

OREGON'S LABOR FORCE DURING THE GREAT
RECESSION

by

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A THESIS

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Abstract

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The 2008 financial crisis following the collapse of the subprime mortgage market launched the greatest economic retraction in the United States since the Great Depression of the 1930s. The entire country experience a spike in unemployment from 4.7% to 10.1%. The crisis shifted from financial to personal when many Oregonians lost their jobs. In order to examine how Oregonians experienced the Great Recession, this thesis observes how Oregon's industries expanded or contracted total employment between 2007 and 2010. I will discuss each of Oregon's industries, as divided by the North American Industry Classification System. This reveals 70% of employment contraction in Oregon between 2007 and 2010 belonged to the manufacturing, construction, and trade transportation and utilities industries.

Acknowledgments

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Thank you Mom and Dad for the unconditional support that allowed me to get where I am today.

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Background:

On September 15, 2008 Lehman Brothers, an Investment Bank holding over 600 billion dollars in assets, filed for bankruptcy. When US Federal Reserve chairs and the US department of the treasury decided this bank was beyond saving, the result was the largest bankruptcy in United States history. This shock rolled into the greatest economic downturn in the United States since the Great Depression of the 1930s. As we heard time and time again, the affects of this crisis were not limited to Wall Street; but instead permeated Main Street.

Not all Main Streets experienced the Great Recession in a similar fashion. By looking at industrial labor trends between 2007 and 2010, this paper will show how Oregon experienced the Great Recession. Using Oregon Labor Market Information Systems this paper will detail which industries contributed the most to Oregon's spike in unemployment. Why each industry lost (or gained) jobs during this time period localizes the experience of Oregonians during the Great Recession. Some economists use the concept of 'economic resilience' to measure the local effects of a natural recession. However, due to the controversy surrounding economic resilience's ambiguous definition, this paper will discuss nonfarm labor markets trends in Oregon during the Great Recession. These trends show that job losses in Oregon's manufacturing, construction, and trade, transportation, and utilities industry resulted in layoffs of the majority of Oregonians who lost their jobs during the Great Recession.

Economic Resilience:

Simply put, economic resilience is a local economy's ability to recover from an external shock or disturbance. Beyond this broad statement, there is no universally agreed upon definition of a resilient economy. Some economists use resilience as a means to discover why certain regions tend to recovery more quickly from economic shocks than others. The end goal being, pinpointing the economic indicators consistent in stable economies that produce high standards of living for their residents. While the desire for understanding resilience has increased in the face of growing insecurities of the future, literature on the subject continues to be sparse. Of what literature exists, there is even less agreement. In my research, I found two prevalent quantitative definitions of economic resilience. The two main perspectives on economic resilience are "equilibrium" and "path-dependence."

Equilibrium. One of the most intuitive ways of thinking of economic resilience is a return to pre-shock equilibrium. This can be measured by various quantitative factors, and a region's ability to regain pre-shock values within a brief period of time. An easy way to conceptualize this is measuring New Orleans' tourist expenditures pre-Hurricane Katrina, and how long it took for those numbers to rebound post-shock. Some economists attempt to apply an ecological definition to regional resilience. This definition shifts from an economy's ability to recover, to "the buffer capacity or the ability of a system to absorb perturbations, or the magnitude of disturbance that can be

absorbed before a system changes its structure by changing the variables and process that control behavior.”¹

However, there are a number of difficulties with measuring resilience by the return to single or even multiple equilibria. When deciding which quantitative factors to consider when evaluating an economy’s return to equilibrium, a strong selection bias is difficult to avoid. Even attempting to create a ubiquitous set of equilibrium categories to measure all regional resilience would be ill-equipped to explain geographical diversity, and economic variety.² Additionally, many economists reject the idea that a pre-shock equilibrium should even be considered equilibrium for a post-shock economy. The term “new normal” is sometimes used to describe this idea.

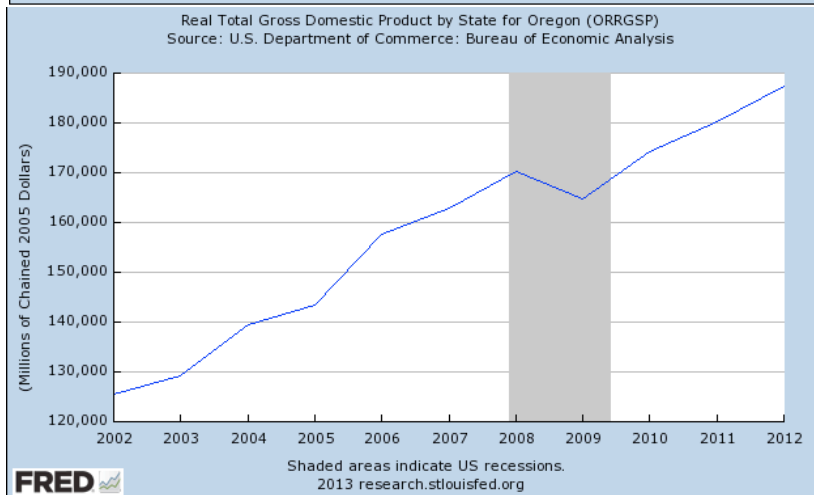
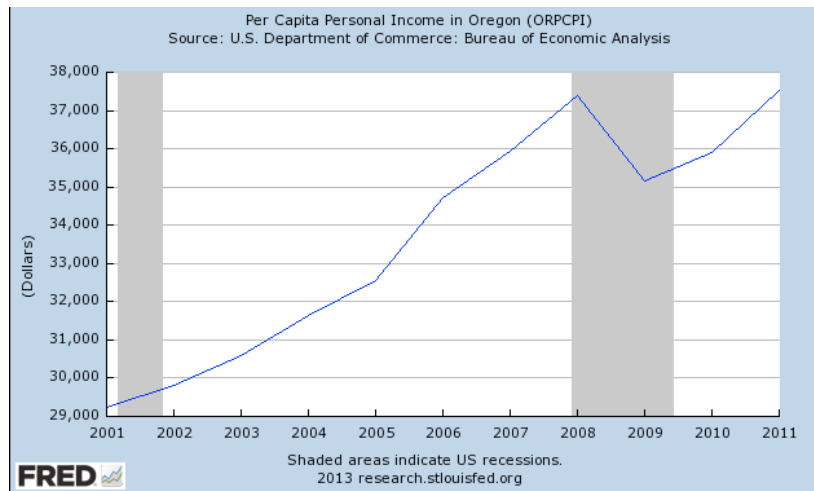
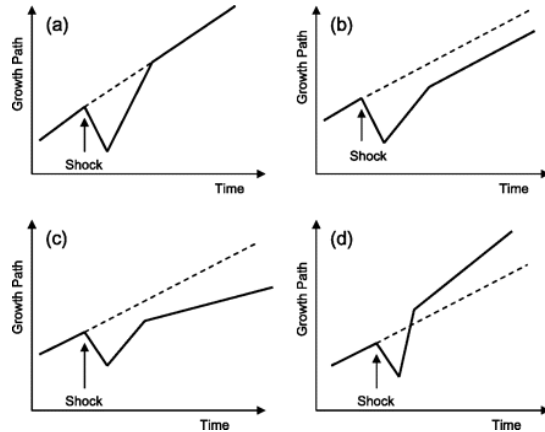
Path-Dependence. Another way of looking at economic resilience is “lock-in” or path dependence. This method suggests that before an external economic shock, an economy is set on a growth path as a result of long run cumulative decisions. An external economic shock will knock an economy off its path and path-dependence resilience compares the new growth rate established post-shock. “A region whose post-shock growth rate is at least as high as its pre-shock growth rate and that achieves its pre-shock level of economic performance within a specified time period can be considered resilient.”³ In the figure below, economies (a) (b) and (d) would be

¹ Pike, A., S. Dawley, and J. Tomaney. "Resilience, Adaptation and Adaptability." *Cambridge Journal of Regions, Economy and Society* 3.1 (2010): 59-70.

² Pike, 61.

³ Hill, Edward W., Howard Wial, and Harold Wolman. "Exploring Regional Economic Resilience." *Institute of Urban and Regional Development* (2008): 1-15. *University of California*. Web.

considered resilient in path-dependence terms. Next to these models are examples figures of Oregon's real GDP growth, and income per capita.



But again, path-dependent theories have serious shortcomings in the application to real world resilience. “Path dependence plays a role in determining the outcomes, but that role is contingent; it is framed by the strategic choices of local actors and the degree to which local institutional structures constrain or support the realization of their goals.”⁴ In other words, that path-dependence only tells part of the story. Capital acquisition over time, and the degree of adaptability of those inputs plays a much more important role than growth pattern itself. This stance is known as an evolutionary view of economic resilience. Additionally, many of the same criticisms of equilibrist economic resilience can be applied to path-dependent theories. It is worth questioning the assumption that returning to a pre-shock equilibrium is helpful to understanding resilience. With path-dependence, there is a similar criticism. In a post-shock economy, the previous growth path could prove unattainable or even harmful to the future of the economy. For example, in retrospect, pre-2008 housing prices were artificially inflated. It would not be useful to compare housing price growth post-shock with the pre-shock growth rate to determine resiliency of the housing market. Instead, it is more useful “to regard lock-in as a negative attribute as holding back the adaptation of the regional economy to a shock. The implication in this instance is that path-dependant lock-in undermines a regional economy’s resilience.”⁵ Furthermore, path-dependence theories do little to explain the underlying factors that lock-in an economy on a particular path.

⁴ Christopherson, S., J. Michie, and P. Tyler. "Regional Resilience: Theoretical and Empirical Perspectives." *Cambridge Journal of Regions, Economy and Society* 3.1 (2010): 3-10. Print.

⁵ Simmie, J., and R. Martin. "The Economic Resilience of Regions: Towards an Evolutionary Approach." *Cambridge Journal of Regions, Economy and Society* 3.1 (2010): 27-43. Web. 32.

In reality, it is these underlying factors and their ability to adjust to in the face of new post-shock economic factors that create resilience.

Due to the shortfalls in understanding economic resilience, the more effective way to understand Oregon's experience during the Great Recession is to observe changes in labor market trends. The contraction and expansion of certain industries shifted the composition of Oregon's workforce. Industrial responses to the effects of the national recession forced layoffs of over 150,000 people in Oregon, indicating the effects were indeed not limited to Wall Street. To understand the impact of the economic collapse, it is important to first discuss how we got there.

The Great Recession: Built on a Subprime Mortgage Market

In the pre-2008 crisis economy, search for higher yield investments coupled with financial deregulation allowed a misrepresentation of risk that eventually sent the economy reeling. With low government bond rates, and a decreasing yield on corporate and emerging market bonds, investors were incentivized to seek out more profitable investments. To a large extent, lenders had already taken advantage of low rates by giving credit to worthy customers. Between 1997 and 2005 there was an 11.5% increase in owner occupied homes. Homeownership in the United States reached its all-time quarterly high in the fourth quarter of 2004 at 69.2%⁶. On its own, increasing homeownership rate in the United States seemed like an admirable goal. President Clinton made this one of the cornerstones of his presidency. However, the means to this goal included financial deregulation and minimized lending standards. The language

⁶ United States. Census Bureau. Department of Commerce. RESIDENTIAL VACANCIES AND HOMEOWNERSHIP IN THE FOURTH QUARTER 2013. By Robert Callis and Melissa Kresin. N.p.: n.p., n.d. Web. <<http://www.census.gov/housing/hvs/files/qtr413/q413press.pdf>>.

used in President Clinton's "National Homeownership Strategy" eerily foreshadows what would eventually cause the Great Recession.

