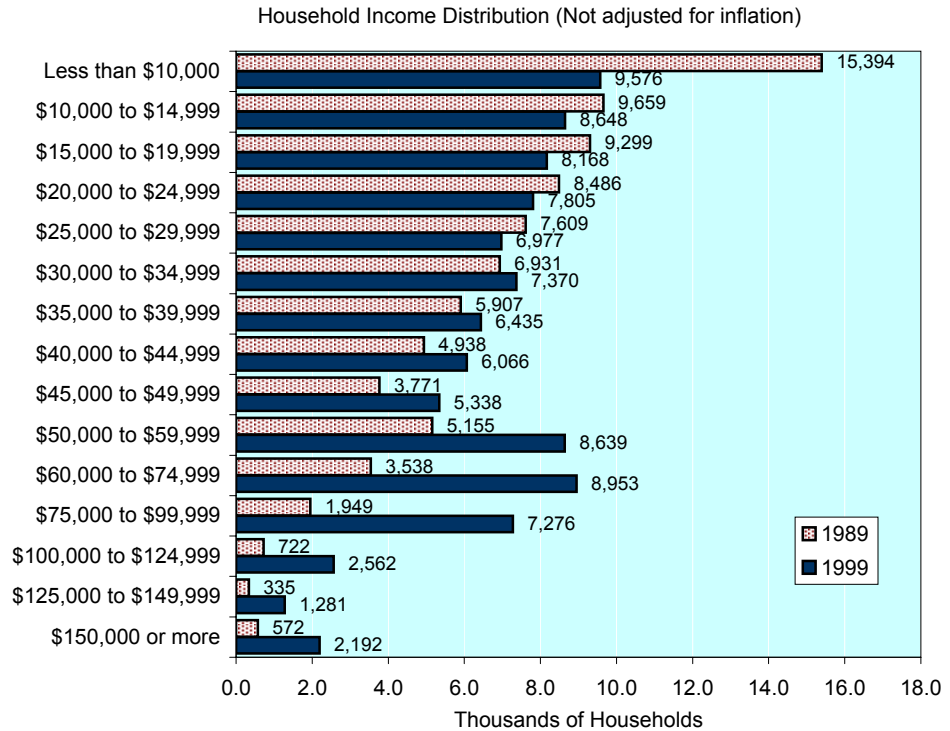
Note: In aggregated profiles, medians are interpolated.



Source: Census 2000 and Census 1990

## Income Distribution

- In 1999, for every household that made over \$100K, there were 6.8 households that made under \$30K. 10 years earlier, for every household that made over \$100K, there were 31.0 households that made under \$30K.
- Please note that the income distribution is not adjusted for inflation so some of the changes are due to inflation.



## Housing Affordability - Owner Occupied

- The housing affordability index is 155, which suggests that the median family can afford the median house. \*
- Housing affordability has become more affordable in the last decade, from 149 in 1990 to 155 in 2000.

Owner Occupied Housing Affordability	1990	2000
Specified owner-occupied housing units: Median value (Adjusted for	\$ 77,865	\$ 97,700
% of median income necessary to buy the median house	17%	16%
Income required to qualify for the median house	\$ 26,262	\$ 27,607
Housing Affordability Index: (100 or above means that the median family can afford the median house.)*	149	155

Universe: Specified owner-occupied housing units

SF3 - H76

Income in:	1989	1999
Median household income (Adj. for Inflation in 2000 \$)	\$ 32,389	\$ 35,080
Median family income (Adj. for Inflation in 2000 \$)	\$ 39,129	\$ 42,656

Universe: Total population, Households, Families

SF3 - P82,P53,P77

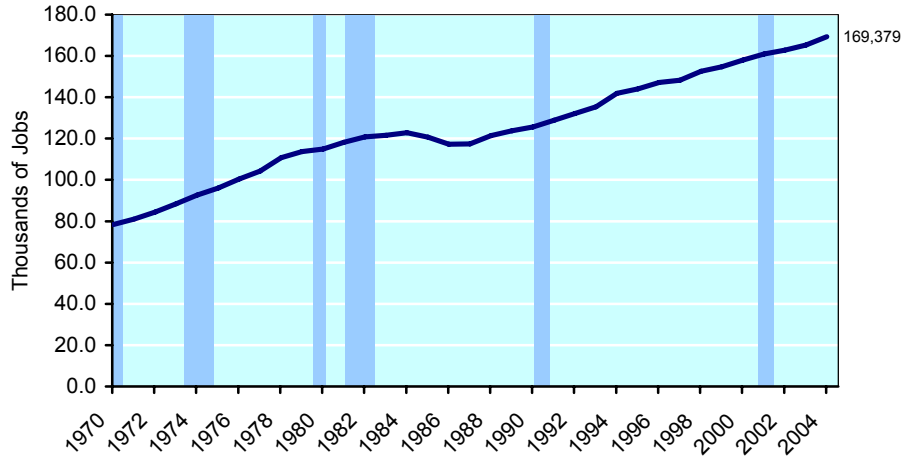
\* Note: The housing affordability figures assume a 20% down payment and that no more than 25% of a family's income goes to paying the mortgage. It is based on an interest rate of 10.01% in 1990 and 8.03% in 2000. Use this statistic as a comparative, rather than absolute, measure.

Note: In aggregated profiles, medians are interpolated.

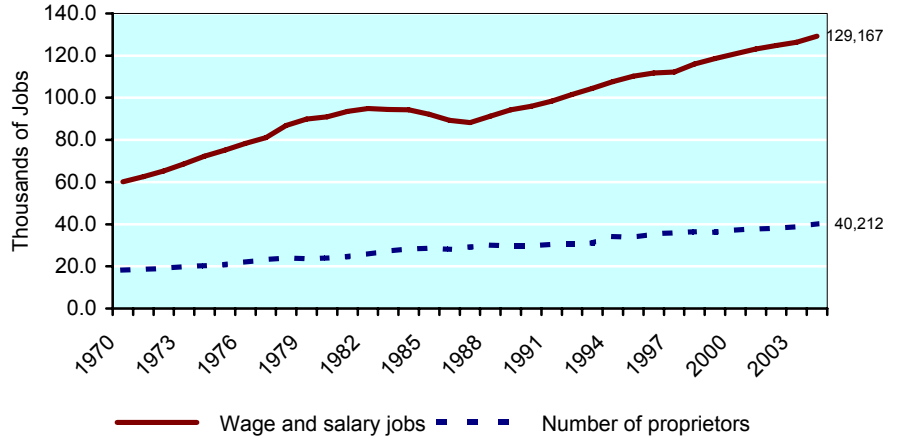
Source: Census 2000 and Census 1990

Long term trend

- From 1970 to 2004, 91,031 new jobs were created.
- From 1970 to 2004, the majority of job growth, 76% of new jobs, has been in wage and salary employment (people who work for someone else).



- Employment of proprietors contributed to 24% of new employment from 1970 to 2004, and 22% of new employment since 1994.
- In 1970, proprietors represented 23.3% of total employment; by 2004, they represented 23.7%.



**Employment by Industry**  
Changes from 1970 to 2004

	1970	% of Total	1994	2004	% of Total	New Employment (70-04)	% of New Employment	New Employment (94-04)	% of New Employment
Total full-time and part-time employees	78,348		141,855	169,379		91,031		27,524	100.0%
Wage and salary jobs	60,073	76.7%	107,728	129,167	76.3%	69,094	75.9%	21,439	77.9%
Number of proprietors	18,275	23.3%	34,127	40,212	23.7%	21,937	24.1%	6,085	22.1%
Number of nonfarm proprietors 5/	12,441	15.9%	28,406	34,269	20.2%	21,828	24.0%	5,863	21.3%
Number of farm proprietors	5,834	7.4%	5,721	5,943	3.5%	109	0.1%	222	0.8%

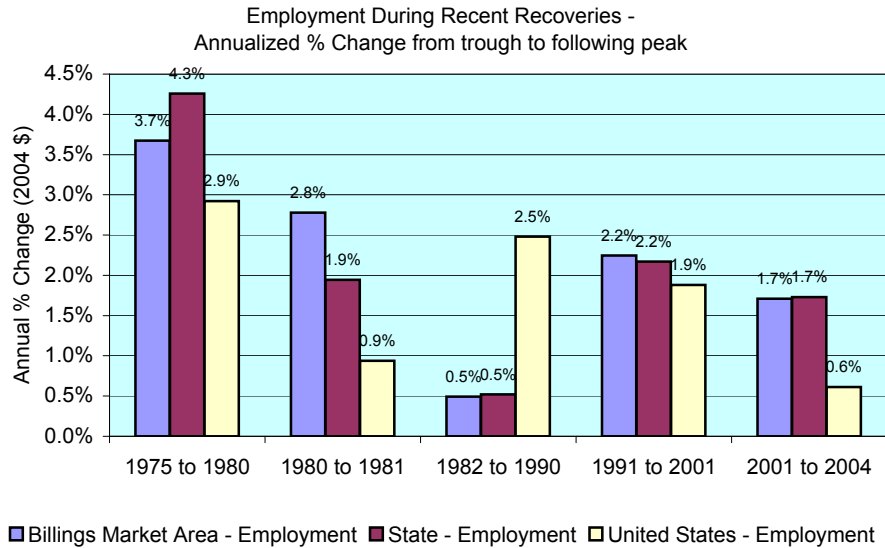
**Proprietors** include sole proprietorships, partnerships, and tax-exempt cooperatives. A sole proprietorship is an unincorporated business owned by a person. A partnership is an unincorporated business association of two or more partners. A tax-exempt cooperative is a nonprofit business organization that is collectively owned by its members.

**Wage and salary** employment refers to employees.

Source: BEA REIS 2004 Table CA30

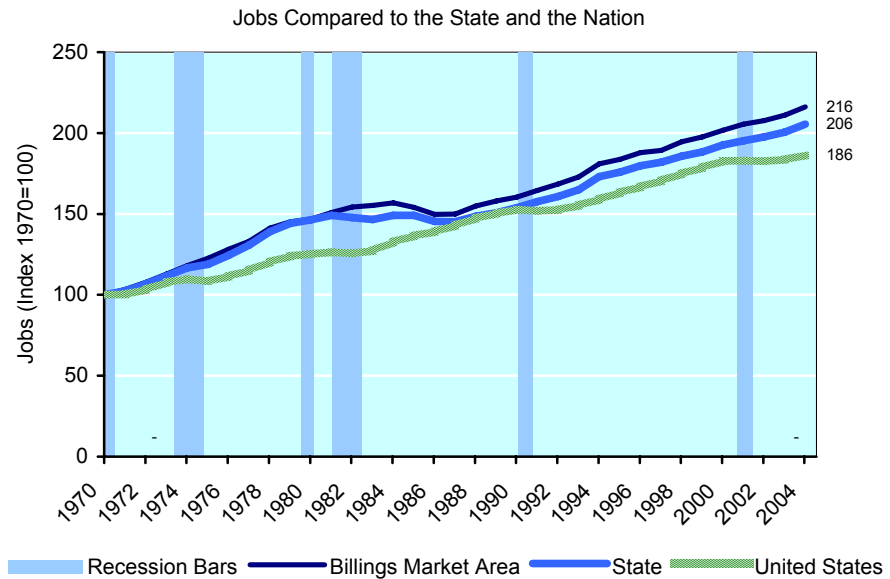
How well do we recover from recessions?

- In the latest recovery (2001 to 2004), employment growth in State (up 1.7%) has outpaced Billings Market Area and the United States.
- Alternatively, in the last recovery (1991 to 2001), Billings Market Area (up 2.2%) grew the fastest.
- In the recovery from 1982 to 1990, the United States (up 2.5%) grew the fastest.



Job Growth Compared to the State and the Nation

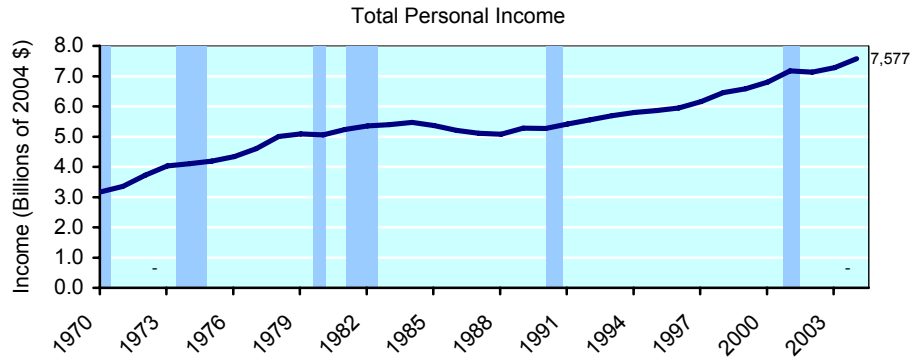
- Over the last 34 years job growth in Billings Market Area has outpaced that of the state and the nation.
- Some areas can experience employment gains even during the recessions. If so, check to see how much is due to migration and population changes.



