



Oregon Economic and Revenue Forecast

June 2016

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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

June 2016

On the backs of the consumer and the strengthening labor market, the U.S. economic expansion continues. Weakness and uncertainty remain in terms of the global economy, financial markets and the goods-producing industries. However, as the U.S. economy enters the seventh year of expansion, including the longest string on monthly job gains on record, the outlook remains positive. The ongoing job gains and wage growth are pulling workers back into the economy and measures of slack, or underutilization, show ongoing improvements.

Oregon continues to see full-throttle rates of growth. Job gains are outpacing the typical state as are wages for Oregon workers. The state's economy is quickly approaching full employment, or a healthy labor market. Such a milestone has not been seen since 2000. Encouragingly, underemployment, or those involuntarily working part-time in Oregon is back to pre-Great Recession rates. Given the ongoing economic strength in Oregon, the economic outlook has been raised relative to recent forecasts. The state is now expected to maintain these full-throttle rates of growth through the end of 2017 before longer-run demographics weigh on the outlook.

Absent the state's new minimum wage law, passed during the 2016 legislative session, the upward revision to the employment outlook would have been even larger. While the impact is relatively small when compared to the size of the Oregon economy, it does result in approximately 40,000 fewer jobs in 2025 than would have been the case absent the legislation. Our office is not predicting outright job losses, however we are expecting somewhat slower growth. Low-wage workers receiving raises in the near term boost incomes. Over time, however, employers will adjust by increasing worker productivity, possibly via capital for labor substitutions.

With the first income tax filing season of the 2015-17 biennium now behind us, Oregon's General Fund revenue collections remain on track with what was expected when the budget was drafted. Personal income tax collections continue to expand at a healthy pace as a result of strong job growth and wage gains. Like the overall economy, Oregon's revenue gains are among the nation's strongest, but also not a surprise.

Personal income tax collections during the filing season came in roughly the same size as last year. However, current collections reflect the payout of kicker credits. If not for the kicker, this season's collections would have been \$300 million larger than last year.

Corporate tax collections have started to contract in recent months. Nationwide, corporate profits are falling, largely due to rapid appreciation of the U.S. dollar, and struggles among energy firms and other commodity producers. Even so, corporate tax collections remain large relative to historical norms. Corporate tax revenues are expected to exceed the 2% kicker threshold by \$10.4 million, generating a kicker amount of \$32.3 million.

In addition to healthy General Fund revenue growth, Oregon Lottery sales have been very strong as well. Recent collections have consistently come in above expectations. The 2015-17 Lottery outlook has been revised upward as a result. However the forecast for future biennia has been lowered as the Cowlitz Tribe casino, scheduled to open in spring 2017, is being included in the outlook for the first time.

Although General Fund revenues have been tracking very close to expectations to date, the outlook for revenue growth during the upcoming 2017-19 biennium has become somewhat stronger. However current rates of growth are not sustainable indefinitely. As the economy reaches full employment, growth will transition to a more sustainable, long-run path. Over the 10-year forecast horizon, Oregon and other states will face considerable downward pressure on revenue growth as the baby boom population cohort works less and spends less. Revenue growth will fail to match the pace seen in the past.

ECONOMIC OUTLOOK

Economic Summary

On the backs of the consumer and the strengthening labor market, the U.S. economic expansion continues. Weakness and uncertainty remain in terms of the global economy, financial markets and the goods-producing industries (natural resources and manufacturing in particular). However, as the U.S. economy enters the seventh year of expansion, including the longest string on monthly job gains on record, the outlook remains positive. The ongoing job gains and wage growth are pulling workers back into the economy and measures of slack, or underutilization, show ongoing improvements.

Oregon continues to see full-throttle rates of growth. Job gains are outpacing the typical state as are wages for Oregon workers. The state's economy is quickly approaching full employment, or a healthy labor market. Such a milestone has not been seen since 2000. Encouragingly, underemployment, or those involuntarily working part-time in Oregon is back to pre-Great Recession rates. Given the ongoing economic strength in Oregon, the economic outlook has been raised relative to recent forecasts. The state is now expected to maintain these full-throttle rates of growth through the end of 2017 before longer-run demographics weigh on the outlook.

Absent the state's new minimum wage law, passed during the 2016 legislative session, the upward revision to the employment outlook would have been even larger. Using estimates provided by the Oregon Legislative Revenue Office, along with the academic literature, our office's outlook now includes a slowdown in job growth due to the higher minimum wage moving forward. While the impact is relatively small when compared to the size of the Oregon economy, it does result in approximately 40,000 fewer jobs in 2025 than would have been the case absent the legislation. Our office is not predicting outright job losses due to the higher minimum wage, however we are expecting future growth to be slower as a result. In the near term, the higher minimum wage boosts overall state income as low-wage workers receive raises. Such workers are better off due to their increased wages. Over the medium term, however, employers are expected to adjust to the higher wages and increase worker productivity, possibly via capital for labor substitutions. Our office has incorporated these overall effects into the outlook for wages and in the industries which employ low-wage workers.

U.S. Economy

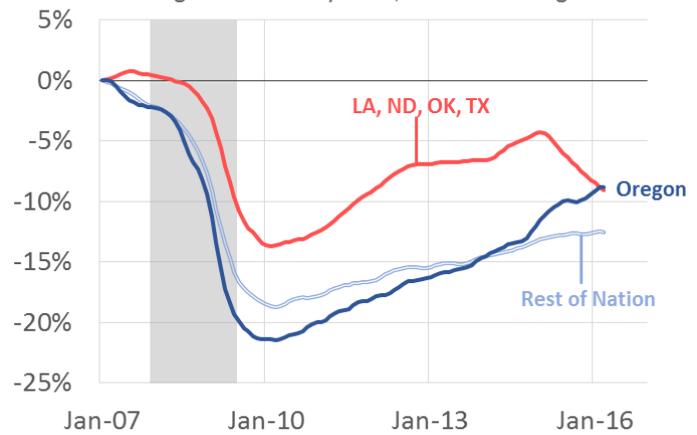
On the backs of the consumer and the strengthening labor market, the U.S. economic expansion continues. Weakness and uncertainty remain in terms of the global economy, financial markets and the goods-producing industries (natural resources and manufacturing in particular). However, as the U.S. economy enters the 84th month of expansion, including the longest string on monthly job gains on record, the outlook remains positive. The ongoing job gains and wage growth are pulling workers back into the economy and measures of slack, or underutilization, continue to improve. The U.S. economy is finally nearing full employment.

Even so, the ongoing concerns in the economy remain. Global growth is weak, removing one pillar of strength in recent years in terms of exports. While financial markets have calmed since the start of the year, forward-looking measures relating to the economy signal market expectations are considerably lower than most economic forecasters, including the Federal Reserve. Finally, the manufacturing and industrial production weakness remains. Some stabilization or slight improvements are seen within goods-producing industries, however the declines experienced over the past year and a half have only occurred historically when the U.S. economy was in recession. The reason this time may be different is at least twofold.

First, manufacturing represents a smaller share of the economy today than it has historically. Thus even severe fluctuations have less of an impact on the topline economic data due to compositional effects. This is not to say that manufacturing and goods-producing industries are not important. They are. However industry-specific shocks may not impact the broader economy to the same degree as they have historically. As such, the manufacturing weakness remains very concentrated in subsectors tied directly to oil and gas, which is reason number two. As the price of oil has fallen essentially in half since late 2014, mining and related suppliers (machinery, metals and the like) have pulled back. Investments in new wells has plunged as have rig counts in the oil patch states and regions. As such, the economic declines and impact remain concentrated not only within specific subsectors but also specific regions of the nation. In fact, manufacturing employment in the largest oil producing states in the nation is falling today. The rest of the nation continues to see manufacturing growth, albeit slowing due to the strong dollar and weak global economy. Oregon in particular has experienced a strong rebound since the depths of the Great Recession. Manufacturing employment today in the state is at the same relative point as in the oil-producing states, however recent trends of course diverge considerably.

U.S. Manufacturing Employment

Change from January 2007, 3 Month Average



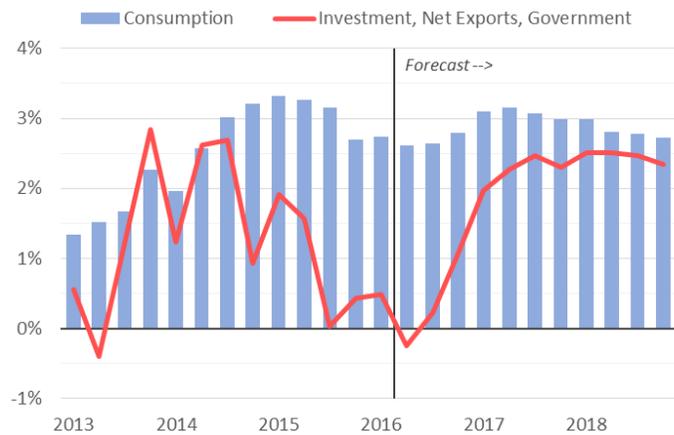
Latest Data: Mar 2016 | Source: BLS, Oregon Office of Economic Analysis

Even in the face of these ongoing economic issues, the U.S. economy continues to strengthen and improve. The economy is resilient. Two related factors are driving this growth: ongoing job gains in nonmanufacturing industries and a pick-up in wages. As such, the consumer is driving economic growth today.

