

Pacific Northwest Regional <u>F</u>conomic Analysis Project



A Web-Based Tool for Diagnosing the Performance of Our State & Local Economies

A Pamphlet to Introduce the

Nevada Regional Economic Analysis Project

Web Site

(http://www.pnreap.org/Nevada)

Prepared for

Calibrating the Nevada Economy:

Data & Tools for Assessing the Performance of

Our State & Local Economies

February 2, 2007 Grand Sierra Resort Reno, Nevada

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Nevada Regional Leonomic Analysis Project

University of Nevada, Reno Center for Economic Development

- ✓ "If we could first know where we are, and whither we are tending, we could better judge what to do and how to do it."

 ~ Abraham Lincoln
- ✓ "It ain't what you don't know that gets you into trouble. It's what you know for sure that just ain't so."

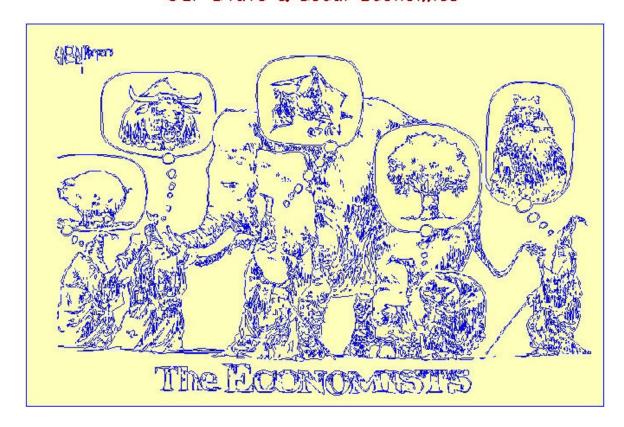
 ~ Mark Twain
- ✓ "Collecting data on the local economy from the internet is akin to drinking water from a fire hydrant."
 ~ Paul Zelus, Idaho State University





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√ Setting:

- Forces of change continue to undermine the vitality, diminish the prosperity and even threaten the survival of many rural area in Nevada and throughout the entire West.
- Federal, state and local area leaders must mobilize, organize and become better informed to more effectively cope with the challenges posed by the economic transitions confronting their communities.
- All too often regional and local economic development efforts focus on energizing and mobilizing local leaders and development organizations without first building from a sound base of information, a good diagnosis of local area problems and a establishing well-grounded understanding of local area trends.
- Policies may be misdirected and misguided in the absence of establishing a sound diagnosis and collective understanding of the local economy:

How it works!

How it is changing!

How it can be changed!



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✓ Situation:

- Even though local leaders may well appreciate the importance and need for better information and understanding of trends and developments within their local economy they frequently lack the resources and staff trained to know:
 - Where to look for and access the pertinent data; and
 - How to manipulate, organize, synthesize, analyze, interpret and portray the data once they have it. (This, is what the PNREAP web site is all about!)
- Rural areas are especially limited in their capacity to initiate and undertake the applied research needed to establish a sound baseline of information and analysis for building a broad collective understanding of where they've been, where they are, and where they are going.
- Even more affluent larger communities and jurisdictions can make better use of scarce and limited resources if they could access and use web-based tools for doing regional economic analysis to diagnose and assess changing local area economic conditions and trends.



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✓ PNREAP & Nevada Regional Economic Analysis Project Goals:

- To strengthen and improve regional and local area planning and economic development decision-making throughout Nevada.
- To broaden and enhance the depth of analysis and understanding of local and regional economic conditions and trends against the backdrop of a dynamic and ever-changing national economy.
- To adopt and exploit web-enabled technologies to expedite the distillation, delivery, portrayal and interpretation of regional economic information, analysis and research results.
- To present and explain web-accessible regional economic analysis and research research results that general audiences can readily and independently generate, understand, share with others, adopt and apply.



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- ✓ The Cornerstone of PNREAP: The BEA Data
 - The cornerstone for the data used on PNREAP are the state and county level income, earnings, employment and transfer payments data compiled and updated annually by the Regional Economic Measurement Division of the Bureau of Economic Analysis, U.S. Department of Commerce (REMD/REIS - BEA, DOC).
- ✓ THE 5 C's In combination, the BEA regional data are among the most:
 - Comprehensive
 - Comparable
 - Consistent
 - Current
 - > Credible
 - Plus....CASH -- (The Income Side of the Local Economic Equation)



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- ✓ BEA Data + "VALUE ADDED" = PNREAP
- ✓ The VALUE ADDED Components of PNREAP...In Combination:
 - Retrieval
 - Manipulation
 - Organization
 - ► Distillation
 - Synthesis
 - Analysis
 - **▶** Interpretation
 - Portrayal
 - Delivery
 - At...the click of a mouse!



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- ✓ The 3 Rules Underlying PNREAP:
 - 1 CONTEXT
 - 2 CONTEXT
 - 3 CONTEXT
- ✓ PNREAP Regional Coverage
 - Regional coverage of the PNREAP web site encompasses all the 250 individual counties of Nevada (17), Washington (39), Oregon (36), Idaho (44), Montana (56) and California (58).
 - National coverage for the individual states and DC (51).
- ✓ And NOW....off to Nevada Regional Economic Analysis Project we
 go!



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A Web-Based Tool for Diagnosing the Performance of Our State & Local Economies

✓ Recent Enhancements

- All Tables as well as Briefing Reports are now Dynamically Generated.
 - Faster turn around for updating
 - · More readily extend to other states
- Addition of California
- New Navigation Features
- New Modules
 - "Comparative Trends Analysis State to State, 1969-2004"
 - "Major Components of Personal Income, 1969-2004"
- Modules Revised or Under Revision
 - "Shift-Share Analysis of Employment Growth" now available for the NAICS classification.
 - "Comparative Trends Analysis County to County, 1969-2004"



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✓ Future Enhancements

- Bolster Factor Analysis
- Cyclical Analysis
- Projections
- Graphics Analysis of Rural Conditions & Trends State by State
- Comparative Analysis by Industry
- Geographic Map Integration
- Integration of Most Recently Released State Level Data
- A Northwest Region Combining State and Provincial (Canadian) Data
- Extending PNREAP to Other States or... Go Nationwide?
- More Active Outreach Activity and Programming
- Garnering \$ Support... A Public Goods Issue?
- Suggestion? Recommedations? Items to Add to Wish list?



- California
 Idaho
 Montana
 Nevada
 Oregon
 Washington
 United States
 - Comparative Trends Analysis

 Comparative Economic Indicators

 Shift-Share Analysis

 Industry Analysis

 Selected Economic Indicators

 Personal Income by Major Source

 Full & Part-Time Employment

 Transfer Payments

 BEARFACTS (BEA Regional Facts)
- Upcoming Conferences
 ■ PNREC Outlook Presentations
 ■ PNREAP/BEA Workshops

Comparative Frends Analysis State to State 1969-2004



"If we could first know where we are, and wither we are tending, we could better judge what to do and how to do it."

- Abraham Lincoln

Comparative Trends Analysis - State to State, 1969-2004 - Generate graphic analysis and summary reports comparing state to state growth and change. Compare state to state and nationwide economic trends focusing on the following key indicators: population, personal income, per capita income, employment, industry earnings and average earnings per job.





PNREAP: Comparative Trends Analysis: Nevada vs. Arizona, Population Growth and Change, 1969 - 2004



Briefing Report Outline:

- 1. Table Nevada and Arizona: Population, 1969 2004
- 2. Introduction
- 3. Graph Nevada Population, 1969 2004
- 4. Graph Population Indices: Nevada, Arizona and United States, 1969 2004
- 5. Graph Population as a Percent of the U.S. Total: Nevada and Arizona, 1969 2004
- 6. Graph Nevada Population: Annual Percent Change, 1969 2004
- 7. Graph Nevada Population: Annual Percent Change, 1969 2004 by decade
- 8. Graph Population Growth: Average Annual Percent Change, 1969 2004

Nevada and Arizona: Population, 1969-2004

	R 0	Nevad	а			Arizon	a		
			7023 R	Percent			8 8	Percent	
0.9509	Beenfelde	1000000	Percent		600000000	100000	Percent		
Year	Population	Index1	Change	Total	Population	Index ¹	Change	Total	
1969	480,000	100.0		0.24	1,737,000	100.0		0.86	
1970	493,223	102.8	2.75	0.24	1,794,912	103.3	3.33	0.88	
1971	519,989	108.3	5.43	0.25	1,896,108	109.2	5.64	0.92	
1972	546,736	113.9	5.14	0.26	2,008,847	115.7	5.95	0.96	
1973	568,910	118.5	4.06	0.27	2,125,281	122.4	5.80	1.01	
1974	596,713	124.3	4.89	0.28	2,224,342	128.1	4.66	1.04	
1975	619,847	129.1	3.88	0.29	2,286,348	131.6	2.79	1.06	
1976	646,823	134.8	4.35	0.30	2,347,976	135.2	2.70	1.08	
1977	678,134	141.3	4.84	0.31	2,427,310	139.7	3.38	1.10	
1978	719,345	149.9	6.08	0.32	2,517,852	145.0	3.73	1.13	
1979	765,121	159.4	6.36	0.34	2,638,582	151.9	4.79	1.17	
1980	810,215	168.8	5.89	0.36	2,737,774	157.6	3.76	1.20	
1981	847,656	176.6	4.62	0.37	2,810,108	161.8	2.64	1.22	
1982	881,538	183.7	4.00	0.38	2,889,860	166.4	2.84	1.25	
1983	901,978	187.9	2.32	0.39	2,968,924	170.9	2.74	1.27	
1984	924,921	192.7	2.54	0.39	3,067,134	176.6	3.31	1.30	
1985	951,032	198.1	2.82	0.40	3,183,539	183.3	3.80	1.34	
1986	980,614	204.3	3.11	0.41	3,308,261	190.5	3.92	1.38	
1987	1,023,374	213.2	4.36	0.42	3,437,103	197.9	3.89	1.42	
1988	1,075,023	224.0	5.05	0.44	3,535,183	203.5	2.85	1.45	
1989	1,137,382	237.0	5.80	0.46	3,622,184	208.5	2.46	1.47	
1990	1,220,695	254.3	7.32	0.49	3,684,097	212.1	1.71	1.48	
1991	1,296,171	270.0	6.18	0.51	3,788,576	218.1	2.84	1.50	
1992	1,351,367	281.5	4.26	0.53	3,915,740	225.4	3.36	1.53	
1993	1,411,215	294.0	4.43	0.54	4,065,440	234.0	3.82	1.56	
1994	1,499,298	312.4	6.24	0.57	4,245,089	244.4	4.42	1.61	
1995	1,581,578	329.5	5.49	0.59	4,432,499	255.2	4.41	1.66	
1996	1,666,320	347.2	5.36	0.62	4,586,940	264.1	3.48	1.70	
1997	1,764,104	367.5	5.87	0.65	4,736,990	272.7	3.27	1.74	
1998	1,853,191	386.1	5.05	0.67	4,883,342	281.1	3.09	1.77	
1999	1,934,718	403.1	4.40	0.69	5,023,823	289.2	2.88	1.80	
2000	2,018,214	420.5	4.32	0.72	5,165,993	297.4	2.83	1.83	
2001	2,094,827	436.4	3.80	0.73	5,295,929	304.9	2.52	1.86	
2002	2,167,867	451.6	3.49	0.75	5,438,159	313.1	2.69	1.89	
2003	2,241,700	467.0	3.41	0.77	5,577,784	321.1	2.57	1.92	
2004	2,332,898	486.0	4.07	0.79	5,739,879	330.4	2.91	1.95	

1 Values are expressed as 100% for 1969 (2000 Dollars) and as a percent of 1969 for the following years.

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gary W. Smith, Economist and PNREAP Director.

Introduction



Attracting and retaining people to live, work, raise a family, and retire underlies the economic growth of any region. Population growth is both a cause--and a consequence--of economic growth. Patterns of population growth and change reflect differences among regions to attract and retain people both as producers and consumers in their economy.

The following graphs offer a broad overview of trends in the pattern of population growth and change of Nevada with comparisons to Arizona and the nation. The data used are those compiled by the Bureau of Economic Analysis, U.S. Department of Commerce.

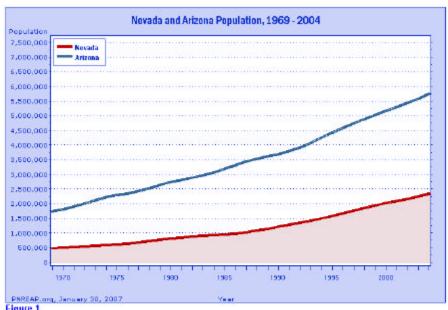


Figure 1.

Figure 1 traces Nevada's annual population over 1969-2004 to illustrate the pattern of growth over time. Over the entire 35-year period, Nevada's population rose from 450,000 in 1969 to 2,332,598 in 2004, for a net gain of 1,852,898, or 386,0%. In turn, Arizona's population increased from 1,737,000 in 1989 to 5,739,879 in 2004, for a net gain of 4,002,879, or 230.4%.

The county and state population totals reported by the Bureau of Economic Analysis (BEA) are from the Bureau of Census midyear (July 1) estimates. It should be noted that these estimates might differ from those that are independently prepared in some states by various agencies and/or universities.