Source: BEA REIS 2004 Table CA30

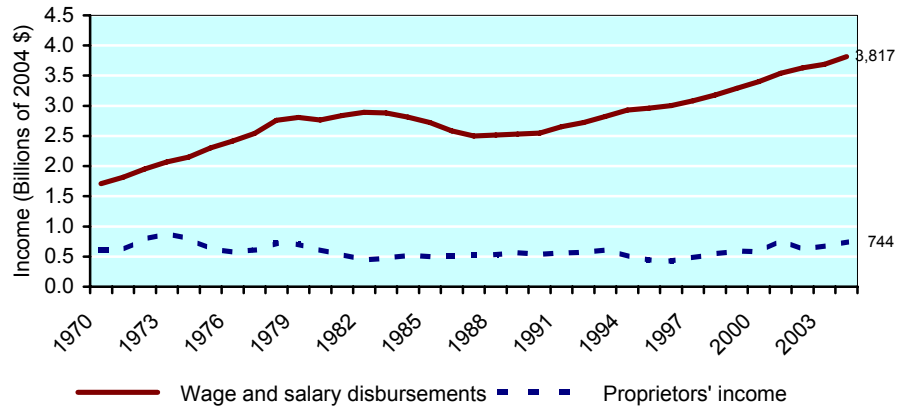
Long term trend

- From 1970 to 2004, personal income added \$4,400 million in real terms.
- The annualized growth rate was 2.6%.



Importance of Proprietors

- In the last 34 years, wage and salary disbursements grew at an annual rate of 2.4%, outpacing proprietors' income which was roughly unchanged.
- 5.4% of new labor income from 1970 to 2004 was from proprietors' income.



Wages and Salaries vs. Proprietors

All income in millions of 2004 dollars	1970		1994		2004		New Income 70-04	% of New Income
	1970	% of Labor	1994	% of Labor	2004	% of Labor		
<b>Labor Sources</b>	2,344	100%	3,614	100%	4,881	100%	2,537	100.0%
Wage and salary disbursements	1,709	73%	2,928	81%	3,817	78%	2,108	83.1%
Proprietors' income	607	26%	505	14%	744	15%	137	5.4%
Nonfarm proprietors' income	386	16%	448	12%	702	14%	317	12.5%
Farm proprietors' income	221	9%	56	2%	42	1%	(180)	NA

**Wage and salary** is monetary remuneration of employees, including employee contributions to certain deferred compensation programs, such as 401(K) plans.

**Proprietors** is income of sole proprietorships, partnerships and tax-exempt cooperatives. A sole proprietorship is an unincorporated business owned by a person. A partnership is an unincorporated business association of two or more partners. A tax-exempt cooperative is a nonprofit business organization that is collectively owned by its members.

Source: BEA REIS 2004 Table CA05N and CA30

**Definitions:**

“Proprietors” refers to employment and income from sole proprietorships, partnerships, and tax-except cooperatives.  
 “Wage and salary” refers to employees; people who work for someone else.

**Are proprietors an important indicator of economic health?**

Growth of proprietor employment and income can be a healthy sign that opportunities for entrepreneurship exist. Another way to gauge the health of small business growth is to look at changes in businesses by type and size of establishment (later in this profile).

Growth of proprietors can also mean that a rising number of people in the community want to (or need to) have side jobs in addition to their wage and salary jobs. When this is the case, earnings from second jobs can pull down average wages. To see if this is a sign of stress, look for other potential stress indicators in this profile: unemployment rates over time and changes in earnings per job.

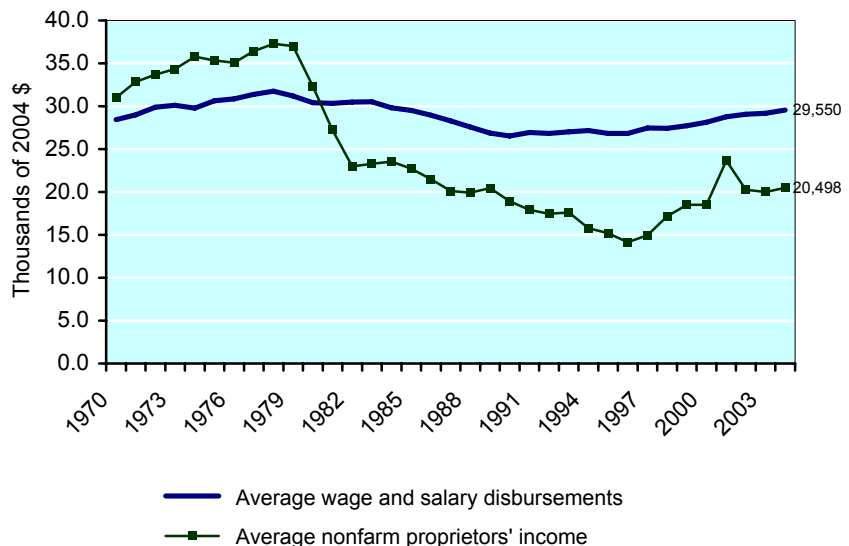
**Proprietors' Share of Total (Income vs. Employment)**

- In 2004, proprietors' share of total employment (24%) was higher than proprietors' income share of total (10%).
- From 1970 to 2004, proprietors' income share of total fell by 48.6%, while proprietors' employment share of total grew by 1.8%.



**How are Proprietors Doing?**

- From 1970 to 2004, average wage and salary disbursements grew at an annualized rate of 0.1% (adjusted for inflation), faster than from average nonfarm proprietors' income, which fell by 1.2%.
- In 2004, average wage and salary disbursements were \$29,550 (adjusted for inflation), more than average nonfarm proprietors' income (\$20,498).
- In 1970, it was the other way around. Average nonfarm proprietors' income was \$31,006 (adjusted for inflation), more than average wage and salary disbursements (\$28,451).
- If these shares vary widely, it suggests that proprietors and wage earners have different earnings.

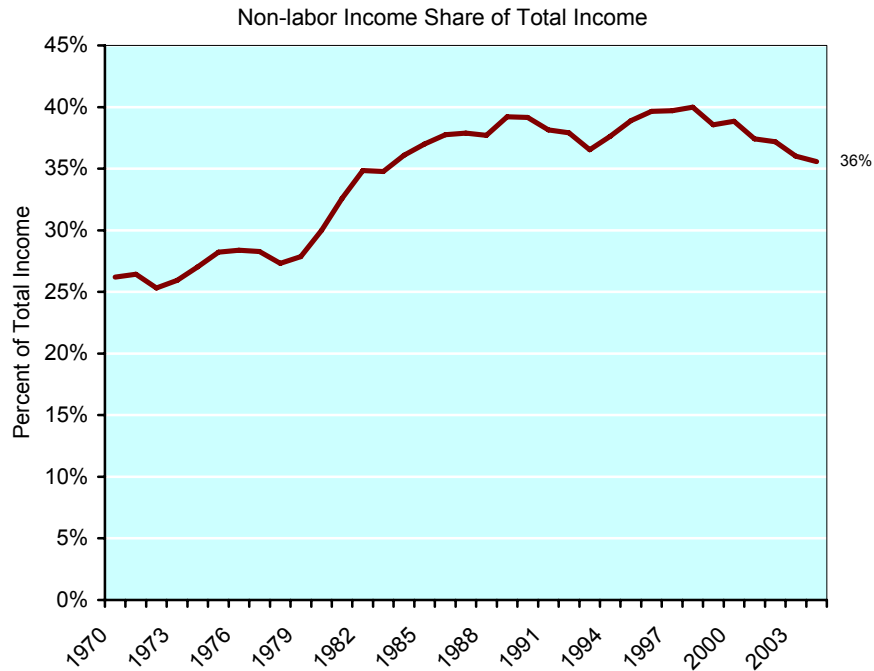


Source: BEA REIS 2004 Table CA30

The term "Non-Labor Income" is also referred by some economists as "Non-Earnings Income". It consists of Dividends, Interest and Rent (collectively often referred to as money earned from investments) and Transfer Payments (payments from governments to individuals, age-related, including Medicare, disability insurance payments, and retirements).

(See methods section for definitions and further explanations.)

- In the last 34 years, non-labor sources grew at an annual rate of 3.5%, outpacing labor sources which grew at a 2.2% rate.
- 35.6% of total personal income in 2004 was from non-labor sources.
- 42.3% of new income from 1970 to 2004 was from non-labor sources.



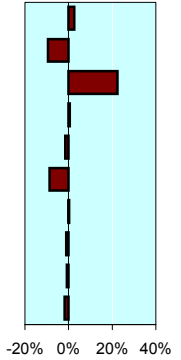
Non-labor income under estimates retirement income because it does not include pensions (401Ks).

Labor vs. Non-Labor										
	1970		1994		2004		New Income	% of New Income	% Chg Ann. Rate	% Chg Ann. Rate
	% of		% of		% of					
	All income in millions of 2004 dollars	1970	Total	1994	Total	2004	Total	70-04	70-04	94-04
<b>Total Personal Income</b>	3,177	100%	5,795	100%	7,577	100%	4,400	100.0%	2.6%	2.7%
<b>Labor Sources</b>	2,344	74%	3,614	62%	4,881	64%	2,537	57.7%	2.2%	3.1%
<b>Non-Labor Sources</b>	833	26%	2,181	38%	2,696	36%	1,863	42.3%	3.5%	2.1%
Dividends, interest, and rent	547	17%	1,304	23%	1,550	20%	1,003	22.8%	3.1%	1.7%
Personal current transfer receipts	285	9%	877	15%	1,146	15%	860	19.5%	4.2%	2.7%

Percentages do not add to 100 because of adjustments made by BEA, such as residence, social security, and others.

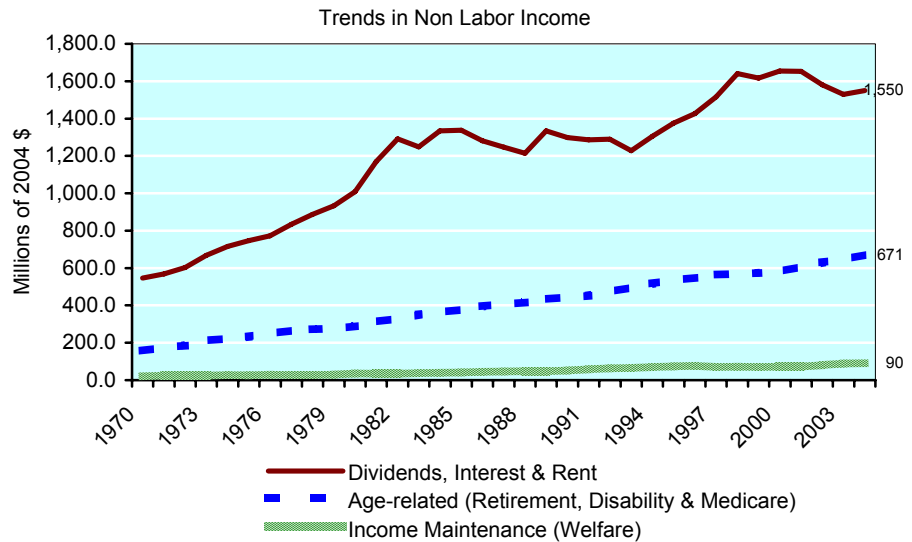
Source: BEA REIS 2004 Table CA30

Components of Transfer Payments							
All figures in millions of 2004 dollars	1970	% of Total TP	2004	% of Total TP	New Payments 1970 to 2004	% of New Payments	Change in Share of Total (1970 - 2004)
Government payments to individuals	264.3	93%	1,090.3	95%	826.1	96.0%	
Retirement & disab. insurance benefit payments	158.0	55%	525.5	46%	367.5	42.7%	
Medical payments	35.7	13%	400.5	35%	364.8	42.4%	
Income maintenance benefit payments ("welfare")	20.9	7%	90.3	8%	69.4	8.1%	
Unemployment insurance benefit payments	9.7	3%	21.8	2%	12.1	1.4%	
Veterans benefit payments	33.9	12%	36.4	3%	2.4	0.3%	
Federal educ. & trng. asst. pay. (excl. vets)	2.4	0.9%	13.3	1.2%	10.8	1.3%	
Other payments to individuals	3.7	1.3%	2.8	0.2%	(0.9)	NA	
Payments to nonprofit institutions *	12.3	4%	40.0	3%	27.7	3.2%	
Business payments to individuals	8.8	3%	15.3	1%	6.5	0.8%	
Age-related (Retirement, Disability & Medicare)	158.1	55%	671.0	59%	512.9	59.6%	



Trends in Non-Labor Income by Type

- The largest components of Non-Labor Income are from Dividends, Interest & Rent (i.e. money earned from past investments).
- In 2004 welfare represented 7.9% of transfer payments, and 1.2% of total personal income. This is up slightly from 1970 and up slightly from 1980.



