



Oregon Economic and Revenue Forecast

December 2015

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Foreword

This document contains the Oregon economic and revenue forecasts. The Oregon economic forecast is published to provide information to planners and policy makers in state agencies and private organizations for use in their decision making processes. The Oregon revenue forecast is published to open the revenue forecasting process to public review. It is the basis for much of the budgeting in state government.

The report is issued four times a year; in March, June, September, and December.

The economic model assumptions and results are reviewed by the Department of Administrative Services Economic Advisory Committee and by the Governor's Council of Economic Advisors. The Department of Administrative Services Economic Advisory Committee consists of 15 economists employed by state agencies, while the Governor's Council of Economic Advisors is a group of 12 economists from academia, finance, utilities, and industry.

Members of the Economic Advisory Committee and the Governor's Council of Economic Advisors provide a two-way flow of information. The Department of Administrative Services makes preliminary forecasts and receives feedback on the reasonableness of such forecasts and assumptions employed. After the discussion of the preliminary forecast, the Department of Administrative Services makes a final forecast using the suggestions and comments made by the two reviewing committees.

The results from the economic model are in turn used to provide a preliminary forecast for state tax revenues. The preliminary results are reviewed by the Council of Revenue Forecast Advisors. The Council of Revenue Forecast Advisors consists of 15 specialists with backgrounds in accounting, financial planning, and economics. Members bring specific specialties in tax issues and represent private practices, accounting firms, corporations, government (Oregon Department of Revenue and Legislative Revenue Office), and the Governor's Council of Economic Advisors. After discussion of the preliminary revenue forecast, the Department of Administrative Services makes the final revenue forecast using the suggestions and comments made by the reviewing committee.

Readers who have questions or wish to submit suggestions may contact the Office of Economic Analysis by telephone at 503-378-3405.



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EXECUTIVE SUMMARY

December 2015

Full employment is finally within sight. It is not here yet, and the current economic expansion is far from perfect, but a long stretch of modest gains in recent years have cumulatively delivered significant progress across the economic spectrum. The number of actual jobs and job openings posted by businesses have never been higher. Combining this with an unemployment rate that is back to normal, at least on paper, indicates that workers are finally becoming a bit scarce. The result is businesses must now compete on price (wages) to attract and retain the best employees. Finally, after years of lackluster wage gains nationally, average hourly earnings for all workers are now increasing faster than inflation. More income for U.S. households will not only feel good but should allow for continued improvement in household balance sheets.

Oregon's economy continues to make significant gains. Job growth has slowed just a bit from early 2015 rates, yet remains more than strong enough to bring the unemployment rate down and account for the influx of new workers as population growth picks up. More importantly, Oregon's stronger-than-the-nation's wage gains have continued through the fall. Overall, the state has regained and retained its traditional economic advantage in expansion relative to the nation. Job growth over the past year in Oregon is more than one percentage point faster than in the typical state. This advantage is primarily due to the state's industrial structure and migration trends, both of which remain strong today.

Unfortunately, there are always risks to the outlook and warts to the expansion. The significant deterioration in manufacturing, driven by weak global demand, a stronger U.S. dollar and the pull-back of investment related to oil and gas, has eliminated one pillar of growth. Even with the sizable gains in the labor market, there remains large levels of underemployment and a wide disparity between urban and rural economies. Ongoing growth will help, but so far has failed to close these gaps. Even so, most economists and forecasters are relatively bullish about the near term, with many expecting the economy to reach full employment in 2016.

Oregon's General Fund revenues are growing strongly. Over the first four months of the 2015-17 biennium, personal income taxes, lottery sales and corporate taxes all grew at double-digit rates relative to last year. Although much of this growth was expected, gains in corporate taxes and lottery funds outstripped what was called for in the September forecast, leading to an upward revision to the outlook. Total available resources – combined General Fund and Lottery – are now expected to be \$56 million larger over the current biennium than what was expected when budgets were drafted in the summer.

The revenue outlook is stable, yet uncertain. Volatility in equity markets is injecting a great deal of risk into the forecast. Oregon's budget depends heavily on personal income tax collections tied to realizations of capital gains. These collections are extremely volatile, with revenues subject to the sometimes unpredictable behavior of investors. Many analysts believe equity markets will take a step backward soon after monetary policymakers begin to raise interest rates this winter. A 10% drop in stock prices will typically lead to a decline of twice that rate or more in the amount of net capital gains reported on tax returns. This negative impact on personal income tax collections is often delayed for several months after investors pull their assets out of equity markets. During a sell-off, the volume of trades increases, and paper gains from past years become subject to tax. Afterward, taxable capital gains face considerable downward pressure, with paper earnings from past years having been tapped, and with losses being carried forward into future tax years.

Revenue growth in Oregon and other states will face considerable downward pressure over the 10-year extended forecast horizon. As the baby boom population cohort works less and spends less, traditional state tax instruments such as personal income taxes and general sales taxes will become less effective, and revenue growth will fail to match the pace seen in the past.

ECONOMIC OUTLOOK

U.S. Economic Summary

Full employment is finally within sight. It is not here yet, and the current economic expansion is far from perfect, but a long stretch of modest gains in recent years have cumulatively delivered significant progress across the economic spectrum. The number of actual jobs and job openings posted by businesses have never been higher. Combining this with an unemployment rate that is back to normal, at least on paper, indicates that workers are finally becoming a bit scarce. The result is businesses must now compete on price (wages) to attract and retain the best employees. Finally, after years of lackluster wage gains nationally, average hourly earnings for all workers are now increasing faster than inflation. More income for U.S. households will not only feel good but should allow for continued improvement in household balance sheets.

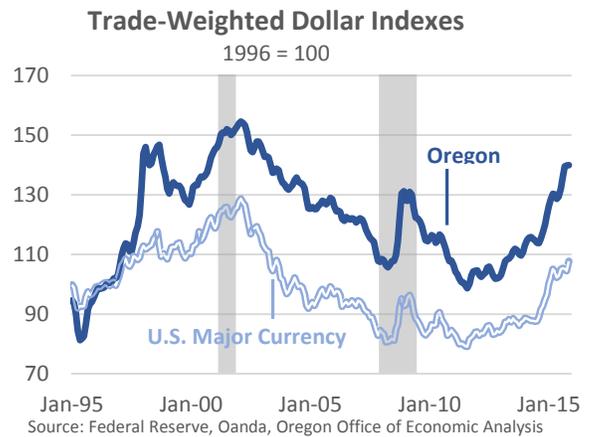
Unfortunately, there are always risks to the outlook and warts to the expansion. The significant deterioration in manufacturing, driven by weak global demand, a stronger U.S. dollar and the pull-back of investment related to oil and gas, has eliminated one pillar of growth. Even with the sizable gains in the labor market, there remains large levels of underemployment and a wide disparity between urban and rural economies. Ongoing growth will help, but so far has failed to close these gaps. Even so, most economists and forecasters are relatively bullish about the near term, with many expecting the U.S. economy to reach full employment in mid to late-2016, if not sooner.

U.S. Economic Detail

The U.S. economy has slowed in the second half of 2015 relative to rates of growth earlier in the year. Both employment and GDP are increasing at a slower pace, yet remain strong enough to bring down unemployment and for the expansion to continue.

Economists remain generally bullish on the near-term prospects for the economy, as much of the weakness in recent months is expected to be temporary. The strong U.S. dollar and pullback in investment in the oil and gas industry is clearly weighing on manufacturing more broadly – from the pipeline of new orders to employment. This is concerning as the manufacturing sector is generally considered to be the canary in the coal mine of the business cycle, or at least one of the canaries. To the extent that the manufacturing weakness continues, and does not lessen as the oil and gas sector settles into the new normal of significantly lower oil prices, the outlook is more likely than not to deteriorate moving forward.

However, offsetting the manufacturing weakness is the ongoing strength in the service sector of the economy. Job growth remains strong and personal consumption even stronger. Lost among the relatively lackluster and volatile GDP figures in recent years is the fact that personal consumption is accelerating and driving growth. This is made possible by the continued improvement in the labor market and nascent signs of wage gains nationally.



The average U.S. worker has not experienced an inflation-adjusted wage increase since the Great Recession. Wages have grown, but at the rate of inflation, leaving workers no better off in terms of their purchasing power. That appears to be changing as two of the most widely tracked wage measures are now indicating stronger gains in recent months. In October, average hourly earnings increased 2.5 percent relative to a year ago. This is the strongest reading since the recession. It remains to be seen to what degree this increase is a temporary blip or signs of further improvements. Economic outlooks – including the Federal Reserve’s – expect average wages to accelerate up to approximately 3.5 percent per year. This is the combination of the Fed’s 2 percent inflation target and 1.5 percent productivity growth expectations.



While the U.S. economy remains far below such wage gains, the labor market has experienced tremendous improvement in recent years. It is true that growth overall has been relatively slow – mostly due to the aftermath of the financial crisis and demographic trends – but cumulative improvements have been substantial. With the unemployment rate back down to something considered normal, at least on paper, it indicates that workers are becoming a bit scarce. Even as workers are being drawn back into the labor market with more plentiful job opportunities, firms must now compete on price (wages) to attract and retain the best workers.

It is estimated that job gains of just 125,000 per month or so will be enough to absorb the new entrants into the labor market as the Millennials age into their prime working years. With job growth in 2015 running north of 200,000 per month, slack in the economy is diminishing. It is expected that by this time next year, if not a bit sooner, the U.S. economy will reach full employment. This is the state where nearly all workers who want a job, have a job, they are experiencing wage growth along with their increasing productivity and inflation is stable. While some wounds of the Great Recession will likely never heal, in aggregate, full employment is within sight. The consensus of economic forecasters expect the U.S. to reach it, as the probability of recession in the next year remains low, even as risks to the outlook are always lurking.

Oregon Economic Summary

Oregon’s economy continues to make significant gains. Job growth has slowed just a bit from early 2015 rates, yet remains more than strong enough to bring the unemployment rate down and account for the influx of new workers as population growth picks up. More importantly, Oregon’s stronger-than-the-nation’s wage gains have continued through the fall.

The state has regained and retained its traditional economic advantage in expansion relative to the nation. Job growth over the past year in Oregon is more than one percentage point faster than in the typical state. This advantage is primarily due to the state’s industrial structure and migration trends, both of which remain strong today.

Like the nation, Oregon’s expansion is far from complete but the pace of growth is expected to be maintained throughout the 2015-17 biennium and for Oregon to reach full employment by this time next year, if not sooner.

Oregon Economic Detail

The pace of improvement in Oregon’s labor market continues to be full throttle. Job growth has slowed a bit from rates seen earlier in 2015, but remains north of 3 percent over the past year. Given demographic trends – with the labor force growing slowly as Baby Boomers retire – such rates are as strong as can be expected.

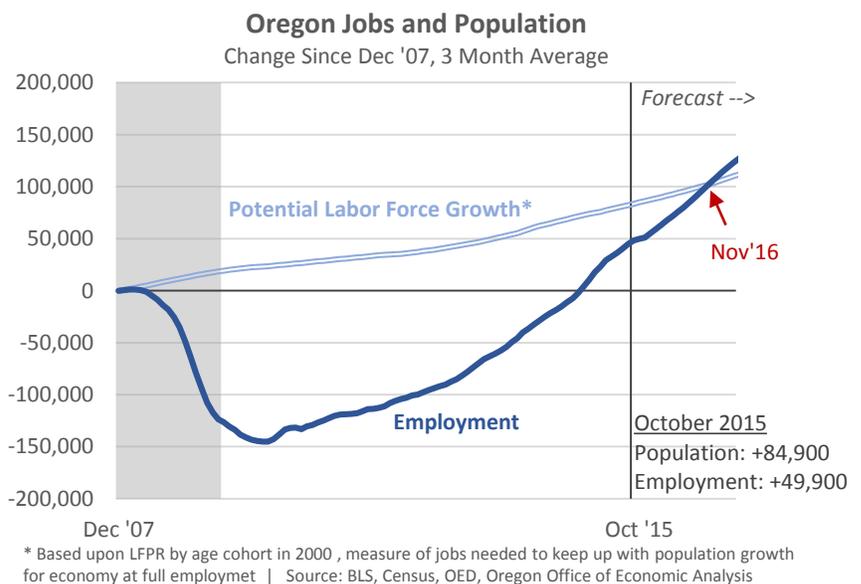
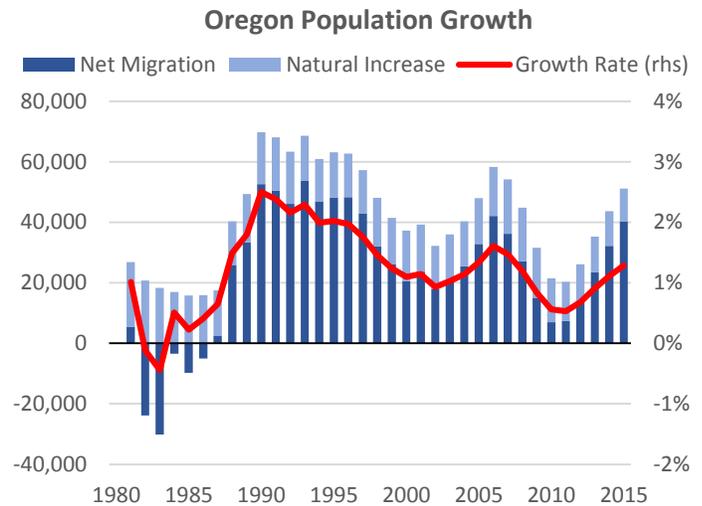
Oregon has regained its traditional advantage in growth relative to the nation. Today, Oregon’s job growth is more than one percentage point faster than in the typical state. This growth differential largely comes from the state’s underlying fundamentals like its industrial structure and strong in-migration flows. Both of these trends have long-lasting impacts on the Oregon economy and help drive the state’s more volatile swings over the course of the business cycle.

Population growth is accelerating as the migration flows return along with an improving economy. Just released estimates for 2015 indicate the state experienced an influx of new residents this year that is on par with the gains seen during the housing boom. *See Oregon Regional Trends on pg. 25 for more on population growth across the state.*

Migrants generally move for two fundamental economic reasons: job opportunities and housing costs. With the increase in population growth, both topics are of interest and potential concern for the economy.

It is true that many new residents arrive unemployed, or in search of work. It takes time – an adjustment period – for a regional economy to absorb and integrate an influx of new job seekers. This is one reason why Oregon’s unemployment is higher than the nation’s. While the total number of jobs in Oregon has never been higher and is nearly 50,000 above pre-Great Recession levels, it has yet to catch up with underlying population growth. However, the gap is closing quickly. Today’s pace of job gains – approximately 4,000 per month – is double what is needed to keep up with population growth. By this time next year, if our forecast comes to pass, employment in Oregon will have fully caught up to the population gains since the onset of the Great Recession.

More importantly, these job gains and overall improvements are now translating into stronger wage gains for the average Oregon worker with better wage growth than the typical state. While Oregonian income and wages are below the typical state, average wages today in Oregon are at their highest relative point since the severe



early 1980s recession when the timber industry restructured. Much of this improvement has come in the past 2-3 years when Oregon wage growth, much like job growth, has outstripped the average state. While there remains much room for improvement in average income levels in Oregon, wages have not been this high, relatively, for more than a generation.

The other major economic driver of migration trends – housing costs – are of greater immediate concern today in Oregon’s metropolitan areas. Bend, Hood River and Portland in particular are experiencing rapidly eroding housing affordability as demand far outstrips supply. Such a classic economic case is a recipe for rising prices until either supply increases to meet demand, or demand declines. A third possibility is that demand remains high, yet supply low, which results in all new residents effectively displacing existing residents who must move elsewhere given they can no longer afford to live locally. Eroding housing affordability is a concern not just for those at the lower end of the income spectrum, but for much of the working class and even upper middle income households as well. Given the high prices in today’s market, for both ownership and rentals, a supply response is expected. New construction has increased, and the pipeline for future work remains intact, however demand continues to be even stronger in these fast growing areas. While Oregon still remains the low-cost alternative on the West Coast – California and Washington are experiencing the exact same trends – there is no question that housing is more expensive today even after adjusting for income gains and inflation. Housing affordability, or lack thereof, remains a risk to the outlook.

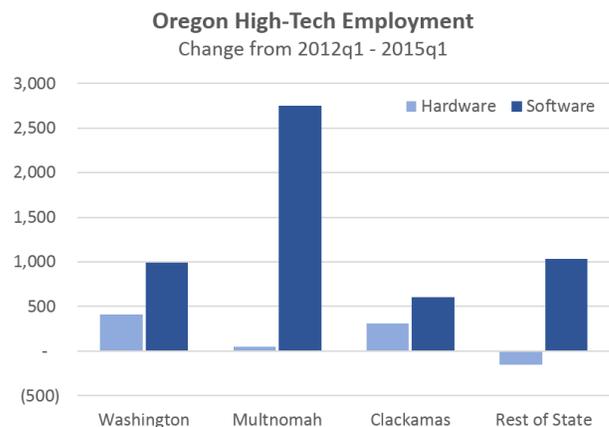
Overall the Oregon economy, much like the nation, is nearing full employment, or at least it is within sight. Job growth is strong enough to absorb the new workers and bring down the unemployment rate. Wages are increasing much faster than in the typical state. And population gains are bringing increased demand for local services, including housing. Not all is well with the economy of course. There remains an oversized share of underemployment and a wide disparity between rural and urban Oregon economies. However progress is being made and strong economic growth is helping to close the gap, at least somewhat.

Oregon’s High-Tech Sector: Software, Outposts and Critical Mass

Oregon’s high-technology sector is growing briskly since the Great Recession and with average wages right around \$100,000 per year, these are certainly good jobs. However, within the high-tech sector, Oregon is undergoing two different shifts relative to historical patterns. First, nearly all of the job gains have been in software, while Oregon’s legacy has been in hardware¹. Second, this growth is concentrated in Multnomah County and not Washington County, home to much of the Silicon Forest.

The development of the software industry within Oregon in recent years is welcomed and needed. While the state has long been a leader in hardware – computer and electronic product manufacturing in particular – the software side of the sector is approximately the same size as in the typical state. Starting from a relatively low base, software jobs in Oregon are booming, bringing in new firms, new investment and more jobs.

However, many of these new firms are headquartered out-of-state and are setting up satellite offices in Oregon,

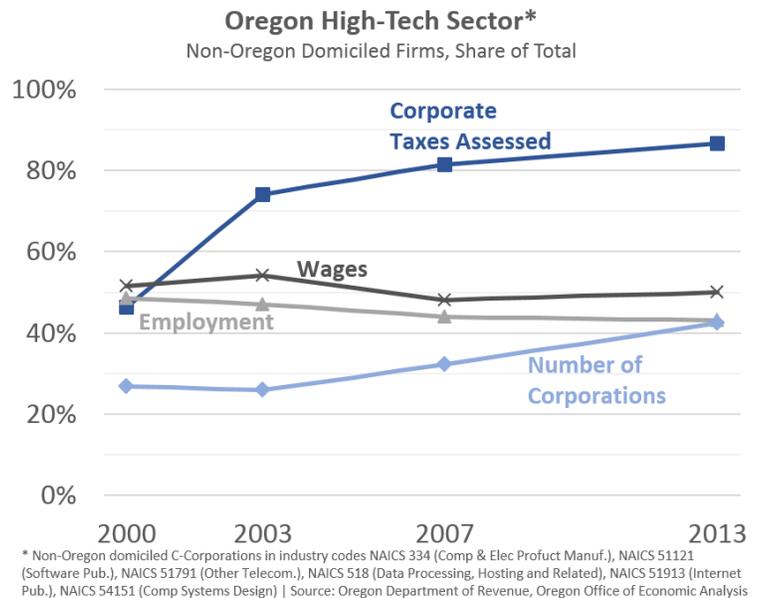


Source: BLS, Oregon Employment Department, Oregon Office of Economic Analysis

¹ Hardware remains the state’s comparative advantage today, it pays even higher wages to a large number of employees and drives much of the state’s GDP growth due to its productivity. However, employment is relatively flat and is not expected to be a driver of job growth moving forward.

or outposts. Overall the growth in the sector is most important and the differences between local or out-of-state businesses can many times be negligible. Yet, one concern is the fact that during economic recessions, or a tech industry correction, headquarter operations survive while outposts are downsized, or eliminated altogether.

While corporate headquarters are hard to move, one offsetting factor would be if Oregon’s software industry reaches critical mass. In the event of a downturn, when job losses ensue, do these relatively new software workers in Oregon pack up and leave when the jobs dry up, or do they remain and rebuild? To the extent that critical mass has been reached and the latter occurs, then the outpost trend is of less concern. The Portland MSA’s high-tech talent concentration is a third larger than the nation overall, with 4.7 percent of all jobs being tech or require a similar skill set, compared to 3.5 percent for the U.S. While this ranks Portland 14th best among the 50 largest metros in the country, it remains significantly below industry leaders like San Jose (16%), Seattle (8%), Austin (7%), San Francisco (7%) and Boston (6%), among others.

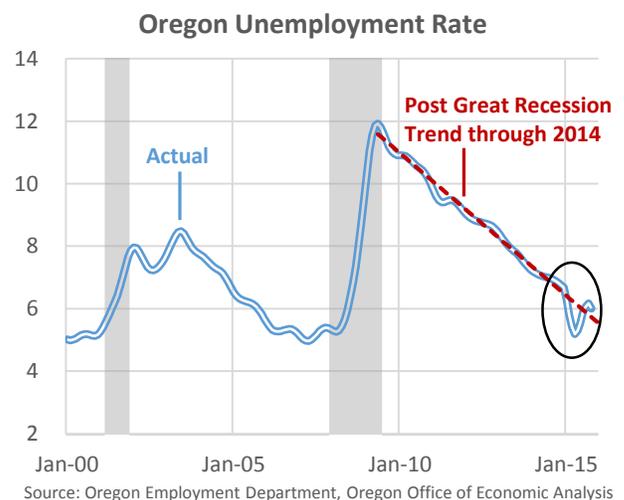


It remains an open question whether or not critical mass has been reached – we likely will not know until the aftermath of the next business cycle. However, our office’s economic advisors were all bullish on the topic and do believe this to be the case. If true, it does indicate the potential downside is potentially limited.

Oregon Labor Market

The Office of Economic Analysis examines four main sources for jobs data: the monthly payroll employment survey, the monthly household survey, monthly withholding tax receipts and the quarterly census of employment and wages. Right now all four measures of the labor market are showing relatively strong improvements with jobs being added, wages increasing and the unemployment rate declining over the past year.

As our office warned earlier in 2015, the large declines in the unemployment rate to start the year likely overstated the strength in the labor market. As the unemployment rate increased over the summer and, more or less, stabilized in recent months, it has now returned to its post Great Recession trend. As such, it likely understates the improvements in the labor market today – the exact opposite of the start of the year. The composition of the unemployment rate is a bit concerning, with falling labor force figures in much of 2015. However the labor grew substantially in 2014 and following revisions to the noisy data, 2015 is likely to look better. Regardless, the broader trends are clear: Oregon’s economy is on the upswing, showing strong gains across nearly all measures.



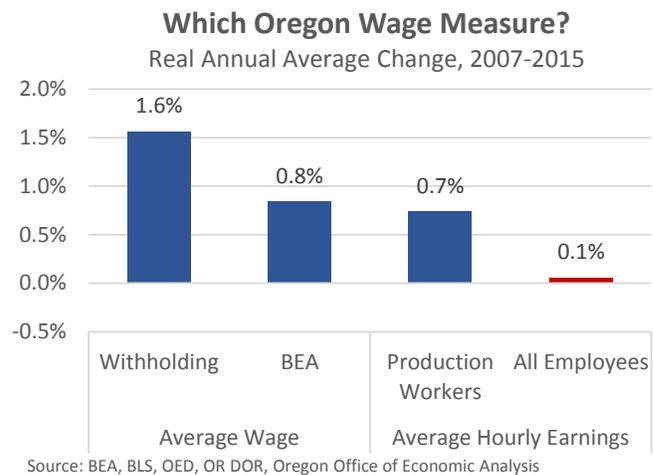
More importantly, wages in Oregon are increasing at nearly 8 percent per year, which is better than during the mid-2000s expansion but still a notch below the 1990s gains of 10 percent per year. Average wages per worker are currently increasing 3-4 percent per year, which is faster than inflation, albeit not considerably so.

Unlike the nation overall, Oregon’s various measures of wage gains are all increasing above the rate of inflation, producing real wage gains for Oregon workers. All measures that is except one. Average hourly earnings, much like its national counterpart, has been growing at just above zero percent in inflation-adjusted terms. Given the strength in the labor market overall, in terms of job growth and the other measures of wages, plus the fact the overall average hourly earnings series is still new – beginning in 2007 – our office’s position is that wage growth today in Oregon is strong.

The most recent job growth rankings, published by Arizona State University’s W.P. Carey School of Business², places Oregon 8th in the nation for job growth in October.

Overall, getting a handle of the health of Oregon’s labor market is being somewhat complicated by technical issues within the underlying payroll jobs data. For this reason the employment data in our office’s forecast is adjusted for two important technical purposes: seasonality at the detailed industry level and the upcoming benchmark revisions³.

In the third quarter, total nonfarm employment increased 3.1 percent over the past year with the private sector growing at 3.3 percent and the public sector at 2.4 percent. These rates of growth, while down slightly from early 2015 rates, are the best Oregon has experienced since 2006, or the height of the housing boom. The nearby graph illustrates the number of job gains by major industry by the length of the bar. The percentage increase these changes represent is noted as well. The bars are color coded by growth rate relative to total employment growth.



² <http://research.wpcarey.asu.edu/seidman/current-state-rankings/>

³ Each year the U.S. Bureau of Labor Statistics revise the employment data – a process known as benchmarking. The current establishment survey (CES), also known as the monthly payroll survey, is benchmarked against the quarterly census of employment and wages (QCEW), a series that contains all employees covered by unemployment insurance. The monthly CES is based on a sample of firms, whereas the QCEW contains approximately 96 percent of all employees, or nearly a complete count of employment in Oregon. The greatest benefit of the CES is the timeliness – monthly employment estimates are available with only a one month lag – and these estimates are reasonably accurate. However the further removed from the latest benchmark, the larger the errors. The QCEW is less timely as the data is released approximately 3-4 months following the end of the quarter. The greatest benefit of the QCEW is that is a near 100 percent count of statewide employment. For these reasons, the CES is usually used to discuss recent monthly employment trends, however once a year the data is revised to match the historical QCEW employment trends. The last month of official benchmark data is September 2014. The QCEW is currently available through June 2015, thus the preliminary benchmark used here covers the October 2014 – June 2015 period.

Industries with blue colored bars are growing at rates much faster than total employment, yellow bars represent industries which are growing approximately in line with the average, while grey bar industries are growing at rates significantly less than the average.

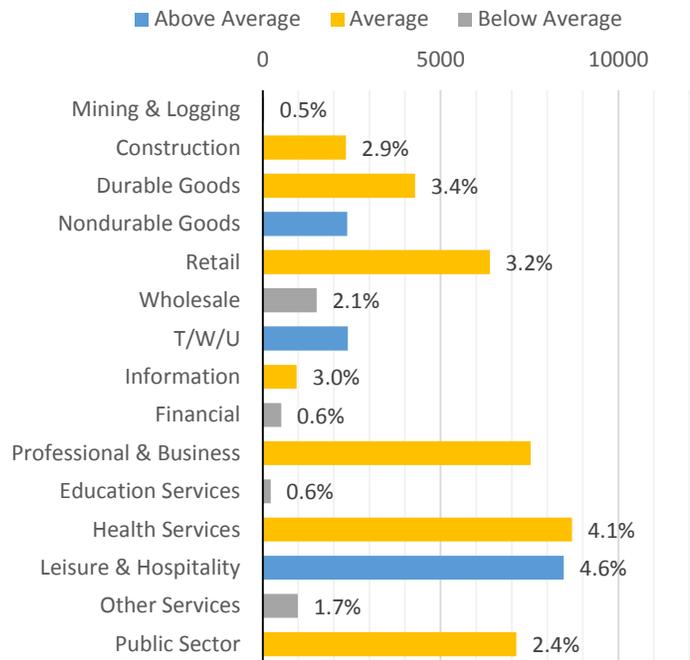
As has been the case in the recovery to date, jobs in the large service sector have led growth in terms of outright job gains and above-average growth rates. These include jobs in professional and business services, health services, and leisure and hospitality industries. These three industries have gained 24,700 jobs in the past year and account for 46 percent of all job gains across the state. The good news is that this share is becoming smaller as other industries continue to strengthen.

In terms of illustrating how each industry has fared over the Great Recession and so far in recovery, the nearby graph shows both the depths of recessionary losses⁴ and where each industry stands today relative to pre-recession peak levels.

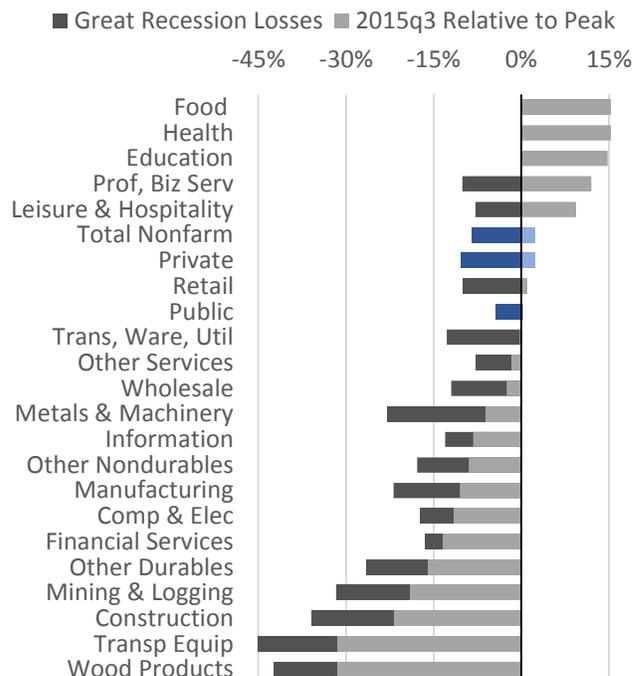
Currently, six major industries, which account for 51 percent of statewide jobs, are at all-time highs. Private sector education, health, and food manufacturing never really suffered recessionary losses – although their growth did slow during the recession. Professional and business services, leisure and hospitality, and retail trade have each regained all of their losses and are leading growth today.

