



STATE OF OREGON

Oregon's Regional Economic Outlook



October 14th, 2015

Oregon Office of Economic Analysis
Mark McMullen



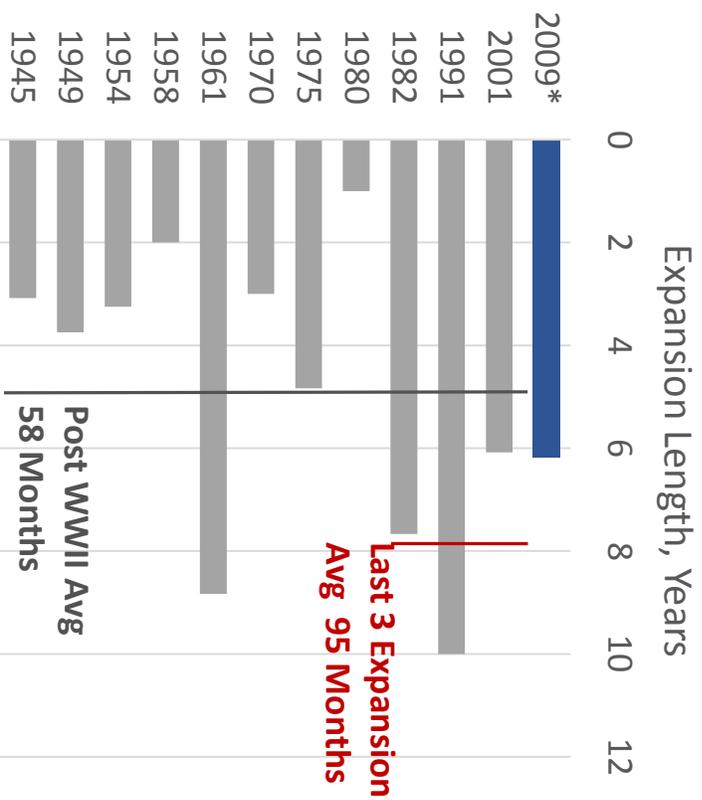
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Macroeconomic Outlook



Expansions Do Not Die of Old Age

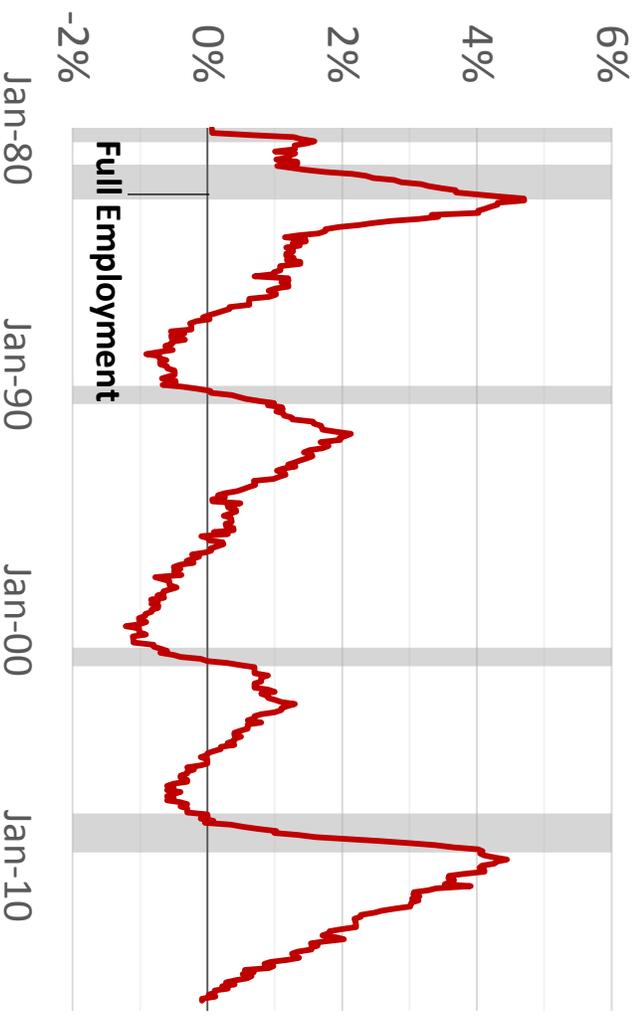
Postwar U.S. Expansions



* Current expansion through August 2015
Source: NBER, Oregon Office of Economic Analysis

Expansions End After Overheating

Percentage point difference between actual unemployment rate and full employment rate



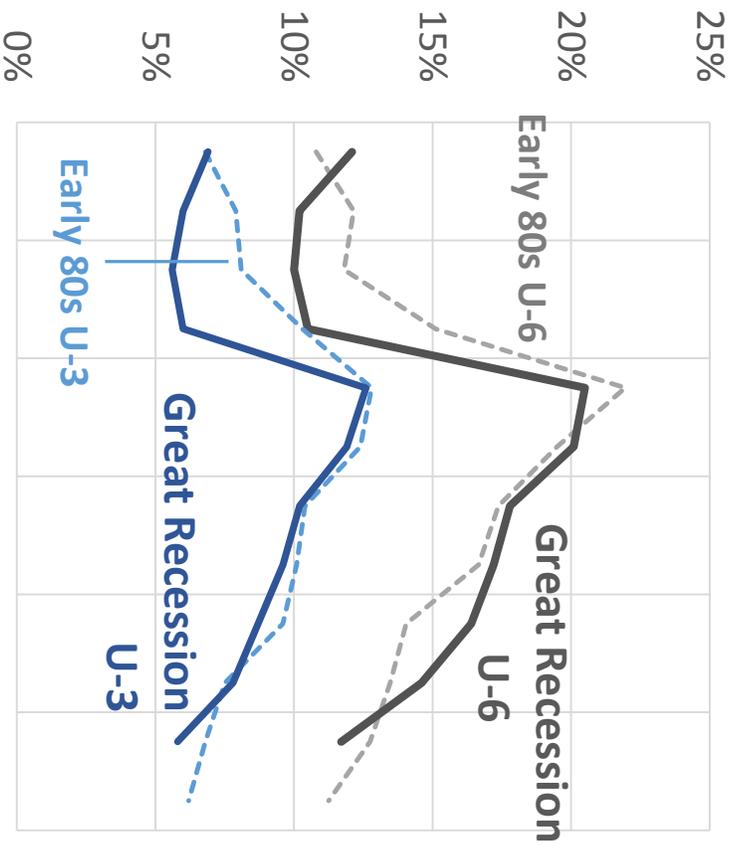
Source: BLS, CBO, Oregon Office of Economic Analysis



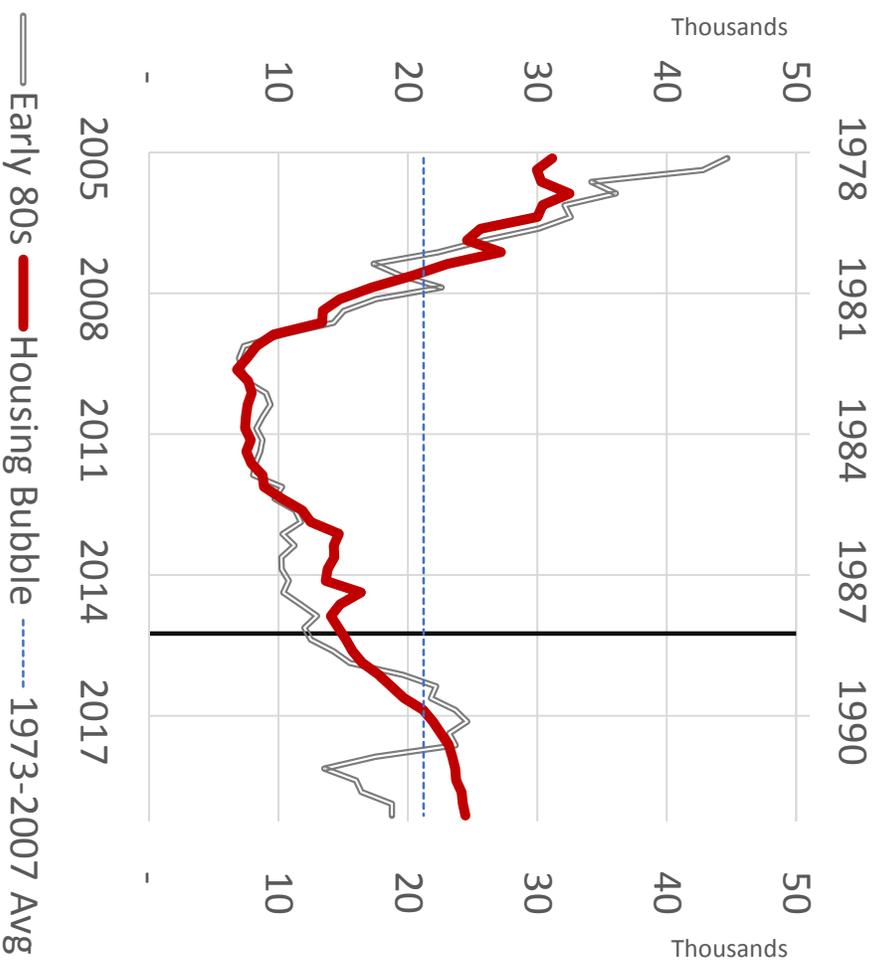
1980's Revisited

Unemployment Comparisons

Severe Recessions in Oregon



Oregon's Housing Bust Replay



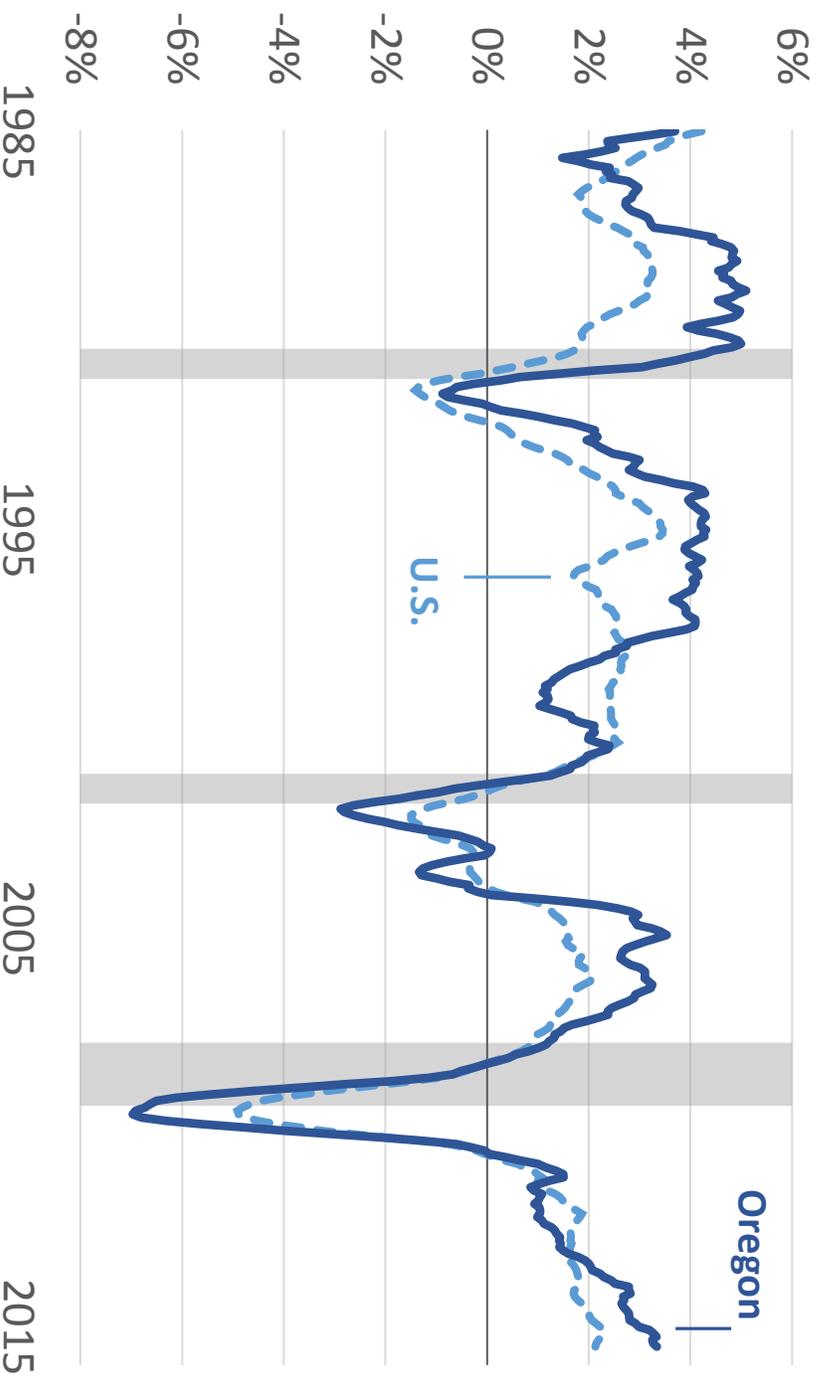
Source: RLS, IPUMS-CPS, QED, Oregon Office of Economic Analysis



Traditional Advantage Regained

Total Nonfarm Employment

Year-over-Year Percent Change



Source: BLS, Oregon Employment Department, Oregon Office of Economic Analysis

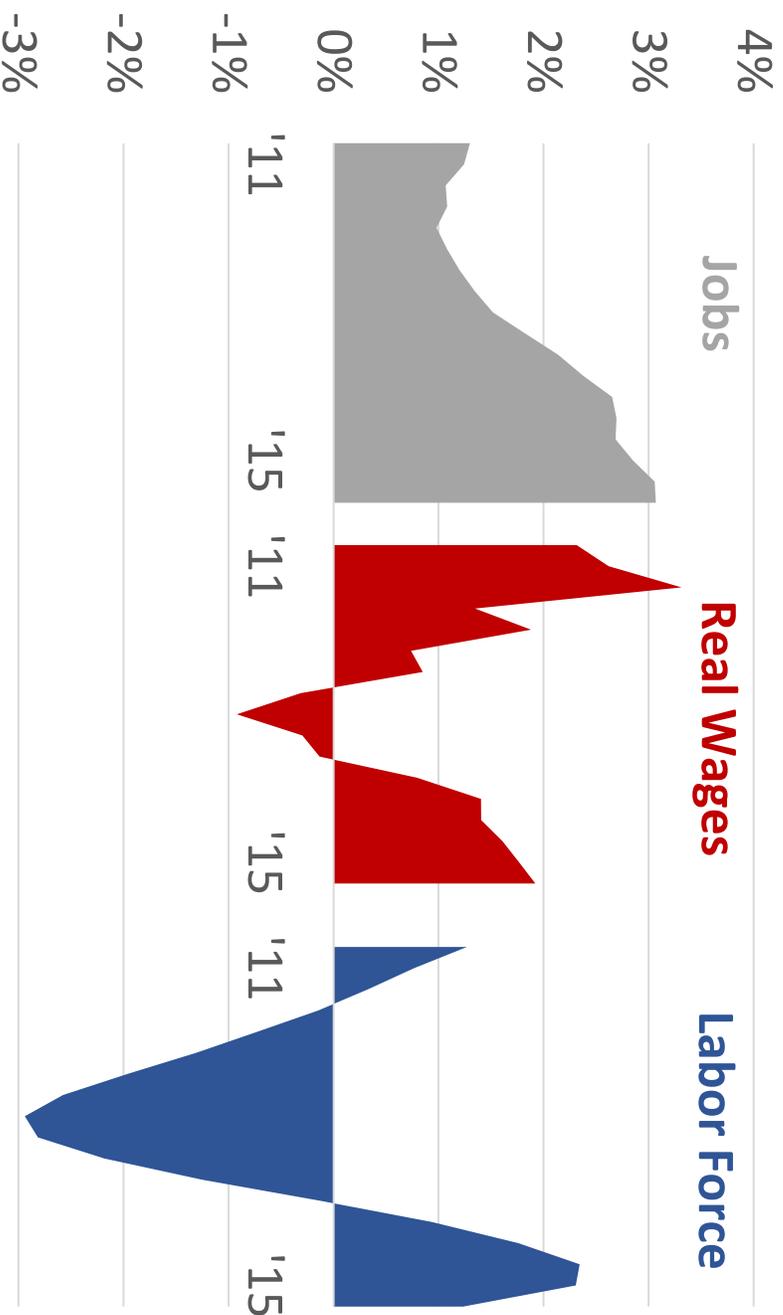




Signs of a Deeper Labor Market Recovery in Oregon

Returning to Normal

Oregon Labor Market Dynamics



Year-over-Year change, 6 month average. Wages are inflation-adjusted average QCEW wages.

