

The background features a large, faint, circular seal of the Oregon Office of Economic Analysis. The seal contains an eagle with wings spread, perched on a banner that reads "THE UNION". Below the eagle are two wheels and a plow. The text "OFFICE OF ECONOMIC ANALYSIS OF OREGON" is written around the top inner edge of the seal, and "1859" is at the bottom. The seal is centered behind the main title.

Addressing Oregon's Housing Shortage

May 11th, 2023

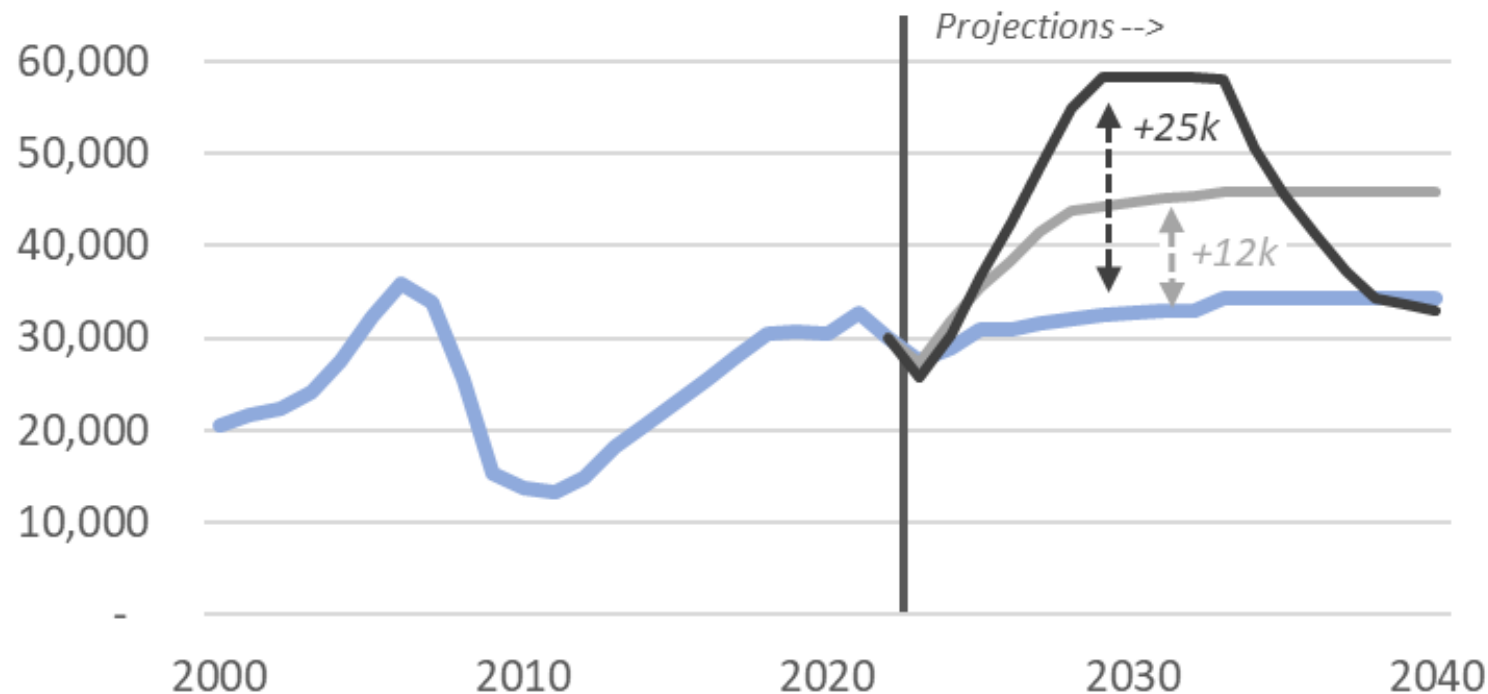
Oregon Office of Economic Analysis
Josh Lehner



Increasing the construction workforce

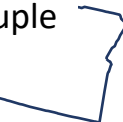
Residential Construction Employment

Baseline Forecast | 10 Year Scenario | 20 Year Scenario



Latest: 2022 | Source: Oregon Office of Economic Analysis

- To build more housing, Oregon needs more workers
- Residential Construction
 - Increase of 12,000 to 25,000 more workers per year to build more units
 - 1.4 jobs per housing start
 - Challenge: Labor market is tight, and residential pay is 15% below average
 - Increase number of construction firms
- Local Government
 - 400-500 per year to approve, permit, and inspect more units
 - Based on current staffing ratios of 0.04-0.05 FTE per housing permit
 - Larger increases likely needed to improve timeliness
 - Challenge: Decentralized need; every city and county needs to hire a couple to a couple dozen such workers





What types of workers are needed?