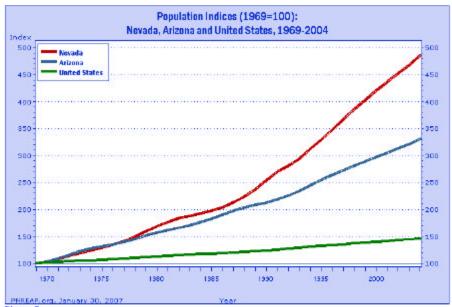
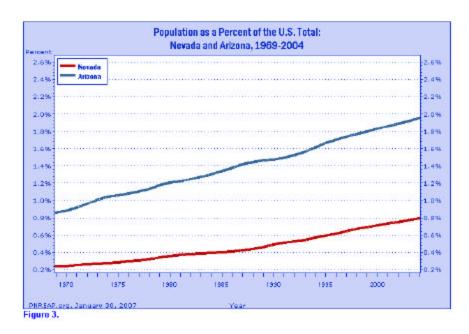


Figure 2.

Figure 2 shows Nevada's population growth compared with Arizona and the nation in a more long-term context. Growth indices express each region's population in 1969 as 100, and the populations in later years as a percent of 1969. They allow for a direct comparison of the differences in population growth between regions although they may differ vastly in size.

Nevada's overall population growth of 386.0% over 1969-2004 surpassed Arizona's increase of 230.4%, and outpaced the national increase of 45.9%.



Another way of highlighting the growth of Nevada and Arizona's population compared with the United States is to trace their share of total U.S. population over time as shown in Figure 3. A rising share means a state's population grew faster-or declined less-than the United States population, while a declining share shows it grew more slowly.

In 1969, Nevada's population comprised 0.24% of the United States population, in 2004, it comprised 0.79%. Similarly, in 1969, Avizona's population consisted of 0.86% of the nation's population; in 2004, it accounted for 1.95%.

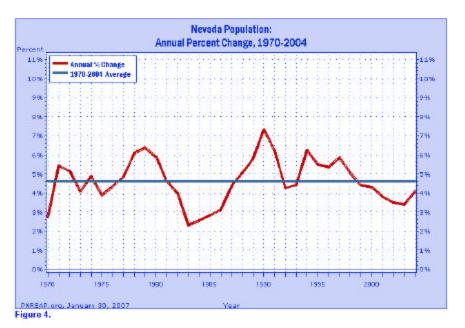
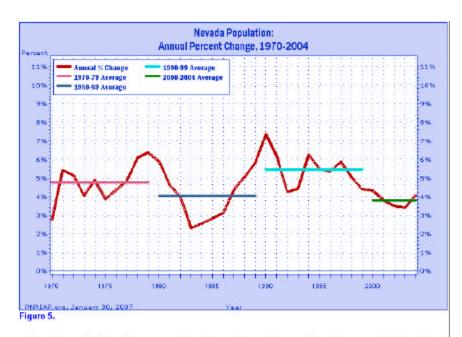


Figure 4 highlights the short-run pattern of Nevada's population growth by tracking the year-to-year percent change over 1963-2004. The average annual percent change for the entire 35-year period is also traced on this chart.

to provide a benchmark for gauging periods of relative high-and relative low-growth against the long-term trend.

Nevada's population grew on average at an annual rate of 4.63% over 1989-2004.



Over the past three decades some counties, regions, and states have experienced extreme swings in growth, and often such aways have tended to coincide with the decades themselves. Figure 5 again traces the annual percent change in Navada population since 1989, but this time they are displayed with average growth rates for the decade of the 1970s, 1980s, the 1990s, and 2000-2004.

During the 1970s, Nevada's annual population growth rate averaged 4.78%. It averaged 4.06% during the 1980s, 5.46% in the 1990s, and 3.81% thus far this decade (2000-2004).

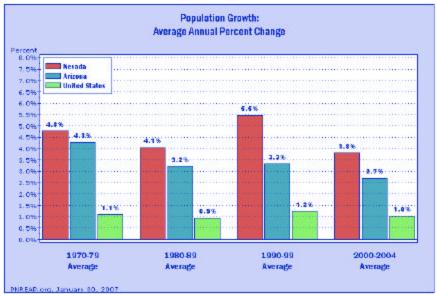


Figure 6

Figure 5 compares the decade average growth rates for Nevada noted in the previous graph with the corresponding decade averages for Anzona and the nation. As the chart reveals, Nevada's average population growth outpaced Arizona's average during the 1970s (4.78% vs. 4.28%), surpassed Arizona's average during the 1980s (4.05% vs. 3.23%), topped Arizona's average during the 1990s (5.46% vs. 3.33%), and equaled higher than Arizona's average over the 5 year period for this decade, 2000-2004 (3.81% vs. 2.70%).

Relative to nationwide population growth trends, Nevada led the nation during the 1970s (4.28% vs. 1.10%), registered above the nation in the 1980s (4.05% vs. 0.95%), exceeded the nation in the 1990s (5.45% vs. 1.23%), and tallied over the nation from 2000-2004 (3.91% vs. 1.03%).

Population Growth: Average Annual Percent Change										
	1978-2004	1970-78	1080-80	1990-00	2000-2004					
Nevada:	4.63%	4.78%	4.05%	5.40%	3.81%					
Arizona:	3.46%	4.28%	3.22%	3.88%	2.70%					
United States:	1.08%	1.10%	0.95%	1.23%	1.03%					

PNREAP Snippets from the Comparative Indicators Module – United States



- California
- Idaho
- Montana
- Nevada
- Oregon
- Washington
- United States Comparative Trends Analysis

Comparative Economic Indicators

Shift-Share Analysis

Industry Analysis

Selected Economic Indicators

Personal Income by Major Source

Full & Part-Time Employment

Transfer Payments

BEARFACTS (BEA Regional Facts)

- **⊞** Upcoming Conferences
- **PNREC Outlook** Presentations
- I#I PNREAP/BEA Workshops

1969-2004



Comparative Economic Indicators, 1969-2004 - In contrast to the Selected Economic Indicators tables that trace changes for individual counties year-over-year, the maps and tables generated by this PNREAP module compare the growth and relative standing of all counties and regions in terms of per capita income, population, total personal income, employment, total industry earnings, and average earnings per



Ranking By County:

- Population
- C Personal Income
- C Per Capita Income
- C Employment
- C Total Industry Earnings
- O Average Earnings Per Job

1969 vs. 2004 v

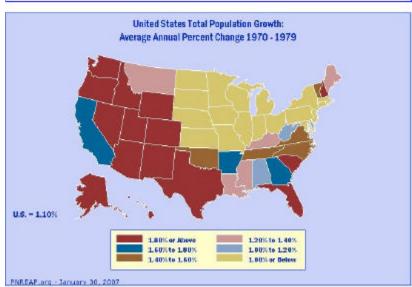
Generate & Display Output

Growth by County and Region, 1970-2004:

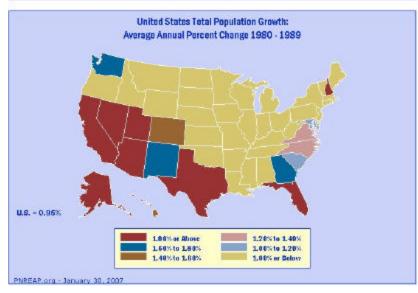
- Population
- C Personal Income
- O Per Capita Income
- C Employment
- C Total Industry Earnings
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Generate & Display Output

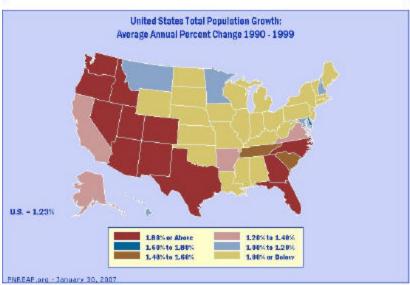




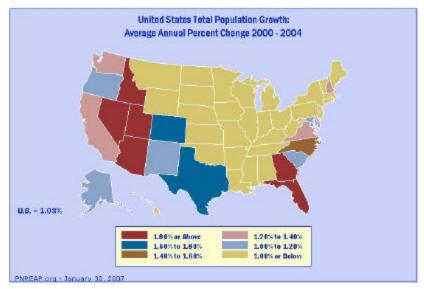












	1970 - :	2004	1970 -	1979	1980 -	1989	1990 -	1999	2000 - :	2004	200	4
County	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rank	Percent	Rani
Nevada	4.63	1	4.78	1	4.05	1	5.46	1	3.81	1	4.07	- 1
Arizona	3.48	2	4.28	2	3.22	2	3.33	2	2.70	2	2.91	2
Florida	2.79	3	3.62	3	2.93	4	2.23	7	1.98	4	2.31	3
Utah	2.43	4	3.07	6	1.88	8	2.59	3	1.90	5	1.77	6
Alaska	2.33	- 5	3.17	5	3.13	3	1.34	18	1.03	18	1.43	9
Colorado	2.18	6	2.78	8	1.41	13	2.58	4	1.72	8	1.18	15
Texas	2.05	7	2.32	12	1.93	7	2.04	9	1.80	7	1.69	7
Idaho	1.97	8	2.81	7	0.65	24	2.52	5	1.81	6	1.98	4
Georgia	1.94	9	1.71	17	1.75	9	2.30	6	2.08	3	1.96	5
New Mexico	1.83	10	2.39	10	1.62	11	1.86	12	1.03	19	1.26	12
Washington	1.79	11	1.85	15	1.70	10	2.10	8	1.22	14	1.24	13
California	1.72	12	1.67	18	2.31	5	1.38	16	1.36	11	1.09	17
New Hampshire	1.69	13	2.33	11	1.94	6	1.02	23	1.23	13	0.90	19
Oregon	1.60	14	2.26	13	0.80	21	1.98	10	1.14	16	0.81	23
Hawaii	1.53	15	2.49	9	1.43	12	1.01	24	0.84	22	1.12	16
North Carolina	1.52	16	1.44	23	1.24	15	1.93	11	1.44	9	1.40	10
South Carolina	1.41	17	1.85	14	1.14	16	1.41	15	1.10	17	1.23	14
Virginia	1.39	18	1.44	22	1.40	14	1.35	17	1.34	12	1.33	11
Wyoming	1.26	19	3.23	4	0.18	38	0.71	38	0.57	33	0.79	24
Delaware	1.24	20	1.04	31	0.95	19	1.65	13	1.38	10	1.50	8
Tennessee	1.19	21	1.52	20	0.69	23	1.51	14	0.89	21	0.89	21
Arkansas	1.04	22	1.72	16	0.34	34	1.23	19	0.73	26	0.87	22
Maryland	1.04	23	0.88	32	1.14	17	1.06	22	1.14	15	0.89	20
Vermont	1.01	24	1.47	21	0.98	18	0.81	32	0.54	35	0.35	44
Oklahoma	0.95	25	1.60	19	0.61	25	0.88	31	0.50	39	0.53	32
Minnesota	0.87	26	0.72	33	0.72	22	1.17	20	0.90	20	0.69	28
Montana	0.83	27	1.29	26	0.14	39	1.16	21	0.65	29	0.98	18
Maine	0.81	28	1.27	27	0.82	20	0.38	46	0.75	24	0.52	35
Alabama	0.79	29	1.18	29	0.41	32	0.95	25	0.43	40	0.52	34
Mississippi	0.77	30	1.23	28	0.26	36	0.95	26	0.51	37	0.69	27
Kentucky	0.74	31	1.31	25	0.09	41	0.89	29	0.61	31	0.61	29
Wisconsin	0.66	32	0.64	34	0.40	33	0.94	27	0.63	30	0.58	30
Louisiana	0.63	33	1.35	24	0.28	35	0.48	43	0.20	47	0.36	42
Missouri	0.62	34	0.53	37	0.41	31	0.88	30	0.70	27	0.71	26
New Jersey	0.58	35	0.39	42	0.47	28	0.79	36	0.77	23	0.52	33
Kansas	0.58	36	0.49	40	0.52	27	0.80	34	0.41	43	0.35	43
Indiana	0.55	37	0.63	35	0.09	42	0.91	28	0.59	32	0.49	38
Nebraska	0.49	38	0.60	36	0.07	43	0.80	35	0.50	38	0.56	31
Connecticut	0.44	39	0.33	44	0.58	26	0.31	48	0.66	28	0.38	41
Rhode Island	0.42	40	0.27	46	0.45	30	0.39	45	0.75	25	0.39	40
South Dakota	0.41	41	0.31	45	0.11	40	0.75	37	0.53	36	0.79	25
Illinois	0.40	42	0.34	43	-0.01	47	0.80	33	0.56	34	0.49	37
Michigan	0.40	43	0.52	38	0.01	45	0.68	39	0.42	42	0.26	46
Massachusetts	0.36	44	0.17	48	0.46	29	0.49	41	0.28	44	-0.16	50
Ohio	0.23	45	0.22	47	0.03	44	0.46	44	0.20	48	0.16	48
New York	0.18	46	-0.26	50	0.20	37	0.49	42	0.42	41	0.27	45
Pennsylvania	0.16	47	0.11	49	-0.01	46	0.33	47	0.21	46	0.24	47
Iowa	0.15	48	0.39	41	-0.51	50	0.52	40	0.24	45	0.39	39
West Virginia	0.11	49	1.06	30	-0.70	51	0.03	49	0.01	49	0.12	49
North Dakota	0.07	50	0.49	39	-0.08	48	-0.03	50	-0.25	50	0.51	36
District of Columbia	-0.90	51	-1.49	51	-0.49	49	-0.90	51	-0.57	51	-0.65	51
United States	1.08		1.10		0.95		1.23		1.03		0.97	
Metro	1.17		1.09		1.11		1.32		1.15		1.07	
Nonmetro	0.70		1.14		0.25		0.85		0.42		0.47	



- California
- Idaho
- Montana
- Nevada

Graphic Trend Analysis

Population

Personal Income

Per Capita Income

Employment

Total Industry Earnings

Average Earnings Per Job

Comparative Economic Indicators

Major Components of Personal Income

Shift-Share Analysis

Industry Analysis

Selected Economic Indicators

Personal Income by Major Source

Full & Part-Time Employment

Transfer Payments

BEARFACTS (BEA Regional Facts)

- Oregon
- Washington
- United States
- Upcoming Conferences
- PNREC Outlook Presentations
- PNREAP/BEA Workshops

Graphic Trend Analysis of Per Capita Uncome 1969-2004



"If we could first know where we are, and wither we are tending, we could better judge what to do and how to do it."

