

Structural Change in Employment in the Pacific Northwest Economy Since the Great Recession

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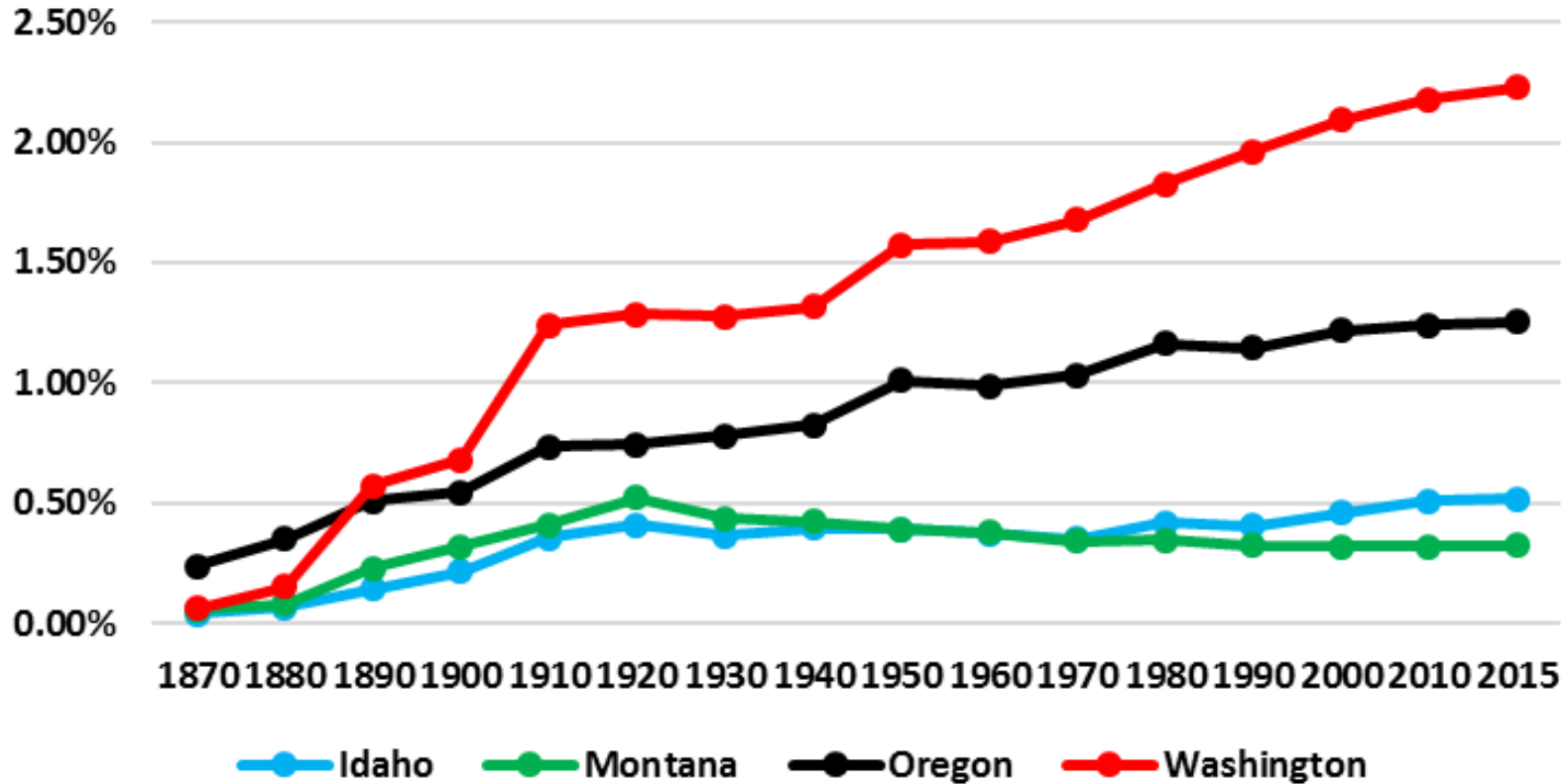
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Outline of Presentation

- First some key perspectives on employment and population trends in NW states
- Then, an analysis of employment change since the bottom of the Great Recession (2010) to 2015 (the most recent year with local area employment data)
- Shift-share as a way of displaying Northwest employment trends - using the U.S as the benchmark
- Data on state level trends, and counties
- County data are from BEA and Census Bureau County Business Patterns; State data are from BEA, PNREAP, Census NonEmployer, and BLS