Source: BEA, OED, Oregon Office of Economic Analysis

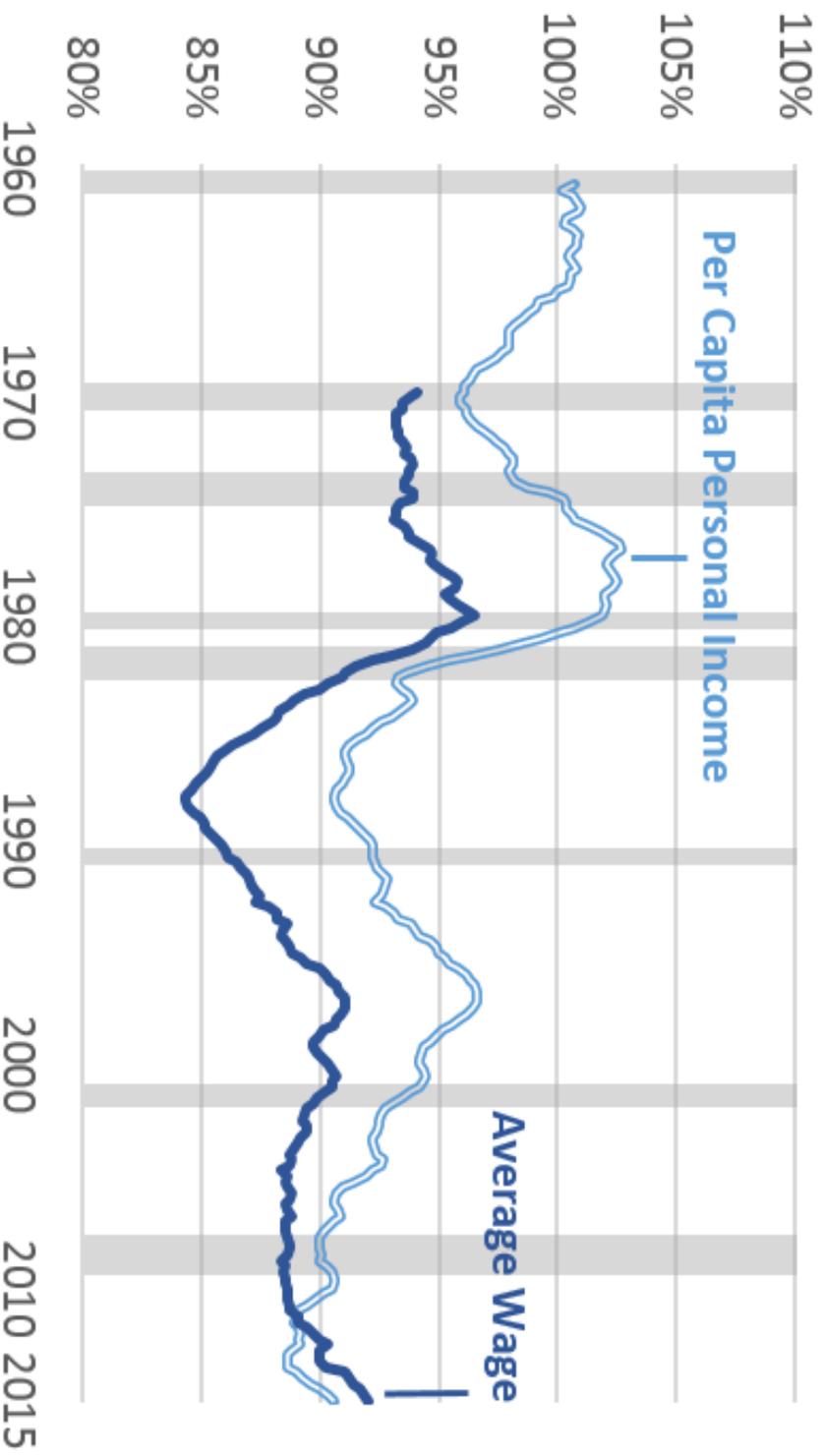




Incomes Rising as a Result

Oregon Personal Income

Share of U.S., 4 Quarter Moving Average



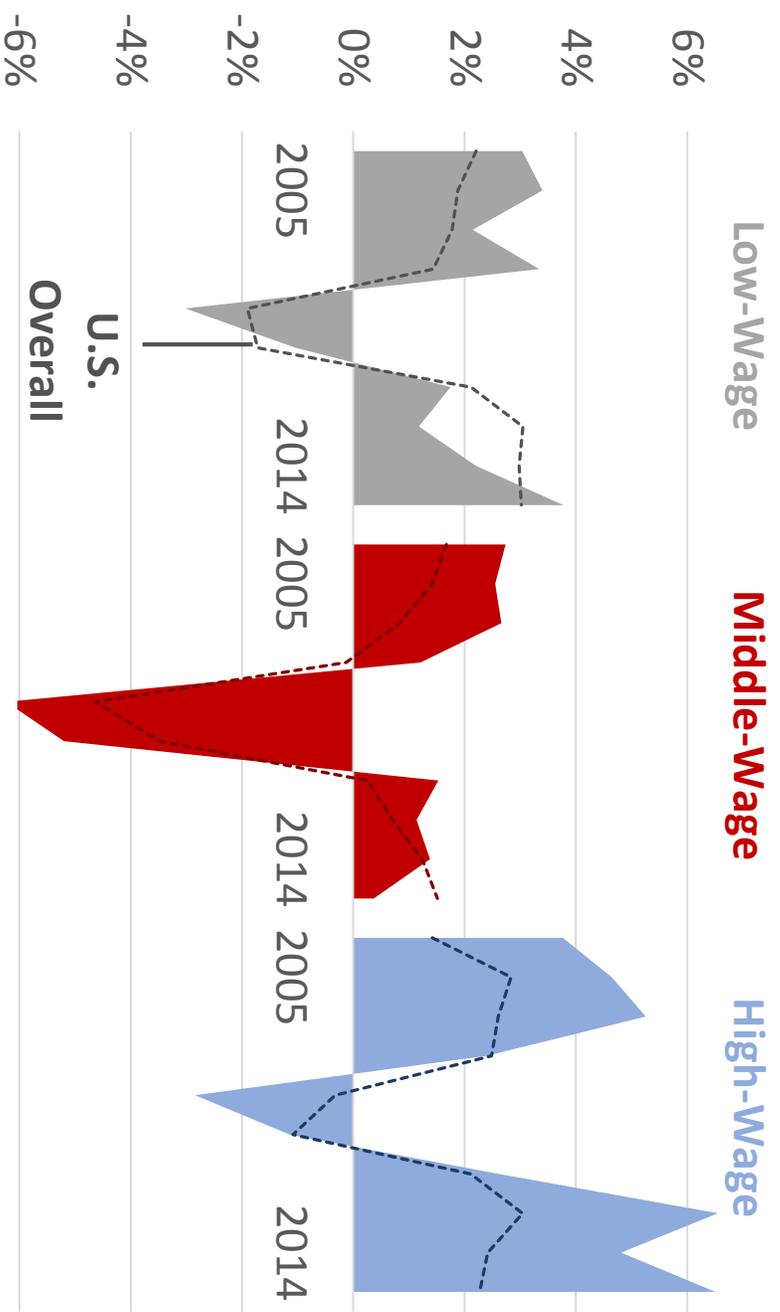
Source: BEA, IHS Global Insight, Oregon Office of Economic Analysis





Economy Creating High-Wage Jobs

Portland MSA Job Growth



Categories based on median wage for major occupational groups as US level
Source: BLS, Oregon Office of Economic Analysis

- Job polarization leads to lots of low- and high-wage job growth
- Indicating larger pool of higher income households as a result
- Middle-wage jobs lacking everywhere

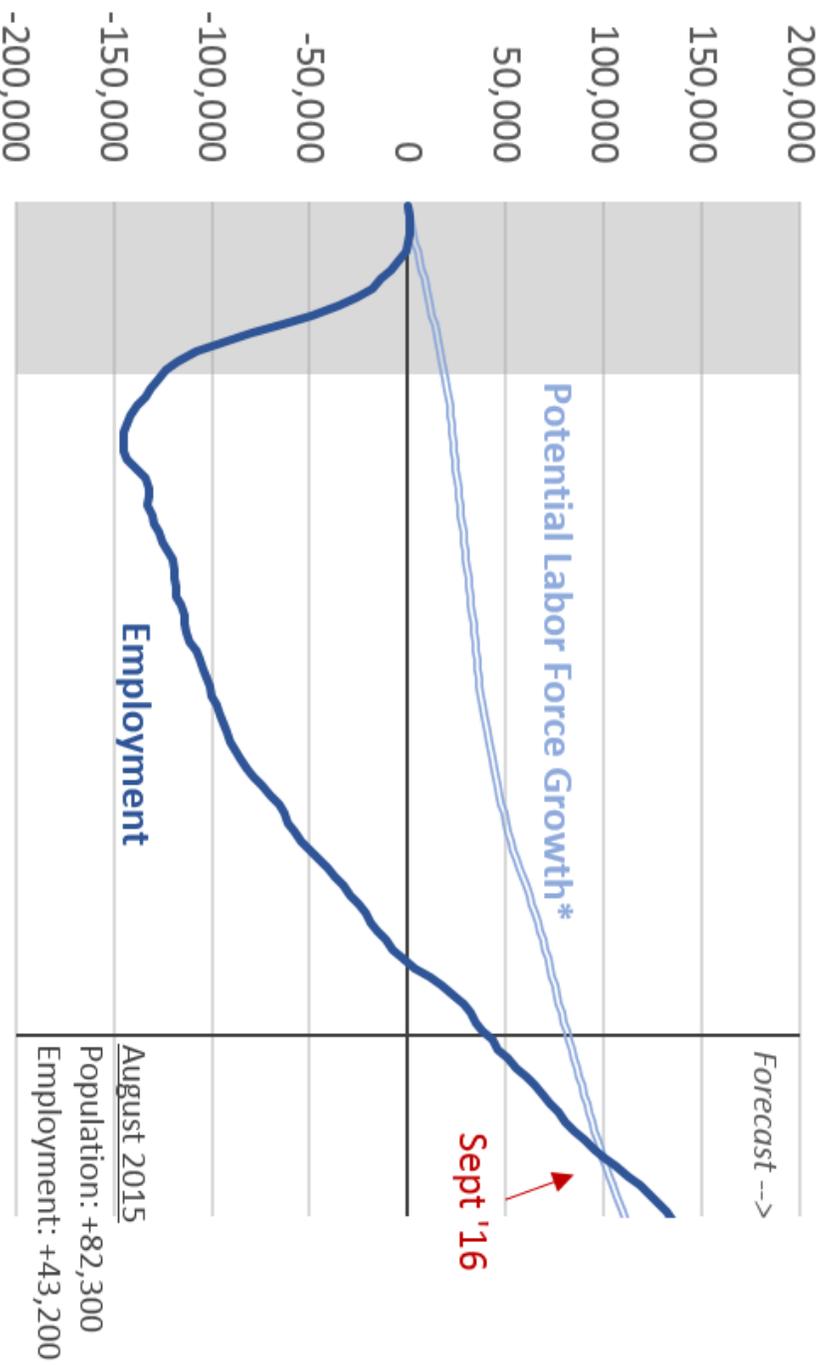




More Jobs but More Workers

Oregon Jobs and Population

Change Since Dec '07, 3 Month Average

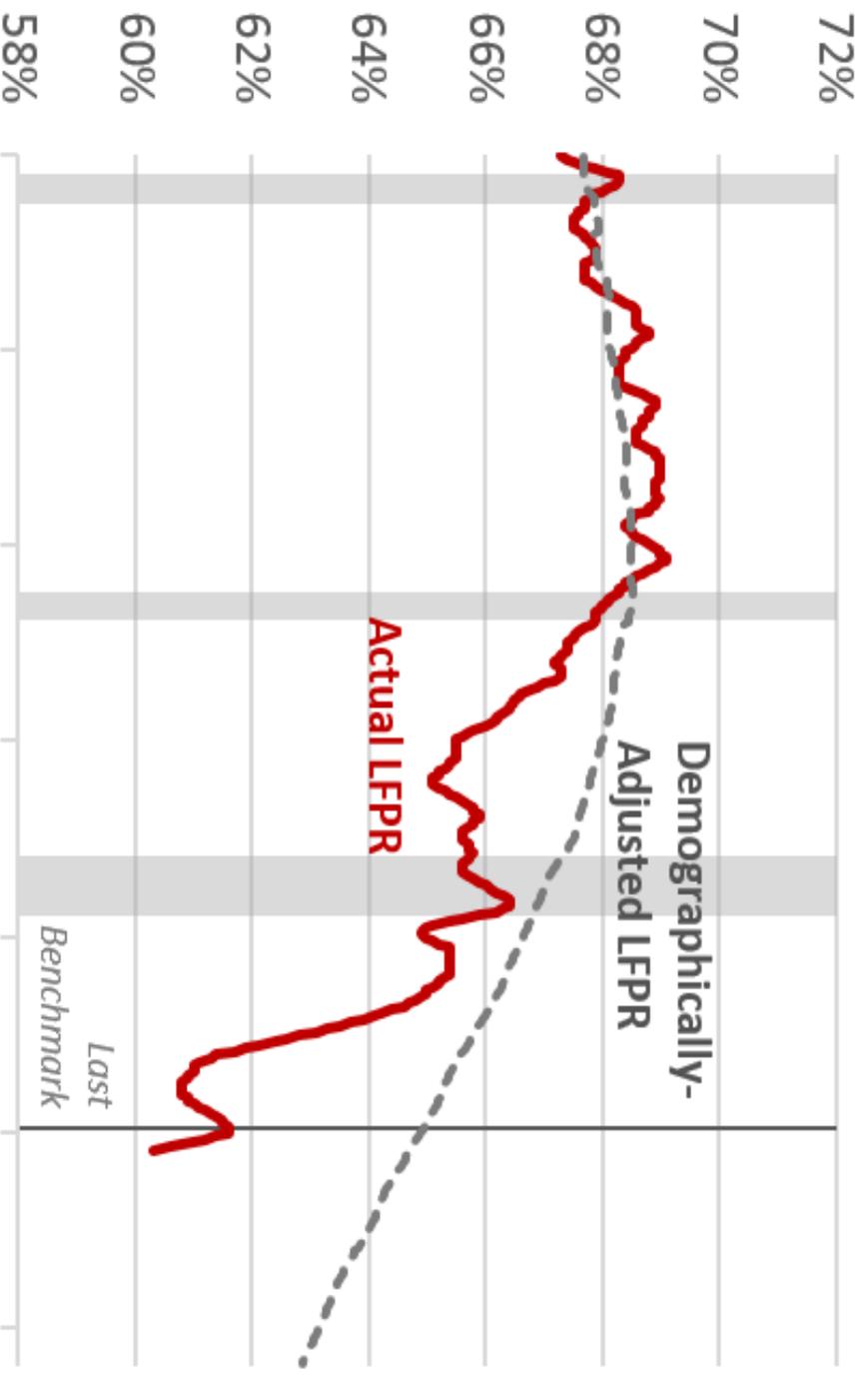


* Based upon LFPR by age cohort in 2000, measure of jobs needed to keep up with population growth for economy at full employment | Source: BLS, Census, OED, Oregon Office of Economic Analysis



Participation Remains Weaker than Expected

Oregon Labor Force Participation



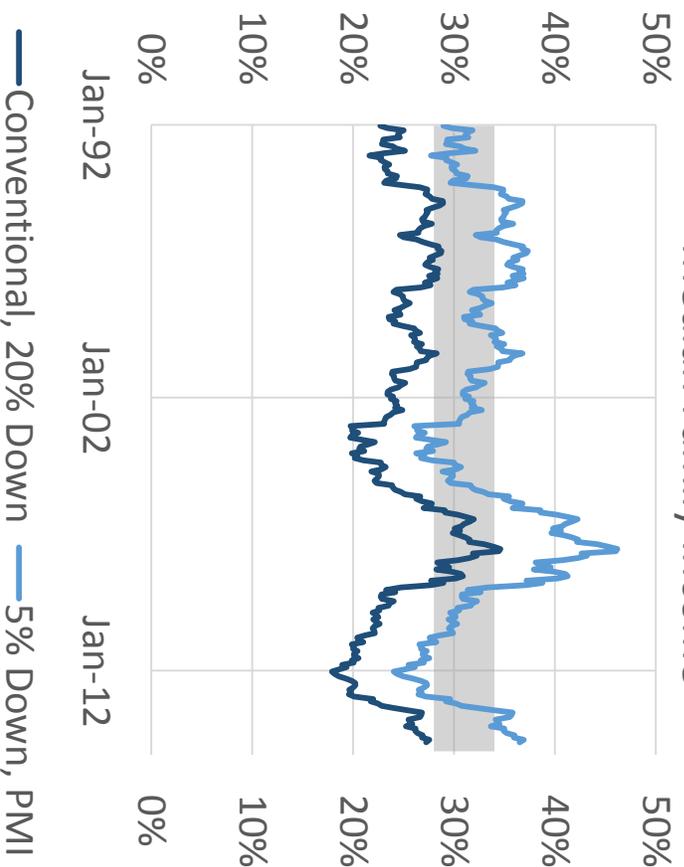
Source: BLS, Census, Oregon Office of Economic Analysis



Higher Housing Costs Offset Lower Energy Costs

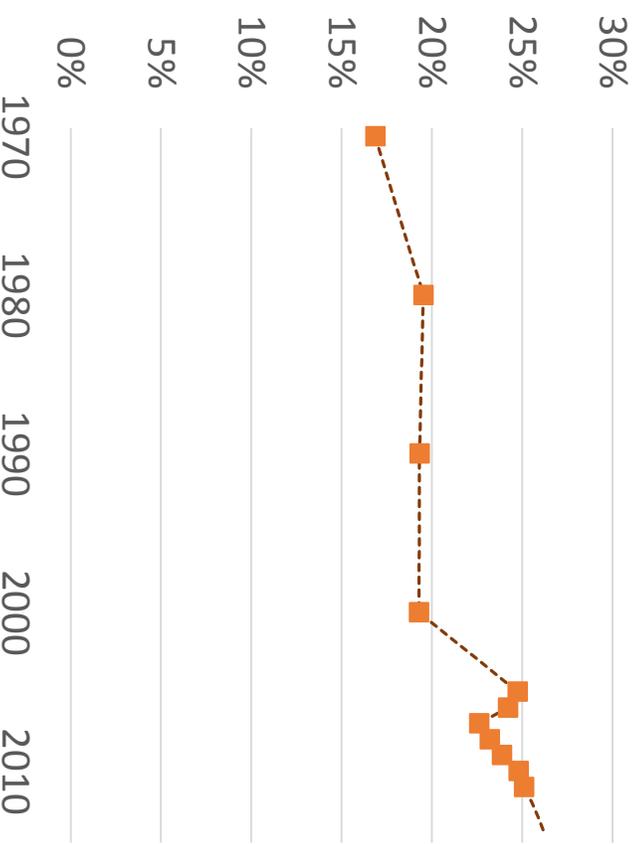
Portland Ownership

Housing Expense for Buying
Median Home Sold as Share of
Median Family Income



Portland Rental

Average Rent as Share of Average
Household Income for Renters

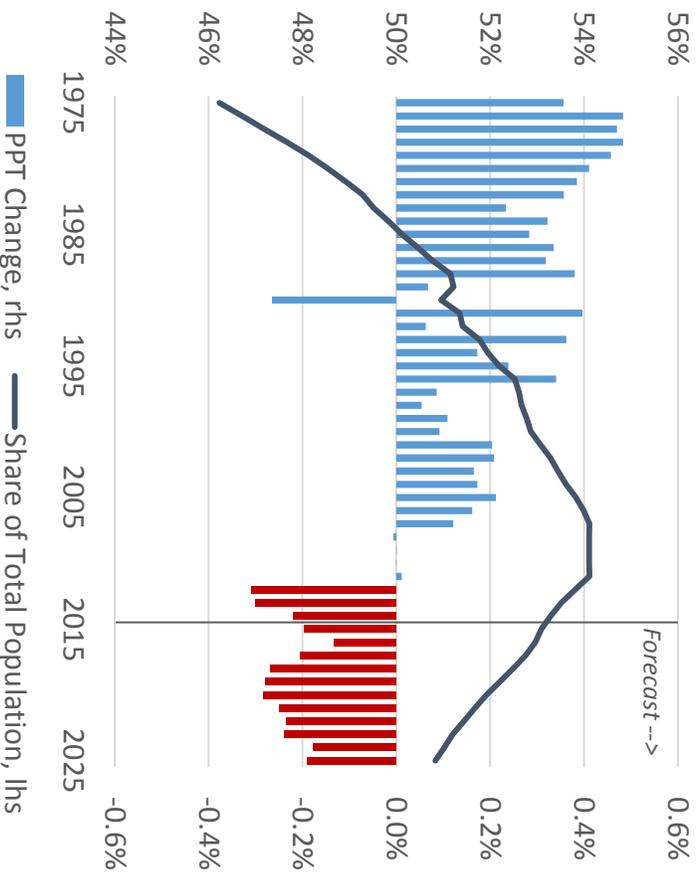


1970, 1980, 1990, 2000 Census, 2005-11 ACS, Source: IPUMS-USA.
2012-14 Author Calculations, Source: HUD, Zillow