- Abraham Lincoln

Graphic Trend Analysis of Per Capita Income, 1969-2004 - Generate graphic analysis and summary reports of local area growth and change. Compare local, state and nationwide economic trends focusing on per capita income. Per Capita Personal Income is the total personal income of an area divided by its resident population as of July 1st.

University of Nevada, Reno Center for Economic Development

Per Capita Income

Churchill Lyon Clark Mineral Douglas Nye Pershing Elko Esmeralda Storey Washoe Eureka White Pine Humboldt Lander Carson City Lincoln Metropolitan Nevada Nonmetropolitan Nevada

Regions

Western Nevada

Central Nevada

Northeast Nevada

Southern Nevada

PNREAP: Graphic Trend Analysis: Washoe County Per Capita Income, 1969 - 2004



Briefing Report Outline:

- 1. Table Washoe County Per Capita Income Growth and Change, 1969 2004
- 2. Introduction
- 3. Graph Washoe County Per Capita Income, 1969 2004, Current vs. Constant 2000 Dollars
- 4. Graph Real Per Capita Income Indices: Washoe County, Nevada, and United States, 1969 2004
- 5. Graph Per Capita Income as a Percent of the Statewide Average: Washoe County, 1969 2004
- 6. Graph Washoe County Real Per Capita Income: Annual Percent Change, 1969 2004
- 7. Graph Washoe County Real Per Capita Income: Annual Percent Change, 1969 2004 by decade
- 8. Graph Real Per Capita Income Growth: Average Annual Percent Change, 1969 2004

Washoe County and Nevada: Per Capita Income, 1969-2004

			Washo	e County					Nevada		
	Current Dollars	2000 Dollars ¹		Percent Change ¹	Percent of U.S.	Percent of State	Current Dollars	2000 Dollars ¹		Percent Change ¹	Percent of U.S.
Year	(1,000s)	(1,000s)	Index2	(2000 \$s)	Average	Average	(1,000s)	(1,000s)	Index2	(2000 \$s)	Average
1969	4,830	19,125	100.0	94	125.91	107.12	4,509	17,854	100.0	94	117.54
1970	5,282	19,971	104.4	4.42	129.30	107.01	4,936	18,663	104.5	4.53	120.83
1971	5,656	20,512	107.3	2.71	130.26	108.17	5,229	18,964	106.2	1.61	120.43
1972	6,026	21,123	110.4	2.98	127.75	108.26	5,566	19,511	109.3	2.88	118.00
1973	6,548	21,768	113.8	3.05	125.18	107.22	6,107	20,302	113.7	4.05	116.75
1974	6,933	20,888	109.2	-4.04	121.48	106.81	6,491	19,557	109.5	-3.67	113.74
1975	7,609	21,163	110.7	1.32	123.28	108.04	7,043	19,588	109.7	0.16	114.11
1976	8,506	22,415	117.2	5.92	125.94	109.83	7,745	20,410	114.3	4.20	114.67
1977	9,506	23,524	123.0	4.95	128.37	111.40	8,533	21,116	118.3	3.46	115.23
1978	11,123	25,719	134.5	9.33	134.91	114.38	9,725	22,487	125.9	6.49	117.95
1979	12,320	26,180	136.9	1.79	134.70	115.56	10,661	22,655	126.9	0.75	116.56
1980	13,305	25,548	133.6	-2.41	131.55	113.72	11,700	22,466	125.8	-0.83	115.68
1981	14,361	25,319	132.4	-0.90	127.70	112.62	12,752	22,482	125.9	0.07	113.39
1982	14,840	24,792	129.6	-2.08	124.34	112.83	13,152	21,972	123.1	-2.27	110.20
1983	15,511	24,843	129.9	0.21	122.93	113.58	13,656	21,872	122.5	-0.46	108.23
1984	16,634	25,672	134.2	3.34	119.75	113.79	14,618	22,560	126.4	3.15	105.23
1985	17,602	26,297	137.5	2.43	119.27	113.70	15,481	23,128	129.5	2.52	104.90
1986	18,243	26,605	139.1	1.17	118.14	112.82	16,170	23,582	132.1	1.96	104.71
1987	19,070	26,879	140.5	1.03	117.43	113.07	16,865	23,771	133.1	0.80	103.85
1988	20,230	27,429	143.4	2.05	116.73	111.35	18,168	24,633	138.0	3.63	104.83
1989	21,383	27,780	145.3	1.28	115.46	110.45	19,360	25,152	140.9	2.11	104.54
1990	23,067	28,655	149.8	3.15	118.43	113.37	20,346	25,275	141.6	0.49	104.46
1991	23,862	28,605	149.6	-0.17	119.96	114.94	20,761	24,888	139.4	-1.53	104.37
1992	25,575	29,799	155.8	4.17	122.64	115.81	22,084	25,732	144.1	3.39	105.90
1993	25,695	29,264	153.0	-1.80	120.37	112.81	22,777	25,941	145.3	0.81	106.70
1994	27,031	30,150	157.6	3.03	121.92	113.71	23,772	26,515	148.5	2.21	107.22
1995	28,339	30,946	161.8	2.64	122.81	114.19	24,817	27,100	151.8	2.21	107.54
1996	29,599	31,641	165.4	2.25	122.44	113.47	26,085	27,884	156.2	2.89	107.90
1997	30,538	32,103	167.9	1.48	120.54	113.68	26,862	28,239	158.2	1.27	106.03
1998	32,265	33,617	175.8	4.72	120.02	114.17	28,260	29,444	164.9	4.27	105.12
1999	33,915	34,758	181.7	3.39	121.39	116.21	29,184	29,909	167.5	1.58	104.46
2000	36,100	36,100	188.8	3.86	120.96	118.61	30,437	30,437	170.5	1.77	101.98
2001	37,373	36,606	191.4	1.40	122.24	121.63	30,727	30,097	168.6	-1.12	100.50
2002	36,704	35,448	185.3	-3.16	119.13	119.42	30,736	29,685	166.3	-1.37	99.76
2003	37,693	35,721	186.8	0.77	119.72	118.00	31,943	30,272	169.6	1.98	101.46
2004	39,513	36,503	190.9	2.19	119.56	116.95	33,787	31,213	174.8	3.11	102.23

^{1 2000} constant dollar estimates determined using the chain-weight Implicit Price Deflator for Personal Consumption.

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gary W. Smith, Economist and PNREAP Director.

² Values are expressed as 100% for 1969 (2000 Dollars) and as a percent of 1969 for the following years.

Introduction



Per Capita Income is one of the most widely used indicators for gauging the economic performance and changing fortunes of local economies. It is used as a yardstick to assess the economic well being of a region's residents and the quality of consumer markets. It serves as a barometer for calibrating the economic performance of a region over time and to judge differences in relative economic prosperity between regions. Shifting trends in local per capita income growth have important social and political ramifications and significant implications in formulating local economic development strategies and initiatives.

Definition: **Per Capita Personal Income** is the total personal income of an area divided by its resident population as of July 1. Use and interpret per capita income estimates with care in consideration of factors such as the following:

Personal income is measured as a flow throughout the year, while the measurement of population is at one point in mid-year. Therefore, per capita income is distorted if a significant change in population occurs during the year.

For smaller counties in particular, per capita income in any given year may be exceptionally high or low for the short run because of unusual local conditions, such as a bumper crop, a catastrophe, or a major construction project as the building of a dam or nuclear power plant.

Farm incomes are notorious for being especially volatile year-to-year, owing to changing weather, work market conditions, and alterations in government programs. Therefore, the per capita income of farm-dependent counties may exhibit sharp fluctuations over time.

The presence of large institutional populations--such as residents attending a local college or the residents of a local prison or state mental institution--can significantly lower the per capita income estimates of an area. Such results may not reflect the relative economic well being of the non-institutional population and may mislead if care is not given to their interpretation.

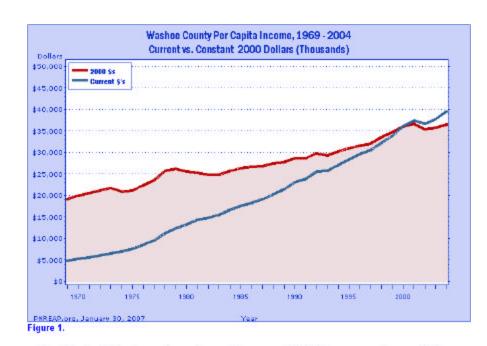


Figure 1 depicts Washoe County's annual per capita income over 1969-2004 in current and constant (2000) dollars. Constant dollar measurements remove the effects of inflation. They allow for comparison of changes in the real purchasing power of per capita income over time.

When measured in current dollars, Washoe County's per capita income increased 718.1%, from \$4,830 in 1983 to \$39,513 in 2004. When measured in constant 2000 dollars to adjust for inflation, it advanced 90.9%, from \$19,125 in 1969 to \$36,503 in 2004.

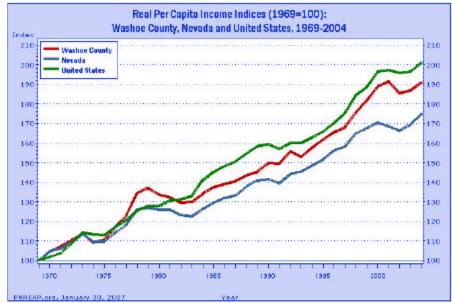


Figure 2.

The long-term growth of Washoe County's real per capita income is compared with that of Nevada and the nation in Figure 2. Cumulative growth indices express each region's real per capita income as 100 for the base year 1989, and the per capita income of subsequent years as a percent of 1969. These indices allow a direct comparison of the differences in cumulative growth in per capita income for Washoe County, Nevada, and the nation.

Washos County's real per capita income climbed 90.9% over 1969-2004, surpassed the gain by Nevada (74.8%), and fell below the increase nationally (101.0%)

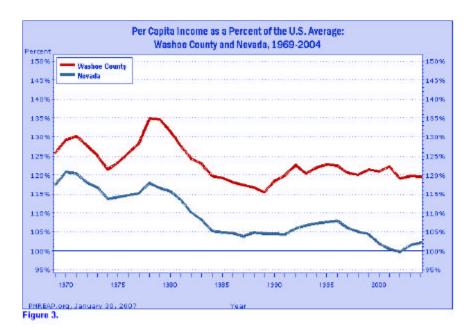


Figure 3 highlights Washoe County and Nevada per capita income relative to national trends by tracking their per capita incomes as a percent of the national average over 1963-2004.

In 1969, Washoe County's per capita income amounted to 125,91% of the national average; in 2004, it comprised 119.56%. Similarly, in 1969, Nevada's per capita income totaled 117.54% of the national average; in 2004 it consisted of 102,23%.

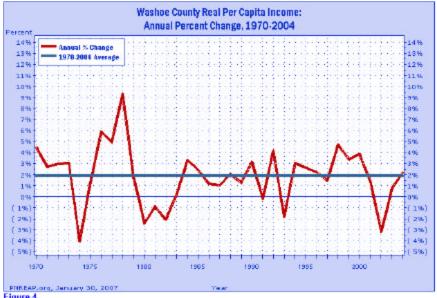


Figure 4.

Figure 4 highlights the short-run pattern of growth in Washee County's real per capita income by tracking its percent change year-to-year since 1969. The overall average annual percent change for the 36-year period is plotted to serve as a reference for identifying periods of relative high- and relative low-growth against the long-term frend.

Washoe County's real per capita income grew on average at an annual rate of 1.90% over 1969-2004.

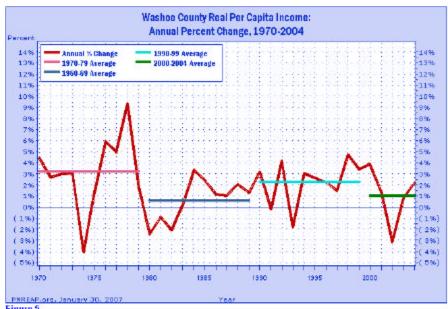


Figure 5.