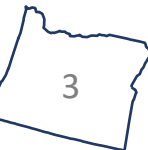
Increasing Oregon's Construction Workforce

A look at the occupations, and education and training needed to increase Oregon's construction workforce by 12,000 to make up for historical underproduction.

Job Zone	Education and Training Requirements	Construction, Installation, Maintenance & Repair, and Production Occupations	All Other Industry Occupations
Zone 1	Minimal education and training required	400	0
Zone 2	3-12 months training, some apprenticeships	6,300	600
Zone 3	1+ years of training, including vocational, apprenticeships, and community colleges	3,600	200
Zones 4 & 5	Bachelors degree+	0	900
TOTAL		10,300	1,700

Estimates based on occupational mix of the construction industry and O*NET's job zones
Source: Census, IPUMS-USA, O*NET, Oregon Office of Economic Analysis

- Oregon's construction industry workforce
 - 70% work in the trades
 - 30% work in other occupations like management and office staff
- To grow productive capacity, projected need skews heavier on the trades. Hopefully, office-based staff can increase productivity easier.
- 84% of construction occupations have some form of existing apprenticeship programs
- Data Need
 - Better reporting that links CTE data with apprenticeship and vocational program data, and occupational projections

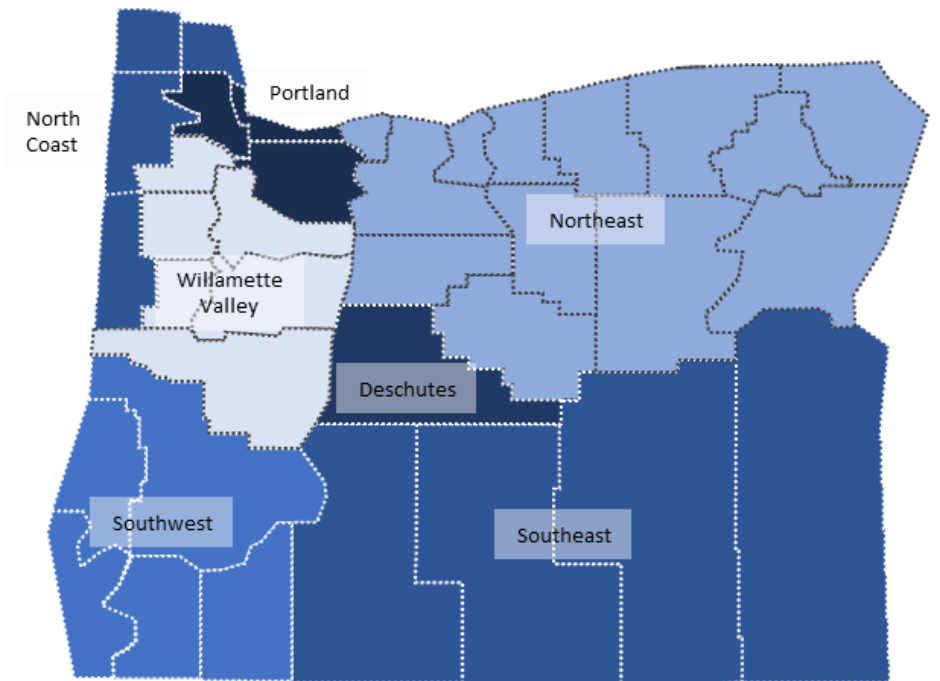




Where are the workers needed?