With the Great Recession being characterized by a housing bubble, it is no surprise to see wood products, construction, mining and logging and financial services (losses are mostly real estate agents) among the hardest hit industries. These housing and related sectors are now beginning to recover, although they still have much ground to make up. Transportation equipment manufacturing suffered the worst job cuts and is likely a structural decline due to the RV industry’s collapse⁵. With that being said, the subsectors tied to aerospace are doing well and the ship and boat building subsector is

Oregon Employment Growth
2014q3 to 2015q3



Oregon Employment by Industry



⁴ Each industry’s pre-recession peak was allowed to vary as, for example, construction and housing-related industries began losing jobs earlier than other industries or the recession’s official start date per NBER.

⁵ <http://oregoneconomicanalysis.com/2012/07/10/rv-workers-and-reemployment/>

growing again. Metals and machinery manufacturing, along with mining and logging, have shown the largest improvements since the depths of the recession.

Coming off such a deep recession, and with a strong manufacturing cycle today, the goods-producing industries have and will exhibit stronger growth than in past cycles. Although, even with relatively strong manufacturing gains today, the industry is unlikely to fully regain all of its lost jobs. Oregon manufacturers typically outperform those in other states, in large part due to the local industry make-up. Oregon does not rely upon old auto makers or textile mills. The state's manufacturing industry is comprised of newer technologies like aerospace and semiconductors. Similarly Oregon's food processing industry continues to boom.

All told, each of Oregon's major industries has experienced some growth in recovery, albeit uneven. As the economy continues to recover there will be net winners and net losers when it comes to jobs, income and sales. Business cycles have a way of restructuring the economy.

For additional information on the most recent quarter's employment forecast errors, please refer to Table A.1 in Appendix A.

Housing Market: Is 2015 Peak Renter?

Housing is expected to remain one source of growth moving forward as the population continues to increase, household formation picks up and the simple fact that the market is very tight today, particularly for in-demand locations like Bend, Hood River and Portland, among others. While the housing bubble and its aftermath wreaked havoc on the industry – and the global economy – a key question is what type of housing is needed.

There has been a massive shift toward renting and away from ownership in the past decade, due to at least three primary reasons: finances, demographics and tastes or preferences. Are these trends likely to continue moving forward, or will the market – based on consumer demand – start to shift back into ownership in the future? To help answer, let's examine each of the three underlying drivers.

Financial issues will continue to improve for households. Credit availability will loosen further (it has along some dimensions like down payments, yet not on FICO scores). Household balance sheets are largely in good to great shape. Household formation is on the rise as the economy improves. All of this suggest the market is, or will likely be, shifting toward ownership as more households can afford to buy.

Demographics have played a large role to date in the shift into ownership, yet flown under the radar. Demographics are slow moving and primarily deterministic, yet very powerful. As the nearby graphs show, the vast majority of 20-somethings rent and the bulk of the large Millennial generation is currently in their 20s. Ownership essentially increases from about 25 years old through 50 or 60 years old, even in today's market, after the big shift into rentals following the bubble. Increased in ownership is one reason by the 25-35 year old range is considered the "root setting" years. In fact, age 35 in Portland is the point where half of the population rents and half owns. Rental rates do not increase again until 80+ years old.

A decade from now, Millennials will be between 25 and 45 years old, with the highest number in the mid-30s, or right about the breakeven point in terms of ownership vs rentals. Similarly, age 33 today is the breakeven point in Portland for 50 percent of households in detached single family homes, compared to other types of housing. As the Millennials age, ownership will increase, as will the demand for housing units of all types.

Even as finances and demographics due suggest the housing market is at or near peak renter, it is too hard to tell given the last driver of recent trends: tastes and preferences. This is the wild card and hard to gauge or measure moving forward, even with the various surveys and polls in recent years. Our office remains skeptical that all of the shift into rental is permanent, even from a taste stand point. When the Millennials do settle down, get married, have a couple of kids – granted, at a later age than previous generations – single family homes with good schools will look a lot more attractive.

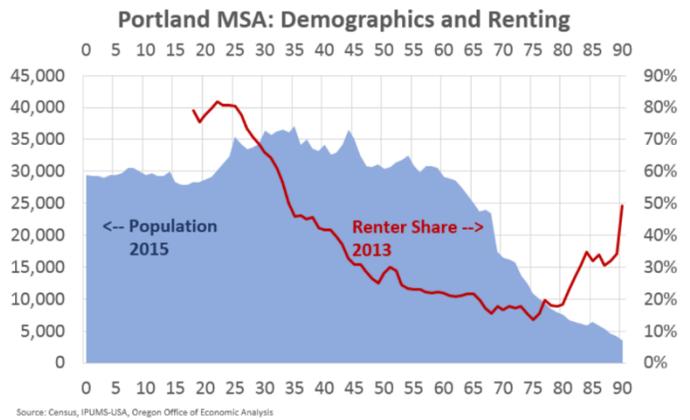
Even so, it does appear that much of the shift from ownership into rentals is permanent. Expectations are not for a corresponding swing back to the patterns seen during the housing bubble. In historical context, the 1990s through the mid-2000s are the outlier period for the housing market. Today’s shifts have really just brought a realignment, albeit one that has potentially gone further than fundamentals given the wreckage of the bursting bubble. All told, for growing and popular areas like Oregon, there will be increased demand for all types of housing moving forward. This is simply due to the overall population growth.

Leading Indicators

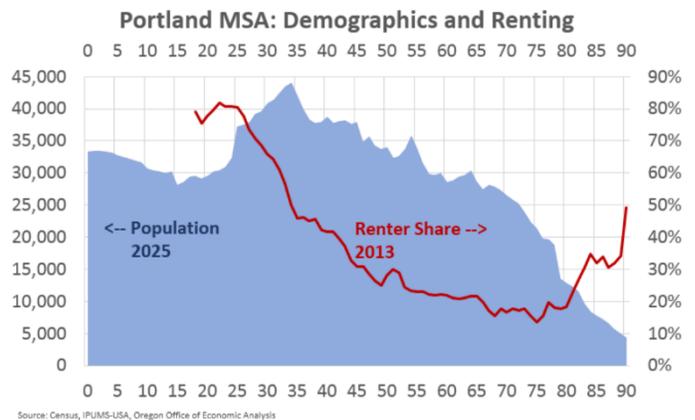
Both of the Oregon-specific composite leading indicators, along with U.S. leading indicators, are signaling continued economic growth. Our office’s Oregon Index of Leading Indicators (OILI) and the University of Oregon’s Index of Economic Indicators have exhibited the same general pattern of fits and starts, but an upward trend nevertheless.

While the indicators have been mostly positive for five years now, a few have flipped directions recently. On the positive side, new business filings in Oregon continue to increase in recent months. After falling during the recession and stagnating through the early stages of recovery, the number of new filings has started to increase again in the past year and a half. Historically, innovation and new technologies have largely been driven by entrepreneurs and start-ups, although existing firms investing in research and development play a big role as well. Looking forward, having more new businesses in the state is a positive sign and seeing the decline in new business formation not only stop, but actually improve is a welcomed development. Hopefully some of these firms are working on developing and/or delivering new products and services that meet the needs of tomorrow in addition to today.

Demographics 2015



Demographics 2025



On the negative side, housing permits remain relatively flat in recent months. The improvement in new construction activity seen in recent years is holding steady, but not increasing further. Industrial production has fallen in recent months, largely due to oil and gas-related industries pulling back on new investment and output, but encouragingly has increased in each of the past two months. The Oregon Dollar Index also continues to strengthen, appreciating against the basket of currencies of our major trading partners. This will weigh on exports moving forward.

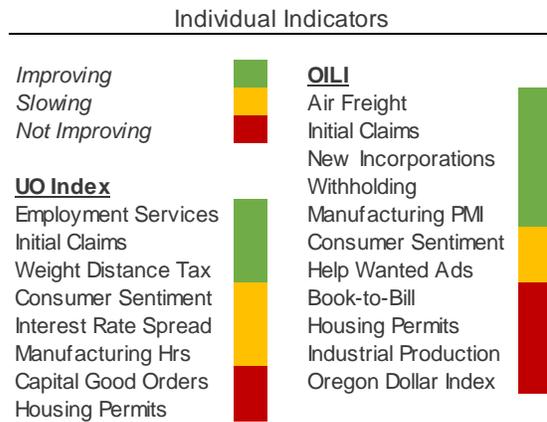
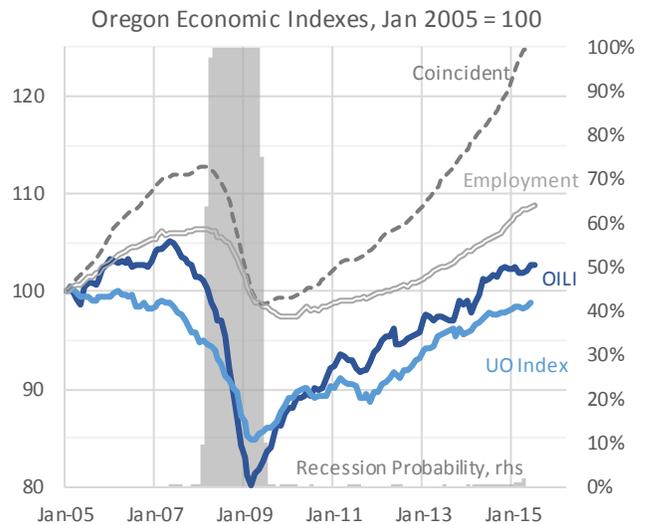
At the national level, the Federal Reserve Bank of Philadelphia’s leading index incorporates many of the same variables, in particular housing permits, new claims for unemployment insurance, the Institute of Supply Management survey and the interest rate spread. These indicators similarly point toward continued expansion for the U.S. Furthermore the most recent probability of recession⁶, calculated in real time by University of Oregon professor Jeremy Piger, is just 0.9 percent for the U.S.

Short-term Outlook

Job growth in Oregon continued to accelerate in 2015. Since the beginning of 2013, Oregon job growth has picked up from around 1.5 to 2.0 percent to over 3.0 percent today. The outlook calls for this growth to persist throughout the 2015-17 biennium before longer-run demographic trends weigh on growth rates. The general character of the forecast remains the same as in recent forecasts, with key aspects such as job and income growth remaining largely unchanged.

Should this outlook come to pass, it will be consist with full throttle growth, matching the equivalent of previous expansions in Oregon. Given demographic trends today, particularly the aging Baby Boomer cohort, job growth of 3 percent is considered full throttle. In decades past, growth of 4 or 5 percent was common during expansions in Oregon, however that time period also coincided with the Baby Boomers entering their prime working years. Today the opposite is occurring. Even so, demographic trends are not all bad, as the even larger cohort of Millennials are currently entering their prime working years. The net effect is overall lower rates of labor force and economic growth, due to demographics.

Private sector growth, measured by the number of jobs created, will be dominated by the large, service sector industries like professional and business services, leisure and hospitality and health.



⁶ http://pages.uoregon.edu/jpiger/us_recession_probs.htm/

Nevertheless, goods-producing industries, while smaller, are expected to grow at above-average rates. Job growth in mining and logging, construction and manufacturing – led by durable goods – will outpace the average industry in 2015, before growing at slower rates over the extended horizon. In fact, the ongoing strength in manufacturing employment has been a pleasant surprise so far in recovery. Gains have been every bit as strong within manufacturing as outside of it, at least so far. However, manufacturing is expected to slow given the weak global economy, strong U.S. dollar and the fact that the manufacturing cycle wanes as the overall expansion matures.



Public sector employment at the local, county and state level for both education and non-education workers has recently begun growing in Oregon, as state and local revenues continue to grow along with an improving economy. Over the forecast horizon, government employment growth is expected to stay in line with population growth and increased demand for public services. One risk to the outlook is the recent Oregon Supreme Court decision which reversed earlier Public Employees Retirement System (PERS) changes enacted by the Legislature. The extent to which the court decision will impact hiring by local and state public entities is unknown, but is a risk to the outlook.

Along with an improving labor market, stronger personal income gains will come. 2013 personal income is estimated to have increased by just 2.3 percent. This largely reflects the pulling forward of investment-type income into 2012 in anticipation of increased federal tax rates in 2013. Personal income rebounded strongly in 2014, with gains of 5.7 percent. Continued strong growth is expected moving forward, along with a full throttle economic expansion, with income gains of 5.7 percent in 2015 and 6.5 percent in 2016.

Economic Forecast Summary

		Quarterly					Annual				
		2015:2	2015:3	2015:4	2016:1	2016:2	2014	2015	2016	2017	2018
Personal Income, Nominal	U.S.	3.8	4.6	4.2	5.1	4.3	4.4	4.2	4.7	5.4	5.2
% change	Oregon	5.0	6.2	6.8	6.3	6.2	5.7	5.7	6.5	7.0	6.4
Wages and Salaries, Nominal	U.S.	2.5	4.2	4.2	4.9	5.0	5.1	4.0	4.7	5.3	5.1
% change	Oregon	3.6	7.6	6.4	8.1	7.5	6.1	6.0	7.3	7.6	6.5
Population	U.S.	0.8	0.8	0.8	0.8	0.8	0.7	0.8	0.8	0.8	0.8
% change	Oregon	1.2	1.4	1.1	1.0	1.2	1.1	1.2	1.2	1.2	1.2
Housing Starts	U.S.	1.16	1.14	1.17	1.22	1.27	1.00	1.11	1.30	1.45	1.51
U.S. millions, Oregon thousands	Oregon	13.9	16.1	18.0	18.5	18.9	15.6	15.7	19.2	21.6	22.8
Unemployment Rate	U.S.	5.4	5.2	5.1	5.1	5.1	6.2	5.3	5.0	4.9	5.0
	Oregon	5.3	6.1	6.0	5.9	5.8	7.0	5.8	5.8	5.4	5.6
Total Nonfarm Employment	U.S.	1.7	1.7	1.4	1.6	1.6	1.9	2.1	1.5	1.3	1.2
% change	Oregon	2.0	2.3	2.5	2.9	2.7	2.8	3.1	2.7	2.9	2.0
Private Sector Employment	U.S.	2.0	1.8	1.5	1.9	1.9	2.3	2.4	1.7	1.4	1.2
% change	Oregon	2.1	2.1	2.6	3.1	3.0	3.0	3.3	2.9	3.1	2.2

As the economy continues to improve, household formation is increasing too, which will help drive up demand for new houses. Household formation has remained suppressed in the aftermath of the Great Recession and bursting housing bubble, as individuals and families turned to rental markets and doubled up. As these individuals

are now finding work in an improving economy, their desire to live on their own or away from their parents will lead to increased housing demand. Much of the increase in young Oregonians living at home can be attributed to higher college enrollments. As the Millennials continue to age beyond their early 20s, demand for housing (both rental and ownership) will increase further.

Housing starts in the third quarter totaled 16,000 at an annual pace. A level of about 21,000 is the long-run average for the state prior to the housing bubble, and the forecast calls for strong growth in the coming few years with starts reaching about 16,000 in 2015 and 19,000 in 2016. Over the extended horizon, starts are expected to average a little less than 23,000 per year to meet demand for a larger population and also, partially, to catch-up for the underbuilding that has occurred in recent years. As of today, new home construction is cumulatively about one year behind the stable growth levels of prior decades even after accounting for the overbuilding during the boom.

A more complete summary of the Oregon economic outlook and forecast changes relative to the previous outlook are available as Table A.2 and A.3 in Appendix A.

Forecast Comparison

Besides the Oregon Office of Economic Analysis, there are a number of other economic forecasters who produce an Oregon outlook. A comparison of these forecasts is provided below for employment growth and personal income growth. Arizona State University compiles these outlooks as part of the Western Blue Chip⁷, with the exception being IHS Economics (formerly IHS Global Insight).

Overall, each forecast certainly expects the economic expansion to continue. Both our office and the Western Blue Chip Consensus expect strong employment gains in 2015

Forecaster	Oregon Forecast Comparison					
	Employment			Personal Income		
	2015	2016	2017	2015	2016	2017
IHS Economics	3.0	1.8	1.6	5.3	4.6	5.5
Western Blue Chip Consensus	2.7	2.5		4.9	5.0	
<i>Oregon Office of Economic Analysis</i>	3.2	2.7	2.9	5.7	6.5	7.0

and 2016, even as IHS Economics is forecasting deceleration. Personal income growth largely follows a similar pattern with our office and other Western Blue Chip Consensus forecasts expecting income gains of 5 percent or larger. All told, these rates of growth, while considered full throttle today are still less than Oregon has seen in past expansions. To the extent that the U.S. economy improves, and in-migration flows increase further, there does remain some upside risk to the outlook, along with downside risks should the expansion falter.

Forecast Risks

The economic and revenue outlook is never certain. Our office will continue to monitor and recognize the potential impacts of risk factors on the Oregon economy. Although far from comprehensive, we have identified several major risks now facing the Oregon economy in the list below:

- Federal fiscal policy. Federal fiscal policy remains a risk. The good news for Oregon is that outside of outright land ownership, the federal government has a relatively small physical presence in the state. This means that direct spending reductions are less likely to hurt Oregon. Of course, it also limits the local benefit from any potential increases in federal spending. In terms of federal grants as a share of state

⁷ <http://wpcarey.asu.edu/bluechip/western/oregon.cfm>

revenue, Oregon ranks 29th highest. For federal procurement as a share of the economy, Oregon ranks 48th highest. Oregon ranks below average in terms of military-dependent industries as well. The one area that Oregon ranks above average is in terms of direct federal employment, ranking 19th highest among all states. Oregon also is exposed to an above-average share of federal transfer payments to households. Transportation funding is also a major local concern. Overall, the direct impact may be less than in other states but the impact will be felt nevertheless, particularly as our closest neighbors have large federal and military workforces.

- Strength and durability of the housing market recovery. The housing market in recent years has undergone an unusual pattern of growing briskly (2012) to stalling out (2013) to recovering with moderate growth (2014.) How long this lasts and what strength of gains has direct implications for regional economies within in the state – namely the medium sized metros and more rural areas. As the recovery continues, some of the same underlying dynamics of growth will reappear. Chief among them is low inventory, which is not keeping up with demand. As such, home prices are rising. There remains much more room for improvement before the market (sales of both existing homes and new construction activity) reflects anything approaching normal levels. While foreclosures and long-term delinquency rates remain somewhat elevated, when compared with pre-recession levels, the market has certainly passed the peak of foreclosures and is working through the backlog of distressed properties. Oregon, with the rest of the nation, will see sizable improvements of construction activity in 2015 and 2016.
- Even as the housing market recovers, new supply entering the market has not kept up with demand (both from new households and investor activity.) This applies to both the rental and ownership sides of the market. As such, prices have risen considerably and housing (in)affordability is becoming a larger risk to the outlook. Expectations are that new construction will pick up in the next year or three, to match the increase in demand, which will alleviate price pressures. However to the extent that supply does not match demand, home prices and rents increasing significantly faster than income or wages for the typical household is a major concern.
- The drought impacting much of the West Coast and Southwestern U.S. is a risk to the outlook. Its impact on the California economy reached into the billions of dollars in 2014 and is expected to increase in cost and size in 2015. The drought has reached Oregon as well and most eastern and/or southern counties are classified accordingly. The impact is most felt within the agriculture industry. Losses are expected to be concentrated more in the grains, feed and other crops in addition to cattle. Fruits, nuts and dairies to be less impacted. The severity and duration of the drought is unknown, however it remains a risk to Oregon's rural economies in particular.
- Ongoing European debt problems and potential financial market contagion or instability. The European high debt, low growth, austerity cycle has continued, more or less, for the past four years. So long as Europe is able to continue to muddle through the process, the situation acts as a drag on domestic and global economic growth, however no more so than it already is. With that being said, the potential for another financial crisis unfortunately still looms large as a catastrophic scenario. Domestic credit markets are easing, but consumers and businesses still have difficulty getting loans. To the extent that credit markets take longer to come back to some sort of state of normalcy, the current recovery could be slower than projected or thrown off track. In such a scenario, Oregon will suffer the consequences along with the rest of the nation.

- Commodity price inflation. Prices for many major commodities are trending down, but remain atypically high from a historical perspective. Future commodity prices will be tied to growth. Should the global expansion pick up speed, a return to high rates of commodity inflation is possible. Always worrisome is the possibility of higher oil (and gasoline) prices. While consumer spending has held up pretty consistently in this recovery, anytime there is a surge in gas prices, it eats away at consumers' disposable income, leaving less income to spend on all other, non-energy related goods and services.
- Federal timber payments. Even with the temporary reinstatement, it has been and it is clear that federal policymakers will not reinstate the program the same as before, however negotiations are ongoing for more sustainable timber harvests and related revenue. In the meantime, reductions in public employment and services are being felt in the impacted counties. For more information from a historical perspective, see two recent blog posts, [here](#) and [here](#)⁸.
- Global Spillovers Both Up and Down. The international list of risks seems to change by the day: sovereign debt problems in Europe, equity and property bubbles in places like South America and Asia, political unrest in the Middle East and Ukraine, and commodity price spikes and inflationary pressures in emerging markets. In particular, with China now a top destination for Oregon exports, the state of the Chinese economy – and its real estate market – has spillover effects to the Oregon economy. The recent economic slowdown across much of Asia is a growing threat to the Pacific Northwest's growth prospects.
- Undoing the Federal Policy Used to Combat the Financial Crisis and Recession. Bailouts, tax cuts, monetary quantitative easing, and other fiscal packages most likely prevented a more serious economic downturn. But the clean-up after the storm can have its own risks to the economy. Exit strategies will have to be carefully implemented to prevent premature tightening and choking off the recovery or acting too late to avoid an inflationary environment. All states, including Oregon, face the same risks.
- Initiatives, referendums, and referrals. Generally, the ballot box and legislative changes bring a number of unknowns that could have sweeping impacts on the Oregon economy and revenue picture.

Alternative Scenarios

The baseline forecast is our outlook of the most likely path for the Oregon economy. As with any forecast, however, many other scenarios are possible. In conjunction with the Legislative Revenue Office, this forecast provides three alternative scenarios, which are modeled on growth patterns over previous business cycles.

Optimistic Scenario: The recovery gathers steam and pulls the economy further away from the aftermath of the Great Recession and into a stronger cyclical expansion. The lackluster economic growth seen in the early stages of recovery recedes into the rearview mirror of history and the U.S. economy builds momentum through the remainder of the year. The economy is soon firing on all cylinders. Economic growth is above potential in the late 2015, and all of 2016 and 2017, resulting in stronger job and income gains. This stronger growth leads to more consumer spending and more business investment.

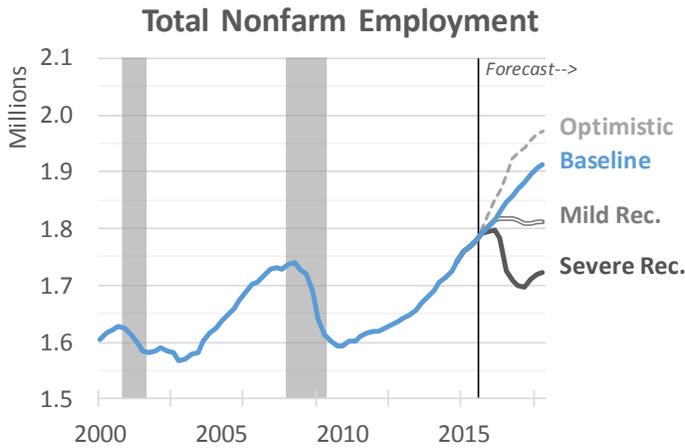
In Oregon, job gains are broad based with strong growth in all private sector industries. The unemployment rate declines faster than under the baseline scenario as individuals are able to find employment more readily and

⁸ <http://oregoneconomicanalysis.wordpress.com/2012/01/23/historical-look-at-oregons-wood-product-industry>
<http://oregoneconomicanalysis.wordpress.com/2013/05/28/timber-counties/>

income growth accelerates. The increase in employment and income support a self-sustaining economic expansion in which new income fuels increased consumer spending (and debt reduction) which begets further increases in employment. Such an expansion increases housing demand as newly employed households (and increasing income for existing households) find their own homes after doubling-up with family and friends during the recession. This results in new construction returns to normal levels by late 2015 or early 2016, about a year earlier than the baseline.

Alternative Scenarios

Dec 2015



	2015	2016	2017	2018
Employment				
Baseline	3.1%	2.7%	2.9%	2.0%
Optimistic	3.3%	4.5%	4.3%	1.8%
Mild Recession	3.2%	2.1%	0.0%	0.2%
Severe Recession	3.1%	0.0%	-4.0%	1.5%
Personal Income				
Baseline	5.7%	6.5%	7.0%	6.4%
Optimistic	6.4%	9.8%	8.5%	6.3%
Mild Recession	5.8%	5.8%	4.1%	5.4%
Severe Recession	5.8%	3.9%	-0.9%	6.7%

Mild Recession Scenario: The economic acceleration of the past two years proves temporary and soon Oregon is returning to very slow employment and GDP growth in late 2015. The housing market stalls (again), removing one driver of growth. The Fed’s tightening in late-2015 causes emerging market turmoil and capital flight. The U.S. dollar strengthens further, helping to choke off the manufacturing cycle. These factors are enough weight on the lackluster recovery that by early 2016 the economy slides back into recession. Job losses ensue in 2016 and 2017, and while not severe – about 15,000 jobs in Oregon – it takes a toll on business income, housing starts and personal income. The unemployment rate returns to over 8 percent. The net effect of the mild recession is an extended period of prolonged economic weakness, not unlike Japan’s so-called Lost Decade(s). Although inflation is expected to remain positive, a key difference.

Severe Recession Scenario: The economy is not able to reach escape velocity from the lackluster recovery to date, and with a newly stalled housing recovery removing one pillar of growth, increasing turmoil in domestic and international markets, and the Fed’s premature tightening in 2015, the economy is soon in free-fall. While the catalyst may be different, the economic effect is similar to late 2008 and early 2009, although not quite as severe when the dust settles. This is little comfort when the unemployment spikes back to over 10 percent and more than 100,000 Oregonians lose their jobs in 2016-17. Besides the domestic economic headwinds and Federal Reserve tightening, the likely culprit in this scenario is a meltdown of the financial markets sparked by the European sovereign debt crisis or other geopolitical shock. Economic growth in the U.S., while fairly steady, is not nearly strong enough to withstand an external financial shock of this magnitude. Further economic effects of a recession this size are personal income losses of around 4.8 percent, about three-quarters the size of the Great Recession losses in Oregon. Housing starts plummet to near historical low levels of construction and home prices decline further. On the bright side, when construction does rebound, it will result in a surge of new home building that will rise above the state’s long term average level of building due to pent-up demand for housing and that the state will have under built housing during this time period.

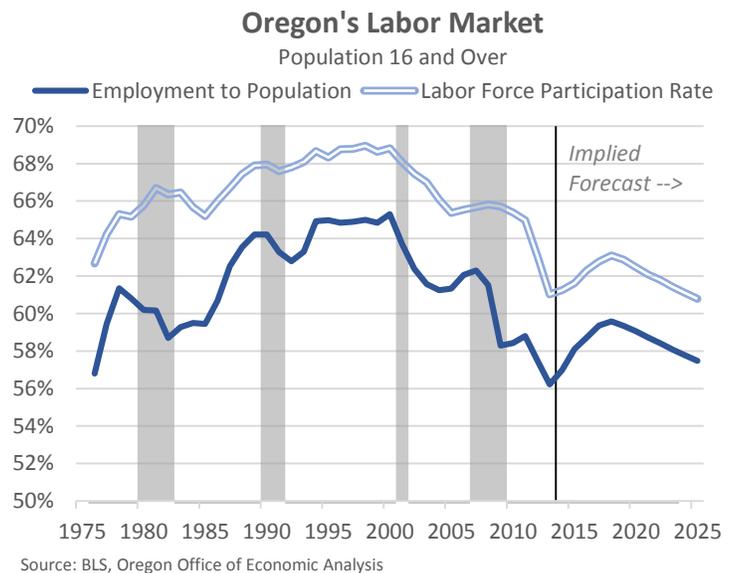
Extended Outlook

IHS Economics projects Oregon’s economy to fare well relative to the rest of the country in the coming years. The state’s Real Gross State Product is projected to be the fifth fastest among all states across the country in terms of growth with gains averaging 3.5 percent through 2020. Total employment is expected to be the ninth strongest among all states at an annualized 1.8 percent, while manufacturing employment will be the second fastest in the country at 1.9 percent. Total personal income growth is expected to be 5.3 percent per year, the eighth fastest among all states, according to IHS Economics.

OEA is somewhat less bullish, but expects Oregon to maintain a growth advantage relative to other states. However, this advantage will be somewhat smaller than the state has enjoyed in past decades. OEA has identified three main avenues of economic growth that are important to continue to monitor over the extended horizon: the state’s dynamic labor supply, the state’s industrial structure and the current number of start-ups, or new businesses.

Oregon has typically benefited from an influx of households from other states, including an ample supply of skilled workers. Households continue to move to Oregon even when local jobs are scarce, as long as the unemployment rate is equally bad elsewhere (particularly in California). Relative prices of housing also contribute to migration flows in and out of the state. For Oregon’s recent history – data available from 1976 – the labor force in the state has both grown faster than the nation overall and the labor force participation rate has been higher. However three recent trends show potentially worrisome signs.