Over the past three decades, some counties, regions and states have experienced extreme swings in growth, and often such swings have tended to be partitioned about the decades themselves. Figure 5 again traces the annual percent changes in Washee County's real per capita income since 1969, but this time they are displayed with average growth rates for the decade of the 1970s, 1990s, 1990s, and 2000-2004.

During the 1970s, growth rate of Washoe County's real per capita income averaged 3.24%. It averaged 0.61% during the 1980s, 2.26% in the 1990s, and 1.01% thus far this decade (2000-2004).

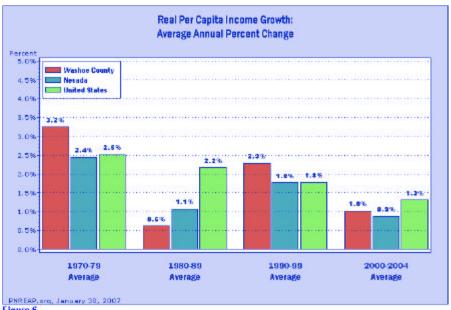


Figure 6.

Figure 5 compares the decade average growth rates for Washoe County noted in the previous graph with the corresponding decade averages for Nevada and the nation. As the chart reveals, Washoe County's average annual real per capita income growth outpaced Nevada's average during the 1970s (3.24% vs. 2.45%), trailed Nevada's average during the 1980s (0.81% vs. 1.07%), topped Nevada's average during the 1990s (2.28% vs. 1.76%), and equaled higher than Nevada's average over the 5 year period for this decade, 2000-2004 (1.01% vs. 0.67%).

Relative to nationwide real per capita income growth trends, Washoe County led the nation during the 1970s. (3.24% vs. 2.51%), trailed the nation in the 1980s (0.61% vs. 2.17%), exceeded the nation in the 1990s (2.28% vs. 1.77%), and recorded undemeath the nation from 2000-2004 (1.01% vs. 1.31%).

Real Per Capita Income Growth: Average Annual Percent Change									
60	1970-2004	1970-79	1080-80	1000.00	2000-2004				
Washing County:	1.90%	3.24%	0.61%	2.28%	1.01%				
Nevada:	1.63%	2.45%	1.07%	1.75%	0.87%				
United States	2.03%	2.51%	2.17%	1.77%	1.31%				

PNREAP Snippets from the Comparative Indicators Module – Nevada



- Idaho
- Montana
- Nevada

Graphic Trend Analysis

Comparative Economic Indicators

Major Components of Personal Income

Shift-Share Analysis

Industry Analysis

Selected Economic Indicators

Personal Income by Major Source

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 Presentations
- PNREAP/BEA
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Comparative

<u>f</u>eonomic Indicators

1969-2004

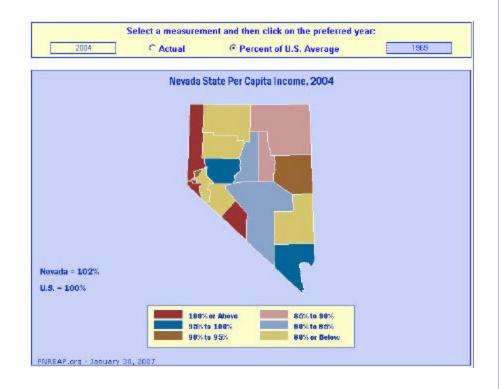


Comparative Economic Indicators, 1969-2004 - In contrast to the Selected Economic Indicators tables that trace changes for individual counties year-over-year, the maps and tables generated by this PNREAP module compare the growth and relative standing of all counties and regions in terms of per capita income, population, total personal income, employment, total industry earnings, and average earnings per job. University of Nevada, Reno Center for Economic Development





PNREAP Snippets from the Comparative Indicators Module – Nevada



				Curre	nt Dolla	15)				
	7	200	4		765	196	9		1969	2004
County	Per Capita Income	Difference from U.S. Average	Percent of U.S. Average	Rank	Per Capita Income	Difference from U.S. Average	Percent of U.S. Average	Rank	Change	Rank Change
Douglas	42,772	9,722	129.42	1	6,264	2,428	163.30	1	36,508	0
Washoe	39,513	6,463	119.56	2	4,830	994	125.91	4	34,683	2
Carson City	36,055	3,005	109.09	3	4,408	572	114.91	7	31,647	4
Esmeralda	33,620	570	101.72	4	4,050	214	105.58	11	29,570	7
Clark	32,963	-87	99.74	5	4,496	660	117.21	6	28,467	1
Churchill	32,171	-879	97.34	6	3,072	-764	80.08	17	29,099	11
Storey	30,890	-2.160	93,46	7	4.394	558	114.55	8	26,496	1
White Pine	30,306	-2,744	91.70	8	3,506	-330	91.40	15	26,800	7
ureka	28.827	-4.223	87.22	9	6,106	2,270	159.18	2	22,721	-7
lko	28,385	-4,665	85.89	10	4,175	339	108.84	9	24,210	-1
ander	28,000	-5,050	84.72	11	3,877	41	101.07	13	24,123	2
lve	27,093	-5,957	81.98	12	5,034	1,198	131.23	3	22,059	-9
lumboldt	25,709	-7,341	77.79	13	3,883	47	101.23	12	21,826	-1
dineral	25,341	-7,709	76.67	14	3,655	-181	95.28	14	21,686	0
yon	24,071	-8,979	72.83	15	4,075	239	106.23	10	19,996	-5
incoln	21,542	-11,508	65.18	16	3,142	-694	81.91	16	18,400	0
Pershing	18,320	-14,730	55.43	17	4,545	709	118.48	5	13,775	-12
Nevada	33,787	737	102.23		4,509	673	117.54		29,278	
Metro	34,235	1,185	103.59		4,591	755	119.68		29,644	
Nonmetro	29,952	-3,098	90.63		4,089	253	106.60		25,863	
Regions										
Western	39,357	6,307	119.08		4,849	1,013	126.41		34,508	
Central	26,094	-6,956	78.95		3,688	-148	96.14		22,406	
Northern	28,639	-4,411	86.65		3,968	132	103.44		24,671	
Southern	32,803	-247	99.25		4,493	657	117.13		28,310	
Inited States		0	100.00		3,836	0	100.00		29,214	
Metro	34,668	1,618	104.90		4,056	220	105.74		30,612	
Nonmetro	25,104	-7,946	75.96		2,921	-915	76.15		22,183	



- California
- **⊞** Idaho
- Montana
- Nevada

Graphic Trend Analysis

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Personal Income



Understanding Growth and Change Among the Major Components of Personal Income: Earned Income, Property income and Transfer Payments, 1969-2004. Unless there is a sound understanding of the make-up of local personal income, and an awareness of how each components has grown or declined in relative importance over time, one can not gauge or appreciate the underlying character or complexion of growth and change of the local economy. This web page is for monitoring and analyzing the changing composition of local area personal income.

University of Nevada, Reno Center for Economic Development

Major Components of Personal Income

Churchill Lyon Mineral Clark Douglas Nye Elko Pershing Esmeralda Storey Eureka Washoe Humboldt White Pine Lander Carson City Lincoln Metropolitan Nevada Nonmetropolitan Nevada Regions

Western Nevada

Central Nevada Northeast Nevada

Southern Nevada

PNREAP Analysis of Growth and Change Among the Major Components of Personal Income within Nye County: 1969-2004



Briefing Report Outline:

- 1. Table 1 Earned Income and Property Income: Nye County, 1969 2004
- 2. Table 2 Transfer Payments and Total Personal Income: Nye County, 1969 2004
- 3. Introduction
- 4. Graph Major Components of Personal Income: Nye County, 1969-2004
- 5. Graph Major Income Components as a Percent of Total Personal Income
- 6. Graph Income Growth Indices, Nye County, 1969-2004
- 7. Graph Major Income Components as a Percent of Total Personal Income; Nye County, 1969-2004
- 8. Graph Shifts in Share of Total Personal Income among Major Income Components
- 9. Graph Earned Income as a Percent of Total Personal Income: Nye County, Nevada, and U.S.
- 10. Graph Earned Income by Place of Residence: vs. Place of Work
- 11. Graph Property Income as a Percent of Total Personal Income: Nye County, Nevada, and U.S.
- 12. Graph Transfer Payments as a Percent of Total Personal Income: Nye County, Nevada, and U.S.
- 13. Graph Indices of Structural Change among the Major Components of Income
- 14. Graph Major Components Contributions to Real Total Personal Income Growth
- 15. Graph 2004 vs. 1969 and Component Contributions to Real Income Growth, 1969-2004: Nye County

Major Components of Personal Income: Earned Income and Property Income Nye County, Nevada (1969-2004)

	9	Earne	ed Income			32	Prop	erty Incom	е	
	Current	2000		Percent	Percent	Current	2000		Percent	Percen
	Dollars	Dollars1		Change ¹		Dollars	Dollars1		Change ¹	
Year	(1,000s)	(1,000s)	Index2	(2000 \$s)	Income	(1,000s)	(1,000s)	Index ²	(2000 \$s)	Income
1969	24,578	97,319	100.0		88.0	2,043	8,089	100.0		7.3
1970	24,009	90,778	93.3	-6.72	86.8	2,271	8,587	106.1	6.15	8.2
1971	26,215	95,071	97.7	4.73	86.5	2,421	8,780	108.5	2.25	8.0
1972	28,397	99,541	102.3	4.70	86.2	2,665	9,342	115.5	6.40	8.1
1973	31,026	103,142	106.0	3.62	85.3	3,075	10,222	126.4	9.43	8.5
1974	33,781	101,778	104.6	-1.32	84.5	3,434	10,346	127.9	1.21	8.6
1975	38,011	105,718	108.6	3.87	82.8	4,242	11,798	145.8	14.03	9.2
1976	42,242	111,315	114.4	5.29	82.2	4,896	12,902	159.5	9.36	9.5
1977	47,875	117,978	121.2	5.99	81.7	5,911	14,628	180.8	13.38	10.1
1978	55,707	128,808	132.4	9.18	80.6	7,690	17,781	219.8	21.56	11.1
1979	62,069	131,896	135.5	2.40	79.1	9,383	19,939	246.5	12.13	12.0
1980	84,218	161,715	166.2	22.61	79.3	12,820	24,617	304.3	23.46	12.1
1981	109,951	193,849	199.2	19.87	79.5	16,836	29,683	366.9	20.58	12.2
1982	116,371	194,409	199.8	0.29	77.7	20,106	33,589	415.2	13.16	13.4
1983	114,838	183,929	189.0	-5.39	75.3	22,918	36,706	453.8	9.28	15.0
1984	124,529	192,189	197.5	4.49	74.4	26,959	41,607	514.3	13.35	16.1
1985	134,960	201,625	207.2	4.91	73.6	30,682	45,838	566.6	10.17	16.7
1986	140,920	205,516	211.2	1.93	72.6	32,789	47,819	591.1	4.32	16.9
1987	149,985	211,404	217.2	2.87	72.5	35,249	49,684	614.2	3.90	17.0
1988	180,107	244,196	250.9	15.51	74.0	37,939	51,439	635.9	3.53	15.6
1989	204,926	266,234	273.6	9.02	72.7	46,973	61,026	754.4	18.64	16.7
1990	205,403	255,165	262.2	-4.16	69.4	53,290	66,200	818.4	8.48	18.0
1991	210,223	252,009	259.0	-1.24	66.3	60,729	72,800	899.9	9.97	19.1
1992	216,128	251,827	258.8	-0.07	63.5	67,260	78,370	968.8	7.65	19.8
1993	231,110	263,211	270.5	4.52	62.1	77,493	88,257	1091.0	12.62	20.8
1994	261,595	291,783	299.8	10.86	61.2	91,871	102,473	1266.7	16.11	21.5
1995	290,665	317,400	326.1	8.78	61.5	99,300	108,433	1340.4	5.82	21.0
1996	330,763	353,579	363.3	11.40	61.4	112,561	120,326	1487.4	10.97	20.9
1997	371,599	390,647	401.4	10.48	61.4	126,863	133,366	1648.6	10.84	21.0
1998	406,516	423,551	435.2	8.42	60.8	142,839	148,825	1839.7	11.59	21.4
1999	437,402	448,273	460.6	5.84	61.4	144,011	147,590	1824.5	-0.83	20.2
2000	484,425	484,425	497.8	8.06	60.8	166,339	166,339	2056.2	12.70	20.9
2001	482,850	472,947	486.0	-2.37	58.6	173,129	169,578	2096.3	1.95	21.0
2002	499,931	482,829	496.1	2.09	59.1	157,530	152,141	1880.7	-10.28	18.6
2003	544,799	516,299	530.5	6.93	59.1	167,064	158,324	1957.2	4.06	18.1
2004	617,704	570,648	586.4	10.53	60.5	172,693	159,538	1972.2	0.77	16.9

^{1 2000} constant dollar estimates determined using the chain-weight Implicit Price Deflator for Personal Consumption.

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gary W. Smith, Economist and PNREAP Director.

 $^{^2\,\}text{Values}$ are expressed as 100% for 1969 (2000 Dollars) and as a percent of 1969 for the following years.