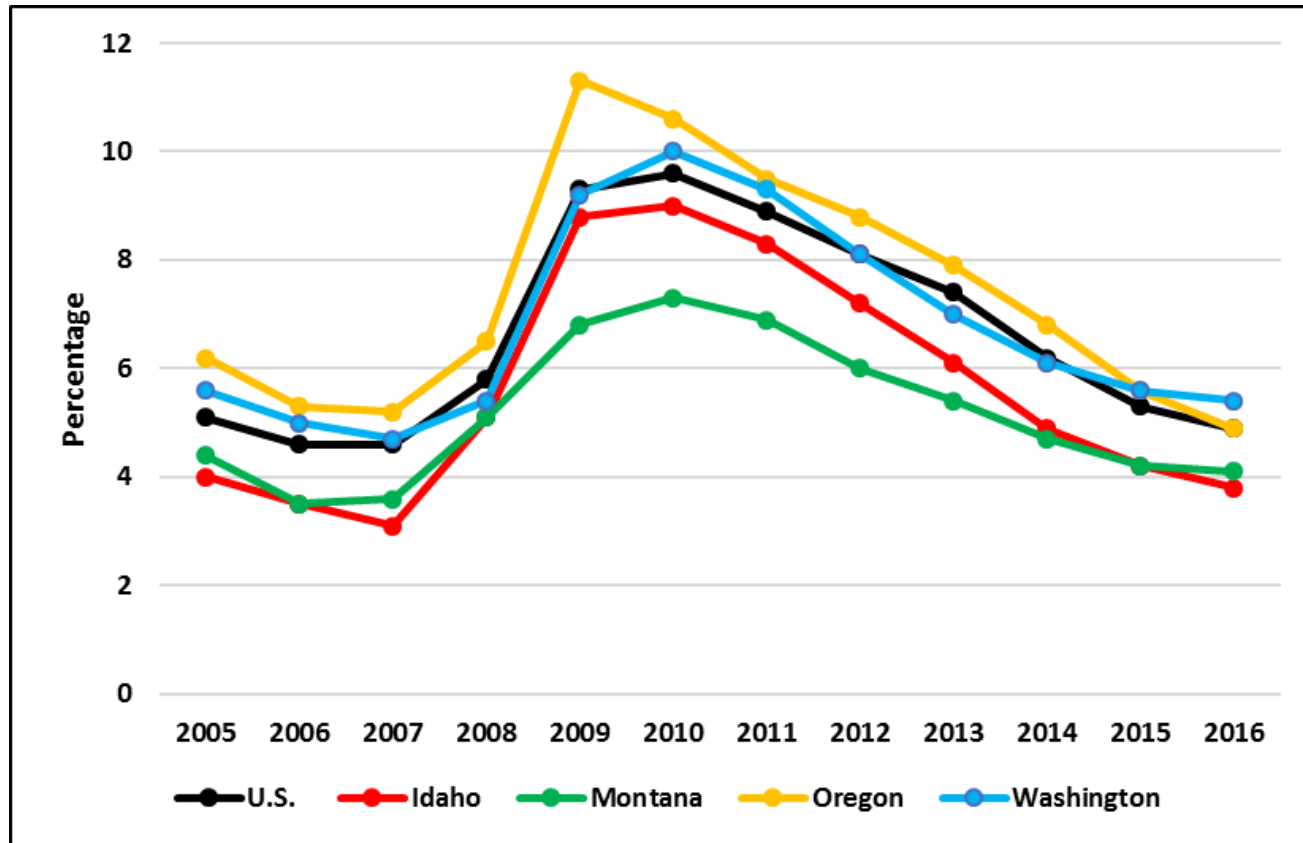
State Population as a Share of U.S. Population



Clearly, Washington and Oregon expand as a share of US population from the Great Depression, while Idaho grows slowly and Montana is stagnant.