Components of Transfer Payments

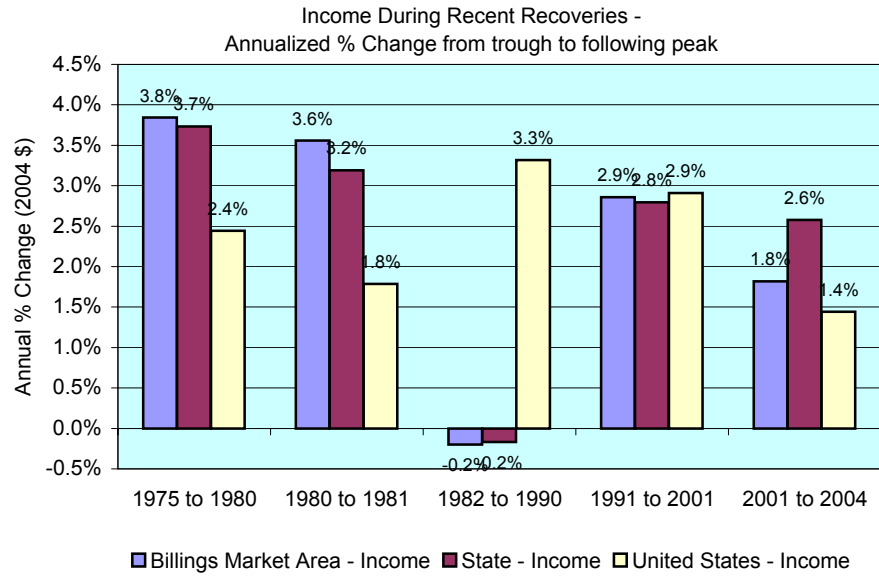
- In 2004, 59% of Transfer Payments were from age-related sources (retirement, disability, insurance payments, and Medicare), while 8% was from welfare.

\* See glossary for definitions.

Source: BEA REIS 2004 Table CA35

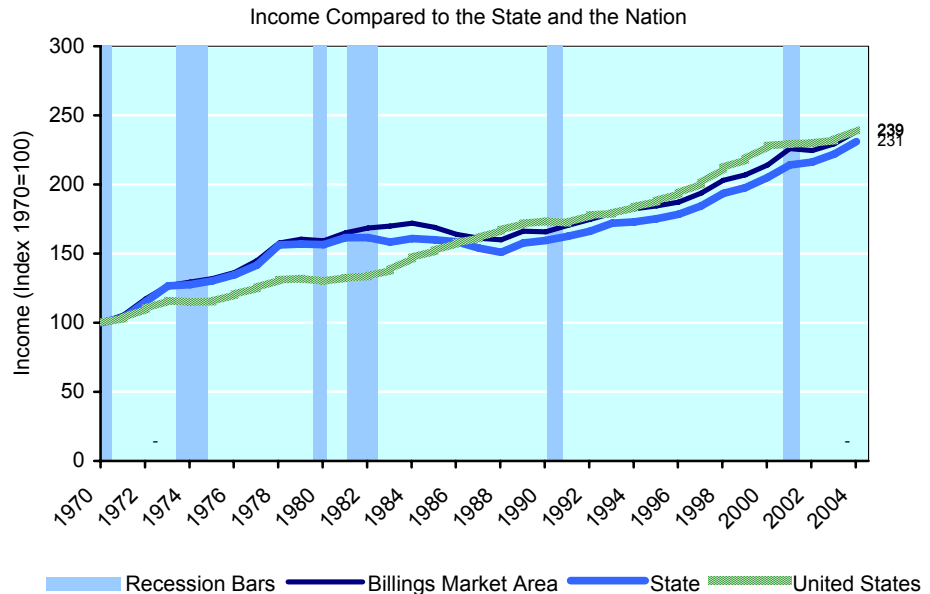
How well do we recover from recessions?

- In the latest recovery (2001 to 2004), income growth in State (up 2.6%) outpaced Billings Market Area and the United States.
- Alternatively, in the last recovery (1991 to 2001), the United States (up 2.9%) grew the fastest.
- In the recovery from 1982 to 1990, the United States (up 3.3%) grew the fastest.



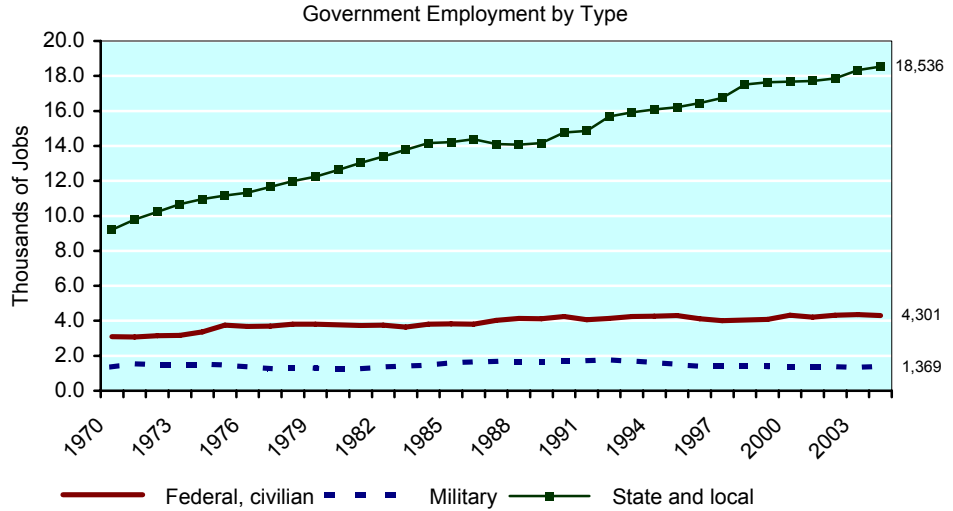
Income Growth Compared to the State and the Nation

- Over the last 34 years income growth in Billings Market Area has been faster than the state and the same as the nation.
- Some areas can experience income gains even during the recessions. If so, check to see how much of the change is due to changes in earnings per job, employment, migration and population changes.

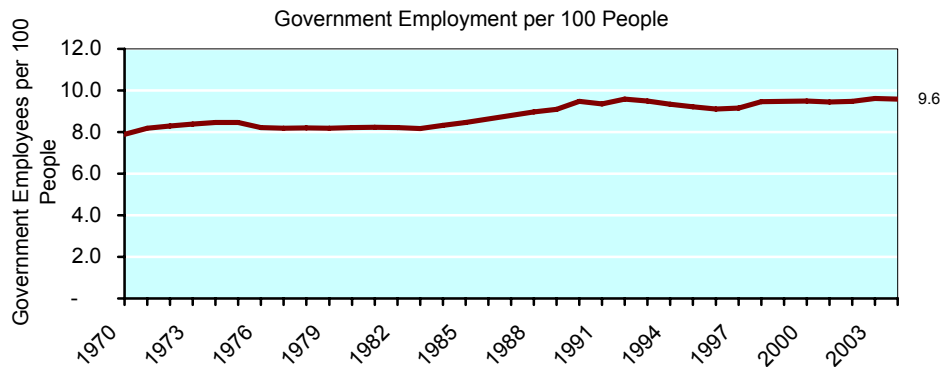
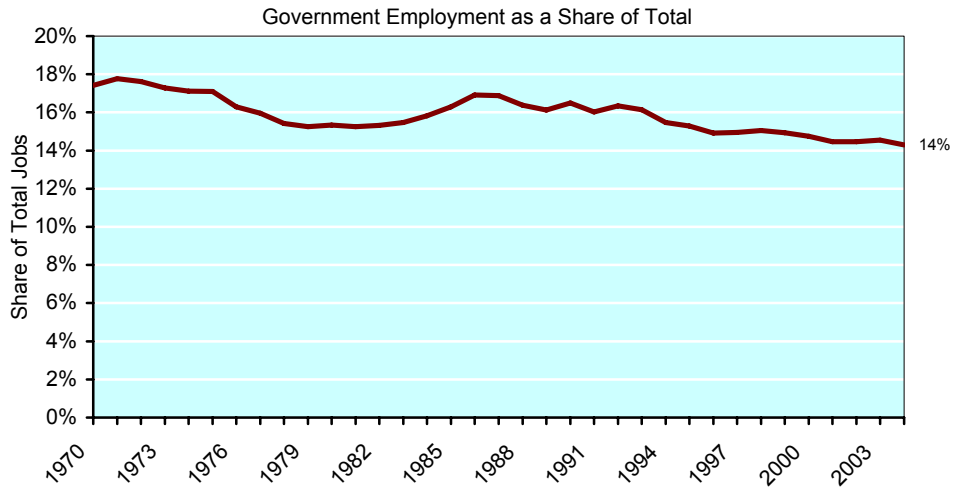


Source: BEA REIS 2004 Table CA30

- The majority of the growth in government employment has been in state and local government (88%).



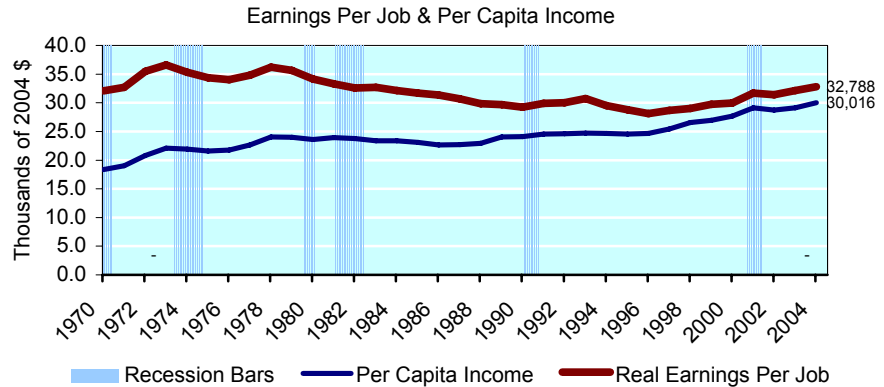
- Is the size of government getting bigger? One way to answer this is to look at whether government employment has grown. If so, what type of government employment, and how does it compare to population growth? The figures on this page show government employment by type.



Source: BEA REIS 2004 Table CA25 and CA25N

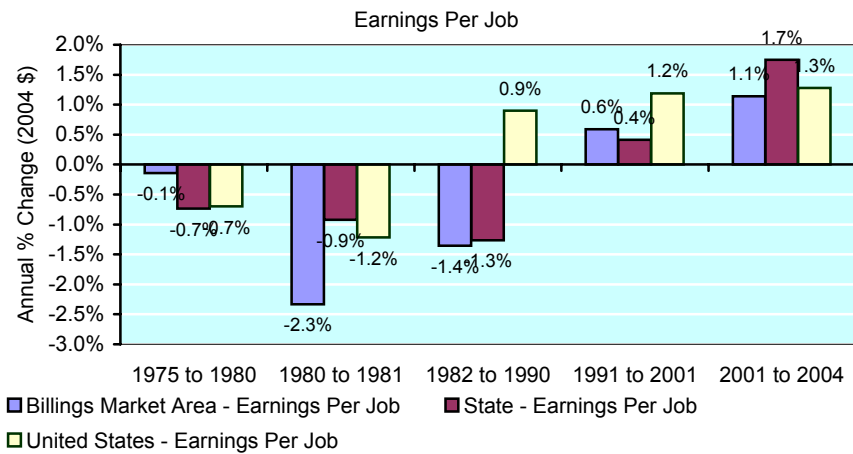
$$\text{Average Earnings per Job} = \frac{\text{Total Wages Earned}}{\text{Total \# of Workers}}$$

- Average earnings per job, adjusted for inflation, have risen from \$32,063 in 1970 to \$32,788 in 2004.
- In 2004, Average earnings per job in Billings Market Area (\$32,788) were higher than the state (\$32,617) and lower than the nation (\$44,503).



**How well do we recover from recessions?**

- In the current recovery (2001 to 2004), earnings per job growth in State (up 1.7%) have outpaced the United States and Billings Market Area.
- Alternatively, in the last recovery (1991 to 2001), the United States (up 1.2%) grew the fastest.
- In the recovery from 1982 to 1990, the United States (up 0.9%) grew the fastest.



**Reasons why earnings per job may change over time:**

- 1) Average earnings per job statistics include full and part-time employment. In some counties only a portion of the eligible workforce works full-time, driving down wage statistics. Run an EPSC profile to see the percentage of people working full-time.
- 2) Communities with an increase in tourism may see a decline in earnings due to a rise in seasonal (part-time) workers.
- 3) Communities that have established themselves as regional retail trade centers may see a decline in wages due to the low wages paid in retail trade.
- 4) Structural changes may have resulted in the loss of relatively high-wage occupations. Look at the long-term trends in employment, by industry, and compare to the nation and other counties. Are the changes local, or part of nation-wide trends?
- 5) More women have entered the workforce, and because of relatively lower pay, or because of fewer hours worked (depending on the region both may occur), earnings may decline over time. For a comparison of male versus female income run an EPSC profile.
- 6) Earnings will decline if job growth is primarily from low-wage services industries. Look at the breakdown of different industrial sectors to see the type of service industries that are growing. Does the community have what it takes (education, airports, amenities, etc.) to attract the high-wage service industries (engineering, finance, etc.)?
- 7) People may be choosing to live in some communities for quality of life reasons. In some areas the increase in population can outpace the rate of job creation, thereby flooding the labor market and causing a downturn in wages. Look at the growth rates of population relative to growth in jobs and personal income.