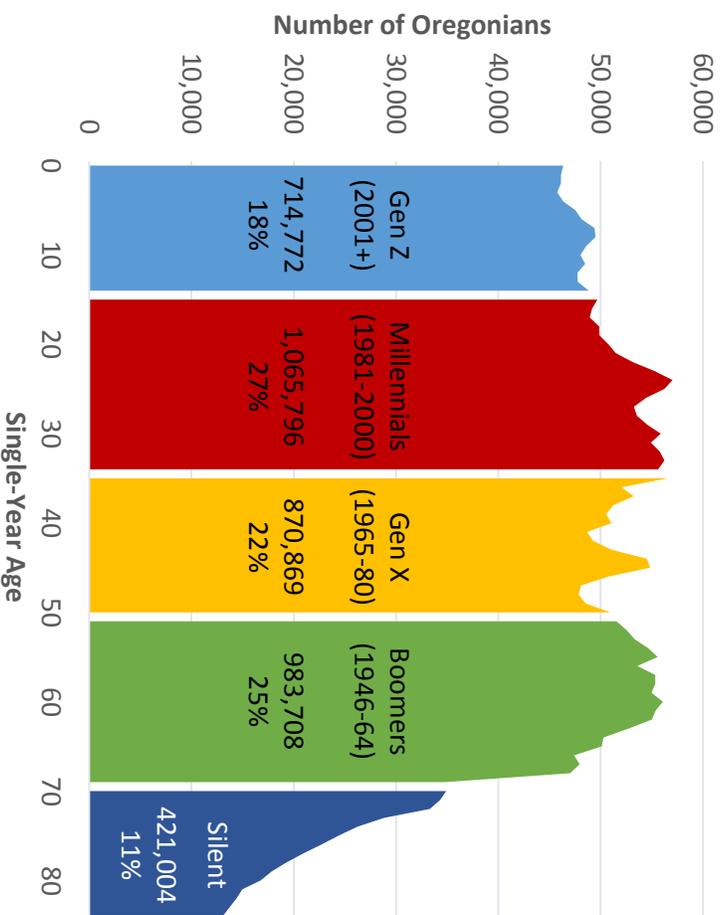
Demographics are a Mixed Bag

Oregon Working Age Population
25-64 Years Old



Source: Oregon Office of Economic Analysis

Oregon Population by Age, 2015

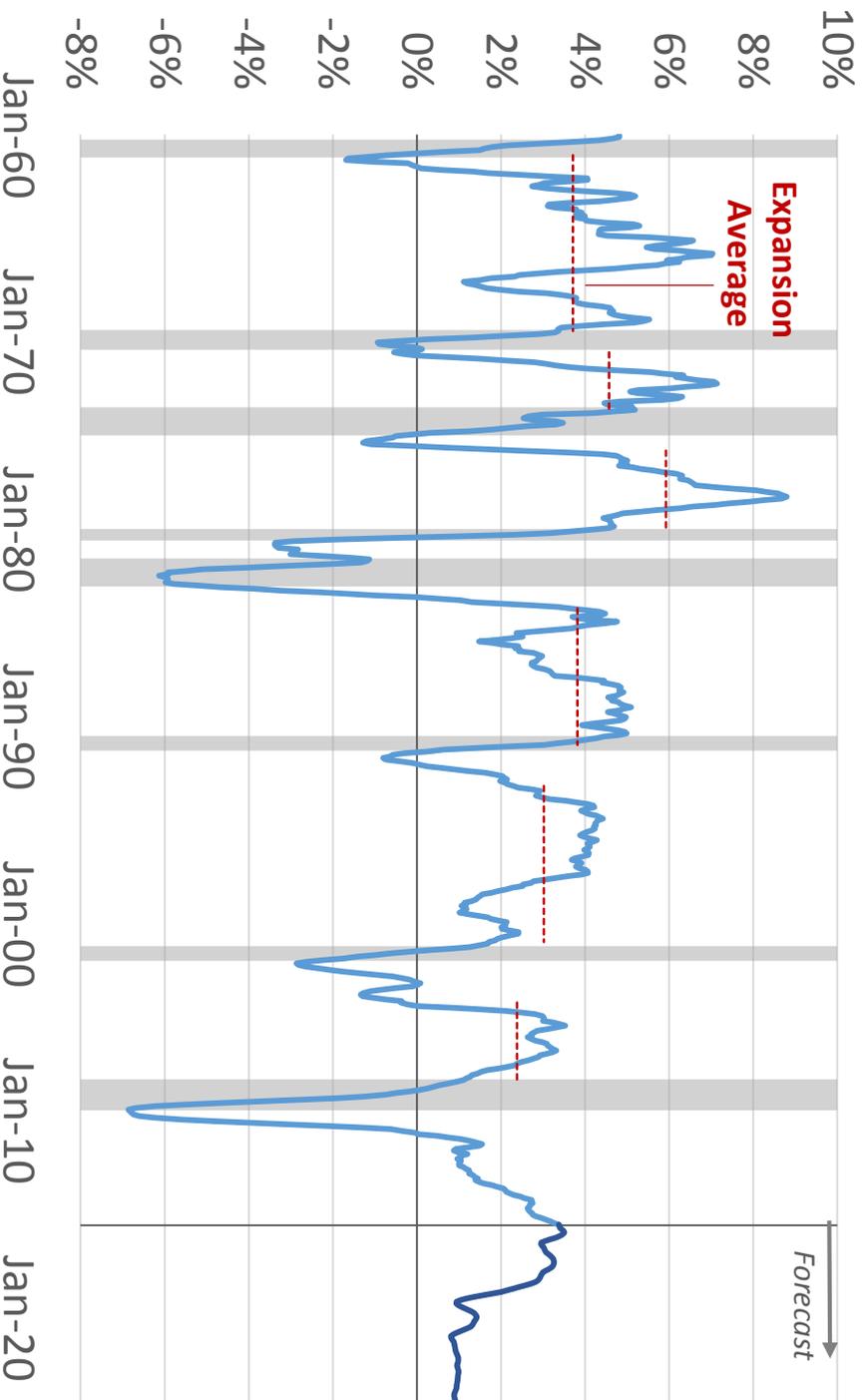


Source: Oregon Office of Economic Analysis



Outlook: Near-Term Strong, Long-Term Weak

Oregon Nonfarm Employment Growth Year-over-Year Percent Change





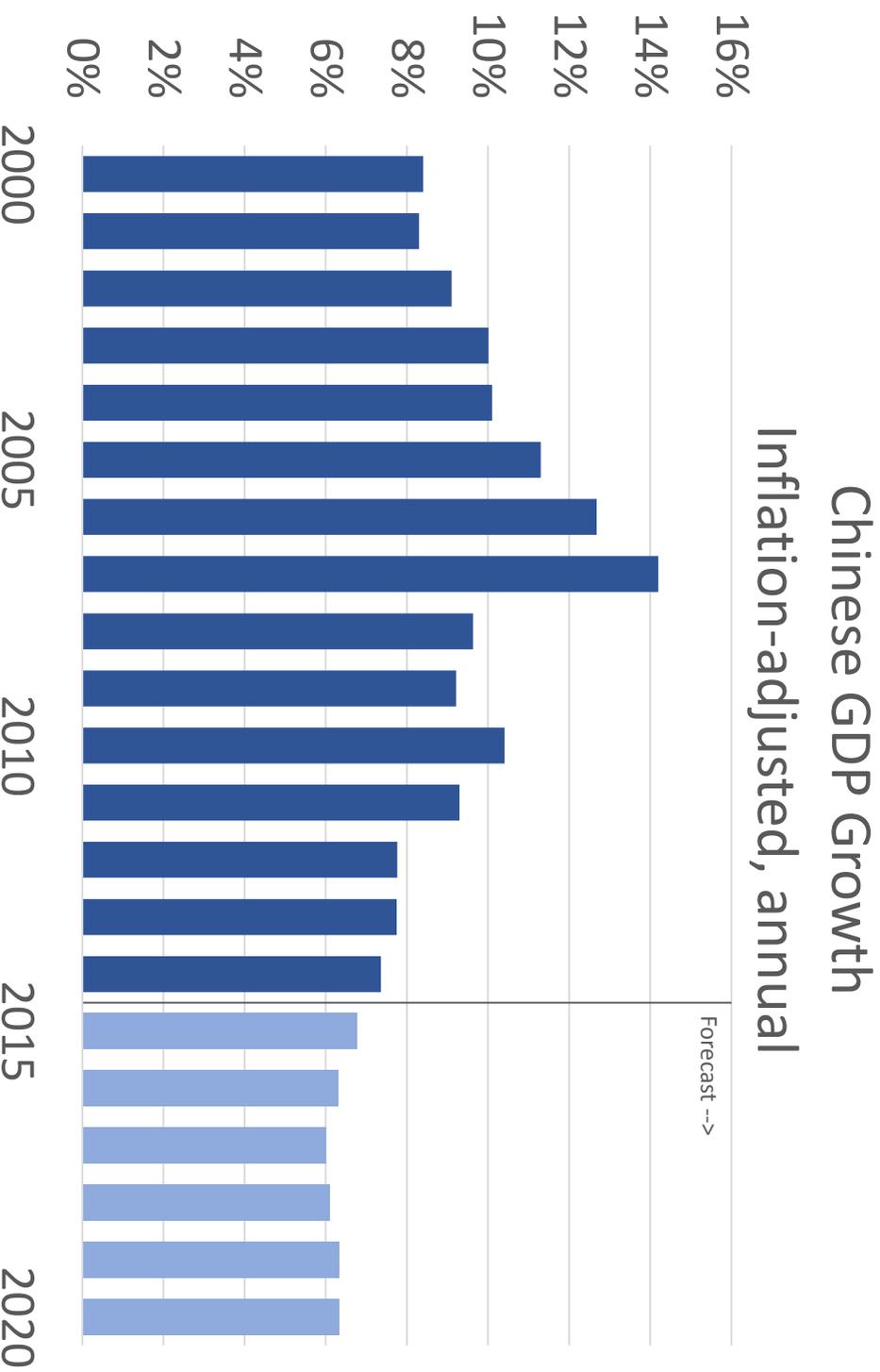
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Risks



Slower Chinese Growth, At Best

(Global growth slowing as well, not just China)

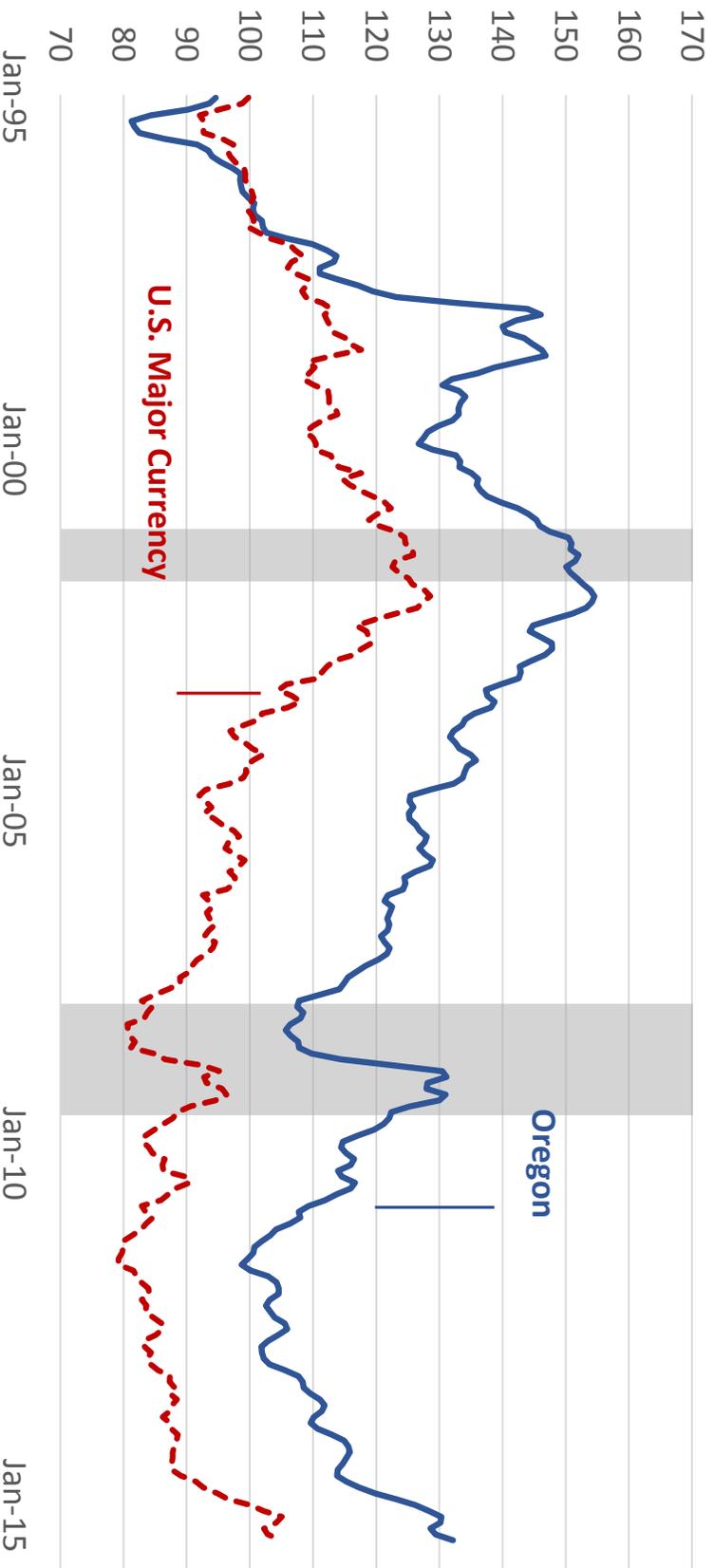


Source: IMF, Oregon Office of Economic Analysis



Terms of Trade Make Oregon/US Products More Expensive

Trade-Weighted Dollar Indexes
1996 = 100

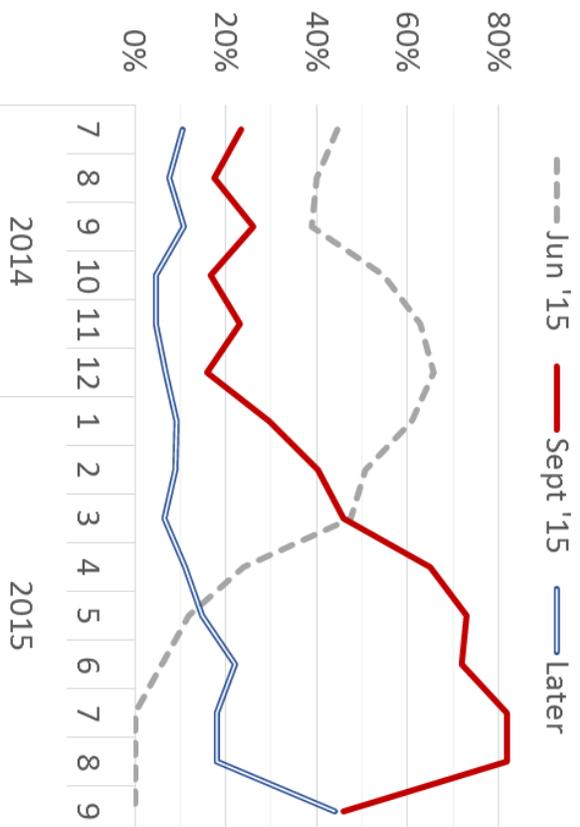


Source: Federal Reserve, Oanda, Oregon Office of Economic Analysis



Federal Reserve Held Off Raising Rates ... For Now

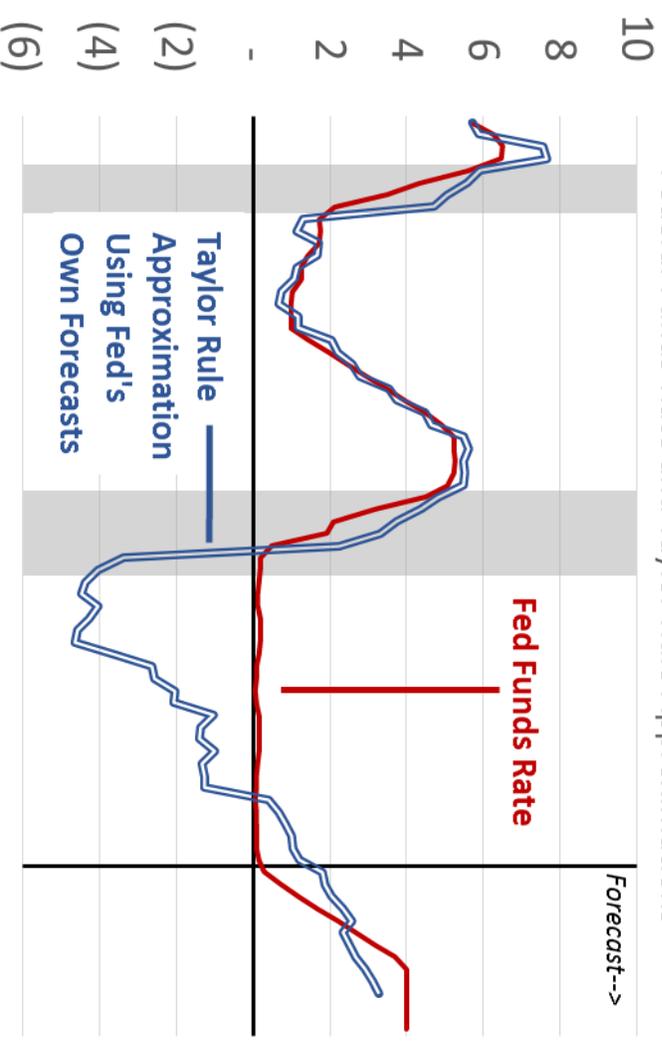
Timing the Interest Rate Hike



Source: Wall Street Journal, Oregon Office of Economic Analysis

Interest Rate Policy

Federal Funds Rate and Taylor Rule Approximations



Source: Federal Reserve, IHS, Oregon Office of Economic Analysis



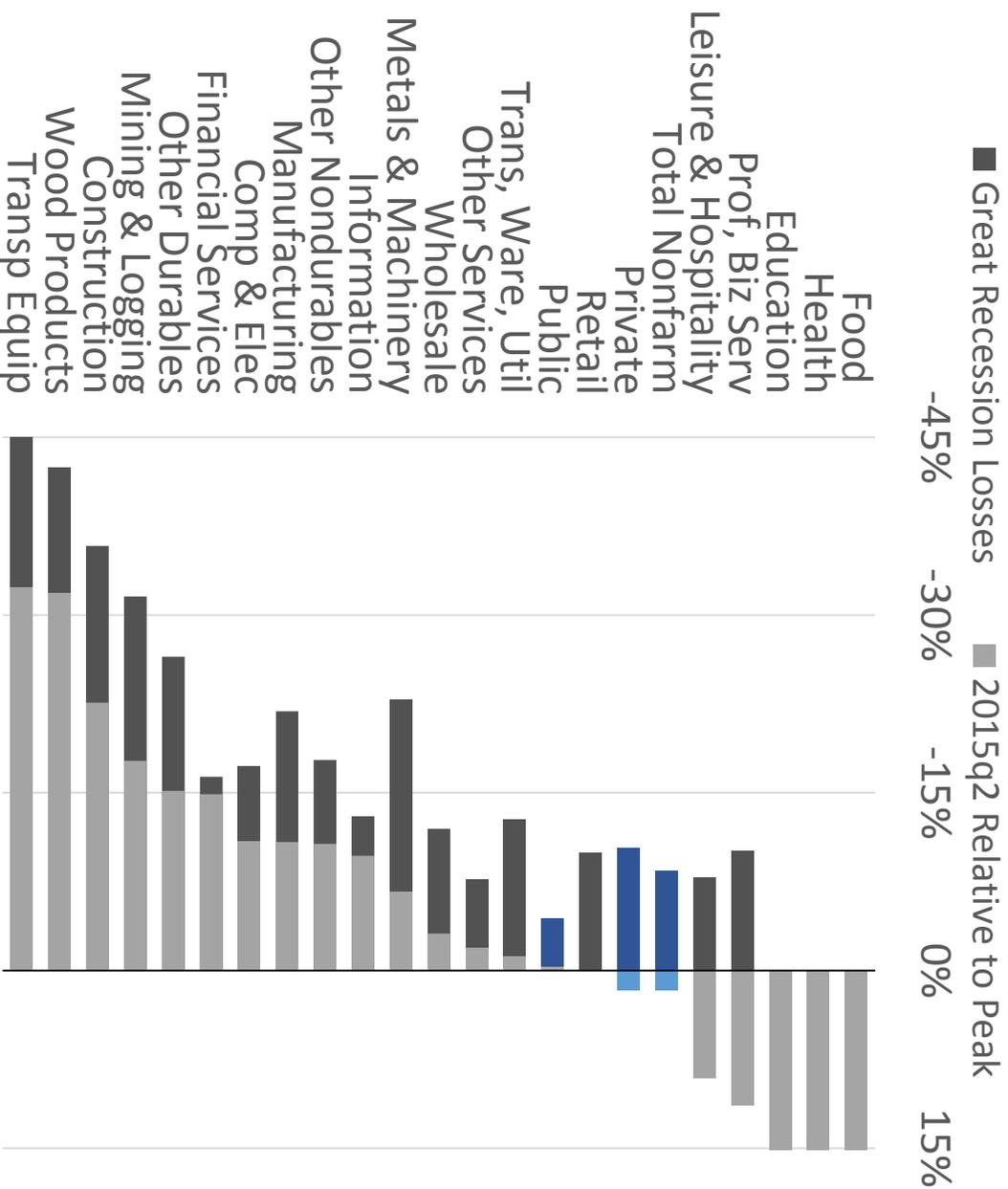
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Industry Trends