"For many potential homebuyers, the lack of cash available to accumulate the required down payment and closing costs is the major impediment to purchasing a home. Other households do not have sufficient available income to make the monthly payments on mortgages financed at market interest rates for standard loan terms. Financing strategies, fueled by the creativity and resources of the private and public sectors, should address both of these financial barriers to homeownership."⁷

In other words, the administration was encouraging lenders to use 'creative' means to lend to less creditworthy could-be homeowners. During the same period, the financial industry was deregulated by the passing of legislation like the Gramm-Leach-Bliley Act of 1999 which overturned the Glass-Steagall Act of 1933. Before the Glass-Steagall act was passed, insurance companies, commercial banks, and investment banks were required by law to be separate. After the Gramm-Leach-Bliley Act, these barriers could be crossed and some of the largest financial services and bank mergers were a direct result.⁸

The response to federal government's incentives and deregulated financial markets was the creation of the sub-prime mortgage market. Debtors who, in the past, were deemed too risky were now potential profit centers to investors seeking higher yields. Customers with questionable credit were lured in with adjustable rate mortgages (ARMs) or zero percent down mortgages. Adjustable rate mortgages would begin with

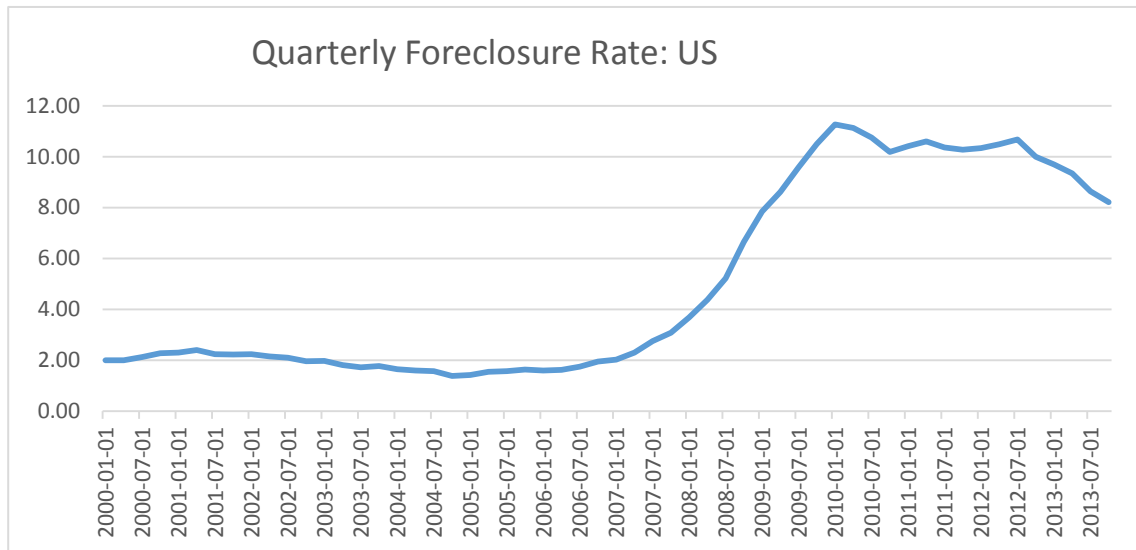
⁷ United States. White House. Department of Housing and Urban Development. The National Homeownership Strategy: Partners in the American Dream. By Henry Cisneros and Bill Clinton. May 2, 1995. Web. <<http://confoundedinterest.files.wordpress.com/2013/01/nhsdream2.pdf>>.

⁸ Freiling, Nicholas. "GLBA and Financial Deregulation: The Forgotten Cause of the Financial Crisis." Proc. of Austrian Student Scholars Conference, Grove City College. N.p., 2012. Web.

affordable ‘teaser’ rates with extremely low payments for the first few years. They also included promises of refinancing opportunities on the appreciated home. The mortgage originator had little incentive to check the creditworthiness of their borrower, because the mortgages were then sold to financial institutions. This was particularly popular with Fannie Mae and Freddie Mac, government sponsored mortgage originators. Mortgage originators would then package collections of these mortgages into “structured investment vehicles” called mortgage-backed securities. The designation of “structured investment vehicles” allowed institutions to record these securities off-balance sheet. By doing this, mortgage-backed security issuers could avoid capital requirements and take their financial leverage to unprecedented levels. Mortgage-backed securities were then separated into senior, mezzanine, and non-investment grade tranches, depending on risk of default. By pooling geographically diverse mortgages, financial institutions thought they could effectively mitigate risk of failing mortgages. In hindsight, it is clear the degree of risk associated with these assets was underestimated. However, at that time, private financial investment firms purchased mortgage backed securities from multiple tranches and packed them together as collateralized debt obligations. These new collateralized debt obligations ‘re-securitized’ the mortgage backed securities with the goal of increasing diversification and reducing risk. This argument was convincing enough to land certain collateralized debt obligations AAA ratings, the safest rating possible. This attracted investors from across the globe to invest in the United States’ sub-prime mortgage market. These assets were such a popular investment vehicle, by 2006 48% of mortgages issued were sub-prime. This percentage up from just 15% in 2001.⁹

⁹ Verick, Sher; Islam, Iyanatul (2010) : The great recession of 2008 – 2009 Causes, consequences and

Over time, the Federal Reserve began to raise rates and by 2006 creditors began to fall behind on their payments. The low ‘teaser’ rate period of the adjustable rate mortgages expired and housing prices began to fall.¹⁰ This inhibited creditworthy borrowers from being able to refinance as they had anticipated. In response, foreclosures increased at a rapid rate. Through collateralized debt obligations, banks



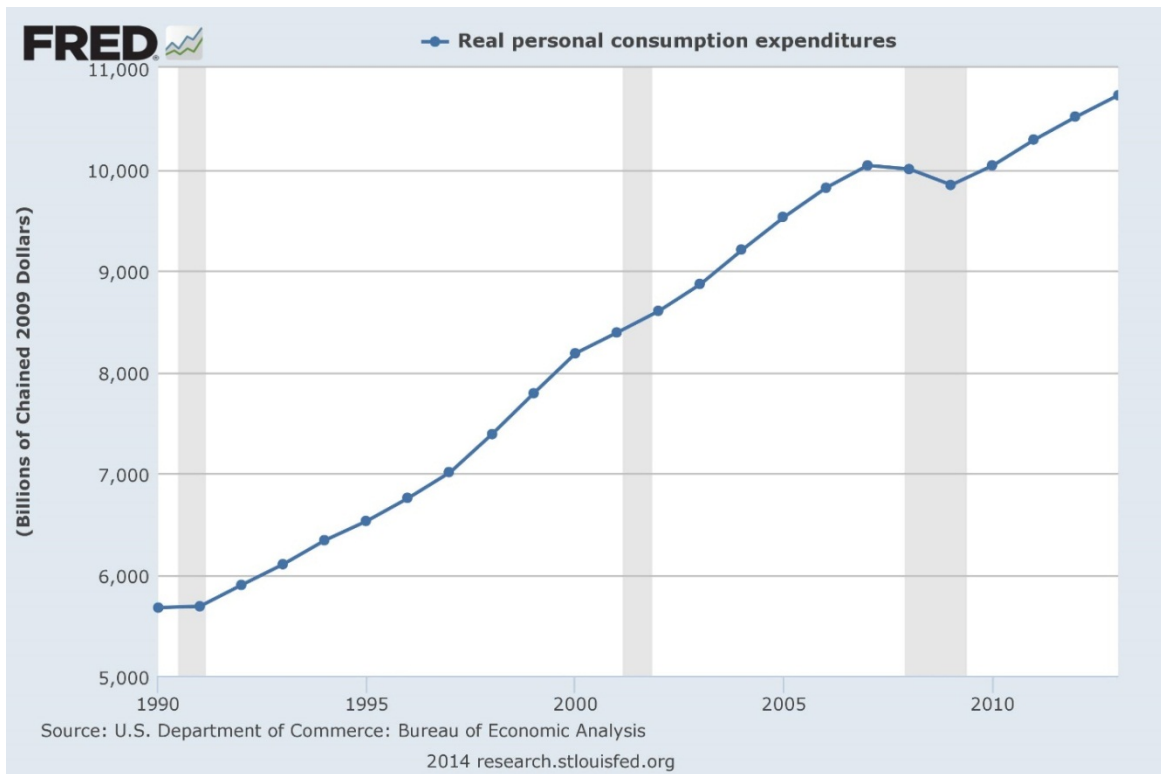
and retail investors were exposed to the failing mortgage lenders. In part due to the complexity in which these asset-backed securities were wound, financial institutions feared the effect these downgraded assets would have once they were forced onto their balance sheets. In turn, institutions began to hoard liquidity and lending screeched to a halt. After suffering massive losses in collateralized debt obligations, in September of 2008 Lehman Brothers was the first bank to fail. This bankruptcy raised fears of other potential financial and bank losses, and soon the Great Recession had arrived.

The National Impact:

policy responses, Discussion paper series // Forschungsinstitut zur Zukunft der Arbeit, No. 4934

¹⁰ "S&P Case-Shiller 20-City Home Price Index." - FRED. N.p., n.d. Web. 09 May 2014

By bringing consumers into the housing market who were previously deemed not worthy of credit, demand increased and house prices grew. Using equity withdrawn from rising real estate prices, consumers were able to fuel a high level of spending.