First, the labor force participation rate has declined significantly during and after the Great Recession at both the national and state level. Second, since 2005, Oregon’s labor force participation rate no longer exceeds the national rate as it had for the prior 30 years. Third, during the Great Recession and through the early stages of recovery, the number of individuals in Oregon’s labor force held relatively steady, however in the past year that number is actually declining. All three of these labor force signals are potentially worrisome when it comes to Oregon’s dynamic labor supply. However, how much is attributable to the severe nature of the business cycle, from which one could reasonably expect a rebound, and how much is a fundamental shift in Oregon’s economy is unknown at this time.



With that being said, our office’s baseline outlook calls for some improvement in the near-term for both the labor force participation rate and the employment to population ratio. These gains are due to the shorter run cyclical rebound in the economy, before longer-run demographic trends will weigh on these measures. Focusing just on the prime working age cohorts reveals stronger improvements.

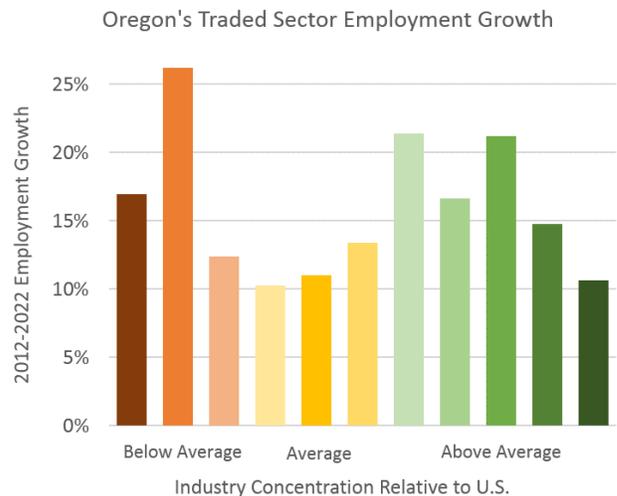
Oregon’s industrial structure is very similar to the U.S. overall, even moreso than nearly all other states. Oregon’s manufacturing industry is larger and weighted toward semiconductors and wood products, relative to the nation which is much more concentrated in transportation equipment. However, these industries which have been Oregon’s strength in both the recent past and historically, are now expected to grow the slowest moving forward.

Productivity and output from the state's technology producers is expected to continue growing quickly, however employment is not likely to follow suit. Similarly, the timber industry remains under pressure from both market based conditions and federal regulations. Barring major changes to either, the slow to downward trajectory of the industry in Oregon is likely to continue.

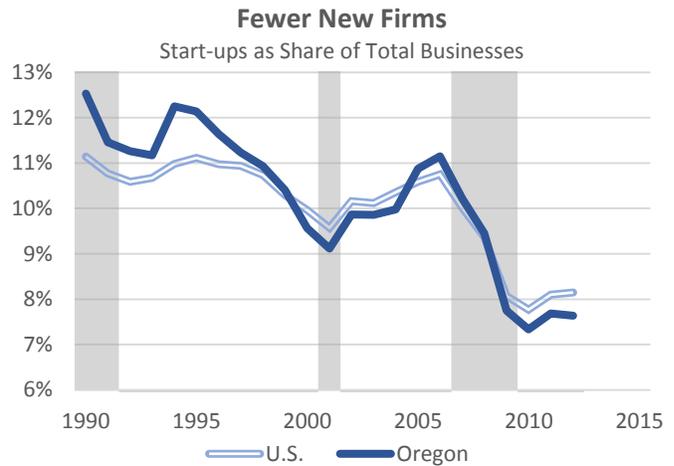
With that being said, certainly not all hope is lost. Many industries in which Oregon has a larger concentration than typical state are expected to perform well over the coming decade. These industries include management of companies, food and beverage manufacturing, published software along with gains in crop production and nurseries. The state's real challenges and opportunities will come in industries in which Oregon does not have a relatively large concentration (the orange bars in the graph). These industries, like consulting, computer system design, financial investment, and scientific R&D, are expected to grow quickly in the decade ahead. To the extent that Oregon is behind the curve than the state may not fully realize these gains in they rely more on clusters and concentrations of similar firms that may already exist elsewhere in the country.

Another area of potential concern that may impact longer term economic growth is that of new business formation. Over the past year or two, the number of new business license applications with the Oregon Secretary of State have begun to grow again. However, these applications remain low relative to historical standards. Similar trends are seen in data available from the U.S. Census Bureau and Bureau of Labor Statistics. These indicators of entrepreneurship, and business formation all show that the recessionary declines are over, but that not much progress has been made in terms of regaining lost ground.

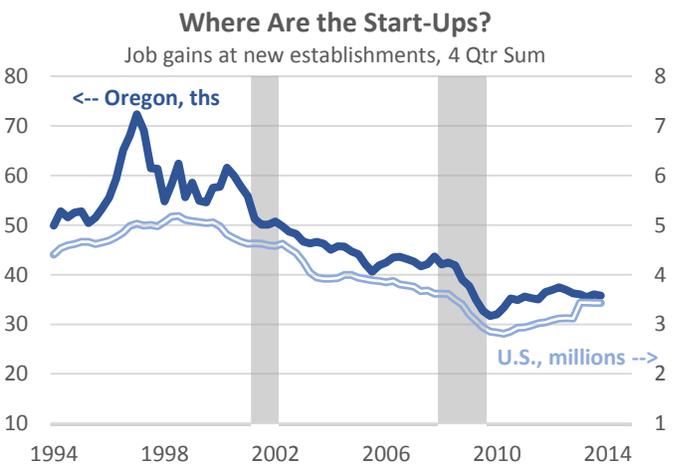
The share of all businesses that are start-ups, either in Oregon or across the nation, is effectively at an all-time low, with data starting in the late 1970s. Associated start-up employment follows a similar pattern. The concern is that new businesses are generally considered the source of innovation and new ideas, products and services that help propel economic growth. To the extent that lower start-up rates indicates that R&D more broadly is not being undertaken, slower growth is to be expected moving



Industry concentration = 2012 employment location quotient at 4 digit NAICS level
 Each column represents approximately 1/11 of Oregon traded sector employment
 Source: BLS, Oregon Employment Department, Oregon Office of Economic Analysis calculations



Source: Census Bureau, Oregon Office of Economic Analysis



Source: BLS, Oregon Office of Economic Analysis

forward. However, if the larger firms that have won out in today's marketplace are investing in R&D and making those innovations themselves, then the worries about the number of start-ups today is overstated. It can be hard to say which is the correct view. However seeing these longer run, downward trends in new business formation warrants, at the very least, concern about future growth prospects.

Finally, Oregon also enjoys the long-term advantages of low electricity costs; a central location between the large markets of California, Vancouver and Asia; clean water; low business rents and living costs; and an increasingly diverse industrial base.

One primary long-run concern for policymakers, think tanks and Oregon's economy is that very little progress on raising per capita income is projected out to 2020. In and of itself, a higher per capita income level would better fund public services for citizens. The benefit side of the state's relatively low income figures is that local firms do not have to pay higher wages, thus helping support the firms' balance sheets as well. It is not purely a lose-lose proposition. The Oregon Employment Department has published a detailed look at Oregon's per capita personal income entitled Why Oregon Trails the Nation⁹.

⁹ <http://olmis.emp.state.or.us/olmisj/PubReader?itemid=00007366>

Oregon Regional Trends

Population growth and migration in particular is vital to Oregon’s economic health. Along with our industrial structure, migration is one of the two reasons Oregon outperforms the typical state during an economic expansion. In both good times and bad, Americans want to live in and move to Oregon. In fact, Americans have been moving to Oregon in droves since Lewis and Clark. Our state’s ability to attract skilled, young working age households is a huge economic benefit. The state ranks quite well on the brain gain spectrum (the opposite of the brain drain).

Migration is part of Oregon’s economic foundation. 68 percent of native born Americans live in the same state they were born. In Oregon that figure is just 51 percent. Oregon is half native and half migrant. This works out mathematically to more than half a million “extra” migrants in the state today, relative to the typical state.

What is true for Oregon as a whole is also true for our regional economies within the state. Every region in Oregon is experiencing accelerating population growth in recent years and the just released 2015 population estimates indicate no slowing down as the economic expansion continues.

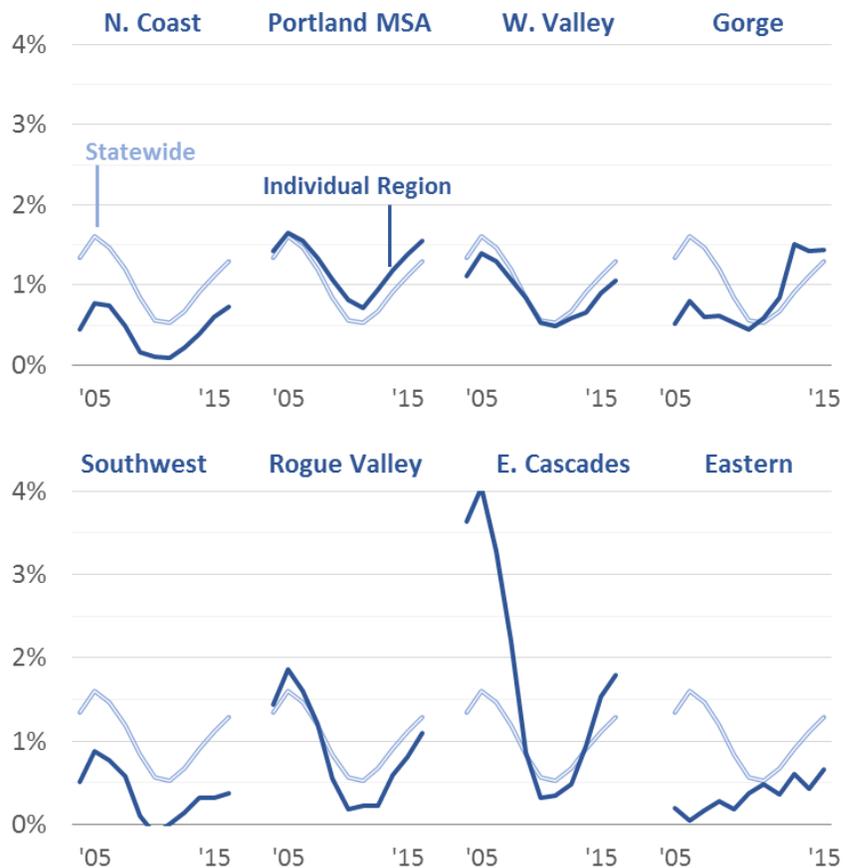
Every region except Eastern Oregon follows the same general pattern over the past decade – strong gains during the housing boom, followed by very meager gains during the Great Recession, with accelerating gains in recent years. Much of this pattern can be tied to migration in particular, as

Americans moved less during the recession. Why move when job opportunities were lacking everywhere and/or the collapsing housing bubble sent your mortgage underwater? As both of these concerns have largely been eliminated, migration flows into Oregon and its various regions have return.

Eastern Oregon is the exception to this pattern. The region as a whole experiences lower rates of population growth as it sees fewer net migrants and relies more upon births and deaths to determine population growth. What migration the region does experience is largely international, as it does see some out-migration into Idaho.

For on Oregon’s regional trends please see our website¹⁰ and the Oregon Employment Department’s website¹¹.

Oregon County Population Growth



N. Coast: Clatsop, Lincoln, Tillamook | Portland MSA: Clackamas, Columbia, Multnomah, Washington, Yamhill | Willamette Valley: Benton, Lane, Linn, Marion, Polk | Gorge: Gilliam, Hood River, Sherman, Wasco, Wheeler | Southwestern: Coos, Curry, Douglas | Rogue Valley: Jackson, Josephine | East Cascades: Crook, Deschutes, Jefferson, Klamath, Lake | Eastern: Baker, Grant, Harney, Malheur, Morrow, Umatilla, Union, Wallowa | Source: Portland State, Oregon Office of Economic Analysis

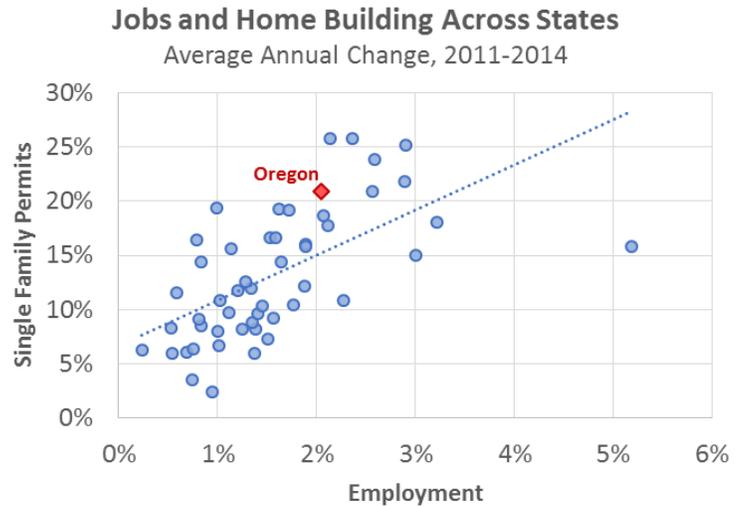
¹⁰ <http://oregoneconomicanalysis.com/regional/>

¹¹ <http://www.qualityinfo.org/olmisj/OlmisZine>

State Comparisons

Historically, housing has led the economy out of recessions and into expansions. This was usually the case given recessions were caused the Federal Reserve raising interest rates to head off inflation. As the Fed cut rates after inflation subsided, it unleashed pent-up demand for interest rate sensitive goods, like housing. However, as the National Association of Home Builder’s chief economist, David Crowe, recently said, “This is not your grandfather’s recovery.”

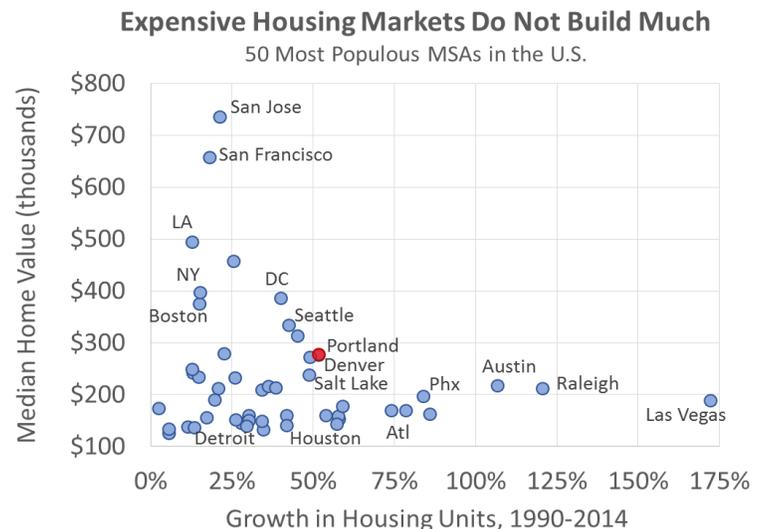
Housing has not led the recovery in the aftermath of the bursting bubble and financial crisis. In fact it is the other way around in recent years. States (and metros) across the country experiencing strong job gains and also seeing stronger increases in new construction. As employment and household finances improve with the economy, the demand for housing (and credit availability) increases as well. New construction and housing growth more broadly is directly tied to local economic conditions and household formation.



Source: BLS, Census, NAHB, Oregon Office of Economic Analysis

However, even in some rapidly growing areas of the country, housing is unable to keep up with demand. This is partly due to the simple fact it takes quite a long time to build new construction, much longer than it takes to hire new workers or gain new residents. However some of the supply and demand imbalances are due to supply constraints like geography, typography but also land use restrictions and NIMBYism. The end result for these in-demand locations that are unable or unwilling to build more housing is higher prices.

Among the 50 largest metros in the country there are essentially five groups. First, there are those in-demand cities that do not build new housing, and are largely unaffordable without making significant lifestyle sacrifices. Second there are metros that see a large influx of new migrants but also build lots of housing. Such metros – like Atlanta Phoenix and Las Vegas – are inexpensive in terms of housing costs.



Source: Census, Oregon Office of Economic Analysis

Third, there are the largely Rust Belt metros that have jointly lower demand and housing costs. There is no real need for new supply given the lack of demand. Fourth, the cluster of popular metros like Denver, Portland and Seattle, where the regions have added just enough housing to maintain some semblance of affordability. Prices are relatively high but much more affordable than the first group.

Finally, the fifth group has no members. Among the 50 largest metros, there is no market that builds a lot of housing and sees high prices. Nor is there an expensive housing market that also builds lots of houses.

REVENUE OUTLOOK

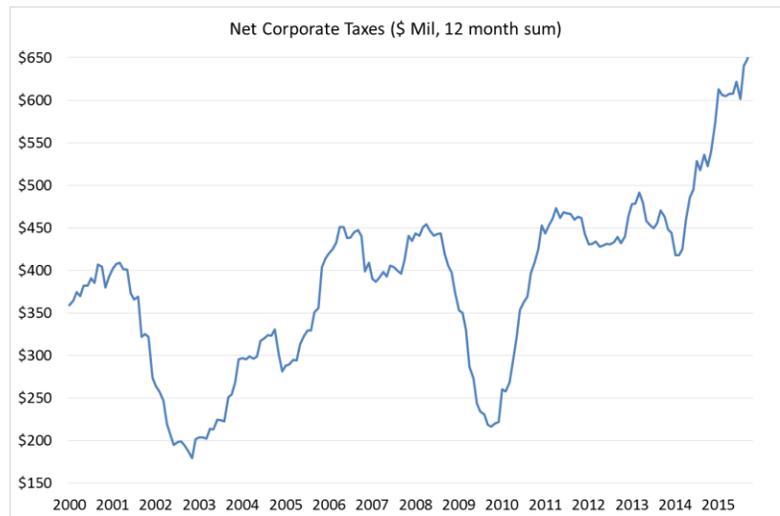
Revenue Summary

Oregon's General Fund revenues are growing strongly. Over the first four months of the 2015-17 biennium, personal income taxes, lottery sales and corporate taxes all grew at double-digit rates relative to last year.

Although much of this growth was expected, gains in corporate taxes and lottery funds outstripped what was called for in the September forecast, leading to an upward revision to the outlook. General Fund Revenues are now expected to be \$31 million larger over current the biennium than what was expected when budgets were drafted in the summer. Given a lower beginning balance heading into the biennium, expected available resources have not changed significantly over that time.

Expectations for growth in Oregon's dominant source of General Fund revenues, personal income taxes, have remained virtually unchanged since the 2015-17 budget was drafted. Although job growth has been somewhat weaker than expected, healthy gains in wages paid per worker have offset this, keeping personal income tax collections closely aligned with the forecast.

Corporate tax collections have been particularly strong. Over the past year, corporate tax collections have increased from a rate of \$450 million per year (their pre-recession peak level), to \$650 million per year. Although some of this growth is expected to be temporary, the forecast has been raised to reflect these strong recent collections. As such, corporate tax revenues¹² are expected to exceed the 2% kicker threshold by \$13 million, generating a kicker amount of \$34.7 million. In keeping with statute, this amount, should it be realized, will be dedicated to K-12 funding during the 2017-19 biennium.

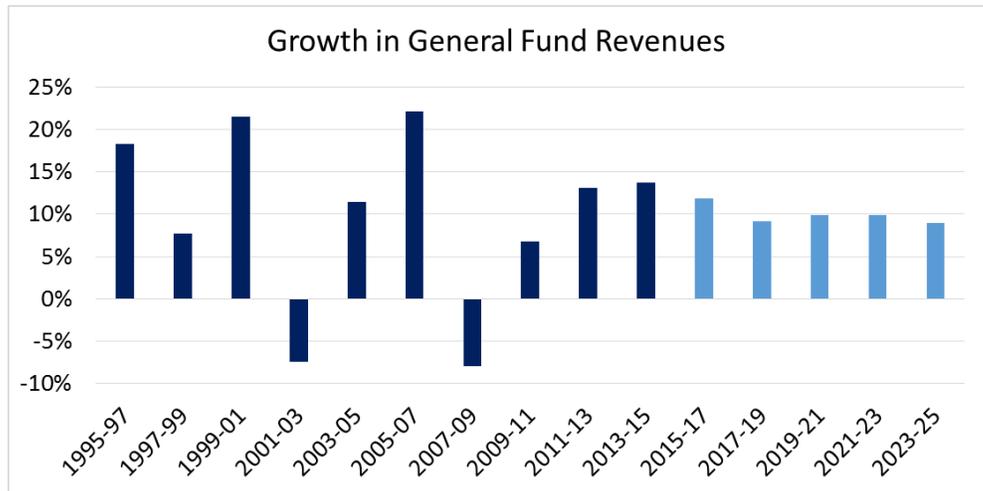


The revenue outlook is stable, yet uncertain. Volatility in equity markets is injecting a great deal of risk into the forecast. Oregon's budget depends heavily on personal income tax collections tied to realizations of capital gains. These collections are extremely volatile, with revenues subject to the sometimes unpredictable behavior of investors. Many analysts believe equity markets will take a step backward soon after monetary policymakers begin to raise interest rates this winter.

A 10% drop in stock prices will typically lead to a decline of twice that rate or more in the amount of net capital gains reported on tax returns. This negative impact on personal income tax collections is often delayed for several months after investors pull their assets out of equity markets. During a sell-off, the volume of trades increases, and paper gains from past years become subject to tax. Afterward, taxable capital gains face considerable downward pressure, with paper earnings from past years having been tapped, and with losses being carried forward into future tax years.

¹² Excluding minimum taxes paid by S-Corporations, which are not part of the corporate kicker base.

Revenue growth in Oregon and other states will face considerable downward pressure over the 10-year extended forecast horizon. As the baby boom population cohort works less and spends less, traditional state tax instruments such as personal income taxes and general sales taxes will become less effective, and revenue growth will fail to match the pace seen in the past.



2015-17 General Fund Revenues

General Fund revenues for the 2015-17 biennium are expected to reach \$18,029 million. This represents a decrease of \$29 million (0.2%) from the September 2015 forecast, and an increase of \$1.9 billion (11.9%) relative to the 2013-15 biennium. General Fund revenues for the 2015-17 biennium are now expected to come in \$31 million (0.2%) above the Close of Session forecast.

Personal Income Tax

Personal income tax collections were \$1,876 million during the first quarter of fiscal year 2016, \$19 million (1.0%) below the latest forecast. Compared to the year-ago level, total personal income tax collections grew by 9.5% relative to a forecast that called for 10.6% growth. Table B.8 in Appendix B presents a comparison of actual and projected personal income tax revenues for the July-September quarter. Early estimates of personal income tax collections received during October and November suggest that revenues have more than made up for this first-quarter gap, and are now tracking ahead of the September forecast.

Corporate Excise Tax

Corporate excise tax collections equaled \$198 million for the first quarter of fiscal year 2016, \$3 million below the September forecast. Estimates of corporate taxes in October suggest that collections are still growing rapidly. Some of the large increase in corporate tax collections over the last few months is likely technical in nature, with the pattern of processing and coding of data having changed due to an upgraded IT system. After a few more months under the new processing system, it is hoped that the collections data will settle into its new trend. Similar concerns will surround personal income tax payments in the coming months, as they too are now being processed using the new system.

Corporate tax collections would likely be at record levels even without technical issues. Outside of energy production and mining, profitability remains strong in most industries. Also, recent law changes have supported collections, as has a decline in outstanding Business Energy Tax Credits.

Corporate income tax collections for 2015-17 are now expected to end the biennium 3.2% higher than what was called for in the Close of Session forecast. This would generate a corporate kicker amount of \$34.7 million to be dedicated to K-12 education during the 2017-19 budget period.

Other Sources of Revenue

Among other primary sources of revenue, video lottery sales, and cigarette and liquor taxes have been coming in above expectations in recent months. Insurance taxes and court fees have been coming in somewhat below the forecast.

Table R.1

2015-17 General Fund Forecast Summary

(Millions)	2015 COS Forecast	September 2015 Forecast	December 2015 Forecast	Change from Prior Forecast	Change from COS Forecast
Structural Revenues					
Personal Income Tax	\$15,713.5	\$15,718.2	\$15,712.4	-\$5.8	-\$1.1
Corporate Income Tax	\$1,100.0	\$1,095.5	\$1,134.7	\$39.2	\$34.7
All Other Revenues	\$1,184.6	\$1,186.6	\$1,182.0	-\$4.5	-\$2.6
Gross GF Revenues	\$17,998.1	\$18,000.2	\$18,029.1	\$28.9	\$31.0
Offsets and Transfers	-\$42.8	-\$43.5	-\$43.0	\$0.6	-\$0.2
Administrative Actions ¹	-\$20.2	-\$20.2	-\$20.2	\$0.0	\$0.0
Legislative Actions	-\$158.9	-\$158.9	-\$158.9	\$0.0	\$0.0
Net Available Resources	\$18,309.1	\$18,254.4	\$18,283.6	\$29.2	-\$25.4
Confidence Intervals					
67% Confidence	+/- 7.3%		\$1,311.4	\$16.72B to \$19.34B	
95% Confidence	+/- 14.5%		\$2,622.8	\$15.41B to \$20.65B	

1 Reflects cost of cashflow management actions, exclusive of internal borrowing.

Extended General Fund Outlook

Table R.2 exhibits the long-run forecast for General Fund revenues through the 2023-25 biennium. Users should note that the potential for error in the forecast increases substantially the further ahead we look.

Table R.2

General Fund Revenue Forecast Summary (Millions of Dollars, Current Law)

Revenue Source	Forecast 2013-15		Forecast 2015-17		Forecast 2017-19		Forecast 2019-21		Forecast 2021-23		Forecast 2023-25	
	Biennium	% Chg	Biennium	% Chg	Biennium	% Chg	Biennium	% Chg	Biennium	% Chg	Biennium	% Chg
Personal Income Taxes	13,958.3	15.2%	15,712.4	12.6%	17,512.0	11.5%	19,413.4	10.9%	21,466.0	10.6%	23,469.8	9.3%
Corporate Income Taxes	1,116.5	26.3%	1,134.7	1.6%	1,094.4	-3.5%	1,073.8	-1.9%	1,115.4	3.9%	1,167.1	4.6%
All Others	1,030.2	-11.4%	1,182.0	14.7%	1,075.0	-9.1%	1,151.3	7.1%	1,209.4	5.0%	1,262.8	4.4%
Gross General Fund	16,105.0	13.7%	18,029.1	11.9%	19,681.4	9.2%	21,638.5	9.9%	23,790.8	9.9%	25,899.6	8.9%
<i>Offsets and Transfers</i>	<i>(74.5)</i>		<i>(43.0)</i>		<i>(73.3)</i>		<i>(74.3)</i>		<i>(74.8)</i>		<i>(75.7)</i>	
Net Revenue	16,030.5	13.3%	17,986.1	12.2%	19,608.1	9.0%	21,564.3	10.0%	23,716.0	10.0%	25,823.9	8.9%

Revenue growth in Oregon and other states will face considerable downward pressure over the 10-year extended forecast horizon. As the baby boom population cohort works less and spends less, traditional state tax instruments such as personal income taxes and general sales taxes will become less effective, and revenue growth will fail to match the pace seen in the past.

General Fund revenues are expected to total \$19,681 million in 2017-19 biennium, an increase of 9.2% percent from the prior period, but \$66 million below the September forecast. In the 2019-21 biennium and beyond, revenue growth is expected to remain stable, with growth rates of around 9% to 10% in the typical biennium. The slowdown in long-run revenue growth is largely due to the impact of demographic changes and changes in savings behavior. In particular, the labor force will lose many very productive workers with a lifetime of experience over the coming years. Table B.2 in the Appendix presents a more detailed look at the long-term General Fund revenue forecast.

Tax Law Assumptions

The revenue forecast is based on existing law, including measures and actions signed into law during the 2015 Oregon Legislative Session. OEA makes routine adjustments to the forecast to account for legislative and other actions not factored into the personal and corporate income tax models. These adjustments can include expected kicker refunds, when applicable, as well as any tax law changes not yet present in the historical data. A summary of actions taken during the 2015 Legislative Session can be found in Appendix B Table B.3. For a detailed treatment of the components of the 2015 Legislatively Enacted Budget, see: [LFO 2015-17 Budget Summary](#).

Although based on current law, many of the tax policies that impact the revenue forecast are not set in stone. In particular, sunset dates for many large tax credits have been scheduled. As credits are allowed to disappear, considerable support is lent to the revenue outlook in the outer years of the forecast. To the extent that tax credits are extended and not allowed to expire when their sunset dates arrive, the outlook for revenue growth will be reduced. The current forecast relies on estimates taken from the Oregon Department of Revenue's 2015-17 Tax Expenditure Report together with more timely updates produced by the Legislative Revenue Office.

Alternative Scenarios

The latest revenue forecast for the current biennium represents the most probable outcome given available information. OEA feels that it is important that anyone using this forecast for decision-making purposes recognize the potential for actual revenues to depart significantly from this projection.

Currently, the overwhelming downside risk facing the revenue outlook is the threat that the U.S. economic recovery will lose steam in the near term. Such a scenario, however it played out, would result in drastic revenue losses. Two recessionary scenarios are displayed in table R.2b. In a severe recession, biennial revenues could come in as much as \$2 billion lower than predicted¹³.

¹³ The methodology for computing alternative scenarios has been changed to reflect recent work done by the Legislative Revenue Office. Assumptions: Recessions begin in fiscal year 2016 and return to baseline income by 2023. The moderate recession scenario assumes personal income growth will be reduced by one-half relative to the baseline in 2016 and 2017. The severe recession scenario assumes personal income will decline in 2016 by as much as it did in 2009. The percentage deviation in personal income taxes is 1.4 times the deviation in personal income. The percentage deviation in corporate income taxes is 2.0 times the deviation in personal income.