How Industries Fared Over the Business Cycle

Oregon Employment by Industry

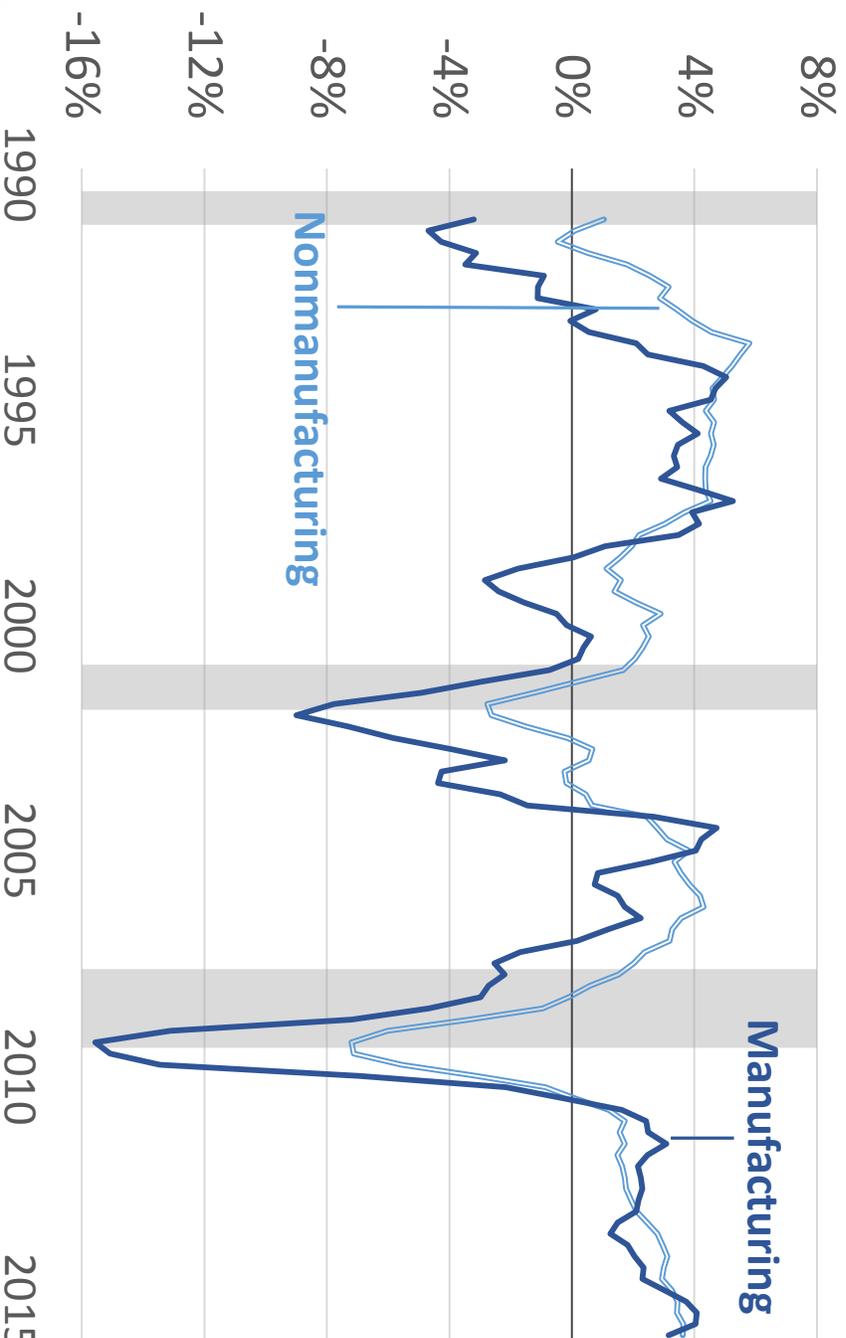




As Good As It Gets

Oregon Manufacturing Still Going Strong

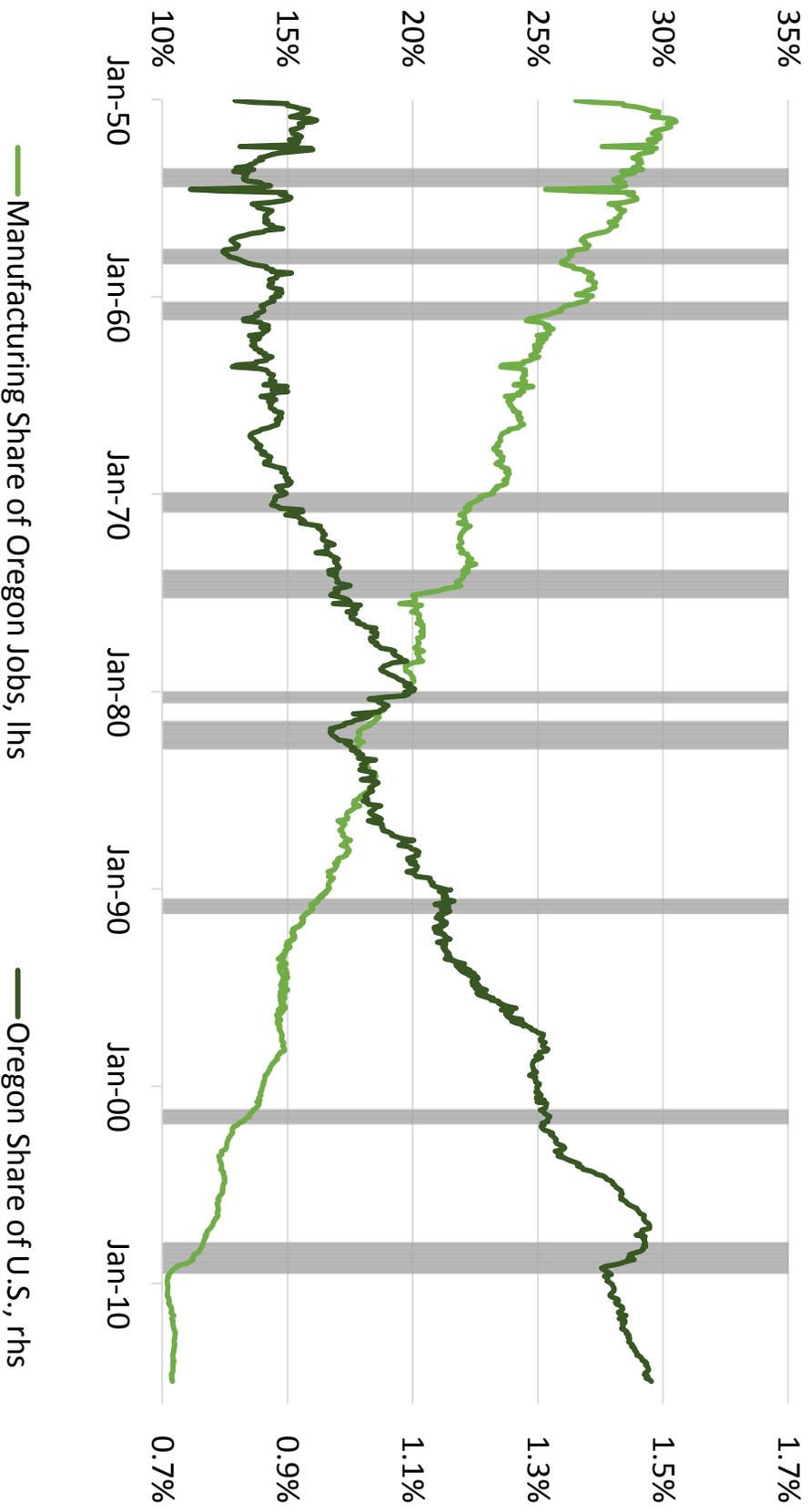
Year-over-Year Employment Change





Oregon's Comparative Advantage

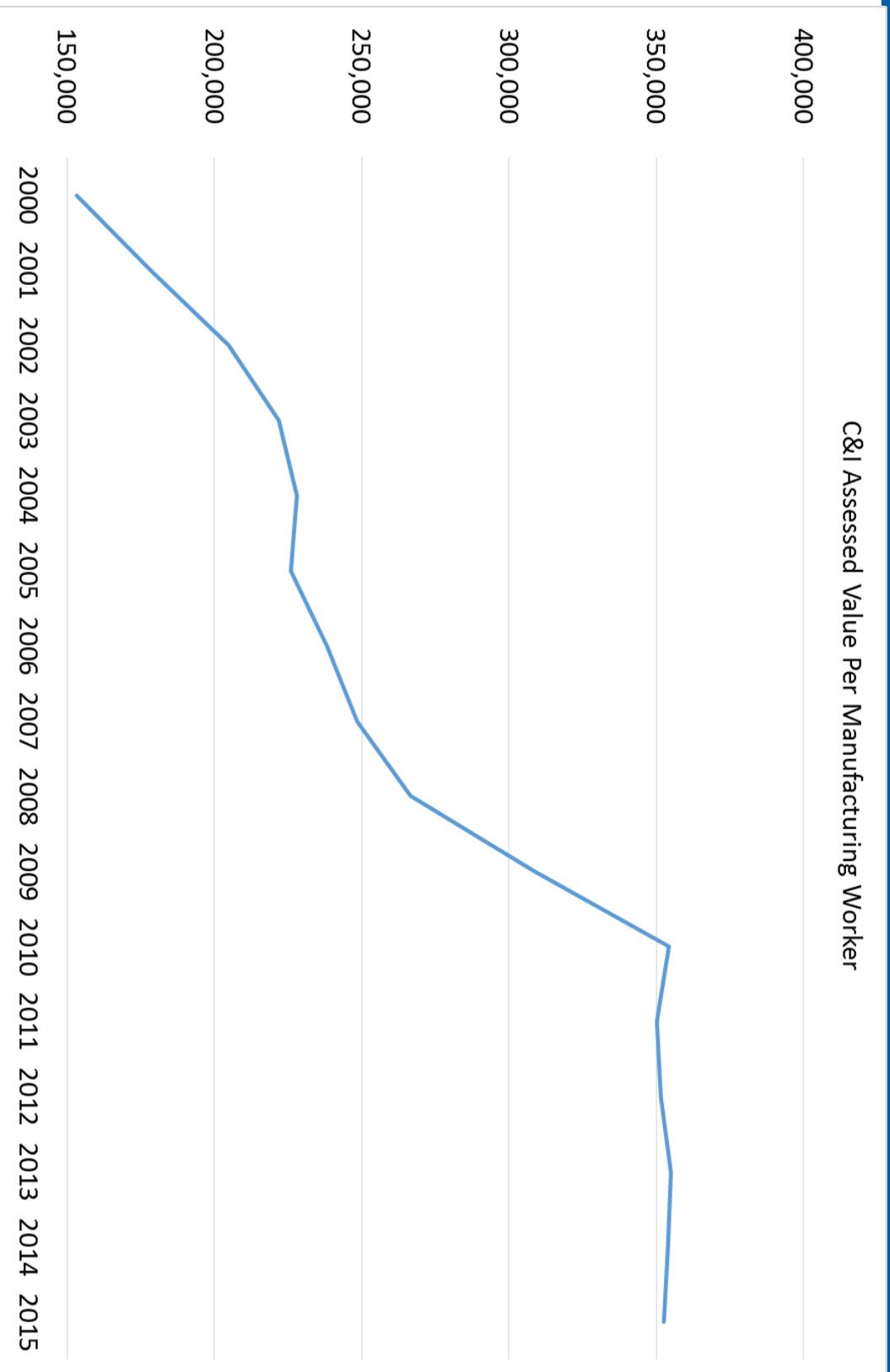
Oregon Manufacturing Employment





Not Only Robots.....

C&I Assessed Value Per Manufacturing Worker

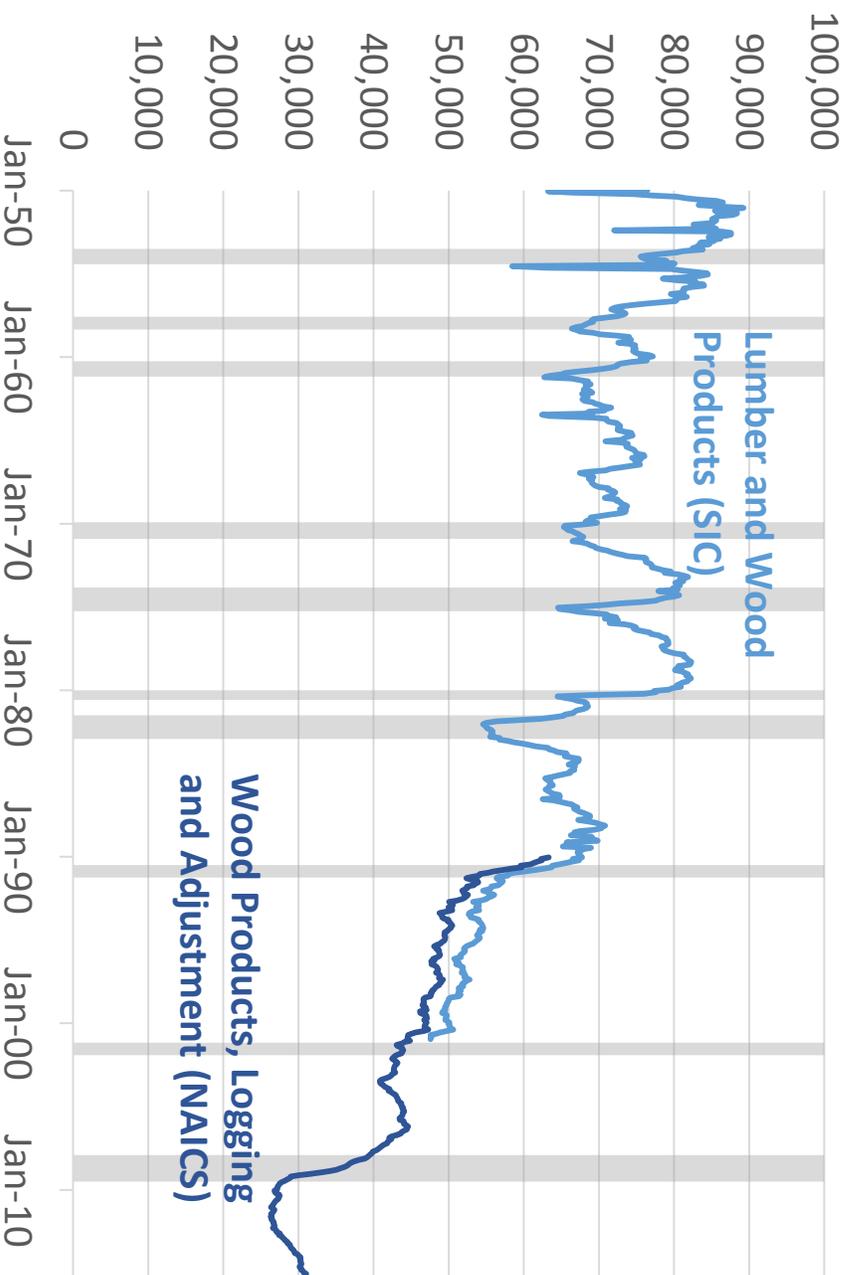




Wood Products

Oregon Wood Products Employment

1950-2015



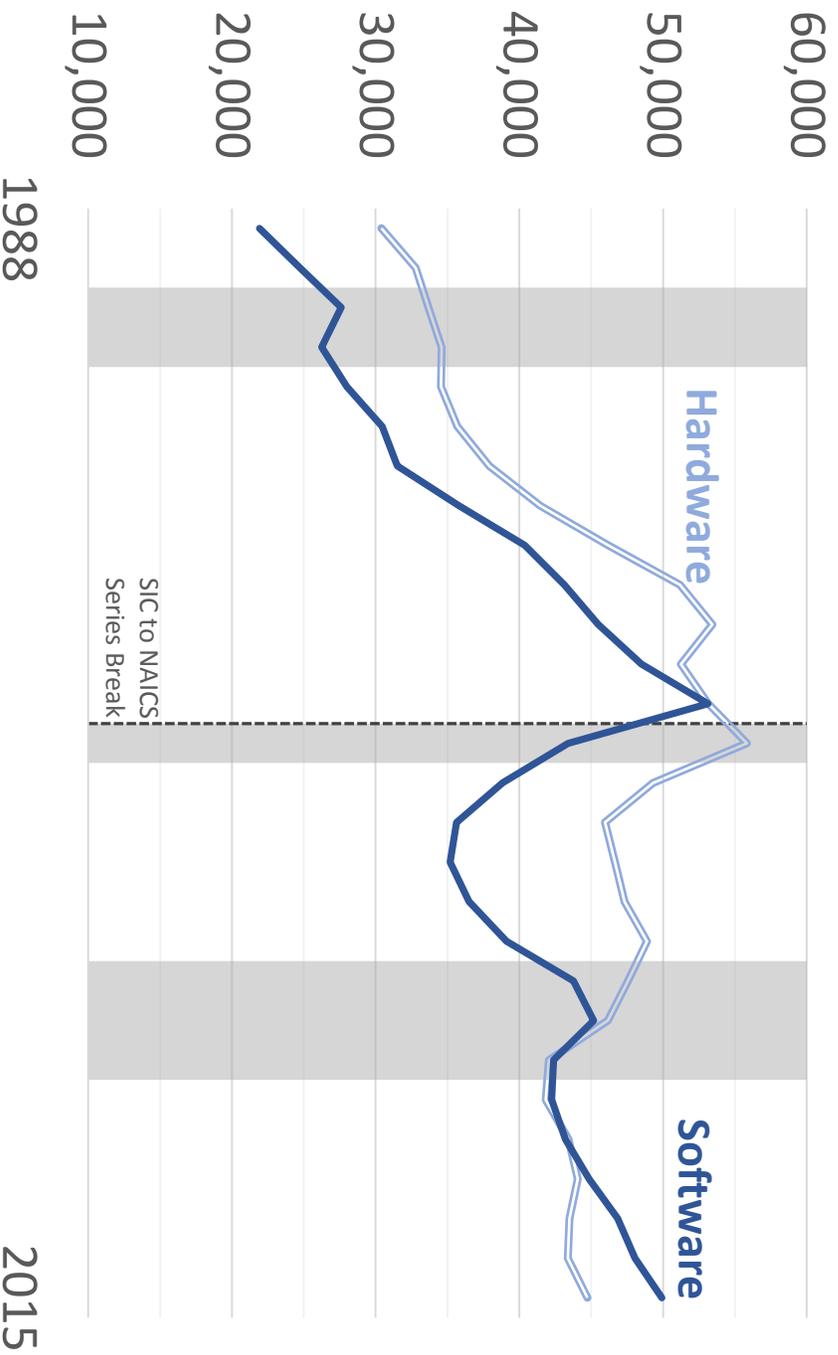
Source: Census, Oregon Employment Department, Oregon Office of Economic Analysis





High Tech

Oregon High-Tech Employment



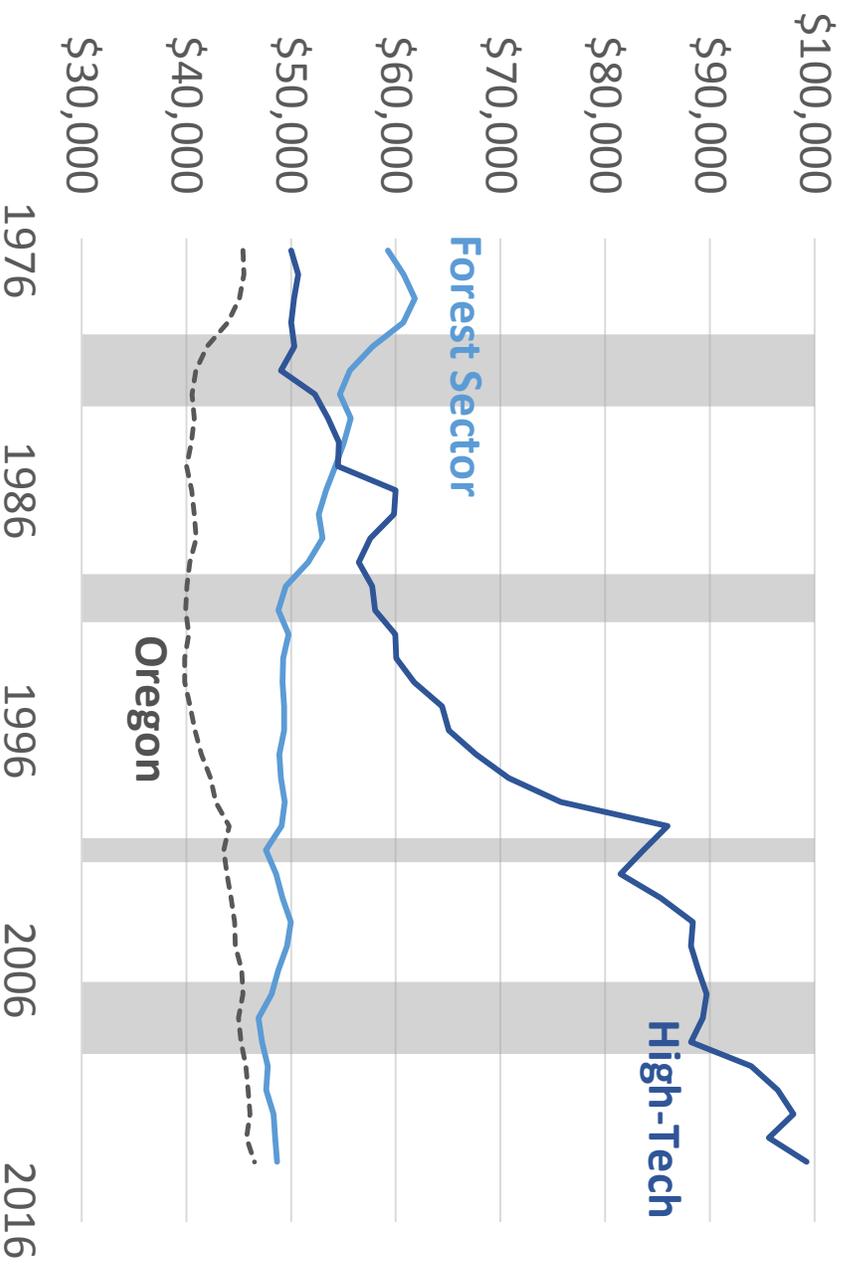
Source: Oregon Employment Department, Oregon Office of Economic Analysis