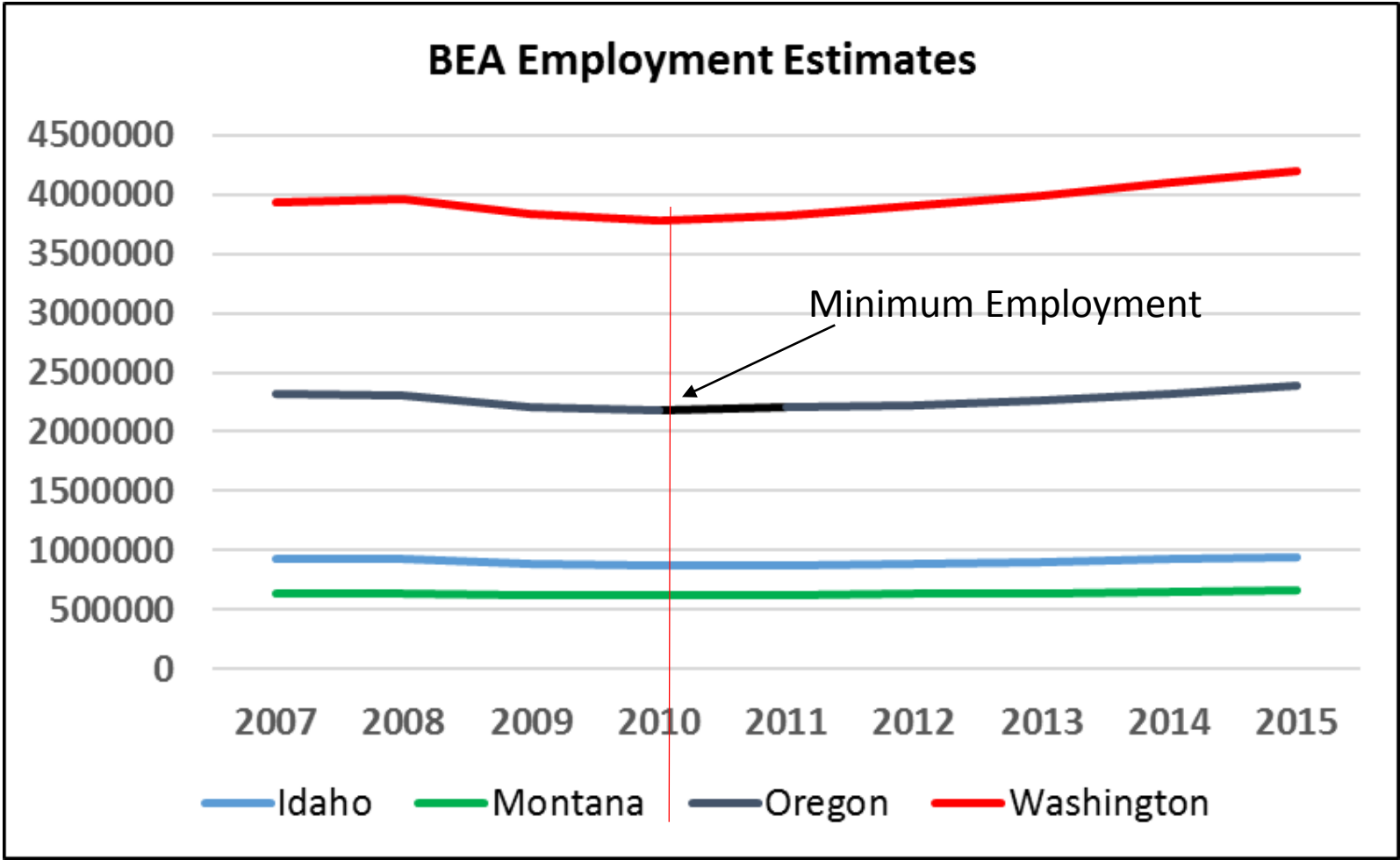
Source: U.S. Census Bureau

Unemployment Rates



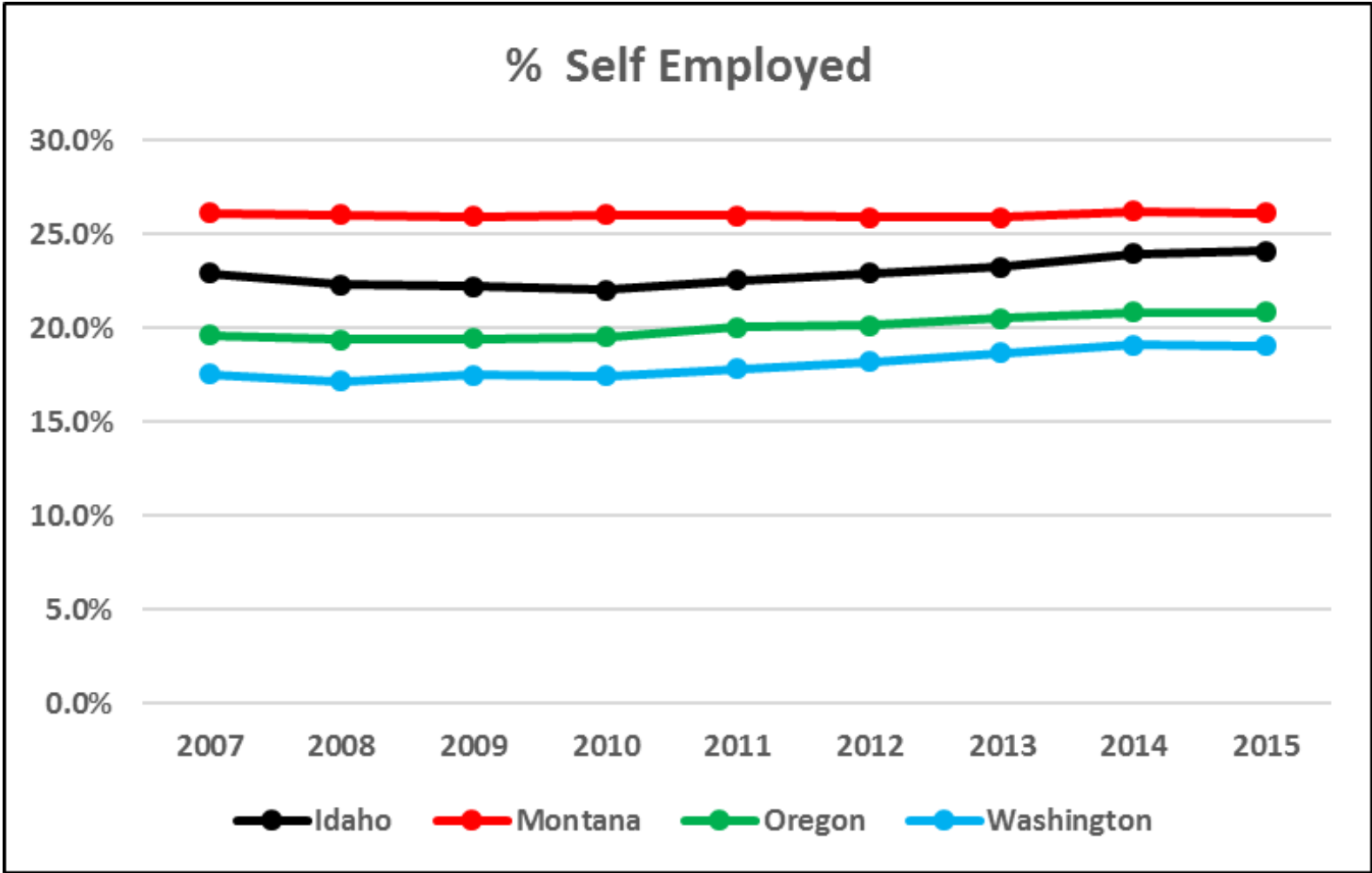
Oregon and Washington trend higher than the U.S. before the Great Recession, as well as after it (Oregon now at national average). Idaho and Montana exhibit lower levels than the national average, but a similar cyclicality.

Source: U.S. Bureau of Labor Statistics



Employment that peaked in 2008 declined until 2010 in all Northwest States. BEA data are for both wage & salary and self-employment