Major Components of Personal Income: Transfer Payments and Total Personal Income Nye County, Nevada (1969-2004)

		Transf	er Paymer	nts		Tot	tal Personal	Income	
	Current	2000		Percent	Percent	Current	2000		Percent
	Dollars	Dollars1		Change ¹	of Total	Dollars	Dollars1		Change ¹
Year	(1,000s)	(1,000s)	Index2	(2000 \$s)	Income	(1,000s)	(1,000s)	Index ²	(2000 \$s)
1969	1,312	5,195	100.0	33	4.7	27,933	110,604	100.0	28
1970	1,393	5,267	101.4	1.38	5.0	27,673	104,632	94.6	-5.40
1971	1,671	6,060	116.7	15.06	5.5	30,307	109,912	99.4	5.05
1972	1,890	6,625	127.5	9.32	5.7	32,952	115,508	104.4	5.09
1973	2,268	7,540	145.1	13.80	6.2	36,369	120,904	109.3	4.67
1974	2,786	8,394	161.6	11.33	7.0	40,001	120,518	109.0	-0.32
1975	3,668	10,202	196.4	21.54	8.0	45,921	127,718	115.5	5.97
1976	4,264	11,236	216.3	10.14	8.3	51,402	135,454	122.5	6.06
1977	4,773	11,811	227.4	5.12	8.2	58,359	144,417	130.6	6.62
1978	5,705	13,191	253.9	11.68	8.3	69,102	159,781	144.5	10.64
1979	7,031	14,941	287.6	13.26	9.0	78,483	166,776	150.8	4.38
1980	9,180	17,627	339.3	17.98	8.6	106,218	203,959	184.4	22.30
1981	11,514	20,300	390.8	15.16	8.3	138,301	243,831	220.5	19.55
1982	13,282	22,189	427.1	9.31	8.9	149,759	250,186	226.2	2.61
1983	14,830	23,752	457.2	7.05	9.7	152,586	244,388	221.0	-2.32
1984	15,822	24,419	470.0	2.80	9.5	167,310	258,214	233.5	5.66
1985	17,607	26,304	506.3	7.72	9.6	183,249	273,767	247.5	6.02
1986	20,470	29,853	574.7	13.49	10.5	194,179	283,188	256.0	3.44
1987	21,673	30,548	588.0	2.33	10.5	206,907	291,636	263.7	2.98
1988	25,410	34,452	663.2	12.78	10.4	243,456	330,087	298.4	13.18
1989	29,834	38,760	746.1	12.50	10.6	281,733	366,020	330.9	10.89
1990	37,092	46,078	887.0	18.88	12.5	295,785	367,444	332.2	0.39
1991	46,289	55,490	1068.1	20.43	14.6	317,241	380,298	343.8	3.50
1992	57,030	66,450	1279.1	19.75	16.8	340,418	396,647	358.6	4.30
1993	63,805	72,668	1398.8	9.36	17.1	372,408	424,136	383.5	6.93
1994	73,797	82,313	1584.5	13.27	17.3	427,263	476,569	430.9	12.36
1995	82,522	90,112	1734.6	9.47	17.5	472,487	515,945	466.5	8.26
1996	95,318	101,893	1961.4	13.07	17.7	538,642	575,798	520.6	11.60
1997	107,072	112,580	2166.7	10.47	17.7	605,534	636,573	575.5	10.55
1998	119,179	124,173	2390.2	10.32	17.8	668,534	696,549	629.8	9.42
1999	130,658	133,905	2577.6	7.84	18.3	712,071	729,768	659.8	4.77
2000	146,006	146,006	2810.5	9.04	18.3	796,770	796,770	720.4	9.18
2001	168,374	164,921	3174.6	12.95	20.4	824,353	807,445	730.0	1.34
2002	189,135	182,665	3516.2	10.76	22.3	846,596	817,635	739.2	1.26
2003	209,697	198,727	3825.3	8.79	22.8	921,560	873,351	789.6	6.81
2004	230,648	213,078	4101.6	7.22	22.6	1,021,045	943,263	852.8	8.01

^{1 2000} constant dollar estimates determined using the chain-weight Implicit Price Deflator for Personal Consumption.

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gany W. Smith, Economist and PNREAP Director.

Introduction



Paralleling a nationwide trend, the composition of Nye County's total personal income has undergone dramatic change over the past three decades. With faw exceptions, transfer payments and properly income have increased in their importance, while labor-related earned income declined in relative share. But within this trend there notable and sometimes very extreme differences among individual counties and regions as to the extent of the shift in the composition of personal income among the three income components.

The annual total personal incomes estimates compiled by the *Bureau of Economic Analysis*, (BEA) are among the most comprehensive, consistent, comparable and timely measures of economic activity available on the county and statewide level. Personal income estimates are also the best available local level indicator of general purchasing power, and are therefore central to tracking and comparing county patterns of economic growth and change. Yet, unless there is understanding of the degree and magnitude of the pattern of growth and shifting composition among the three major components that underlie total personal income one cannot gauge or appreciate the underlying character of income as a barometer for the economic performance of the local economy. This report offers a comparative perspective by examining the changing structure and composition of Nye County's personal income in relation to the state and nation at large.

Earned income can be view as compensation for labor services. Property income represents payments in the form of dividends, interest and rent for the services of capital owned by persons. In contrast to the other two components of income, Transfer Payments are by definition payments that are not related to the provision of services. Yanous aspects of each income component will be further defined and explained as this discussion and analysis unfolds.

Tables that report the data for the major components of Nye County personal income are posted on the page just preceding this introduction.

 $^{^2}$ Values are expressed as 100% for 1969 (2000 Dollars) and as a percent of 1969 for the following years.

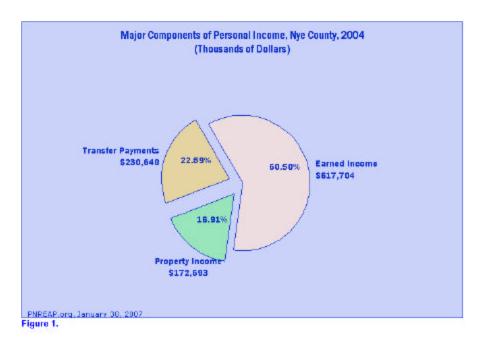


Figure 1 depicts the composition of Nye County's personal income among the three major components for 2004. Net earnings amounted to \$617,704,000 or 60.5% of total personal income; property income totaled \$172,833,000 or 16.9%; and transfer payments summed to \$230,548,000 comprising 22.6% of Nye County's personal income in 2004. For every \$100 of personal income that accrued to the residents of Nye County in 2004, about \$40 derived.

from property income and transfer payments.

Major Income Components as of Percent of Total Personal Income: Nye County, Nevada and the U.S., 2004 Percent Earned Income Property income 90.09 Iransfer Payments 80.09 69.6% 69.6% 70.0% 80.6% 60.0% 50.0% 40.0% 30.0% 22.6% 19.2% 20.0% 46.9% 16.4% 14.7% 11.2% 10.0% 0.0% Nye County Nevada United States PNREAP, org. January 30, 2007

Figure 2.

What are the differences in personal income composition between Nye County, Nevada and the United States? Figure 2 illustrates three major income components—earned income, property income, and transfer payments as a percent of total personal income. The share of Nye County's personal income that originates as property income (16.9%) is slightly above the share nationally (15.8%). The share of Nye County's personal income that stems from transfer payments (22.6%) is above the national average (14.7%).

In combination, property income and transfer payments amounted to 39.5% (16.9% + 22.6%) of Nye County's income in 2004. Earned income made up the balance (90.5%) of personal income, which amounted to a substantially smaller share than the corresponding 69.5% for earned income nationwide.

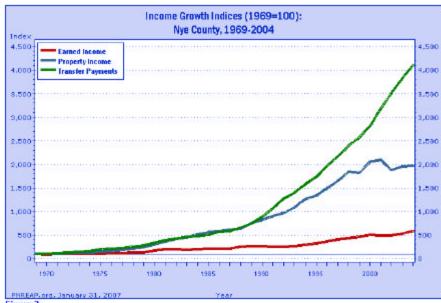


Figure 3.

One of the key objectives of this report is to highlight the growing importance over the past several decades of property income and transfer payments and to illustrate their emergence as more prominent components of local area personal income. Figure 3 compares the real (that is, removing the effects of inflation) cumulative growth of the three major components of personal income for Nye County over 1969-2004. The cumulative growth indices express each income component as 100 for the base year of 1969, and represent each component in subsequent years as a percent of their level in 1969. The indices enable a direct comparison of the differences in the cumulative percentage growth of the earned income, property income, and transfer payments for Nye County over more than three decades

Over the 1969-2004 period, earned income in Nye County grew by 466.4%. Property income, however, increased by 1872.2%, while transfer payments rose 4001.6%. As a general rule, the growth of property income and transfer payments outpaced the growth of earned income. As a result, earned income declined as a share of total personal income, while property income and transfer payments increased.

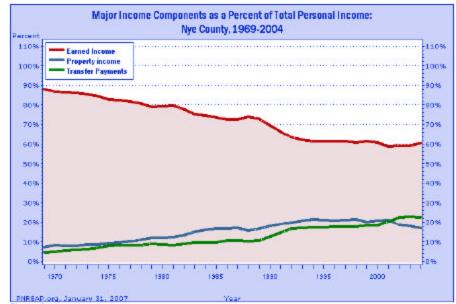


Figure 4.

While the previous graph illustrates the degree of growth among the three major components of personal income, the above figure traces their changing share and relative importance over time. Differences in growth among the three components income translates the changes in their relative share as shown here. Earned income as a share of Nye County's personal income declined from 88.0% in 1969 to 80.5% in 2004, a shift in relative share of -27.5% Offsetting this decline was a 9.6% increase in property income's share from 7.3% in 1989 to 16.9% in 2004; and a 17.9% advance in transfer payments share, from 4.7% to 22.6% over the same period.

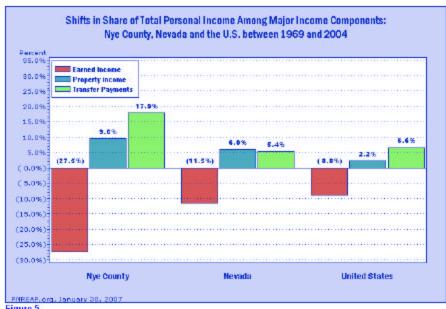


Figure 5.

How does the shift in personal income composition for Nye County compare with the shifts in share among the three major components for Nevada and the United States over 1989 to 2004? In the above figure, earned income's share statewide and nationally declined by -11.5% and -8.6%, respectively, whereas earned income's share decline by -27.5% in Nye County over 1969-2004. Nationally the shift in share of property income and transfer amounted to 2.2% and 6.6%, respectively, while the corresponding shifts in share in Nye County amounted to 9.6% and 17.9%, respectively.

When a notable increase in property income's share is observed often this associates with a county or region that experienced an influx of relatively affluent retirees.

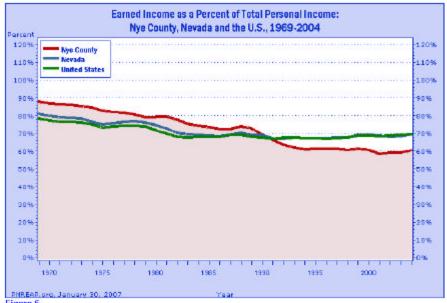


Figure 5 above traces earned income as a percent of personal income for Nye County, the state and nation over 1969-2004. Generally, local as well as state and national earned income share declines were most prominent from 1979 to the mid-1980s.

Some localities and regions experienced pronounced short-term swings in earned income because earnings generation was concentrated in industries especially sensitive to major cyclical swings in the national economy. Mining, wood products and durable goods producing manufacturing, such as primary metal and transportation (including air and motor vehicle equipment), are among the most notable cyclically sensitive industries.

Agricultural dependent regions are especially subject to pronounced swings in earned income owing to the influence of weather on output and production, international swing in commodity prices, changes in government programs, as well as general cyclical conditions and trends. Finally, other factors that have induced abnormal shortterm swings in earned income include major natural catastrophes and very large-scale private or government construction project such as the building dams and power plants.

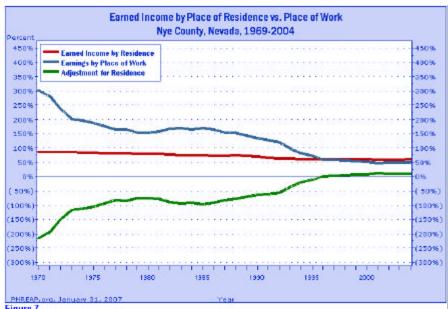


Figure 7.

Figure 7 focuses on a very important dimension of earned income that needs to be addressed and explained. Personal income, and its three major components, is intended to measure the incomes of the residents of a region. Accordingly, the earned income data reported and presented in this report are "by place of residence." But in fact, earnings data are first collected and reported as "earnings by place of work." That is, they reflect earnings on the basis of where workers work, and not on the basis of where they live. To develop an estimate of earned income based on where workers live, the *Bineau of Economic Analysia* develops an "adjustment for residence" to take into account the earnings of such intercountly commuters.