Region	Number of Housing Units of Historical Underproduction plus Housing for the Homeless	Proportionate Allocation of Additional Workers in Construction, Installation, Maintenance & Repair, and Production Occupations	Proportionate Allocation of Additional Workers in All Other Industry Occupations
Portland Metro	70,200	5,150	850
Willamette Valley	44,900	3,300	550
Southwest	14,900	1,100	175
Deschutes	6,000	425	75
North Coast	2,600	200	25
Northeast	900	75	10
Southeast	500	50	10
TOTAL	140,000	10,300	1,700

Regions Used in the Oregon Housing Needs Analysis

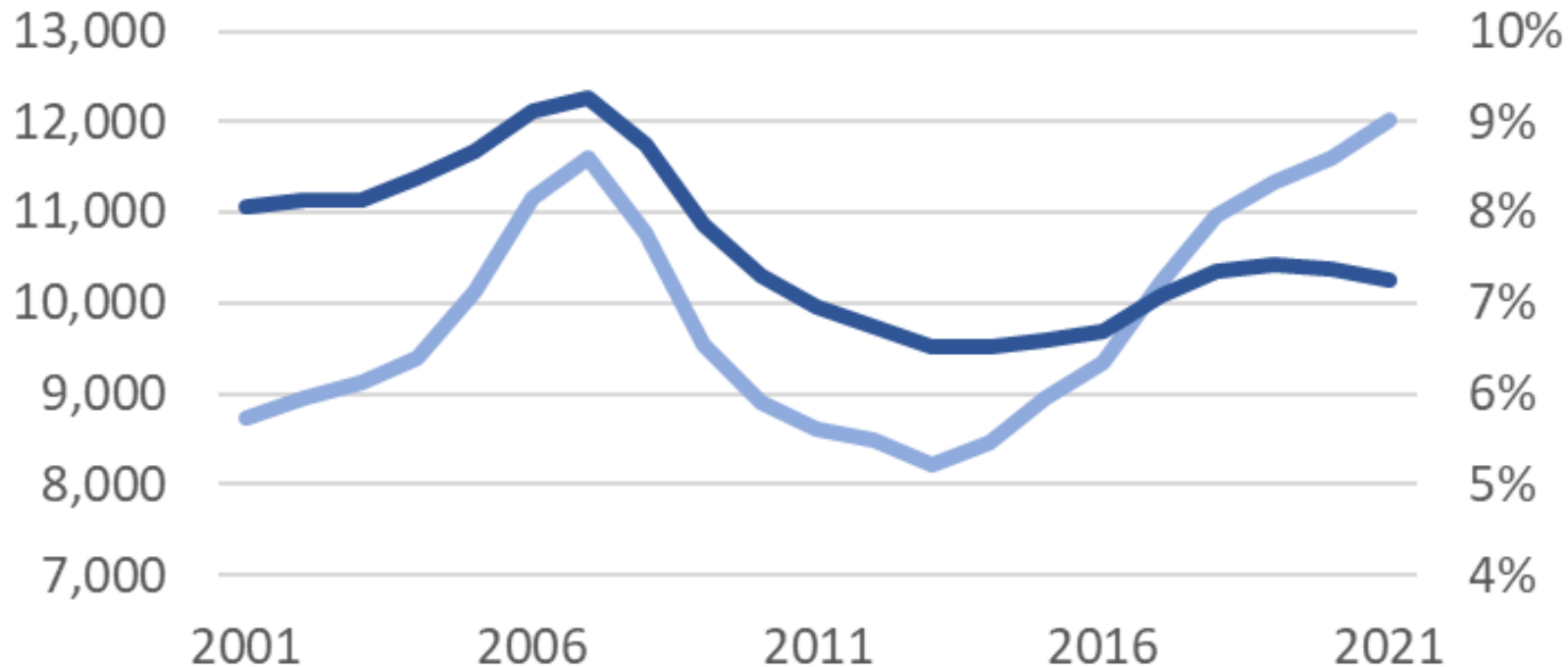




Issue: Fewer Construction Firms

Oregon Residential Construction

Number of Business Units, left | Share of Total Private Sector, right



- Housing underwent industry consolidation following the bubble bursting 15 years ago
- Even as construction employment has fully returned, the number of construction firms as a share of the economy remains lower than pre-bubble era
- Implication is Oregon has 1,300 fewer residential construction companies than expected
 - Nationally about 100,000 fewer
- Like the overall economy, construction needs more entrepreneurship