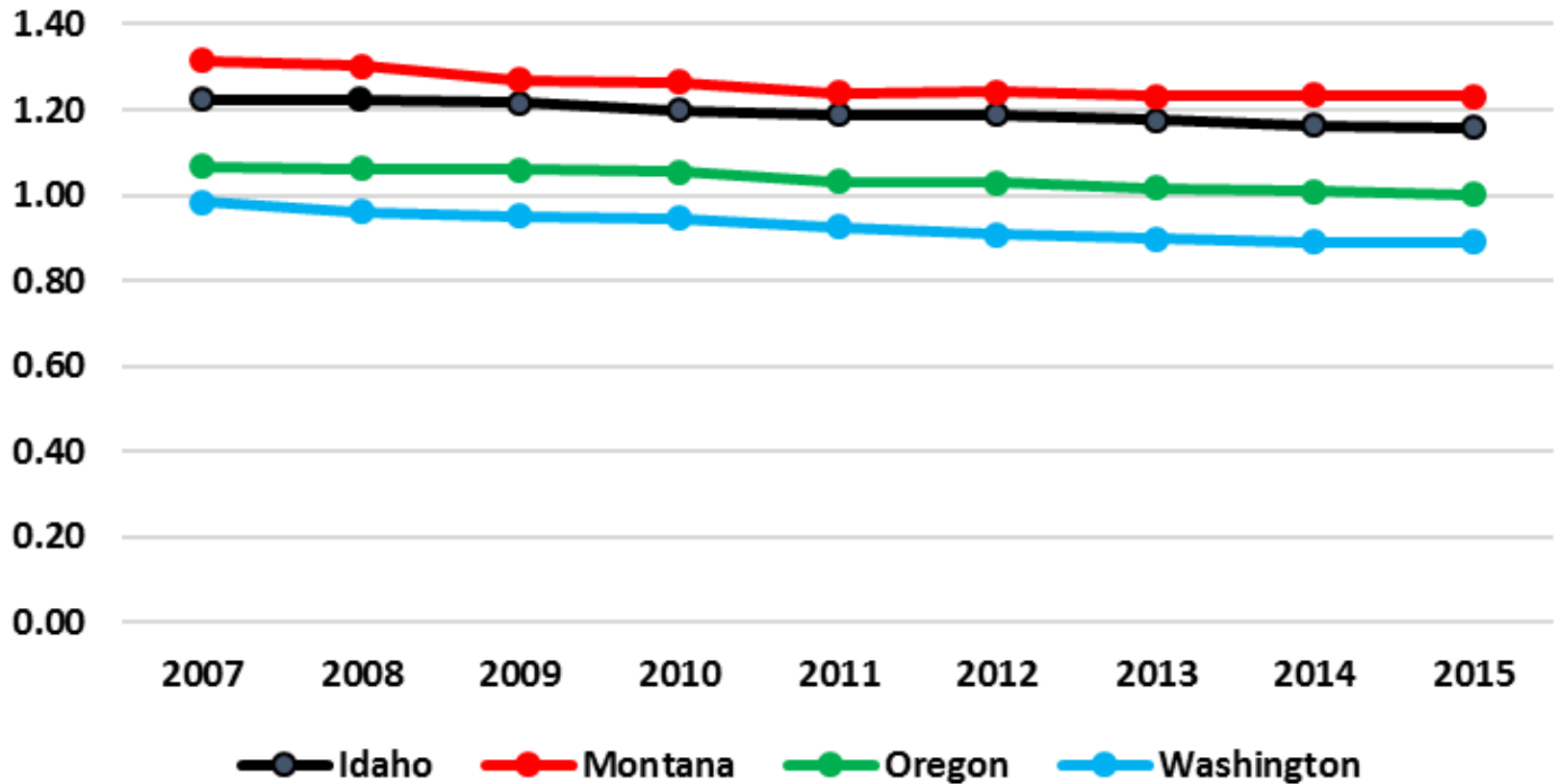
Source: U.S. Bureau of Economic Analysis



The share of self-employed in WA, OR, and Idaho increased since 2010, while it was stable in Montana

Source: U.S. Bureau of Economic Analysis

Location Quotients - Self Employment



Compared to the U.S. as whole the share of self-employed as declined since 2007, notwithstanding an absolute and percentage expansion. Idaho and Montana have a higher average than the U.S., reflecting agriculture and natural resources. WA is lower than national average, reflecting a high share of employment in manufacturing.

Source: U.S. Bureau of Economic Analysis

Change in Employment 2010 - 2015

	US	Oregon	Washington	Idaho	Montana
Absolute Change	17,160,700	211,634	423,125	78,664	45,144
Percentage Change	9.9%	9.7%	11.2%	9.0%	7.3%
Wage & Salary % Change	8.9%	10.4%	12.1%	9.2%	7.1%
Proprietors % Change	13.5%	7.6%	7.9%	8.7%	7.9%

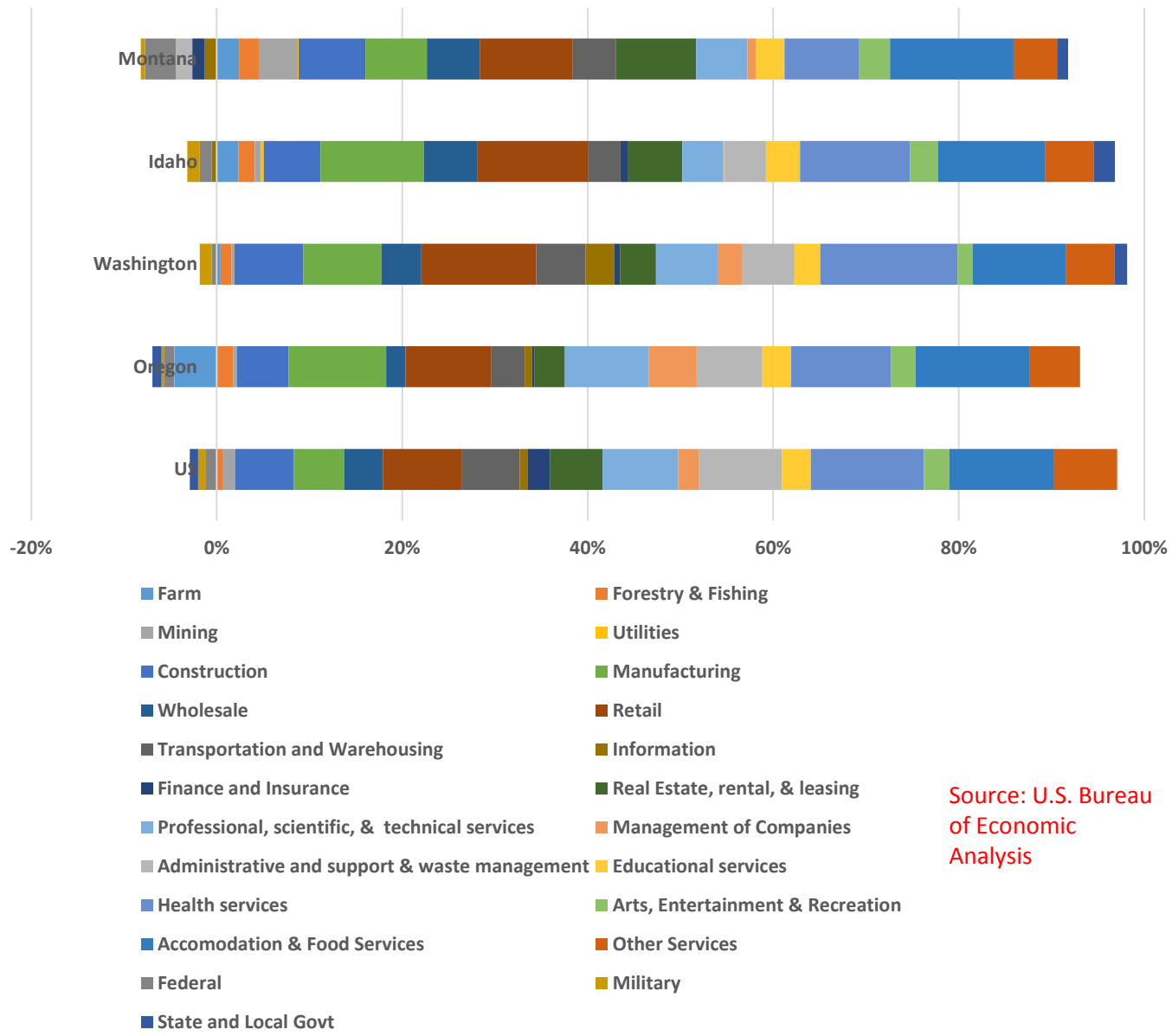
- Washington outpaced U.S. growth between 2010 and 2015, while Oregon, Idaho, and Montana lagged U.S. Growth
- All Northwest states lagged U.S. growth in proprietors employment
- Oregon, Washington, and Idaho outpaced U.S. Wage and Salary growth