Most encouragingly is the meaningful increase in wage gains across the U.S. While wage growth is still lower than in past expansions, it is accelerating over the past year. As the labor market continues to improve, businesses must compete more on price to attract and retain the best workers. Rising wages are one indication this is occurring.

The Consumer is Driving Growth

Inflation-Adjusted GDP Growth, Year-over-Year Change



Latest Data: 2016q1 | Source: BEA, IHS Global Insight, Oregon Office of Economic Analysis

Additionally, a tighter labor market is resulting in increased hiring rates for the unemployed and even those not currently in the labor force. Over the past year and a half, the share of individuals who did not have a job, nor were actively looking for work, yet found a job the following month, increased considerably. Such trends generally appear the closer an economy is to full employment. As the number of unemployed decreases, businesses must cast a wider net to find and fill some positions, including potential hires that may not have been looking in the first place. Given the right opportunity, such workers move directly from not in the labor force to being employed, bypassing the unemployment stage of looking for work. While the U.S. economy is not yet fully healthy today, considerable improvement has been made in recent years and the pace of improvement remains strong.

Moving forward, expectations are that the labor market gains will continue. The oil-related drag on investment will lessen. And overall economic growth will strengthen as a result. The outlook remains positive despite the headwinds.

Oregon Economy

The pace of improvement in Oregon’s labor market continues to be full throttle. In fact, the gains in 2015 and so far in 2016 are the best in the past two decades. Over the past two years the state has added 5,000 jobs every month, which translates into 3.5 percent growth on an annual basis. Such gains are stronger than the peak of the housing boom last decade. Only the mid-1990s boom saw comparable gains. At that time, employment gains were similar, nearly 5,000 per month, however growth rates were higher due to the smaller population and employment base. Given demographic trends today, job growth north of 3 percent is as strong as can be expected.

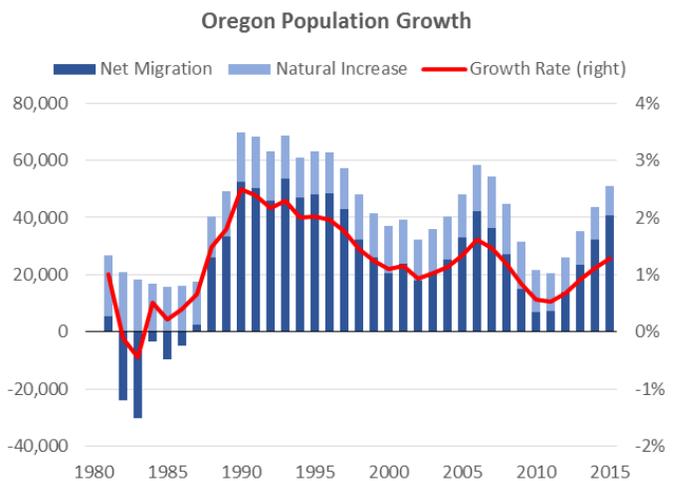
Oregon has regained its traditional advantage relative to the nation, with job growth outpacing the typical state by more than one percentage point. This growth differential largely comes from the state’s underlying fundamentals like its industrial structure and strong in-migration flows. Both of these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

More importantly, these improvements are now translating into stronger wage gains for the average Oregon worker. 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.

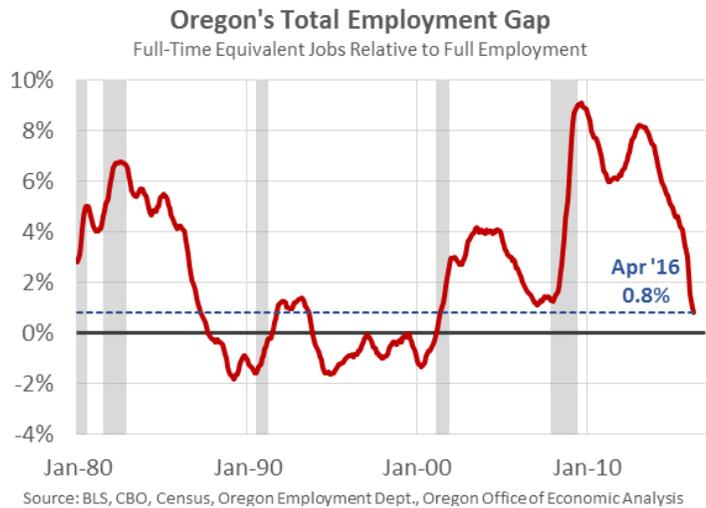
The wage gains are due to broad-based increases across all major industries and all regions of the state. Wage growth is not due to compositional effects, such as the strong growth in high-wage technology jobs or that the Portland MSA has added the most jobs, where wages are higher than in rural Oregon. While both of those trends are happening, they have surprisingly little impact on statewide average wages. This is certainly good news that the wage increases are broad-based and not isolated to certain industries or regions.

Overall, while there remains much room for improvement in average income levels in Oregon, it is important to remember that wages have not been this high, relatively, for more than a generation.

Approaching Full Employment

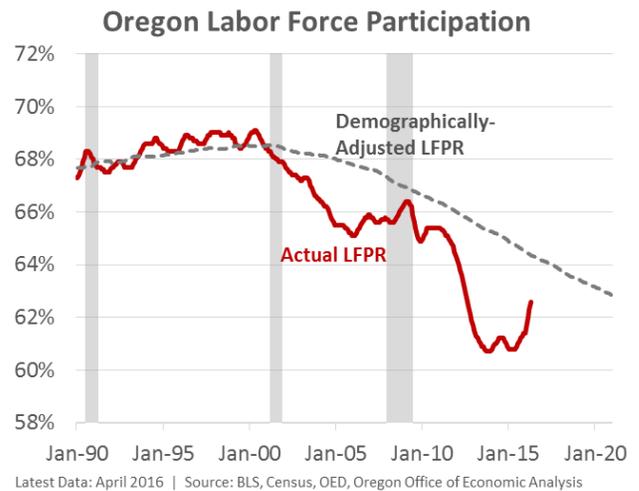


The Great Recession caused severe damage that has taken years to repair. However, Oregon is now quickly approaching full employment, or a healthy labor market. The state’s official unemployment rate (4.5 percent in April and May) is actually below what would historically be considered normal for Oregon during an economic expansion. However the improvements are much broader than just the unemployment rate. In fact, our office’s Total Employment Gap is currently indicating this is the best labor market Oregon has seen since the technology-led boom of the 1990s. Expectations are that this gap will fully close by late summer or early fall.



The Total Employment Gap, modeled after national work from Dartmouth’s Andrew Levin, combines the traditional unemployment rate, labor force participation, and those working part-time but want full-time work. The measure shows how far away the economy is from full employment, on a full-time equivalent jobs basis.

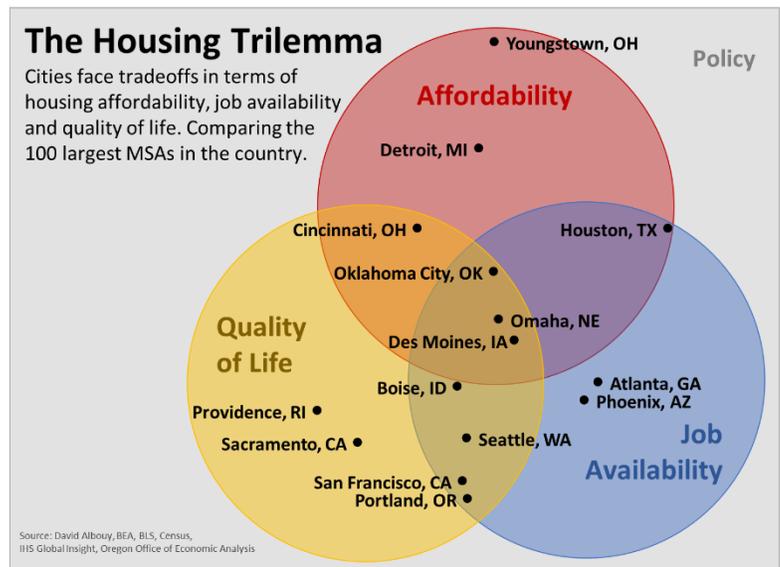
Today, not only is Oregon’s unemployment gap gone, but the share of the labor force involuntarily working part-time is back to pre-Great Recession rates, and in the actual number of such workers. The remaining slack is entirely due to the lower labor force participation rate statewide. While the majority of the decline in participation over the past 15 years is demographic – the aging Baby Boomers are entering their retirement years – some of the decline is due to the lackluster economy. Here the story is improving considerably in recent months and years. Oregon’s participation rate has increased nearly 2 percentage points off its recessionary lows. The gap between the actual participation rate and the demographically-adjusted full employment rate is now 1.8 percentage points. Back in late 2013 this participation gap was 4.6 percentage points. Progress is clearly being made. Participation is increasing as the job opportunities remain plentiful and wages are rising. Full employment in Oregon is fast approaching.