Data: QCEW | Source: BLS, Oregon Office of Economic Analysis





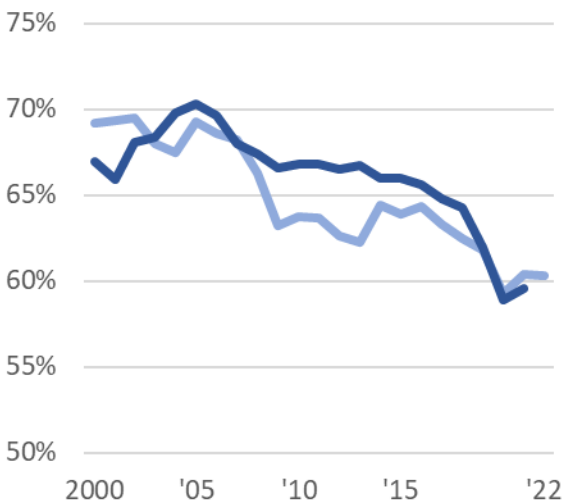
Possible Issue: Industry Structure

Construction Industry: More Managing. Less Doing?

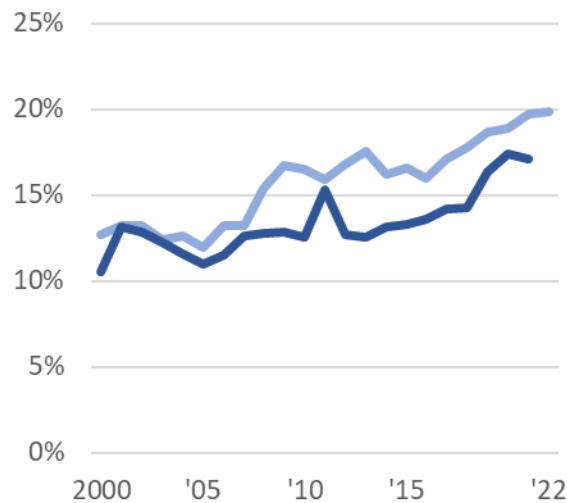
Decomposing the U.S. private sector construction industry by occupation

American Community Survey | Current Population Survey (aka Household Survey)

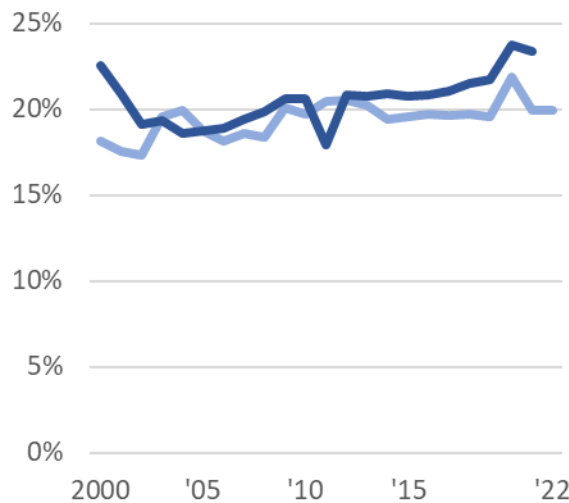
Construction Occupations



Management Occupations



All Other Occupations



Latest Data: ACS 2021, CPS August 2022 | Source: IPUMS-CPS, IPUMS-USA, Oregon Office of Economic Analysis