Wage Trends

Real Average Wages, 2014 \$



Oregon Employment Department, Oregon Office of Economic Analysis





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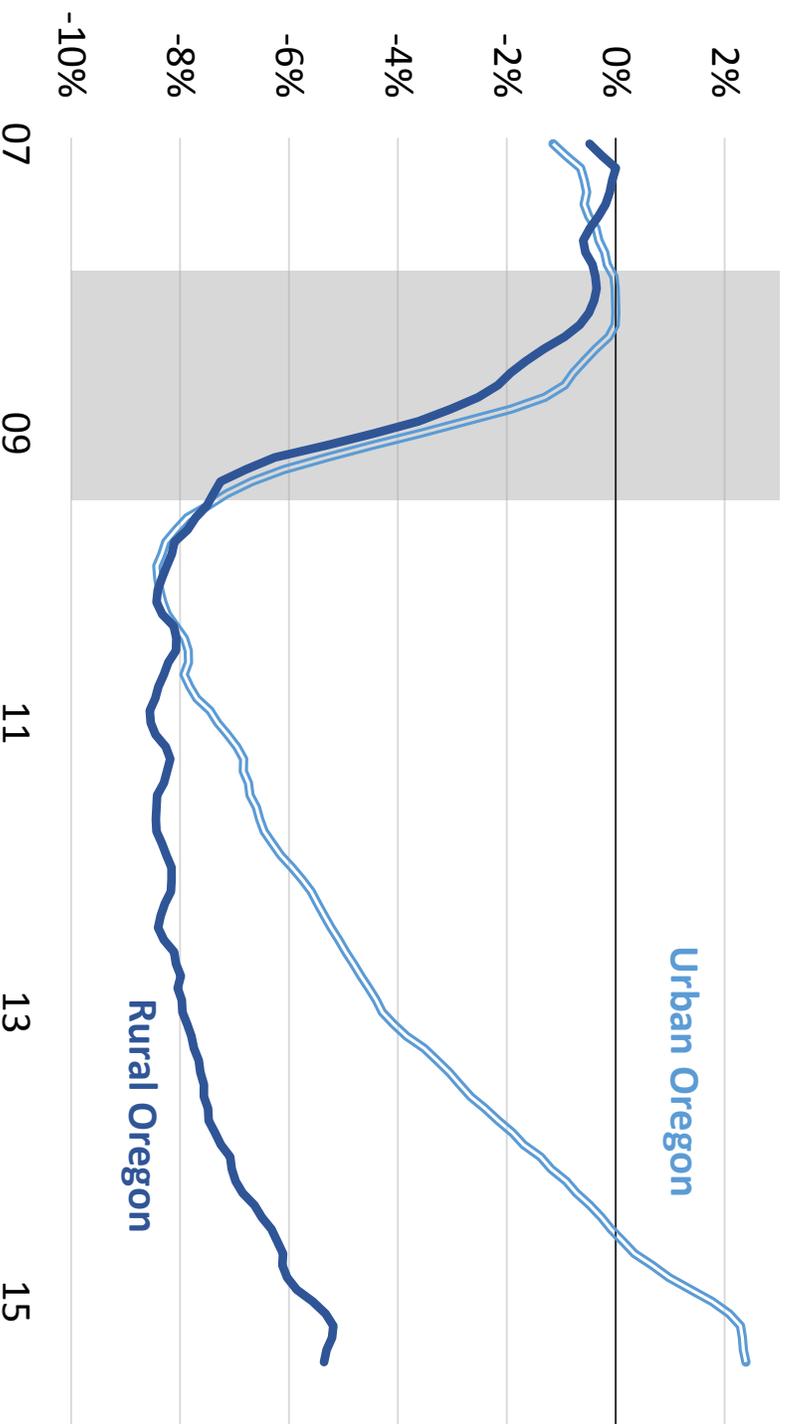
Rural Oregon



Rural Oregon is Finally Adding Jobs...

Oregon and the Great Recession

Employment Change From Pre-Recession Peak



Data: Seasonally-Adjusted, 3 Month Average, Latest data point: June 2015

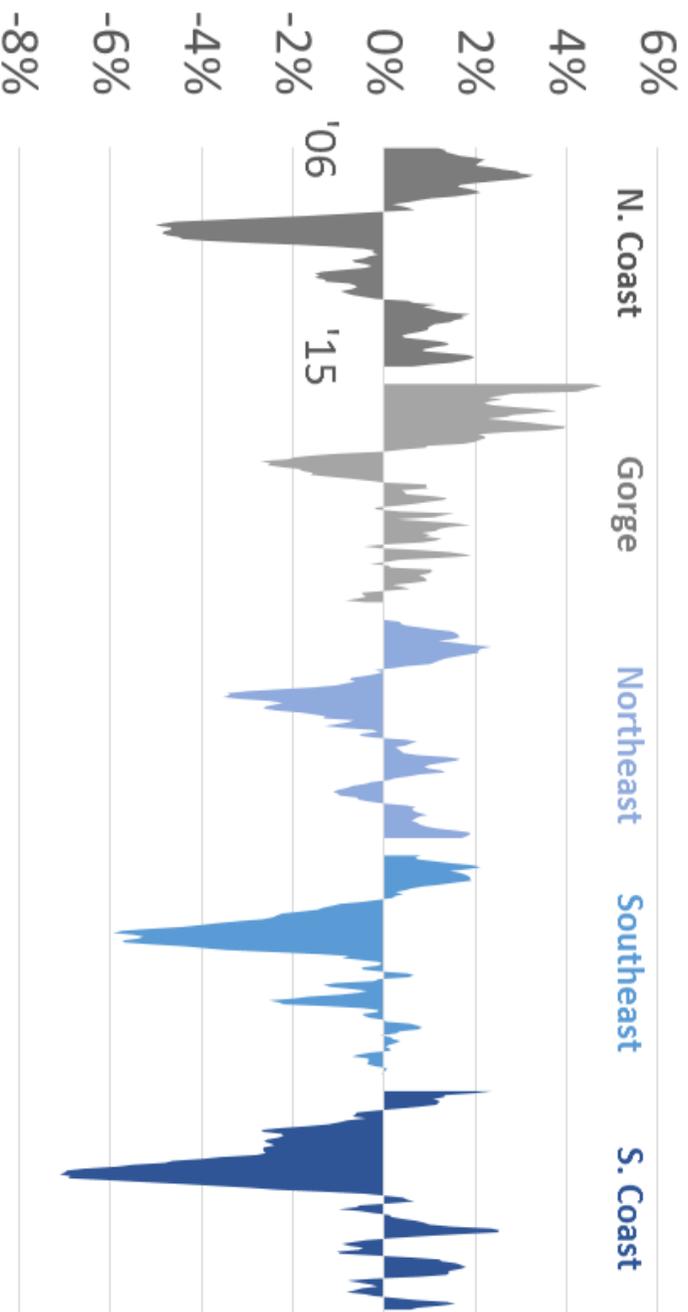
Source: Oregon Employment Department, Oregon Office of Economic Analysis





...With Northern Counties Leading the Way

Rural Oregon Job Growth Year-over-Year Percent Change



N. Coast: Clatsop, Lincoln, Tillamook | Gorge: Gilliam, Hood River, Sherman, Wasco, Wheeler
Northeast: Baker, Grant, Morrow, Union, Wallowa | Southeast: Harney, Klamath, Lake, Malheur
S. Coast: Coos, Curry | Source: Oregon Employment Department, Oregon Office of Economic Analysis

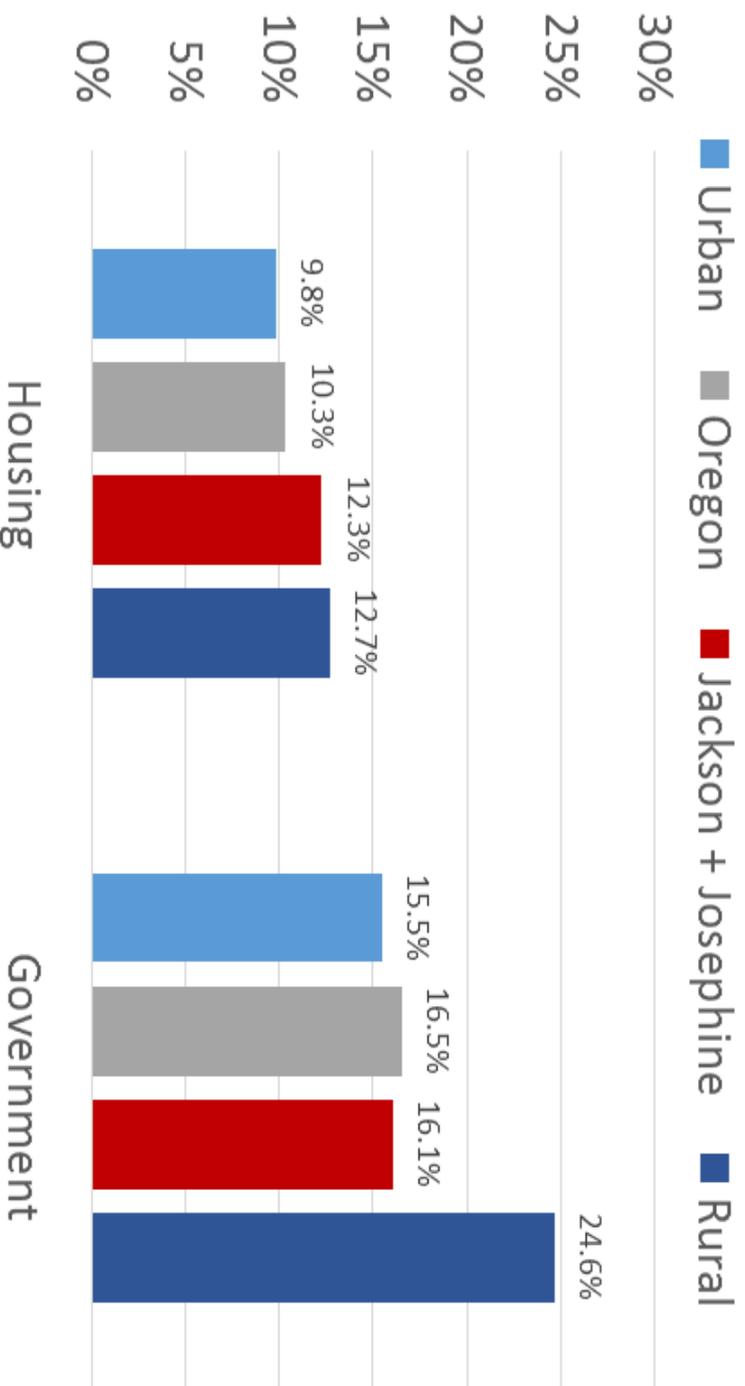




Exposure to Housing

Housing and Government in Oregon

Share of Local Payroll, 2007



Housing = Construction, Wood Product Manufacturing, Furniture Stores, Building Material and Garden Supply Store, Real Estate | Data: 2007 QCEW | Source: Oregon Employment Department, Oregon Office of Economic Analysis



Sources of Strength

While Broad Prosperity is Lacking, Most Regions Are Growing

- On the coast, dairy, fishing and tourism are strong
- In the gorge, beer, drones and fruit are doing well
- Out east, manufacturing expanding, wheat harvests have been good and Morrow is booming
- Down south, timber industry is adding some jobs and migration flows are returning





Migration to Oregon: Friend or Foe?

Governor Tom McCall

“We want you to visit... Come again and again. But for heaven’s sake, don’t move here to live. Or if you do have to move in to live, don’t tell any of your neighbors where you are going.”

“The interests of Oregon for today and in the future must be protected from grasping wastrels of the land... unlimited and unregulated growth leads inexorably to a lowered quality of life.”

“Oregon, queen bee though she is, is not yet ready for the swarm”.



Sources: Oregon Historical Society, OPB/Mike Sherk

Governor Vic Atiyeh

“I just got really irritated... I’m trying to build the economic diversification of the state, and I keep hearing this: ‘Aren’t you the guys that want us to visit but don’t stay?’”

Atiyeh: “*I want to go down there and blow up that damn sign*”

Cabinet: “*Yeah, yeah, okay, governor.*”

Atiyeh: “*No! I want to put dynamite under that thing and blow it up.*”

Cabinet: “*You can’t do that, governor.*”

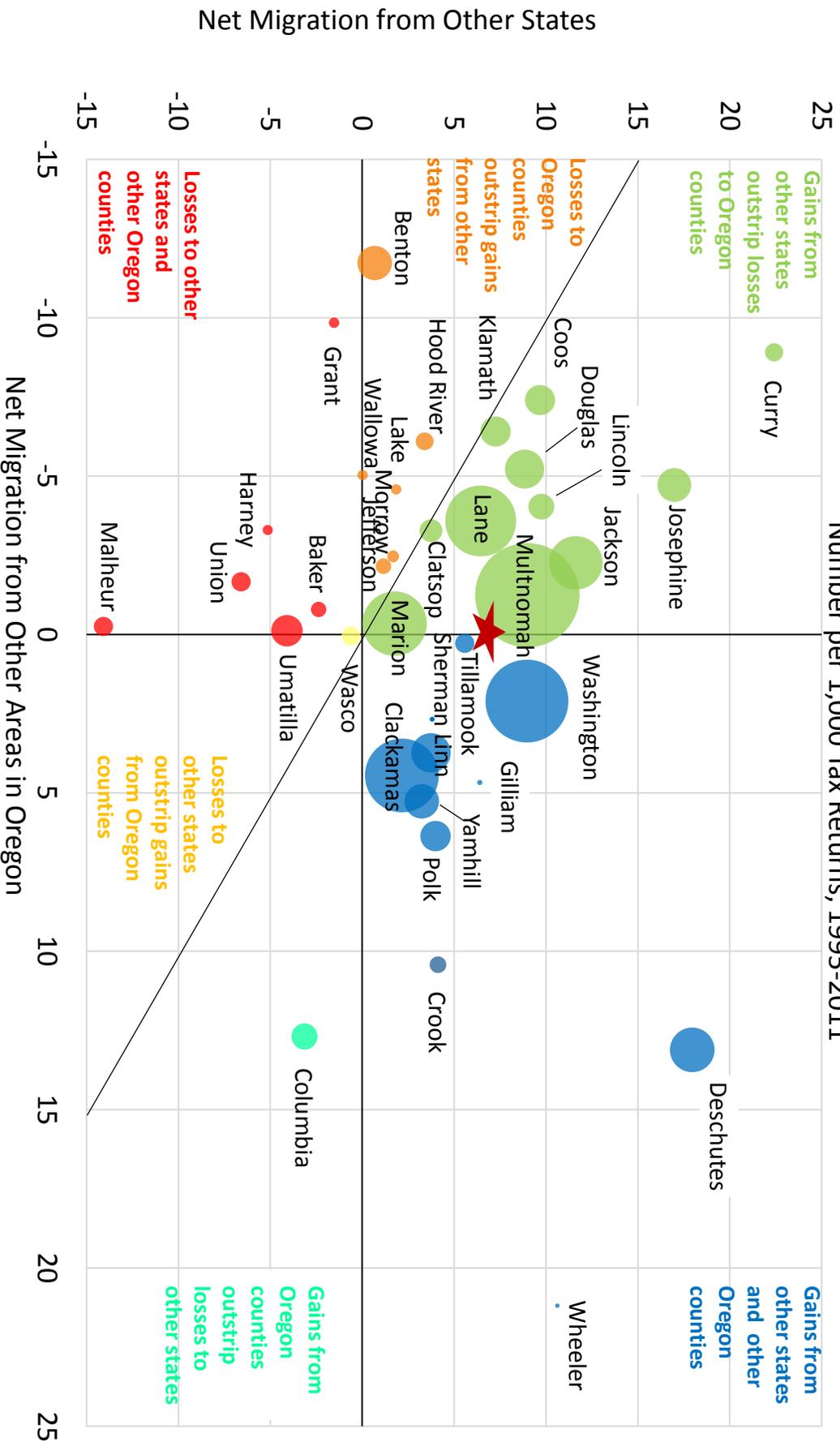
Atiyeh: “*Yes, I can. I want to blow that thing up.*”



Most of Oregon is Attractive to Out-of-Staters

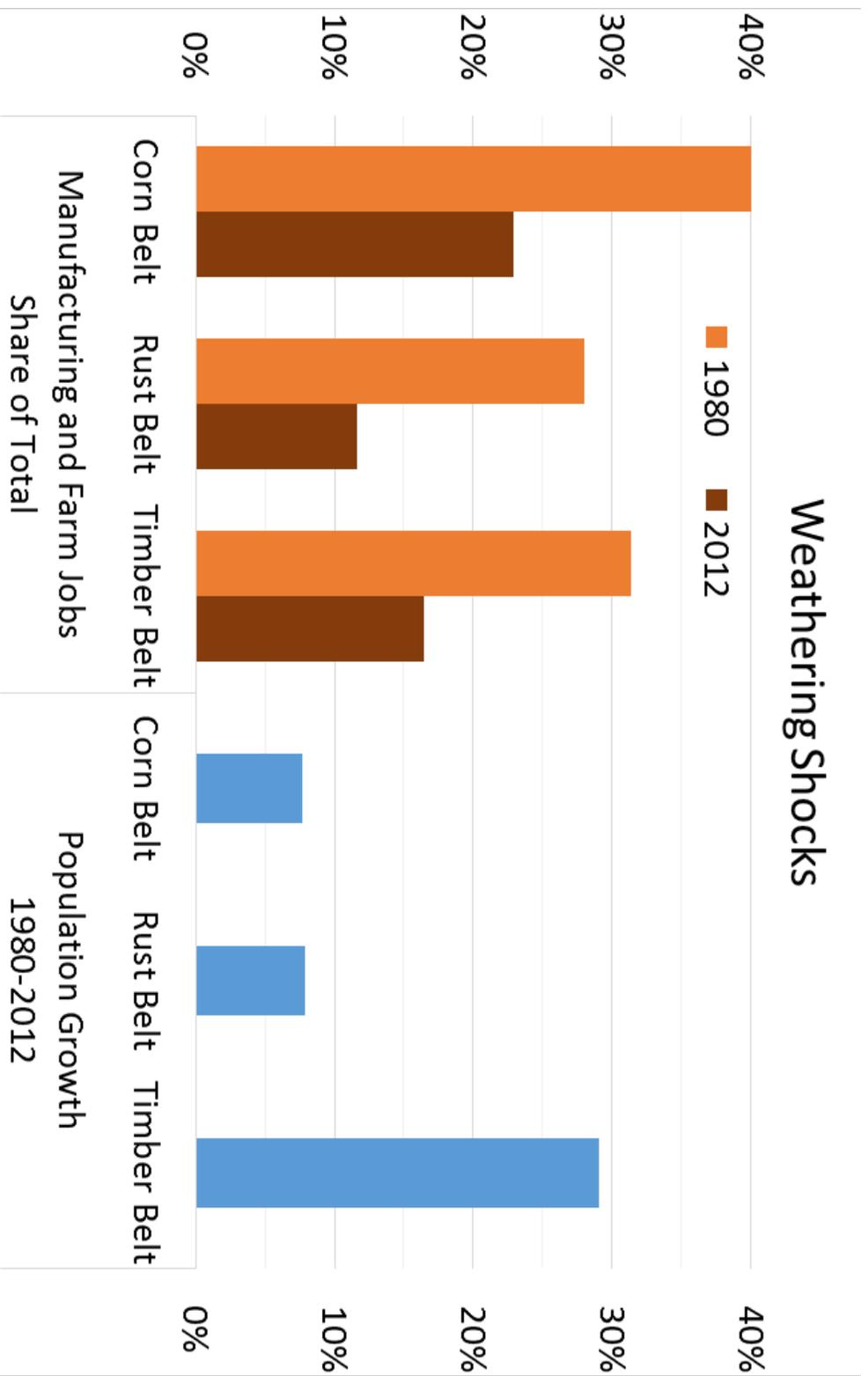
Net Migration of Tax Filers:

Number per 1,000 Tax Returns, 1995-2011





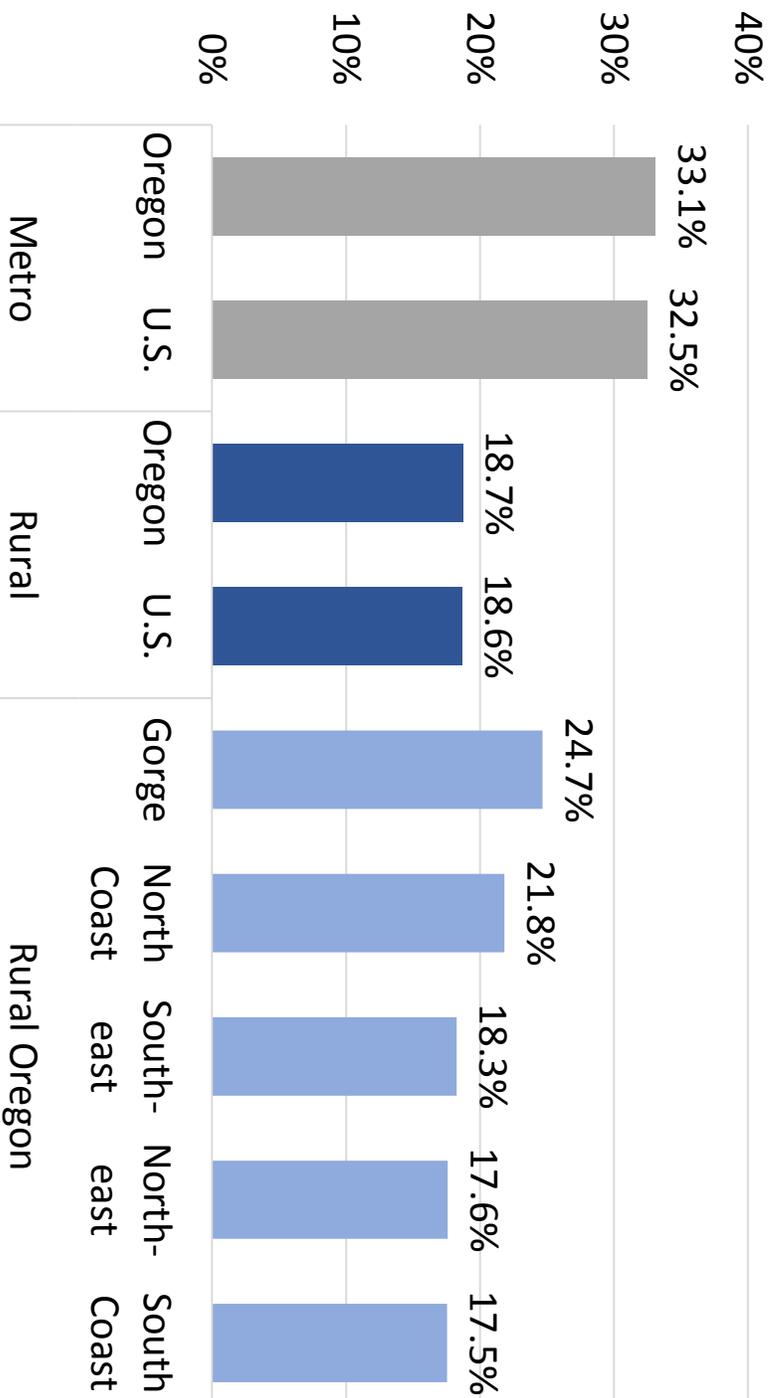
This is Unique: Timber Belt Population





Educational Attainment Among Working-Age Households

Share with Bachelor's Degree or Higher, 25-64 Year Olds



Data: 2013 ACS, 5 Year Estimates | Source: Census, USDA, Oregon Office of Economic Analysis

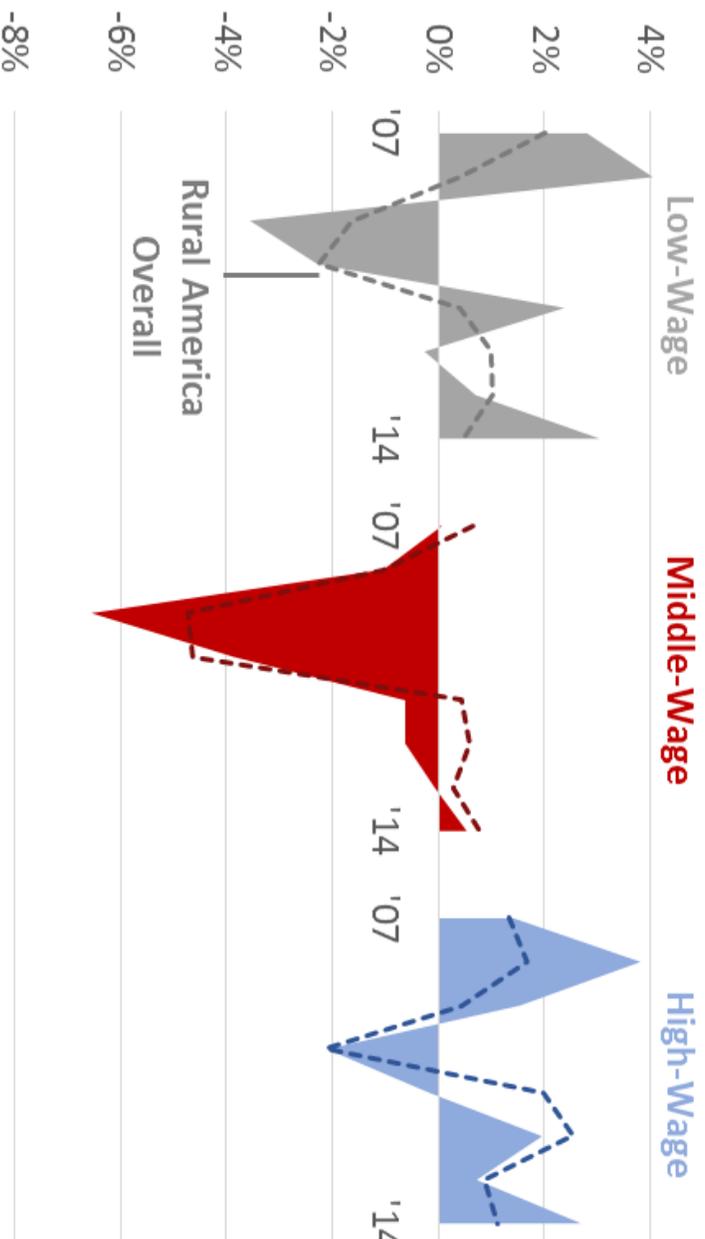
- Gorge and N. Coast rank among best rural areas in entire country
- Rest of Rural Oregon right around the average yet above the typical area (above the median)





Quality of Jobs in Rural Oregon

Rural Oregon Job Growth



Categories based on median wage for major occupational groups as US level
 Source: BLS, Oregon Office of Economic Analysis

Rural job growth slower than metros

Middle-wage jobs lacking everywhere

High-wage jobs stronger in rural Oregon than rural America over past decade





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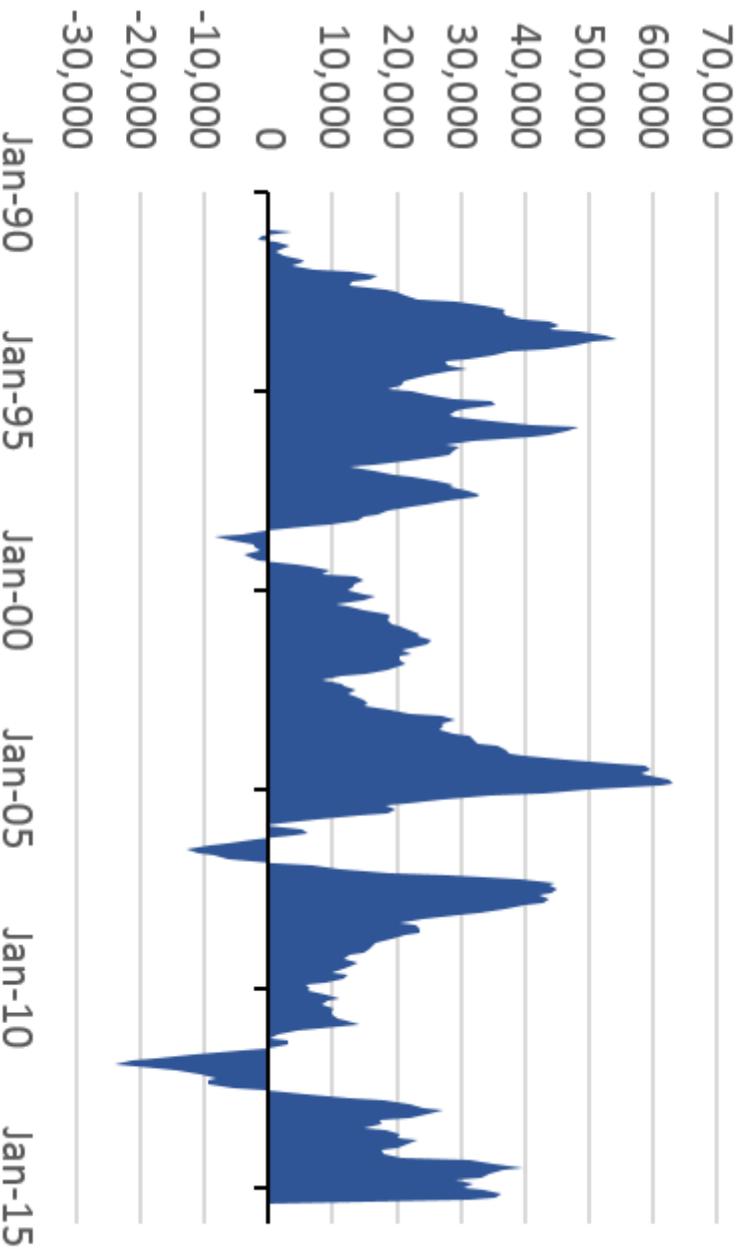
Housing



Housing Demand Has Returned

Oregon Household Formation

Year-over-Year Change, 12 Mth Avg



Data: Current Population Survey, Latest Data: May '15

Source: Census, Oregon Office of Economic Analysis

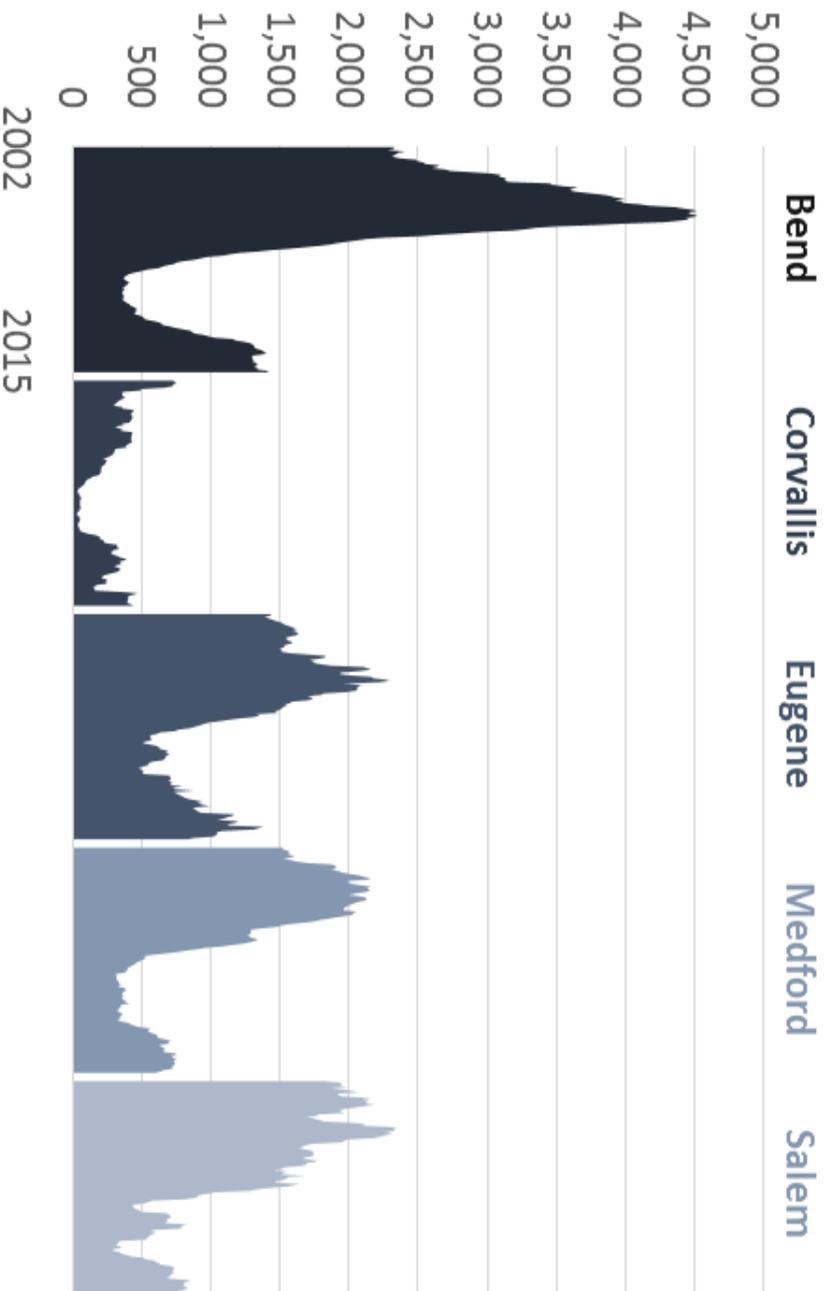




Yet Building Recovery Incomplete

New Construction Uneven

Jan 2002 - July 2015, 12 Month Sum



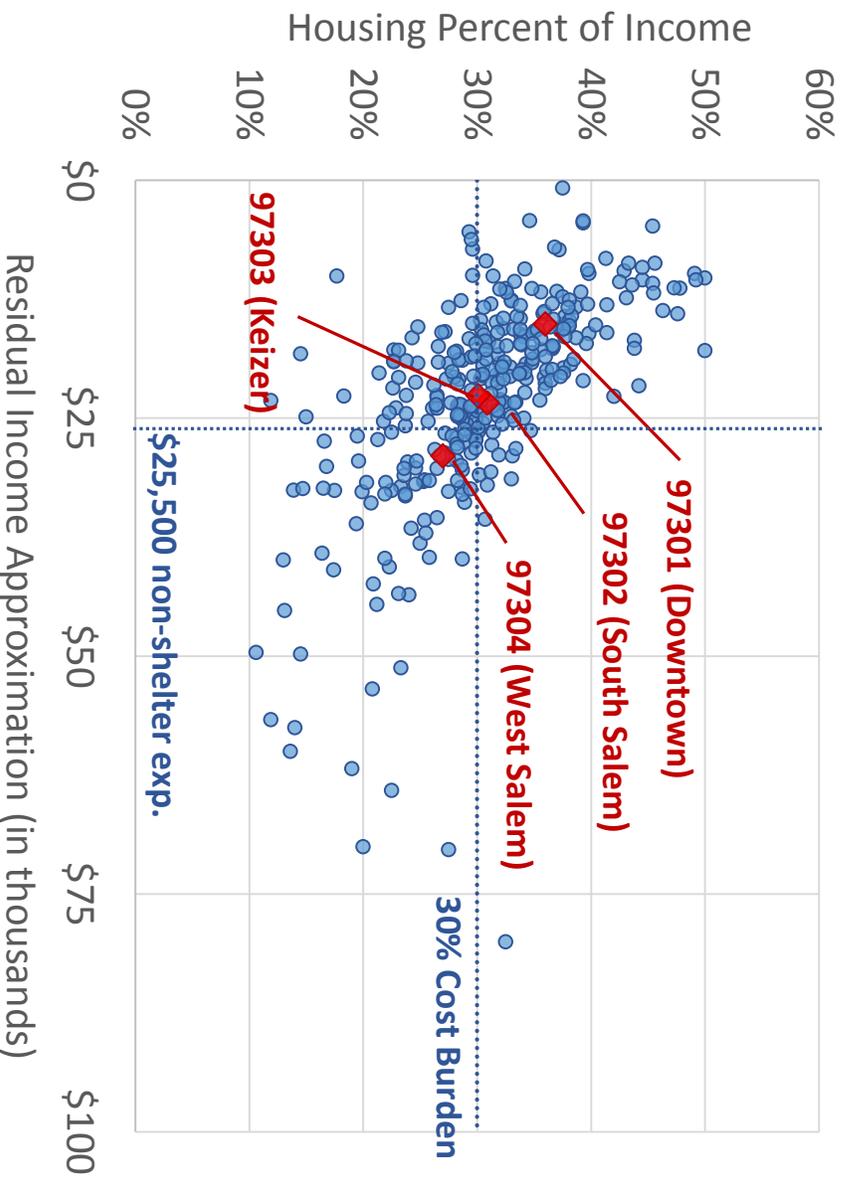
Source: Census, HUD, Oregon Office of Economic Analysis