The Housing Trilemma

Every city wants to have a strong local economy, high quality of life and housing affordability for its residents. Unfortunately these three dimensions represent the Housing Trilemma. A city can achieve success on two but not all three at the same time. Underlying all of these tradeoffs are local policies as well.

The trilemma is very real. Among the 100 largest metropolitan areas in the nation, just eight rank among the top *half* for all three factors. None rank among the Top 20 in all three. Unless you prefer living on the Great Plains, the list of eight metros lacks sizzle.



The reason these tradeoffs exist is mostly, but not entirely, due to market forces. People want to live in cities with a strong economy and high quality of life. Increased demand for housing leads to higher prices and lower affordability. Nice places to live get their housing costs bid up due to strong demand. The opposite is true as well. Regions with underperforming economies and a lower quality of life do have better affordability.

However, even among the group of popular metropolitan areas with strong economies and a high quality of life, affordability does vary. Portland is an extreme case¹ with significantly more households cost-burdened and a lower vacancy rate than nearly all other metros in the nation. This impacts renters the most, including younger households and those on fixed incomes.

For these popular metros, more construction is required, but that alone is not enough. Just look at Austin, TX. Despite leading the nation’s largest metros in new construction, Austin is only able to reach middling affordability. Austin’s home prices, while lower than Portland’s or Seattle’s, are still relatively high and half of all renters are cost-burdened. Increasing construction is able to help with broad, regional affordability, but cannot fully offset the premium required to live in a popular place. In addition to building more homes, targeted programs are also needed to help less fortunate neighbors bear these costs.

The housing trilemma is real. Tradeoffs are inevitable. While Portland, and Oregon more broadly, should work to maintain its economic successes, eroding affordability does not have to be a permanent trend. Increasing construction to match a growing population and strong assistance programs are needed.

Oregon’s Labor Market

¹ <https://oregoneconomicanalysis.com/2016/04/26/portland-affordability-in-comparison/>

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 strong improvements with jobs being added, wages increasing and the unemployment rate declining over the past year.

As our office has been discussing, or more accurately, warning over the past year or so, the pattern of unemployment rate changes does not likely reflect the overall pattern of growth in the Oregon economy. The annual benchmark revisions that occur each March confirmed as much for the 2015 data. The overall unemployment rate pattern was smoothed, relative to the unrevised data. However, similar issues may be at play again so far in 2016. The household survey, from which the unemployment rate is derived, shows both record labor force gains and record monthly declines in the unemployment rate. While there is no question Oregon’s economy continues to improve, future revisions may reveal a somewhat different, and smoother path for the unemployment rate.

More importantly, wages in Oregon are increasing at near double-digit rates, which is better than during the mid-2000s expansion but still a notch below the 1990s gains. Average wages per worker are currently increasing 3-4 percent per year, which is faster than inflation of 1-2 percent per year.

While national wage trends have just begun to accelerate in the past six to nine months, Oregon’s have been strong for a couple years now. Even Oregon’s average hourly earnings have accelerated in the past six months.

Previously this measure, which only began in 2007 and thus is still new, had been growing near 0 percent in inflation-adjusted terms. Given all other Oregon-specific wage data was strong, average hourly earnings was an outlier. This is no longer the case.

The most recent job growth rankings, published by Arizona State University’s W.P. Carey School of Business², places Oregon 2nd in the nation for job growth in March. Over the past year the state has added 59,500 jobs, or an increase of 3.4 percent. Using the Oregon Employment Department’s preliminary benchmarked employment data, it shows slightly stronger figures. Oregon added 62,100 jobs over the year for a 3.5 percent growth rate, which would still rank 2nd fastest, trailing Idaho. For comparison and to show Oregon’s acceleration over the past couple of years, in 2013 Oregon ranked 11th fastest with growth of just 2.1 percent.

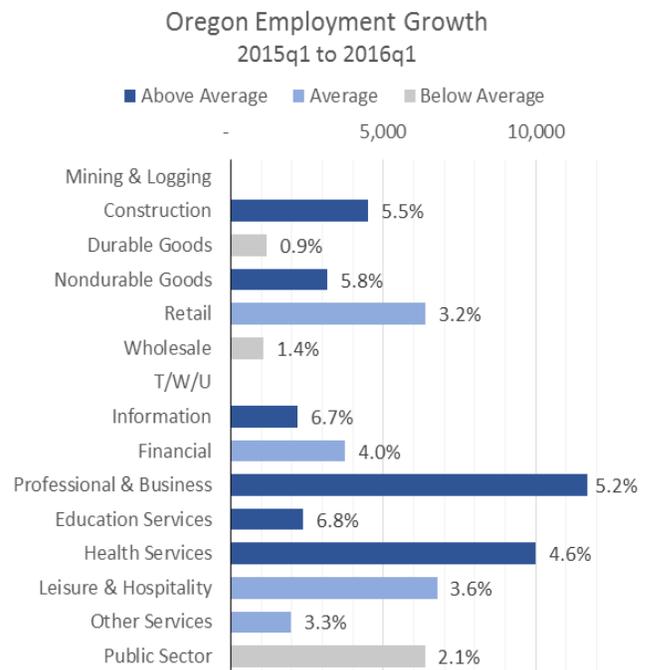


² <http://research.wpcarey.asu.edu/seidman/current-state-rankings/>

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 first quarter, total nonfarm employment increased 3.4 percent over the past year with the private sector growing at 3.7 percent and the public sector at 2.1 percent. These rates of growth are essentially on par with the height of the housing boom and among the best Oregon has experienced in the past generation.

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. Industries with dark blue colored bars are growing at rates much faster than total employment, light blue 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 with above-average growth rates. These include jobs in professional and business services, health services, and leisure and hospitality industries. These three industries have gained 28,500 jobs in the past year and account for 47 percent of all job gains across the state. The good news is that this share is smaller than a few years ago as other industries continue to add jobs as well, which was not the case earlier in the expansion.

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

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 2015. The QCEW is currently available through December 2015, thus the preliminary benchmark used here covers the October 2015 – December 2016 period.

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.

Currently, eight major industries are at all-time highs. Private sector food manufacturing, education, and health never really suffered recessionary losses – although their growth did slow during the recession. Professional and business services and leisure and hospitality have each regained all of their losses and are leading growth today. In recent months both retail employment, other services and the public sector have surpassed their pre-recession levels and are at all-time highs. The seven private sector industries at all-time highs account for 55 percent of all statewide jobs. The public sector accounts for an additional 17 percent of all jobs.

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

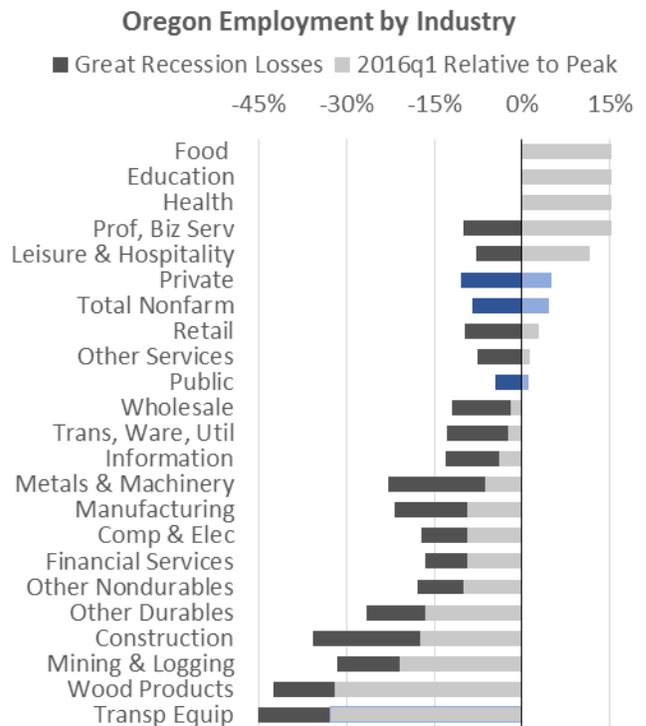
Coming off such a deep recession, and with a strong manufacturing cycle today, the goods-producing industries have and will exhibit stronger growth than in past cycles. Although, even with relatively strong manufacturing gains today, the industry is unlikely to fully regain all of its lost jobs. Oregon 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.

Leading Indicators

Both of the Oregon-specific composite leading indicators have turned up in recent months, following a period where each was more of a mixed bag. Our office’s Oregon Index of Leading Indicators (OILI) and the University of Oregon’s Index of Economic Indicators were essentially flat, or unchanged, from about mid-2014 to late-2015.



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

The unchanged topline hid a stark divergence between manufacturing, or goods producing, indicators and all other types. However, as some of the manufacturing indicators begin to improve, the overall indices are as well.