In addition to showing "earned income by place of residence" as a share of total income, Figure 7 also displays "earnings by place of work," as well the residence adjustment which accounts for the difference between the two. This positive adjustment for residence of 10.15% as a percent of total personal income in 2004 reflects an estimated net inflow of earnings dollars owing to the overall net effect of workers commuting to and from Nye County in 2004. So, in 2004 10.15% of Nye County's personal income derived from workers who reside locally but who generated earnings from jobs held outside the county.

Put another way, the residence adjustment is a fairly significant factor in shaping the personal income of Nye County. For every \$100 of personal income reported for Nye County residents in 2004, \$10.15 derived from jobs held and earnings garnered from outside the county.

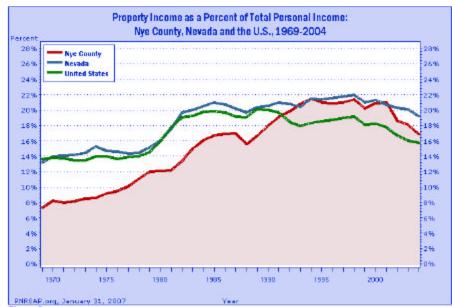
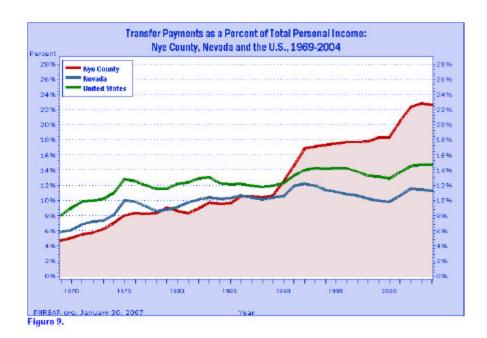


Figure 8.

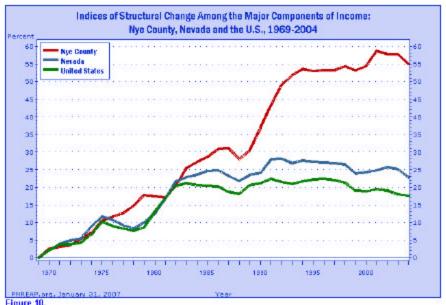
Figure 8 tracks property income as a share of personal income locally, statewide and nationally over 1969-2004. Common to all three was the discemable rise and advance to another plateau in property's income share over 1979-82. This period was plagued by double-digit rates of inflation and associated double-digit rates of interest. As interest income is an important part of property income they played a leading role in the growth and rise in share of property income over 1979-82. Moreover, contained within the period 1979-82 were two back-to-back recessions. Unlike many recessions, the early 1980s recessions were widely disbursed regionally so declines in earned incomes share declines were oftentimes observed, which further served to bolster property income's share during this period.



People receive personal income either for participating in current production, or from transfer payments. Earned income and property income represent payments received for participating in production. Transfer payments, sometimes misleadingly referred to as "unearned income," are payments made by government to individuals "for which no current services are performed."

Compared with the trend nationwide, transfer payments have played a very significant role in the changing composition of Nye County's personal income. Nationally, transfer payments as a share of personal income advanced from 8.07% in 1969 to 14.71% in 2004, for a net gain of 5.64%. For Nye County, transfer payments rose from 4.70% to 22.80% over 1969-2004, for a net gain of 17.90%.

There are vast differences in the mix of transfer payments counties receive, the particulars of which are beyond the scope of this report. As a general rule social security and government pension incomes make up the largest general category of transfer payments. Next in order of importance typically comes medical payments for such programs as Medicare, and Medicaid. Medical payments have driven much of the rapid growth in transfer payments over the past decade. Further down the scale of importance are payments for income maintenance programs such as Family Assistance, Food Stamps and Supplemental Security Income (SSI). Unemployment Insurance Payments is another category, often its relative size and importance is shaped by local economic conditions and more generally by the ebb and flow of business cycles. Finally, Veterans Benefits Payments is the remaining category of importance. Generally veteran's pension and disability payments dominate this group. You may obtain a detail tabulation of the transfer payments received by Nye County residents over 1969-2004 by clicking here.



rigare io.

Over the past several decades one of the more heralded changes that has transformed the character of our economy has been the structural shift in employment and earnings from goods-producing toward services-producing activities. Though far less widely publicized and less popularly understood, another change of major significance was the widespread shifts in the composition of personal income addressed in this briefing report.

The "index of structural change" shown in Figure 10 calibrates the timing and magnitude of change in the composition of Nye County's personal income among the three major components compared with the state and nation over 1969-2004. The period of most dramatic change held in common by Nye County, Nevada and the nation spanned the period of the late 1970s to the mid-1980s.

Structural change is defined and measured here as the composite change in income shares among the three income components. Changes in shares are based on differences between each components share in 1969, and its share of personal income for each year since. Index values equal the sum of the absolute value of the share changes among the three income components year-over-year relative to 1969. A rise in the index indicates that in composition of income among the three major components deviated further away from their 1969 distribution. **Note:** Figure 5 displayed the share shifts among the three income components over the interval 1969-2004. Accordingly, the 2004 value of the structural change indices for the county, state and nation are simply the sum of the absolute values of share shifts reported in Figure 5:

		Shift-In-Share							
	Index Value (2004)		Earned	300	Property Income		Transfer Payments		
Nye County:	55.0%		[27.5]	+	[8.6]	+	[17.8]		
Nevada:	22.0%	=	111.5		[0.0]		[6.4]		
United States:	17.5%	-	[-8.8]	+	[2.2]	+	[8.6]		

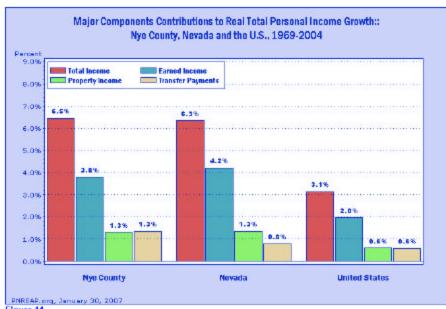


Figure 11.

This report thus far has centered primarily on examining and comparing changes in the composition of Nye. County's personal income compared with the state and nation over 1959-2004. Figure 11 focuses attention on how much each income component contributed individually to Nye County's real personal income growth over the 38-year period. The annual growth rate of Nye County's real (inflation adjusted) personal income averaged 6.45% over 1969-2004. Each component's individual contribution to this total amounted to 3.79% for earned income, 1.31% for property income and 1,35% for transfer payments, all of which sum to 6,45%.

In order to gauge each component's contribution to total real income growth the table below displays each components overall contribution to growth as a percent of total growth. Note, for example, transfer payments overall percentage contribution to the average total growth over 1989-2004 of 20.9% was derived by: 20.9% = (1.35%/6.45%)x100.

			Eamed		Property Income		Transfer Payments
Nye County:	5.45% (100%)	₩.	3,79% (59,9%)	+ .	1.31% (20.3%)	+	1.36% (20.8%)
Nevada:	6.33% (100%)	¥.	4.21% (95.5%)	+.	1.34% (21.2%)	+	0.78%
United States	3.14%	Ξ	1,98%	+	0.80%	+	(18.5%)

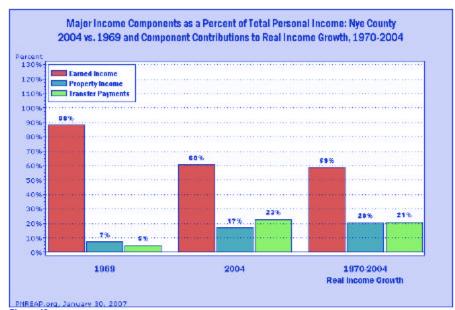


Figure 12.

Figure 12 recaps the theme and distills the results presented throughout this briefing report. In 1969 earned income comprised 88.0% of Nye County's total personal income. However, over the following 35-year period 1969-2004 earned income accounted for only 58.8% of the annual real growth in Nye County's personal income. As a result, by 2004 earned income's share declined to 60.5%.

Because property income alone accounted for 20.3% Nye County's total personal income growth over 1969-2004, its share rose from 7.3% in 1969 to 15.9% in 2004. Transfer payments, in turn, advanced from 4.7% to 22.6% over the same period owing to its 20.9% contribution to the growth of Nye County's total personal income.



- - Graphic Trend Analysis

Comparative Economic Indicators

Major Components of Personal Income

Shift-Share Analysis

Industry Analysis

Selected Economic Indicators

Personal Income by Major Source

Full & Part-Time Employment

Transfer Payments

BEARFACTS (BEA Regional Facts)

⊕ Oregon

■ Nevada

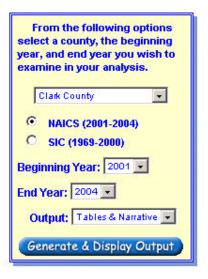
- Washington
- United States
- Upcoming Conferences
- PNREC Outlook Presentations
- PNREAP/BEA Workshops

Bhift-Bhare Analysis of Employment Growth 1969-2004



Shift-Share Analysis of Employment Growth, 1969-2004 - Shift-share analysis produces results that can be valuable for diagnosing, describing and building understanding of major differences between the industry pattern of employment growth locally and nationwide trends. Choose from Nevada's 17 counties, select any time interval between 1969-2000 or 2001-2004, and initiate a web-enabled program that generates shift-share results of local employment growth compared with the nation at large. The program will compile and output a tabular summary of shift-share results based on the options you choose, a tailored report on how the results may be interpreted, and a customized technical summary of how the results are derived.

University of Nevada, Reno Center for Economic Development



2001-2004 Shift-Share Analysis Results for Clark County, Nevada

The shift-share analysis results compiled in this briefing report are for evaluating employment change in the Clark County economy over 2001-2004. They pinpoint important differences between the industry compositions of amployment growth locally versus growth in the nation at large. The results shown in the table below are explained in the brief discussion that follows. For many purposes the results reported in Table 1 may suffice. The shift-share results shown in Table 2 are intended for those interested in comparing and examining the industry pattern of local employment growth in greater depth.

		Emplo	yment				- 9	Standar	dzed
	20)i	201	2004 Actual Growth Growth ²		wth ²	Employment		
Industry	Level	Share1	Level	Share ¹	Percent	Net	Percent	Net	20043
Ferm	361	0.0	343	0.0	4.99	-18	-2.85	-10	351
Forestry, Fishing, & Other	333	0.0	318	0.0	4.50	-15	4.22	-14	319
Mining	1,357	0.2	1,511	0.2	11.35	154	3.89	53	1,410
Utilities	2,733	0.3	3,371	0.3	23.34	638	-5.90	-181	2,572
Construction	78,289	8.9	100,449	10.1	28.31	22,160	3.55	2,776	81,065
Manufacturing	22,280	2.5	25,175	2.5	13.10	2,915	-12.47	-2,775	19,485
vYholesele Trade	22,882	2.6	24,094	2.4	5.39	1,232	-1.29	-294	22,588
Retail Trade	84,077	10.6	106,795	10.7	13.52	12,718	1.31	1,234	95,311
Trans, 8. Warehousing	29,319	3.3	31,081	3.1	6.01	1,762	-2.07	-807	28,712
Information	15,212	1.8	12,767	1.3	-21.25	-3,445	-12.81	-2,076	14,136
Finance & Insurance	45,074	5.1	49,970	5.0	10.86	4,896	2.73	1,232	46,306
Real Estate, Rent. & Leasing	41,731	4.7	51,109	5.1	22.47	9,378	13.30	5,551	47,282
Prof. & Tech. Services	42,440	4.8	50,081	5.0	18.00	7,841	2.15	912	43,352
Management of Comp. & E.	8,545	0.7	8,403	0.8	28,39	1,858	-0.85	-56	6,489
Admin. 8 Waste Services	59,800	6.8	70,181	7.0	17.36	10,381	6.94	4,151	63,951
Educational Services	3,570	0.4	5,600	0.5	44.70	1,730	12.41	480	4,350
Health Care & Social Asst.	50,286	5.7	59,384	6.0	18.09	9,098	8.15	4,100	54,386
Arts, Ent., & Rec.	27,427	3.1	30,391	3.0	10.81	2,954	6.58	1,805	29,233
Accom, & Food Services	223,647	25.3	235,632	23.6	5.36	11,985	6.05	13,530	237,177
Other Services	33,248	3.8	37,143	3.7	11.71	3,895	6.76	2,248	35,496
Federal, Civilian	8,966	1.0	10,487	1.1	16.96	1,521	0.11	10	8,976
Federal Military	9,870	1.1	11,382	1.1	15.12	1,492	-0.81	-80	9,790
State Government	11,690	1.3	13,600	1.4	16.34	1,910	1.01	119	11,809
Local Government	52,185	5.9	58,544	5.9	12.19	6,359	3.37	1,759	53,944

Share: The percentage share of total employment by inclustry.

Note: Percent growth figures may not add due to rounding by a factor of $\pm 0.01\%$

Notes on Interpreting Table 1: Clark County Employment Growth, 2001 - 2004

Employment

Table 1 enumerates the employment levels and percent share of total employment for 2001 and 2004 by major industry group. The employment estimates compiled by the Bureau of Economic Analysis (BEA) measure the number of full- and part-time employees, plus the number of proprietors of unmorporated businesses. People holding more than one job are counted in the employment estimates for each job they hold. This means BEA employment estimates represent a job count, not a number-of-people employed count. Also, BEA employment is by place-of-work, rather than by place-of-residence. Therefore, the jobs held by residents of a neighboring county who commute to work in Clark County are included in the employment (or job) count for Clark County.