TABLE R2b

December 2015

Alternative Cyclical Revenue Forecast (\$ millions)

	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-25
	Fiscal Year								
Baseline Case									
Personal Income									
Level	178.35	190.65	203.75	215.73	227.78	239.23	249.25	262.17	274.06
% change	12.3%	6.9%	6.9%	5.9%	5.6%	5.0%	4.2%	5.2%	4.5%
Taxes									
Personal Income	7,646	8,066	8,521	8,991	9,434	9,980	10,490	10,976	11,475
Corporate Excise & Income	581	554	554	540	535	539	550	565	577
Other General Fund	517	665	525	550	563	588	596	614	622
Total General Fund	8,745	9,285	9,601	10,081	10,532	11,106	11,636	12,154	12,673
% change	3.3%	6.2%	3.4%	5.0%	4.5%	5.4%	4.8%	4.5%	4.3%
Moderate Recession									
Personal Income									
Level	178.3	186.0	194.0	207.6	221.7	234.8	246.4	259.9	272.1
% change	12.3%	4.3%	4.3%	7.0%	6.8%	5.9%	5.0%	5.5%	4.7%
Taxes									
Personal Income	7,646	7,791	7,948	8,516	9,083	9,720	10,325	10,831	11,341
<i>Deviation from baseline</i>		-275	-573	-475	-351	-260	-166	-145	-133
Corporate Excise & Income	581	527	501	500	507	518	538	555	568
<i>Deviation from baseline</i>		-27	-53	-41	-28	-20	-12	-10	-8
Other General Fund	517	665	525	550	563	588	596	614	622
Total General Fund	8,745	8,982	8,974	9,565	10,153	10,826	11,458	12,000	12,531
% change	3.3%	2.7%	-0.1%	6.6%	6.1%	6.6%	5.8%	4.7%	4.4%
<i>Deviation from baseline</i>		-302	-626	-515	-380	-280	-178	-155	-142
Severe Recession									
Personal Income									
Level	178.3	173.7	183.9	199.6	215.8	231.1	245.1	258.5	270.6
% change	5.1%	-2.6%	5.9%	8.5%	8.1%	7.1%	6.1%	5.5%	4.7%
Taxes									
Personal Income	7,646	7,064	7,360	8,051	8,741	9,506	10,248	10,751	11,257
<i>Deviation from baseline</i>		-1,002	-1,161	-940	-693	-473	-242	-225	-217
Corporate Excise & Income	581	455	446	460	479	502	532	549	562
<i>Deviation from baseline</i>		-98	-108	-81	-56	-36	-18	-16	-14
Other General Fund	517	665	525	550	563	588	596	614	622
Total General Fund	8,745	8,185	8,331	9,061	9,783	10,597	11,376	11,913	12,441
% change	3.3%	-6.4%	1.8%	8.8%	8.0%	8.3%	7.4%	4.7%	4.4%
<i>Deviation from baseline</i>		-1,100	-1,269	-1,020	-749	-510	-261	-241	-232

Lottery Earnings

Revenues and available resources from Lottery games and programs are projected to total \$1,189.7 million for 2015-17 BN, an increase of \$27.1 million from the September outlook and \$33.8 million above the Close of Session forecast (2.9%). The vast majority of the increase (\$24.8 million) is due to the ongoing strength in video lottery sales which remain growing at double digit rates in recent months. The remainder of the increase is a combination of slightly stronger traditional product sales and an increase in reversions (\$2.0 million) from last biennium.

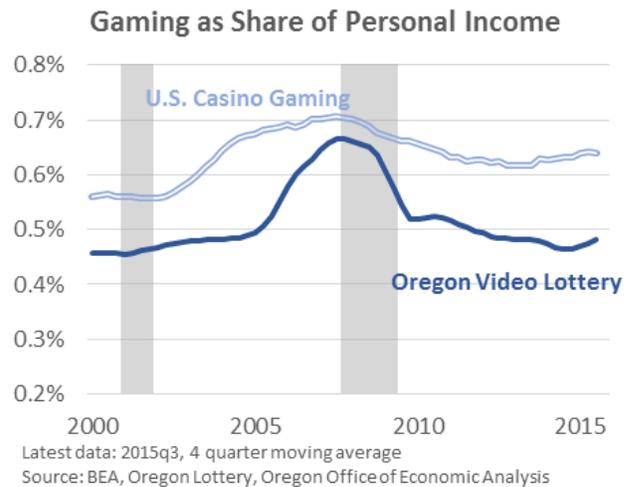
Overall, video lottery dominates total lottery earnings, accounting for approximately 85 percent of all lottery transfers in recent years. Over the past decade, video lottery has underwent three distinct phases and in the past year entered into a fourth.

The first, during the housing boom era, followed the implementation of line games back in 2005. Not only was video lottery new to the marketplace and experienced somewhat of a novelty factor intrigue from consumers, it

also coincided with an economic expansion. Growth in the early years of line games was in the double digits and spending as a share of statewide income increased by 40 percent.

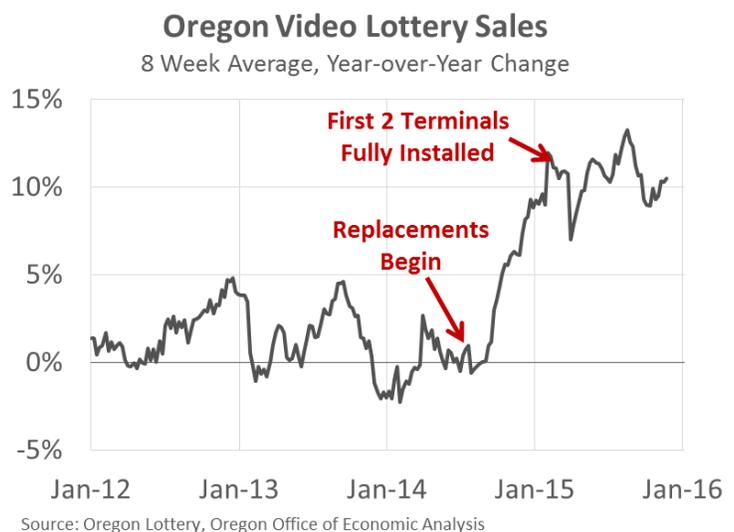
The second phase followed the onset of the Great Recession and enactment of the smoking ban in Oregon. During this time, video lottery sales plummeted 23 percent from pre-recession highs to the depths of the recession; the same magnitude of losses seen in slot machines in Clark County, Nevada, home of Las Vegas.

The third phase covered the initial years of recovery, fiscal years 2008 to 2014. Even as Oregon video lottery sales rebounded at approximately three times the rate seen in Clark County, Nevada, growth still averaged just 1.2 percent per year. Similar sales trends were seen nationwide across the gaming industry, although Oregon’s slow growth was better than most where sales were flat to down.



Last year (FY2015) marked a new phase in Oregon video lottery history with the capital replacement plan. During the past year and throughout this biennium, Lottery will replace the 12,000 existing video lottery terminals throughout the state, some of which will be nine years old when they are replaced. Due to advancements in technology, like a lot of industries, the current machines are becoming obsolete in the marketplace. This replacement plan is expected to cost approximately \$215 million over four years, of which Lottery will self-fund \$85 million. The remaining \$130 million will be deducted from Lottery earnings prior to being transferred for general revenue purposes. The biennial impact of the replacement plan was \$71.2 million in 2013-15, and \$59.2 million in 2015-17, or about 5 percent of revenues available to transfer.

In terms of the new video lottery terminals, the baseline outlook has assumed that older machines would be replaced on a regular basis, given the wear and tear on the machines over time and as technology improves. Clearly this has not been the case, and may be one contributing factor to slow sales growth in the recent past. As such, the baseline forecast had been taking more of a wait and see approach to the new machines in terms of the longer-run sales outlook. However, as the first wave of these new video lottery terminals has been deployed across Oregon – essentially two new terminals in each retailer – there has been a sizable initial sales



bump. Not only are these trends and impacts seen in the statewide sales figures, they are nearly uniform across the state by region, albeit with different timing as the new terminals were installed at different dates depending upon the location. Even in some of Oregon’s hardest hit counties, those that have yet to full partake in the economic recovery, growth in video lottery sales is roughly 10 percent over the past year, following the roll-out

of the new terminals. Sales have started to slow somewhat in the locations where the new terminals were first installed.

While sales remain strong, expectations are not for double digit growth forever. Growth will slow moving forward. Exactly how strong and how long the initial sales bump lasts are still open ended questions at this time.

Another issue to watch is the fact that nearly all other gaming markets are seeing gains over the past year as well. Given this near-universal increase, albeit to varying degrees, it suggests a broader factor influencing sales, such as low gasoline prices. While consumers have saved much of their gas price savings in the past year, it appears one place they are spending more is on a very discretionary item: gaming. Las Vegas casinos are seeing slot revenue growth of 6 percent while other locales are seeing 2-5 percent growth. Except Atlantic City, where sales have declined for years, with no apparent end in sight so far.

Given that for much of the past 6 years consumers have remained cautious with their disposable income, the broader gaming industry has seen relatively flat sales (see our report *Betting the Minimum*¹⁴), the industry is extremely competitive and the uptick in sales recently is the first real signs of life in years, the current forecast builds in a largely one-time novelty factor increase in Oregon video lottery sales. After the initial increase in sales, growth slows to more sustainable rates over the forecast horizon.

Such an outlook does leave room for both upside and downside risks. Should the combination of a stronger economy and the new terminals unlock permanently higher sales over a longer period, instead of one-time novelty factor bump, then the forecast will need to be revised up. Possibly considerably so. However, sales growth has been lackluster to disappointing across the country until recently.

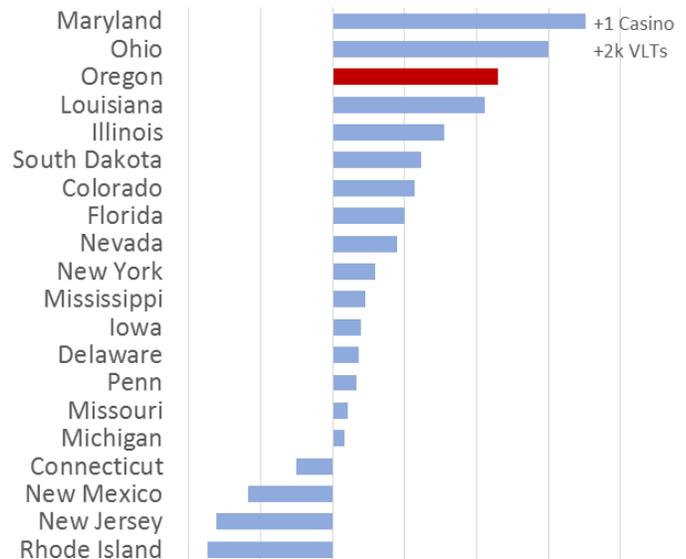
Given all of these trends, the outlook for video lottery has been reduced in recent years. However not completely down to growth along the lines of the adult population (our office’s pessimistic scenario.) Such changes to the outlook have reduced available resources over the 10 year horizon. Overall, expectations are certainly for video lottery sales to continue to increase, however, much like the broader economic outlook, at rates of growth lower than in the past.

The full extended outlook for lottery earnings can be found in Table B.9 in Appendix B.

Gaming Revenues Across the U.S.

2015q3, Year-over-Year Change

-10% -5% 0% 5% 10% 15% 20%



¹⁴ <http://oregoneconomicanalysis.com/2014/10/09/betting-the-minimum-gaming-in-the-u-s-and-state-revenues/>

Budgetary Reserves

The state currently administers two general reserve accounts, the Oregon Rainy Day Fund¹⁵ (ORDF) and the Education Stability Fund¹⁶ (ESF). This section updates balances and recalculates the outlook for these funds based on the December revenue forecast.

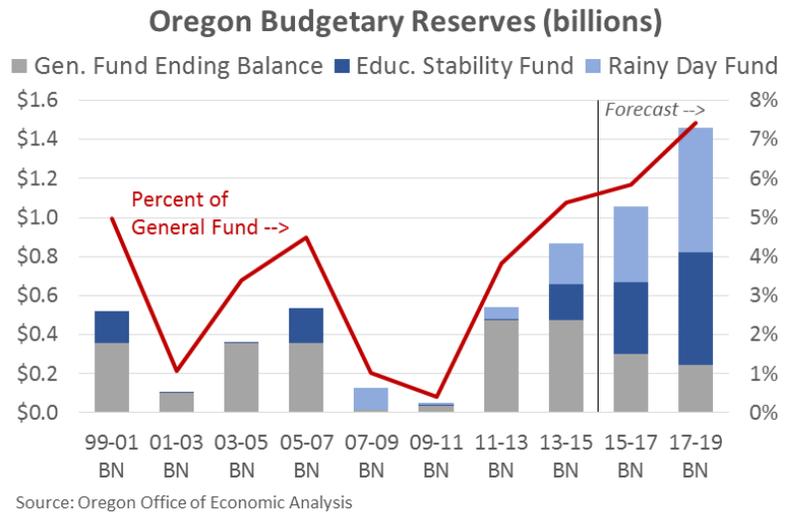
As of this forecast, the two reserve funds currently total a combined \$439.9 million. Additionally there is a projected General Fund ending balance for this biennium of \$299 million, bringing effective reserves to nearly \$739 million, or about 4 percent of last biennium’s revenue.

There were two deposits into the ORDF last biennium (2013-15). Due to the positive General Fund ending balance in 2011-13, one percent of appropriations, \$136.7 million, were deposited along with \$12.0 million due to the increases in corporate tax rates from Measure 67. Similarly, the forecast for the current biennium’s ORDF includes two deposits related to the positive General Fund ending balance from last biennium (2013-15), \$158.9 million along with the increased corporate taxes from Measure 67, \$10.3 million. This brings the projected total in the ORDF at the end of 2015-17 to \$390.6 million.

The ESF received deposits of \$171.9 million last biennium based on Oregon Lottery revenues. The forecast calls for an additional \$187.9 million in deposits into the ESF in 2015-17 based on the current Lottery forecast. This would bring the ESF balance to \$367.2 million at the end of the current biennium. Together, the ORDF and ESF are projected to have a combined balance of \$755.4 million at the close of the 2015-17 biennium.

Such levels of reserve balances are bigger than Oregon has ever been able to accumulate, at least in the state’s recent history. However, that does not indicate they are sufficient to withstand a recession’s impact on the state budget. Reserve balances of approximately 7 percent are generally accepted to be able to withstand a recession of average size. (This figure is based on a one standard deviation change in revenues. Larger reserves would be needed to insure against a more severe recession.) Provided the economic expansion continues, Oregon’s reserves are projected to reach 7 percent of expenditures at the end of the 2017-19 biennium.

See B.10 in Appendix B for more details.



¹⁵ The ORDF is funded from ending balances each biennium, up to one percent of appropriations. The Legislature can deposit additional funds, as it did in first populating the ORDF with surplus corporate income tax revenues from the 2005-07 biennium. The ORDF also retains interest earnings. Withdrawals from the ORDF require one of three triggers, including a decline in employment, a projected budgetary shortfall, or declaration of a state of emergency, plus a three-fifths vote. Withdrawals are capped at two-thirds of the balance as of the beginning of the biennium in question. Fund balances are capped at 7.5 percent of General Fund revenues in the prior biennium.

¹⁶ The ESF gained its current reserve structure and mechanics via constitutional amendment in 2002. The ESF receives 18 percent of lottery earnings, deposited on a quarterly basis – 5% of which are deposited in the Oregon Growth sub-account. The ESF does not retain interest earnings. The ESF has similar triggers as the ORDF, but does not have the two-thirds cap on withdrawals. The ESF balance is capped at five percent of General Fund revenues collected in the prior biennium.

POPULATION AND DEMOGRAPHIC OUTLOOK

Population and Demographic Summary

Oregon's population count on April 1, 2010 was 3,831,074. Oregon gained 409,550 persons between the years 2000 and 2010. The population growth during the decade of 2000 to 2010 was 12.0 percent, down from 20.4 percent growth from the previous decade. Oregon's rankings in terms of decennial growth rate dropped from 11th between 1990-2000 to 18th between 2000 and 2010. Oregon's national ranking in population growth rate has dropped further to 20th between 2010 and 2014 lagging behind all of the neighboring states. Slow population growth during the decade preceding the 2010 Census characterized by double recessions probably cost Oregon one additional seat in the U.S. House of Representatives. Actually, Oregon's decennial population growth rate during the most recent decade was the second lowest since 1900. As a result of economic downturn and sluggish recovery, Oregon's population increased at a slow pace in the recent past. However, Oregon's population growth in 2014 rebounded nicely and ranked 13th fastest in the nation. According to the preliminary estimate by the Portland State University's Population Research Center, Oregon's population passed 4 million mark in 2015. Based on the current forecast, Oregon's population will reach 4.36 million in the year 2022 with an annual rate of growth of 1.17 percent between 2015 and 2022.

Oregon's economic condition heavily influences the state's population growth. Its economy determines the ability to retain existing work force as well as attract job seekers from national and international labor market. As Oregon's total fertility rate remains below the replacement level and number of deaths continue to rise due to ageing population, long-term growth comes mainly from net in-migration. Working-age adults come to Oregon as long as we have favorable economic and employment environments. During the 1980s, which include a major recession and a net loss of population during the early years, net migration contributed to 22 percent of the population change. On the other extreme, net migration accounted for 73 percent of the population change during the booming economy of 1990s. This share of migration to population change declined to 32 percent in 2010, lowest since early 1980s when we actually had negative net migration. As a sign of slow to modest economic gain, the ratio of net migration-to-population change will increase gradually from 79 percent in 2015 to 82 percent by the end of the forecast horizon of 2022. The rise in the ratio of migration to population change is due largely to combination of increase in net migration and decline in natural increase due to decline in the number of births and increase in the number of deaths associated with increasing elderly population. Although economy and employment situation in Oregon looked stagnant in the recent past, migration situation was not similar to the early 1980s pattern of negative net migration. Potential Oregon out-migrants had no better place to go since other states were also in the same boat in terms of economy and employment. California is the number one state of origin of migrants to Oregon. As California's housing market improves, we expect positive impact on Oregon's net migration.

Age structure and its change affect employment, state revenue, and expenditure. Demographics are the major budget drivers, which are modified by policy choices on service coverage and delivery. Growth in many age groups will show the effects of the baby-boom and their echo generations during the period of 2015-2022. It will also reflect demographics impacted by the depression era birth cohort combined with diminished migration of the working age population and elderly retirees. After a period of slow growth during the 1990s and early 2000s, the elderly population (65+) has picked up a faster pace of growth and will surge to the record high levels as the baby-boom generation continue to enter this age group. The average annual growth of the elderly population will be 3.8 percent during the forecast period as the boomers continue to enter retirement age. However, the youngest elderly (aged 65-74) has been growing at an extremely fast pace in the recent years exceeding 5 percent annual

growth rate and continue the fast paced trend in the near future due to the direct impact of the baby-boom generation entering the retirement age and smaller pre-baby boom cohort exiting the 65-74 age group. However, the growth rate tapers off equally dramatically at the end of the forecast period. Reversing several years of slow growth and shrinking population, the elderly aged 75-84 started to show a positive growth as the effect of depression era birth-cohort dissipate. An unprecedented fast pace of growth of population in this age group begins as the baby-boom generation starts to mature into 75-84 age group. The oldest elderly (aged 85+) will continue to grow at a slow but steady rate due to the combination of cohort change, continued positive net migration, and improving longevity. Growth rate will pick up at the end of the forecast period. The average annual rate of growth for this oldest elderly over the forecast horizon will be 1.1 percent. An unprecedented growth in oldest elderly will commence at the end of the forecast horizon.

As the baby-boom generation matures out of oldest working-age cohort combined with slowing net migration, the once fast-paced growth of population aged 45-64 has gradually tapered off to below zero percent rate of growth by 2012 and will remain at slow or below zero growth phase for several years. The size of this older working-age population will shrink slightly from the beginning to the end of the forecast period. The 25-44 age group population is recovering from several years of declining and slow growing trend. The decline was mainly due to the exiting baby-boom cohort. This age group has seen positive growth starting in the year 2004 and will increase by 1.6 percent annual average rate during the forecast horizon mainly because of the exiting smaller birth (baby-bust) cohort being replaced by baby-boom echo cohort. The young adult population (aged 18-24) will remain nearly unchanged over the forecast period. Although the slow or stagnant growth of college-age population (age 18-24), in general, tend to ease the pressure on public spending on higher education, college enrollment typically goes up during the time of high unemployment and scarcity of well-paying jobs when even the older people flock back to colleges to better position themselves in a tough job market. The growth in K-12 population (aged 5-17) will remain very low which will translate into slow growth in school enrollments. This school-age population actually declined in size in recent past years and will grow in the future at well below the overall state average. The growth rate for children under the age of five has remained below or near zero percent in the recent past due to the sharp decline in the number of births. This cohort of children will see steady positive growth starting from the year 2015. Although the number of children under the age of five declined in the recent years, the demand for child care services and pre-Kindergarten program will be additionally determined by the labor force participation and poverty rates of the parents. Overall, elderly population over age 65 will increase rapidly whereas population groups under age 65 will experience slow growth in the coming years. Hence, based solely on demographics of Oregon, demand for public services geared towards children and young adults will likely to increase at a slower pace, whereas demand for elderly care and services will increase rapidly.

Procedure and Assumptions

Population forecasts by age and sex are developed using the cohort-component projection procedure. The population by single year of age and sex is projected based on the specific assumptions of vital events and migrations. Oregon's estimated population of July 1, 2010 based on the most recent decennial census is the base for the forecast. To explain the cohort-component projection procedure very briefly, the forecasting model "survives" the initial population distribution by age and sex to the next age-sex category in the following year, and then applies age-sex-specific birth and migration rates to the mid-period population. Further iterations subject the in-and-out migrants to the same mortality and fertility rates.

Populations by age-sex detail for the years 2000 through 2009, called intercensal estimates, in the following tables are developed by OEA based on 2000 and 2010 censuses and 2011-2015 postcensal totals from the Population

Research Center, Portland State University. The numbers of births and deaths through 2014 are from Oregon's Center for Health Statistics.

Annual numbers of births are determined from the age-specific fertility rates projected based on Oregon's past trends and past and projected national trends. Oregon's total fertility rate is assumed to remain below the replacement level of 2.1 children per woman during the forecast period, tracking at slightly lower than the national rate.

Life Table survival rates are developed for the year 2010. Male and female life expectancies for the 2010-2022 period are projected based on the past three decades of trends and national projected life expectancies. Gradual improvements in life expectancies are expected over the forecast period. At the same time, the difference between the male and female life expectancies will continue to shrink. The male life expectancy at births of 77.4 and the female life expectancy of 81.8 in 2010 are projected to improve to 79.0 years for males and 83.25 years for females by the year 2022.

Estimates and forecasts of the number of net migrations are based on the residuals from the difference between population change and natural increase (births minus deaths) in a given forecast period. The migration forecasting model uses Oregon's employment, unemployment rates, income/wage data from Oregon and neighboring states, and past trends. Distribution of migrants by age and sex is based on detailed data from the American Community Survey. The annual net migration between 2015 and 2022 is expected to remain in the range of 38,200 to 39,900, averaging 39,100 persons annually. Slowdown in Oregon's economy in the recent years resulted in smaller net migration and slow population growth. Estimated population growth and net migration rates in 2010 and 2011 were the lowest in over two decades. Oregon's population growth is expected a gradual recovery in the future. Migration is intrinsically related to economy and employment situation of the state. Still, high unemployment and job loss in the recent past have impacted net migration and population growth, but not to the extent in the early 1980s. Main reason for this is the fact that other states of potential destination for Oregon out-migrants were not faring any better either. Hence the potential out-migrants had very limited destination choices. As Oregon's economy gets better, net migration and population growth will increase. However, the future growth will not look like high growth period of 1990s. The role of net migration in Oregon's population growth will get more prominence as the natural increase will decline considerably due to rapid increase in the number of deaths associated with ageing population.

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Table A.1 – Employment Forecast Tracking

Total Nonfarm Employment, 3rd quarter 2015

(Employment in thousands, Annualized Percent Change)

	Preliminary Estimate		Forecast		Forecast Error		Y/Y Change
	level	% ch	level	% ch	level	%	% ch
Total Nonfarm	1,779.9	2.3	1,781.8	3.3	(1.8)	(0.1)	3.1
Total Private	1,477.6	2.1	1,479.2	3.3	(1.6)	(0.1)	3.3
Mining and Logging	7.7	(4.1)	8.1	13.5	(0.4)	(4.7)	0.5
Construction	82.2	2.6	82.1	3.8	0.1	0.1	2.9
Manufacturing	186.2	0.8	186.2	1.6	0.0	0.0	3.7
Durable Goods	130.5	0.7	130.6	0.7	(0.2)	(0.1)	3.4
Wood Product	22.7	3.3	22.5	(1.3)	0.2	0.7	3.2
Metals and Machinery	37.0	0.1	36.9	1.9	0.1	0.2	2.8
Computer and Electronic Product	37.3	(2.9)	37.5	(0.6)	(0.2)	(0.5)	2.6
Transportation Equipment	12.7	7.5	12.5	0.5	0.1	1.2	9.8
Other Durable Goods	20.9	1.5	21.3	3.5	(0.4)	(1.8)	2.5
Nondurable Goods	55.8	1.1	55.6	3.6	0.2	0.3	4.4
Food	28.0	(0.2)	28.1	4.3	(0.1)	(0.4)	4.6
Other Nondurable Goods	27.7	2.4	27.4	3.0	0.3	1.1	4.3
Trade, Transportation & Utilities	336.5	3.1	337.0	4.0	(0.4)	(0.1)	3.2
Retail Trade	203.3	2.0	204.1	5.3	(0.8)	(0.4)	3.2
Wholesale Trade	74.0	3.5	73.5	0.2	0.4	0.6	2.1
Transportation, Warehousing & Utilities	59.3	6.4	59.3	4.1	(0.0)	(0.1)	4.2
Information	33.2	4.7	33.0	3.9	0.2	0.6	3.0
Financial Activities	93.4	0.3	93.0	5.1	0.4	0.4	0.6
Professional & Business Services	228.3	1.7	228.5	2.4	(0.1)	(0.1)	3.4
Educational & Health Services	258.4	2.6	258.2	3.0	0.2	0.1	3.6
Educational Services	35.1	0.1	34.9	(3.6)	0.2	0.6	0.6
Health Services	223.3	3.0	223.4	4.1	(0.0)	(0.0)	4.1
Leisure and Hospitality	191.5	1.9	192.6	3.4	(1.1)	(0.6)	4.6
Other Services	60.2	1.4	60.6	4.6	(0.5)	(0.8)	1.7
Government	302.3	3.3	302.5	3.1	(0.2)	(0.1)	2.4
Federal	27.9	2.0	28.0	(1.4)	(0.1)	(0.2)	1.7
State	88.3	2.4	88.3	2.5	(0.0)	(0.1)	4.6
State Education	32.8	(2.7)	32.7	(4.1)	0.1	0.4	1.1
Local	186.1	3.9	186.2	4.1	(0.1)	(0.1)	1.5
Local Education	96.7	5.2	96.2	6.0	0.5	0.5	1.7