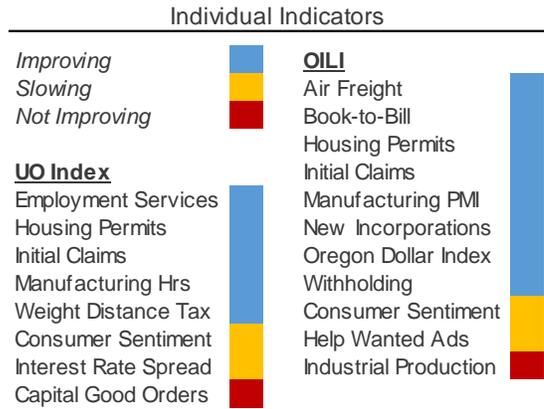
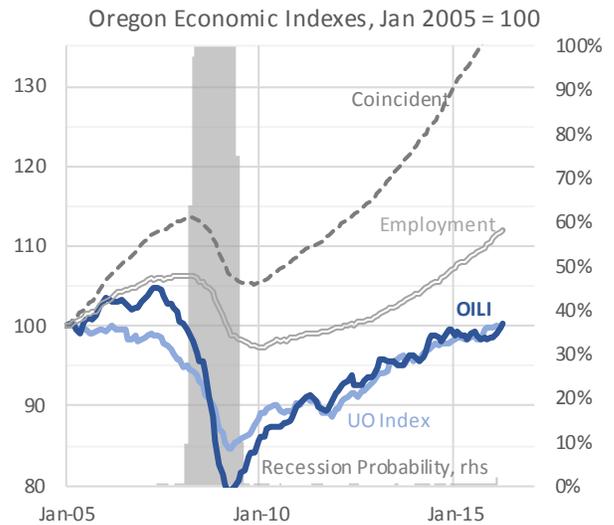
Specifically, the book-to-bill ratio for semiconductor equipment manufacturers, industrial production, manufacturing purchasing managers index, and the Oregon dollar have all seen improvements in the past month or two. New orders for capital goods excluding aircraft remains weak, however. While the relatively good news from these manufacturing indicators is encouraging, it is still premature to assume the downside risks have truly abated. Even so, not all goods producing indicators are negative. Oregon’s weight distance tax and the Port of Portland’s air freight tonnage continue to increase, reflecting overall economic activity, and the average manufacturing workweek is holding strong at 40 hours per week.

Nearly every other indicator remains positive. In fact, labor market measures look exceptionally strong, as initial claims for unemployment are at or near record lows, temporary agency employment continues to grow and withholding tax receipts out of Oregonian paychecks remains very robust. Additionally, housing permits continue to increase and the number of new businesses forming in Oregon is on the rise again. These indicators paint a brighter picture of the economy today and moving forward.

Right now the U.S. economy is not in recession. University of Oregon professor Jeremy Piger has created a real time probability of recession⁶ model, and finds there is just a 1.8 percent chance the U.S. has entered into a recession. However, another recession will come, of that we can be sure. IHS Global Insight puts the probability of recession over the next year at 20 percent, and the Wall Street Journal consensus is at also at 20 percent. Hopefully Oregon’s leading indicators will give a signal in advance of the next recession, which neither is doing today.

While past experience is no guarantee of future performance, Oregon’s leading indicator series do have a good track record in their brief history. Both series flattened out in 2006 and began their decline in advance of the Great Recession. Similarly both Oregon series reached their nadir in March 2009, a few months before the technical end of the recession (June 2009 per NBER) and about 9 months in advance of job growth returning to Oregon.

Short-term Outlook



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

Robust job growth continues in Oregon. Since the beginning of 2013, Oregon job growth has picked up from around 1.5 to 2.0 percent to more than 3.0 percent today. The outlook calls for this growth to persist for another year and a half before longer-run demographic trends weigh on growth. While consistent with the general character of recent forecasts, this marks an upward revision to the employment outlook. Previously our office expected the deceleration in job growth to happen in early to mid-2017. Now, our office expects this to occur at the end of 2017. Wages and incomes remain relatively unchanged to previous outlooks.

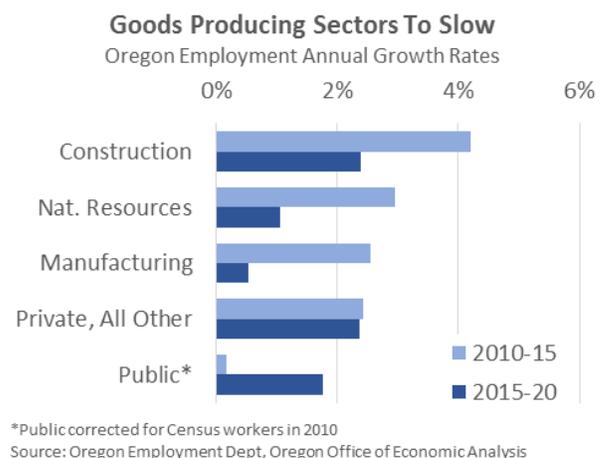
Absent the state’s new minimum wage law, passed during the 2016 legislative session, the upward revision to the employment outlook would have been even larger. Using estimates provided by the Oregon Legislative Revenue Office, along with the academic literature, our office’s outlook now includes a slowdown in job growth due to the higher minimum wage moving forward. While the impact is small when compared to the size of the Oregon economy, it does result in approximately 40,000 fewer jobs in 2025 than would have been the case absent the legislation. Our office is not predicting outright job losses due to the higher minimum wage, however we are expecting future growth to be slower as a result. In the near term, the higher minimum wage boosts overall state income as low-wage workers receive raises. Over the medium term, employers are expected to adjust to the higher wages and increase worker productivity, possibly via capital for labor substitutions. Our office has incorporated these overall effects into the outlook for wages and in the industries which employ the largest numbers of low-wage workers. These include the obvious like leisure and hospitality, and retail trade, but also health care and food processing manufacturing, among others.

Should this overall economic outlook come to pass, it will match 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.

Nevertheless, goods-producing industries, while smaller, have been growing at above-average rates. However, this is expected to change moving forward. All three major goods-producing industries are expected to grow slower in the coming years than they have seen in the recent past. Only construction is expected to add jobs at the same pace as the rest of the private sector, as the housing rebound continues.

Manufacturing in particular is expected to experience very minimal gains in the coming years. Not only is Intel, the state’s largest private employer, downsizing, much, if not all of the cyclical rebound in manufacturing has run its course. The weak global economy and strong Oregon dollar will weigh on growth. What manufacturing gains are expected are among the state’s food processors, and beverage manufacturers, predominantly breweries.



The baseline outlook does not call for outright manufacturing job losses overall, however that does remain a distinct possibility and risk to the outlook.

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 is expected to grow roughly stay in line with population growth and the increased demand for public services, albeit a little faster than population growth alone. 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 it is a risk to the outlook.

Economic Forecast Summary

		Quarterly					Annual				
		2016:1	2016:2	2016:3	2016:4	2017:1	2015	2016	2017	2018	2019
Personal Income, Nominal	U.S.	3.9	3.4	3.9	4.8	5.5	4.4	3.9	4.9	5.1	5.0
<i>% change</i>	Oregon	6.1	6.5	5.8	6.3	6.6	5.8	5.5	6.5	6.4	5.7
Wages and Salaries, Nominal	U.S.	3.8	5.3	5.2	5.3	5.4	4.6	4.6	5.3	4.8	4.6
<i>% change</i>	Oregon	9.1	8.5	7.2	6.9	7.1	6.6	7.1	7.2	6.4	5.3
Population	U.S.	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8	0.8
<i>% change</i>	Oregon	1.1	1.3	1.5	1.1	1.1	1.3	1.3	1.2	1.2	1.2
Housing Starts	U.S.	1.15	1.18	1.21	1.26	1.33	1.11	1.20	1.39	1.50	1.55
<i>U.S. millions, Oregon thousands</i>	Oregon	19.2	18.0	18.6	19.5	20.5	16.0	18.8	21.4	22.9	23.1
Unemployment Rate	U.S.	4.9	4.9	4.8	4.8	4.7	5.3	4.8	4.7	4.7	4.9
	Oregon	4.8	4.9	4.9	5.0	5.0	5.8	4.9	5.1	5.3	5.4
Total Nonfarm Employment	U.S.	1.9	1.7	1.7	1.8	1.4	2.1	1.9	1.4	0.9	0.8
<i>% change</i>	Oregon	4.6	3.4	3.1	3.1	3.0	3.3	3.5	3.0	2.0	1.0
Private Sector Employment	U.S.	2.1	2.0	2.0	2.1	1.6	2.4	2.1	1.6	0.9	0.7
<i>% change</i>	Oregon	4.9	3.0	3.3	3.4	3.3	3.5	3.7	3.2	2.1	1.0

Along with an improving labor market, stronger personal income gains will come. 2013 personal income is estimated to have increased by just 1.6 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, followed by 5.8 percent growth in 2015. Continued strong gains are expected moving forward, along with a full throttle economic expansion. Income growth is forecasted to be 5.5 percent in 2016 and 6.5 percent in 2017.

As the economy continues to improve, household formation is increasing too, which will help drive up demand for new houses. Household formation was suppressed earlier in the recovery, however the improving economy and increase in migration have returned in full force. Even as more young Oregonians are living at home, as the Millennials continue to age beyond their early 20s, demand for housing will increase as well.

Housing starts in the first quarter totaled 19,200 at an annual pace, the highest figures seen since 2007. However, 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 nearly 19,000 in 2016 and nearly 23,000 in 2017. Over the extended horizon, starts are expected to average a little more 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 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 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](#)⁷.
- 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.