Actual Growth

The next two columns of Table 1 listed under "actual" growth report the percent and net change in the total number of jobs for each industry category. Over 2001-2004 a net total of 113,208 jobs were added to the Clark County economy, amounting to an increase of 12,80%. The percent change results by industry permit you to distinguish between the faster and slower sectors irrespective of their relative importance, while the net change results by industry permit you to distinguish between the faster and slower sectors irrespective of their relative importance, while the net change results highlight those industries that contributed most to the total net change overall.

Standardized Growth

The standardized percent and net growth numbers reported in Table 1 are hypothetical in nature. They post the changes in Clark County employment that would have occurred over 2001-2004 had each industry grown at the same rate as its national counterpart. The standardized "percent" growth column identifies the growth rate for each industry nationally, while the standardized "net" growth column simulates the resulting nat changes in employment locally. The data not only allow one to directly compare local with national industry employment growth rates, they also translate national industry growth rates into hypothetically comparable changes in employment locally.

Although the standardized percent change reported for each industry identifies industry growth rates nationally, it should be noted that the "TOTAL" standardized percent change of 3.83% exceeded the growth rate for total employment nationally of 1.84%. This arises because the proportional industry distribution or mix of employment in Clark County was titled toward faster growing industries. In other words, simply by virtue of its industry mix Clark County was favorably disposed toward experiencing faster employment growth than the nation at large over 2001–2004.

Standardized Employment, 2004

Standardized employment for 2004 is the resulting level of employment in each industry for Clark County had each grown at the same rate as its national counterpart since 2001. This presents a hypothetical profile of the industry composition and level of local employment that would have occurred had the county directly followed national industry trends.

² Standardized Growth. The change in county employment that would have occurred had each industry grown at the same rate as its counterpart at the national level.

³ Standardzed Employment, 2004: The 2004 level of employment in each industry had it grown at the same rate as its counterparts at the national level since 2001.

Shift-Share Components of Clark County Employment Growth, 2001-2004

The underlying purpose of shift-share analysis is to perform a numerical sort on the data that offers a construct for describing two key differences between the growth of employment in Clark County and the nation at large. The objective is to answer two different but interrelated questions. First, did the difference in employment growth arise because of initial dissimilarities in the industry composition of employment? Or, second, did the difference arise because of disparities in the performance of local industries in contrast with their national counterparts?

Table 2 contains the crux of the shift-share results. Differences between the extent and composition of local employment growth with comparison to the nation are broken down into the hypothetical components; national growth, industry mix, and regional shift. Each component attempts to account for a separate aspect of the disparity between the overall growths of employment locally vs. nationally over 2001-2004.

Table 2: Shift-Si	nare Components of Clark 2001 - 2004		Growth
	National Growth ¹	Industry Mix ²	Regional

	National	Growth ¹	hdustr	y Mix ²	Regional Shift ³	
Industry	Percent	Net	Percent	Net	Percent	Net
enn	1.84	7	-4.68	-17	-2.14	-8
Forestry, Fishing, 8 Other	1.84	6	-5.07	-20	-0.28	
Aning	1.04	25	2.05	28	7.45	101
Hillies	1.84	50	-7.74	-212	29.24	799
Construction	1.84	1,442	1.70	1,333	24.76	19,384
Manufacturing	1.84	410	-14.31	-3,185	25.58	5,880
Amolesale Trade	1.84	421	-3.13	-716	6.68	1,626
Setal Trade	1.84	1,733	-0.53	-499	12.21	11,469
Irans 8 Warehousing	1.84	540	-3.91	-1,148	8.08	2,368
nformation	1.84	299	-14.65	-2,375	-8.44	-1,369
Inence & Insurance	1.84	830	0.89	402	813	3,664
Real Estate, Rent. & Leasing	1.84	769	11.45	4,783	9.17	3,827
rof, & Tech. Services	1.84	702	0.31	130	15.65	6,728
Asnagement of Comp. 8.E.	1.84	121	-2.70	-178	29.24	1,914
Admin. & Whate Services	1.84	1,102	5.10	3,050	10.42	8,230
Educational Services	1.84	71	10.57	409	32.29	1,250
leath Care & Social Asst.	1.84	926	6.31	3,174	9.94	4,998
Arts, Ent., & Rec.	1.04	505	4.74	1,300	4.22	1,150
Accom. 8 Food Services	1.84	4,120	4.21	9,410	-0.69	-1,545
Other Services	1.84	613	4.92	1,635	4.95	1,847
ederal, Civilian	1.84	185	-1.73	-155	18.85	1,511
ederal Military	1.84	182	-2.65	-262	15.93	1,572
State Government	1.84	215	-0.63	-97	15.33	1,781
ocal Government	1.84	981	1.53	797	8.62	4,600
TOTAL	1.84	16,298	1.99	17.591	8.97	79,322

¹ National Growth: The change in local engloyment that would have occurred for a specific industry had it grown at the national growth rate of all industries combined.

Note: Percent growth figures may not add due to rounding by a factor of ± 0.01%.

Notes on Interpreting Table 2: Shift-Share Components of Clark County Employment Growth, 2001-2004

National Growth

This component is the most straightforward. It calibrates the growth in Clark County employment that may be attributed to overall national conditions and trends. If the industry composition and growth of employment had been the same locally as nationally, then Clark County's employment growth over 2001-2004 would have matched the overall national rate of 1.84%.

Industry Mix

The industry mix component seeks to address and answer the question: "Did Clark County employment growth of 12.80% outpace the overall national average (1.84%) because employment was more concentrated foward faster growing industries when compared to the nation?" That is, did the Clark County employment growth over 2001-2004. outperform the nation simply because its industry mix was weighted more heavily toward industries that experienced faster growth at the national level?

The results are derived by multiplying local employment in each sector for 2001 by the difference between the national growth rate for each sector and the total national employment growth rate (1.84%). The industry mix results report positive values for those industries that experienced employment growth above the 1.84% national average, while negative values are posted for those industries that grew at rates less than 1,84%.

The most crucial result from the industry mix calculation is the "TOTAL" derived from summing over all industries. The positive values reported reveal that the industry composition employment for Clark County was tilted toward faster growing industries. Negative results would have indicated just the opposite:

Regional Shift

The third shift-share component, tagged the "Regional Shift", computes the gain (or loss) in local employment from an industry growing faster (or slower) than the same industry nationally. When employment in a local industry grows faster (or declines less) than its counterpart nationally there occurs a positive "shiff" in the net "share" of national employment captured by that industry locally. The "TOTAL" regorded for the regional-shift component is 79,322, showing that Clark County employment grew an additional 8,97% because a larger proportion of industries grew more quickly locally than nationally

Summary of the Shift-Share Results

Shift-share analysis provides a framework for describing the growth of local employment relative to the nation at large. Results for Clark County may be highlighted as follows:

Actual Growth	National Growth	+	Industry Mis:	+	Regional Shiff
12.80%	1.84%		1.99%		8.97%
(113,209)	(18,296)		(17,591)		(79,322)

Note that the shift-share identity can be rearranged to focus on identifying the difference between local (actual) and national growth rates as the sum of the industry mix and regional shift components:

Actual Growth - National Growth)=	Industry Mix	+	Regional Shift
10.96%		1.99%		8.97%
(96,913)		(17,591)		(79,322)

Clark County's employment growth over 2001-2004 of 12.80% surpassed the 1.84% growth of employment. nationally by 10.96%. Accounting for this difference was an industry mix inclined toward industries that experienced faster growth, coupled with the fact that a large share of local industries outperformed their counterparts nationally.

² Industry Mis: The additional gain (or loss) in local engloyment that would have occurred for a specific. industry (additional to the national growth effect) due to the industry growing fester (or slower) nationally then the rate of all inclustries combined.

³ Regional Shift: The additional gain (or loss) in local employment for a specific industry beyond the national. growth and industry mix effects resulting from the industry growing taster (or slower) than the same

Percent growth figures may not add due to rounding by a factor of $\pm 0.01\%$.

Frequently Asked...and Sometimes Not So Frequently Asked...Questions

Question #1: Some of the industry categories are abbreviated. Would you explain what they stand for?

Answer: To conserve space some of the titles for the industry categories were shortened. The industry categories in their entirety are listed as follows:

North American Industry Classification System (NAJCS) Industry Categories Forestry, Fishing, Related Activities & Others Mining Utilities Construction Manufacturing Mholesale Trade Roball Tracks Transportation & Werehousing Information Finance & Institution. Real Estate, Rental & Leasing. Management of Companies & Enterprises Administrative & Waste Services Educational Services Health Care 8 Social Assistance Arts, Entertainment & Recreation, Accommodations & Food Services Other Services, Except Public Administration Professional & Technical Services Federal Civilian Federal Military State Government Local Government " "Other" consists of the number of jobs held by U.S. residents. employed by international organizations and foreign embassies and consulates in the United States.

Question #2: An industry category labeled "Unreported" appeared in my table. What's this?

Answer: It is not uncommon to encounter suppressed data for selected industries, especially in small counties. Data are suppressed to avoid disclosure of confidential information regarding individual firms. Even though the concern for confidentiality may relate to only one industry, data for at least two must be suppressed as summing over the reported data and subtracting from the total yields data for the suppressed category. The program, which compiles these shift-share results, performs such a computation when suppressed data are encountered, and reports them in the "Unreported" category. For consistency, the program also contrives a corresponding "Unreported" industry category for the nation at large. Often data for the "Mining", "Manufacturing", or the "Wholesale Trade" industry categories are suppressed, and you will find that their data are paired as "Unreported" in the table.

Question #3: Where could I get more information about what activities are included under each industry category?

Answer: Bureau of Economic Analysis (BEA) employment data over 101-104 are reported on the basis of NAICS (North American Industrial Classification Standard) definitions. NAICS definitions, principles, and procedures were developed to promote comparability of national and regional economic statistics. They are prepared by the Office of Management and Budget (CMB), and were last updated and reported in the North American Industrial Classification Standard Manual, (2002), U.S. Government Printing Office. Most libraries should have a copy of the latest NAICS Manual.

If you plan on using economic data sometime in the foreseeable future, you should know that the decades old SIC system was replaced by the new North American Industry Classification System (NAICS, pronounced "nakes"). NAICS provides a more contemporary classification of business activity given the new and emerging changes that are reshaping our economy, it was developed by the U.S., Canada, and Mexico to produce comparable data across North America. Data reported on a NAICS basis began to appear in 1999. For more information about NAICS check out Census Bureau's NAICS internet site at http://www.census.gowhaics.

Question #4. Would the shift-share results be much different if the industry data were available in greater detail?

Answer. Yes! Greater industry detail would divulge a lot more insight as to the differences between the composition and growth of industry employment locally versus in the nation at large. A redistribution of the shift-share results between totals for industry mix and regional shift components should be expected. However, without the actual data it is impossible to say what the outcome might be. The results produced here are a good starting point for identifying changes and trends in employment growth locally, but greater industry detail will generally always be more useful and offer more insight.

Question #5: Where can I get a look at the BEA employment data for Clark County over all the years 1969-2004? This would give me a better idea of the time interval that might be most suitable for performing the shift-share analysis.

Answer. The BEA employment data for Clark County is available on the PNREAP web site. Click on the following Link:

Table CA25/CA25N - Clark County - Full-time and Part-time Employment by Major Industry

Question #6: Although you discuss how the shift-share results are derived, would you show more explicitly how they are constructed using an example for Clark County from the table above?

Answer: Let's begin by looking at how the results are derived for an individual industry category. We'll use "Accorn. & Food Services" for illustration, since data for this sector led the employment numbers for Clark County in 2004.

We will use the subscript " $_i$ " as general notation for an individual industry. Shift-share analysis describes the net change in employment (Δ E $_i$) for each industry (i) as the sum of three individual components: National Growth (NG), Industry Mix (M), and Regional Shift (RS). Using the data for Clark County's Accorn. & Food Services sector from the table above we have:

Actual Growth	=	National Growth	+	Industry Mix	+	Regional Shift
ΔE _i	-	NG	4	M	+	RS
(11,985)		(4,120)		(9,410)		(-1,545)

The National Growth (NG) component for Accom. 8: Food Services is computed as the product of employment in Accom. 8: Food Services for the beginning year (2001), e.g., (i.e., E_{1,101} = 223,647), and the overall growth rate of employment nationally over 2001-2004 (1.84%).

$$NG_i = E_{i,2001} \times (1.84\%)$$

(4,120) (223,647) (1.84%)

Note: Growth rates are rounded to 2 digits. Totals are derived from unrounded values.]