Source: U.S. Bureau of Economic Analysis

Structural Change in the recovery from the Great Recession

- All Northwest states gained employment, but three of them lagged the national jobs recovery (ID, OR, MT)
- The next slides decompose these trends
- Data on absolute and percentage change are followed by shift-share model results.
- These models identify industries that contribute to the relative performance of Northwest industries
- The next bar-chart reflects data just presented
- Percentage change data identify a broad range of industries in which the Northwest has lagged, esp. in Idaho, Montana, and Oregon

Absolute Change in Employment 2010-2015



Source: U.S. Bureau of Economic Analysis

Percent Change Employment 2010-2015

	U.S.	Oregon	Washington	Idaho	Montana
Farm	0.2%	-16.5%	2.2%	5.3%	4.5%
Forestry-Fishing	12.5%	15.0%	13.4%	12.3%	16.1%
Mining	18.7%	18.9%	17.4%	12.7%	20.5%
Utilities	1.1%	-1.4%	0.8%	8.5%	1.4%
Construction	13.1%	13.4%	16.6%	9.6%	9.5%
Manufacturing	8.2%	14.6%	13.4%	16.0%	18.0%
Wholesale	12.6%	6.4%	14.3%	16.7%	17.6%
Retail	8.9%	10.0%	14.3%	10.2%	7.6%
Transportation and Warehousing	20.7%	14.3%	21.7%	11.8%	14.6%
Information	4.8%	4.9%	11.8%	-3.6%	-7.7%
Finance and Insurance	4.8%	0.7%	1.8%	1.9%	-2.9%
Real Estate, rental, & leasing	13.4%	7.8%	9.6%	11.2%	15.3%
Professional, scientific, & technical services	12.6%	16.8%	10.8%	7.1%	8.8%
Management of Companies	20.4%	40.4%	32.9%	1.3%	24.1%
Administrative and support & waste management	15.6%	15.7%	13.5%	7.7%	-3.6%
Educational services	14.0%	14.3%	17.4%	21.2%	21.5%
Health services	11.6%	10.5%	16.9%	11.1%	6.4%
Arts, Entertainment & Recreation	13.2%	12.5%	7.9%	14.7%	9.6%
Accommodation & Food Services	17.1%	19.7%	18.5%	17.9%	14.6%
Other Services	12.8%	11.8%	11.8%	10.3%	7.9%
Government	-2.1%	-2.0%	-0.3%	-0.2%	-1.4%
Federal	-7.4%	-9.0%	-3.2%	-7.9%	-12.1%
Military	-6.9%	-4.9%	-6.9%	-11.4%	-3.0%
State and Local Govt	-0.8%	-1.0%	1.3%	1.8%	0.9%

Yellow – below U.S. average.
Considerable variation across Northwest states.

Notable:

Loss in farm sector in Oregon
Strong Mfg. gain across NW
Strong Transport & warehousing and information in WA
Slower growth in MT in many industries reflects overall change
All NW states had smaller losses than US in govt.