Table A.2 – Short-Term Oregon Economic Summary

Oregon Forecast Summary

	Quarterly					Annual					
	2015:2	2015:3	2015:4	2016:1	2016:2	2013	2014	2015	2016	2017	2018
Personal Income (\$ billions)											
Nominal Personal Income	171.6	174.1	177.0	179.8	182.5	154.9	163.7	173.0	184.3	197.2	209.9
% change	5.0	6.2	6.8	6.3	6.2	1.6	5.7	5.7	6.5	7.0	6.4
Real Personal Income (base year=2005)	156.8	158.7	161.5	163.2	164.9	144.0	150.0	158.2	166.1	174.4	181.5
% change	2.7	4.9	7.3	4.2	4.2	0.3	4.2	5.5	5.0	5.0	4.1
Nominal Wages and Salaries	89.2	90.9	92.3	94.1	95.8	80.1	85.1	90.2	96.8	104.1	110.9
% change	3.6	7.6	6.4	8.1	7.5	3.9	6.1	6.0	7.3	7.6	6.5
Other Indicators											
Per Capita Income (\$1,000)	42.8	43.3	43.9	44.5	45.0	39.4	41.2	43.1	45.4	48.0	50.5
% change	3.7	4.7	5.6	5.3	5.0	0.7	4.5	4.5	5.2	5.8	5.2
Average Wage rate (\$1,000)	49.9	50.4	51.0	51.6	52.2	47.3	48.9	50.2	52.5	54.8	57.2
% change	1.6	4.3	4.9	4.8	4.5	1.6	3.3	2.8	4.5	4.5	4.4
Population (Millions)	4.0	4.0	4.0	4.0	4.1	3.93	3.97	4.02	4.06	4.11	4.16
% change	1.2	1.4	1.1	1.0	1.2	0.9	1.1	1.2	1.2	1.2	1.2
Housing Starts (Thousands)	13.9	16.1	18.0	18.5	18.9	14.2	15.6	15.7	19.2	21.6	22.8
% change	(22.6)	81.9	54.1	12.8	7.5	31.3	9.4	0.8	22.2	12.4	5.7
Unemployment Rate	5.3	6.1	6.0	5.9	5.8	7.8	7.0	5.8	5.8	5.4	5.6
Point Change	(0.5)	0.8	(0.1)	(0.1)	(0.1)	(1.0)	(0.8)	(1.2)	(0.0)	(0.3)	0.1
Employment (Thousands)											
Total Nonfarm	1,769.9	1,779.9	1,791.0	1,803.7	1,816.0	1,674.1	1,721.4	1,775.6	1,823.8	1,876.3	1,914.3
% change	2.0	2.3	2.5	2.9	2.7	2.1	2.8	3.1	2.7	2.9	2.0
Private Nonfarm	1,470.1	1,477.6	1,487.1	1,498.3	1,509.3	1,385.2	1,427.5	1,474.3	1,516.6	1,564.4	1,598.2
% change	2.1	2.1	2.6	3.1	3.0	2.7	3.0	3.3	2.9	3.1	2.2
Construction	81.6	82.2	82.8	83.6	84.7	74.1	80.1	82.3	85.0	87.8	89.2
% change	(5.4)	2.6	3.2	4.1	5.2	6.1	8.0	2.8	3.3	3.2	1.7
Manufacturing	185.8	186.2	186.4	187.0	187.2	175.0	179.4	185.7	187.6	190.4	192.5
% change	3.6	0.8	0.5	1.1	0.5	1.8	2.5	3.5	1.1	1.5	1.1
Durable Manufacturing	130.2	130.5	130.6	130.9	131.0	123.2	126.1	130.1	131.4	133.5	134.9
% change	3.0	0.7	0.3	1.0	0.3	1.3	2.3	3.2	0.9	1.6	1.0
Wood Product Manufacturing	22.5	22.7	22.8	22.9	22.9	21.1	22.0	22.6	23.0	23.5	24.0
% change	3.5	3.3	3.1	1.1	(0.4)	7.0	4.0	2.7	1.9	2.1	2.0
High Tech Manufacturing	37.6	37.3	37.2	37.1	37.0	36.6	36.5	37.3	37.1	37.6	37.4
% change	2.8	(2.9)	(0.6)	(1.1)	(0.9)	(1.0)	(0.4)	2.4	(0.7)	1.4	(0.5)
Transportation Equipment	12.4	12.7	12.5	12.6	12.5	10.9	11.5	12.4	12.6	12.7	12.8
% change	7.0	7.5	(5.5)	3.7	(2.3)	(2.3)	5.7	8.5	1.1	0.9	1.3
Nondurable Manufacturing	55.6	55.8	55.9	56.1	56.2	51.8	53.3	55.6	56.3	56.9	57.7
% change	4.8	1.1	0.9	1.4	0.7	3.0	2.9	4.3	1.3	1.2	1.3
Private nonmanufacturing	1,284.2	1,291.4	1,300.7	1,311.4	1,322.2	1,210.3	1,248.1	1,288.6	1,329.0	1,374.0	1,405.6
% change	1.9	2.3	2.9	3.3	3.3	2.8	3.1	3.2	3.1	3.4	2.3
Retail Trade	202.2	203.3	204.6	205.9	207.6	191.6	196.3	202.6	208.4	214.1	219.2
% change	3.7	2.0	2.6	2.6	3.4	2.4	2.4	3.2	2.9	2.7	2.4
Wholesale Trade	73.3	74.0	74.2	74.6	74.8	71.5	72.4	73.7	75.2	76.9	78.1
% change	1.0	3.5	1.2	2.3	1.3	3.9	1.3	1.7	2.0	2.4	1.5
Information	32.8	33.2	33.4	33.6	33.8	32.3	32.1	33.0	33.9	34.7	35.6
% change	3.8	4.7	2.3	2.3	2.3	0.4	(0.4)	2.7	2.7	2.5	2.5
Professional and Business Services	227.4	228.3	230.7	233.4	236.4	209.4	219.7	228.1	238.5	254.0	265.7
% change	2.1	1.7	4.2	4.7	5.3	3.6	4.9	3.8	4.5	6.5	4.6
Health Services	221.7	223.3	224.9	226.2	227.4	208.6	213.9	222.3	228.3	233.2	236.2
% change	4.4	3.0	2.8	2.4	2.1	2.1	2.5	3.9	2.7	2.1	1.3
Leisure and Hospitality	190.6	191.5	193.3	195.6	197.6	176.6	182.9	191.1	199.0	206.3	210.2
% change	3.6	1.9	3.7	5.0	4.1	3.8	3.6	4.5	4.1	3.7	1.9
Government	299.9	302.3	303.9	305.4	306.6	288.8	293.9	301.3	307.2	311.9	316.2
% change	1.2	3.3	2.2	1.9	1.7	(0.7)	1.8	2.5	2.0	1.5	1.4

Table A.3 – Oregon Economic Forecast Change

Oregon Forecast Change (Current vs. Last)

	Quarterly					Annual					
	2015:2	2015:3	2015:4	2016:1	2016:2	2013	2014	2015	2016	2017	2018
Personal Income (\$ billions)											
Nominal Personal Income	171.6	174.1	177.0	179.8	182.5	154.9	163.7	173.0	184.3	197.2	209.9
% change	(0.7)	(0.7)	(0.5)	(0.5)	(0.5)	(1.1)	(1.1)	(0.7)	(0.4)	(0.2)	0.0
Real Personal Income (base year=2005)	156.8	158.7	161.5	163.2	164.9	144.0	150.0	158.2	166.1	174.4	181.5
% change	(1.1)	(1.1)	(0.4)	(0.7)	(0.8)	(1.3)	(1.4)	(1.0)	(0.7)	(0.5)	(0.6)
Nominal Wages and Salaries	89.2	90.9	92.3	94.1	95.8	80.1	85.1	90.2	96.8	104.1	110.9
% change	(0.8)	(0.6)	(0.9)	(0.7)	(0.6)	(0.4)	(0.1)	(0.7)	(0.7)	(0.5)	(0.3)
Other Indicators											
Per Capita Income (\$1,000)	42.8	43.3	43.9	44.5	45.0	39.4	41.2	43.1	45.4	48.0	50.5
% change	(0.7)	(0.7)	(0.5)	(0.5)	(0.5)	0.0	0.0	0.1	0.2	0.3	0.3
Average Wage rate (\$1,000)	49.9	50.4	51.0	51.6	52.2	47.3	48.9	50.2	52.5	54.8	57.2
% change	(0.7)	(0.6)	(0.4)	(0.3)	(0.3)	0.0	0.0	0.0	0.0	0.0	0.0
Population (Millions)	4.01	4.02	4.03	4.0	4.1	3.93	3.97	4.02	4.06	4.11	4.16
% change	(0.1)	(0.1)	(0.2)	(0.2)	(0.2)	0.0	(0.0)	(0.1)	(0.2)	(0.3)	(0.3)
Housing Starts (Thousands)	13.9	16.1	18.0	18.5	18.9	14.2	15.6	15.7	19.2	21.6	22.8
% change	(0.0)	5.1	14.0	11.9	8.8	0.0	0.0	0.0	0.0	0.0	0.0
Unemployment Rate	5.3	6.1	6.0	5.9	5.8	7.8	7.0	5.8	5.8	5.4	5.6
Point Change	0.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Employment (Thousands)											
Total Nonfarm	1,769.9	1,779.9	1,791.0	1,803.7	1,816.0	1,674.1	1,721.4	1,775.6	1,823.8	1,876.3	1,914.3
% change	0.1	(0.1)	(0.3)	(0.3)	(0.3)	0.2	0.2	(0.0)	(0.3)	(0.6)	(0.7)
Private Nonfarm	1,470.1	1,477.6	1,487.1	1,498.3	1,509.3	1,385.2	1,427.5	1,474.3	1,516.6	1,564.4	1,598.2
% change	0.2	(0.1)	(0.4)	(0.4)	(0.4)	0.2	0.3	(0.0)	(0.5)	(0.8)	(1.0)
Construction	81.6	82.2	82.8	83.6	84.7	74.1	80.1	82.3	85.0	87.8	89.2
% change	0.4	0.1	(0.6)	(1.2)	(0.9)	0.7	0.8	0.1	(1.0)	(0.6)	(0.6)
Manufacturing	185.8	186.2	186.4	187.0	187.2	175.0	179.4	185.7	187.6	190.4	192.5
% change	0.2	0.0	(0.4)	(0.3)	(0.4)	0.1	0.2	(0.0)	(0.3)	(0.1)	(0.2)
Durable Manufacturing	130.2	130.5	130.6	130.9	131.0	123.2	126.1	130.1	131.4	133.5	134.9
% change	(0.1)	(0.1)	(0.6)	(0.6)	(0.8)	0.1	0.2	(0.2)	(0.8)	(0.6)	(0.8)
Wood Product Manufacturing	22.5	22.7	22.8	22.9	22.9	21.1	22.0	22.6	23.0	23.5	24.0
% change	(0.4)	0.7	1.2	1.7	1.1	0.2	0.2	0.4	1.2	0.8	0.9
High Tech Manufacturing	37.6	37.3	37.2	37.1	37.0	36.6	36.5	37.3	37.1	37.6	37.4
% change	0.1	(0.5)	(0.9)	(1.4)	(1.9)	0.1	0.0	(0.3)	(2.0)	(0.8)	(1.2)
Transportation Equipment	12.4	12.7	12.5	12.6	12.5	10.9	11.5	12.4	12.6	12.7	12.8
% change	(0.5)	1.2	(1.1)	(1.0)	(1.0)	0.0	0.0	(0.1)	(0.7)	(0.7)	(1.4)
Nondurable Manufacturing	55.6	55.8	55.9	56.1	56.2	51.8	53.3	55.6	56.3	56.9	57.7
% change	1.0	0.3	0.2	0.6	0.6	0.2	0.3	0.4	0.7	1.0	1.2
Private nonmanufacturing	1,284.2	1,291.4	1,300.7	1,311.4	1,322.2	1,210.3	1,248.1	1,288.6	1,329.0	1,374.0	1,405.6
% change	0.2	(0.1)	(0.4)	(0.5)	(0.4)	0.2	0.3	(0.0)	(0.6)	(0.9)	(1.1)
Retail Trade	202.2	203.3	204.6	205.9	207.6	191.6	196.3	202.6	208.4	214.1	219.2
% change	0.4	(0.4)	(0.8)	(0.7)	(0.3)	0.2	0.2	(0.1)	(0.5)	(0.9)	(1.0)
Wholesale Trade	73.3	74.0	74.2	74.6	74.8	71.5	72.4	73.7	75.2	76.9	78.1
% change	(0.2)	0.6	0.0	0.0	0.0	0.3	0.3	0.2	0.0	(0.1)	(0.2)
Information	32.8	33.2	33.4	33.6	33.8	32.3	32.1	33.0	33.9	34.7	35.6
% change	0.4	0.6	(0.0)	0.7	0.7	0.1	0.2	0.3	0.4	(0.1)	0.2
Professional and Business Services	227.4	228.3	230.7	233.4	236.4	209.4	219.7	228.1	238.5	254.0	265.7
% change	0.1	(0.1)	(0.7)	(1.3)	(1.7)	0.3	0.4	(0.1)	(1.9)	(2.3)	(2.4)
Health Services	221.7	223.3	224.9	226.2	227.4	208.6	213.9	222.3	228.3	233.2	236.2
% change	0.2	(0.0)	0.2	0.4	0.6	0.1	0.1	0.2	0.5	(0.0)	(0.6)
Leisure and Hospitality	190.6	191.5	193.3	195.6	197.6	176.6	182.9	191.1	199.0	206.3	210.2
% change	(0.2)	(0.6)	(0.6)	(0.1)	0.1	0.1	0.1	(0.3)	(0.0)	(0.3)	(0.6)
Government	299.9	302.3	303.9	305.4	306.6	288.8	293.9	301.3	307.2	311.9	316.2
% change	(0.1)	(0.1)	0.3	0.4	0.5	0.0	0.1	0.0	0.5	0.8	1.1

Table A.4 – Annual Economic Forecast

Dec 2015 - Personal Income

(Billions of Current Dollars)

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Personal Income*												
Oregon	145.1	152.4	154.9	163.7	173.0	184.3	197.2	209.9	221.7	233.6	244.9	256.4
% Ch	5.6	5.0	1.6	5.7	5.7	6.5	7.0	6.4	5.6	5.3	4.9	4.7
U.S.	13,254.5	13,915.1	14,068.4	14,694.2	15,310.4	16,023.4	16,890.6	17,771.0	18,665.9	19,578.0	20,492.7	21,431.7
% Ch	6.2	5.0	1.1	4.4	4.2	4.7	5.4	5.2	5.0	4.9	4.7	4.6
Wage and Salary												
Oregon	74.0	77.2	80.1	85.1	90.2	96.8	104.1	110.9	117.0	123.2	129.1	135.2
% Ch	4.3	4.2	3.9	6.1	6.0	7.3	7.6	6.5	5.5	5.3	4.8	4.7
U.S.	6,633.2	6,930.3	7,114.4	7,477.8	7,778.6	8,141.6	8,573.1	9,010.1	9,462.1	9,935.4	10,409.6	10,891.7
% Ch	4.0	4.5	2.7	5.1	4.0	4.7	5.3	5.1	5.0	5.0	4.8	4.6
Other Labor Income												
Oregon	18.2	19.7	20.1	19.8	20.5	21.6	23.2	24.8	26.2	27.6	28.8	30.1
% Ch	2.4	8.5	2.0	(1.6)	3.4	5.4	7.8	6.9	5.6	5.1	4.5	4.4
U.S.	1,142.0	1,165.3	1,197.8	1,224.0	1,263.4	1,309.6	1,370.8	1,424.9	1,477.3	1,530.0	1,582.5	1,636.6
% Ch	2.5	2.0	2.8	2.2	3.2	3.7	4.7	3.9	3.7	3.6	3.4	3.4
Nonfarm Proprietor's Income												
Oregon	10.1	10.7	11.1	11.8	12.4	13.4	14.3	15.1	15.9	16.8	17.7	18.6
% Ch	3.2	6.0	3.3	5.9	5.4	7.8	6.8	5.6	5.6	5.6	5.5	5.2
U.S.	1,068.1	1,179.8	1,196.3	1,268.5	1,331.5	1,421.5	1,498.8	1,562.2	1,625.6	1,704.3	1,788.4	1,875.5
% Ch	8.2	10.5	1.4	6.0	5.0	6.8	5.4	4.2	4.1	4.8	4.9	4.9
Dividend, Interest and Rent												
Oregon	27.9	30.3	30.1	31.4	32.9	35.0	37.7	40.6	43.3	45.7	48.0	50.0
% Ch	10.7	8.5	(0.4)	4.2	4.6	6.4	7.8	7.7	6.6	5.6	5.1	4.1
U.S.	2,399.2	2,649.1	2,623.8	2,728.4	2,842.8	2,957.4	3,163.0	3,396.5	3,606.8	3,784.9	3,946.3	4,105.3
% Ch	12.0	10.4	(1.0)	4.0	4.2	4.0	6.9	7.4	6.2	4.9	4.3	4.0
Transfer Payments												
Oregon	29.7	29.7	30.8	33.5	36.0	37.9	39.6	41.5	43.7	45.9	48.2	50.7
% Ch	1.5	(0.0)	3.7	8.8	7.3	5.2	4.6	4.8	5.2	5.1	4.9	5.3
U.S.	2,274.3	2,329.2	2,406.1	2,538.3	2,645.9	2,772.3	2,888.5	3,018.7	3,176.8	3,349.8	3,522.5	3,708.2
% Ch	1.7	2.4	3.3	5.5	4.2	4.8	4.2	4.5	5.2	5.4	5.2	5.3
Contributions for Social Security												
Oregon	11.6	12.1	14.2	14.9	15.7	16.9	18.1	19.2	20.4	21.6	22.8	23.9
% Ch	(7.5)	4.8	16.9	5.4	5.2	7.2	7.1	6.4	6.2	5.8	5.5	5.0
U.S.	423.9	437.2	579.4	611.8	633.0	662.2	698.7	737.2	781.0	825.0	869.7	915.5
% Ch	(17.6)	3.1	32.5	5.6	3.5	4.6	5.5	5.5	5.9	5.6	5.4	5.3
Residence Adjustment												
Oregon	(3.4)	(3.6)	(3.6)	(3.6)	(3.8)	(3.9)	(4.1)	(4.2)	(4.3)	(4.4)	(4.4)	(4.5)
% Ch	9.3	4.7	0.6	0.0	5.0	3.1	3.7	2.8	2.1	2.2	2.0	1.8
Farm Proprietor's Income												
Oregon	0.1	0.5	0.4	0.7	0.7	0.5	0.4	0.4	0.3	0.3	0.3	0.2
% Ch	(416.4)	269.3	(24.7)	86.0	(2.2)	(28.6)	(11.8)	(12.5)	(10.7)	(8.4)	(2.9)	(14.3)
Per Capita Income (Thousands of \$)												
Oregon	37.6	39.2	39.4	41.2	43.1	45.4	48.0	50.5	52.7	54.8	56.9	58.8
% Ch	5.1	4.3	0.7	4.5	4.5	5.2	5.8	5.2	4.4	4.1	3.7	3.5
U.S.	42.4	44.2	44.4	46.0	47.6	49.4	51.6	53.9	56.2	58.4	60.7	63.0
% Ch	5.4	4.2	0.4	3.7	3.4	3.8	4.6	4.4	4.2	4.1	3.9	3.8

* Personal Income includes all classes of income minus Contributions for Social Security

**Dec 2015 - Employment By Industry
(Oregon - Thousands, U.S. - Millions)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Total Nonfarm												
Oregon	1,619.8	1,640.0	1,674.1	1,721.4	1,775.6	1,823.8	1,876.3	1,914.3	1,939.5	1,962.7	1,978.4	1,996.9
% Ch	1.1	1.2	2.1	2.8	3.1	2.7	2.9	2.0	1.3	1.2	0.8	0.9
U.S.	131.8	134.1	136.4	139.0	141.9	144.1	146.0	147.8	149.2	150.7	151.7	152.8
% Ch	1.2	1.7	1.7	1.9	2.1	1.5	1.3	1.2	1.0	1.0	0.7	0.7
Private Nonfarm												
Oregon	1,324.8	1,349.0	1,385.2	1,427.5	1,474.3	1,516.6	1,564.4	1,598.2	1,619.3	1,637.1	1,650.6	1,665.2
% Ch	1.8	1.8	2.7	3.0	3.3	2.9	3.1	2.2	1.3	1.1	0.8	0.9
U.S.	109.8	112.2	114.5	117.2	119.9	122.0	123.8	125.3	126.5	127.8	128.8	129.7
% Ch	1.8	2.2	2.1	2.3	2.4	1.7	1.4	1.2	1.0	1.0	0.8	0.7
Mining and Logging												
Oregon	7.0	7.2	7.6	7.7	7.8	8.0	8.3	8.4	8.5	8.5	8.6	8.7
% Ch	4.6	3.2	4.8	2.0	0.7	3.2	2.8	1.6	0.9	0.8	0.9	0.7
U.S.	0.8	0.8	0.9	0.9	0.8	0.8	0.8	0.8	0.9	0.9	0.9	0.9
% Ch	11.8	7.6	1.8	3.8	(6.2)	(6.8)	2.6	3.7	2.9	2.6	2.4	2.4
Construction												
Oregon	68.6	69.9	74.1	80.1	82.3	85.0	87.8	89.2	89.8	90.5	91.2	92.1
% Ch	1.4	1.8	6.1	8.0	2.8	3.3	3.2	1.7	0.6	0.8	0.7	1.0
U.S.	5.5	5.6	5.9	6.1	6.4	6.6	7.0	7.3	7.5	7.8	7.9	8.0
% Ch	0.2	2.1	3.7	4.8	3.9	3.8	6.1	4.3	3.0	2.7	2.0	1.5
Manufacturing												
Oregon	168.1	171.9	175.0	179.4	185.7	187.6	190.4	192.5	193.9	194.9	196.3	197.7
% Ch	2.6	2.2	1.8	2.5	3.5	1.1	1.5	1.1	0.7	0.5	0.7	0.7
U.S.	11.7	11.9	12.0	12.2	12.3	12.3	12.5	12.6	12.7	12.8	12.8	12.9
% Ch	1.7	1.7	0.8	1.4	1.1	0.1	1.2	1.1	0.9	0.5	0.5	0.2
Durable Manufacturing												
Oregon	118.6	121.6	123.2	126.1	130.1	131.4	133.5	134.9	135.2	135.6	136.5	137.4
% Ch	3.2	2.5	1.3	2.3	3.2	0.9	1.6	1.0	0.3	0.3	0.7	0.7
U.S.	7.3	7.5	7.5	7.7	7.8	7.8	7.9	8.0	8.1	8.1	8.2	8.2
% Ch	2.9	2.7	1.0	1.8	1.4	0.1	1.6	1.3	0.8	0.5	0.7	0.5
Wood Products												
Oregon	19.3	19.8	21.1	22.0	22.6	23.0	23.5	24.0	23.7	23.7	24.0	24.3
% Ch	(3.7)	2.6	7.0	4.0	2.7	1.9	2.1	2.0	(1.2)	0.1	1.3	1.1
U.S.	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5	0.5	0.5
% Ch	(1.5)	0.7	4.2	5.3	2.0	4.6	9.3	5.1	2.2	3.7	2.9	1.9
Metal and Machinery												
Oregon	33.3	34.7	35.4	35.9	36.9	37.5	38.0	38.6	39.2	39.8	40.3	40.7
% Ch	6.9	4.2	2.0	1.5	2.7	1.5	1.5	1.6	1.5	1.4	1.4	0.9
U.S.	2.8	2.9	2.9	3.0	3.0	3.0	3.0	3.1	3.1	3.2	3.2	3.3
% Ch	5.7	4.2	0.7	1.8	0.1	(1.2)	1.5	2.1	1.9	1.5	1.7	1.3
Computer and Electronic Products												
Oregon	36.4	37.0	36.6	36.5	37.3	37.1	37.6	37.4	37.3	37.2	37.2	37.4
% Ch	4.1	1.6	(1.0)	(0.4)	2.4	(0.7)	1.4	(0.5)	(0.3)	(0.2)	0.0	0.3
U.S.	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1
% Ch	0.8	(1.3)	(2.2)	(1.4)	0.3	0.6	3.3	1.0	1.1	0.8	0.7	0.7
Transportation Equipment												
Oregon	10.7	11.1	10.9	11.5	12.4	12.6	12.7	12.8	12.8	12.4	12.2	12.1
% Ch	5.2	3.4	(2.3)	5.7	8.5	1.1	0.9	1.3	(0.7)	(2.8)	(1.6)	(0.6)
U.S.	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5	1.5
% Ch	3.6	5.8	3.3	3.6	3.2	0.5	(0.8)	(1.1)	(2.1)	(2.2)	(1.8)	(1.9)
Other Durables												
Oregon	18.9	19.1	19.2	20.2	20.9	21.3	21.7	22.0	22.3	22.5	22.7	22.9
% Ch	1.6	1.0	0.8	5.4	3.1	1.8	2.0	1.7	1.1	0.9	1.0	0.9
U.S.	2.0	2.0	2.0	2.1	2.1	2.2	2.2	2.3	2.3	2.3	2.3	2.4
% Ch	0.0	0.7	1.6	2.3	2.3	1.3	2.8	2.2	0.9	1.0	1.2	0.8
Nondurable Manufacturing												
Oregon	49.5	50.3	51.8	53.3	55.6	56.3	56.9	57.7	58.7	59.3	59.8	60.3
% Ch	1.2	1.4	3.0	2.9	4.3	1.3	1.2	1.3	1.7	1.1	0.8	0.8
U.S.	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.6	4.6	4.7	4.7	4.6
% Ch	(0.3)	0.1	0.3	0.7	0.6	0.0	0.4	0.7	1.0	0.4	0.0	(0.3)
Food Manufacturing												
Oregon	24.2	24.8	25.9	26.9	27.9	28.3	28.7	29.1	29.6	29.9	30.1	30.4
% Ch	1.8	2.4	4.3	4.0	3.7	1.3	1.4	1.4	1.7	1.1	0.8	1.0
U.S.	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.7
% Ch	0.5	0.7	0.3	0.5	0.7	0.6	1.9	1.8	2.0	1.6	1.4	1.1
Other Nondurable												
Oregon	25.3	25.4	25.9	26.3	27.6	28.0	28.3	28.6	29.1	29.4	29.7	29.9
% Ch	0.7	0.5	1.7	1.8	4.9	1.4	0.9	1.2	1.8	1.1	0.9	0.7
U.S.	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0
% Ch	(0.6)	(0.2)	0.3	0.8	0.5	(0.3)	(0.3)	0.2	0.5	(0.2)	(0.7)	(1.1)
Trade, Transportation, and Utilities												
Oregon	305.9	310.0	318.0	325.6	335.3	344.1	353.4	361.2	366.6	369.9	371.9	373.6
% Ch	1.2	1.3	2.6	2.4	3.0	2.6	2.7	2.2	1.5	0.9	0.5	0.4
U.S.	25.1	25.5	25.9	26.4	26.9	27.3	27.4	27.6	27.7	27.8	27.8	27.7
% Ch	1.7	1.6	1.5	2.0	2.1	1.3	0.5	0.8	0.4	0.2	(0.1)	(0.2)

**Dec 2015 - Employment By Industry
(Oregon - Thousands, U.S. - Millions)**

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
Retail Trade												
Oregon	184.8	187.1	191.6	196.3	202.6	208.4	214.1	219.2	222.8	224.9	226.4	227.9
% Ch	0.9	1.2	2.4	2.4	3.2	2.9	2.7	2.4	1.6	0.9	0.7	0.7
U.S.	14.7	14.8	15.1	15.4	15.7	15.9	15.8	15.8	15.7	15.7	15.7	15.6
% Ch	1.5	1.1	1.6	1.9	2.0	1.2	(0.6)	(0.0)	(0.1)	(0.2)	(0.4)	(0.5)
Wholesale Trade												
Oregon	67.7	68.8	71.5	72.4	73.7	75.2	76.9	78.1	78.9	79.6	80.1	80.3
% Ch	1.0	1.6	3.9	1.3	1.7	2.0	2.4	1.5	1.0	1.0	0.6	0.3
U.S.	5.5	5.7	5.7	5.8	5.9	6.0	6.1	6.2	6.2	6.3	6.3	6.4
% Ch	1.7	2.2	1.2	1.6	1.5	1.0	1.6	1.6	1.3	0.9	0.6	0.5
Transportation and Warehousing, and Utilities												
Oregon	53.4	54.1	54.9	56.9	59.0	60.5	62.4	63.8	64.9	65.4	65.5	65.4
% Ch	2.3	1.3	1.5	3.6	3.8	2.5	3.1	2.3	1.7	0.8	0.1	(0.1)
U.S.	4.9	5.0	5.0	5.2	5.3	5.5	5.6	5.7	5.8	5.8	5.8	5.8
% Ch	2.3	2.3	1.6	2.8	2.9	2.2	2.5	2.1	0.8	0.4	0.0	(0.1)
Information												
Oregon	31.7	32.1	32.3	32.1	33.0	33.9	34.7	35.6	36.2	36.5	36.9	37.3
% Ch	(0.1)	1.5	0.4	(0.4)	2.7	2.7	2.5	2.5	1.8	0.8	1.0	1.1
U.S.	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.9	2.9	2.9	3.0	3.1
% Ch	(1.3)	0.1	1.2	1.3	1.8	(0.0)	1.3	1.4	1.2	1.2	2.3	2.1
Financial Activities												
Oregon	91.7	90.5	91.6	92.4	93.4	95.2	97.0	98.0	98.5	98.9	98.9	98.9
% Ch	(1.6)	(1.3)	1.2	0.9	1.1	1.9	1.9	1.0	0.5	0.4	0.0	0.0
U.S.	7.7	7.8	7.9	8.0	8.1	8.1	8.0	7.9	7.9	7.9	7.9	7.9
% Ch	0.0	1.1	1.3	1.2	1.8	0.0	(1.3)	(1.1)	(0.6)	0.0	0.1	0.1
Professional and Business Services												
Oregon	195.2	202.1	209.4	219.7	228.1	238.5	254.0	265.7	269.7	274.6	279.3	284.5
% Ch	3.5	3.6	3.6	4.9	3.8	4.5	6.5	4.6	1.5	1.8	1.7	1.9
U.S.	17.3	17.9	18.5	19.1	19.7	20.5	21.3	21.7	22.0	22.5	22.9	23.4
% Ch	3.6	3.5	3.3	3.1	3.4	3.8	3.9	1.7	1.4	2.2	2.0	2.2
Education and Health Services												
Oregon	234.2	237.8	242.7	248.5	257.4	263.7	269.1	272.5	276.3	280.8	283.9	287.5
% Ch	2.3	1.6	2.0	2.4	3.6	2.5	2.0	1.3	1.4	1.6	1.1	1.3
U.S.	20.2	20.7	21.1	21.5	22.0	22.6	22.8	23.1	23.4	23.6	23.8	24.0
% Ch	1.7	2.3	1.9	1.8	2.6	2.4	1.0	1.2	1.4	1.1	0.9	0.8
Educational Services												
Oregon	32.9	33.6	34.1	34.6	35.1	35.4	35.8	36.3	36.7	37.1	37.4	37.8
% Ch	3.4	2.0	1.5	1.6	1.3	0.8	1.2	1.4	1.2	1.1	0.7	0.9
U.S.	3.3	3.3	3.4	3.4	3.5	3.4	3.4	3.4	3.4	3.3	3.3	3.2
% Ch	3.1	2.8	0.4	1.9	1.1	(0.2)	(1.4)	(0.5)	(0.5)	(0.9)	(1.2)	(1.4)
Health Care and Social Assistance												
Oregon	201.2	204.3	208.6	213.9	222.3	228.3	233.2	236.2	239.5	243.7	246.5	249.8
% Ch	2.1	1.5	2.1	2.5	3.9	2.7	2.1	1.3	1.4	1.7	1.2	1.3
U.S.	17.0	17.4	17.7	18.1	18.6	19.1	19.4	19.7	20.0	20.3	20.5	20.8
% Ch	1.5	2.2	2.2	1.8	2.9	2.9	1.4	1.5	1.7	1.4	1.2	1.2
Leisure and Hospitality												
Oregon	165.6	170.1	176.6	182.9	191.1	199.0	206.3	210.2	214.1	216.0	216.7	217.6
% Ch	2.0	2.7	3.8	3.6	4.5	4.1	3.7	1.9	1.8	0.9	0.3	0.4
U.S.	13.4	13.8	14.3	14.7	15.2	15.4	15.6	15.8	16.0	16.1	16.2	16.3
% Ch	2.4	3.2	3.5	3.2	3.0	1.8	0.9	1.6	1.3	0.7	0.6	0.2
Other Services												
Oregon	56.8	57.3	58.0	59.1	60.2	61.6	63.5	64.8	65.8	66.4	66.9	67.4
% Ch	0.4	0.9	1.2	1.8	1.9	2.5	3.0	2.1	1.5	0.9	0.7	0.8
U.S.	5.4	5.4	5.5	5.6	5.6	5.6	5.6	5.5	5.5	5.5	5.5	5.5
% Ch	0.6	1.3	1.0	1.6	1.1	(0.2)	(1.2)	(0.3)	(0.3)	(0.1)	(0.1)	(0.2)
Government												
Oregon	295.0	291.0	288.8	293.9	301.3	307.2	311.9	316.2	320.1	325.6	327.8	331.6
% Ch	(1.6)	(1.4)	(0.7)	1.8	2.5	2.0	1.5	1.4	1.3	1.7	0.7	1.2
U.S.	22.1	21.9	21.8	21.9	22.0	22.1	22.3	22.5	22.7	22.9	22.9	23.0
% Ch	(1.8)	(0.8)	(0.3)	0.0	0.5	0.4	0.9	1.0	0.8	1.1	(0.2)	0.5
Federal Government												
Oregon	28.8	28.1	27.5	27.4	27.8	27.9	27.7	27.6	27.4	28.9	27.3	27.2
% Ch	(5.7)	(2.5)	(1.9)	(0.3)	1.3	0.4	(0.7)	(0.6)	(0.6)	5.5	(5.6)	(0.3)
U.S.	2.9	2.8	2.8	2.7	2.7	2.7	2.7	2.6	2.6	2.7	2.6	2.6
% Ch	(3.9)	(1.3)	(1.8)	(1.6)	0.2	(0.7)	(1.5)	(1.5)	(1.3)	4.9	(5.6)	(0.6)
State Government, Oregon												
State Total	80.6	80.1	81.0	84.1	87.9	89.8	91.3	92.6	93.6	94.5	95.4	96.3
% Ch	1.0	(0.6)	1.2	3.7	4.6	2.2	1.7	1.4	1.1	1.0	1.0	0.9
State Education	31.1	31.8	32.0	32.5	32.8	32.6	32.8	33.1	33.3	33.5	33.7	33.9
% Ch	4.6	2.1	0.7	1.4	1.1	(0.6)	0.7	0.7	0.7	0.7	0.6	0.5
Local Government, Oregon												
Local Total	185.6	182.8	180.3	182.4	185.6	189.5	192.9	196.0	199.2	202.2	205.1	208.1
% Ch	(2.1)	(1.5)	(1.4)	1.2	1.7	2.1	1.8	1.6	1.6	1.5	1.4	1.5
Local Education	97.0	95.1	93.6	94.6	96.2	98.9	101.0	102.6	104.0	105.3	106.6	107.9
% Ch	(3.3)	(1.9)	(1.6)	1.1	1.8	2.7	2.1	1.6	1.3	1.2	1.2	1.2