The Industry Mix (IM) component is calculated by multiplying local Accom. & Food Services employment in the beginning year (2001), (i.e., E_{1,101} = 223,647), by the difference in the national growth rate for Accom. & Food Services employment (6.05%) and the national growth rate for total employment (1.84%):

The Regional Shift (RS_i) component is computed by multiplying local Accom. & Food Services employment in the beginning year (19101), (i.e., E_{i, 101} = 223,547), by the difference in Clark County's growth rate for Accom. & Food Services employment (5.35%) and the growth of Accom. & Food Services nationally (6.05%):

$$RS_i = E_{j,2004} \times (5.38\% - 6.05\%)$$
(-1,545) (223,647) (-0.69%)

After results for each industry are derived they are summed (E) to determine the total effect for each component

Question #7: I'd life to learn more about shift-share analysis. Are there some textbooks, manuals, or articles you would recommend?

Answer, Part 1: If you are interested in other explanations and illustrations of the "conventional" approach to shiftshare analysis as presented above, you should find the following references helpful:

Bendarid-Val, Avrom. "Relative Regional Industrial Composition Analysis." Chapter 5. Regional and Local Economic Analysis for Practitioners, New York: Praeger Publishers, 1983.

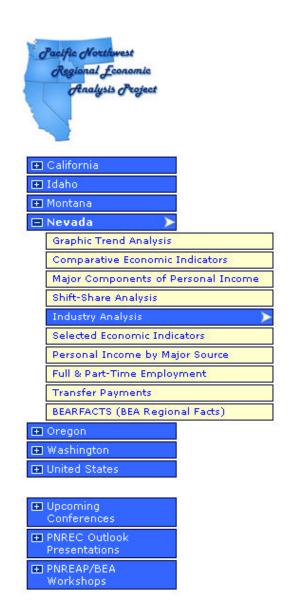
Hustedde, Ron, Ron Shaffer, and Glen Pulver. Community Economic Analysis: A How-To Menual. North Central Regional Center for Economic Development, lows State University, Arnes, lows, 1993. Click here to link to a pdf document of this report.

Answer, Part 2: Over the past several decades a number of sitemative approaches and formulations of shift-share have been proposed and debated in the regional economics literature. Articles that would serve as good points of entry to this literature include:

Loveridge, Scott and Anne C. Setting. "A Review and Comparison of Shift-Share Identifies." International Regional Science Review, Vol. 21, No. 1, 1998;37-58.

Stevens, Benjamin H. and Craig L. Moore. "A Critical Review of the Literature on Shift-Share as a Forecasting Technique." Journal of Regional Science, Vol. 20, No. 4, November 1980:419-437.

<u>Answer, Part 3</u>: Should you wish to get a more detailed overview of some of the journal articles on this topic I recommend you perform a subject search on the phrase "shift-share" at the EconUni web site. EconUni is an unline database copyrighted by the American Economics Association that is produced and maintained by the Journal of Economic Literature. You can access it by clicking <u>here.</u>



Andustry Analisys of Structure & Performance 2001-2004



Industry Analysis of Structure & Performance, 2001-2004 -

University of Nevada, Reno Center for Economic Development



Employment by Major Industry: White Pine County, 2001 - 2004

		2004		2001-2004	Averages	2001-2004
Major Industry	Employment	Charles Commerce	Location Quotient	Percent of Total	Location Quotient	Share Shift
Farm Employment	179	4.1	2.33	4.4	2.43	-0.63
Mining	335	7.6	15.35	5.2	10.86	2.73
Construction	250	5.7	0.95	5.1	0.87	0.73
Manufacturing	51	1.2	0.13	1.1	0.12	-0.05
Wholesale Trade	58	1.3	0.36	1.4	0.37	-0.04
Retail Trade	502	11.4	1.03	12.2	1.10	-1.64
Finance & Insurance	95	2.2	0.46	2.3	0.49	0.17
Real Estate & Rental & Leasing	100	2.3	0.61	2.3	0.65	0.11
Arts, Entertainment & Recreation	43	1.0	0.48	0.9	0.47	0.17
Accommodation & Food Services	529	12.0	1.78	11.9	1.80	0.43
Federal Civilian	203	4.6	2.87	5.2	3.16	-0.72
Federal Military	17	0.4	0.32	0.4	0.33	-0.04
State Government	562	12.8	4.27	12.8	4.24	0.42
Local Government	681	15.5	1.91	16.4	2.02	-0.97
Unreported	798	18.1	0.49	18.4	0.50	-0.67
DTAL	4,403	100.0	1.00	100.0	1.00	

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gary W. Smith, Economist and PNREAP Director.

Employment Growth by Major Industry: White Pine County, 2004

	Employment Growth 2004						
Major Industry	Growth Rate	Component Contribution	National Growth Rate	Local – Nationa Growth Rate			
Parm Employment	-1.65	-0.07	-2.08	0.43			
Mining	101.81	4.18	4.96	96.85			
② Construction	23.15	1.16	3.19	19.96			
Manufacturing	10.87	0.12	-1.21	12.08			
Wholesale Trade	11.54	0.15	1.31	10.23			
Retail Trade	4.80	0.57	1.41	3.39			
Finance & Insurance	-9.52	-0.25	0.71	-10.23			
Real Estate & Rental & Leasing	3.09	0.07	4.68	-1.59			
Arts, Entertainment & Recreation	4.88	0.05	2.67	2.21			
Accommodation & Food Services	9.98	1.19	2.88	7.10			
Pederal Civilian	-7.73	-0.42	-0.91	-6.82			
Pederal Military	0.00	0.00	-1.28	1.28			
State Government	4.85	0.64	0.20	4.65			
Local Government	0.00	0.00	0.58	-0.58			
Unreported	7.98	1.46	2.20	5.78			
TOTAL	8.85	8.85	1.55	7.30			

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gary W. Smith, Economist and PNREAP Director.

Employment Growth by Major Industry: White Pine County, 2002 - 2004

		Employment	Growth 2002-20	004
Major Industry	Average Annual Growth Rate	Component Contribution	National Average Annual Growth Rate	Local – National Annual Growth Rate
Farm Employment	-1.36	-0.07	-0.95	-0.40
Mining	28.96	1.16	1.49	27.47
② Construction	8.73	0.44	1.19	7.53
Manufacturing	2.63	0.02	-4.31	6.94
Wholesale Trade	3.11	0.03	-0.42	3.53
Retail Trade	-1.02	-0.14	0.44	-1.45
∂ Finance & Insurance	7.51	0.13	0.90	6.61
Real Estate & Rental & Leasing	5.20	0.12	4.26	0.93
@ Arts, Entertainment & Recreation	10.51	0.09	2.15	8.35
② Accommodation & Food Services	4.88	0.57	1.98	2.90
Pederal Civilian	-1.33	-0.07	0.04	-1.37
Pederal Military	0.00	0.00	-0.27	0.27
State Government	4.62	0.59	0.34	4.28
2 Local Government	1.39	0.23	1.11	0.27
9 Unreported	2.27	0.41	1.32	0.95
TOTAL	3.51	3.51	0.61	2.90

Source: U.S. Department of Commerce, Bureau of Economic Analysis and calculations by the author.

Prepared by Gary W. Smith, Economist and PNREAP Director.

Explanatory Notes - Working Draft

Employment - The employment estimates compiled by the Bureau of Economic Analysis (BEA) measure the number of full- and part-time employees, plus the number of proprietors of unincorporated businesses. People holding more than one job are counted in the employment estimates for each job they hold. This means BEA employment estimates represent a job count, not a number-of-people employed count. Also, BEA employment is by place-of-work, rather than by place-of-residence. Therefore, the jobs held by residents of a neighboring county who commute to work in White Pine County are included in the employment (or job) count for White Pine County.

Major Industry - The industry categories portraying BEA employment estimates over 2001 - 2004 in the above tables correspond with the general sector-level categories of economic activity of the 2002 NAICS (North American Industry Classification System), see:

http://www.census.gov/epcd/www/naics.html

The @symbol associated with each industry category will link you to its corresponding definition as posted on the BEA web site.

Unreported - For some counties an industry category labeled "Unreported" may appear in the tables generated by this PNREAP module. It is not uncommon, especially for smaller counties, to encounter suppressed data for selected industries. Data are suppressed to avoid disclosure of confidential information regarding individual firms. Even though the concern for confidentiality may relate to only one industry, data for at least two must be suppressed as summing over the reported data and subtracting from the total yields data for the suppressed category. The PNREAP program that compiles this table performs this computation when suppressed data are encountered, and reports them in the "Unreported" category. For consistency, the program also contrives a corresponding "Unreported" industry category for the nation at large. Often data for the "Mining", "Manufacturing", or the "Wholesale Trade" industry categories are suppressed, and you will find that their data are paired as "Unreported" in the table.

Percent of Total - The percent share of total employment for each major industry category.

Location Quotient - The location quotient is the ratio of the share of local employment in a given industry locally to the corresponding industry share nationwide. It helps gauge the extend to which various industries are more or less concentrated locally when compared with the nation at large. If an industry's share of total employment is the same as the national share, then its location quotient is equal to one. If an industry is concentrated in a region, its local employment share will be larger than the share nationally, and its location quotient will correspondingly be greater that one. Conversely, the location quotient for an industry not concentrated in the region will fall between zero and one.

2001 - 2004 Averages - Four-year averages for percent shares and location quotients over 2001 - 2004 are reported in order to avoid having a unique single-year event in 2004 skew the results.

2001 - 2004 Share Shift - This records the difference between each industry share of total employment between 2001 and 2004. Industries that experienced growth above the overall average over this interval will realize a positive share-shift, while a negative share-shift is posted by those industries whose growth was less than the total.

Growth Rate - Growth rate refers to simple percent changes over the previous year. Average annual growth rates are simply the average of the percent changes year-over-year during the interval 2002 - 2004.

Component Contribution - This isolates and records each industry's individual contribution to the total growth of employment in White Pine County over 2004, and 2002 - 2004, respectively. When summed over all industries the component contribution will match White Pine County's TOTAL employment growth rate.

National Growth Rate - The growth rate of each industry category nationwide.

Local - National Growth Rate - To readily compare White Pine County's employment growth within each industry relative to their counterparts nationwide this records the difference between the two.

		200	04		2002-2004	Averages	2001-2004
County	Employment	Percent Share		Percent of State Total	Percent Share	Location Quotient	Share Shift
Churchill	S	s	s	s	s	s	s
Clark	13,600	1.36	0.46	44.50	1.34	0.45	0.04
Douglas	115	0.38	0.13	0.38	0.38	0.13	0.02
Elko	871	3.76	1.26	2.85	3.74	1.24	0.27
Esmeralda	S	S	s	s	S	S	S
Eureka	S	S	S	S	S	S	S
Humboldt	221	2.29	0.77	0.72	2.37	0.79	0.02
Lander	56	2.33	0.78	0.18	2.21	0.73	0.41
Lincoln	s	S	S	S	S	S	S
Lyon	S	S	S	S	S	S	S
Mineral	S	S	S	S	S	S	S
Nye	S	S	S	S	S	S	S
Pershing	S	S	S	S	S	S	S
Storey	S	S	S	S	S	S	S
Washoe	7,228	2.80	0.94	23.65	2.80	0.93	0.13
White Pine	562	12.76	4.27	1.84	12.79	4.24	0.42
Carson City	7,047	17.18	5.75	23.06	17.43	5.78	-0.53
Nevada	30,560	2.14	0.72	100.00	2.16	0.71	-0.00
Metro	27,875	2.15	0.72	91.21	2.17	0.72	-0.01
Nonmetro	S	S	S	S	S	S	s
United States	5,082,000	2.99	1.00		3.02	1.00	-0.02
Metro	4,209,498	2.92	0.98		2.94	0.98	-0.01
Nonmetro	872,502	3.39	1.13		3.44	1.14	-0.08

	State Government Employment Growth 2004							
000000000	120000000000000000000000000000000000000	Component	Local - U.S.					
County	Growth Rate	Contribution	Growth Rate					
Churchill	S	S	s					
Clark	8.65	0.12	8.46					
Douglas	-1.71	-0.01	-1.91					
Elko	0.46	0.02	0.26					
Smeralda	S	S	S					
Eureka	S	S	S					
Humboldt	0.00	0.00	-0.20					
Lander	1.82	0.04	1.62					
Lincoln	S	S	S					
Lyon	S	S	S					
Mineral	S	S	S					
Nye	S	S	S					
Pershing	S	S	S					
Storey	S	S	S					
Washoe	2.92	0.08	2.72					
White Pine	4.85	0.64	4.65					
Carson City	1.70	0.29	1.51					
Nevada	5.08	0.11	4.89					
Metro	5.31	0.11	5.11					
Nonmetro	S	S	S					
United States	0.20	0.01	0.00					
Metro	0.28	0.01	0.08					
Nonmetro	-0.18	-0.01	-0.38					
So	urce: U.S. Departr Bureau of Econ and calculations	omic Analysis,	roe,					

State Government Employment Growth by County: Nevada, 2002 - 2004 State Government Employment Growth 2002 - 2004 Local - U.S. Annual Annual Growth Rate Growth Rate County Contribution S S S 4.87 4.20 Lyon Storey S Washoe 3.71 White Pine 4.62 4.28 Carson City -0.11 3.15 Nevada Metro 3.21 S Nonmetro United States 0.00 Metro 0.45 0.01 0.11 Nonmetro -0.20 -0.01 -0.53 Source: U.S. Department of Commerce, Bureau of Economic Analysis, and calculations by the author. Prepared by Gary W. Smith, Economist and PNREAP Director.



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