Renters Facing Financial Squeeze Across the State

Oregon Renter Affordability



Source: BLS, Census, Oregon Office of Economic Analysis

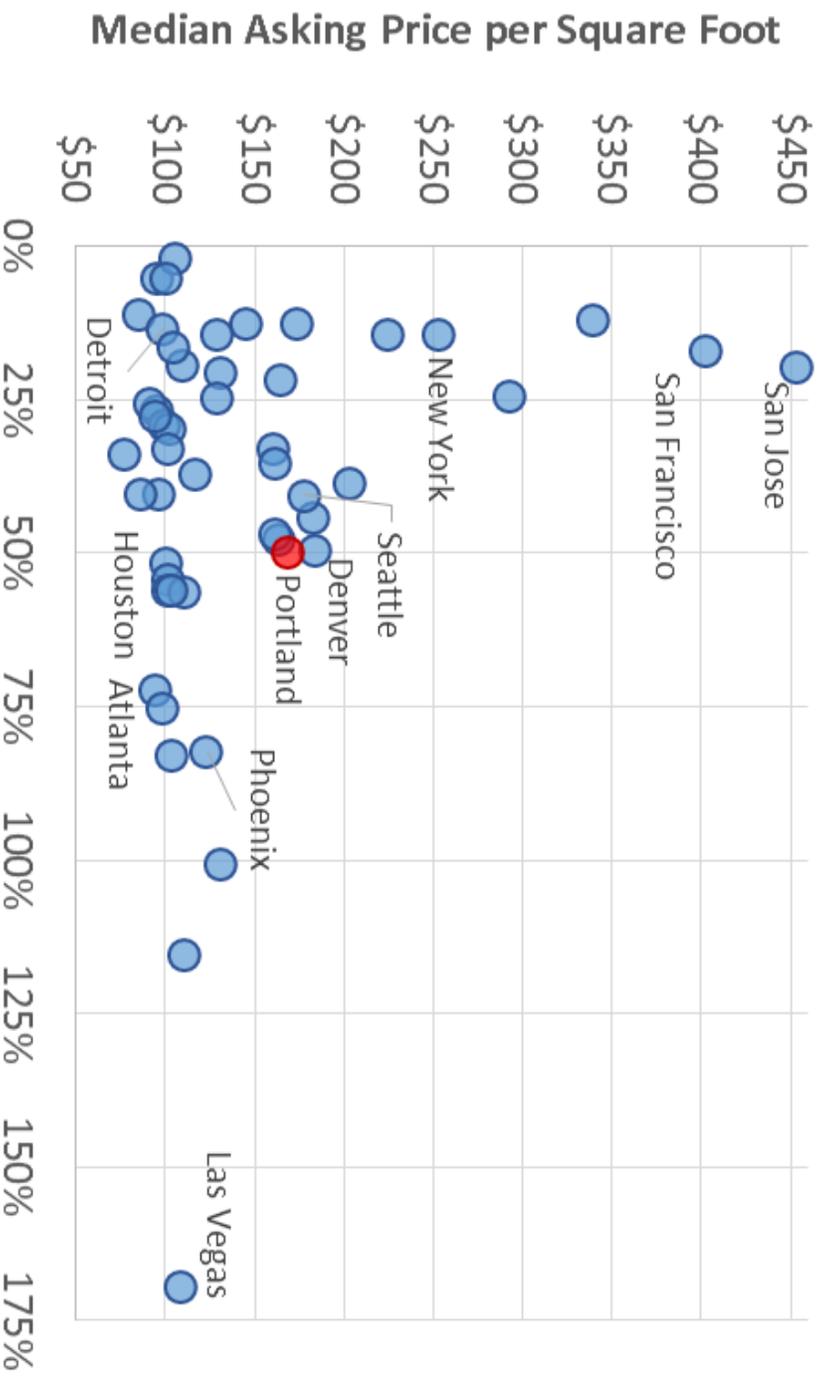
- The typical renter in 54% of zip codes are cost burdened
- 70% of zip codes face residual income issues





Portland's Challenge

Expensive Markets Do Not Build Much



Housing Unit Growth, 1990-2013

Source: Census, Zillow, Oregon Office of Economic Analysis

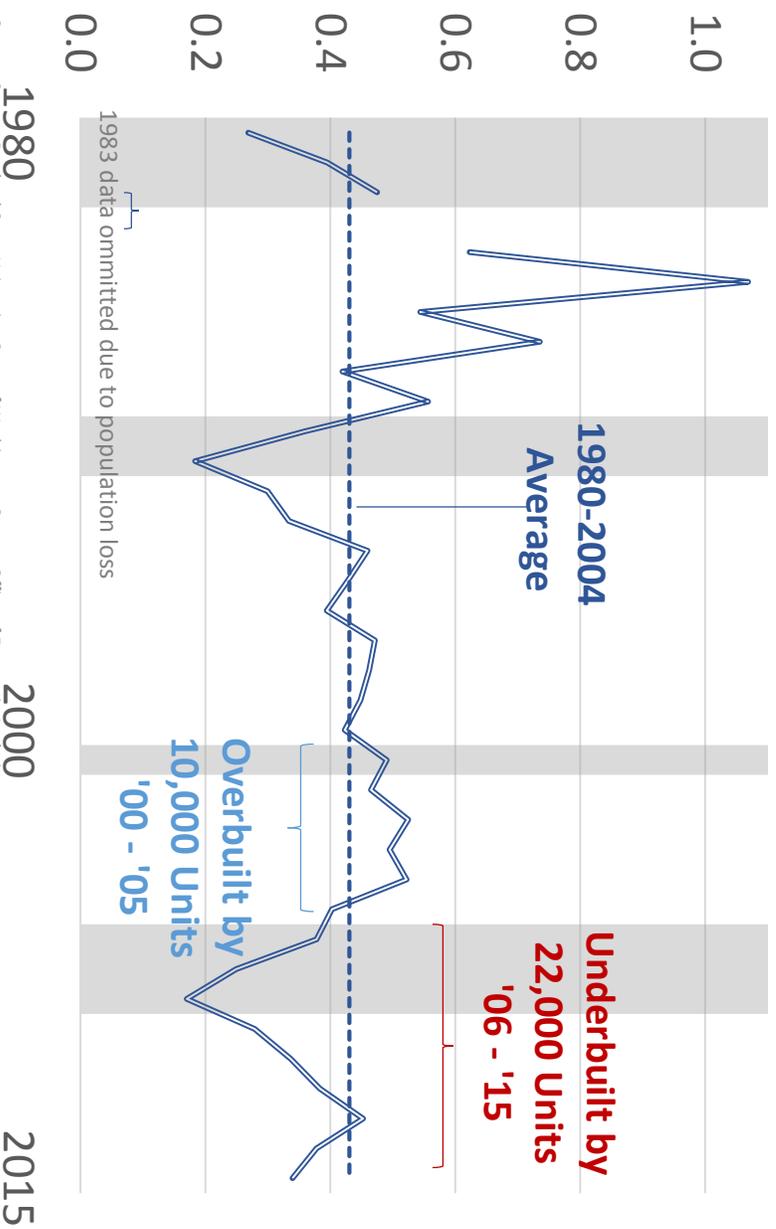




Portland's Challenge

New Construction and Population Growth

Portland MSA Housing Permits per Population Change



Source: Census, Portland State University, State of Washington, Oregon Office of Economic Analysis

- Challenge is maintaining supply to keep pace
- Current market is supply constrained
 - “Shortage of cities”
- Sub-markets and niches can be overbuilt however

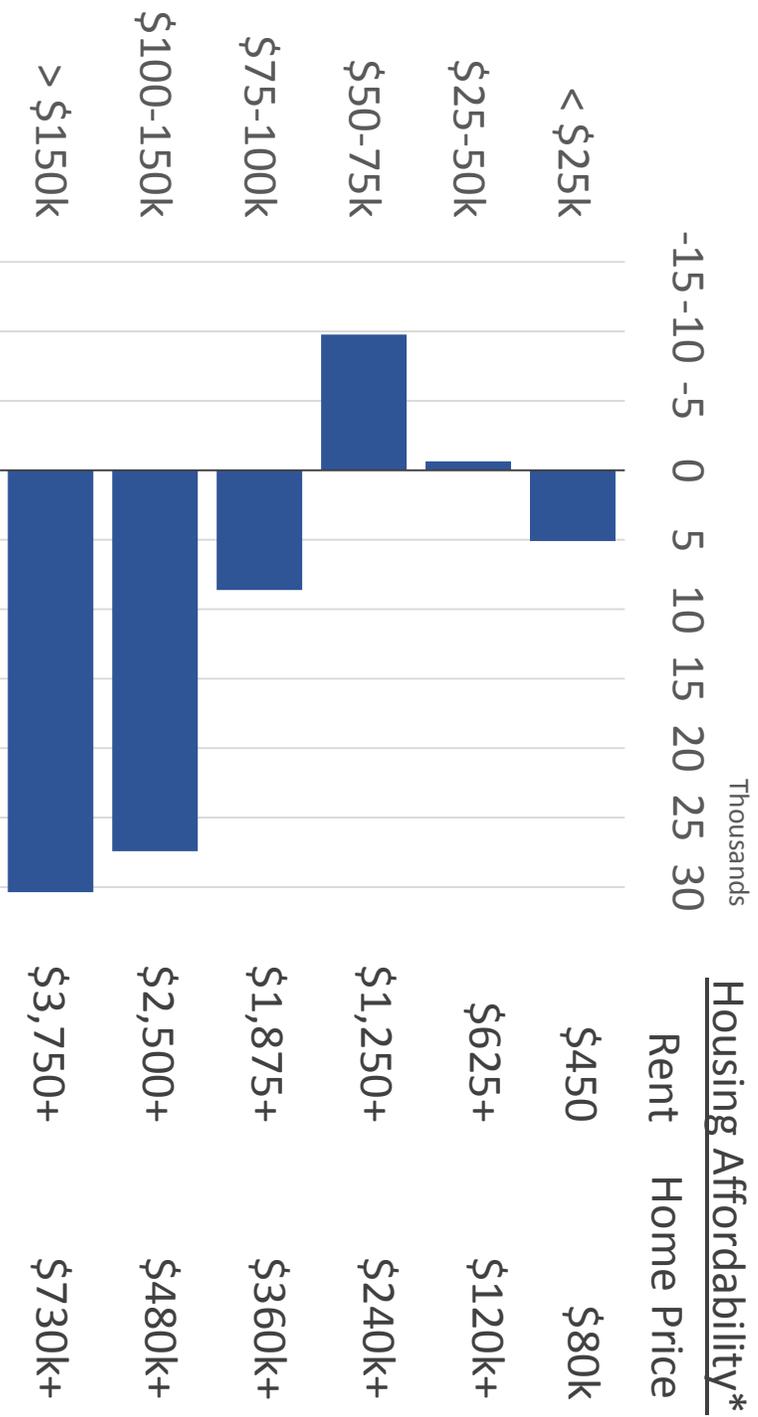




More High Income Households Today

Portland MSA Households by Income

Change from 2007 to 2014



*Monthly housing costs equal to 30% of income. Home price assumes 20% down payment, 4% 30 year fixed mortgage, average property taxes and homeowners insurance. | Source: Census, Oregon Office of Economic Analysis

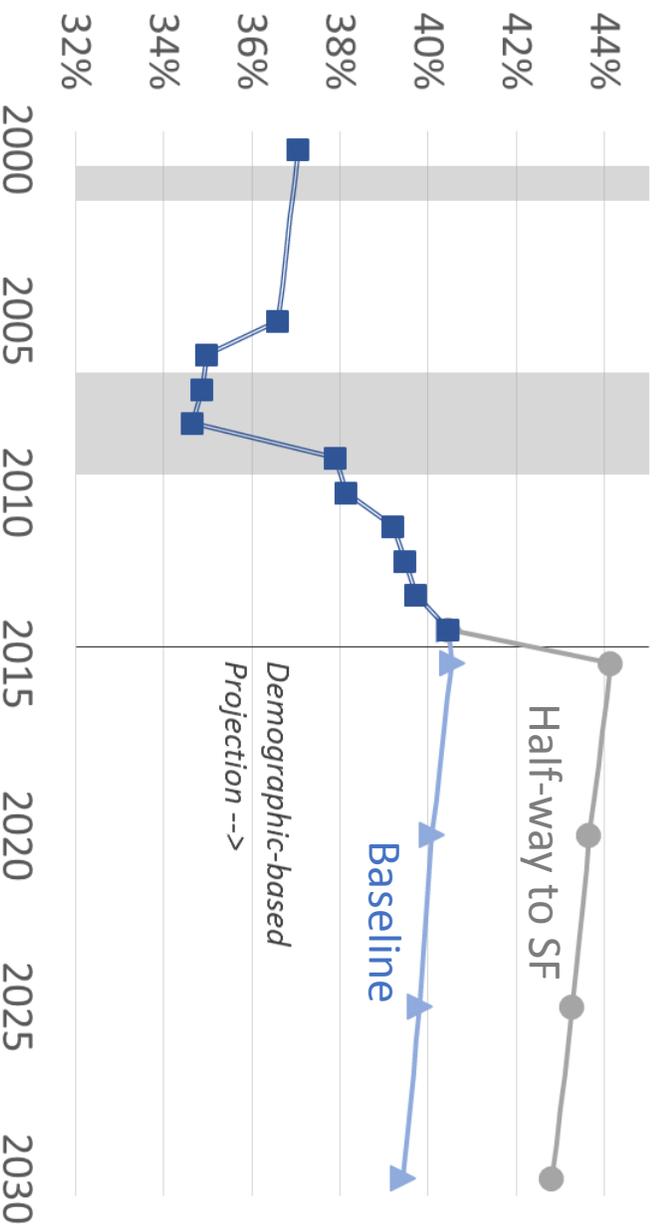




Is 2015 Peak Renter? Maybe

Portland Metro Renters

Share of All Households that are Renters



Projection fixes headship rates by age cohort at 2015. Figures based on ACS data. Then adjusts for age/demographic forecast. | Source: Census, IHS, Oregon Office of Economic Analysis

Main Renter Factors

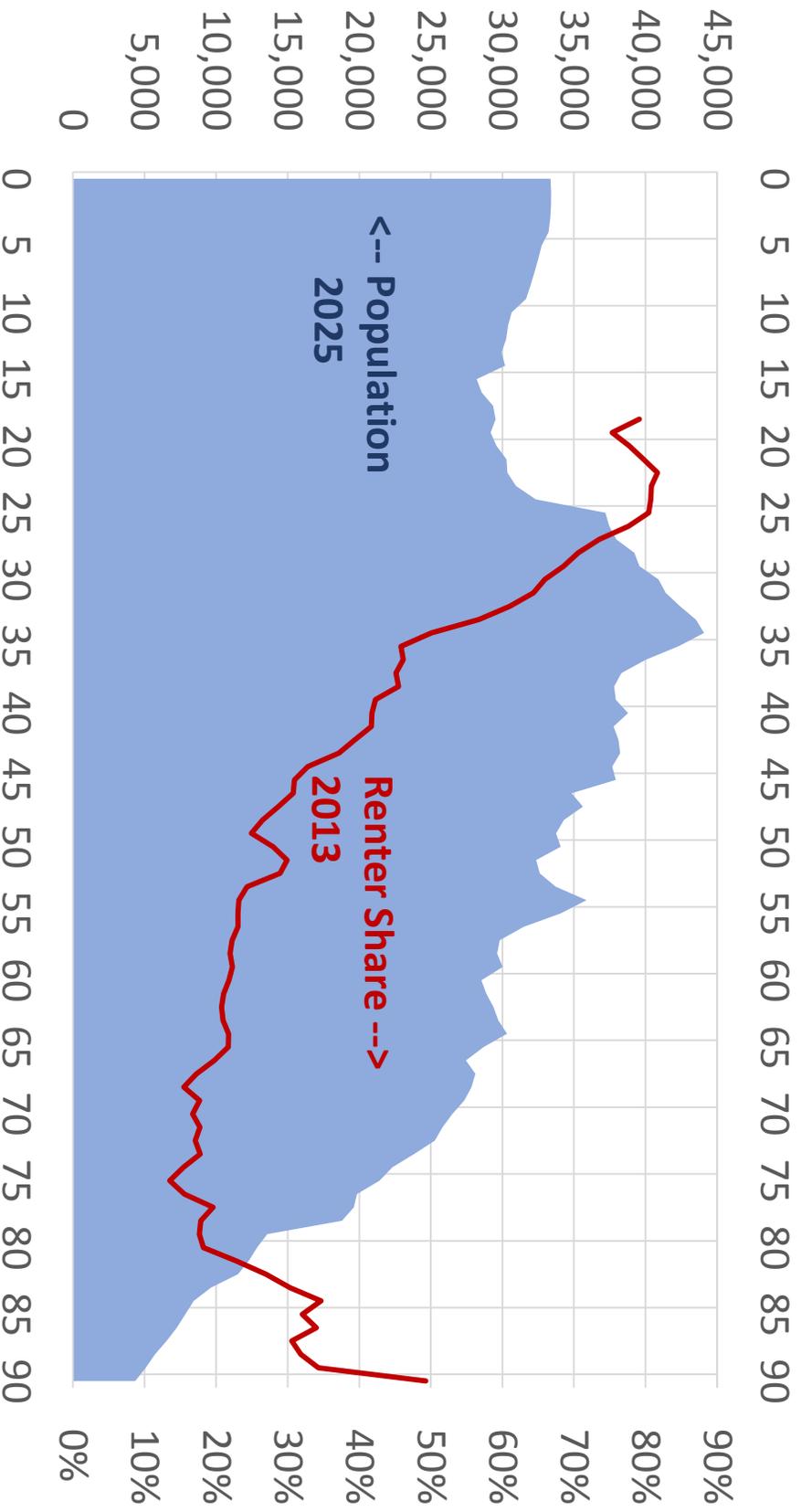
- Demographics
 - Millennials will age
 - Boomers downsize?
- Finances
 - Improving for HH
 - Lending will loosen
- Preferences
 - Harder to gauge
 - Some of shift is permanent





Demographics 2025

Portland MSA: Demographics and Renting

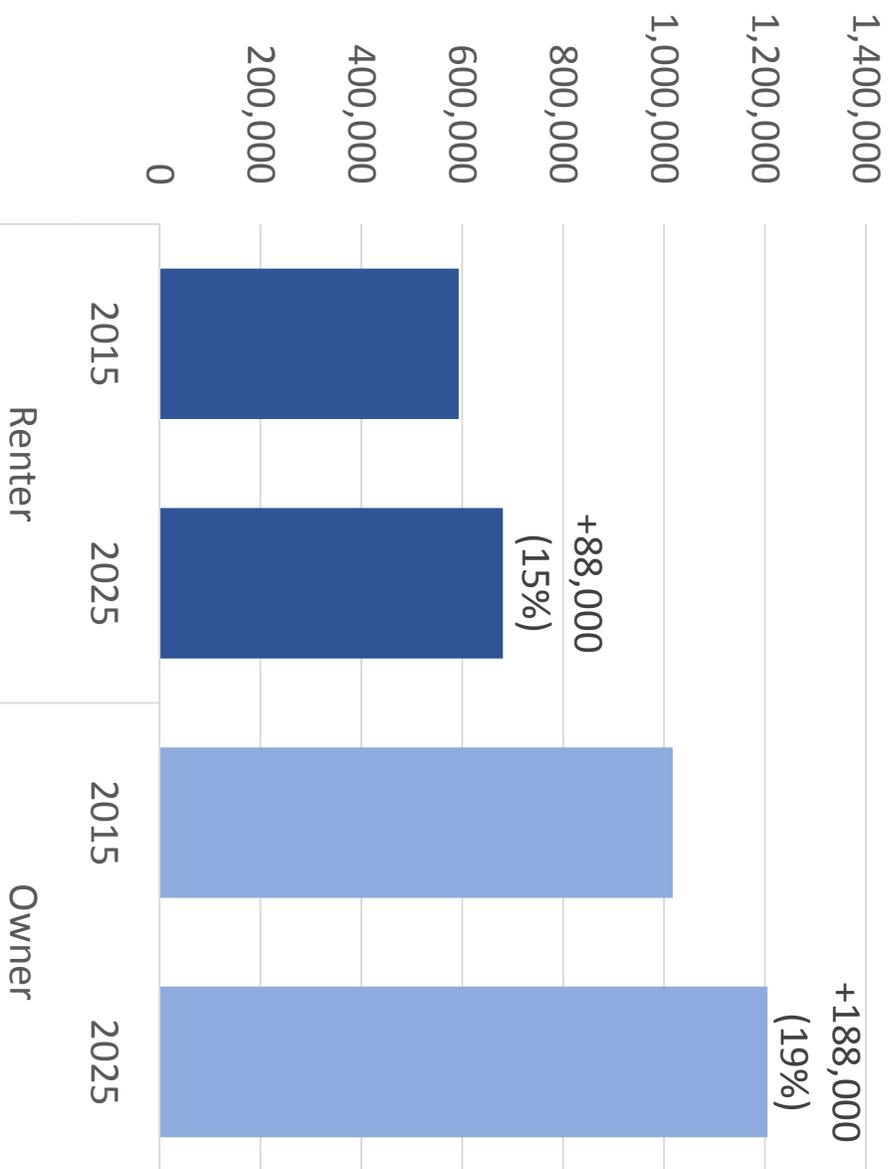




Raw Numbers: More of Everybody

Portland MSA Population

Uses 2013 Owner/Renter Shares by Age, 25+





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Tax Revenues



\$402 Million Kicker: What Is Your Cut?