Source: U.S. Bureau of Economic Analysis

State-Level Trends – Competitive Shift, U.S. as Benchmark

	Oregon	Washington	Idaho	Montana
Wage and salary employment	23,772	57,884	1,627	(8,131)
Proprietors employment	(29,121)	(49,020)	(10,890)	(9,502)
Farm proprietors employment	(1,063)	(672)	147	(80)
Nonfarm proprietors employment	(26,410)	(49,276)	(9,046)	(6,715)
Farm employment	(11,352)	1,449	1,883	1,232
Nonfarm employment	10,587	7,790	(7,072)	(15,349)
Private nonfarm employment	7,690	10,007	(8,397)	(14,344)

- Competitive shift is defined as actual change in region minus expected change based on overall change corrected by national change in individual industries
- The shift-share model here used the U.S. as a whole as the benchmark.
- Montana had less wage & salary growth than expected, while the other states had growth in this category above the national average.
- All Northwest states lagged in proprietors growth
- Farm employment dipped below expectations in Oregon, while grew faster than expected in the other Northwest states
- Nonfarm employment outpaced the U.S. in Oregon and Washington, but lagged it in Idaho and Montana. **Source: U.S. Bureau of Economic Analysis**

Competitive Shift, U.S. as Benchmark

	Oregon	Washington	Idaho	Montana
Farm Employment	(11,352)	1,449	1,883	1,232
Forestry, fishing, and related activities	753	(164)	(22)	263
Mining, quarrying, and oil and gas extraction	11	(220)	(265)	207
Utilities	(119)	(18)	218	9
Construction	220	3,604	(1,893)	(1,487)
Manufacturing	11,414	10,847	4,599	1,952
Wholesale trade	(5,048)	309	1,172	867
Retail trade	2,569	15,428	1,338	(854)
Transportation and warehousing	(3,862)	(1,212)	(2,213)	(1,058)
Information	64	6,653	(1,058)	(1,131)
Finance and insurance	(3,702)	(4,938)	(1,095)	(1,945)
Real estate and rental and leasing	(5,748)	(8,427)	(964)	576
Professional, scientific, and technical services	5,488	(8,075)	(2,928)	(1,284)
Management of companies and enterprises	6,309	3,129	(1,224)	74
management and remediation services	90	(6,179)	(3,907)	(5,096)
Educational services	147	1,184	1,049	588
Health care and social assistance	(2,903)	13,971	(465)	(3,610)
Arts, entertainment, and recreation	(381)	(5,510)	254	(672)
Accommodation and food services	4,075	(1,032)	437	(1,240)
Other services (except public administration)	(1,177)	(4,286)	(1,070)	(1,581)
Government and government enterprises	425	11,756	2,482	705
Federal, civilian	(504)	3,410	(68)	(704)
Military	250	546	(443)	319
State and local	(380)	9,353	2,792	1,270

Source: Calculated from U.S. Bureau of Economic Analysis

County-Level Trends

- Data were developed from BEA Local Area CA-25 series, supplemented by data from U.S. County Business Patterns in case of suppression by BEA
- CBP covers only non-agricultural and non-government wage and salary employment
- Shift-share analysis was undertaken, using the U.S. as a whole as the benchmark
- Thanks are given to Mike Babb, a graduate student in geography at the UW for the maps that follow

An Example of Solving BEA Suppression of Employment Data using County Business Patterns

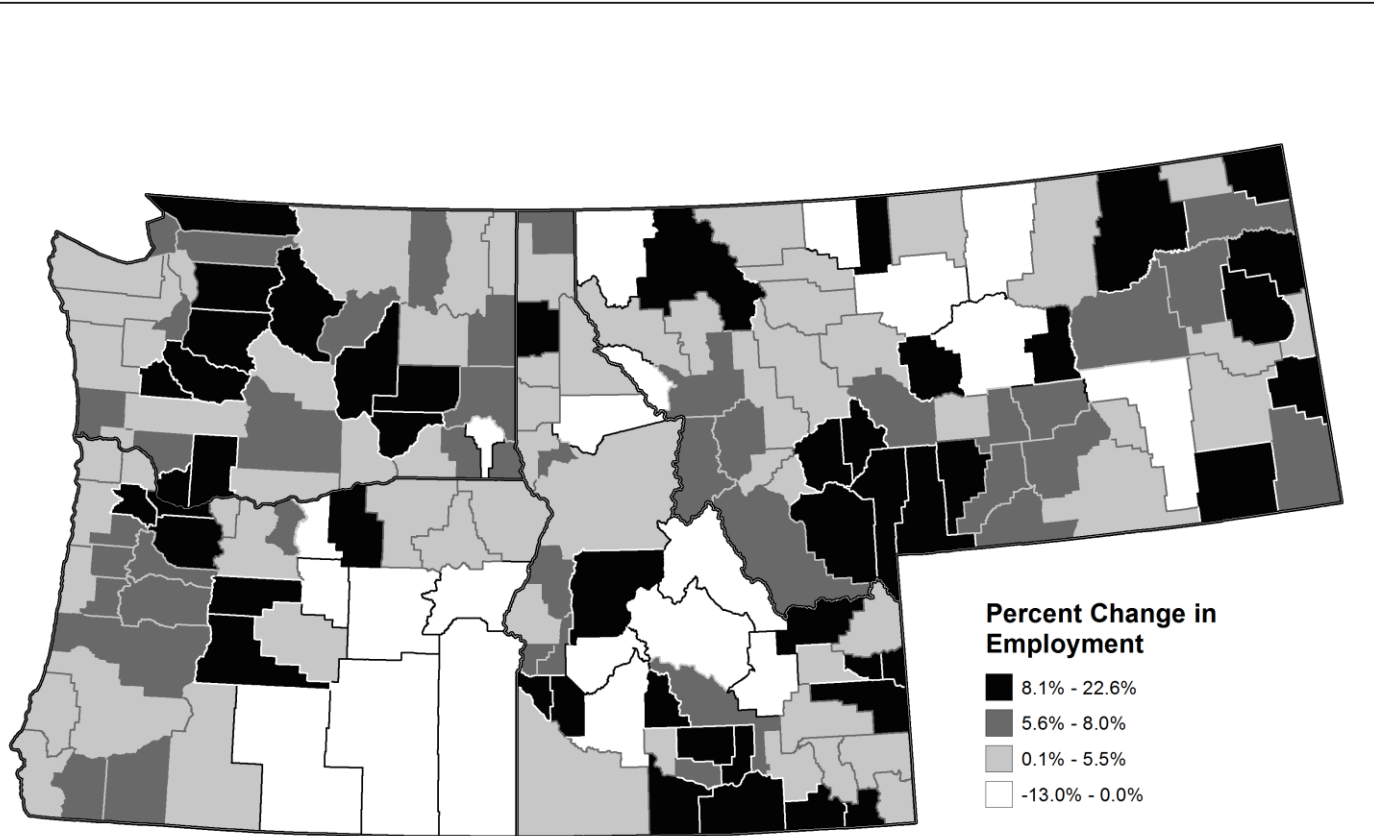
Counties in this table have suppressions by BEA for 2015