Dec 2015 - Other Economic Indicators

	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022
GDP (Bil of 2009 \$),												
Chain Weight (in billions of \$)	15,020.6	15,354.6	15,583.3	15,961.7	16,360.7	16,831.6	17,328.2	17,779.4	18,218.0	18,657.4	19,057.6	19,468.4
% Ch	1.6	2.2	1.5	2.4	2.5	2.9	3.0	2.6	2.5	2.4	2.1	2.2
Price and Wage Indicators												
GDP Implicit Price Deflator,												
Chain Weight U.S., 2009=100	103.3	105.2	106.9	108.7	109.9	112.1	114.3	116.6	119.0	121.5	124.2	126.9
% Ch	2.1	1.8	1.6	1.6	1.1	2.0	1.9	2.1	2.0	2.1	2.2	2.2
Personal Consumption Deflator,												
Chain Weight U.S., 2009=100	104.1	106.1	107.6	109.1	109.4	111.0	113.1	115.7	118.0	120.5	123.2	126.0
% Ch	2.5	1.9	1.4	1.4	0.2	1.5	1.9	2.3	2.0	2.1	2.2	2.3
CPI, Urban Consumers,												
1982-84=100												
Portland-Salem, OR-WA	224.6	229.8	235.5	241.2	243.2	247.1	252.0	257.7	263.0	268.5	274.6	280.9
% Ch	2.9	2.3	2.5	2.4	0.8	1.6	2.0	2.3	2.0	2.1	2.3	2.3
U.S.	224.9	229.6	233.0	236.7	236.7	241.0	246.7	253.7	259.8	266.3	273.3	280.7
% Ch	3.1	2.1	1.5	1.6	0.0	1.8	2.4	2.8	2.4	2.5	2.6	2.7
Oregon Average Wage												
Rate (Thous \$)	45.2	46.6	47.3	48.9	50.2	52.5	54.8	57.2	59.5	62.0	64.4	66.8
% Ch	3.2	3.0	1.6	3.3	2.8	4.5	4.5	4.4	4.1	4.1	3.9	3.7
U.S. Average Wage												
Wage Rate (Thous \$)	50.3	51.7	52.2	53.8	54.8	56.5	58.7	61.0	63.4	65.9	68.6	71.3
% Ch	2.8	2.7	0.9	3.1	1.9	3.1	3.9	3.9	4.0	4.0	4.1	3.9
Housing Indicators												
FHFA Oregon Housing Price Index												
1980 Q1=100	347.5	346.3	371.3	404.8	438.3	478.5	500.6	518.7	537.0	556.1	575.8	595.6
% Ch	(6.9)	(0.4)	7.2	9.0	8.3	9.2	4.6	3.6	3.5	3.5	3.6	3.4
FHFA National Housing Price Index												
1980 Q1=100	312.3	312.0	324.9	346.2	370.8	382.6	394.2	403.5	412.9	424.4	436.9	453.5
% Ch	(3.7)	(0.1)	4.1	6.6	7.1	3.2	3.0	2.4	2.3	2.8	3.0	3.8
Housing Starts												
Oregon (Thous)	8.0	10.8	14.2	15.6	15.7	19.2	21.6	22.8	23.1	23.4	23.7	23.6
% Ch	5.3	35.6	31.3	9.4	0.8	22.2	12.4	5.7	1.2	1.6	1.2	(0.6)
U.S. (Millions)	0.6	0.8	0.9	1.0	1.1	1.3	1.5	1.5	1.6	1.6	1.6	1.6
% Ch	4.5	28.1	18.4	7.8	11.1	16.6	12.2	3.9	3.0	2.5	(0.7)	(0.1)
Other Indicators												
Unemployment Rate (%)												
Oregon	9.4	8.8	7.8	7.0	5.8	5.8	5.4	5.6	5.6	5.5	5.4	5.5
Point Change	(1.1)	(0.7)	(1.0)	(0.8)	(1.2)	(0.0)	(0.3)	0.1	0.0	(0.2)	(0.0)	0.0
U.S.	8.9	8.1	7.4	6.2	5.3	5.0	4.9	5.0	5.0	5.0	5.1	5.1
Point Change	(0.7)	(0.9)	(0.7)	(1.2)	(0.8)	(0.3)	(0.1)	0.0	0.1	(0.0)	0.0	0.1
Industrial Production Index												
U.S. 2002 = 100	97.2	100.0	101.9	105.7	107.1	109.3	113.2	116.3	119.0	121.8	124.3	126.9
% Ch	3.0	2.8	1.9	3.7	1.3	2.0	3.5	2.8	2.3	2.4	2.1	2.1
Prime Rate (Percent)	3.3	3.3	3.3	3.3	3.3	3.9	4.9	5.9	6.3	6.3	6.3	6.3
% Ch	0.0	0.0	0.0	0.0	0.3	20.0	25.6	20.2	5.9	0.0	0.0	0.0
Population (Millions)												
Oregon	3.86	3.89	3.93	3.97	4.02	4.06	4.11	4.16	4.21	4.26	4.31	4.36
% Ch	0.6	0.7	0.9	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
U.S.	312.5	314.8	317.1	319.5	321.9	324.5	327.1	329.8	332.4	335.0	337.6	340.2
% Ch	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Timber Harvest (Mil Bd Ft)												
Oregon	3,649.0	3,749.0	4,199.0	4,126.0	4,349.8	4,844.5	4,824.3	4,803.4	4,810.0	4,805.0	4,791.6	4,806.2
% Ch	13.1	2.7	12.0	(1.7)	5.4	11.4	(0.4)	(0.4)	0.1	(0.1)	(0.3)	0.3

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Table B.1 General Fund Revenue Statement

Table B.1
General Fund Revenue Statement -- 2015-17

	Estimate at COS 2015	Forecasts Dated: 9/1/2015			Forecasts Dated: 12/1/2015			Difference	
		2015-16	2016-17	Total 2015-17	2015-16	2016-17	Total 2015-17	12/1/2015 Less 9/1/2015	12/1/2015 Less COS
Taxes									
Personal Income Taxes	15,713,459,000	7,659,597,000	8,058,581,000	15,718,178,000	7,646,463,000	8,065,935,000	15,712,398,000	(5,780,000)	(1,061,000)
Shared Service Fund (Gainshare)	(32,663,000)	(16,313,000)	(16,329,000)	(32,642,000)	(16,313,000)	(16,329,000)	(32,642,000)	0	21,000
Corporate Income Taxes	1,100,007,000	540,107,000	555,343,000	1,095,450,000	581,072,000	553,589,000	1,134,661,000	39,211,000	34,654,000
Rainy Day Fund Transfer (Minimum Tax)	(10,114,000)	(5,717,000)	(5,186,000)	(10,903,000)	(5,117,000)	(5,204,000)	(10,321,000)	582,000	(207,000)
Insurance Taxes	118,885,000	57,859,000	61,026,000	118,885,000	56,225,000	59,325,000	115,550,000	(3,335,000)	(3,335,000)
Estate Taxes	217,126,000	108,064,000	109,062,000	217,126,000	108,064,000	109,062,000	217,126,000	0	0
Cigarette Taxes	65,029,000	33,772,000	31,257,000	65,029,000	35,299,000	32,820,000	68,119,000	3,090,000	3,090,000
Other Tobacco Products Taxes	63,819,000	31,453,000	32,366,000	63,819,000	30,639,000	31,718,000	62,357,000	(1,462,000)	(1,462,000)
Other Taxes	1,736,000	868,000	868,000	1,736,000	868,000	868,000	1,736,000	0	0
Fines and Fees									
State Court Fees	125,978,000	62,746,000	63,232,000	125,978,000	60,893,000	61,079,000	121,972,000	(4,006,000)	(4,006,000)
Secretary of State Fees	61,627,000	31,672,000	31,923,000	63,595,000	31,672,000	31,923,000	63,595,000	0	1,968,000
Criminal Fines & Assessments	60,419,000	27,692,000	32,727,000	60,419,000	27,736,000	32,779,000	60,515,000	96,000	96,000
Securities Fees	21,859,000	10,704,000	11,155,000	21,859,000	11,477,000	11,480,000	22,957,000	1,098,000	1,098,000
Central Service Charges	8,152,000	4,076,000	4,076,000	8,152,000	4,076,000	4,076,000	8,152,000	0	0
Liquor Apportionment	273,519,000	133,972,000	139,547,000	273,519,000	133,972,000	139,547,000	273,519,000	0	0
Interest Earnings	14,943,000	6,974,000	7,969,000	14,943,000	6,974,000	7,969,000	14,943,000	0	0
Miscellaneous Revenues	12,409,960	6,105,000	6,305,000	12,410,000	6,105,000	6,305,000	12,410,000	0	40
One-time Transfers	139,088,000	3,000,000	136,088,000	139,088,000	3,000,000	136,088,000	139,088,000	0	0
Gross General Fund Revenues	17,998,055,960	8,718,661,000	9,281,525,000	18,000,186,000	8,744,535,000	9,284,563,000	18,029,098,000	28,912,000	31,042,040
Offsets and Transfers	(42,777,000)	(22,030,000)	(21,515,000)	(43,545,000)	(21,430,000)	(21,533,000)	(42,963,000)	582,000	(186,000)
Net General Fund Revenues	17,955,278,960	8,696,631,000	9,260,010,000	17,956,641,000	8,723,105,000	9,263,030,000	17,986,135,000	29,494,000	30,856,040
Plus Beginning Balance	532,887,537			476,887,537			476,601,537	(286,000)	(56,286,000)
Less Anticipated Administrative Actions*	(20,200,000)			(20,200,000)			(20,200,000)	0	0
Less Legislatively Adopted Actions**	(158,894,706)			(158,894,706)			(158,894,706)	0	0
Available Resources	18,309,071,791			18,254,433,831			18,283,641,831	29,208,000	(25,429,960)
Appropriations	17,984,668,302			17,984,668,302			17,984,668,302	0	0
Projected Expenditures	17,984,668,302			17,984,668,302			17,984,668,302	0	0
Estimated Ending Balance	324,403,489			269,765,529			298,973,529	29,208,000	(25,429,960)

Table B.2 General Fund Revenue Forecast by Fiscal Year

General Fund Revenue Forecast												
(\$Millions)												
Fiscal Years	2013-14	2014-15	2015-16	2016-17	2017-18	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25
	Fiscal Year											
Taxes												
Personal Income	6,628.0	7,330.3	7,646.5	8,065.9	8,521.5	8,990.6	9,433.8	9,979.5	10,490.4	10,975.6	11,474.8	11,995.0
Offsets and Transfers	(24.1)	(38.1)	(16.3)	(16.3)	(16.3)	(16.4)	(16.4)	(16.4)	(16.4)	(16.4)	(16.5)	(16.5)
Corporate Excise & Income	494.8	621.8	581.1	553.6	554.2	540.3	535.3	538.5	550.5	564.9	576.8	590.4
Offsets and Transfers	(6.9)	(5.4)	(5.1)	(5.2)	(20.2)	(20.4)	(20.7)	(20.8)	(20.8)	(21.1)	(19.4)	(23.4)
Insurance	59.8	61.3	56.2	59.3	61.9	64.0	66.1	68.0	69.8	72.0	74.2	76.5
Estate	85.5	111.0	108.1	109.1	112.1	119.3	123.8	128.6	133.9	137.6	141.6	145.6
Cigarette	36.1	37.2	35.3	32.8	31.4	29.5	27.9	25.7	23.9	21.0	19.5	18.1
Other Tobacco Products	30.2	29.9	30.6	31.7	32.6	33.6	34.6	35.6	36.6	37.7	38.7	39.9
Other Taxes	1.1	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
Other Revenues												
Licenses and Fees	128.2	128.1	131.8	137.3	135.0	141.7	138.1	145.0	139.5	146.4	141.8	148.3
Charges for Services	3.6	5.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1	4.1
Liquor Apportionment	120.8	125.9	134.0	139.5	126.0	129.7	133.6	137.6	141.8	146.0	150.4	154.9
Interest Earnings	4.2	4.8	7.0	8.0	11.8	17.5	24.4	32.7	35.0	38.0	40.0	42.0
Others	50.8	5.7	9.1	142.4	9.4	9.6	9.8	10.0	10.2	10.4	10.6	10.8
Gross General Fund	7,643.1	8,461.8	8,744.5	9,284.6	9,600.7	10,080.8	10,532.3	11,106.3	11,636.5	12,154.4	12,673.3	13,226.3
Net General Fund	7,612.1	8,418.3	8,723.1	9,263.0	9,564.1	10,044.0	10,495.2	11,069.0	11,599.2	12,116.8	12,637.5	13,186.5
Biennial Totals	2013-15	Percent	2015-17	Percent	2017-19	Percent	2019-21	Percent	2021-23	Percent	2023-25	Percent
	Biennium	Change										
Taxes												
Personal Income	13,958.3	15.2%	15,712.4	12.6%	17,512.0	11.5%	19,413.4	10.9%	21,466.0	10.6%	23,469.8	9.3%
Corporate Excise & Income	1,116.5	26.3%	1,134.7	1.6%	1,094.4	-3.5%	1,073.8	-1.9%	1,115.4	3.9%	1,167.1	4.6%
Insurance	121.0	22.2%	115.5	-4.5%	125.9	9.0%	134.1	6.5%	141.8	5.8%	150.7	6.3%
Estate Taxes	196.5	-3.5%	217.1	10.5%	231.4	6.6%	252.4	9.1%	271.4	7.5%	287.1	5.8%
Cigarette	73.3	-1.8%	68.1	-7.0%	60.9	-10.6%	53.6	-12.0%	44.8	-16.3%	37.7	-16.0%
Other Tobacco Products	60.1	3.2%	62.4	3.7%	66.2	6.2%	70.1	5.9%	74.2	5.9%	78.6	5.9%
Other Taxes	2.0	-15.9%	1.7	-14.1%	1.7	-3.5%	1.6	-2.4%	1.6	-0.6%	1.6	0.0%
Other Revenues												
Licenses and Fees	256.4	-7.1%	269.0	4.9%	276.7	2.8%	283.2	2.3%	285.9	1.0%	290.1	1.5%
Charges for Services	8.7	-24.7%	8.2	-6.6%	8.2	0.0%	8.2	0.0%	8.2	0.0%	8.2	0.0%
Liquor Apportionment	246.7	5.9%	273.5	10.9%	255.7	-6.5%	271.3	6.1%	287.8	6.1%	305.3	6.1%
Interest Earnings	9.0	-44.1%	14.9	65.9%	29.3	95.9%	57.1	95.1%	73.0	27.8%	82.0	12.3%
Others	56.5	-70.0%	151.5	168.4%	19.0	-87.4%	19.8	4.1%	20.6	4.0%	21.4	3.9%
Gross General Fund	16,105.0	13.7%	18,029.1	11.9%	19,681.4	9.2%	21,638.5	9.9%	23,790.8	9.9%	25,899.6	8.9%
Net General Fund	16,030.5	13.3%	17,986.1	12.2%	19,608.1	9.0%	21,564.3	10.0%	23,716.0	10.0%	25,823.9	8.9%

Table B.3 Summary of 2015 Legislative Session Adjustments

	Biennia				Revenue Impact Statement
	15-17	17-19	19-21	21-23	
Personal Income Tax Impacts (millions)					
DOR Compliance Tools - HB 5035	\$4.0	\$4.2	\$4.4	\$4.6	HB 5035
Gain Share - SB 129	\$53.5	\$24.8	-\$33.1	-\$34.0	SB 129
ABLE (529) Accounts - SB 777	-\$0.2	-\$0.5	-\$0.5	-\$0.6	SB 777
<i>Tax Credits - HB 2171</i>	-\$40.1	-\$112.6	-\$125.3	-\$75.7	HB 2171
Working Family Child & Dependent Care	-\$31.4	-\$62.7	-\$62.7	-\$31.5	
IDA Contributions	-\$6.9	-\$14.3	-\$14.5	-\$7.5	
Oregon Veterans' Home Physicians		< \$50K per year			
Severe Disability	-\$5.3	-\$11.6	-\$13.0	-\$7.1	
Child with a Disability	-\$4.6	-\$10.2	-\$11.7	-\$6.2	
Rural Medical Providers	-\$0.1	-\$2.8	-\$2.3	-\$1.9	
Office of Child Care Contributions	-\$0.4	-\$0.9	-\$1.0	-\$0.5	
Long-term Care Insurance	\$10.4	\$0.0	\$0.0	\$0.0	
Film & Video	\$0.0	-\$9.3	-\$19.3	-\$20.0	
Military active duty	-\$1.8	-\$0.8	-\$0.9	-\$1.0	
Personal Income Tax Total	\$17.2	-\$84.1	-\$154.5	-\$105.7	
Corporate Income Tax Impacts (millions)					
Tax Havens - SB 61	\$0.1	\$0.2	\$0.3	\$0.4	SB 61
<i>Tax Credits - HB 2171</i>	\$19.2	\$20.4	\$20.7	\$0.0	HB 2171
Oregon Life & Health IGA Assessments		< \$50K per year			
Corporate minimum tax	\$19.2	\$20.4	\$20.7	\$0.0	
Corporate Income Tax Total	\$19.3	\$20.6	\$21.0	\$0.4	
Other Tax/Revenue Impacts (millions)					
Program Change Bill - SB 501	\$154.1	\$0.0	\$0.0	\$0.0	SB 501
Lottery CFA - HB 5029	-\$7.1	\$0.0	\$0.0	\$0.0	HB 5029
Racing Commission - HB 2719	-\$0.2	-\$0.4	-\$0.5	-\$0.6	HB 2719
Portland Photo Radar - HB 2621	\$16.1	\$42.5	\$47.4	\$50.0	HB 2621
Other Tax Total	\$162.9	\$42.1	\$46.9	\$49.4	

Table B.4 Oregon Personal Income Tax Revenue Forecast

TABLE B.4	OREGON PERSONAL INCOME TAX REVENUE FORECAST - QUARTERLY COLLECTIONS									
	Thousands of Dollars - Not Seasonally Adjusted									
										December 2015
	2007:3	2007:4	2008:1	2008:2	FY 2008	2008:3	2008:4	2009:1	2009:2	FY 2009
WITHHOLDING	1,115,359	1,200,822	1,196,532	1,111,034	4,623,747	1,162,107	1,182,763	1,128,994	1,089,305	4,563,169
%CHYA	-0.3%	2.4%	1.2%	2.1%	1.4%	4.2%	-1.5%	-5.6%	-2.0%	-1.3%
EST. PAYMENTS	250,749	217,163	281,441	399,475	1,148,828	264,440	174,826	217,305	263,135	919,707
%CHYA	8.2%	22.7%	5.3%	10.0%	10.6%	5.5%	-19.5%	-22.8%	-34.1%	-19.9%
FINAL PAYMENTS	57,503	129,817	104,841	971,325	1,263,486	70,306	99,430	104,105	529,995	803,836
%CHYA	3.8%	45.2%	4.3%	24.6%	23.3%	22.3%	-23.4%	-0.7%	-45.4%	-36.4%
REFUNDS	71,372	155,912	389,876	365,908	983,068	92,063	180,329	447,706	404,229	1,124,327
%CHYA	-20.0%	23.0%	-12.3%	-1.0%	-4.6%	29.0%	15.7%	14.8%	10.5%	14.4%
OTHER	(177,781)	(1,084,201)	-	182,322	(1,079,660)	(182,322)	-	-	138,521	(43,801)
TOTAL	1,174,457	307,689	1,192,938	2,298,247	4,973,332	1,222,469	1,276,690	1,002,698	1,616,726	5,118,583
%CHYA	3.0%	-76.6%	7.9%	12.7%	-11.1%	4.1%	314.9%	-15.9%	-29.7%	2.9%
	2009:3	2009:4	2010:1	2010:2	FY 2010	2010:3	2010:4	2011:1	2011:2	FY 2011
WITHHOLDING	1,092,795	1,151,673	1,157,857	1,116,552	4,518,878	1,146,189	1,196,214	1,262,781	1,218,439	4,823,622
%CHYA	-6.0%	-2.6%	2.6%	2.5%	-1.0%	4.9%	3.9%	9.1%	9.1%	6.7%
EST. PAYMENTS	176,110	161,759	186,894	265,703	790,467	179,692	148,589	207,036	284,662	819,978
%CHYA	-33.4%	-7.5%	-14.0%	1.0%	-14.1%	2.0%	-8.1%	10.8%	7.1%	3.7%
FINAL PAYMENTS	63,363	77,013	105,745	515,262	761,383	62,259	81,728	114,877	607,592	866,456
%CHYA	-9.9%	-22.5%	1.6%	-2.8%	-5.3%	-1.7%	6.1%	8.6%	17.9%	13.8%
REFUNDS	96,477	188,704	459,550	380,459	1,125,190	92,291	151,515	432,478	340,652	1,016,937
%CHYA	4.8%	4.6%	2.6%	-5.9%	0.1%	-4.3%	-19.7%	-5.9%	-10.5%	-9.6%
OTHER	(138,521)	-	-	136,193	(2,328)	(136,193)	-	-	165,933	29,740
TOTAL	1,097,271	1,201,740	990,947	1,653,251	4,943,210	1,159,655	1,275,015	1,152,216	1,935,973	5,522,860
%CHYA	-10.2%	-5.9%	-1.2%	2.3%	-3.4%	5.7%	6.1%	16.3%	17.1%	11.7%
	2011:3	2011:4	2012:1	2012:2	FY 2012	2012:3	2012:4	2013:1	2013:2	FY 2013
WITHHOLDING	1,235,508	1,287,030	1,348,171	1,269,562	5,140,271	1,262,589	1,364,547	1,354,116	1,321,413	5,302,666
%CHYA	7.8%	7.6%	6.8%	4.2%	6.6%	2.2%	6.0%	0.4%	4.1%	3.2%
EST. PAYMENTS	194,674	185,239	199,238	299,646	878,797	205,533	159,104	278,341	321,896	964,874
%CHYA	8.3%	24.7%	-3.8%	5.3%	7.2%	5.6%	-14.1%	39.7%	7.4%	9.8%
FINAL PAYMENTS	85,889	87,233	117,628	627,762	918,512	72,224	91,338	123,456	785,542	1,072,560
%CHYA	38.0%	6.7%	2.4%	3.3%	6.0%	-15.9%	4.7%	5.0%	25.1%	16.8%
REFUNDS	64,687	156,272	530,800	360,618	1,112,377	52,211	109,503	536,506	383,176	1,081,397
%CHYA	-29.9%	3.1%	22.7%	5.9%	9.4%	-19.3%	-29.9%	1.1%	6.3%	-2.8%
OTHER	(165,933)	-	-	193,614	27,681	(193,614)	-	-	201,367	7,753
TOTAL	1,285,451	1,403,230	1,134,237	2,029,966	5,852,884	1,294,521	1,505,486	1,219,407	2,247,042	6,266,457
%CHYA	10.8%	10.1%	-1.6%	4.9%	6.0%	0.7%	7.3%	7.5%	10.7%	7.1%
	2013:3	2013:4	2014:1	2014:2	FY 2014	2014:3	2014:4	2015:1	2015:2	FY 2015
WITHHOLDING	1,333,946	1,435,630	1,442,755	1,420,313	5,632,644	1,455,822	1,523,453	1,576,188	1,505,337	6,060,801
%CHYA	5.7%	5.2%	6.5%	7.5%	6.2%	9.1%	6.1%	9.2%	6.0%	7.6%
EST. PAYMENTS	221,695	214,342	247,826	357,218	1,041,080	264,823	236,303	305,582	408,957	1,215,665
%CHYA	7.9%	34.7%	-11.0%	11.0%	7.9%	19.5%	10.2%	23.3%	14.5%	16.8%
FINAL PAYMENTS ¹	83,096	112,495	139,923	730,795	1,066,309	92,647	144,239	156,188	847,330	1,240,403
%CHYA	15.1%	23.2%	13.3%	-7.0%	-0.6%	11.5%	28.2%	11.6%	15.9%	16.3%
REFUNDS	67,098	197,448	472,018	354,437	1,091,001	100,729	173,522	520,272	375,119	1,169,642
%CHYA	28.5%	80.3%	-12.0%	-7.5%	0.9%	50.1%	-12.1%	10.2%	5.8%	7.2%
OTHER	(201,367)	-	-	180,356	(21,011)	(180,356)	-	-	163,398	(16,959)
TOTAL	1,370,272	1,565,018	1,358,485	2,334,246	6,628,021	1,532,207	1,730,473	1,517,685	2,549,903	7,330,268
%CHYA	5.9%	4.0%	11.4%	3.9%	5.8%	11.8%	10.6%	11.7%	9.2%	10.6%

Note: "Other" includes kicker and federal pension refunds, as well as July withholding accrued to June. Tax law impacts are reflected in the collections numbers to produce more meaningful projections.