⁷ <http://oregoneconomicanalysis.wordpress.com/2012/01/23/historical-look-at-oregons-wood-product-industry>
<http://oregoneconomicanalysis.wordpress.com/2013/05/28/timber-counties/>

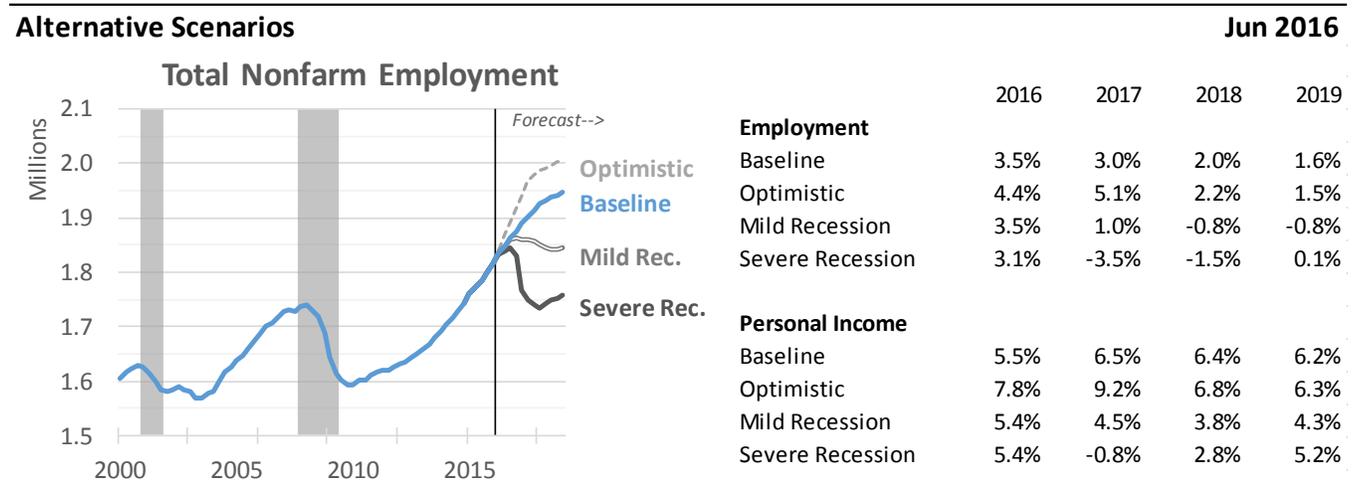
- Initiatives, referendums, and referrals. Generally, the ballot box and legislative changes bring a number of unknowns that could have sweeping impacts on the Oregon economy and revenue picture.

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 into a stronger cyclical expansion. The lackluster economic growth seen in the early stages of recovery, and the manufacturing weakness in 2015 recedes into the rearview mirror of history and the U.S. economy builds momentum throughout 2016. The economy is soon firing on all cylinders. Economic growth is above potential in 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 remains lower than under the baseline scenario as individuals are able to find employment more readily and income growth accelerates. The labor force participation gap closes. 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 mid-2016 or about a year earlier than the baseline.



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 2016. The housing market stalls (again), removing one driver of growth. The Fed’s tightening in late-2015 and mid-2016 causes emerging market turmoil and capital flight. The U.S. dollar strengthens further, choking off the manufacturing cycle. These factors are enough weight on the lackluster recovery that mid to late-2016 the economy slides back into recession. Job losses ensue in 2017, and while not severe – about 17,000 jobs in Oregon – it takes a toll on business income, housing starts and personal income. The unemployment rate returns to 7.5 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 and again in 2016, 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 10 percent and more than 100,000 Oregonians lose their jobs in 2017-18. 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 sixth fastest among all states across the country in terms of growth with gains averaging 2.9 percent through 2021. Total employment is expected to be the eighth strongest among all states at an annualized 1.6 percent, while manufacturing employment will be the third fastest in the country at 1.4 percent. Total personal income growth is expected to be 5.1 percent per year, the eleventh fastest among all states, according to IHS Economics.

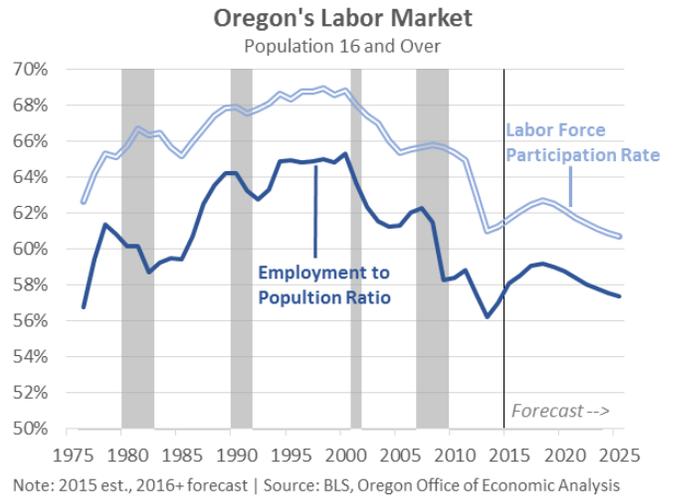
OEA is somewhat more bullish as our office expects the peak growth rates in the economy to persist longer than does IHS. Oregon will also maintain a growth advantage relative to other states. However, this advantage will be somewhat smaller than the state has enjoyed in past decades. OEA has identified 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 while recent months have brought considerable improvements there remain potentially worrisome signs, particularly when the next recession comes.

First, on the bright side, all of the recessionary-induced declines in the labor force itself have been reversed in the past two years. Oregon's labor force has never been larger. However, the participation rate remains lower than expected, when adjusting for the size of the population and the aging demographics. Oregon's participation rate is rebounding today, which is great news, however the participation gap is still cause for concern. While much of the past decade's patterns can be attributed to the severe nature of the Great Recession, and even the

lackluster housing boom itself, some of the damage is likely to be permanent. The longer the expansion continues, the more likely the permanent damage will be small.

All told, our office’s baseline outlook calls for some continued 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 (autos and aerospace). 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, then the state may not fully realize these gains if they rely more on clusters and concentrations of similar firms that may already exist elsewhere in the country.



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

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 and even accelerate. However data available from the U.S. Census Bureau and Bureau of Labor Statistics clearly indicate that entrepreneurship and business formation remain at subdued levels and rates.

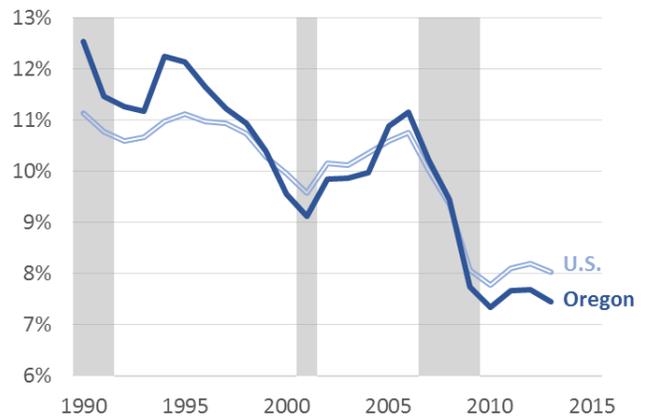
The share of all businesses that are start-ups, either in Oregon or across the nation, is effectively at an all-time low, with data starting in the late 1970s. Associated start-up employment follows a similar pattern. The concern is that new businesses are generally considered the source of innovation 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 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 2025. 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 published⁸ a detailed look at Oregon's per capita personal income.

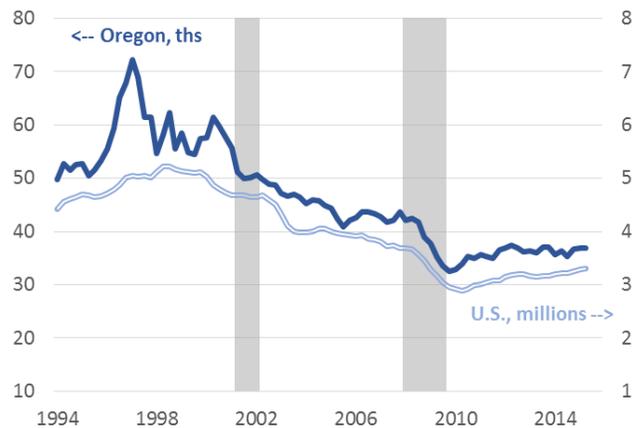
While the state's per capita income remains low, the state's average wage does not. Today, Oregon's average wage relative to the nation, is at its highest point since the mills closed in the 1980s. While some industries are seeing stronger growth, these gains are broad-based across regions and industries in Oregon.