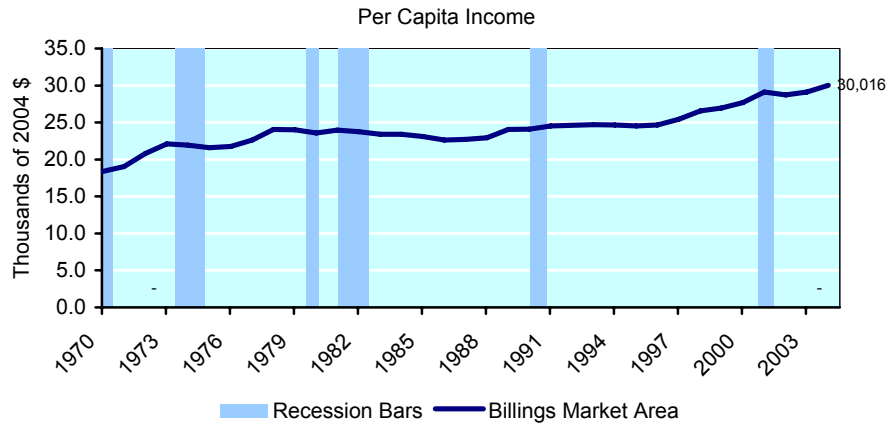
Source: BEA REIS 2004 Table CA30

$$\text{PCI} = \frac{\text{Total Personal Income}}{\text{Population}}$$

Per capita income is often used as a measure of economic performance, but it should be combined with changes in earnings for a realistic picture of economic health:

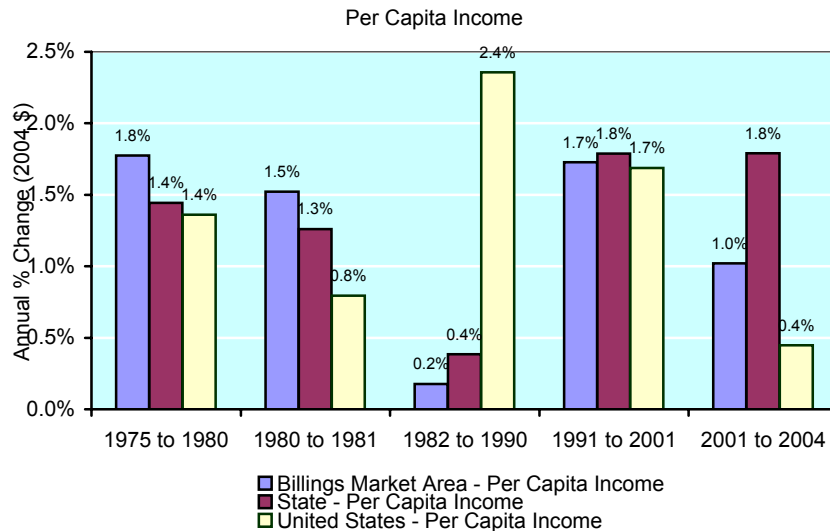
Since total personal income includes income from 401(k) plans as well as other non-labor income sources like transfer payment, dividends, and rent, it is possible for per capita income to rise, even if the average wage per job declines over time. In other words, the non-labor sources of income can cause per capita income to rise, even if people are earning less per job.

- Per capita income, adjusted for inflation, has risen from \$18,381 in 1970 to \$30,016 in 2004.
- In 2004, per capita income in Billings Market Area (\$30,016) was the same as the state (\$29,995) and lower than the nation (\$33,050).



How well do we recover from recessions?

- In the current recovery (2001 to 2004), per capita income growth in State (up 1.8%) has outpaced Billings Market Area and the United States.
- Similarly, in the last recovery (1991 to 2001), State (up 1.8%) grew the fastest.
- In the recovery from 1982 to 1990, the United States (up 2.4%) grew the fastest.



Source: BEA REIS 2004 Table CA30

The advantage of this data source is that it never has disclosure restrictions. This source also releases data for hundreds of sectors (available on demand). The data on this page are from the US Census County Business Patterns, which unlike the REIS data, does NOT include proprietors, government, household services or railroad workers. If available, we encourage you to look at employment and income data from BEA REIS starting on page 26 as well.

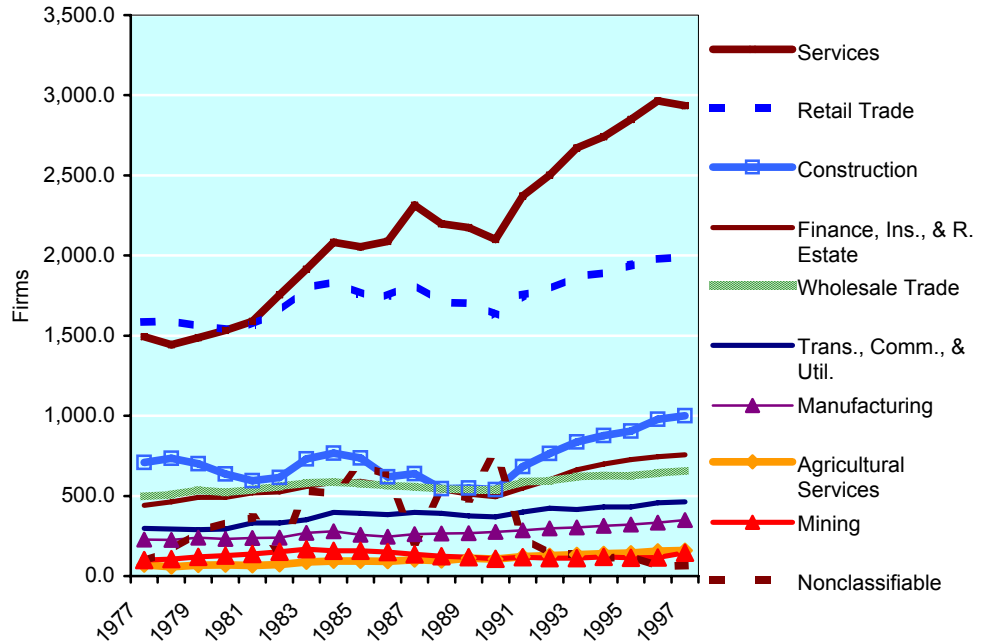
**Growth**

- The employment category whose share of total gained the most was services, which went from 27.1% in 1977 to 34.4% in 1997.

**Decline**

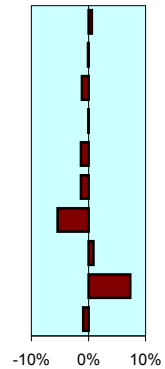
- The category whose share of total shrank the most was retail trade, which went from 28.8% in 1977 to 23.4% in 1997.

County Business Patterns Number of Establishments



**Firms by Industry**

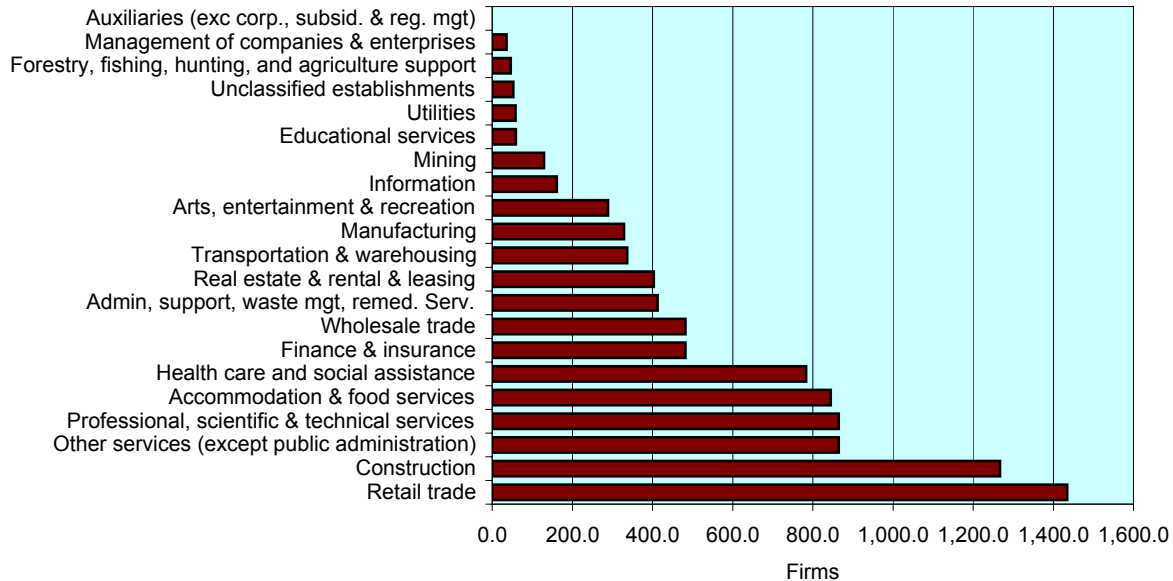
	1977	Shr of Tot	1987	Shr of Tot	1997	Shr of Tot	New Firms	Shr of Tot	Change in Share of Total
Total	5512		7000		8521		3009		
Agricultural Services	69	1.3%	102	1.5%	159	1.9%	90	3.0%	
Mining	99	1.8%	136	1.9%	146	1.7%	47	1.6%	
Construction	709	12.9%	638	9.1%	1000	11.7%	291	9.7%	
Manufacturing	227	4.1%	261	3.7%	349	4.1%	122	4.1%	
Trans., Comm., & Util.	298	9.0%	397	8.0%	464	7.7%	160	5.3%	
Wholesale Trade	497	9.0%	557	8.0%	657	7.7%	160	5.3%	
Retail Trade	1585	28.8%	1825	26.1%	1991	23.4%	406	13.5%	
Finance, Ins., & R. Estate	442	8.0%	556	7.9%	756	8.9%	314	10.4%	
Services	1494	27.1%	2315	33.1%	2934	34.4%	1440	47.9%	
Nonclassifiable	92	1.7%	213	3.0%	65	0.8%	-27	NA	



Data ends in 1997 because the CBP switched to a different classification system (NAICS) in 1997.

Source: Census County Business Patterns

Firms by Industry in 2004



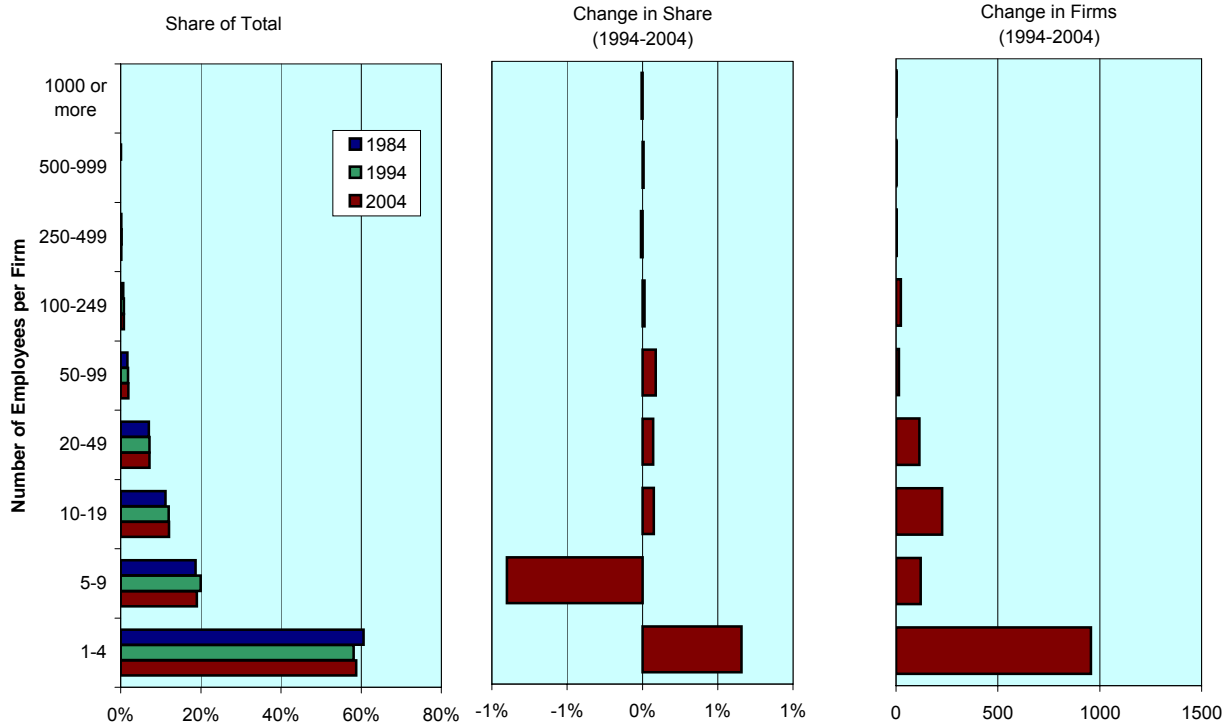
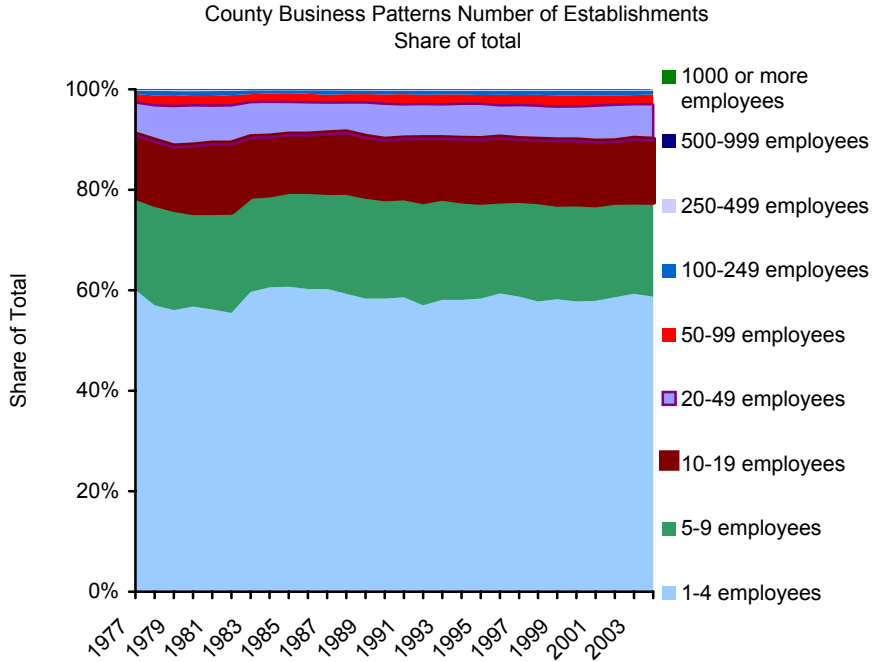
Firms by size and industry in 2004