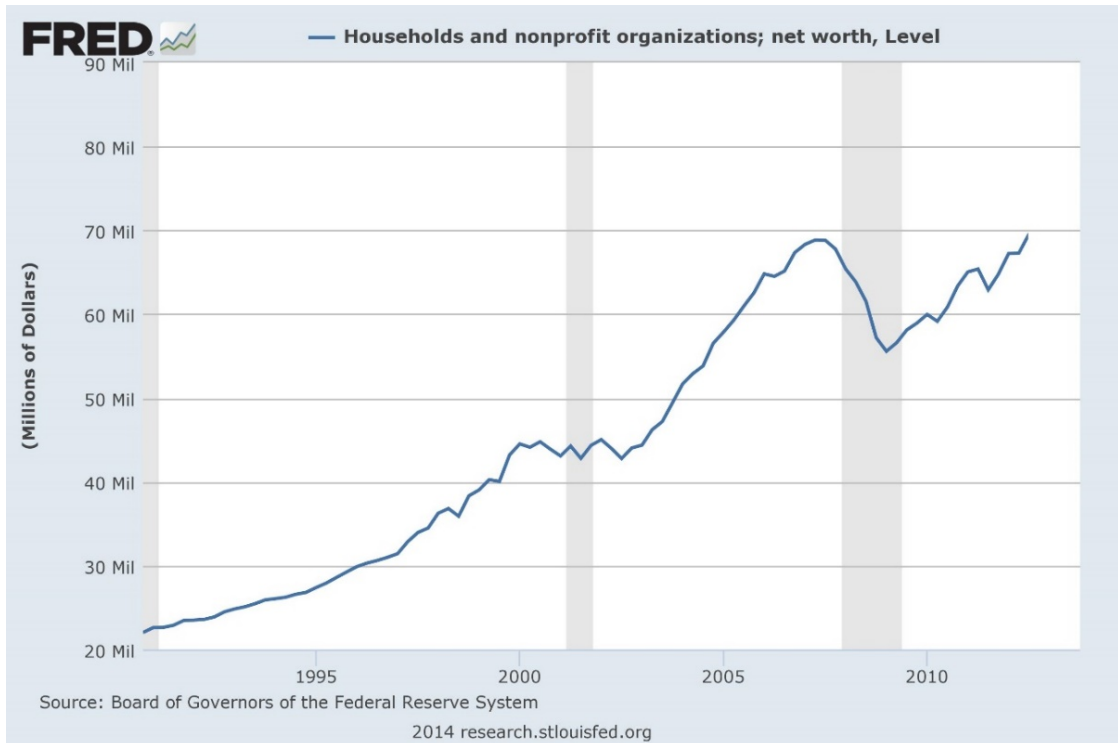


After the housing bubble popped, the United States experienced six straight

quarters of decreasing real personal consumption. During the same period, the personal savings rate in the United States over tripled. In between November 2008 and May 2009 personal savings spiked from 2.6% to 8.1%.¹¹ The San Francisco Federal Reserve estimated that this increase in personal savings resulted in foregone consumption of \$7,300 per capita in between December 2007 and May of 2011. To come up with this

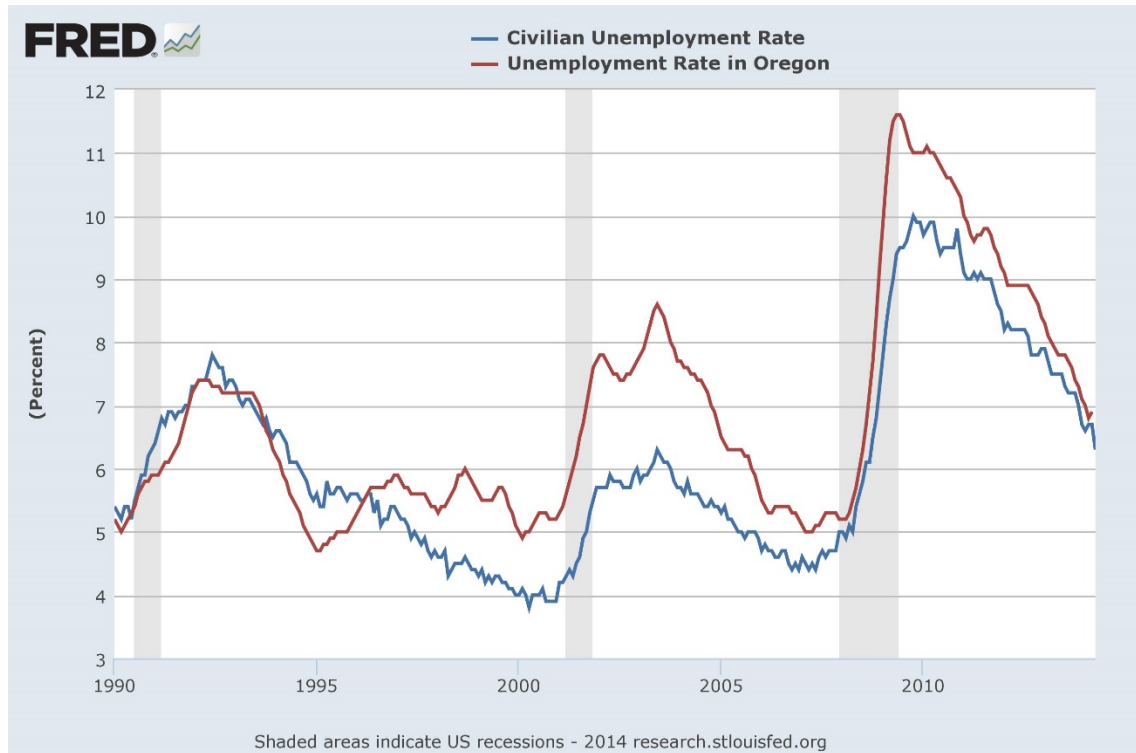
¹¹ "Personal Saving Rate." - FRED. N.p., n.d. Web. 09 May 2014

figure, the San Francisco Federal Reserve compared recession spending habits to the pre-recession growth path of real personal consumption expenditures. While the \$7,300 seems like a useful way to conceptualize the lost income due to increased saving, it is important to take this figure with a grain of salt. As discussed in the path-dependence section of defining economic resilience, it is not always reasonable to compare pre and post shock growth paths. This scenario is a good example, since we now know spending was inflated by rising housing prices. At the same time, it is important to note an impact of increased savings during the Great Recession. In addition, the bear real estate market dropped household owners' equity in real estate from \$13,399.5 billion to \$6,085 billion. Another strong contributor to household net worth, the stock market, also took an unprecedented plunge. The S&P 500, an index created by Standard and Poor designed to show the strength of the stock market and economy, dropped from pre-recession high near \$1,561 to a low near \$683. These combined factors contributed to the decline in United States household net worth, associated with both the decline in real personal consumption and increase in savings rate. As a result of the Great Recession, net worth of households and nonprofit organizations dropped a stunning 19.27% (as seen in the graph below). The effects of decreased consumption shrank



consumer demand for certain firms, who in change decreased employment. Roughly 8.5 million nonfarm employees were let go during the Great Recession. This pushed the nation’s unemployment rate up to a peak of 10.1%. Before the recession, unemployment was just 4.7%.¹² This large shift in unemployment rate was not equally spread across the United States. Oregon’s unemployment rate started above the national average, at 5.3%. At its peak, Oregon’s unemployment sat at 11.6%. A similar jump to the national average, but starting at a higher point. To understand how this happened, I will discuss which of Oregon’s industries expanded or contracted the most during the Great Recession. Industries are the eleven largest categories sorted by the North American Classification System (NAICS). Smaller subcategories within industries are referenced as sectors. I will go further to understand the makeup of each industry and tie

¹² United States. Federal Reserve Bank of San Francisco. Gauging the Impact of the Great Recession. By Kevin J. Lansing. N.p.: n.p., n.d. Web. 10 May 2014. <<http://www.frbsf.org/economic-research/publications/economic-letter/2011/july/impact-great-recession/el2011-21.pdf>>

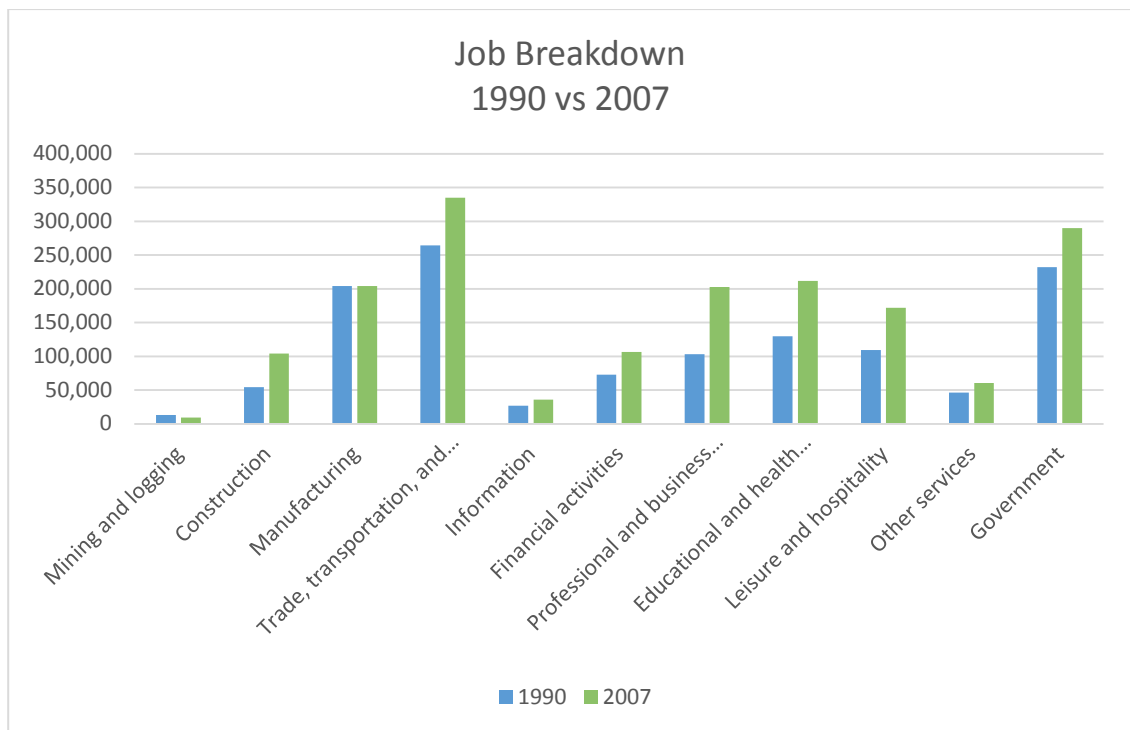


their reactions into the national impact of the Great Recession. By doing this, I will paint a picture of Oregon’s experience during the Great Recession.

The state of Oregon before the Great Recession:

The Oregon Labor Market Information System (OLMIS) has tracked non-farm payroll numbers in Oregon since 1990, and is an effective means for understanding local labor trends. Before looking at how each industry changed as a result of the Great Recession, it’s important recognize the pattern of each industry before the recession arrived. Looking at these patterns also shows which industries dominate the Oregonian workforce. This knowledge determines which industries have the greatest leverage over effecting the Oregon economy as a whole, and in turn carry a larger weight in Oregon’s experience during the Great Recession.

Between 1990 and 2007, the year before the beginning of the Great Recession, the Oregon Economy added 475,300 non-farm jobs. This brought total non-farm payroll to 1,731,000 jobs in the state. During this period, Oregon experienced strong jobs growth, except a minor loss period during the early 2000s recession. The strongest driver of this growth, was the professional and business services industry. This industry added 99,300 total jobs. The second largest growing industry in Oregon during this time was the educational and health services industry, which added 82,000. The graph below compares each industry in Oregon’s total employment in 1990 versus 2007.