These data are for Health Care in counties in Idaho, 2015. BEA data are 2015, while CBP are 2014

	CBP Code or Value	Initial Estimate	Adjusted Estimate
Adams	B	35	50
Benewah	402	402	435
Camas	A	7	15
Caribou	235	235	270
Clark	0	0	0
Clearwater	519	519	575
Custer	B	35	50
Franklin	E	350	430
Fremont	173	173	205
Gooding	510	510	545
Jefferson	333	333	380
Lemhi	B	35	45
Minidoka	491	491	575
Owyhee	194	194	230
Payette	639	639	639
Power	175	175	220
Valley	443	443	505
Washington	E	350	440
Total	4114	4926	5609
Total Suppressed by BEA	5609		

Percent Change in Employment 2010-2015

(BEA Data – proprietors & wage and salary employees)



Map categories are roughly quartiles.

Cross-Tabulations of Employment Change and Metro/Non-metro status

Yellow: Counties above the overall regional averages

	NonMetro	Metro	Total
Loss	89.5%	10.5%	100.0%
0-5.5%	84.8%	15.2%	100.0%
5.6% - 8%	52.2%	47.8%	100.0%
Over 8%	61.4%	38.6%	100.0%
All counties	70.9%	29.1%	100.0%
	NonMetro	Metro	Total
Loss	13.7%	3.9%	10.9%
0-5.5%	45.2%	19.6%	37.7%
5.6% - 8%	19.4%	43.1%	26.3%
Over 8%	21.8%	33.3%	25.1%
Total	100.0%	100.0%	100.0%

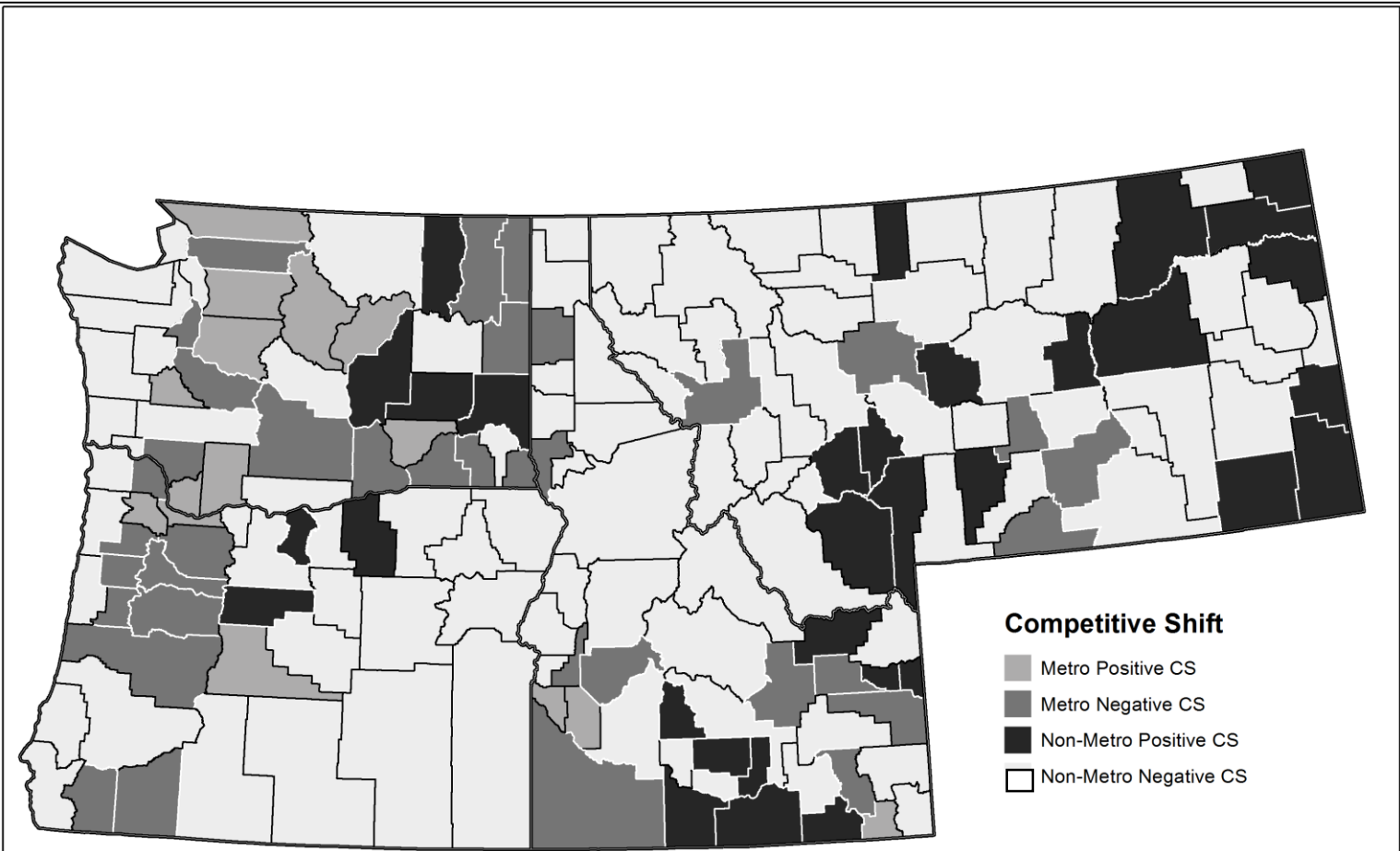
Percentage of counties by % change in employment category

Percentage of counties by metro or nonmetro classification

Employment losses and slow growth are overwhelmingly in non-metro areas, while more rapid growth has occurred in a larger percentage of metro areas than they account for as total counties.