Fewer New Firms
Start-ups as Share of Total Businesses



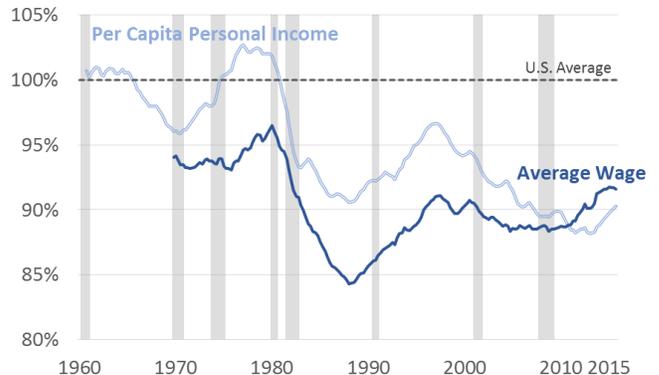
Source: Census Bureau, Oregon Office of Economic Analysis

Where Are the Start-Ups?
Job gains at new establishments, 4 Qtr Sum



Source: BLS, Oregon Office of Economic Analysis

Oregon Income
Share of U.S. Average



Latest data: 2015q4 | Source: BEA, IHS Global Insight, Oregon Office of Economic Analysis

⁸ <http://olmis.emp.state.or.us/olmisj/PubReader?itemid=00007366>

Oregon Regional Trends

Job growth has returned to all regions in Oregon and in many, employment has surpassed pre-Great Recession levels. However that alone does not indicate the economy is fully healthy. For most regions, the population continued to grow even as the economy cratered. Our office's Jobs Gap measure compares the actual number of jobs in a region with the amount needed to keep pace with a growing population. This is based on an estimate of the potential labor force which takes into account local demographics and the aging of the population.

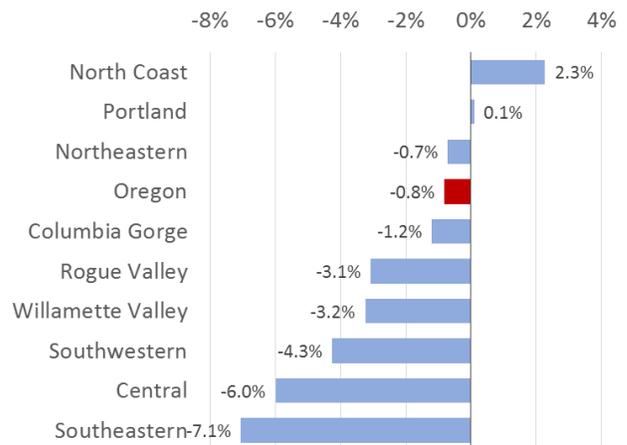
Today in Oregon only two regional economies – the North Coast and Portland MSA – have a positive Jobs Gap, indicating they have added enough local jobs to match or exceed population gains. While the Portland region has had record employment numbers for a couple of years, it was just recently that the growth caught up to the population gains of the past decade.

The remaining regions in the state fall into two groups. The first group consists of Central Oregon and the Rogue and Willamette Valleys. These regions have seen strong job growth but just not enough to match population gains. Central Oregon in particular experienced some of the largest job losses in the nation during the recession. While robust gains in recent years are impressive, population growth has returned. These regional Jobs Gaps are narrowing quickly, however they have not closed just yet. Expectations are they will by late 2016 or early 2017.

The second group consists of both Southeastern and Southwestern Oregon. These regions suffered severe job losses and have only seen modest gains so far in recovery. In Southwestern Oregon, the Jobs Gap has closed half due to job gains and half due to the potential labor force shrinking. As bad as demographic trends can be in rural America, in many places in Oregon the vast majority of the impact on the economy has already taken place. Aging from 60 to 70 years old has the largest labor market impact. Moving forward, demographic trends will actually be better and more supportive of growth for this very reason than many realize.

For more Jobs Gap, please visit our website: <https://oregoneconomicanalysis.com/2016/03/29/oregon-jobs-gap-by-region/>.

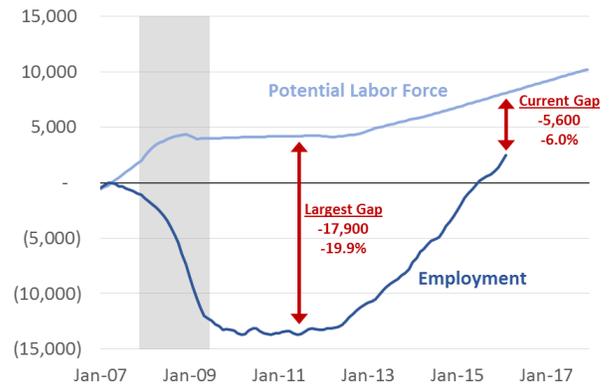
Oregon Jobs Gap by Region, Feb '16



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

Central Oregon Jobs Gap

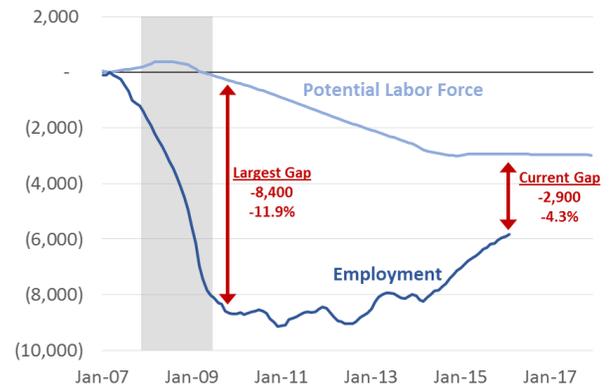
Crook, Deschutes, Jefferson Counties



Latest Data: Feb '16 | Source: Census, Oregon Employment Department, Oregon Office of Economic Analysis

Southwestern Oregon Jobs Gap

Coos, Curry, Douglas Counties



Latest Data: Feb '16 | Source: Census, Oregon Employment Department, Oregon Office of Economic Analysis

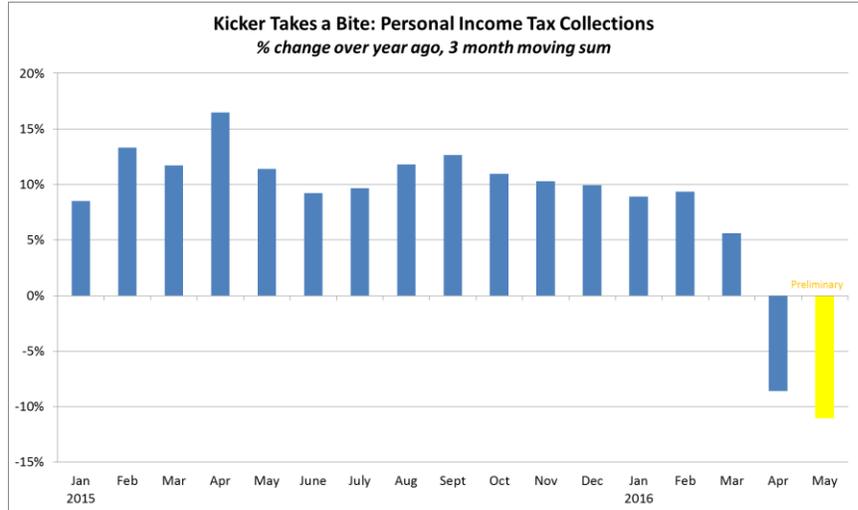
REVENUE OUTLOOK

Revenue Summary

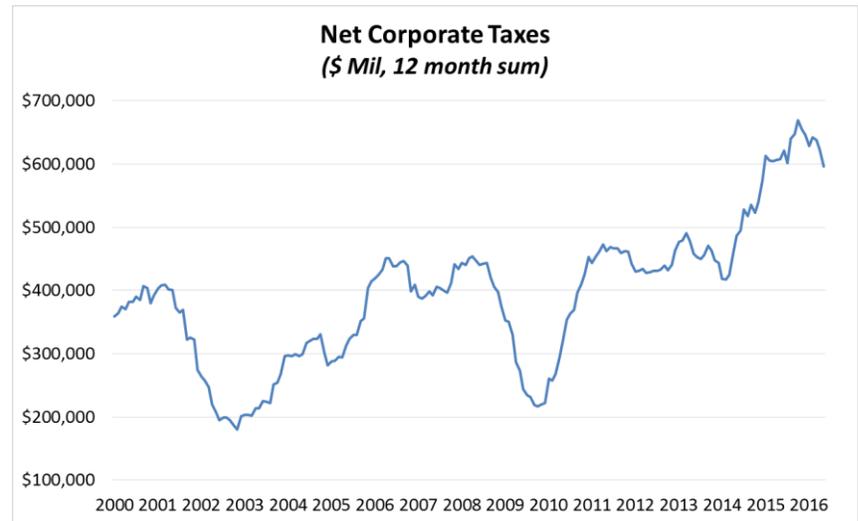
With the first income tax filing season of the 2015-17 biennium now behind us, Oregon’s General Fund revenue collections remain on track with what was expected when the budget was drafted. Personal income tax collections continue to expand at a healthy pace as a result of strong job growth and wage gains.

Personal income tax collections during the filing season came in roughly the same size as last year. However, current collections reflect the payout of kicker credits. If not for the kicker, this season’s collections would have been \$300 million larger than last year. Underlying state revenue growth in Oregon remains among the strongest in the U.S.

Although Oregon’s revenue growth has been strong, these gains have not come as a surprise. Expectations for Oregon’s General Fund revenue sources in 2015-17 are currently within 0.2% of the Close of Session forecast.



In contrast to the strong growth seen in personal income tax collections, corporate tax collections have started to contract in recent months. Nationwide, corporate profits are falling, largely due to rapid appreciation of the U.S. dollar, and struggles among energy firms and other commodity producers. Even so, corporate tax collections remain large relative to historical norms. Corporate tax revenues are expected to exceed the 2% kicker threshold by \$10.4



million, generating a kicker amount of \$32.3 million. In keeping with statute, this amount, should it be realized, will be dedicated to K-12 funding during the 2017-19 biennium.