	Total	Number of Employees per Firm								
		1-4	5-9	10-19	20-49	50-99	100-249	250-499	500-999	1000 or more
Forestry, fishing, hunting, and agriculture s	46	36	5	5	0	0	0	0	0	0
Mining	129	72	24	12	10	5	4	1	0	1
Utilities	58	36	5	8	6	2	0	1	0	0
Construction	1267	888	211	113	44	9	2	0	0	0
Manufacturing	329	159	63	55	33	11	5	3	0	0
Wholesale trade	482	247	91	80	45	14	4	1	0	0
Retail trade	1435	696	357	214	121	29	14	3	1	0
Transportation & warehousing	337	195	47	41	36	12	6	0	0	0
Information	161	79	32	30	14	4	1	1	0	0
Finance & insurance	482	298	94	37	39	10	3	0	1	0
Real estate & rental & leasing	403	326	45	21	10	1	0	0	0	0
Professional, scientific & technical services	865	626	134	70	24	7	4	0	0	0
Management of companies & enterprises	36	16	11	5	3	1	0	0	0	0
Admin, support, waste mgt, remed. Serv.	413	278	62	35	26	11	1	0	0	0
Educational services	59	36	11	3	4	2	1	2	0	0
Health care and social assistance	783	386	196	103	45	30	14	6	1	2
Arts, entertainment & recreation	289	176	47	35	24	4	3	0	0	0
Accommodation & food services	845	305	164	175	164	27	10	0	0	0
Other services (except public administratio	865	580	178	78	26	2	1	0	0	0
Auxiliaries (exc corp., subsid. & reg. mgt)										
Unclassified establishments	53	51	0	2	0	0	0	0	0	0
<b>Total</b>	<b>9337</b>	<b>5,486</b>	<b>1,777</b>	<b>1,122</b>	<b>674</b>	<b>181</b>	<b>73</b>	<b>18</b>	<b>3</b>	<b>3</b>

Source: Census County Business Patterns

Firms by Size

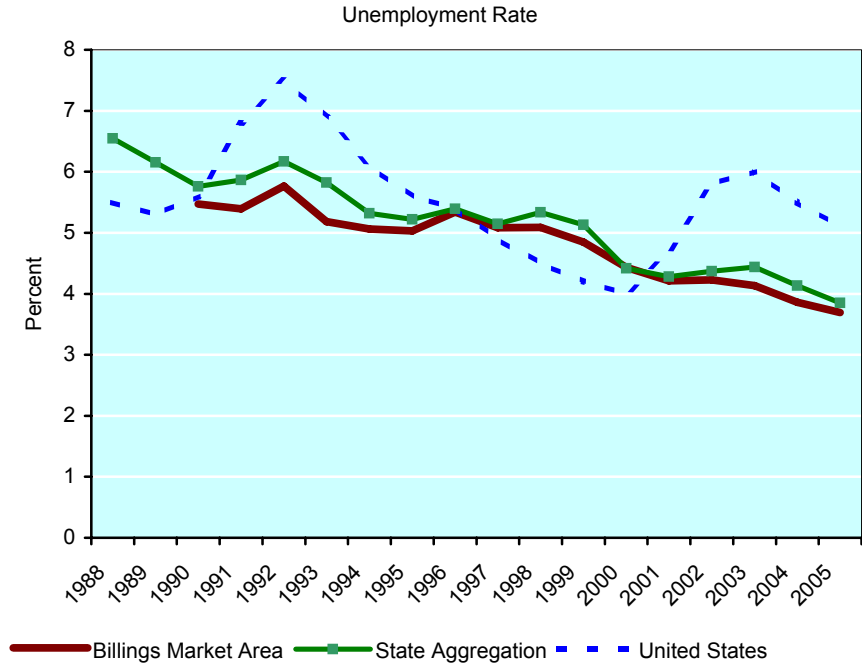
- The size category that grew the most was 1-4 employees.
- As a share of total, the size category that gained the most was 1-4 employees.
- In 2004, 90% of firms had fewer than 20 employees.



Source: Census County Business Patterns

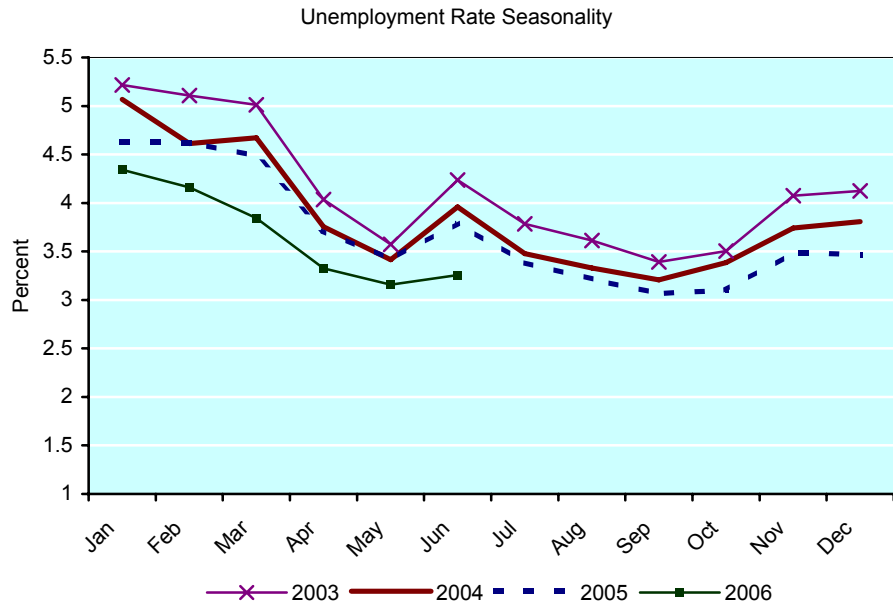
## Annual Average Unemployment Rate Compared to the State and the Nation

- In 2005, the unemployment rate was 3.7%, compared to 3.8% in the state and 5.1% in the nation.



## Unemployment Rate Seasonality

- This graph illustrates the seasonal variation in the unemployment rate over the last three years. In 2005, the unemployment rate varied from from a low of 3.1% in September 2005 to a high of 4.6% in January 2005



Source: Bureau of Labor Statistics

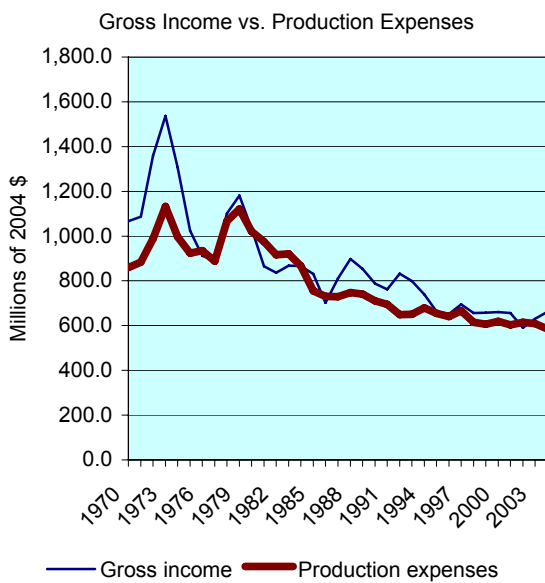
This page is blank because the system does not contain commuting data for this geography.

Farm income figures presented on this page reflect income from farming *enterprises* (income of the business). The term “farm” includes farming and ranching, but not agricultural services such as soil preparation services and veterinary services. In contrast, farm income figures presented in the next section reflect personal income earned by *individuals* (income of individuals, both proprietors and wage and salary employees) who work in farming and ranching.

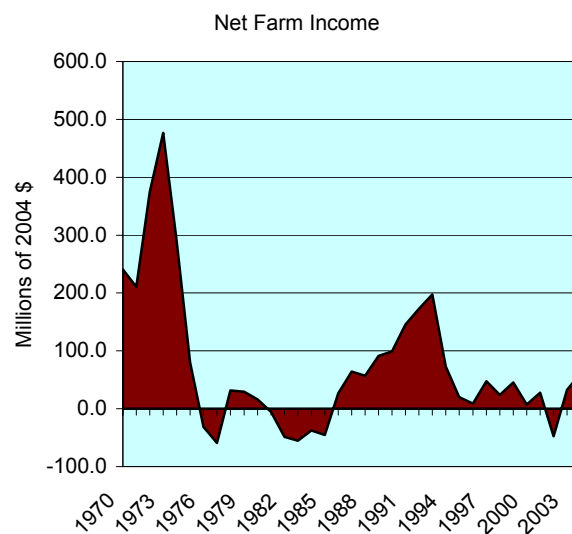
Farm income of businesses differs from individual farm income because it also includes government payments, rent, the value of inventory change and production expenses. In some areas, net farm income can be negative when production expenses exceed gross income.

Gross Income, Expenses, and Net Income from Farming and Ranching							
All figures in thousands of 2004 dollars	1970	% of Gross Income	1994	% of Gross Income	2004	% of Gross Income	70-04 Change in Share
Gross Income (Cash + Other)	1,066,287		738,545		661,348		
Cash Receipts from Marketings	986,048	92%	667,903	90%	586,862	88.7%	-4%
Livestock & Products	791,924	74%	429,414	58%	439,002	66.4%	-8%
Crops	194,124	18%	238,489	32%	147,860	22.4%	4%
Other Income	80,239	8%	70,642	10%	74,486	11.3%	4%
Government Payments	58,939	6%	40,100	5%	33,568	5.1%	0%
Imputed Rent & Rent Received	21,300	2%	30,543	4%	40,918	6.2%	4%
Production Expenses	859,514		678,640		585,046		
Realized Net Income (Income - Expenses)	206,772		59,905		76,321		
Value of Inventory Change	33,812	3%	13,384	2%	(15,151)	NA	NA
Total Net Income (Inc. corporate farms)	240,302		73,361		61,115		

### Gross Income vs. Production Expenses



### Net Farm Income



Source: BEA REIS 2004 CD Table CA45

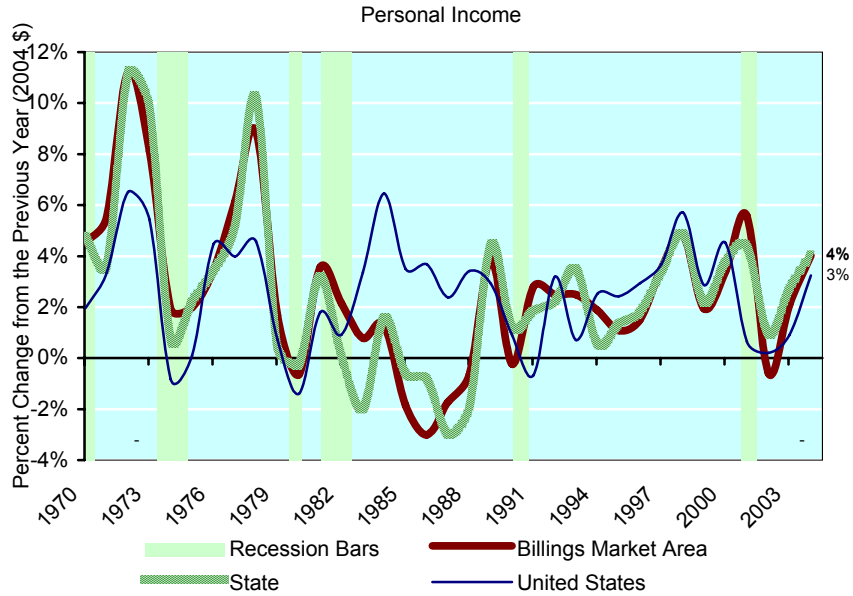
**In the following pages (23-25) you will learn about:**

1. The economic diversity of the county, compared to the state and the nation.
2. The year to year stability of personal income growth, comparing the county to the state and the nation.
3. The stability of personal income over time, comparing labor versus non-labor income.
4. If this is a county profile, numerous performance characteristics of the county (population growth, employment growth, employment stability, etc.), are used to compare the county to the median county in the country (a “benchmark”).