Income Group	Adjusted Gross Income*	Rough Estimate of Kicker Size**
Bottom 20%	< \$10,200	\$10
Second 20%	\$10,200 - \$23,800	\$55
Middle 20%	\$23,800 - \$43,800	\$125
Fourth 20%	\$43,800 - \$79,900	\$235
Next 15%	\$79,900 - \$157,100	\$469
Next 4%	\$157,100 - \$336,400	\$1,073
Top 1%	> \$336,400	\$4,614
Average	\$53,900	\$244
Median	\$30-35,000	\$124

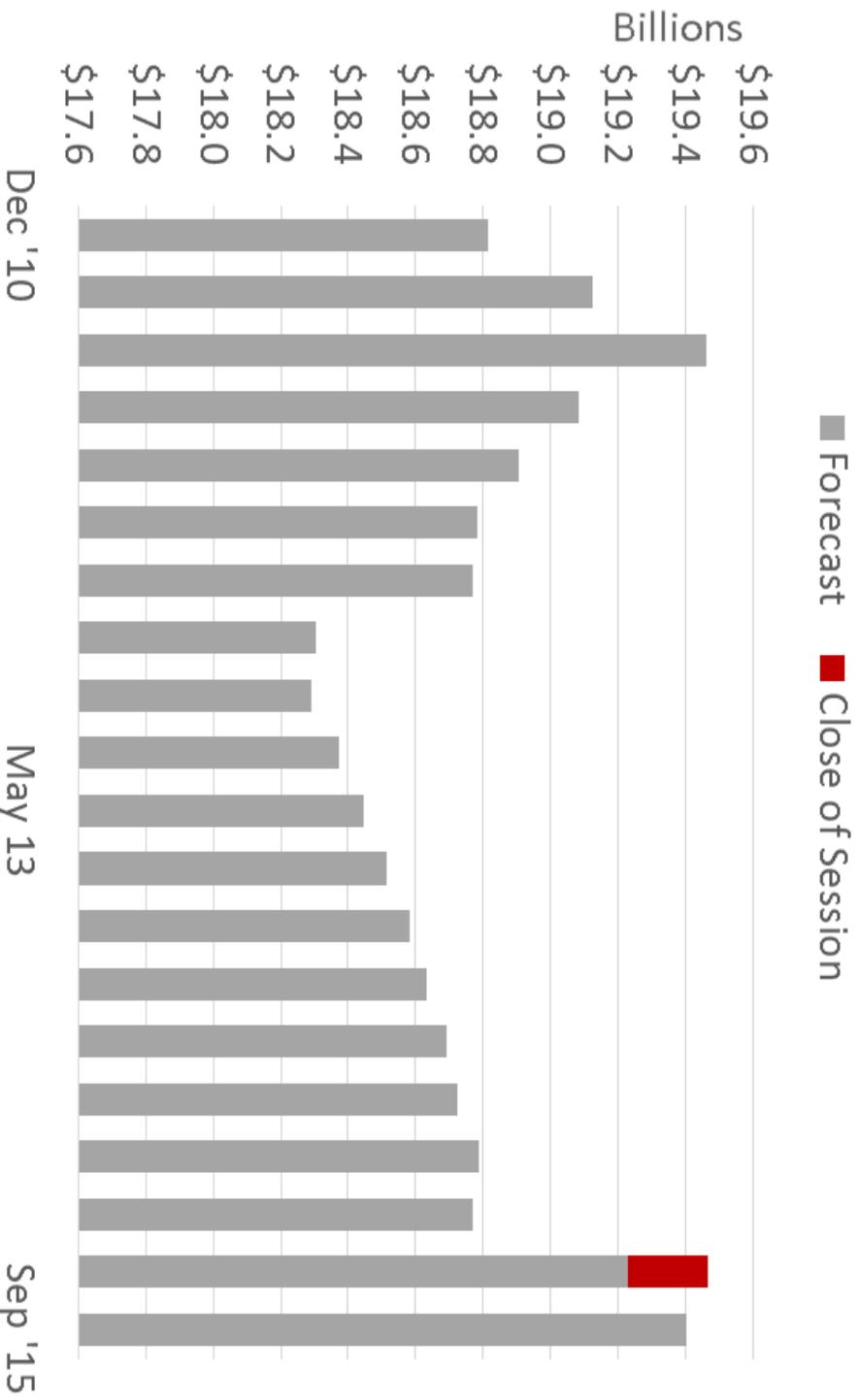
* Based on 2013 actual tax returns

** Based on 2013 actual tax returns, PIT kicker amount (\$402 million) and the Oregon Office of Economic Analysis' forecast for tax liability



2015-17 Forecast Evolution

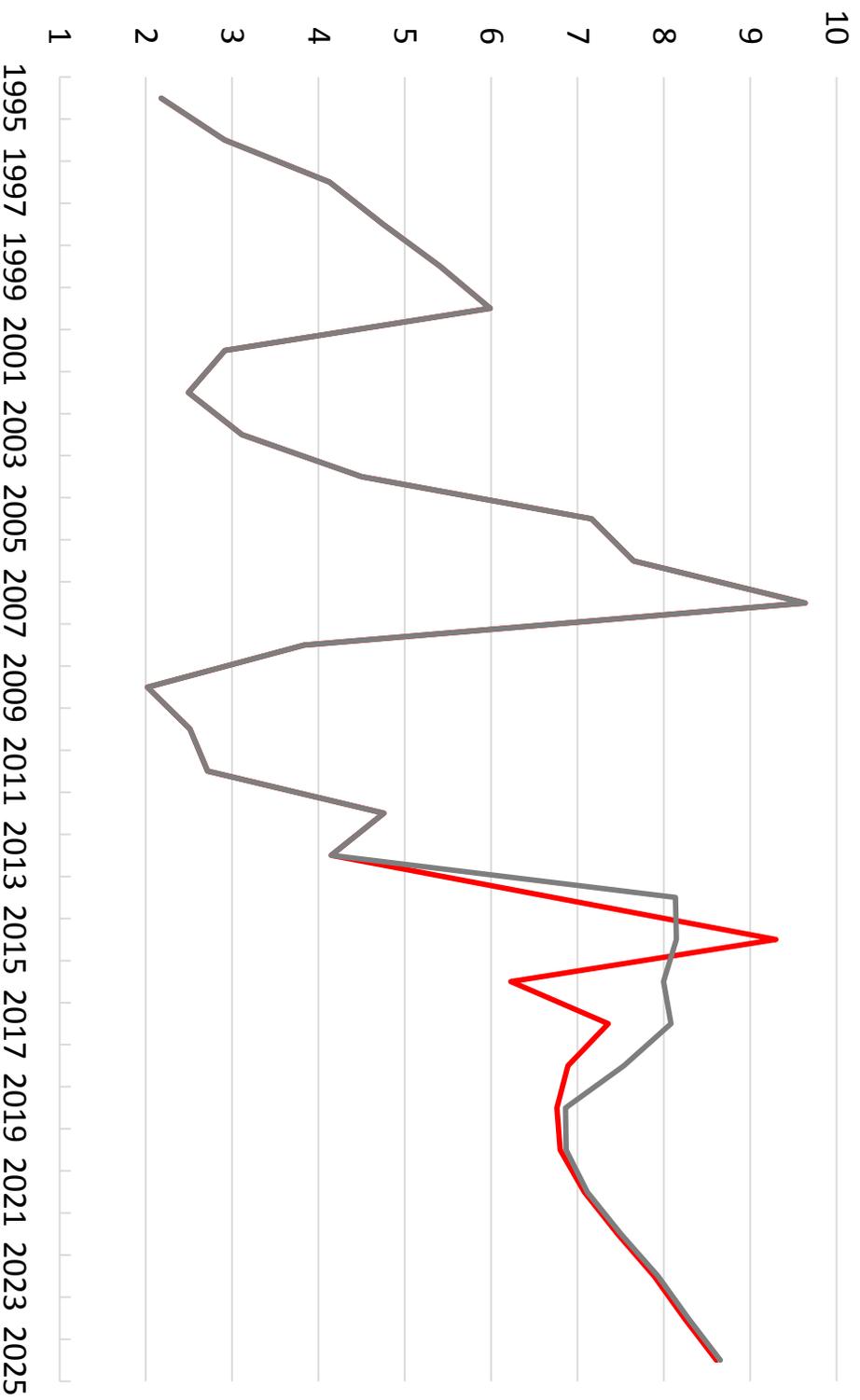
General and Lottery Fund Revenues 2015-17





Stocks and Capital Gains

Oregon Realizations of Capital Gains, \$ billions



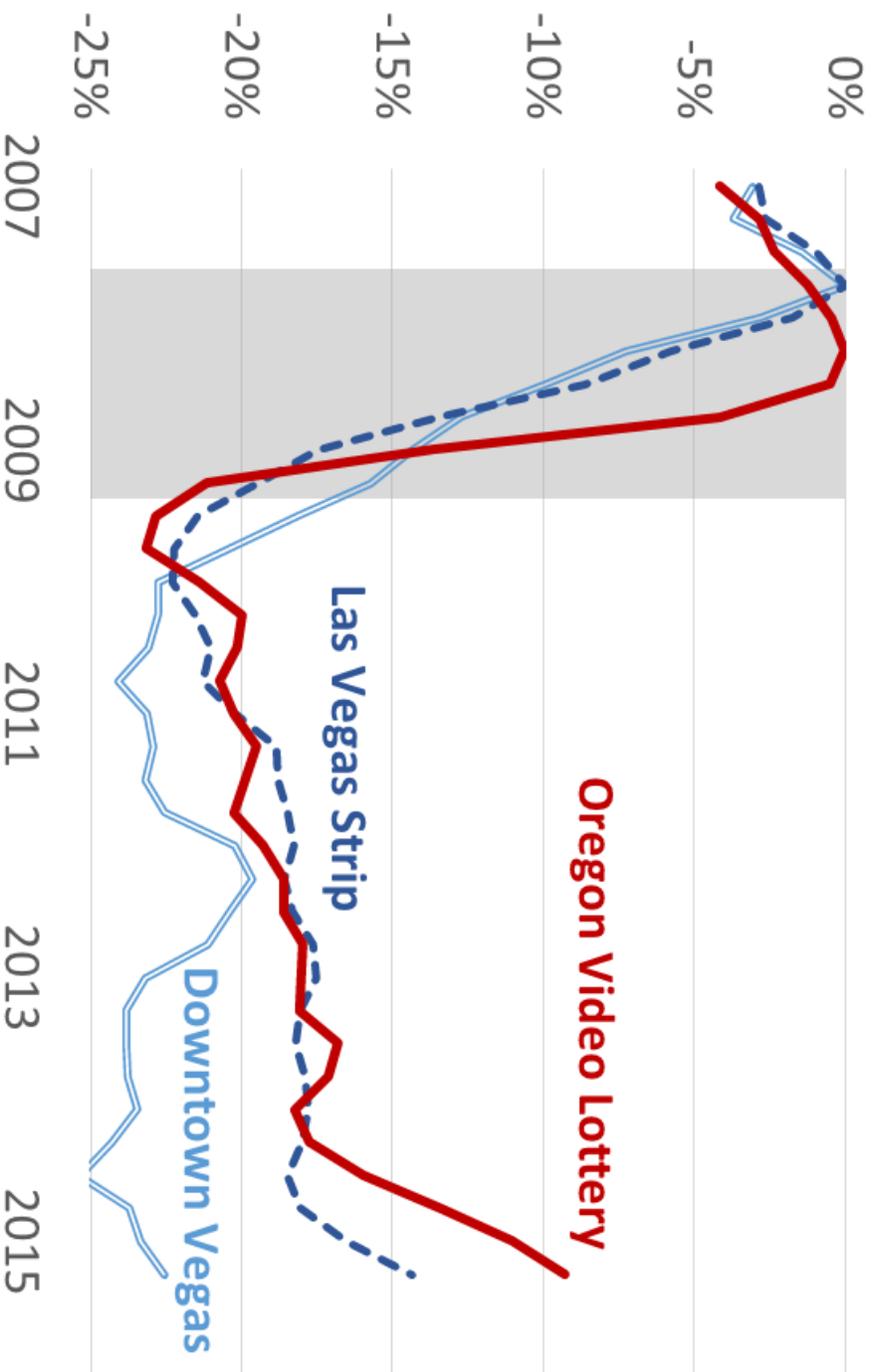


Gaming Increasing

The Gaming Bust

Sales Relative to pre-Great Recession Peak

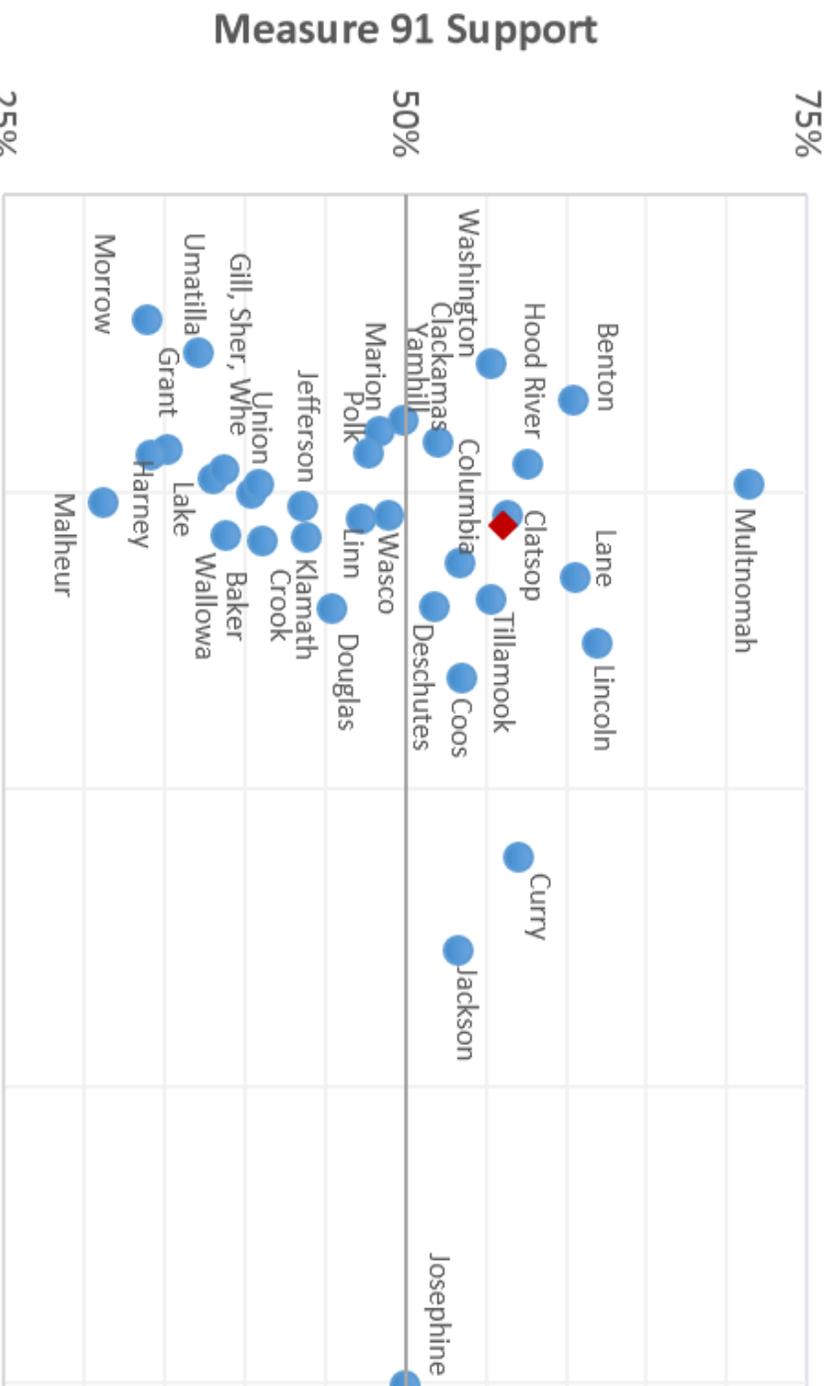
Seasonally-Adjusted, 6 Month Average



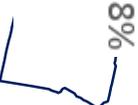


Southern Oregon: $\sim \sqrt{(\text{ツ})}$

Marijuana Support Medicinal vs Recreational

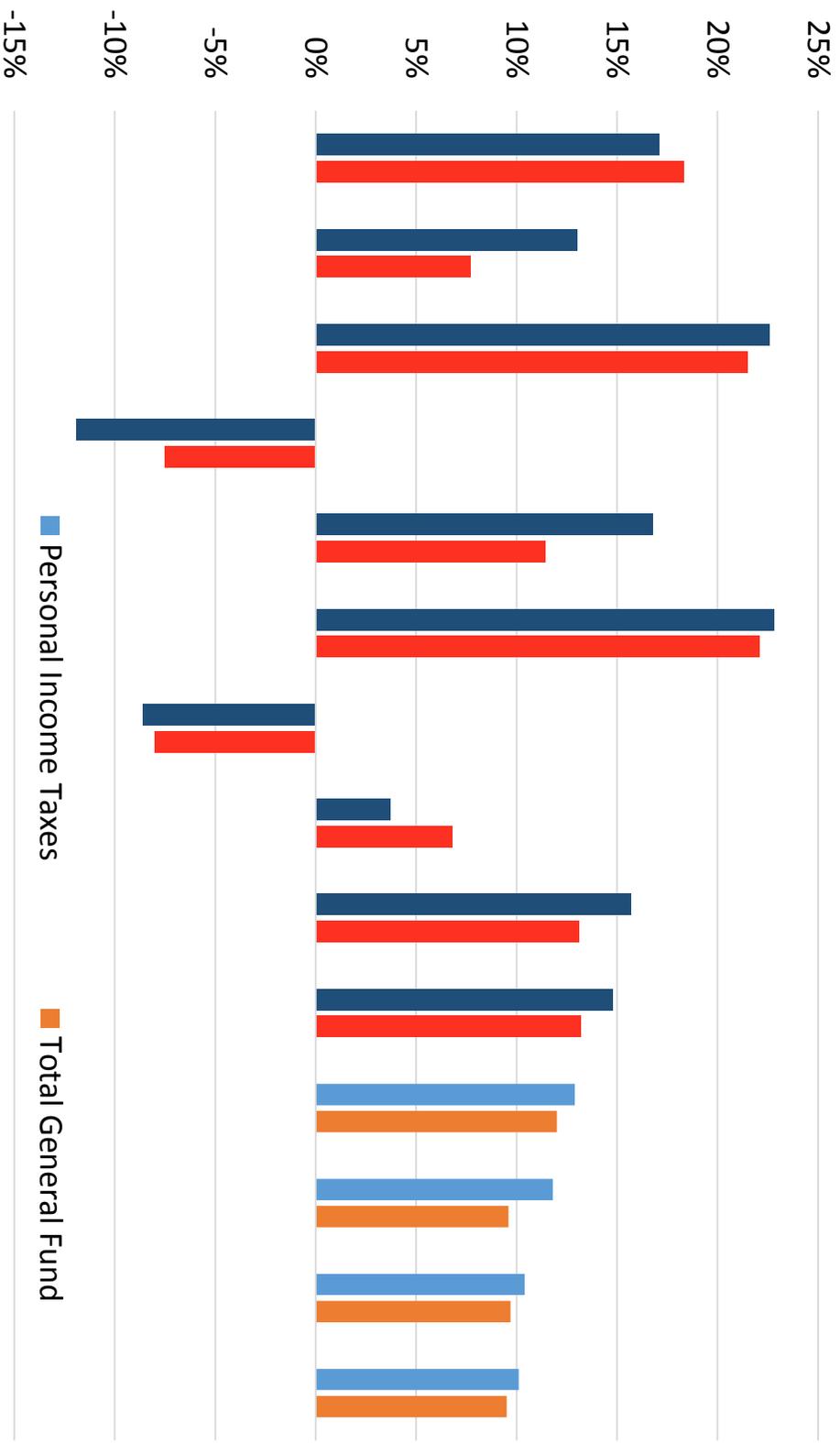


- Statewide 56% of voters supported
- Est. Revenue
 - 2015-17 \$10.1m
 - 2017-19 \$40.9m





Biennial Revenue Growth





For More Information

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