In addition to healthy General Fund revenue growth, Oregon Lottery sales have been very strong as well. Recent collections have consistently come in above expectations.

Although General Fund revenues have been tracking very close to expectations to date, the outlook for revenue growth during the upcoming 2017-19 biennium has become somewhat stronger. Oregon’s labor market has finally soaked up all of the slack created by the recession. As such, current rates of growth are not sustainable

indefinitely. In earlier versions of the forecast, growth was expected to begin to come back down to earth during the last six months of the current biennium. Now, it is assumed that growth will not slow significantly until the beginning of the 2017-19 biennium. A broad consensus among the Governor's Council of Economic Advisors felt that Oregon's current boom still has legs, given that few saw signs of weakness in their individual areas of expertise.

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 \$18,023 million. This represents an increase of \$17 million (0.1%) from the March 2016 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 \$25 million (0.1%) above the Close of Session forecast.

Personal Income Tax

Personal income tax collections were \$1,603 million during the third quarter of fiscal year 2016, \$131 million (8.9%) above the latest forecast. Compared to the year-ago level, total personal income tax collections grew by 5.6% relative to a forecast that called for a 3.0% decline. Table B.8 in Appendix B presents a comparison of actual and projected personal income tax revenues for the January-March quarter. However, comparisons with past tax collections have been complicated by the use of a new personal income tax processing system.

Corporate Excise Tax

Corporate excise tax collections equaled \$119 million for the third quarter of fiscal year 2016, \$13 million above the March forecast. Compared to the year-ago level, net corporate excise tax collections fell by 8.4% relative to a forecast that called for a 20.3% decline.

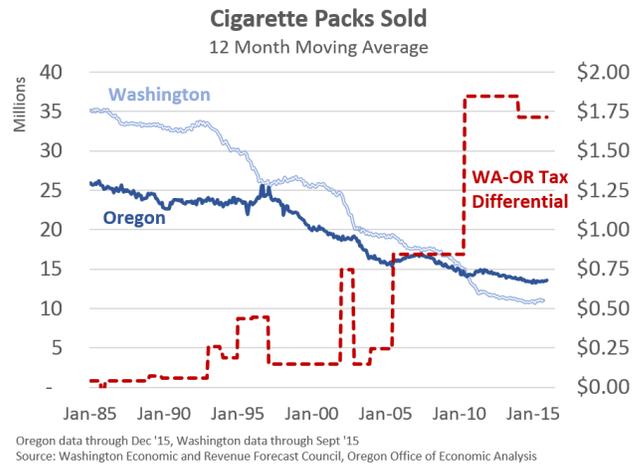
Corporate tax collections remain well above historical norms even after recent declines. In addition to profitability, recent law changes have supported collections, as has a decline in outstanding Business Energy Tax Credits.

Corporate income tax collections for 2015-17 are now expected to end the biennium 3.0% higher than what was called for in the Close of Session forecast. This would generate a corporate kicker amount of \$32.3 million to be dedicated to K-12 education during the 2017-19 budget period.

Tobacco Tax Revenue

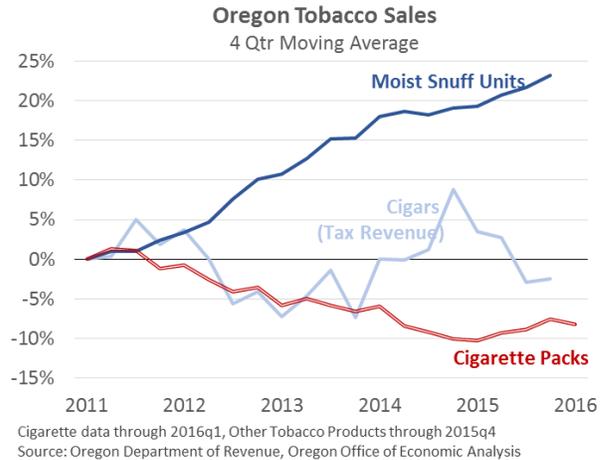
Cigarettes sold in Oregon have been on a long-run decline since the early 1980s, if not longer, as the smoking rate and overall consumption and usage have plunged. Oregon's trends have matched or exceeded the national ones over this time period. However, packs sold in 2015 were 2.7 percent higher than in 2014, or nearly 360,000 more. The increase in sales has resulted in more tax revenue than expected. So far in the first nine months of the 2015-17 biennium, actual cigarette tax revenue has exceeded forecast by nearly \$11 million, of which \$1.9 million is General Fund.

It can be difficult to know what exactly is driving higher cigarette sales, however three items stand out. First, the interplay between tax policy and tax rates in Oregon and Washington has driven sizable fluctuations around the long-term trend in cigarette sales in the Northwest. Typically, when Washington raises taxes and Oregon does not, Washington sales fall considerably and Oregon’s stabilize or increase. The opposite is true as well. However one has to go back to the early 1990s to find a time when Oregon sales increased and the tax environment was stable, like it is today.



Second, based on conversations among our office’s counterparts around the country, this increase in cigarette sales is nationwide. The vast majority of states are seeing sales above their forecast, with many seeing outright increases like Oregon. This indicates the driver of growth is national in scope and not any particular local issue. Potential answers may be the increases in disposable income due to lower gas prices, or the overall improvement in the economy in recent years.

Third, the increases could be related to consumer behavior, changing tastes or preferences and e-cigarettes. The Wall Street Journal recently noted that consumers do not like e-cigarettes as much, sales have slowed, manufacturers and retailers have a backlog of inventory, and increased scrutiny from states have all impacted the industry. Along these lines, it is very plausible that some smokers switched to e-cigs in recent years, but did not like them, and have switched back to cigarettes, thus the uptick in sales following previous declines.



Other Sources of Revenue

Among other primary sources of revenue, estate taxes, video lottery sales and criminal fines have been coming in above expectations in recent months.

Table R.1**2015-17 General Fund Forecast Summary**

(Millions)	2015 COS Forecast	March 2016 Forecast	June 2016 Forecast	Change from Prior Forecast	Change from COS Forecast
Structural Revenues					
Personal Income Tax	\$15,713.5	\$15,692.1	\$15,702.1	\$10.0	-\$11.4
Corporate Income Tax	\$1,100.0	\$1,134.3	\$1,132.3	-\$2.0	\$32.3
All Other Revenues	\$1,184.6	\$1,179.9	\$1,189.2	\$9.3	\$4.6
Gross GF Revenues	\$17,998.1	\$18,006.3	\$18,023.6	\$17.3	\$25.5
Offsets and Transfers	-\$42.8	-\$43.2	-\$43.6	-\$0.4	-\$0.8
Administrative Actions ¹	-\$20.2	-\$14.0	-\$14.0	\$0.0	\$6.2
Legislative Actions	-\$158.9	-\$158.3	-\$158.3	\$0.0	\$0.6
Net Available Resources	\$18,309.1	\$18,319.6	\$18,336.5	\$16.9	\$27.4
Confidence Intervals					
67% Confidence	+/- 4.9%		\$887.6	\$17.14B to \$18.91B	
95% Confidence	+/- 9.8%		\$1,775.2	\$16.25B to \$19.80B	

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.

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.

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%	15,702.1	12.5%	17,497.4	11.4%	19,366.9	10.7%	21,476.7	10.9%	23,399.0	9.0%
Corporate Income Taxes	1,116.5	26.3%	1,132.3	1.4%	1,045.8	-7.6%	1,057.7	1.1%	1,101.5	4.1%	1,134.8	3.0%
All Others	1,030.2	-11.4%	1,189.2	15.4%	1,079.4	-9.2%	1,171.4	8.5%	1,252.2	6.9%	1,330.0	6.2%
Gross General Fund	16,105.0	13.7%	18,023.6	11.9%	19,622.6	8.9%	21,596.0	10.1%	23,830.4	10.3%	25,863.8	8.5%
<i>Offsets and Transfers</i>	<i>(74.5)</i>		<i>(43.6)</i>		<i>(71.4)</i>		<i>(73.6)</i>		<i>(74.0)</i>		<i>(74.4)</i>	
Net Revenue	16,030.5	13.3%	17,980.0	12.2%	19,551.2	8.7%	21,522.3	10.1%	23,756.4	10.4%	25,789.4	8.6%

General Fund revenues are expected to total \$19,623 million in the 2017-19 biennium, an increase of 8.9% percent from the prior period, and \$132 million above the March forecast. In the 2019-21 biennium, revenue growth is expected to reach 10.1%, followed by rates of 10.3% in the 2021-23 biennium and 8.5% in the 2023-25 biennium. The slowdown in long-run revenue growth is largely due to the impact of slower labor force growth 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. On a smaller scale, a newly enacted minimum wage increase will weigh on the outlook over the extended horizon. Table B.2 in 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](#). For changes made during the 2016 short session see: [Budget Highlights 20152017](#).

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 predicted⁹.