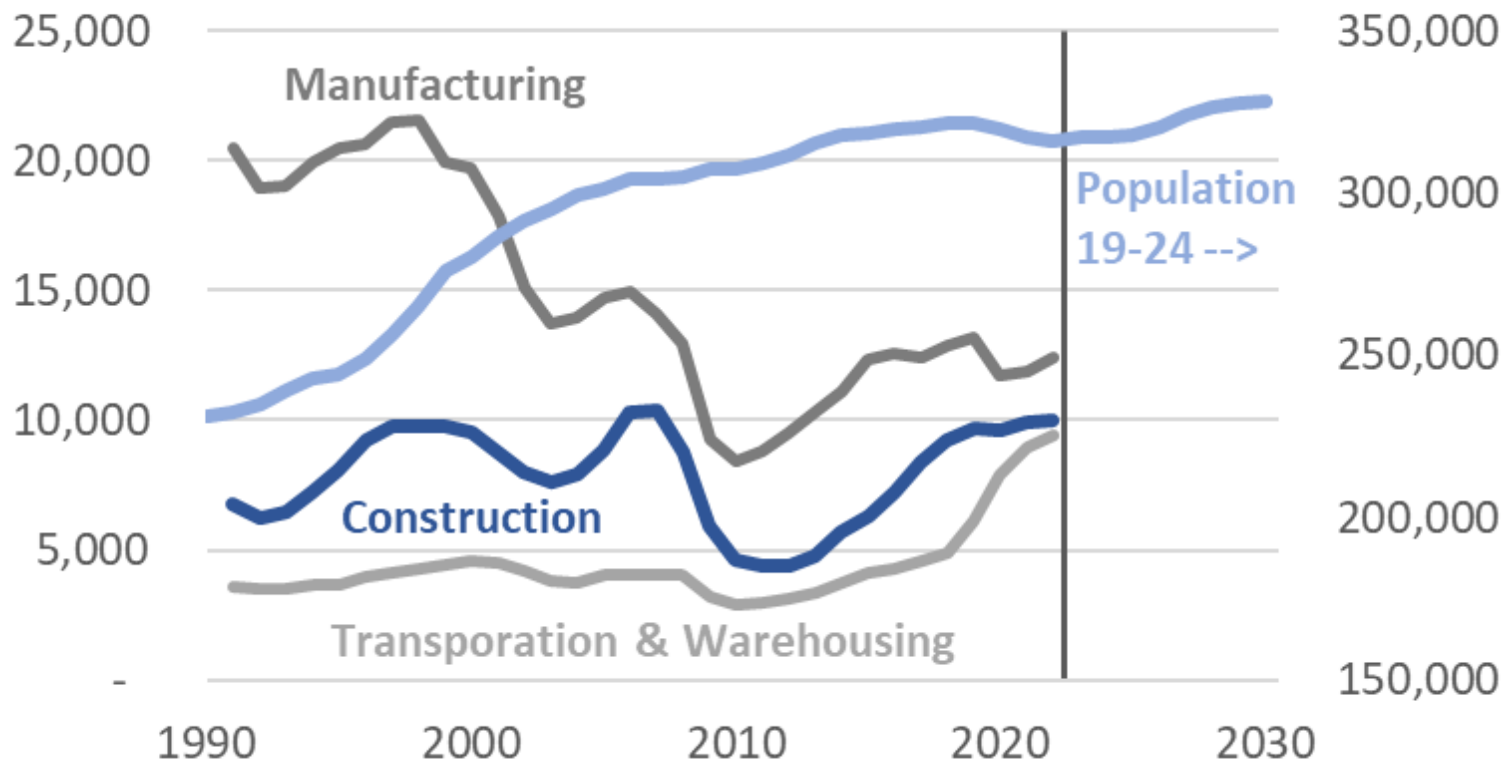
- The *share* of the construction industry workforce that actually builds things has fallen in recent decades
- The management share of the construction workforce has been increasing in recent decades
- Given industry consolidation, why is management/overhead increasing?
 - Is it just data or classification issues?
 - Note this data uses IPUMS consistently defined industry and occupation codes, but still a potential issue
 - Is this why construction overall has zero productivity gains? More workers for same volume of work?
 - Outsourcing of manual work to subcontractors or temp workers that show up classified somewhere else? (Household survey results similar looking at self-employment vs payroll jobs)
 - Change in the mix of projects?
 - Increased regulation/compliance?
 - Other industry-specific issues?



Labor Challenge: Demographics

Young Oregonians in the Trades

19-24 Year Olds



- It's difficult recruiting and training workers in a tight labor market
- Bad news: labor market is structurally tight due to demographics with increased retirements and slower gains due to low birth rate and slower migration
- These challenges face all industries, construction is about average in this challenge
- Silver lining: young Oregonians in construction is at or near an all-time high