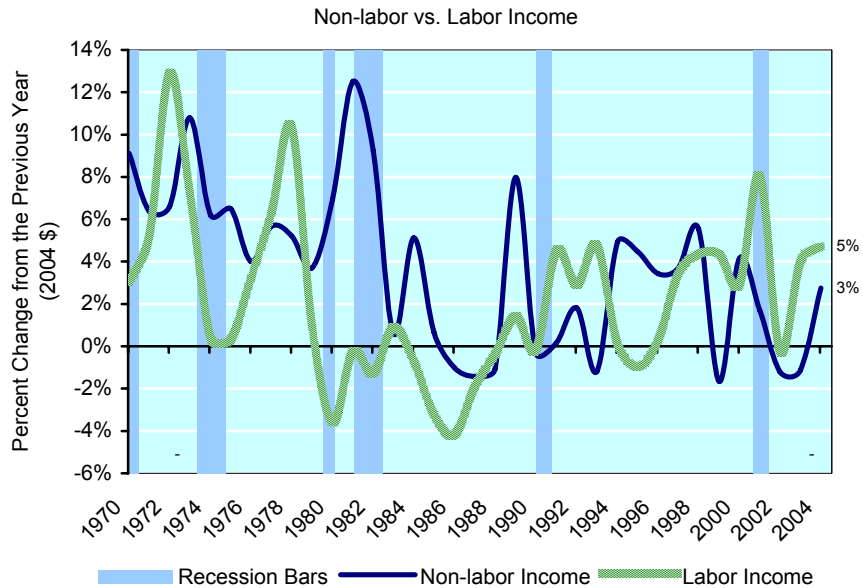
Stability vs. State and Nation

- Different regions can behave very differently during recessions and recoveries.
- Note: Below 0% means absolute decline. Above 0% means absolute growth, but at different rates.



Labor vs. Non-Labor Income Stability

- Non-labor income sources can have a stabilizing effect on the economy and are sometimes, but not always, counter-cyclical to labor income.

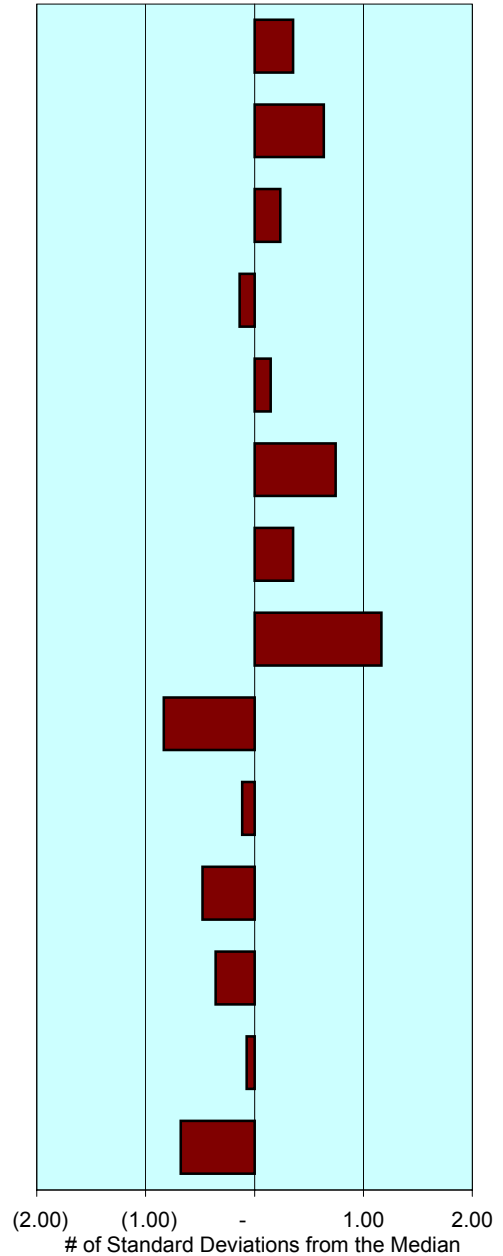


Source: BEA REIS 2004 Table CA30

Benchmark = Median of all Counties in U.S. \*\*\*

Compared to benchmark area, the county has:  
 ← Less Than | More Than →

	Billings Market Area	US Median
<b>Population Growth (Annualized rate, 1970-2004)</b>	1.1%	0.7%
<b>Employment Growth (Annualized rate, 1970-2004)</b>	2.3%	1.4%
<b>Personal Income Growth (Adjusted for Inflation, Annualized rate, 1970-2004)</b>	2.6%	2.2%
<b>Non-labor Income Share of Total in 2004</b>	35.6%	36.7%
<b>Median Age*</b>	37.9	37.3
<b>Per Capita Income (2004)</b>	\$ 30,016	\$ 25,335
<b>Average Earnings Per Job (2004)</b>	\$ 32,788	\$ 29,750
<b>Education Rate</b> (% of population 25 and over who have a college degree)*	23.5%	14.5%
<b>Employment Specialization*</b>	735.3	961.0
<b>Ratio Rich/Poor</b> (Number of households that made under \$30K for every household that made over \$100K)*	6.8	8.7
<b>Housing Affordability</b> (100 or above means that the median family can afford the median house)*	155	186
<b>Change in Housing Affordability (1990-2000)*</b>	3.7%	10.3%
<b>Government share of Total employment</b>	15%	15%
<b>Unemployment Rate in 2005**</b>	3.7%	5.2%



All data are from REIS except \* are from 2000 US Census and \*\* is from Bureau of Labor Statistics.

\*\*\*Median is the middle value of a list of numbers. This is different from mean (average), which is the sum of all the numbers in a list divided by the number of numbers in the list.

## In the following pages (28-31) you will learn about:

1. Long-term employment and personal income trends, from 1970 to 2004
2. How the structure of the economy has changed during the last three decades

Information for some industries and for some years may not be available from the U.S. Department of Commerce because of disclosure restrictions.

## What is a 'disclosure restriction'?

A disclosure restriction means a gap exists in the data. Information has been suppressed by the U.S. Department of Commerce to avoid disclosure of confidential information. Generally, the smaller the geographic level of analysis and the smaller the population of the county, the higher the chances that industry-specific information is suppressed and that disclosure restrictions will occur.

Our model to estimate the disclosure restrictions currently provides estimates for employment and income using the SIC classification method through 2000 for the western states only.

### Important Notes on the Industrial Classification Systems used by EPS

The U.S. Department of Commerce made a transition in how economic information is gathered and organized in 2001. The Standard Industrial Classification System (SIC) was used from 1970 to 2000; the North American Industrial Classification System (NAICS, pronounced “nakes”) is used currently, for data from 2001 and beyond.

Unfortunately the two systems are not backward comparable, so they are presented separately in EPS: 1970 to 2000 data are organized by SIC, and data beyond those years are organized by NAICS.

The most important change resulting from the shift to NAICS is the recognition of hundreds of new businesses in today's economy. NAICS divides the economy into 20 broad sectors rather than the SIC's 10 divisions. This is especially helpful in giving a more detailed breakdown of the fastest growth area in the country's economy – “services.” For example, advanced technology related “service” industries (e.g., professional, scientific and technical services) are clearly differentiated from “in-person” services (e.g., health care) and low-wage services (e.g., accommodation and food services).

For historical data (1970-2000, organized by SIC) EPS was designed to illustrate the complexity of the service economy in a couple of ways:

- 1) We use the term “Services and Professional” to underscore an important point: service occupations are not just “hamburger flippers and maids,” but rather consist of a combination of high-paying and low-paying professions, mixing physicians with barbers, and chambermaids with architects and financial consultants.
- 2) We reorganized the SIC categories into different types of services, such as Consumer Services, Producer Services, Social Services, and Government Services.

The transition to NAICS has alleviated the need to explain that “services” are actually a wide mix of low, medium, and high-wage industries.

### About Missing Data

This profile is organized so that all non-disclosed information is presented first. Employment and personal income by industry is presented last. For some rural counties, and for some industries, data gaps may occur. EPS has a built-in system for estimating data gaps through 2000 for the 11 contiguous western states (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY). When estimates are used in the tables on pages 28 and 30, they are highlighted in bold red text.

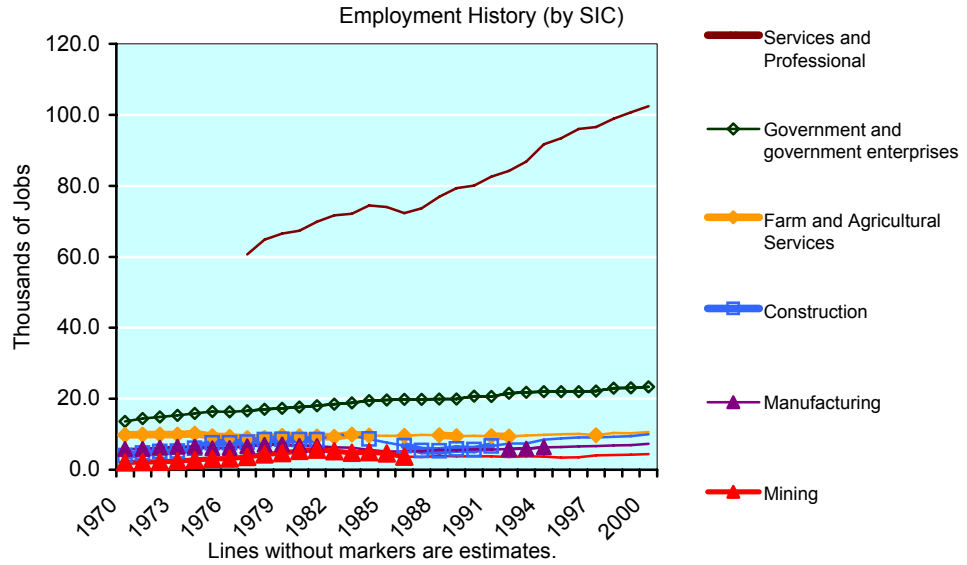
Data ends in 2000 because the BEA switched to a different classification system (NAICS) in 2001.

**Growth**

- Missing data prevent this ranking

**Decline**

- Missing data prevent this ranking



Employment by Industry Changes from 1970 to 2000							
	1970	% of Total	2000	% of Total	New Employment	% of New Employment	Change in Share
Total Employment	78,348.0		158,079.0		79,731.0		
Wage and Salary Employment	60,073.0	76.7%	120,922.0	76.5%	60,849.0	76.3%	
Proprietors' Employment	18,275.0	23.3%	37,157.0	23.5%	18,882.0	23.7%	
Farm and Agricultural Services	9,798.0	12.5%	<b>10,679.7</b>	6.8%	881.7	1.1%	
Farm	9,087.0	11.6%	8,051.0	5.1%	(1,036.0)	NA	
Ag. Services	711.0	0.9%	<b>2,628.7</b>	1.7%	1,917.7	2.4%	
Mining	2,054.0	2.6%	<b>4,435.4</b>	2.8%	2,381.4	3.0%	
Manufacturing (incl. forest products)	5,819.0	7.4%	<b>7,288.4</b>	4.6%	1,469.4	1.8%	
Services and Professional	#N/A	#N/A	102,388.0	64.8%	#N/A	#N/A	
Transportation & Public Utilities	<b>#N/A</b>	#N/A	<b>8,661.5</b>	5.5%	#N/A	#N/A	
Wholesale Trade	3,999.0	5.1%	<b>8,505.9</b>	5.4%	4,506.9	5.7%	
Retail Trade	13,618.0	17.4%	28,756.0	18.2%	15,138.0	19.0%	
Finance, Insurance & Real Estate	5,104.0	6.5%	<b>10,180.9</b>	6.4%	5,076.9	6.4%	
Services (Health, Legal, Business, Others)	<b>#N/A</b>	#N/A	<b>46,283.7</b>	29.3%	#N/A	#N/A	
Construction	3,990.0	5.1%	<b>9,964.6</b>	6.3%	5,974.6	7.5%	
Government	13,649.0	17.4%	23,323.0	14.8%	9,674.0	12.1%	

\* Estimates for data that were not disclosed are bold and red in the above table.

\* **Agricultural Services** include soil preparation services, crop services, etc. It also includes forestry services, such as reforestation services, and fishing, hunting and trapping. **Manufacturing** includes paper, lumber and wood products manufacturing.

Source: BEA REIS 2004 CD Table CA25

### Growth

- Missing data prevent this ranking

### Decline

- Missing data prevent this ranking.