Interestingly, during this period of growth, the manufacturing industry was relatively stagnant. In fact, the manufacturing industry lost 200 net jobs during this time period. As a result, the composition of Oregon’s labor force changed dramatically between 1990 and 2007. Manufacturing jobs dropped from representing 16.26% of the total workforce to just 11.79%. Not only is it interesting to see the mining and logging

industry with such low employment numbers, it also decreased its total employment between 1990 and 2007. As a state that is known for its timber resources, even in 1990, mining and logging accounted for only 1.04% of Oregon’s nonfarm labor force. By 2007 mining and logging only represent 9,300 employees, according to Oregon Labor Market Information System. This makes the mining and logging industry a relatively small detail in Oregon’s labor composition. On the other hand, professional and business services, and education and health services both gained in total share of Oregon’s nonfarm workforce. Below is a chart showing the percent of total jobs each industry represented of total nonfarm employees in Oregon. The third column shows the

1990	2007	Difference	Industry
16.26%	11.78%	-4.48%	Manufacturing
18.48%	16.74%	-1.74%	Government
21.04%	19.35%	-1.69%	Trade, transportation, and utilities
1.04%	0.54%	-0.50%	Mining and logging
3.69%	3.49%	-0.20%	Other services
2.15%	2.06%	-0.09%	Information
5.79%	6.15%	0.36%	Financial activities
8.70%	9.93%	1.23%	Leisure and hospitality
4.32%	6.03%	1.71%	Construction
10.34%	12.24%	1.90%	Educational and health services
8.22%	11.70%	3.48%	Professional and business services

difference between the 1990 and 2007 composition, listed in increasing order.¹³

The State of Oregon after the Crash:

In December of 2007, the United States economy officially entered a recession. Household net worth decreased on the backs of a collapsed national housing market and

¹³ United States. Oregon Labor Market Information System. Annual Average Nonfarm Employment.

US stock market. This forced a decrease in consumer spending, and with less demand many firms resorted to layoffs. Statewide nonfarm employment decreased for three straight years during and immediately after the recession. A net 129,300 jobs were removed from the workforce between 2007 and 2010. This contributed to Oregon's unemployment rate jumping from 5.3% to 10.6%. To discuss Oregon's experience during the Great Recession, I will detail how each industry in Oregon responded to the national recession. Some industries grew, most shrank. Looking at the components of each industry will show why they behaved the way they did, and how Oregonians experienced the Great Recession.

Mining and Logging:

As mentioned before, mining and logging in Oregon represent a surprisingly small amount of Oregon's total workforce. In 2007, together, mining and logging accounted for 9,300 employees or .54% of the workforce. By the beginning of 2010 that number was just 6,700. This change resulted in the smallest impact on Oregon's labor force of all industries. Internally, the industry suffered the second largest losses as a percentage of pre-recession employment (the largest being construction). The loss of those 2,600 jobs decreased mining and logging employment in Oregon by 27.96%.¹⁴

In Oregon, logging is the dominant force of this industry lumped together by the Bureau of Labor Statistics. In 2007 mining only accounted for 2,200 of the industry's 9,300 jobs. That number did drop by 600 to 1600 mining employees in the beginning of 2010. The drop in mining employment can be associated with four of the 149 mining

¹⁴ United States. Oregon Labor Market Information System. Industry Report: Mining and Logging

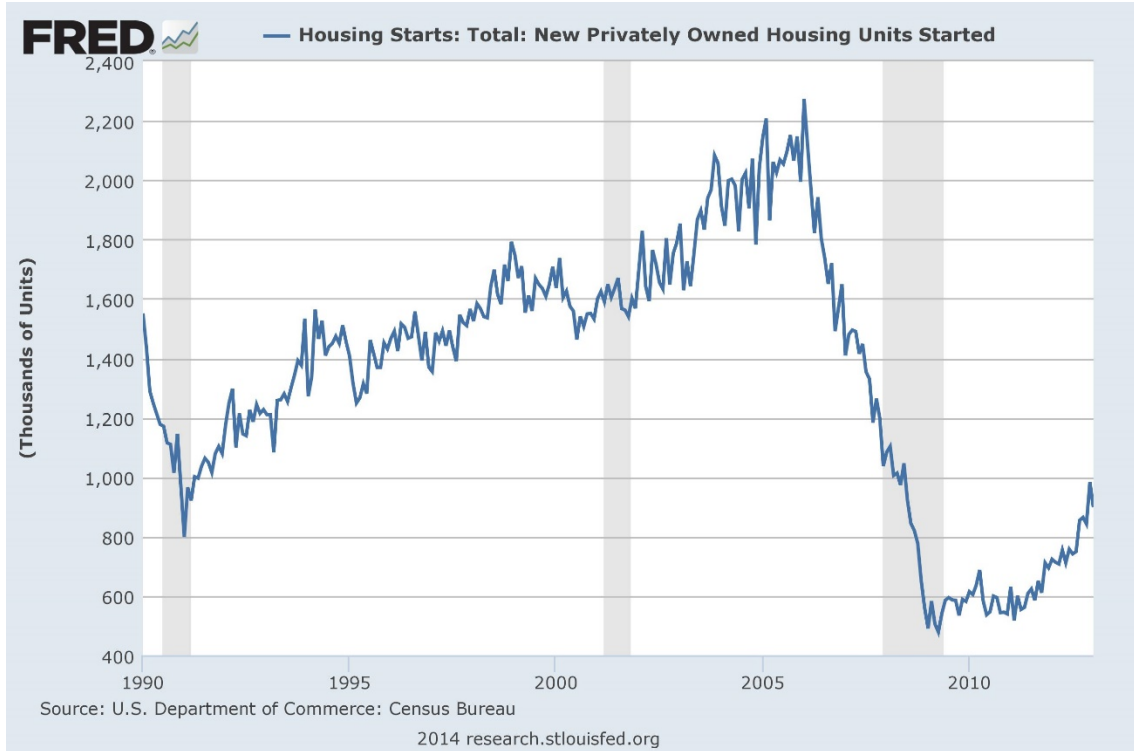
business units closing their doors during the Great Recession. The vast majority of mining employment in Oregon falls into the “Mining, except oil and gas” category (2,100 of the original 2,200)¹⁵ Mining (except oil and gas) consists of the extraction and beneficiating of metallic and nonmetallic minerals including coal. Beneficiating refers to processing including the crushing screening, washing, sizing etc of the extracted substance. In Oregon, the majority of these minerals include stones, sand, gravel, and clay. These materials are primarily used in construction aggregate and other industrial applications. The Industrial applications include road building, landscaping, and construction. With consumer spending, and tax revenues down many of these projects were cut back during the Great Recession. As a result, employment in this sector contracted.¹⁶

The logging industry, more simply, is involved in cutting timber, transporting timber, and producing wood chips in the field. Compared to mining, logging was the driving force in this industry. The majority of logging products are predestined for residential housing projects. Not surprisingly, after the housing bubbled popped housing projects nearly grinded to a halt. At the housing market’s peak, 2,275,000 new housing projects were started a month. By the start of 2010 there were just 614,000 new housing projects per month. With the Great Recession knocking out the Oregon’s logging industry’s main source of demand the only possible outcome was contraction and

¹⁵ United States. Oregon Labor Market Information System. Industry Report: Mining, except oil and gas

¹⁶ Kruchkin, Agiimaa. "Sand and Gravel Mining in the US." IBISWorld. 2013. Web

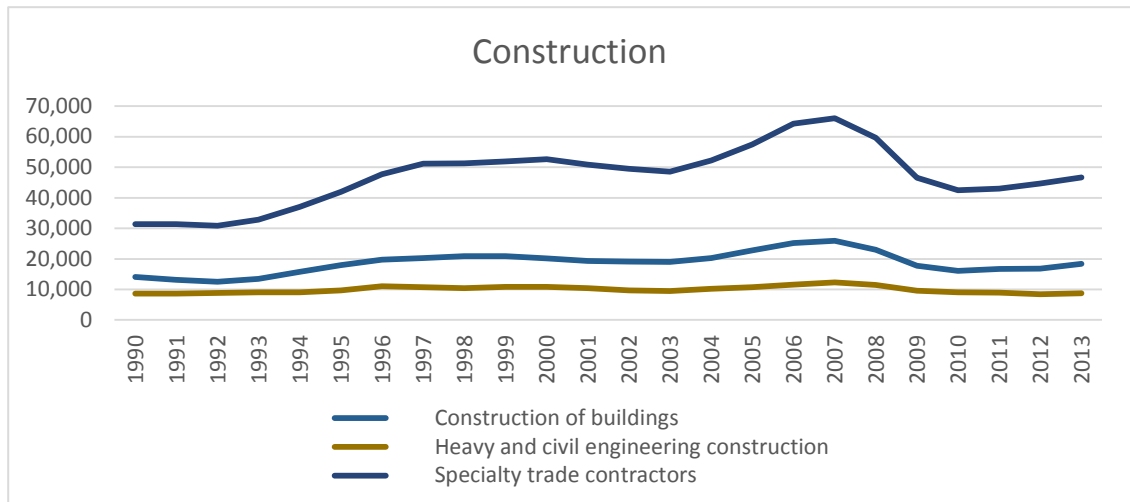
layoffs.



Construction:

The construction industry in Oregon was one of the hardest hit industries during the Great Recession. Between 2007 and 2010, 36,700 construction jobs were lost. This created a 35.19% reduction in employment in the industry. This loss was the second largest net loss and largest loss as a percentage of the total industry. In other words, the job losses in the construction industry accounted for 28.38% of Oregon's net job loss. The construction industry is broken down into three parts: construction of buildings, heavy and civil engineering construction, and specialty trade contractors. The largest contributor of these three categories to employment in Oregon is specialty trade contractors. Compared to employees classified in 'construction of buildings,' these contractors are involved in only part of the construction. For example specialty trade

contracts might be responsible for pouring concrete, plumbing, or painting, but will not be on site for the entirety of the project. Looking at the graph below, the influence of



specialty trade contractors (top line) on the overall decrease in construction employment is clearly visible. Also important, specialty trade contracts made up the majority of the increase in employment in this industry before the crash. This shows that specialty contracts are both the first to be added to the construction workforce when demand is high, and the first to be let go when that demand subsides. Compared to specialty trade contractors, employees classified in ‘construction of buildings’ or ‘heavy and civil engineering construction’ experienced a smoother employment trend over the last thirteen years.¹⁷

Like the logging industry, the construction industry suffered heavily from the collapse in the housing market. Commercial construction demand was heavily hit as corporate profits sank due to low consumer demand. While some businesses failed during the Great Recession, office rental vacancy rose. Similar to the effect of an increased foreclosure rate on the housing industry, higher commercial vacancy rates

¹⁷ United States. Oregon Labor Market Information System. Industry Report: Construction

create a surplus in commercial real estate. In turn, higher vacancy rates lower demand for new construction. The Federal Reserve encouraged borrowing for construction projects by lowering interest rates, however this was not enough to overcome the surplus created by vacancies. With low demand for new construction projects, specialty contractors in Oregon were the first to be laid off. Overall the construction industry's retraction played a large role in Oregon's spike in unemployment during the Great Recession.¹⁸

Manufacturing:

The manufacturing industry in Oregon suffered the greatest net job loss at 40,100 jobs between 2007 and 2010. In the state of Oregon, durable goods manufacturing dominates nondurable goods (such as food and paper) in terms of total employment. In 2007, durable goods manufacturing employed 150,900 Oregonians, almost triple nondurable goods manufacturing employment. Durable goods manufacturing also suffered a disproportionately high percentage of the manufacturing industry's job losses in Oregon. 36,000 durable goods manufacturing jobs were lost compared to 4,200 of nondurable manufacturing jobs. To compare, durable goods manufacturing employment shrank by 23.9%, and nondurable good manufacturing employment shrank by just 8%.¹⁹

The durable goods manufacturing industry in Oregon covers a broad range of products including, wood products, primary metal, fabricated metal, machinery, computer/electronic equipment, and transportation equipment. In Oregon, the largest of

¹⁸ Doug Kelly. "Construction Project Management Services in the US." IBISWorld. 2013. Web

¹⁹ United States. Oregon Labor Market Information System. Industry Report: Manufacturing

these subcategories is the computer and electronic equipment manufacturing sector. This sector mainly engages in the design and creation of integrated circuits, and other inputs to computers, communications equipment, and other consumer electronics. The vast majority of this employment is located in Washington County. This county is home to Intel's semiconductors manufacturing plant.