TABLE B.4

OREGON PERSONAL INCOME TAX REVENUE FORECAST - QUARTERLY COLLECTIONS

	Thousands of Dollars - Not Seasonally Adjusted									
	2015:3	2015:4	2016:1	2016:2	FY 2016	2016:3	2016:4	2017:1	December 2015 2017:2	FY 2017
WITHHOLDING	1,551,517	1,631,923	1,705,211	1,596,583	6,485,233	1,654,591	1,752,877	1,827,230	1,700,253	6,934,951
%CHYA	6.6%	7.1%	8.2%	6.1%	7.0%	6.6%	7.4%	7.2%	6.5%	6.9%
EST. PAYMENTS	309,470	249,291	328,718	417,869	1,305,349	322,368	270,098	352,892	436,390	1,381,748
%CHYA	16.9%	5.5%	7.6%	4.2%	8.1%	4.2%	8.3%	7.4%	4.4%	5.9%
FINAL PAYMENTS ¹	99,618	104,868	122,300	937,506	1,264,292	83,452	111,933	127,464	946,804	1,269,653
%CHYA	7.5%	-27.3%	-21.7%	9.6%	1.3%	-16.2%	6.7%	4.2%	1.0%	0.4%
REFUNDS	85,113	185,880	684,074	514,565	1,469,632	93,344	239,293	696,580	532,672	1,561,888
%CHYA	-15.5%	7.1%	31.5%	37.2%	25.6%	9.7%	28.7%	1.8%	3.5%	6.3%
OTHER	(163,398)	-	-	224,618	61,221	(224,618)	-	-	266,090	41,472
TOTAL	1,712,094	1,800,203	1,472,155	2,662,011	7,646,463	1,742,449	1,895,615	1,611,006	2,816,865	8,065,935
%CHYA	11.7%	4.0%	-3.0%	4.4%	4.3%	1.8%	5.3%	9.4%	5.8%	5.5%
	2017:3	2017:4	2018:1	2018:2	FY 2018	2018:3	2018:4	2019:1	2019:2	FY 2019
WITHHOLDING	1,762,054	1,866,723	1,940,087	1,804,363	7,373,227	1,869,989	1,981,068	2,040,970	1,895,388	7,787,415
%CHYA	6.5%	6.5%	6.2%	6.1%	6.3%	6.1%	6.1%	5.2%	5.0%	5.6%
EST. PAYMENTS	336,656	282,070	368,852	462,008	1,449,585	356,419	298,628	390,275	484,622	1,529,945
%CHYA	4.4%	4.4%	4.5%	5.9%	4.9%	5.9%	5.9%	5.8%	4.9%	5.5%
FINAL PAYMENTS ¹	86,984	116,236	135,036	1,038,086	1,376,342	92,328	123,513	140,463	1,109,726	1,466,030
%CHYA	4.2%	3.8%	5.9%	9.6%	8.4%	6.1%	6.3%	4.0%	6.9%	6.5%
REFUNDS	93,513	242,768	743,861	600,965	1,681,107	100,057	260,075	802,888	648,715	1,811,735
%CHYA	0.2%	1.5%	6.8%	12.8%	7.6%	7.0%	7.1%	7.9%	7.9%	7.8%
OTHER	(266,090)	-	-	269,504	3,415	(269,504)	-	-	288,407	18,902
TOTAL	1,826,092	2,022,261	1,700,113	2,972,997	8,521,462	1,949,175	2,143,134	1,768,820	3,129,428	8,990,557
%CHYA	4.8%	6.7%	5.5%	5.5%	5.6%	6.7%	6.0%	4.0%	5.3%	5.5%
	2019:3	2019:4	2020:1	2020:2	FY 2020	2020:3	2020:4	2021:1	2021:2	FY 2021
WITHHOLDING	1,964,449	2,081,137	2,149,746	1,997,303	8,192,636	2,070,038	2,192,998	2,256,839	2,095,474	8,615,349
%CHYA	5.1%	5.1%	5.3%	5.4%	5.2%	5.4%	5.4%	5.0%	4.9%	5.2%
EST. PAYMENTS	376,865	316,245	412,615	515,994	1,621,720	398,753	334,585	436,446	543,065	1,712,848
%CHYA	5.7%	5.9%	5.7%	6.5%	6.0%	5.8%	5.8%	5.8%	5.2%	5.6%
FINAL PAYMENTS ¹	99,829	131,840	155,434	1,145,675	1,532,778	103,274	136,404	161,854	1,158,323	1,559,854
%CHYA	8.1%	6.7%	10.7%	3.2%	4.6%	3.5%	3.5%	4.1%	1.1%	1.8%
REFUNDS	107,837	280,257	811,793	650,333	1,850,220	113,301	294,046	849,623	680,956	1,937,926
%CHYA	7.8%	7.8%	1.1%	0.2%	2.1%	5.1%	4.9%	4.7%	4.7%	4.7%
OTHER	(288,407)	-	-	225,336	(63,071)	(225,336)	-	-	254,750	29,415
TOTAL	2,044,899	2,248,966	1,906,002	3,233,976	9,433,843	2,233,428	2,369,941	2,005,516	3,370,656	9,979,541
%CHYA	4.9%	4.9%	7.8%	3.3%	4.9%	9.2%	5.4%	5.2%	4.2%	5.8%
	2021:3	2021:4	2022:1	2022:2	FY 2022	2022:3	2022:4	2023:1	2023:2	FY 2023
WITHHOLDING	2,171,842	2,300,849	2,363,605	2,193,942	9,030,239	2,273,929	2,408,999	2,471,317	2,293,388	9,447,632
%CHYA	4.9%	4.9%	4.7%	4.7%	4.8%	4.7%	4.7%	4.6%	4.5%	4.6%
EST. PAYMENTS	416,637	349,082	456,226	566,744	1,788,689	437,219	366,327	478,674	592,989	1,875,208
%CHYA	4.5%	4.3%	4.5%	4.4%	4.4%	4.9%	4.9%	4.9%	4.6%	4.8%
FINAL PAYMENTS ¹	107,765	142,484	163,356	1,215,314	1,628,919	108,900	145,575	166,560	1,262,481	1,683,515
%CHYA	4.3%	4.5%	0.9%	4.9%	4.4%	1.1%	2.2%	2.0%	3.9%	3.4%
REFUNDS	118,609	307,468	878,698	704,497	2,009,272	122,815	317,813	910,256	730,045	2,080,929
%CHYA	4.7%	4.6%	3.4%	3.5%	3.7%	3.5%	3.4%	3.6%	3.6%	3.6%
OTHER	(254,750)	-	-	306,601	51,851	(306,601)	-	-	356,766	50,166
TOTAL	2,322,885	2,484,948	2,104,490	3,578,104	10,490,425	2,390,631	2,603,088	2,206,294	3,775,578	10,975,591
%CHYA	4.0%	4.9%	4.9%	6.2%	5.1%	2.9%	4.8%	4.8%	5.5%	4.6%
	2023:3	2023:4	2024:1	2024:2	FY 2023	2024:3	2024:4	2025:1	2025:2	FY 2025
WITHHOLDING	2,377,024	2,518,217	2,586,918	2,401,228	9,883,387	2,488,772	2,636,604	2,707,650	2,513,154	10,346,180
%CHYA	4.5%	4.5%	4.7%	4.7%	4.6%	4.7%	4.7%	4.7%	4.7%	4.7%
EST. PAYMENTS	457,465	383,290	500,868	620,996	1,962,620	479,072	401,394	524,560	651,018	2,056,043
%CHYA	4.6%	4.6%	4.6%	4.7%	4.7%	4.7%	4.7%	4.7%	4.8%	4.8%
FINAL PAYMENTS ¹	117,724	155,936	177,989	1,321,258	1,772,907	118,814	158,681	181,575	1,373,314	1,832,385
%CHYA	8.1%	7.1%	6.9%	4.7%	5.3%	0.9%	1.8%	2.0%	3.9%	3.4%
REFUNDS	127,145	328,930	940,375	754,403	2,150,853	131,281	339,500	976,377	783,515	2,230,673
%CHYA	3.5%	3.5%	3.3%	3.3%	3.4%	3.3%	3.2%	3.8%	3.9%	3.7%
OTHER	(356,766)	-	-	363,477	6,711	(363,477)	-	-	354,528	(8,949)
TOTAL	2,468,302	2,728,513	2,325,400	3,952,556	11,474,772	2,591,900	2,857,179	2,437,408	4,108,499	11,994,985
%CHYA	3.2%	4.8%	5.4%	4.7%	4.5%	5.0%	4.7%	4.8%	3.9%	4.5%

Note: "Other" includes July withholding accrued to June.

Tax law impacts are reflected in the collections numbers to produce more meaningful projections.

Table B.5 Oregon Corporate Income Tax Revenue Forecast

	OREGON CORPORATE INCOME TAX REVENUE FORECAST - QUARTERLY COLLECTIONS									
	Thousands of Dollars - Not Seasonally Adjusted									
	FY									December 2015
	2007:3	2007:4	2008:1	2008:2	2008	2008:3	2008:4	2009:1	2009:2	FY 2009
ADVANCE PAYMENTS	133,408	205,375	64,256	155,284	558,323	100,589	145,285	63,802	97,368	407,044
%CHYA	2.8%	-13.1%	7.5%	-4.4%	-5.1%	-24.6%	-29.3%	-0.7%	-37.3%	-27.1%
FINAL PAYMENTS	23,631	45,064	35,076	52,143	155,912	23,501	26,721	22,314	21,822	94,357
%CHYA	19.8%	162.7%	37.9%	-20.5%	21.9%	-0.6%	-40.7%	-36.4%	-58.1%	-39.5%
REFUNDS	39,623	158,106	36,380	39,394	273,503	28,134	124,826	67,471	37,218	257,649
%CHYA	76.3%	-20.7%	-6.0%	-21.0%	-11.9%	-29.0%	-21.0%	85.5%	-5.5%	-5.8%
TOTAL	117,416	92,333	62,951	168,032	440,732	95,956	47,181	18,645	81,971	243,753
%CHYA	-7.5%	70.4%	35.4%	-5.7%	8.6%	-18.3%	-48.9%	-70.4%	-51.2%	-44.7%
					FY					FY
	2009:3	2009:4	2010:1	2010:2	2010	2010:3	2010:4	2011:1	2011:2	2011
ADVANCE PAYMENTS	79,579	163,877	66,451	147,313	457,220	115,286	175,561	76,405	165,354	532,606
%CHYA	-20.9%	12.8%	4.2%	51.3%	12.3%	44.9%	7.1%	15.0%	12.2%	16.5%
FINAL PAYMENTS	20,404	24,009	38,412	45,714	128,539	21,781	21,206	35,770	40,805	119,562
%CHYA	-13.2%	-10.2%	72.1%	109.5%	36.2%	6.8%	-11.7%	-6.9%	-10.7%	-7.0%
REFUNDS	29,072	137,244	40,080	25,774	232,170	23,130	89,877	39,065	31,489	183,562
%CHYA	3.3%	9.9%	-40.6%	-30.7%	-9.9%	-20.4%	-34.5%	-2.5%	22.2%	-20.9%
TOTAL	70,910	50,642	64,784	167,254	353,589	113,936	106,890	73,111	174,670	468,606
%CHYA	-26.1%	7.3%	247.5%	104.0%	45.1%	60.7%	111.1%	12.9%	4.4%	32.5%
					FY					FY
	2011:3	2011:4	2012:1	2012:2	2012	2012:3	2012:4	2013:1	2013:2	2013
ADVANCE PAYMENTS	120,766	154,290	86,873	156,652	518,581	130,348	110,207	80,942	282,526	604,023
%CHYA	4.8%	-12.1%	13.7%	-5.3%	-2.6%	7.9%	-28.6%	-6.8%	80.4%	16.5%
FINAL PAYMENTS	19,117	26,841	32,512	33,322	111,792	16,387	21,377	36,660	34,009	108,433
%CHYA	-12.2%	26.6%	-9.1%	-18.3%	-6.5%	-14.3%	-20.4%	12.8%	2.1%	-3.0%
REFUNDS	34,927	91,252	55,051	18,153	199,384	33,212	17,832	25,595	182,929	259,568
%CHYA	51.0%	1.5%	40.9%	-42.4%	8.6%	-4.9%	-80.5%	-53.5%	907.7%	30.2%
TOTAL	104,955	89,878	64,335	171,820	430,989	113,524	113,751	92,007	133,606	452,888
%CHYA	-7.9%	-15.9%	-12.0%	-1.6%	-8.0%	8.2%	26.6%	43.0%	-22.2%	5.1%
					FY					FY
	2013:3	2013:4	2014:1	2014:2	2014	2014:3	2014:4	2015:1	2015:2	2015
ADVANCE PAYMENTS	123,591	187,195	150,401	183,348	644,535	193,248	206,088	106,689	183,611	689,637
%CHYA	-5.2%	69.9%	85.8%	-35.1%	6.7%	56.4%	10.1%	-29.1%	0.1%	7.0%
FINAL PAYMENTS	27,794	18,162	32,218	52,283	130,456	28,815	73,552	57,268	71,415	231,051
%CHYA	69.6%	-15.0%	-12.1%	53.7%	20.3%	3.7%	305.0%	77.8%	36.6%	77.1%
REFUNDS	20,123	118,303	109,296	32,511	280,232	49,952	155,439	58,361	35,167	298,918
%CHYA	-39.4%	563.4%	327.0%	-82.2%	8.0%	148.2%	31.4%	-46.6%	8.2%	6.7%
TOTAL	131,262	87,054	73,323	203,120	494,759	172,111	124,202	105,597	219,860	621,770
%CHYA	15.6%	-23.5%	-20.3%	52.0%	9.2%	31.1%	42.7%	44.0%	8.2%	25.7%

TABLE B.5

OREGON CORPORATE INCOME TAX REVENUE FORECAST - QUARTERLY COLLECTIONS

	Thousands of Dollars - Not Seasonally Adjusted									December 2015
	FY									FY
	2015:3	2015:4	2016:1	2016:2	2016	2016:3	2016:4	2017:1	2017:2	2017
ADVANCE PAYMENTS	173,329	167,631	114,210	191,644	646,814	175,520	166,374	114,618	192,159	648,670
%CHYA	-10.3%	-18.7%	7.0%	4.4%	-6.2%	1.3%	-0.8%	0.4%	0.3%	0.3%
FINAL PAYMENTS	67,305	31,261	28,229	94,442	221,237	36,841	38,820	35,498	114,607	225,766
%CHYA	133.6%	-57.5%	-50.7%	32.2%	-4.2%	-45.3%	24.2%	25.8%	21.4%	2.0%
REFUNDS	42,388	90,583	60,422	93,584	286,978	78,089	88,389	60,222	94,147	320,847
%CHYA	-15.1%	-41.7%	3.5%	166.1%	-4.0%	84.2%	-2.4%	-0.3%	0.6%	11.8%
TOTAL	198,245	108,309	82,017	192,502	581,072	134,272	116,804	89,894	212,618	553,589
%CHYA	15.2%	-12.8%	-22.3%	-12.4%	-6.5%	-32.3%	7.8%	9.6%	10.5%	-4.7%
	FY									FY
	2017:3	2017:4	2018:1	2018:2	2018	2018:3	2018:4	2019:1	2019:2	2019
ADVANCE PAYMENTS	176,607	167,059	115,500	192,775	651,941	177,082	167,119	115,999	193,692	653,893
%CHYA	0.6%	0.4%	0.8%	0.3%	0.5%	0.3%	0.0%	0.4%	0.5%	0.3%
FINAL PAYMENTS	39,709	47,464	37,591	113,471	238,235	38,204	52,131	38,988	113,545	242,868
%CHYA	7.8%	22.3%	5.9%	-1.0%	5.5%	-3.8%	9.8%	3.7%	0.1%	1.9%
REFUNDS	77,896	95,148	64,018	98,954	336,017	80,446	103,622	67,999	104,426	356,493
%CHYA	-0.2%	7.6%	6.3%	5.1%	4.7%	3.3%	8.9%	6.2%	5.5%	6.1%
TOTAL	138,419	119,375	89,072	207,292	554,159	134,840	115,628	86,988	202,811	540,267
%CHYA	3.1%	2.2%	-0.9%	-2.5%	0.1%	-2.6%	-3.1%	-2.3%	-2.2%	-2.5%
	FY									FY
	2019:3	2019:4	2020:1	2020:2	2020	2020:3	2020:4	2021:1	2021:2	2021
ADVANCE PAYMENTS	178,239	168,559	117,042	196,136	659,977	180,342	170,855	119,154	199,904	670,255
%CHYA	0.7%	0.9%	0.9%	1.3%	0.9%	1.2%	1.4%	1.8%	1.9%	1.6%
FINAL PAYMENTS	37,664	58,455	41,762	117,058	254,938	38,502	65,399	45,318	122,509	271,728
%CHYA	-1.4%	12.1%	7.1%	3.1%	5.0%	2.2%	11.9%	8.5%	4.7%	6.6%
REFUNDS	83,399	112,759	72,721	110,762	379,640	86,871	121,995	77,449	117,130	403,445
%CHYA	3.7%	8.8%	6.9%	6.1%	6.5%	4.2%	8.2%	6.5%	5.7%	6.3%
TOTAL	132,504	114,255	86,083	202,432	535,275	131,972	114,259	87,023	205,283	538,537
%CHYA	-1.7%	-1.2%	-1.0%	-0.2%	-0.9%	-0.4%	0.0%	1.1%	1.4%	0.6%
	FY									FY
	2021:3	2021:4	2022:1	2022:2	2022	2022:3	2022:4	2023:1	2023:2	2023
ADVANCE PAYMENTS	183,986	174,440	121,948	204,527	684,900	188,454	178,590	124,834	209,171	701,050
%CHYA	2.0%	2.1%	2.3%	2.3%	2.2%	2.4%	2.4%	2.4%	2.3%	2.4%
FINAL PAYMENTS	40,987	73,888	49,861	129,855	294,591	44,237	82,450	54,165	136,785	317,637
%CHYA	6.5%	13.0%	10.0%	6.0%	8.4%	7.9%	11.6%	8.6%	5.3%	7.8%
REFUNDS	90,731	131,825	82,525	123,911	428,993	94,676	141,430	87,350	130,349	453,805
%CHYA	4.4%	8.1%	6.6%	5.8%	6.3%	4.3%	7.3%	5.8%	5.2%	5.8%
TOTAL	134,242	116,502	89,283	210,471	550,498	138,016	119,610	91,649	215,607	564,883
%CHYA	1.7%	2.0%	2.6%	2.5%	2.2%	2.8%	2.7%	2.6%	2.4%	2.6%
	FY									FY
	2023:3	2023:4	2024:1	2024:2	2024	2024:3	2024:4	2025:1	2025:2	2025
ADVANCE PAYMENTS	192,594	182,403	126,953	212,137	714,086	194,763	184,047	128,093	214,198	721,101
%CHYA	2.2%	2.1%	1.7%	1.4%	1.9%	1.1%	0.9%	0.9%	1.0%	1.0%
FINAL PAYMENTS	46,960	90,873	73,021	163,722	374,576	62,127	130,569	89,734	188,051	470,481
%CHYA	6.2%	10.2%	34.8%	19.7%	17.9%	32.3%	43.7%	22.9%	14.9%	25.6%
REFUNDS	98,384	151,061	106,578	155,875	511,898	112,740	189,536	122,243	176,699	601,219
%CHYA	3.9%	6.8%	22.0%	19.6%	12.8%	14.6%	25.5%	14.7%	13.4%	17.4%
TOTAL	141,170	122,215	93,395	219,984	576,764	144,150	125,079	95,584	225,550	590,363
%CHYA	2.3%	2.2%	1.9%	2.0%	2.1%	2.1%	2.3%	2.3%	2.5%	2.4%

Table B.6 Cigarette and Tobacco Tax Distribution

TABLE B.6 Cigarette & Tobacco Tax Distribution (Millions of \$)								December 2015			
	Cigarette Tax Distribution*							Other Tobacco Tax Distribution			
	General Fund	Health Plan	Tobacco Use Reduction	Mental Health	State Total	Cities, Counties & Public Transit	Total	General Fund	Health Plan	Tobacco Use Reduction	State Total
Distribution Forecast*											
2013-14	36.077	140.132	5.675	7.673	189.557	11.086	200.643	30.181	23.416	2.604	56.202
2014-15	37.184	136.842	5.633	15.675	195.334	10.727	206.061	29.927	23.228	2.583	55.738
2013-15 Biennium	73.260	276.974	11.308	23.348	384.891	21.813	406.704	60.108	46.644	5.188	111.940
2015-16	35.299	134.759	5.468	18.477	194.002	10.650	204.653	30.639	23.640	2.629	56.908
2016-17	32.820	127.907	5.102	20.885	186.713	10.204	196.917	31.718	24.472	2.722	58.912
2015-17 Biennium	68.119	262.665	10.570	39.362	380.716	20.854	401.570	62.358	48.112	5.351	115.821
2017-18	31.381	122.302	4.878	20.620	179.181	9.757	188.938	32.638	25.182	2.801	60.621
2018-19	27.888	115.094	4.591	20.135	167.709	9.182	176.891	33.585	25.912	2.882	62.379
2017-19 Biennium	59.270	237.396	9.469	40.755	346.890	18.939	365.828	66.223	51.094	5.683	123.000
2019-20	27.888	108.689	4.335	19.015	159.927	8.671	168.598	34.559	26.664	2.965	64.188
2020-21	25.699	100.156	3.995	17.522	147.373	7.990	155.363	35.561	27.437	3.051	66.049
2019-21 Biennium	53.588	208.845	8.330	36.537	307.300	16.661	323.961	70.120	54.100	6.017	130.237
2021-22	23.862	92.995	3.709	16.269	136.836	7.419	144.254	36.592	28.233	3.140	67.965
2022-23	20.978	81.758	3.261	14.303	120.301	6.522	126.824	37.653	29.051	3.231	69.936
2021-23 Biennium	44.840	174.754	6.971	30.573	257.137	13.941	271.078	74.246	57.284	6.371	137.900

* Prior to January 1, 2014 the cigarette tax per pack totaled \$1.18 with the following distribution. \$0.8574 to the Health Plan, \$0.22 to the state general fund, \$0.0342 to Tobacco Use Reduction and \$0.0684 to Cities, Counties and Public Transit. Following the passage of HB 3601 during the 2013 Special Session, the following changes were made to cigarette taxes. Beginning January 1, 2014 taxes per pack were raised \$0.13 to a total of \$1.31 per pack. Beginning January 1, 2016 taxes will increase an additional \$0.01 for a total of \$1.32 per pack with a further \$0.01 increase on January 1, 2018 for a total of \$1.33 per pack. The distribution of the \$0.13 increase beginning in 2014 is split \$0.10 to Mental Health, \$0.013 to the state general fund, \$0.002 to Tobacco Use Reduction and \$0.016 to the Health Plan. Beginning January 1, 2016 the full tax increase of \$0.14 per pack relative to pre-2014 tax rates, is dedicated to Mental Health. Similarly the full \$0.15 post January 1, 2018 is likewise dedicated to Mental Health.

Table B.7 Revenue Distribution to Local Governments

TABLE B.7									December 2015
Liquor Apportionment and Revenue Distribution to Local Governments (Millions of \$)***									
	Liquor Apportionment Distribution								
	Total Liquor Revenue Available	General Fund (56%)	Mental Health¹	Oregon Wine Board	City Revenue			Counties	Cigarette Tax Distribution²
					Revenue Sharing	Regular	Total		
2011-12	194.104	110.200	8.300	0.283	23.966	34.237	58.203	17.118	11.795
2012-13	202.612	115.364	8.051	0.282	25.109	35.870	60.980	17.935	11.509
2011-13 Biennium	396.716	225.564	16.351	0.565	49.075	70.107	119.183	35.054	23.304
2013-14	213.810	121.426	8.626	0.294	26.557	37.938	64.495	18.969	11.086
2014-15	227.236	129.493	9.197	0.344	28.064	40.092	68.156	20.046	10.727
2013-15 Biennium	441.047	250.919	17.823	0.638	54.621	78.030	132.652	39.015	21.813
2015-16	235.505	126.772	8.818	0.308	31.693	45.276	76.969	22.638	10.650
2016-17	245.118	131.947	9.178	0.321	32.987	47.124	80.110	23.562	10.204
2015-17 Biennium	480.623	258.719	17.997	0.629	64.680	92.400	157.079	46.200	20.854
2017-18	234.729	125.969	9.454	0.330	31.492	44.989	76.481	22.495	9.757
2018-19	241.771	129.748	9.737	0.340	32.437	46.339	78.776	23.169	9.182
2017-19 Biennium	476.500	255.717	19.191	0.671	63.929	91.328	155.257	45.664	18.939
2019-20	249.024	133.641	10.029	0.351	33.410	47.729	81.139	23.864	8.671
2020-21	256.495	137.650	10.330	0.361	34.413	49.161	83.573	24.580	7.990
2019-21 Biennium	505.519	271.290	20.360	0.712	67.823	96.890	164.712	48.445	16.661
2021-22	264.189	141.779	10.640	0.372	35.445	50.636	86.081	25.318	7.419
2022-23	272.115	146.033	10.959	0.383	36.508	52.155	88.663	26.077	6.522
2021-23 Biennium	536.304	287.812	21.599	0.755	71.953	102.790	174.743	51.395	13.941

*** As of forecast release date this table does not properly reflect the bottle surcharge and distributions. When available, Table B.7 will be updated accordingly.

¹ Mental Health Alcoholism and Drug Services Account, per ORS 471.810

² For details on cigarette revenues see TABLE B.6 on previous page

Table B.8 Track Record for the September 2015 Forecast

Table B.8 Track Record for the September 2015 Forecast

(Quarter ending September 30, 2015)

Personal Income Tax				Forecast Comparison		Year/Year Change	
(Millions of dollars)	Actual Revenues	Latest Forecast	Percent Difference	Prior Year	Percent Change		
Withholding	\$1,551.5	\$1,562.1	-0.7%	\$1,455.8	6.6%		
Dollar difference		-\$10.5		\$95.7			
Estimated Payments	\$309.5	\$308.5	0.3%	\$264.8	16.9%		
Dollar difference		\$0.9		\$44.6			
Final Payments	\$99.6	\$76.5	30.2%	\$92.6	7.5%		
Dollar difference		\$23.1		\$7.0			
Refunds	-\$85.1	-\$52.8	61.1%	-\$100.7	-15.5%		
Dollar difference		-\$32.3		\$15.6			
Total Personal Income Tax	\$1,875.5	\$1,894.3	-1.0%	\$1,712.6	9.5%		
Dollar difference		-\$18.8		\$162.9			
Corporate Income Tax*				Forecast Comparison		Year/Year Change	
(Millions of dollars)	Actual Revenues*	Latest Forecast	Percent Difference	Prior Year	Percent Change		
Advanced Payments	\$173.3	\$186.7	-7.2%	\$193.2	-10.3%		
Dollar difference		-\$13.4		-\$19.9			
Final Payments	\$67.3	\$88.3	-23.8%	\$28.8	133.6%		
Dollar difference		-\$21.0		\$38.5			
Refunds	-\$42.4	-\$74.1	-42.8%	-\$50.0	-15.1%		
Dollar difference		\$31.7		\$7.6			
Total Corporate Income Tax	\$198.2	\$200.9	-1.3%	\$172.1	15.2%		
Dollar difference		-\$2.7		\$26.1			
Total Income Tax				Forecast Comparison		Year/Year Change	
(Millions of dollars)	Actual Revenues	Latest Forecast	Percent Difference	Prior Year	Percent Change		
Corporate and Personal Tax	\$2,073.7	\$2,095.2	-1.0%	\$1,884.7	10.0%		
Dollar difference		-\$21.5		\$189.1			

Table B.9 Summary of Lottery Resources

TABLE B.9 Summary of Lottery Resources	Dec 2015 Forecast										
	2015-17			2017-19		2019-21		2021-23		2023-25	
	Current Forecast	Change from Sep-15	Change from COS 2015	Current Forecast	Change from Sep-15						
(in millions of dollars)											
LOTTERY EARNINGS											
Traditional Lottery	115.169	0.286	(2.636)	118.605	0.880	117.961	0.754	117.670	0.749	117.692	0.758
Video Lottery	1,103.932	24.831	33.280	1,158.321	17.320	1,240.758	20.684	1,326.795	21.158	1,417.594	22.608
Administrative Actions	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Video Lottery Terminal Replacement	(59.200)	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Total Available to Transfer	1,159.900	25.118	30.644	1,276.927	18.200	1,358.719	21.438	1,444.465	21.907	1,535.286	23.366
ECONOMIC DEVELOPMENT FUND											
Beginning Balance	20.500	0.000	1.181	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
Transfers from Lottery	1,159.900	25.118	30.644	1,276.927	18.200	1,358.719	21.438	1,444.465	21.907	1,535.286	23.366
Other Resources ¹	9.290	1.951	1.951	2.000	0.000	2.000	0.000	2.000	0.000	2.000	0.000
Total Available Resources	1,189.691	27.069	33.776	1,278.927	18.200	1,360.719	21.438	1,446.465	21.907	1,537.286	23.366
ALLOCATION OF RESOURCES											
County Economic Development	39.084	0.000	0.000	44.480	0.665	48.390	0.807	53.072	0.846	56.704	0.904
Education Stability Fund ²	208.782	4.521	5.516	229.847	3.276	244.569	3.859	260.004	3.943	276.351	4.206
Parks and Natural Resources Fund ³	173.985	3.768	4.597	191.539	2.730	203.808	3.216	216.670	3.286	230.293	3.505
HECC Collegiate Athletic & Scholarships ⁴	8.240	0.000	0.000	12.769	0.182	13.587	0.214	14.445	0.219	15.353	0.234
Gambling Addiction ⁴	11.293	0.000	0.000	12.769	0.182	13.587	0.214	14.445	0.219	15.353	0.234
County Fairs	3.864	0.000	0.000	3.648	0.000	3.648	0.000	3.648	0.000	3.648	0.000
Other Legislatively Adopted Allocations ⁵	704.779	0.000	0.000	258.600	0.000	258.600	0.000	258.600	0.000	258.600	0.000
Total Distributions	1,150.027	8.289	10.113	753.652	7.035	786.189	8.310	820.882	8.514	856.302	9.08
Ending Balance/Discretionary Resources	39.664	18.780	23.664	525.275	11.165	574.530	13.128	625.582	13.393	680.984	14.283

Note: Some totals may not foot due to rounding.