## Employment by Industry (NAICS) Changes from 2001 to 2004 Share of Total

Category	2001	2004	2004 Share of Total	New Jobs	Change in Share of Total (2004 - 2001)
Total employment	160,973.0	169,379.0	100%	8,406.0	
Wage and salary employment	123,099.0	129,167.0	76%	6,068.0	
Proprietors employment	37,874.0	40,212.0	24%	2,338.0	
Farm proprietors employment	5,963.0	5,943.0	4%	(20.0)	
Nonfarm proprietors employment	31,911.0	34,269.0	20%	2,358.0	
Farm employment	7,882.0	7,804.0	5%	(78.0)	
Nonfarm employment	153,091.0	161,575.0	95%	8,484.0	
Private employment	129,815.0	137,361.0	81%	7,546.0	
Forestry, fishing, related activities, and oth.	#N/A	#N/A	#N/A	#N/A	
Mining	#N/A	#N/A	#N/A	#N/A	
Utilities	#N/A	#N/A	#N/A	#N/A	
Construction	#N/A	#N/A	#N/A	#N/A	
Manufacturing	#N/A	#N/A	#N/A	#N/A	
Wholesale trade	#N/A	#N/A	#N/A	#N/A	
Retail Trade	#N/A	#N/A	#N/A	#N/A	
Transportation and warehousing	#N/A	#N/A	#N/A	#N/A	
Information	#N/A	#N/A	#N/A	#N/A	
Finance and insurance	#N/A	#N/A	#N/A	#N/A	
Real estate and rental and leasing	#N/A	5,452.0	3%	#N/A	
Professional and technical services	#N/A	#N/A	#N/A	#N/A	
Management of companies and enterprises	#N/A	#N/A	#N/A	#N/A	
Administrative and waste services	#N/A	#N/A	#N/A	#N/A	
Educational services	#N/A	#N/A	#N/A	#N/A	
Health care and social assistance	#N/A	#N/A	#N/A	#N/A	
Arts, entertainment, and recreation	#N/A	#N/A	#N/A	#N/A	
Accommodation and food services	#N/A	#N/A	#N/A	#N/A	
Other services, except public administration	#N/A	#N/A	#N/A	#N/A	
Government and government enterprises	23,276.0	24,214.0	14%	938.0	
Federal, civilian	4,209.0	4,301.0	3%	92.0	
Military	1,354.0	1,369.0	1%	15.0	
State and local	17,714.0	18,536.0	11%	822.0	
State government	2,688.0	#N/A	#N/A	#N/A	
Local government	15,024.0	#N/A	#N/A	#N/A	

Source: BEA REIS 2004 CD Table CA25N

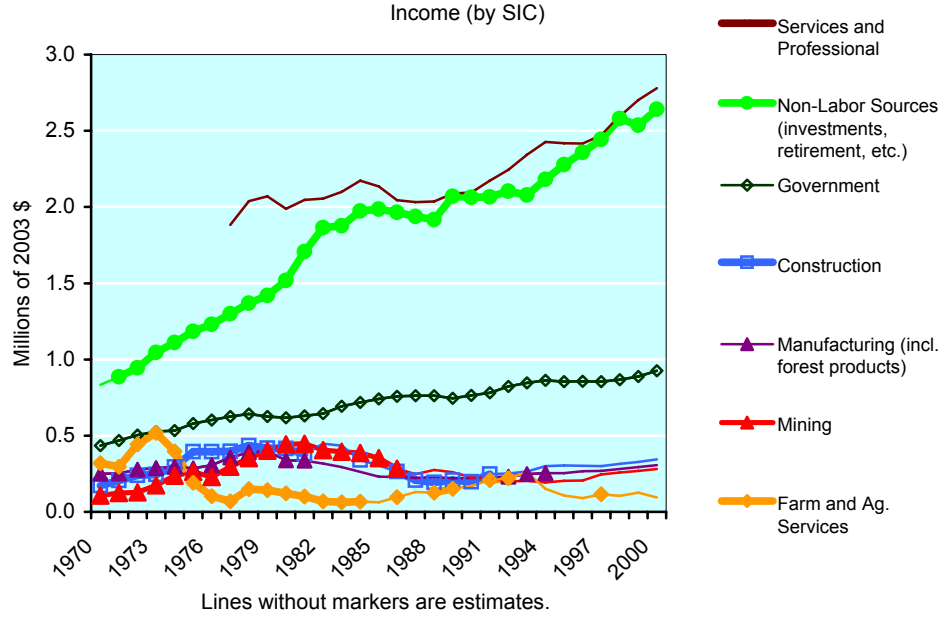
Data ends in 2000 because the BEA switched to a different classification system (NAICS) in 2001.

**Growth**

- Missing data prevent this ranking

**Decline**

- Missing data prevent this ranking



**New Income by Type**

All figures in millions of 2000 dollars	1970	% of Total	2000	% of Total	New Income 1970 to 2000	% of New Income	Change in Share
Total Personal Income*	3,176.7		6,799.9		3,623.2		
Farm and Agricultural Services	318.6	10.0%	94.9	1.4%	(223.7)	NA	
Farm	301.2	9.5%	56.3	0.8%	(244.9)	NA	
Ag. Services	17.4	0.5%	<b>38.6</b>	0.6%	21.2	1%	
Mining	108.1	3.4%	<b>281.8</b>	4.1%	173.7	5%	
Manufacturing (incl. forest products)	249.3	7.8%	<b>307.3</b>	4.5%	58.0	2%	
Services and Professional	#N/A	#N/A	2,779.3	40.9%	#N/A	#N/A	
Transportation & Public Utilities	<b>#N/A</b>	#N/A	<b>423.7</b>	6.2%	#N/A	#N/A	
Wholesale Trade	172.1	5.4%	<b>360.3</b>	5.3%	188.2	5%	
Retail Trade	334.9	10.5%	503.0	7.4%	168.1	5%	
Finance, Insurance & Real Estate	101.0	3.2%	<b>284.8</b>	4.2%	183.8	5%	
Services (Health, Legal, Business, Oth.	<b>#N/A</b>	#N/A	<b>1,207.5</b>	17.8%	#N/A	#N/A	
Construction	171.8	5.4%	<b>343.5</b>	5.1%	171.7	5%	
Government	434.9	13.7%	924.9	13.6%	489.9	14%	
Non-Labor Income	832.5	26.2%	2,641.5	38.8%	1,809.0	50%	
Dividends, Interest & Rent	547.1	17.2%	1,653.7	24.3%	1,106.6	31%	
Transfer Payments	285.4	9.0%	987.8	14.5%	702.4	19%	

\* Estimates for data that were not disclosed are bold and red in the above table.

\*The sum of the above categories do not add to total due to adjustments made for place of residence and personal contributions for social insurance made by the U.S. Department of Commerce.

Source: BEA REIS 2004 CD Table CA05

**Growth**

● Missing data prevent this ranking

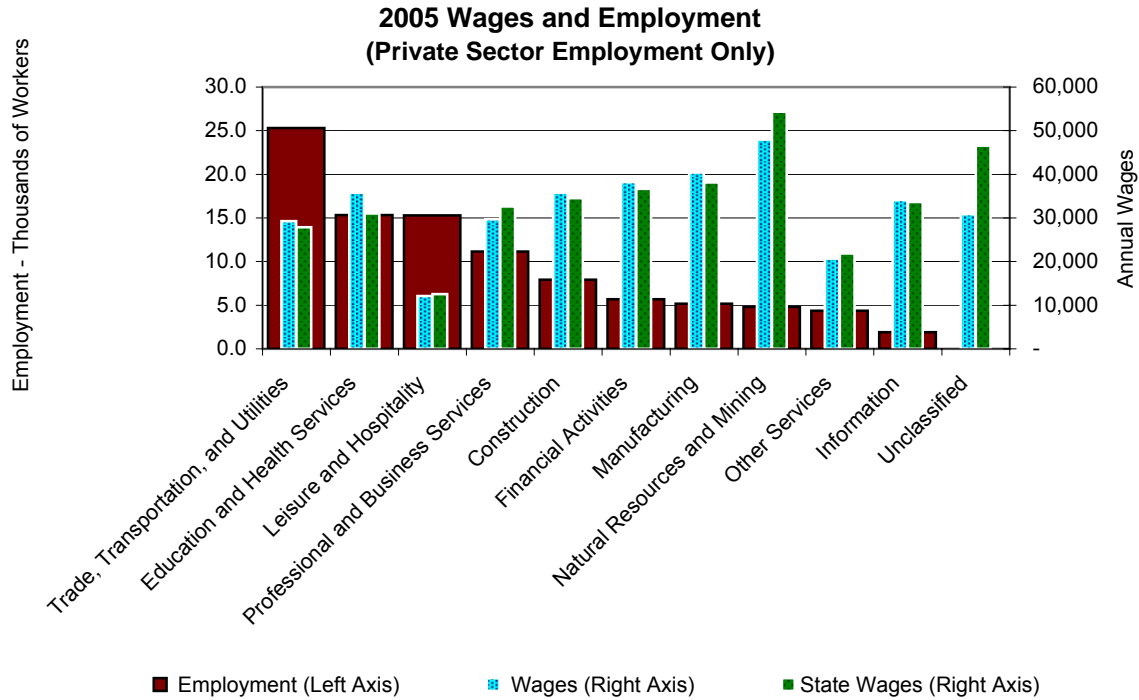
**Decline**

● Missing data prevent this ranking.

**Income by Industry (NAICS)**  
Changes from 2001 to 2004 Share of Total

Category	2,001.0	2004	2004 Share of Total	New Income	Change in Share of Total (2004 - 2001)
Personal income	7,178.5	7,577.1	100%	398.5	
Wage and salary disbursements	3,541.7	3,816.9	50%	275.3	
Proprietors' income	770.3	744.0	10%	(26.3)	
Farm proprietors'	15.4	41.6	1%	26.2	
Nonfarm proprietor	754.9	702.4	9%	(52.5)	
Farm earnings	67.9	89.9	1%	22.0	
Nonfarm earnings	5,033.9	5,463.7	72%	429.8	
Private earnings	4,097.1	4,394.3	58%	297.2	
Forestry, fishing, related act., and oth	#N/A	#N/A	#N/A	#N/A	
Mining	#N/A	#N/A	#N/A	#N/A	
Utilities	#N/A	#N/A	#N/A	#N/A	
Construction	#N/A	#N/A	#N/A	#N/A	
Manufacturing	#N/A	#N/A	#N/A	#N/A	
Wholesale trade	#N/A	#N/A	#N/A	#N/A	
Retail Trade	#N/A	#N/A	#N/A	#N/A	
Transportation and warehousing	#N/A	#N/A	#N/A	#N/A	
Information	#N/A	#N/A	#N/A	#N/A	
Finance and insurance	#N/A	#N/A	#N/A	#N/A	
Real estate and rental and leasing	#N/A	176.3	2%	#N/A	
Professional and technical services	#N/A	#N/A	#N/A	#N/A	
Management of companies & enterp	#N/A	#N/A	#N/A	#N/A	
Administrative and waste services	#N/A	#N/A	#N/A	#N/A	
Educational services	#N/A	#N/A	#N/A	#N/A	
Health care and social assistance	#N/A	#N/A	#N/A	#N/A	
Arts, entertainment, and recreation	#N/A	#N/A	#N/A	#N/A	
Accommodation and food services	#N/A	#N/A	#N/A	#N/A	
Other services, except public admin.	#N/A	#N/A	#N/A	#N/A	
Government and government enterp.	936.9	1,069.4	14%	132.6	
Federal, civilian	301.3	340.7	4%	39.4	
Military	25.0	46.1	1%	21.2	
State and local	610.6	682.6	9%	72.0	
State government	95.0	#N/A	#N/A	#N/A	
Local government	515.6	#N/A	#N/A	#N/A	

Source: BEA REIS 2004 CD Table CA05N



- The highest paying sector is Natural Resources And Mining. It accounts for 4.9% of total employment and pays \$47,955 per year.
- The largest employment sector is Trade, Transportation, And Utilities. It accounts for 25.7% of total employment and pays \$29,293 per year.
- Goods-producing employees (19,290 workers ) were paid an average of \$41,722.
- Service-providing employees (79,148 workers ) were paid an average of \$27,563.