As an input to many consumer electronics, electronics manufacturing employment is closely tied to real personal consumption which took a dip during the 2008 recession. This industry also contains strong firm rivalry manifest through price competition. Domestic electronic goods manufacturers have to compete with overseas manufacturers, who benefit from lower labor costs and more relaxed government regulations. When consumers became more price sensitive due to lower net worth during the recession, demand for high end electronic goods declined. In Oregon, this contributed to the loss of 5,722 of jobs in the electronic equipment manufacturing sector.²⁰

The second largest contributor to Oregon's durable goods manufacturing industry is wood product manufacturing. In fact, from 1990-1996 wood product manufacturing employed more people in Oregon than computer and electronic manufacturing. But over time, technology based manufacturing took over. Wood product manufacturing jobs involve processing lumber into consumer goods. This includes sawing, shaping, laminating, and assembling wood products. The primary output relies heavily on residential and non-residential construction. As discussed earlier, the construction industry was hit hard by the crashing of the housing industry

²⁰ Darryle Ulama. "Circuit Board & Electronic Component Manufacturing in the US" IBISWorld. 2013. Web

when subprime mortgages defaulted. Without that demand, the wood product manufacturing industry crashed as well. In Oregon, the wood product manufacturing industry decreased its employment by 36%, from 30,000 to 19,200, between 2007 and 2010.²¹ The other subsectors of durable goods manufacturing also experienced a decline in employment over this time. However, due to their lower overall employment had a smaller effect on Oregon's experience during the Great Recession.

Nondurable goods manufacturing in Oregon experienced only a moderate decline during the Great Recession. Employment dropped from 53,200 to 49,000. This was buoyed by the food manufacturing industry which actually added 700 jobs between 2007 and 2010. Most of these jobs were added in the bread and bakery product manufacturing and dairy product manufacturing subsectors. In the bread industry, this is an interesting anomaly because per capital wheat flour consumption dropped during the Great Recession. However, through successful harnessing of healthy eating trends it was possible for this industry in Oregon to persevere.²² Nationally, supermarket demand for dairy products only dropped 1% in 2009²³ keeping employment levels steady. This illustrates food manufacturing's relative independence from the effects of a national recession. This independence allowed nondurable goods manufacturing to experience far fewer job losses than durable goods manufacturing in Oregon.

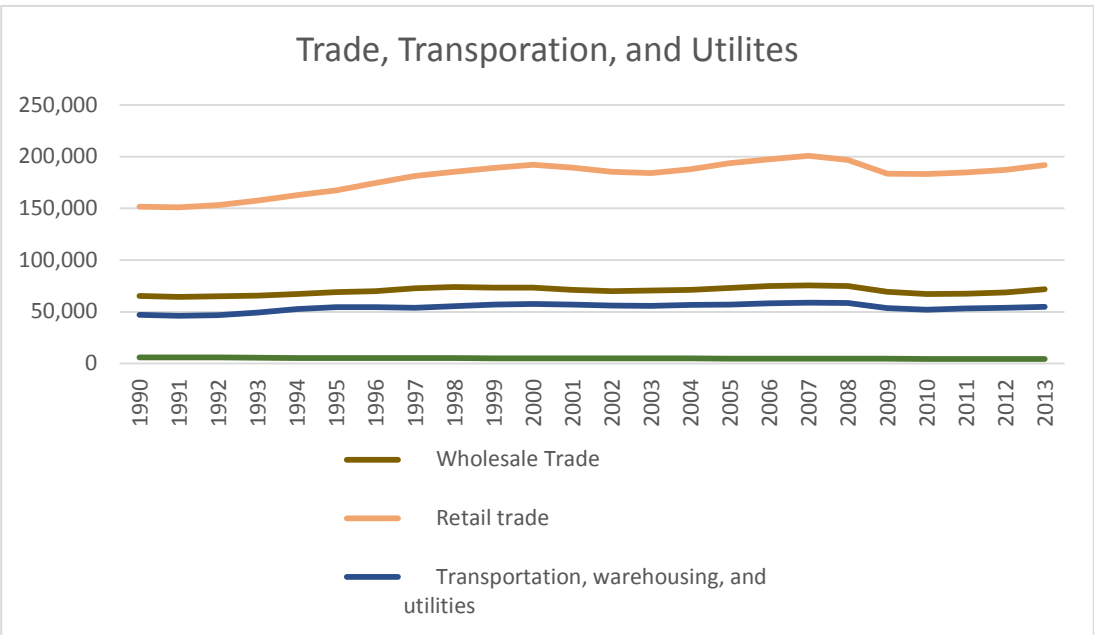
²¹ United States. Oregon Labor Market Information System. Industry Report: Manufacturing

²² Hester Jeon. "Bread Production in the US." IBISWorld. 2013. Web

²³ Antal Neville. "Dairy Production in the US." IBISWorld. 2013. Web

Trade, Transportation, and Utilities

The trade, transportation, and utilities industry, Oregon’s largest in terms of total employment, suffered 32,600 job losses during the Great Recession. This industry includes wholesale trade, retail trade, as well as the transportation, warehousing, and utilities often involved in this process. Over time, the majority of this industry’s growth can be attributed to retail trade. Wholesale trade, transportation, warehousing, and



utility job growth has been minimal since 1990. Those jobs added to the retail trade industry during the spending boom before the recession suffered the greatest losses after the economic retraction. The retail trade industry lost a total of 17,500 jobs during the three years of employment retraction in Oregon.²⁴

Before the recession began, retail trade accounted for 60% of the employment in the trade, transportation, and utilities industry. The three biggest contributors to retail trade employment in Oregon are, food and beverage stores, general merchandise stores,

²⁴ United States. Oregon Labor Market Information System. Industry Report: Trade, Transportation, and Utilities

and motor vehicle parts and dealers. The success of businesses in these subsectors is largely dependent on household disposable income and their propensity to spend on discretionary goods. In 2009 alone, per capita disposable income shrank almost 4%. As a result, monthly retail and food service sales dropped from \$179,370,000,000 to \$158,551,000,000.²⁵ Nationally, these sales dropped 11.6% and firms had to cut



employment to match. The result in Oregon, was a loss of the previously mentioned 17,500 jobs.

Wholesale trade, transportation, warehousing, and utilities make up a much smaller portion of the industry's total employment. Wholesale trade in Oregon, mainly involves selling durable or nondurable goods from manufacturers to retailers.

Transportation employment in Oregon is dominated by truck transportation of a wide variety of commodities. The warehousing subsector includes employees engaged in the

²⁵ Sally Lerman. "Warehouse Clubs & Supercenters in the US." IBISWorld. 2013. Web

handling and storage of goods for the purpose of filling orders. Like the manufacturers themselves, the previously listed middlemen are dependent on consumer demand. When the retailers have to make cuts, their decrease in orders causes their suppliers to tighten their belts as well. In Oregon between 2007 and 2010 the wholesale trade industry shed 8,400 jobs and the transportation, warehousing, and utilities industry lost 6,500. The utilities sector is an interesting inclusion in this industry. Employees in this classification are engaged in providing electric power, natural gas, water, sewage services. However, Oregon employed only 4,700 of these employees in 2007 and only 100 jobs were lost during the recession.

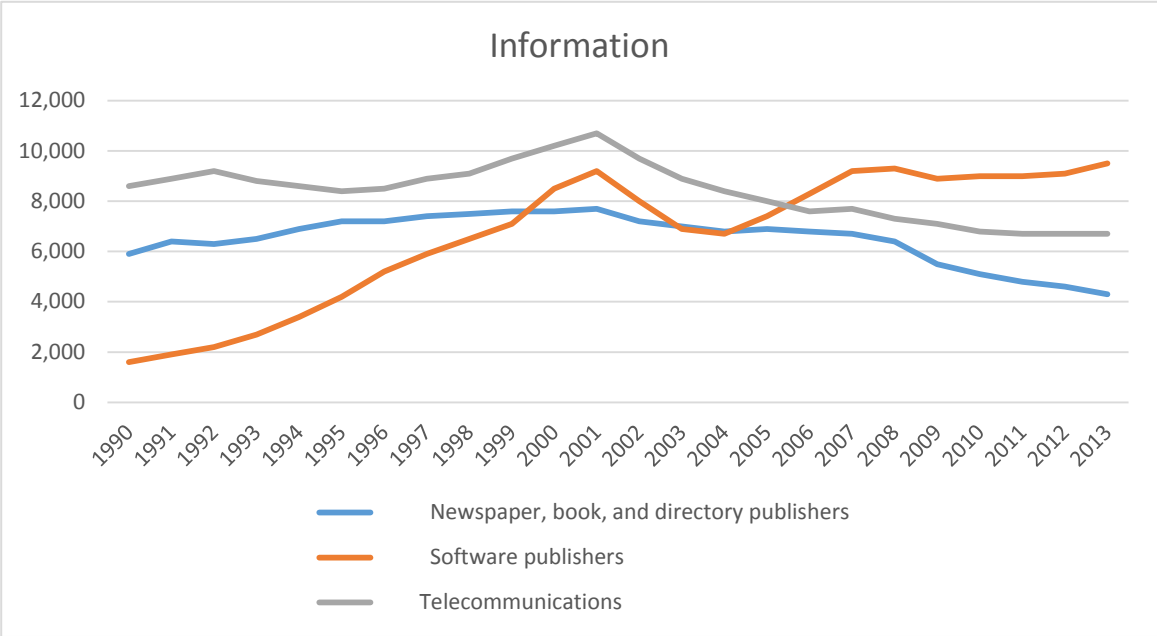
Information

The information industry employs the second fewest employees (mining and logging the least) of all industries in Oregon, and only suffered small employment losses during the Great Recession. Employment in this industry peaked in 2002 with 39,700 before decreasing during the dot com bust of the early 2000s. Then, in 2004 the information industry bottomed out and began adding jobs until reaching another relative peak in 2007 before the recession. Between 2007 and 2010 the information industry lost 4,000 jobs, an 11.2% industry employment retraction.²⁶

The information industry includes jobs that involve publishing, (both software and newspaper/directory) telecommunications, motion pictures, and broadcasting. Of these sectors, publishing employs the vast majority of Oregonians in the information industry. Over twice as many employees work in publishing as the second biggest sector of the information industry, telecommunications. Since 1990, the composition of

²⁶ United States. Oregon Labor Market Information System. Industry Report: Information

the publishing industry has undergone radical change. In 1990, just 1,800 Oregonians worked in software publishing. By 2007 software publishing was the largest subsector of the publishing industry and even surpassed the entire telecommunications sector.