Sources: BEA SA-25 and USDA ERS County Typology

Competitive Shift – US used as benchmark



Source Data: US BEA CA-25 series

Competitive Shift – Metro & Metro, and ERS County Typology

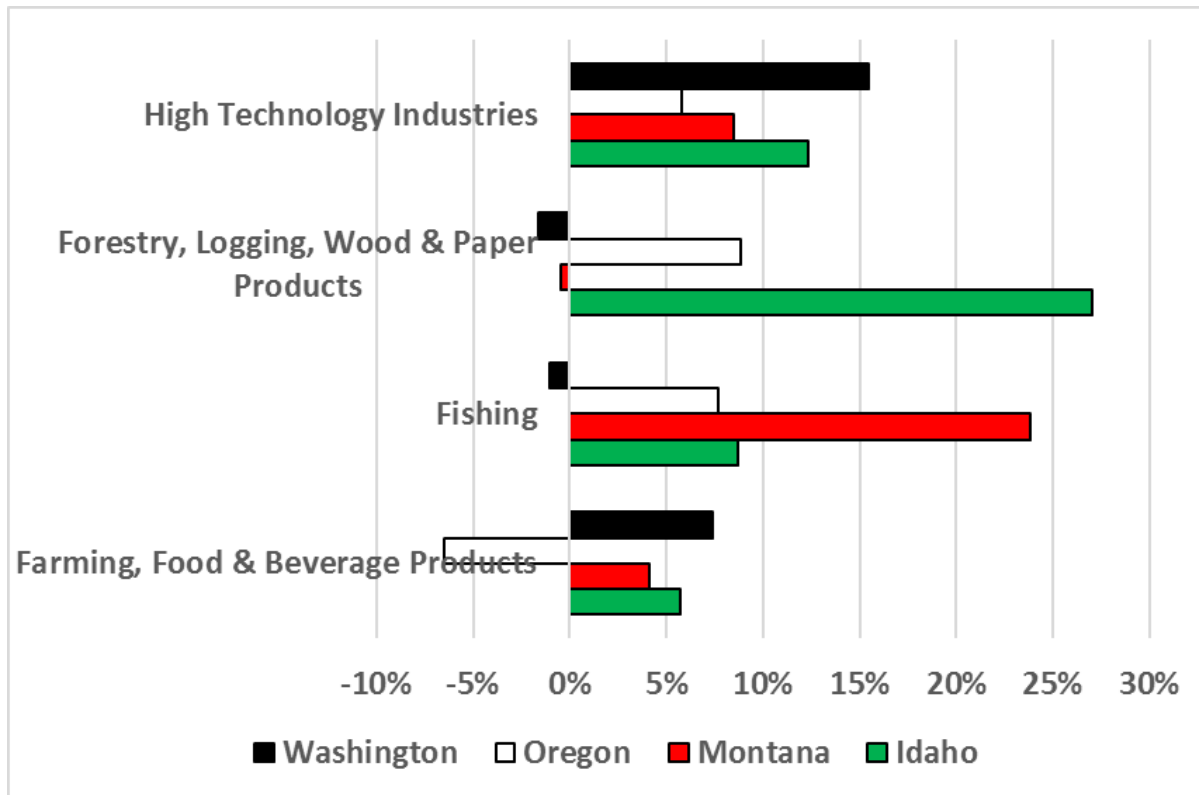
	Metro CS+	Metro CS-	Nonmetro CS+	Nonmetro CS-	Total
ERS Typology					
Nonspecialized	40%	61%	22%	28%	35%
Farm	13%	11%	50%	16%	21%
Mining	0%	0%	9%	9%	6%
Manufacturing	13%	3%	0%	1%	2%
Fed/State	7%	19%	9%	22%	18%
Recreation	<u>27%</u>	<u>6%</u>	<u>9%</u>	<u>24%</u>	<u>18%</u>
Total	100%	100%	100%	100%	100%
N	15	36	32	92	175

Yellow – change less than Northwest average

Metro counties are diversified (nonspecialized), with few farm, federal/state and no mining counties. Metro farm counties had slower growth in this sector than expected.

Non-metro counties have fewer nonspecialized and manufacturing specializations. They are less frequently classified as manufacturing. Those with positive CS tend to be specialized in mining & farming. Those with a negative CS tend to be specialized in mining, fed/state, and recreation. **Sources: BEA & ERS**

Trends in Historic Key Northwest Industries (2010-2015- % chg. n jobs)



Data from U.S. Census County Business Patterns, BEA, and Census Non-employer statistics. The Census Non-employer statistics are significant for fishing, forestry, and logging. BEA farm employment data include self-employed.

Concluding Comments (1)

- The Northwest weathered the Great Recession, but in differing ways.
- Washington has out-run the other Northwest States in the recovery, but Idaho and Montana had a less sharp downturn than WA and OR.
- Proprietor employment gains have lagged the U.S. as whole in all Northwest states.
- There are major differences in trends among the Northwest States—Montana has lagged the U.S. in job recovery—Oregon has had farm employment losses not seen in other PNW states.
- Traditional Northwest Industries have shown recovery, except for farm activity in Oregon

Concluding Comments (2)

- County level trends find metro counties have outperformed rural counties
- County economic specialization as defined by the USDA finds that nonspecialized counties (diversified) have had stronger recoveries than those that are specialized.
- A strong % of nonmetro farm counties had positive competitive shifts-this deserves follow-up
- We have had fewer presentations at PNREC in recent years on regional trends of this type—they are different than the forecast sessions. We need more in-depth presentations unpacking trends in the regional economy, including Canada, Alaska, & Wyoming