<b>County Wages and Employment in 2005 (Private Sector Only)</b>			
	Employment	% of Total	Average Annual Wages
<b>Total, all industries</b>	98,440	100%	30,337
<b>Goods-Producing</b>	19,290	20%	41,722
Natural Resources and Mining	4,819	5%	47,955
Construction	7,923	8%	35,760
Manufacturing	5,180	5%	40,382
<b>Service-Providing</b>	79,148	80%	27,563
Trade, Transportation, and Utilities	25,313	26%	29,293
Information	1,909	2%	34,130
Financial Activities	5,697	6%	38,208
Professional and Business Services	11,148	11%	29,697
Education and Health Services	15,336	16%	35,775
Leisure and Hospitality	15,310	16%	12,135
Other Services	4,377	4%	20,706
Unclassified	15	0%	30,884

Source: Bureau of Labor Statistics (CEW)

## Data Sources

The Economic Profile System was designed to focus on long-term trends at the county level. We used this method and geographic scale for several reasons: (1) trend analysis provides a more comprehensive view of change than spot data for select years, (2) the most reliable information on long-term employment and income trends is available at the county level, and (3) communities within counties rarely function as economic units themselves. Finally, even though in many areas the most accurate geographic scale to understand economic changes may be at the multi-county or regional level, county-level data is useful in the context of existing political jurisdictions, such as county commissions and planning departments. The list below contains the World Wide Web sites and telephone numbers for the databases used in this report:

- **Regional Economic Information System (REIS)**

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

<http://bea.gov/bea/regional/data.htm>

Tel. 202-606-9600

- **Quarterly Census of Employment and Wages (QCEW)**

Bureau of Labor Statistics

<http://www.bls.gov/cew>

Tel. 202-691-6567

- **Local Area Unemployment Statistics (LAUS)**

Bureau of Labor Statistics

<http://www.bls.gov/LAU>

Tel. 202-691-6392

- **1990 and 2000 U.S. Census**

Bureau of Census

<http://www.census.gov>

Tel. 303-969-7750

- **County Business Patterns (CBP)**

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

<http://www.census.gov/epcd/cbp/view/cbpview.html>

Tel 301-763-2580

- **County Business Patterns (Before 1986)**

University of Virginia, Geospatial and Statistical Data Center:

<http://fisher.lib.virginia.edu>

Tel. 804-982-2630

### Use of Federal Rather than State Data Bases

Data from state agencies was not used for this profile. Many of the state and local sources of data do not include information on the self-employed or on the importance of non-labor income, such as retirement income and money earned from past investments. In many counties this can result in the underestimation of employment and total personal income by at least one third. The REIS disk of the Bureau of Economic Analysis contains the most robust data set and for this reason it was used as the primary source.

The only disadvantage of the REIS dataset is it's not as recent; 2003 is the latest for REIS, while state data sources provide data for as recent as 2003 and in some instances 2004. By providing long-term trends data, from 1970 to 2003, having the most recent data is less important than being able to discern where the county's economy has been, and the direction in which it has been headed in recent years.

### Industrial Classification Systems (SIC & NAICS)

The long-term historic industry data used in this profile are based on data that is organized by the U.S. Department of Commerce using the Standard Industrial Classification (SIC) system. In recent years, the Department of Commerce has reorganized economic data according to a new system, called the North American Industry Classification System (NAICS, pronounced "nakes"). County Business Patterns started organizing their data using new NAICS in 1998, Census in 2000, and the Regional Economic Information System (REIS) in 2001.

The NAICS system is an improvement to the SIC system in several ways: first, businesses that use similar processes to produce goods or services are classified together. Previously, under the SIC system, some businesses were classified on the basis of their production processes while others were classified under different principles, such as class of consumer. Second, NAICS is a flexible system that will be updated every five years in order to keep pace with changes in the economy. Third, the NAICS system recognizes the uniqueness and rising importance of the "information economy," and provides several new categories, such as cable program distributors and database and directory publishers. Finally, and perhaps the most useful, the NAICS system provides seven sectors to better reflect services-producing businesses that were previously combined into one generic SIC division (the Services division).

This new system allows the data user to differentiate more clearly between what was previously often lumped under the general heading of "services," into categories such as arts and entertainment; education; professional, scientific and technical services; health care and social assistance, among others.

Arguably the most important change of NAICS is the recognition of hundreds of new businesses in the economy. NAICS divides the economy into 20 broad sectors rather than the SIC's 10 divisions as seen in the table on the following page. Creating these additional sector-level groupings allows NAICS to better reflect key business activities, as well as chronicle their changes.

### SIC Divisions vs. NAICS Sectors

SIC Divisions	NAICS Sectors
<ul style="list-style-type: none"> <li>• Agriculture, Forestry, and Fishing</li> </ul>	<ul style="list-style-type: none"> <li>• Agriculture, Forestry, Fishing and Hunting</li> </ul>
<ul style="list-style-type: none"> <li>• Mining</li> </ul>	<ul style="list-style-type: none"> <li>• Mining</li> </ul>
<ul style="list-style-type: none"> <li>• Construction</li> </ul>	<ul style="list-style-type: none"> <li>• Construction</li> </ul>
<ul style="list-style-type: none"> <li>• Manufacturing</li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing</li> </ul>
<ul style="list-style-type: none"> <li>• Transportation, Communications, and Public</li> </ul>	<ul style="list-style-type: none"> <li>• Utilities</li> <li>• Transportation and Warehousing</li> </ul>
<ul style="list-style-type: none"> <li>• Wholesale Trade</li> </ul>	<ul style="list-style-type: none"> <li>• Wholesale Trade</li> </ul>
<ul style="list-style-type: none"> <li>• Retail Trade</li> </ul>	<ul style="list-style-type: none"> <li>• Retail Trade</li> <li>• Accommodation and Food Services</li> </ul>
<ul style="list-style-type: none"> <li>• Finance, Insurance, and Real Estate</li> </ul>	<ul style="list-style-type: none"> <li>• Finance and Insurance</li> <li>• Real Estate and Rental and Leasing</li> </ul>
<ul style="list-style-type: none"> <li>• Services</li> </ul>	<ul style="list-style-type: none"> <li>• Information</li> <li>• Professional, Scientific, and Technical Services</li> <li>• Administrative and Support and Waste</li> <li>• Management and Remediation Services</li> <li>• Educational Services</li> <li>• Health Care and Social Assistance</li> <li>• Arts, Entertainment, and Recreation</li> <li>• Other Services (except Public Administration)</li> </ul>
<ul style="list-style-type: none"> <li>• Public Administration</li> </ul>	<ul style="list-style-type: none"> <li>• Public Administration</li> </ul>
<ul style="list-style-type: none"> <li>• None (previously, categories within each division)</li> </ul>	<ul style="list-style-type: none"> <li>• Management of Companies and Enterprises</li> </ul>

## Non-Labor Income

Non-labor income is a mix of Dividends, Interest, and Rent (money earned from past investments), and Transfer Payments (government payments to individuals). Private pension funds (e.g. 401(K) plans) are not counted as part of transfer payments.

Some data sources, such as "Section 202" data available from state unemployment insurance records and reported by the Bureau of Labor Statistics, do not report non-labor income. The Bureau of Economic Analysis (BEA), on the other hand, tracks non-labor income. In order to understand the actual growth (labor and non-labor) of personal income, the REIS/BEA data set must be used, and this is what was used for this profile. From REIS table CA05, we added together the following two categories to derive non-labor income: "Personal current transfer receipts" and "Dividends, interest, and rent."

## Disclosure Gaps

Some data, such as employment and income figures in counties with small economies, are not available because of confidentiality restrictions. In order to protect information about individual businesses, data are sometimes suppressed or, in the case of the publication County Business Patterns, a range of values are given instead of a specific value. Generally, the smaller the geographic level of analysis or the smaller the economy under examination the higher the chances that industry-specific information will be suppressed.

Where disclosure gaps exist, the EPS User's Manual outlines a few ways to handle the gaps. One approach is to use a built-in system within EPS for estimating data gaps through 2000 for the 11 contiguous western states (AZ, CA, CO, ID, MT, NM, NV, OR, UT, WA, WY). In order to calculate the estimates, we first estimated gaps in the County Business Patterns data by using the firms by size information. Then we used these County Business Patterns data to estimate the gaps in the REIS data. Finally, we scaled the estimates up or down to force known identities. There is an option in EPS to either show these estimates or not. When these estimates are shown, annotations were made in the profile documenting where estimates were used. For a description of the methods used to estimate the data gaps in EPS, see the EPS User's Manual.

## Aggregated Profiles

The economic profile system has an option to allow you to aggregate data from multiple counties into one profile. The majority of the data in the profiles are summed in the aggregate profile. For some data points, however, the data are averaged. In order to do this, EPS has to replace some of the data in the raw data tables with formulae. For example, the aggregate unemployment rate for a group of counties is calculated from the sum of the unemployed divided by the sum of the labor force. This results in a proportionally weighted average, where larger counties are given more weight than smaller counties.

The Economic Profile System interpolates the medians from the data that are available. When the Census releases data expressed as a median, they also release the number of observations that fall in the full range of categories, or "brackets". For example, median age is interpolated from the number of people in each age bracket. EPS aggregates the number of people in each bracket, and then interpolates the median from the aggregated data. In some cases, the Census have more detailed brackets than we do in the EPS databases so the interpolations in aggregated EPS profiles are rough estimates.

## Adjustments from Current to Real Dollars

Because a dollar in the past was worth more than a dollar today, data reported in current dollar terms should be adjusted for inflation. The U.S. Department of Commerce reports personal income figures in terms of current dollars. All income data in this profile were adjusted to real (or constant) 2004 dollars using the Consumer Price Index, except the Income Distribution information on page 5 of the profile.

## Unemployment Rate

Unemployment is generally available as seasonally unadjusted or adjusted, and there is an advantage to using adjusted data. From the Bureau of Labor Statistics web site (<http://stats.bls.gov/lauseas.htm>), an explanation of why adjusted figures should be used, whenever possible: “Over the year, the size of the Nation's labor force, the levels of employment and unemployment, and other measures of labor market activity undergo sharp fluctuations due to seasonal events including changes in weather, harvests, major holidays, and the opening and closing of schools. Because these seasonal events follow a more or less regular pattern each year, their influence on statistical trends can be eliminated by adjusting the statistics from month to month. These adjustments make it easier to observe the cyclical, long term trend, and other non-seasonal movements in the series.”

Unadjusted numbers were used in this profile in order to obtain an annual average and because county-level data are not available in adjusted format from the Bureau of Labor Statistics web site. This may introduce some error in counties where the size of the workforce fluctuates seasonally, such as tourist destination areas.

## Farm Income

Note that farm income figures on pages 21 are not the same as the figures on pages 30 & 31. The figures on page 21 reflect income from farming *enterprises* (farm proprietors and corporate income), while the farm income on pages 30 & 31 is personal income earned by *individuals* (both proprietors, and wage and salary employees) who work in farming.

## Specialization Index

The specialization index was calculated as:

$$\text{SPECIAL}_{it} = \sum_{j=1}^n (\text{EMP}_{ijt} / \text{EMP}_{it})^2$$

$\text{SPECIAL}_{it}$  = specialization of economy in county  $i$  in year  $t$

$\text{EMP}_{ijt}$  = employment in industry  $j$  in county  $i$  in year  $t$

$\text{EMP}_{it}$  = total employment in county  $i$  in year  $t$

$n$  = number of industries

This index is commonly used as a measure of industrial specialization in the economy. Counties with a high specialization index can also be described as not being economically diverse.

## Income

- Total Personal Income = private earnings, income from government and government enterprises, dividends, interest, and rent, and transfer payments plus adjustments for residence minus personal contributions for social insurance.
- Wage and salary = monetary remuneration of employees, including employee contributions to certain deferred compensation programs, such as 401K plans.
- Other labor income = payments by employers to privately administered benefit plans for their employees, the fees paid to corporate directors, and miscellaneous fees.
- Proprietors' income = income from sole proprietorships, partnerships, and tax-exempt cooperatives. A sole proprietorship is an unincorporated business owned by a person. A partnership is an unincorporated business association of two or more partners. A tax-exempt cooperative is a nonprofit business organization that is collectively owned by its members.

## Transfer Payments

- Transfer payments = payments to persons for which they do not render current services. As a component of personal income, they are payments by government and business to individuals and nonprofit institutions.
- Retirement & disab. insurance benefit payments = Old-Age, Survivors, and Disability Insurance payments (Social Security), Railroad Retirement and Disability payments, Federal Civilian Employee & Disability Payments, Military Retirement, and State and Local Government Employee retirement payments.
- Medical payments = Medicare, public assistance medical care and CHAMPUS payments.
- Income maintenance (welfare) = Supplemental Security Income (SSI), Aid to Families with Dependent Children (AFDC), Food Stamps, and Other Income Maintenance Payments, such as emergency assistance, foster care payments and energy assistance payments.
- Unemployment insurance benefit payments = unemployment compensation for state and federal civilian employees, unemployment compensation for railroad workers, and unemployment compensation for veterans.
- Veterans benefits = primarily compensation to veterans for their disabilities and payments to their survivors.
- Federal education and training assistance = Job Corps payments, interest payments on Guaranteed Student Loans, federal fellowship payments, and student assistance for higher education.
- Other government payments = compensation of survivors of public safety officers and compensation of victims of crime. In Alaska this item includes Alaska Permanent Fund payments.
- Payments to nonprofit institutions = payments for development and research contracts. For example, it includes payments for foster home care supervised by private agencies.
- Business payments to individuals = personal-injury liability payments, cash prizes, and pension benefits financed by the Pension Benefit Guarantee Corporation.

## Mean, Median and Modes

- Mean = The sum of a list of numbers, divided by the total number of numbers in the list.
- Median = "Middle value" of a list. The smallest number such that at least half the numbers in the list are no greater than it. If the list has an odd number of entries, the median is the middle entry in the list after sorting the list into increasing order. If the list has an even number of entries, the median is equal to the sum of the two middle (after sorting) numbers divided by two. The median can be estimated from a histogram by finding the smallest number such that the area under the histogram to the left of that number is 50%.
- Mode = For lists, the mode is the most common (frequent) value. A list can have more than one mode. For histograms, a mode is a relative maximum ("bump").