On the other hand, the second biggest subsector of publishing employment, newspaper, book, and directory publishers have been on a constant decline since 2001. These prerecession trends changed the labor force composition and determined how many Oregonians would experience the Great Recession.

During the Great Recession Oregon’s software publishing growth cooled off and newspaper, book, and directory publishing dove deeper. The most important determinant of the success of the software industry is private investment in computers and software. Nationally, this kind of investment decreased only for one year, 2009, where it shrunk 4.5%. This followed 2007 where investment in computers and software grew 8.9% and 2008 when it grew 2.5%. As a result, the national revenue in this

industry decreased in only 2009 before reaching an all-time high the next year. This shows the impact of a national recession on the software industry was minimal. In turn, Oregon's employment contraction in this industry was only 200 jobs. This helped the information industry as a whole have a small impact on Oregon's experience during the Great Recession.²⁷

On the other hand, printed publishing has suffered from a fundamental shift in consumer preference that was only exacerbated by the 2008 recession. Of all sectors in the information industry, newspaper, book, and directory publishing is the only sector to continue to lose jobs after the conclusion of the Great Recession. Unlike software investment, print advertising dropped dramatically during the recession. Print advertising was down 10% in 2008, 18% in 2009, nearly constant in 2010, but then dropped 6% again in 2011.²⁸ In Oregon, this resulted in 1,600 lost jobs during the recession, and a loss of another 600 between 2010 and 2013. While it is clear this sector had a more difficult time during the Great Recession, in stronger economic times its performance has not improved.

Financial Activities:

106,400 Oregonians worked in the financial activities industry, before 13,200 (12.4%) of those employees lost their jobs during the Great Recession. Before the recession the majority of this industry's employment was in finance and insurance (63,000 of 106,400). The other 43,400 jobs were in real estate, rentals, and leasing. Job losses in these sectors were comparably split. The finance and insurance sector lost

²⁷ "Private Investment in Computers and Software" IBISWorld. 2013. Web

²⁸ "Print Advertising Expenditure" IBISWorld. 2013. Web

7,000 or 11.11% of their employee base. The real estate, rentals, and leasing sectors lost 6,200 jobs or 14.29% of their employee base. These losses were nearly proportional with the state's overall job losses. In 2007 this industry accounted for 6.15% of Oregon's workforce, after the recession this number was reduced to 5.82%. Overall this was a small impact on the composition of Oregon's workforce, and a small impact on Oregon's experience during the Great Recession.²⁹

The finance and insurance sector's employment is mainly split between credit intermediation and insurance carriers. Credit intermediation covers a wide variety of jobs that are mostly commercial banks or credit unions. This includes lending funds raised from depositors, raised from the credit market, or lending funds for loans and mortgages. Insurance carriers underwrite annuities and insurance policies by assuming risk and assigning premiums to clients. Credit industry revenue typically comes from the spread between the prime rate, what banks charge their most creditworthy clients, and the federal funds rate. This spread usually sits at around 3%, however after the recession began the federal funds rate was decreased in order to encourage demand for lending. The credit industry lowered rates in response, but retained their 3% spread. While still profitable for creditors, the low rates were not enough to convince consumers to borrow during the Great Recession. Aggregate household debt decreased during the Great Recession curbing demand for credit intermediaries. As household net worth was cut, consumer confidence fell, and consumers were more likely to pay off old debts than accrue new ones.³⁰ In Oregon, this resulted in 4,200 employee reduction in

²⁹ United States. Oregon Labor Market Information System. Industry Report: Financial Activities

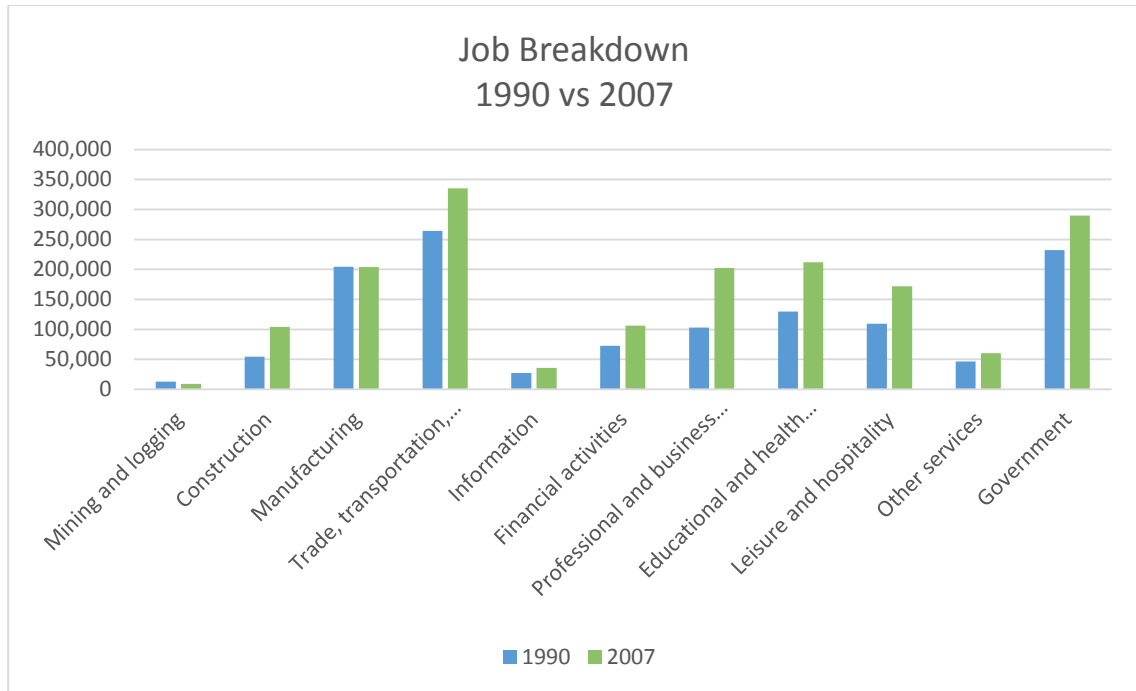
³⁰ "Aggregate Household Debt" IBISWorld. 2013. Web

the credit intermediation sector. In the insurance industry, both companies and individuals discontinued their policies during the recession. Companies cut benefits in order to decrease costs, and individuals ended policies to support their bottom lines. Oregon's insurance employment decreased by 2,800.

Second to finance and insurance, real estate, rentals, and leasing is the largest sector in the financial activities industry. This sector includes all jobs involved with buying, selling, renting or leasing real estate to consumers. After the housing bubble burst and the mortgage crisis was on, many companies in this sector went out of business. In Oregon, 12% of these companies left the marketplace or were sold to competitors. As a result the sectors employment shrank by 14.29%, a loss of 6,200 jobs.

Professional & Business Services

This industry covers a wide range of employees including administrative, professional, scientific, and technical services, as well as corporate management. In the period leading up to the Great Recession (1990-2007) this industry was one of the fastest growing in Oregon. 99,300 jobs were added taking this industry from the 6th

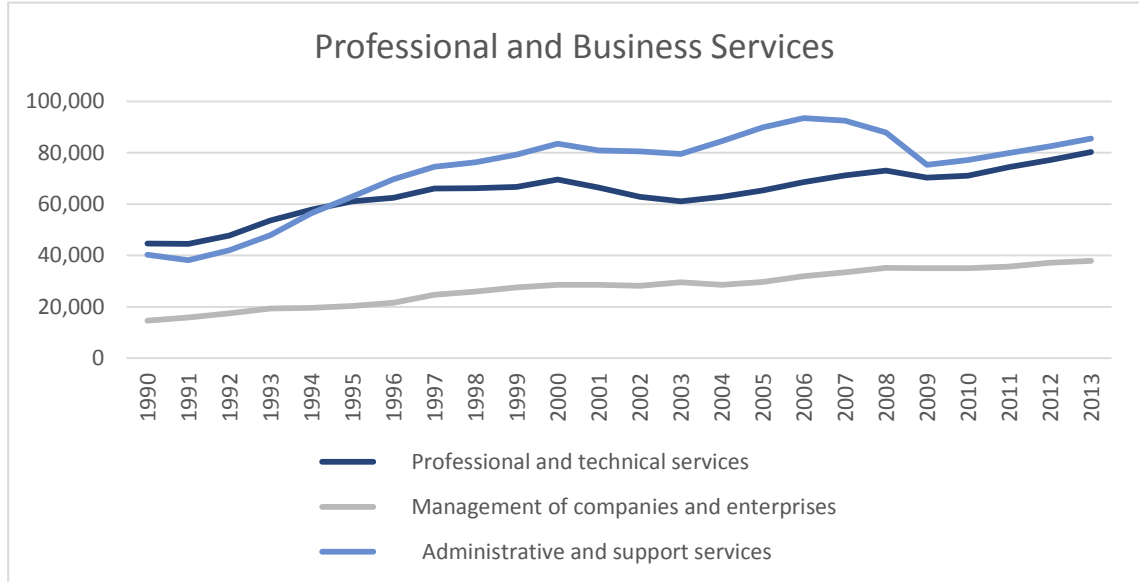


largest in Oregon to the 4th, passing leisure and hospitality and manufacturing. After being the fastest growing industry between 1990 and 2007, this industry only lost 6.86% of its total employment during the Great Recession. This made the professional and business service industry the sixth biggest loser by percentage, of the nine industries that lost jobs between 2007 and 2010.³¹

The largest sector in this industry is the administrative and support services sector, followed by professional, scientific & technical services, with company management in a distant third. The administrative and support services industry experience accelerated growth during the pre-recession spending boom, but also experienced significant job losses. On the other hand, the professional, scientific & technical services sector experienced only a moderate decline of 100 employees. The management of companies and enterprises industry actually added 2,300 jobs during the

³¹ United States. Oregon Labor Market Information System. Industry Report: Professional and Business Services

recession between 2007 and 2010.