1. Includes interest earnings on Economic Development Fund and reversions.
2. Eighteen percent of proceeds accrue to the Ed. Stability Fund, until the balance equals 5% of GF Revenues. Thereafter, 15% of proceeds accrue to the Oregon Capital Matching Account.
3. The Parks and Natural Resources Fund Constitutional amendment requires 15% of net proceeds be transferred to this fund.
4. Approximately one percent of net lottery proceeds are dedicated to Collegiate Athletics and Gambling Addiction programs, respectively. Certain limits are imposed by HB 5035 for 2011-13.
5. Includes Debt Service Allocations, Allocations to State School Fund and Other Agency Allocations

Table B.10 Budgetary Reserve Summary and Outlook

Table B.10: Budgetary Reserve Summary and Outlook

Dec 2015

Rainy Day Fund (Millions)	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25
Beginning Balance	\$61.9	\$211.8	\$388.4	\$638.6	\$927.9	\$1,257.8
Interest Earnings	\$1.3	\$7.3	\$29.8	\$53.0	\$74.5	\$99.1
Deposits ¹	\$148.7	\$169.2	\$220.4	\$236.3	\$255.4	\$277.5
Triggered Withdrawals	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Ending Balance²	\$211.8	\$388.2	\$638.6	\$927.9	\$1,257.8	\$1,634.4

Education Stability Fund³ (Millions)	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25
Beginning Balance	\$7.4	\$179.4	\$367.2	\$574.1	\$794.2	\$939.7
Interest Earnings ⁴	\$1.0	\$6.5	\$28.5	\$48.3	\$63.3	\$73.2
Deposits ⁵	\$171.9	\$187.9	\$206.9	\$220.1	\$145.5	\$122.6
Distributions	\$1.0	\$6.5	\$28.5	\$48.3	\$63.3	\$73.2
Oregon Education Fund	\$0.7	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0
Oregon Opportunity Grant	\$0.2	\$6.5	\$28.5	\$48.3	\$63.3	\$73.2
Withdrawals	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Ending Balance	\$179.4	\$367.2	\$574.1	\$794.2	\$939.7	\$1,062.3

Total Reserves (Millions)	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25
Ending Balances	\$391.2	\$755.4	\$1,212.6	\$1,722.0	\$2,197.5	\$2,696.7
Percent of General Fund Revenues	2.4%	4.2%	6.2%	8.0%	9.3%	10.4%

Footnotes:

1. Includes transfer of ending General Fund balances up to 1% of budgeted appropriations as well as private donations. Assumes future appropriations equal to 98.75 percent of available resources. Includes forecast for corporate income taxes above rate of 6.6% for the biennium are deposited on or before Jun 30 of each odd-numbered year.
2. Available funds in a given biennium equal 2/3rds of the beginning balance under current law.
3. Excludes funds in the Oregon Growth and the Oregon Resource and Technology Development subaccounts.
4. Interest earnings are distributed to the Oregon Education Funds (75%) and the State Scholarship Fund (25%), provided there remains debt outstanding. In the event that debt is paid off, all interest earnings distributed to the State Scholarship Fund.
5. Contributions to the ESF are capped at 5% of the prior biennium's General Fund revenue total. Quarterly contributions are made until the balance exceeds the cap.

APPENDIX C: POPULATION FORECASTS BY AGE AND SEX

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Table C.1 Population Forecasts Component of Change 1980-2022

STATE OF OREGON
POPULATION FORECASTS
COMPONENTS OF CHANGE 1980 -2022

Year (July 1)	Population	Population Change		Births		Deaths		Natural	Net Migration	
		Number	Percent	Number	Rate/1000	Number	Rate/1000	Increase	Number	Rate/1000
1980	2,641,200	---	---	---	---	---	---	---	---	---
1981	2,668,000	26,800	1.01	43,196	16.27	21,870	8.24	21,326	5,474	2.06
1982	2,664,900	-3,100	-0.12	42,261	15.85	21,548	8.08	20,713	-23,813	-8.93
1983	2,653,100	-11,800	-0.44	40,378	15.19	22,039	8.29	18,339	-30,139	-11.33
1984	2,666,600	13,500	0.51	39,611	14.89	22,702	8.54	16,909	-3,409	-1.28
1985	2,672,600	6,000	0.23	39,296	14.72	23,531	8.81	15,765	-9,765	-3.66
1980-1985		31,400		204,742		111,690		93,052	-61,652	
1986	2,683,500	10,900	0.41	39,332	14.69	23,403	8.74	15,929	-5,029	-1.88
1987	2,701,000	17,500	0.65	38,702	14.38	23,695	8.80	15,007	2,493	0.93
1988	2,741,300	40,300	1.49	39,120	14.38	24,752	9.10	14,368	25,932	9.53
1989	2,790,600	49,300	1.80	40,648	14.70	24,705	8.93	15,943	33,357	12.06
1990	2,860,400	69,800	2.50	42,008	14.87	24,763	8.76	17,245	52,555	18.60
1985-1990		187,800		199,810		121,318		78,492	109,308	
1991	2,928,500	68,100	2.38	42,682	14.75	24,944	8.62	17,738	50,362	17.40
1992	2,991,800	63,300	2.16	42,427	14.33	25,166	8.50	17,261	46,039	15.55
1993	3,060,400	68,600	2.29	41,442	13.69	26,543	8.77	14,899	53,701	17.75
1994	3,121,300	60,900	1.99	41,487	13.42	27,564	8.92	13,923	46,977	15.20
1995	3,184,400	63,100	2.02	42,426	13.46	27,552	8.74	14,874	48,226	15.30
1990-1995		324,000		210,464		131,769		78,695	245,305	
1996	3,247,100	62,700	1.97	43,196	13.43	28,768	8.95	14,428	48,272	15.01
1997	3,304,300	57,200	1.76	43,625	13.32	29,201	8.91	14,424	42,776	13.06
1998	3,352,400	48,100	1.46	44,696	13.43	28,705	8.62	15,991	32,109	9.65
1999	3,393,900	41,500	1.24	45,188	13.40	29,848	8.85	15,340	26,160	7.76
2000	3,431,100	37,200	1.10	45,534	13.34	28,909	8.47	16,625	20,575	6.03
1995-2000		246,700		222,239		145,431		76,808	169,892	
2001	3,470,400	39,300	1.15	45,536	13.20	29,934	8.67	15,602	23,698	6.87
2002	3,502,600	32,200	0.93	44,995	12.91	30,828	8.84	14,167	18,033	5.17
2003	3,538,600	36,000	1.03	45,686	12.98	30,604	8.69	15,082	20,918	5.94
2004	3,578,900	40,300	1.14	45,599	12.81	30,721	8.63	14,878	25,422	7.14
2005	3,626,900	48,000	1.34	45,892	12.74	30,717	8.53	15,175	32,825	9.11
2000-2005		195,800		227,708		152,804		74,904	120,896	
2006	3,685,200	58,300	1.61	46,946	12.84	30,771	8.42	16,175	42,125	11.52
2007	3,739,400	54,200	1.47	49,404	13.31	31,396	8.46	18,008	36,192	9.75
2008	3,784,200	44,800	1.20	49,659	13.20	32,008	8.51	17,651	27,149	7.22
2009	3,815,800	31,600	0.84	47,960	12.62	31,382	8.26	16,578	15,022	3.95
2010	3,837,300	21,500	0.56	46,256	12.09	31,689	8.28	14,567	6,933	1.81
2005-2010		210,400		240,225		157,246		82,979	127,421	
2011	3,857,625	20,325	0.53	45,381	11.80	32,437	8.43	12,944	7,381	1.92
2012	3,883,735	26,110	0.68	44,897	11.60	32,804	8.47	12,093	14,017	3.62
2013	3,919,020	35,285	0.91	44,969	11.53	33,168	8.50	11,801	23,484	6.02
2014	3,962,710	43,691	1.11	45,447	11.53	33,968	8.62	11,479	32,212	8.17
2015	4,013,800	51,090	1.29	45,753	11.47	34,940	8.76	10,813	40,276	10.10
2010-2015		176,500		226,447		167,317		59,129	117,370	
2016	4,064,200	50,400	1.26	46,200	11.44	35,665	8.83	10,535	39,865	9.87
2017	4,114,200	49,999	1.23	46,618	11.40	36,218	8.86	10,401	39,599	9.68
2018	4,163,200	49,000	1.19	46,964	11.35	36,768	8.88	10,195	38,805	9.38
2019	4,211,400	48,199	1.16	47,295	11.29	37,320	8.91	9,975	38,224	9.13
2020	4,259,700	48,300	1.15	47,623	11.24	37,934	8.96	9,689	38,611	9.12
2015-2020		245,900		234,701		183,905		50,796	195,104	
2021	4,308,000	48,300	1.13	47,902	11.18	38,640	9.02	9,262	39,038	9.11
2022	4,356,200	48,200	1.12	48,157	11.12	39,399	9.09	8,758	39,442	9.10
1980-1990		219,200		404,552		233,008		171,544	47,656	
1990-2000		570,700		432,703		277,200		155,503	415,197	41,520
2000-2010		406,200		467,933		310,050		157,883	248,317	24,832
2010-2020		422,399		461,148		351,223		109,925	312,474	31,247
2012-2022		472,465		466,929		364,020		102,908	369,556	36,956

Sources: 1980-1999 population - U.S. Census Bureau; 2000-2009 population - intercensal estimates by Office of Economic Analysis; population estimates 2010-2015 by Population Research Center, PSU; births and deaths 1980-14: Oregon Center for Health Statistics.

Table C.2 Population Forecasts by Age and Sex: 2000-2022

Age	2000			2001			2002			2003			2004			2005		
	Male	Female	Total															
0-4	114,100	109,107	223,207	114,742	109,903	224,645	115,219	109,865	225,084	116,118	110,533	226,652	117,038	111,315	228,353	117,847	112,161	230,008
5-9	119,699	113,984	233,683	118,879	113,240	232,119	117,908	112,625	230,533	117,595	112,522	230,117	118,055	112,983	231,038	118,737	113,851	232,588
10-14	124,726	118,350	243,076	125,950	119,470	245,421	126,474	120,344	246,818	127,007	120,408	247,415	126,169	119,728	245,898	124,732	118,604	243,336
15-19	126,002	119,265	245,267	127,311	119,879	247,190	127,250	119,862	247,112	126,490	120,236	246,726	127,484	121,227	248,711	129,634	122,978	252,612
20-24	119,300	113,318	232,618	120,814	115,792	236,605	122,925	118,001	240,926	125,433	119,922	245,356	127,001	121,951	248,952	128,090	122,777	250,867
25-29	120,547	112,269	232,816	119,436	111,809	231,245	119,216	112,937	232,153	120,690	114,847	235,536	122,799	117,484	240,282	125,208	121,121	246,329
30-34	122,441	114,757	237,198	125,882	117,768	243,651	127,842	119,417	247,259	128,373	120,485	248,858	127,650	119,951	247,601	126,179	119,324	245,503
35-39	128,698	126,230	254,928	125,463	122,883	248,346	123,019	119,340	242,360	121,225	116,792	238,017	121,489	116,438	237,927	124,789	119,125	243,914
40-44	134,421	137,137	271,558	134,585	136,761	271,346	133,102	135,121	268,224	131,876	133,467	265,343	131,106	132,016	263,121	129,401	129,428	258,829
45-49	135,644	137,430	273,074	136,214	138,948	275,162	136,992	140,305	277,297	136,336	140,343	276,679	134,864	139,381	274,245	134,310	139,320	273,629
50-54	118,659	119,623	238,282	125,826	127,295	253,120	126,548	128,354	254,902	129,544	132,212	261,756	132,767	136,330	269,097	135,022	138,899	273,921
55-59	85,965	88,187	174,151	89,314	91,758	181,072	98,235	100,967	199,202	103,863	106,596	210,460	109,932	112,923	222,855	117,120	120,794	237,914
60-64	64,543	67,459	132,003	67,383	70,539	137,922	70,666	74,175	144,841	75,490	79,114	154,604	80,095	83,740	163,835	84,062	88,300	172,361
65-69	53,103	59,261	112,364	53,861	59,438	113,299	54,966	60,295	115,291	56,889	62,083	118,972	59,083	64,273	123,356	61,643	66,384	128,027
70-74	48,532	58,102	106,633	48,249	57,290	105,539	47,788	56,535	104,323	47,448	55,941	103,389	47,523	55,493	103,016	48,249	55,650	103,899
75-79	40,475	54,794	95,269	40,503	54,397	94,900	40,508	53,697	94,204	40,627	52,917	93,545	40,403	52,009	92,412	40,366	51,512	91,878
80-84	26,469	40,450	66,919	27,465	41,513	68,978	28,398	42,507	70,905	28,798	43,326	72,124	29,266	44,164	73,430	29,725	44,474	74,199
85+	18,517	39,538	58,055	19,293	40,549	59,843	19,854	41,313	61,167	20,727	42,323	63,050	21,444	43,325	64,769	22,398	44,689	67,087
Total	1,701,841	1,729,259	3,431,100	1,721,170	1,749,230	3,470,400	1,736,939	1,765,661	3,502,600	1,754,532	1,784,068	3,538,600	1,774,167	1,804,733	3,578,900	1,797,511	1,829,389	3,626,900
Mdn. Age	35.2	37.6	36.4	35.3	37.8	36.6	35.5	38.0	36.8	35.7	38.2	36.9	35.8	38.4	37.1	36.0	38.5	37.2
Age	2006			2007			2008			2009			2010			2011		
	Male	Female	Total															
0-4	118,832	113,050	231,882	121,058	115,102	236,160	122,723	116,618	239,340	123,056	116,873	239,929	122,327	116,130	238,457	121,092	115,088	236,180
5-9	119,959	115,315	235,274	120,925	115,818	236,743	121,906	116,639	238,545	122,109	116,793	238,901	121,539	116,369	237,908	121,767	115,893	237,660
10-14	124,400	118,240	242,639	124,017	118,145	242,162	124,144	118,401	242,545	124,495	118,646	243,140	124,508	118,732	243,241	124,074	119,044	243,118
15-19	131,680	124,886	256,566	133,027	126,562	259,588	134,019	127,039	261,058	133,094	126,245	259,339	131,126	124,540	255,667	129,068	121,927	250,996
20-24	129,625	123,689	253,314	129,491	124,047	253,538	128,090	124,102	252,192	128,034	124,294	252,328	128,787	124,903	253,689	130,576	126,691	257,267
25-29	128,110	125,220	253,330	131,446	128,889	260,335	134,251	131,308	265,559	134,893	132,724	267,617	134,019	131,816	265,835	133,302	130,829	264,132
30-34	126,016	119,767	245,782	126,936	121,971	248,907	128,841	124,231	253,072	130,499	126,264	256,763	131,489	128,325	259,814	133,512	130,743	264,255
35-39	128,779	122,827	251,606	131,387	125,260	256,647	132,046	126,581	258,627	133,080	125,541	258,631	128,070	123,596	251,665	125,924	121,787	247,710
40-44	126,728	126,664	253,391	124,917	123,759	248,677	123,362	121,440	244,802	123,395	120,853	244,249	125,969	122,843	248,811	128,974	125,358	254,332
45-49	135,135	139,543	274,678	134,349	138,533	272,882	133,523	137,181	270,705	132,802	135,635	268,437	130,825	132,538	263,363	127,795	128,542	256,337
50-54	136,187	140,978	277,165	137,589	142,901	280,489	137,266	143,176	280,443	135,862	142,064	277,926	135,129	141,565	276,693	134,682	140,654	275,335
55-59	124,581	129,098	253,680	125,683	130,760	256,444	128,665	134,868	263,533	131,454	138,782	270,236	133,011	140,802	273,812	134,009	142,349	276,358
60-64	87,811	92,304	180,115	97,117	102,054	199,171	102,948	107,873	210,821	108,952	114,138	223,090	115,236	121,045	236,281	121,440	127,818	249,258
65-69	64,860	69,850	134,710	68,563	73,945	142,509	73,612	79,164	152,776	78,191	83,768	161,959	81,854	87,917	169,771	84,425	90,852	175,277
70-74	49,222	55,999	105,221	50,569	57,052	107,622	52,510	58,915	111,425	54,604	61,042	115,646	56,925	62,949	119,874	59,485	65,640	125,125
75-79	40,359	51,026	91,385	40,218	50,594	90,812	40,073	50,211	90,285	40,236	49,905	90,141	40,932	50,101	91,034	41,549	50,075	91,624
80-84	29,996	44,406	74,402	30,251	44,085	74,336	30,464	43,606	74,069	30,361	43,011	73,372	30,391	42,734	73,126	30,500	42,287	72,787
85+	23,554	46,323	69,877	24,585	47,794	72,379	25,325	49,078	74,403	26,014	50,369	76,383	26,800	51,458	78,258	27,598	52,275	79,874
Total	1,825,834	1,859,366	3,685,200	1,852,129	1,887,271	3,739,400	1,873,769	1,910,431	3,784,200	1,888,859	1,926,941	3,815,800	1,898,938	1,938,362	3,837,300	1,909,773	1,947,852	3,857,625
Mdn. Age	36.3	38.6	37.3	36.5	38.7	37.5	36.7	38.8	37.8	37.0	39.1	38.0	37.2	39.4	38.3	37.4	39.7	38.5
Age	2012			2013			2014			2015			2016			2017		
	Male	Female	Total															
0-4	119,516	113,359	232,875	118,293	111,850	230,142	117,878	111,497	229,375	118,103	111,581	229,684	118,987	112,263	231,250	119,981	113,317	233,298
5-9	122,733	116,900	239,634	124,024	117,953	241,977	124,740	118,043	242,782	125,497	118,316	243,813	125,229	117,852	243,080	124,618	116,784	241,403
10-14	123,603	118,287	241,890	123,386	118,206	241,593	123,406	118,466	241,872	122,972	118,324	241,296	123,630	118,425	242,055	125,234	120,133	243,367
15-19	127,517	120,587	248,104	126,643	119,875	246,518	126,855	119,977	246,832	127,725	120,625	248,349	127,985	121,329	249,314	128,176	121,223	249,408
20-24	132,853	128,787	261,640	135,293	130,705	266,998	136,756	132,101	268,857	137,285	132,645	269,930	136,714	131,582	268,297	136,246	130,979	267,226
25-29	132,463	129,927	262,390	132,508	130,403	262,911	134,597	132,898	267,496	137,936	137,029	274,964	142,545	142,577	285,122	146,752	147,124	293,875
30-34	135,689	133,329	269,018	137,321	135,074	272,395	139,946	137,422	277,368	141,510	138,697	280,208	143,299	140,166	283,465	144,295	141,360	285,656
35-39	126,018	122,725	248,743	128,683	124,338	253,021	130,863	126,564	257,427	134,478	129,804	264,282	137,845	132,941	270,786	141,380	136,451	277,830
40-44	130,795	126,620	257,415	131,483	127,467	258,950	131,052	126,702	257,753	130,033	125,297	255,330	128,705	124,063	252,768	129,395	125,028	254,423
45-49	125,434	124,976	250,410	123,864	122,179	246,034	124,312	121,476	245,788	127,056	123,541	250,597	130,934	126,591	257,525	133,406	128,356	261,762
50-54	133,445	139,197	272,643	132,080	137,545	269,625	131,567	136,143	267,710	129,980	133,563	263,543	127,646	130,297	257,943	125,882	127,041	252,923
55-59	134,403	143,058	277,461	134,376	142,746	277,12												

Table C.3 Population of Oregon: 1990-2022

Year (July 1)	Total Population	Change from previous year	
		Number	Percent
1990	2,860,400	-	-
1991	2,928,500	68,100	2.38%
1992	2,991,800	63,300	2.16%
1993	3,060,400	68,600	2.29%
1994	3,121,300	60,900	1.99%
1995	3,184,400	63,100	2.02%
1996	3,247,100	62,700	1.97%
1997	3,304,300	57,200	1.76%
1998	3,352,400	48,100	1.46%
1999	3,393,900	41,500	1.24%
2000	3,431,100	37,200	1.10%
2001	3,470,400	39,300	1.15%
2002	3,502,600	32,200	0.93%
2003	3,538,600	36,000	1.03%
2004	3,578,900	40,300	1.14%
2005	3,626,900	48,000	1.34%
2006	3,685,200	58,300	1.61%
2007	3,739,400	54,200	1.47%
2008	3,784,200	44,800	1.20%
2009	3,815,800	31,600	0.84%
2010	3,837,300	21,500	0.56%
2011	3,857,625	20,325	0.53%
2012	3,883,735	26,110	0.68%
2013	3,919,020	35,285	0.91%
2014	3,962,710	43,691	1.11%
2015	4,013,800	51,090	1.29%
2016	4,064,200	50,400	1.26%
2017	4,114,200	49,999	1.23%
2018	4,163,200	49,000	1.19%
2019	4,211,400	48,199	1.16%
2020	4,259,700	48,300	1.15%
2021	4,308,000	48,300	1.13%
2022	4,356,200	48,200	1.12%

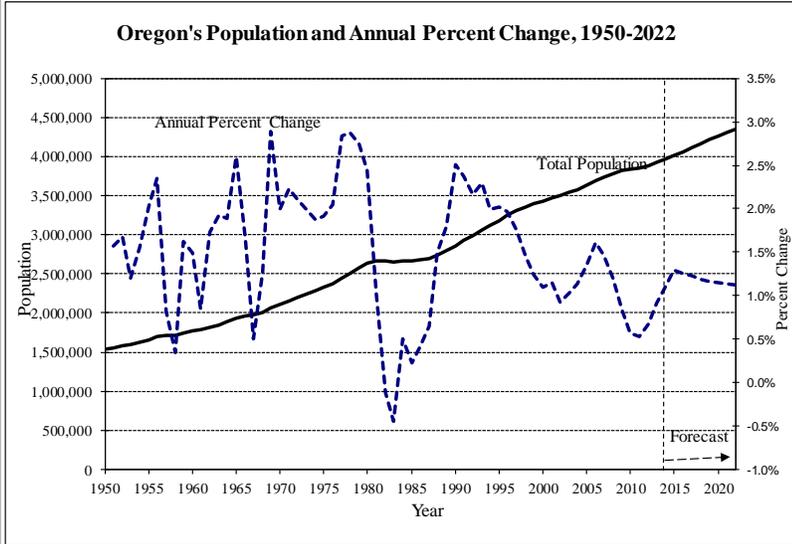


Table C.4 Children: Ages 0-4

Table C.5 School Age
Population: Ages 5-17

Table C.6 Young Adult
Population: Ages 18-24

Year (July 1)	% Change from previous decade/yr.			% Change from previous decade/yr.			% Change from previous decade/yr.		
	Population	Number	Percent	Population	Number	Percent	Population	Number	Percent
1980	199,525	---	---	524,446	---	---	329,407	---	---
1990	209,638	10,113	5.07%	532,727	8,281	1.58%	268,134	-61,273	-18.60%
2000	223,207	13,569	6.47%	624,316	91,589	17.19%	330,328	62,194	23.20%
2001	224,645	1,438	0.64%	624,675	358	0.06%	336,660	6,333	1.92%
2002	225,084	439	0.20%	624,611	-64	-0.01%	340,778	4,118	1.22%
2003	226,652	1,568	0.70%	624,349	-262	-0.04%	345,266	4,487	1.32%
2004	228,353	1,701	0.75%	625,461	1,112	0.18%	349,138	3,873	1.12%
2005	230,008	1,655	0.72%	628,326	2,865	0.46%	351,076	1,938	0.55%
2006	231,882	1,874	0.81%	633,646	5,320	0.85%	354,328	3,252	0.93%
2007	236,160	4,278	1.85%	635,720	2,074	0.33%	356,311	1,983	0.56%
2008	239,340	3,180	1.35%	635,372	-348	-0.05%	358,967	2,656	0.75%
2009	239,929	589	0.25%	633,575	-1,797	-0.28%	360,134	1,166	0.32%
2010	238,457	-1,472	-0.61%	630,741	-2,835	-0.45%	359,764	-370	-0.10%
2011	236,180	-2,277	-0.95%	628,366	-2,375	-0.38%	360,675	911	0.25%
2012	232,875	-3,305	-1.40%	628,688	323	0.05%	362,580	1,904	0.53%
2013	230,142	-2,733	-1.17%	630,161	1,473	0.23%	365,925	3,346	0.92%
2014	229,375	-767	-0.33%	631,776	1,614	0.26%	368,568	2,643	0.72%
2015	229,684	309	0.13%	633,277	1,502	0.24%	370,111	1,543	0.42%
2016	231,250	1,566	0.68%	634,129	852	0.13%	368,617	-1,494	-0.40%
2017	233,298	2,048	0.89%	635,529	1,400	0.22%	367,874	-743	-0.20%
2018	235,225	1,927	0.83%	635,548	19	0.00%	368,797	923	0.25%
2019	236,898	1,673	0.71%	636,405	856	0.13%	369,695	899	0.24%
2020	238,644	1,746	0.74%	638,461	2,056	0.32%	369,574	-121	-0.03%
2021	240,470	1,826	0.77%	640,296	1,835	0.29%	369,905	331	0.09%
2022	242,164	1,694	0.70%	641,653	1,357	0.21%	370,561	656	0.18%

Table C.7 Criminally At Risk
Population (males): Ages 15-39

Table C.8 Prime Wage
Earners: Ages 25-44

Table C.9 Older Wage
Earners: Ages 45-64

Year (July 1)	% Change from previous decade/yr.			% Change from previous decade/yr.			% Change from previous decade/yr.		
	Population	Number	Percent	Population	Number	Percent	Population	Number	Percent
1980	561,931	---	---	790,750	---	---	491,249	---	---
1990	544,738	-17,193	-3.06%	926,326	135,576	17.15%	531,181	39,932	8.13%
2000	616,988	72,250	13.26%	996,500	70,174	7.58%	817,510	286,329	53.90%
2001	618,906	1,918	0.31%	994,587	-1,913	-0.19%	847,276	29,766	3.64%
2002	620,252	1,347	0.22%	989,996	-4,591	-0.46%	876,242	28,966	3.42%
2003	622,211	1,959	0.32%	987,755	-2,241	-0.23%	903,499	27,257	3.11%
2004	626,423	4,212	0.68%	988,932	1,177	0.12%	930,032	26,533	2.94%
2005	633,901	7,478	1.19%	994,575	5,644	0.57%	957,826	27,793	2.99%
2006	644,210	10,309	1.63%	1,004,110	9,535	0.96%	985,638	27,813	2.90%
2007	652,287	8,077	1.25%	1,014,565	10,455	1.04%	1,008,986	23,348	2.37%
2008	657,248	4,961	0.76%	1,022,060	7,495	0.74%	1,025,501	16,515	1.64%
2009	657,327	79	0.01%	1,024,971	2,911	0.28%	1,039,689	14,188	1.38%
2010	653,491	-3,836	-0.58%	1,026,126	1,155	0.11%	1,050,150	10,461	1.01%
2011	652,382	-1,109	-0.17%	1,030,430	4,304	0.42%	1,057,288	7,138	0.68%
2012	654,540	2,158	0.33%	1,037,116	6,686	0.65%	1,052,983	-4,305	-0.41%
2013	660,449	5,909	0.90%	1,047,277	10,162	0.98%	1,050,536	-2,447	-0.23%
2014	669,017	8,568	1.30%	1,060,044	12,766	1.22%	1,053,471	2,935	0.28%
2015	678,934	9,917	1.48%	1,074,785	14,741	1.39%	1,059,736	6,265	0.59%
2016	688,388	9,455	1.39%	1,092,141	17,356	1.61%	1,065,800	6,063	0.57%
2017	696,849	8,460	1.23%	1,111,784	19,643	1.80%	1,065,614	-185	-0.02%
2018	703,948	7,100	1.02%	1,132,171	20,386	1.83%	1,062,026	-3,588	-0.34%
2019	712,004	8,056	1.14%	1,152,165	19,994	1.77%	1,057,733	-4,293	-0.40%
2020	717,426	5,422	0.76%	1,169,788	17,623	1.53%	1,055,538	-2,195	-0.21%
2021	724,026	6,600	0.92%	1,187,829	18,040	1.54%	1,054,254	-1,284	-0.12%
2022	730,567	6,541	0.90%	1,205,678	17,850	1.50%	1,053,592	-663	-0.06%

Table C.10 Elderly Population by Age Group

Year (July 1)	%Change from previous decade/yr.							
	Ages 65+		Ages 65-74		Ages 75-84		Ages 85+	
1980	305,841	---	185,863	---	91,137	---	28,841	---
1990	392,369	28.29%	224,772	20.93%	128,813	41.34%	38,784	34.48%
2000	439,239	11.95%	218,997	-2.57%	162,187	25.91%	58,055	49.69%
2001	442,558	0.76%	218,838	-0.07%	163,878	1.04%	59,843	3.08%
2002	445,890	0.75%	219,614	0.35%	165,109	0.75%	61,167	2.21%
2003	451,080	1.16%	222,361	1.25%	165,669	0.34%	63,050	3.08%
2004	456,984	1.31%	226,373	1.80%	165,842	0.10%	64,769	2.73%
2005	465,089	1.77%	231,926	2.45%	166,077	0.14%	67,087	3.58%
2006	475,596	2.26%	239,931	3.45%	165,787	-0.17%	69,877	4.16%
2007	487,657	2.54%	250,131	4.25%	165,148	-0.39%	72,379	3.58%
2008	502,959	3.14%	264,201	5.63%	164,354	-0.48%	74,403	2.80%
2009	517,502	2.89%	277,606	5.07%	163,513	-0.51%	76,383	2.66%
2010	532,062	2.81%	289,645	4.34%	164,159	0.40%	78,258	2.45%
2011	544,686	2.37%	300,402	3.71%	164,410	0.15%	79,874	2.06%
2012	569,493	4.55%	322,490	7.35%	165,727	0.80%	81,276	1.75%
2013	594,977	4.47%	344,125	6.71%	168,319	1.56%	82,533	1.55%
2014	619,476	4.12%	363,776	5.71%	172,371	2.41%	83,329	0.96%
2015	646,206	4.31%	384,855	5.79%	177,243	2.83%	84,108	0.94%
2016	672,263	4.03%	404,384	5.07%	182,862	3.17%	85,018	1.08%
2017	700,099	4.14%	423,956	4.84%	190,422	4.13%	85,722	0.83%
2018	729,433	4.19%	441,674	4.18%	201,486	5.81%	86,273	0.64%
2019	758,503	3.99%	459,056	3.94%	212,784	5.61%	86,663	0.45%
2020	787,694	3.85%	476,851	3.88%	223,000	4.80%	87,843	1.36%
2021	815,245	3.50%	493,857	3.57%	232,107	4.08%	89,281	1.64%
2022	842,551	3.35%	500,549	1.36%	250,856	8.08%	91,146	2.09%