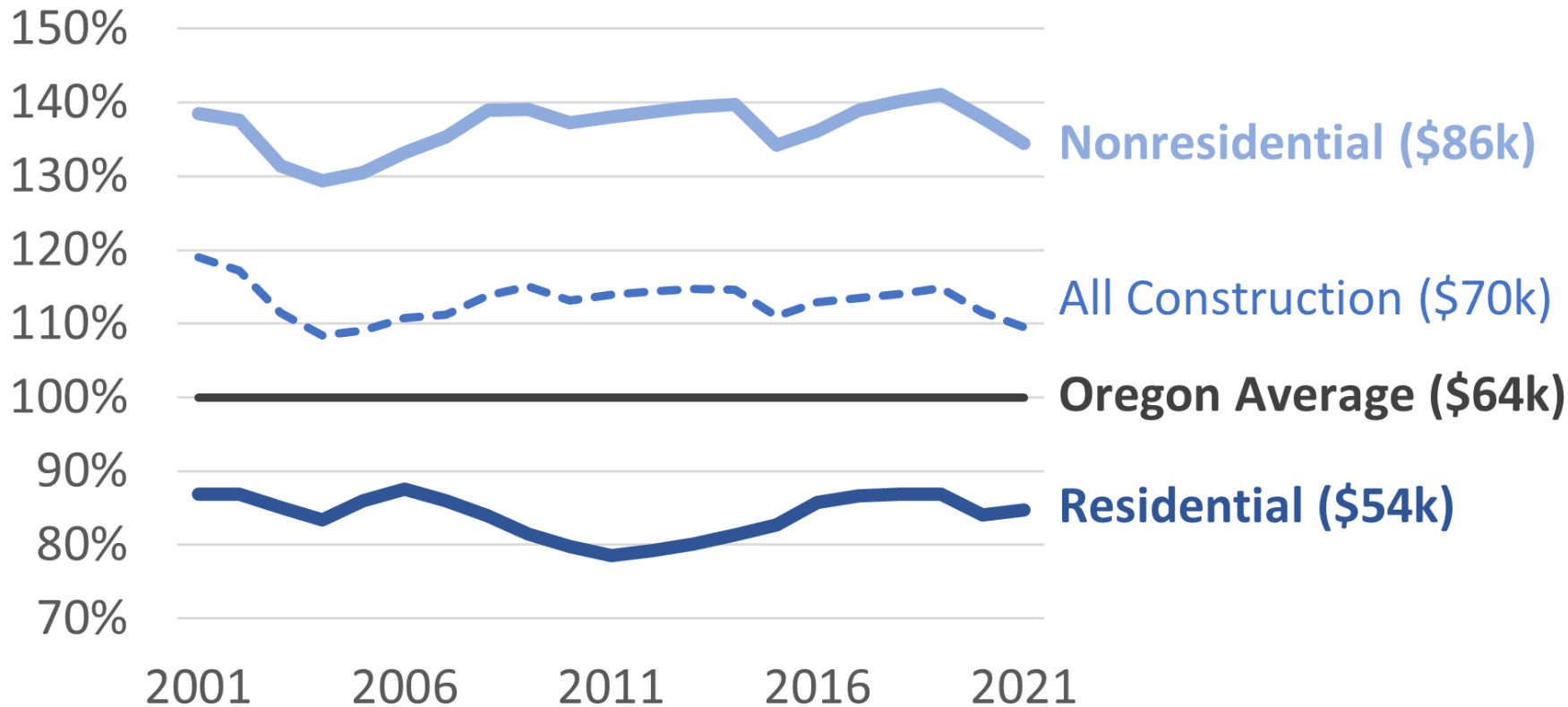




Potential Labor Issue: Wages

Oregon Construction Wages

Relative to Average for All Industries (2021 Avg Wage)

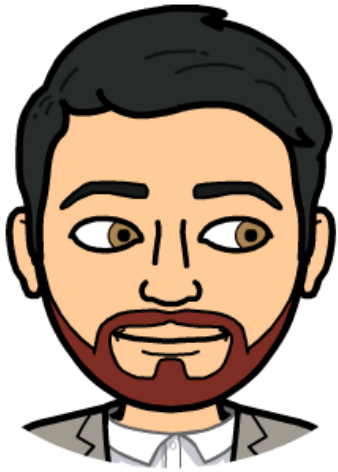


- There is a large difference in pay between residential and nonresidential construction
- There is a difference between construction “labor costs” which go into the cost of projects and the actual wages paid to workers





Contact



joshua.lehner@oregon.gov
(971) 209-5929



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@OR_EconAnalysis