The administrative and support services sector ramped up from 79,600 employees to 92,500, after plateauing through the dot com bust. This entire gain, and then some, was lost in between 2007 and 2010 during the Great Recession. By 2010 17,200 jobs in this sector were lost. These jobs include, any employees who work to support the day-to-day operations of outside organizations. The most common examples include, temporary help agencies, telephone call centers, janitorial services, and landscaping. Almost half of the 17,200 sector losses (8,363) were from firms engaged in filling client's temporary labor needs. One of the biggest sources of demand for temporary labor is the construction industry. As shown earlier, with low demand for residential and commercial construction full time construction jobs were cut. Because temporary labor is often easier to let go, the effects of this downturn easily spread to administrative and support services. The telemarketing industry also suffered during the Great Recession. With decreased corporate profits, firms were pushed to look for ways to cut costs. Offshoring of call centers for e-commerce and financial firms was a

popular solution. Telemarketing employment was also hindered by The Do Not Call Improvement Act of 2007 which made numbers added to that list permanently unavailable to telemarketers.³²

The second biggest source of employment in the business and professional services industry is the professional and technical services sector. This sector's employment was nearly unchanged between 2007 and 2010, dropping from 71,200 employees to 71,100. This sector includes, legal, architectural, engineering, and computer system service. Law firm employment losses were largely mitigated because many firms and consumers were forced to seek legal advice as bankruptcies rose. Many architecture firms work closely with construction companies. However, the recession's impact on architectural firms was milder because companies passing on new construction projects, sometimes chose renovation projects instead. These project also needed the assistance of architectural firms. Computer system support was also relatively stable during the recession. With increasing technological complexity and competition surrounding technological innovation, many firms chose to cut costs in other areas.³³ These factors allowed professional and technical services to have a stabilizing effect on Oregon's employment during the Great Recession.

The management of companies sector, while smaller than the other two sectors, impressively added 1,700 jobs during the Great Recession. This sector includes employees engaged in holding equity in companies for the purpose of overseeing or guiding business decisions. Nationally, many companies were forced to reduce headcounts due to reduced profits during the Great Recession. Oregon is an exception to

³² Jeremy Edwards. "Office Staffing & Temp Agencies in the US." IBISWorld. 2014. Web

³³ Jeremy Edwards. "IT Consulting in the US." IBISWorld. 2014. Web

that trend. Unfortunately, the Oregon Labor Market Information System does not provide subsector information on this sector. This makes it difficult to deduct exactly how Oregon was able to add management employees during a recession. However, it certainly helped buoy the industry as a whole's employment. This employment increase, combined with mitigated employment losses in the professional, technical, and support services allowed this industry to have a small impact on Oregon's overall unemployment increase during the Great Recession.

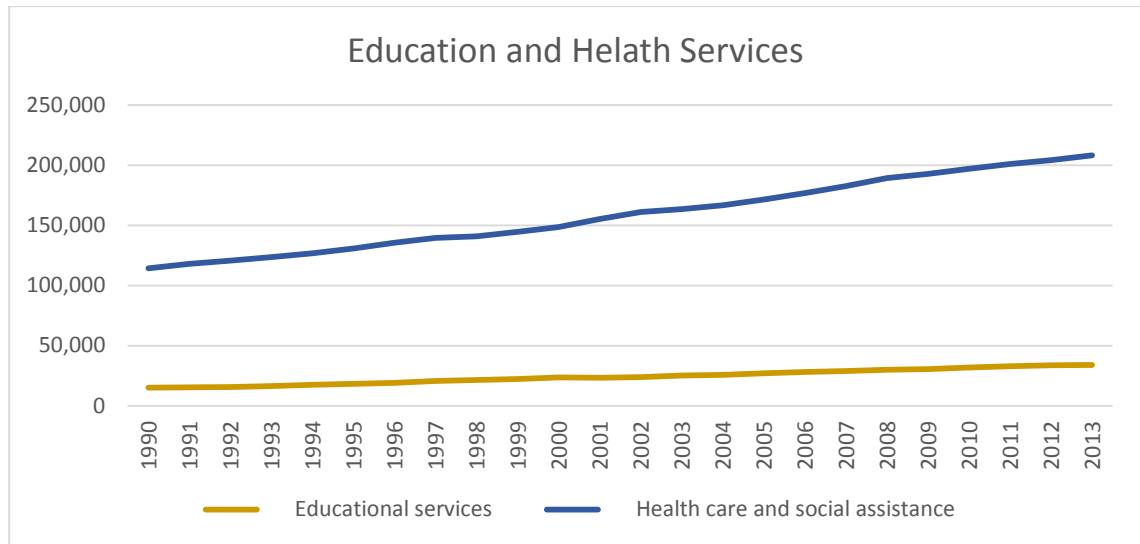
Education and Health Services

The education and health services industry in Oregon was the only industry, other than government, to increase employment between 2007 and 2010. An impressive 17,200 jobs were added, resulting in an 8.12% growth in the industry during a national recession. This changed the composition of the Oregon labor force. Before the recession education and health services employees represented 12.24% of Oregon's workforce, and by 2010 this increased to 14.3%. This gain of 2.06% market share of all Oregon employees was the largest change, positive or negative, of any industry during the 2008 recession.³⁴

This industry is composed for two main sectors, the health and social services sector and the educational services sector. The health and social services sector dominates the industry and increased the gap during the Great recession. In 2007, 182,800 of the industry's total 211,800 jobs were in the health and social services sector. Between 2007 and 2010, 14,300 jobs were added to Oregon's health and social

³⁴ United States. Oregon Labor Market Information System. Industry Report: Education and Health Services

services sector. Jobs in this sector include ambulatory health care services, hospitals, nursing care facilities, and social assistance. All four of these sectors increased employment between 2007 and 2010.



The biggest external drivers of this sector are federal funding for Medicare and Medicaid, private insurance coverage, and United States population over the age of 65. Medicare and Medicaid funding provides reimbursement programs for health services. With increased funding for reimbursements between 2007 and 2010, demand for healthcare services also increased. This kind of funding has increased very year for the last thirty years, including the Great Recession. With an again median age in the United States, an increased percentage of the population qualify for these programs. According to the United States Census Bureau, in 2010 13.9% of Oregon’s population was over the age of 65. This number grew from 12.8% in 2000, reflecting an increase in Oregon’s elderly population. Compared to the national average of 13%, Oregon had a higher

supply of elderly citizens who typically have a higher demand for healthcare services.³⁵ Even though private insurance enrollment dropped nationally during this time, the aging population and increased funding for Medicare and Medicaid allowed this industry to add jobs during the Great Recession. This growth alleviated the overall job losses in Oregon and mitigated some of the negative effects of the Great Recession.

The educational services sector is a minimal contributor to the overall employment of the education and health services industry in Oregon. In fact, it is smaller than all of the subsectors of health services, except social care (which it is nearly equal to). Educational services in this sector include privately owned schools, colleges, and universities in Oregon. Growing from 29,000 jobs to 31,900, these types of institutions added 2,900 jobs during the Great Recession. Most of these employees, in Oregon, work for private elementary schools or private colleges and universities. These institutions are primarily supported by tuition, fees, and other private donations. They often serve as a direction substitute from public education. For that reason, demand for private education is dependent on the quality of public education available. As a result of the Great Recession tax return revenue decreased and funding for primary and secondary education suffered. In 2009 the budget for public primary and secondary education only grew by 0.3%, the smallest growth since 1982.³⁶ That year the percentage of households earning more than \$100,000 a year also grew.³⁷ These factors

³⁵ United States. Census Bureau. The Older Population: 2010. By Carrie Werner. Web. <<https://www.census.gov/prod/cen2010/briefs/c2010br-09.pdf>

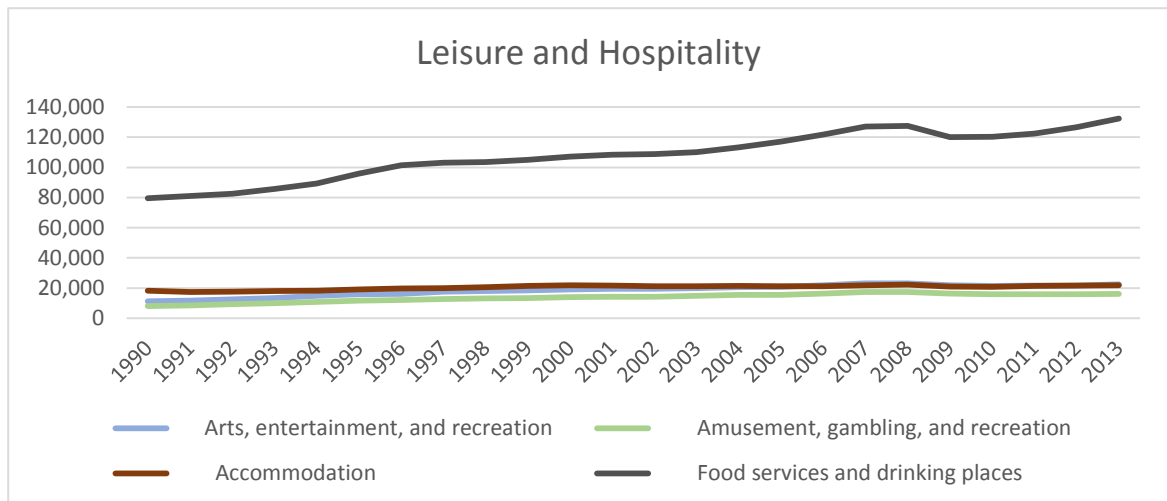
³⁶ "Government Funding for Primary and Secondary Education." IBISWorld. 2014. Web

³⁷ "Households Earning more than \$100,000." IBISWorld. 2014. Web

increased demand for private educational services, and allowed Oregon to add 2,900 jobs to this sector.

Leisure and Hospitality

Nine out of Oregon’s eleven industries lost jobs during the Great Recession, but the leisure and hospitality industry lost the smallest percentage of their 2007 employment. In 2007 1,000 jobs were added, and in 2009 only 600 jobs were lost (0.3%). The leisure and hospitality industry in Oregon suffered its only major losses in 2008, decreasing total employment from 172,900 to 162,900 (5.78%). While the industry only contributed to a small amount of the total job losses in Oregon, looking at where these job losses came from will help exhibit how Oregon experienced the Great Recession.³⁸



Almost three quarters of this industry’s employment is within the food services and drinking places sector. In turn, 7,109 of the total 10,000 job losses were also attributed to food services and drinking places in Oregon. Food and drinking places

³⁸ United States. Oregon Labor Market Information System. Industry Report: Leisure and Hospitality

mainly represent restaurants, but also include bars, food service contracts, and mobile food services. Chain restaurant revenue dropped in both 2008 and 2009, 1.0% and 3.2% respectively. Not surprising, the largest contributor to the success of the restaurant industry is consumer spending. As shown earlier, real person consumption dropped as average net worth retracted during the Great Recession. Single location restaurants' revenue were affected less than chain restaurants. 2009 was the only year single location restaurants had less revenue nationally than the year before. Importantly, single location restaurants nationally represent \$44,949 in wages versus \$26,317 from chain restaurants (in millions).^{39 40} Unfortunately, Oregon Labor Market Information System does not provide a distinction on employment in Oregon between these two. Assuming the breakdown is similar, single location restaurants' minor dip in revenue during the Great Recession helps explain their comparably small percentage job losses to other industries in Oregon.

The rest of the leisure and hospitality industry's job losses were mostly from the amusements, gambling, and recreation sector and the accommodation sector. The amusements, gambling, and recreation sector lost 1,473 jobs or about 8.5% of their 2007 workforce. The accommodation sector lost 1,125 jobs or a smaller 5.18% of their 2007 workforce. Both of these sectors rely on domestic trips taken by United States residents. The number of trips taken bottomed out in 2009 at 620.80 million, an 8.96% decrease from before the Great Recession hit.⁴¹ Without the demand from these

³⁹ Andy Brennan. "Single Location Full-Service Restaurants in the US." IBISWorld. 2014. Web

⁴⁰ Andy Brennan. "Chain Restaurants in the US." IBISWorld. 2014. Web

⁴¹ "Domestic Trips by US Residents" IBISWorld

travelers, amusements, gambling, recreation, and accommodation in Oregon revenue suffered. Firms in these sectors then had to resort to job elimination to cut costs, impacting the unemployment rate in Oregon during the Great Recession.

Other Services

“Other Services” is a catch-all industry to include other service sectors that could not be included in other industries. Employment in this miscellaneous industry is small and has a minimal impact on the overall economy in Oregon. The only other industries with less total employment were information, and mining and logging. 3,700 jobs were lost in this industry, the second smallest net job loss by industry. The only single industry that lost fewer jobs was the mining and logging industry. The 3,700 lost jobs represents a 6.14% reduction in the industry’s employment between 2007 and 2010. The three sectors this umbrella includes are, membership associations, repair and maintenance services, and personal and laundry services.⁴²

Membership associations is the largest sector of other services and lost just 500 jobs between 2007 and 2010. Membership associations sector include religious organizations, social advocacy organizations, and grant making services. These employees engage in organizing and promoting religious activities, supporting a wide range of causes by distributing grants, or advocating social and political causes. The two most important economic factors supporting these sectors are per capita disposable income, and time spend on leisure and sports. Real disposable personal income per

⁴² United States. Oregon Labor Market Information System. Industry Report: Other Services



capital dipped nationally during the Great Recession. The biggest decrease occurred in 2008 when real disposable personal income per capital dropped 1.3%. With less available cash, organizations dependent on donations in Oregon suffered. This happened despite the fact that the average American spent more time on leisure and sports during the Great Recession.⁴³ This number often increases with a spike in unemployment. But even if Oregonians had more time to spend with their church or social organization, they did not have the same amount of financial capital to contribute. The result was a minor decrease in employment in this sector.

The repair and maintenance sector is involved in the restoration of heavy machinery and equipment through routine and special services. Jobs of this nature accounted for the most lost jobs of all ‘other services.’ 2,612 repair and maintenance jobs were lost, decreasing employment from 17,538 to 14,926. The majority of these

⁴³ David Yang. “Religious Organizations in the US.” IBISWorld. 2014. Web

jobs are in some way related to automotive repair. Like membership associations, repair and maintenance work is dependent on available disposable income. Consumers will put off any deferrable maintenance during short term economic downturn like the 2008 recession. The number of motor vehicles registered in the United States also dropped from 254.4 million to 250.3 million during the Great Recession.⁴⁴ With fewer cars registered, demand for repairs and maintenance also decreases. This deduction in demand caused the sector to retract in Oregon.

The smallest 'other' sector is personal and laundry services, mainly constituting hair, nail, skin, laundry, and pet services. These largely represent non-essential services dependent on disposable income. About 5% of 2007 employment or 640, of these jobs were lost during the Great Recession. This employment change does not reflect a large impact on Oregon's experience during the Great Recession, but this does illustrate the cutbacks average Oregonians were forced to make in the wake of rising unemployment, lost net worth, and shrinking disposable income per capita.⁴⁵

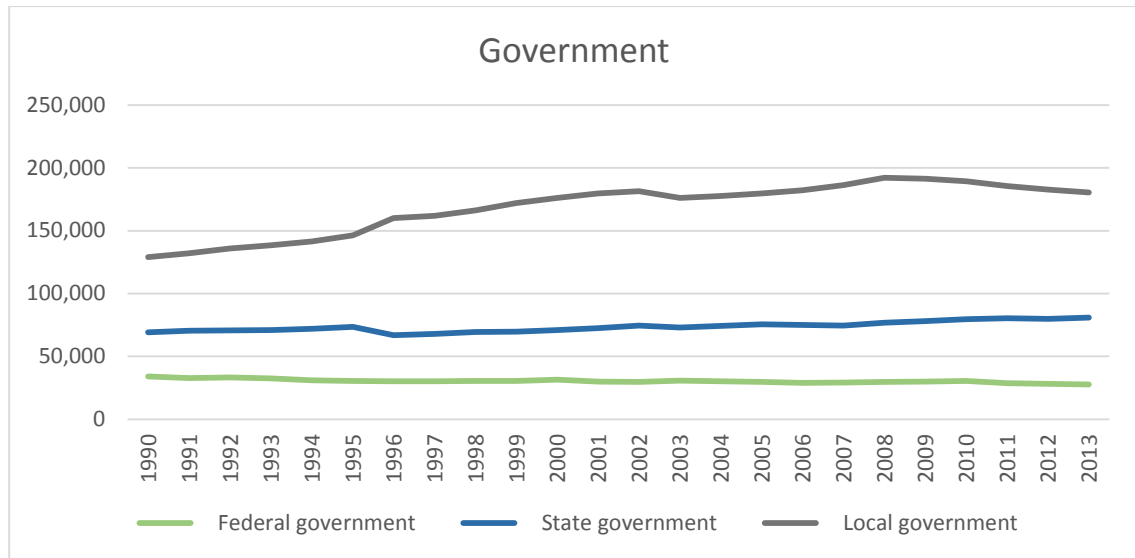
Government

Government has consistently been the second largest employer in Oregon since 1990, and was one of two industries to add employment in Oregon during the Great Recession. Government employment in Oregon increased by 10,000 total employees, a large net increase, but only 3.45% of the huge industry. The other industry to add employment during the national economic downturn was health and education services

⁴⁴ "Number of Motor Vehicle Registration." IBISWorld. 2014. Web

⁴⁵ Sally Lerman. "Hair & Nail Salons in the US" IBISWorld. 2014. Web

which added 17,200 jobs. Government employment includes employees engaged in many of the industries listed before. However, in these cases, the wages come from local, federal, or state government.⁴⁶



Local government is by far the biggest driver of employment of the three sizes of government. Local government employment increased by 3,200 during the Great Recession, from 186,000 to 189,500. Almost all of this growth (2,802 jobs) came from local government jobs in the education sector, the largest sector of local government. Local government education employment totaled 98,107 in 2010. It is important to compare this to the growth in private education jobs which increased by 2,900 to a still much smaller total (31,900). As explained earlier, these sectors serve as substitutes and private education grew much faster than public between 2007 and 2010. The growth disparity was attributed to private education’s advantage during public education’s reduced funding increase during the Great Recession. While funding growth slowed, the need for additional employees in local public education still existed. Between 2007 and

⁴⁶ United States. Oregon Labor Market Information System. Industry Report: Government

2010 Oregon's population of children between the age of 0-17 increased from 877,547 to 884,078 (.74%).^{47 48} This, albeit small growth in young population, help support the addition of 2,702 local educators.

State government is the second biggest government employer in Oregon, adding 5,200 jobs during the Great Recession. State government employment accounted for over half of added government jobs in Oregon, increasing this sector's employment by almost 7%. The gains were primarily split between state level education and state level public administration jobs, adding 2,453 and 1,423 respectively. Oregon department of education oversees public educational services in Oregon. As demand increased for local public education through population growth, administrative, assessment, finance, and leadership positions also were required. Public administration jobs also included government funded positions to care for the elderly and disabled. Much like demand increased for private health positions with an aging Oregonian population, public positions were needed for the same demographic except on welfare services.

Federal government employs the fewest Oregonians of the three government sectors detailed by the Oregon Labor Market Information System. An additional 1,400 of these employees were added between 2007 and 2010 increasing total employment from 29,100 to 30,500. The three biggest contributors to federal employment all told different stories of employment in Oregon during the Great Recession.

⁴⁷ Risa S. Proehl "Estimates of Population Age Groups" Portland State University, July 1 2010. Web < http://www.pdx.edu/sites/www.pdx.edu.prc/files/PopEst_broad_age_grps2010_web.pdf>

⁴⁸ Risa S. Proehl "2007 Oregon Population Report" Portland State University, March 2008. Web < http://www.pdx.edu/sites/www.pdx.edu.prc/files/PRC_2007_Population_Report2_rev.pdf>

Federal public administration jobs added 1,589 new positions between 2007 and 2010. Unlike for state employment where these jobs were added to support the growing school system, federal administration jobs were added to administer economic programs. While the majority of American Recovery and Reinvestment Act funding went into existing state programs, some dollars went to setting up federal workforce development programs. The administration of these programs supported the federal workforce increase. 1,480 economic program administration jobs were added, an increase of 88.46% between 2007 and 2010.⁴⁹ The second largest sector of Federal employment in Oregon is Trade, Transportation, and Utilities. In this case, this sector is almost entirely the Postal Service. Just before and during the Great Recession, Federal tax revenue decreased sharply. One of the resulting cuts was Postal Service employment. In Oregon, 1,702 Postal Service jobs were lost of the 8,161 original positions. To make up for these losses, and to get back to the original 1,400 added federal employment jobs gains were recognized in the Health and Education sectors for similar reasons detailed above. Overall, Government's increased role in the Oregon economy during the Great

⁴⁹ "American Recovery and Reinvestment Act of 2009." Department of Community Colleges and Workforce Development. Web. < <http://www.oregon.gov/ccwd/pages/recovery.aspx>>



Recession helped buoy unemployment buy adding 10,000 jobs mostly in education, health, and administration positions.

Conclusion

After the collapse of the subprime mortgage market, and the subsequent liquidity crisis in the United States, the biggest economic downturn since the Great Depression had arrived. In Oregon, nine industries shed 156,400 and two industries added 27,000. The overall result was an increase in the unemployment rate in Oregon from 5.3% to 11.6%. Almost three quarters of the total job losses came from just three industries. These industries were Manufacturing, Construction, and Trade, transportation and Utilities. The remaining six industries combined account for just 30% of the total job losses in Oregon during the Great Recession. This illustrates the primary manifestation of the Great Recession in Oregon involved decreased demand in three



forms. The largest was decreased demand in durable manufacturing goods, primarily electronic manufacturing tied to lower consumer spending on tech products. The second was reduced demand for construction labor upon the collapse of the housing marketing. After a decrease in national disposable income, demand for retail and food sales dropped significantly. The result was Oregon’s largest industry, trade, transportation, and utilities losing both retail and wholesale jobs making this industry the state’s third biggest loser. These layoffs shifted the composition of Oregon’s workforce away from construction, manufacturing, and trade transportation and utilities. As a share of Oregon’s total employment, constructions labor force decreased from 6.03% to 4.22%. Manufacturing jobs decreased from 11.79% of Oregon’s employment to 10.23%, and trade, transportation, and utilities dropped from 19.35% to 18.88%. This shift has put

greater emphasis on education and health services jobs as well as government jobs in Oregon, two industries that added employment during the Great Recession.

The 2008 Recession was in part manufactured by complex debt instruments designed to achieve high yield and increase homeownership in the United States. When the housing market collapsed, it took the stock market, household net worth, and consumer spending with it. The variety of impacts this retraction had on Oregon's industries illustrates the experience of Oregon's labor force during the Great Recession.

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