⁹ The methodology for computing alternative scenarios has been changed to reflect recent work done by the Legislative Revenue Office. Assumptions: Recessions begin in 2017 and return to baseline income by 2024. The moderate recession scenario assumes personal income growth will be reduced by one-half relative to the baseline in 2017 and 2018. The severe recession scenario assumes personal income will decline in 2017 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

June 2016

Alternative Cyclical Revenue Forecast (\$ millions)

	2015-17 BN		2017-19 BN		2019-21 BN		2021-23 BN		2023-25 BN	
Baseline Case	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
Personal Income										
Level	177.77	188.33	200.84	212.85	224.49	235.75	245.69	258.32	269.37	281.32
% change	5.6%	5.9%	6.6%	6.0%	5.5%	5.0%	4.2%	5.1%	4.3%	4.4%
Taxes										
Personal Income	7,647	8,055	8,528	8,969	9,405	9,962	10,501	10,976	11,447	11,952
Corporate Excise & Income	602	530	525	521	525	533	545	557	563	572
Other General Fund	528	662	526	553	571	601	614	639	652	678
Total General Fund	8,777	9,247	9,579	10,043	10,500	11,095	11,659	12,171	12,663	13,201
% change	3.7%	5.4%	3.6%	4.8%	4.6%	5.7%	5.1%	4.4%	4.0%	4.3%
Moderate Recession	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
Personal Income										
Level	177.8	183.7	191.2	204.8	218.5	231.4	242.9	256.0	267.4	281.0
% change	5.6%	3.4%	4.1%	7.1%	6.7%	5.9%	5.0%	5.4%	4.4%	5.1%
Taxes										
Personal Income	7,647	7,780	7,955	8,496	9,055	9,702	10,335	10,831	11,314	11,902
<i>Deviation from baseline</i>		-275	-573	-474	-350	-260	-166	-145	-133	-49
Corporate Excise & Income	602	504	475	481	497	513	533	547	555	570
<i>Deviation from baseline</i>		-26	-50	-39	-28	-20	-12	-10	-8	-2
Other General Fund	528	662	526	553	571	601	614	639	652	678
Total General Fund	8,777	8,946	8,955	9,530	10,122	10,816	11,481	12,017	12,521	13,150
% change	3.7%	1.9%	0.1%	6.4%	6.2%	6.9%	6.1%	4.7%	4.2%	5.0%
<i>Deviation from baseline</i>		-301	-624	-513	-378	-279	-178	-155	-141	-51
<i>Biennial Deviation</i>		-301		-1,137		-657		-333		-192
Severe Recession	FY '16	FY '17	FY '18	FY '19	FY '20	FY '21	FY '22	FY '23	FY '24	FY '25
Personal Income										
Level	177.8	171.6	181.3	197.0	212.7	227.8	241.6	254.7	266.0	278.6
% change	5.6%	-3.5%	5.6%	8.6%	8.0%	7.1%	6.1%	5.4%	4.4%	4.7%
Taxes										
Personal Income	7,647	7,055	7,366	8,032	8,714	9,490	10,258	10,751	11,230	11,750
<i>Deviation from baseline</i>		-1,000	-1,162	-937	-691	-472	-243	-225	-217	-202
Corporate Excise & Income	602	436	423	443	470	497	527	541	549	558
<i>Deviation from baseline</i>		-94	-102	-78	-55	-36	-18	-16	-14	-13
Other General Fund	528	662	526	553	571	601	614	639	652	678
Total General Fund	8,777	8,153	8,315	9,028	9,754	10,587	11,399	11,931	12,432	12,986
% change	3.7%	-7.1%	2.0%	8.6%	8.0%	8.5%	7.7%	4.7%	4.2%	4.5%
<i>Deviation from baseline</i>		-1,094	-1,264	-1,015	-746	-508	-261	-241	-231	-215
<i>Biennial Deviation</i>		-1,094		-2,280		-1,255		-501		-446

Lottery Earnings

Lottery proceeds continue to boom, driven by strong growth in video lottery sales. While full fiscal year 2016 results will not quite match the records set back in 2008, recent months certainly have. Video lottery growth is slowing somewhat, edging lower from 10 percent growth a year ago to 8 percent growth today. However these gains are outpacing our office's previous forecasts. Given the ongoing economic strength and improving gaming market nationwide, the underlying, fundamental outlook for Lottery is being raised. However, these increases are offset as our office is factoring in the Cowlitz Tribe's new casino in La Center, Washington (16 miles north of

Portland) for the first time. While the casino won approval a year or two ago, legal challenges remain and our office has taken a wait and see approach before adjusting the outlook accordingly. The building itself is now approximately 40 percent finished¹⁰ and set to open by late spring 2017¹¹. As such, our office is now building in a \$65 million dollar per year reduction in video lottery transfers to the outlook.

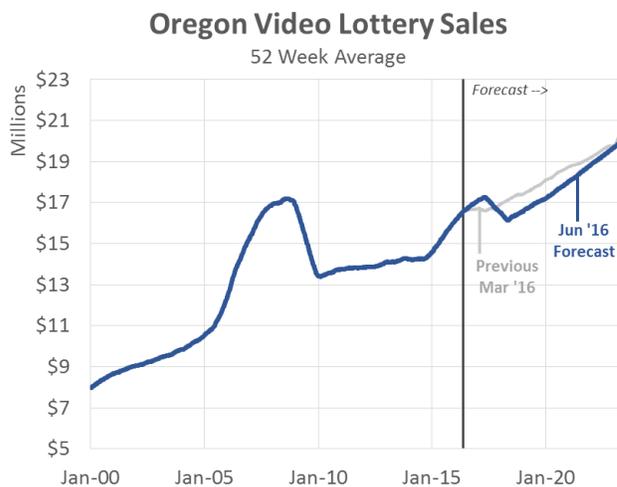
The net result of these changes is as follows. Available resources from Lottery games and programs are increased \$37.2 million for 2015-17 relative to March outlook. This increase is due to the ongoing strength in sales and upwardly revised expectations moving forward. However, revenues in 2017-19 are revised lower by \$55.1 million due to the increased gaming competition. 2019-21 revenues are revised down by a similar \$46.8 million. 2021-23 and 2023-25 are revised lower as well, although by smaller amounts of \$19.4 million and \$20.8 million, respectively. The forecast changes dissipate over time due to the increase in the underlying, longer-run growth rates in video lottery sales.

Lottery Overview

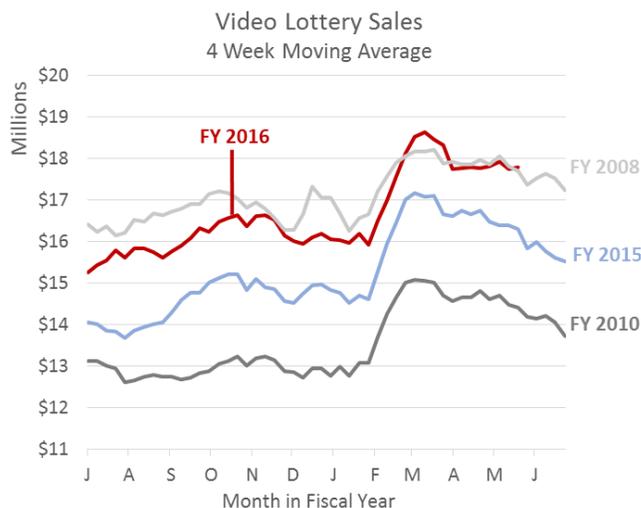
Overall, video lottery dominates total lottery earnings, accounting for approximately 88 percent of all lottery transfers in the past two years. Over the past decade, video lottery has undergone four distinct phases.

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.



Source: Oregon Lottery, Oregon Office of Economic Analysis



¹⁰ <http://www.columbian.com/news/2016/may/16/vancouver-ends-cowlitz-casino-fight/>

¹¹ <http://www.cowlitzcasino.com/our-vision/index.html>

The third phase covered the initial years of recovery, fiscal years 2010 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.

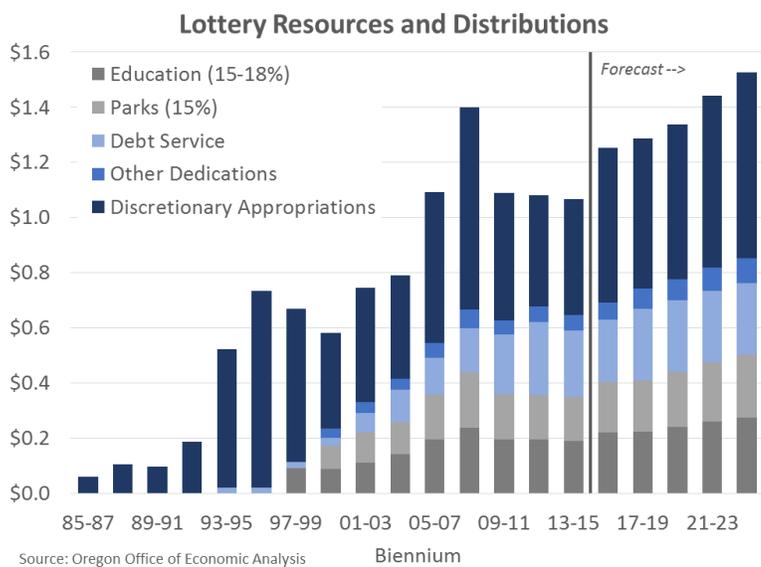
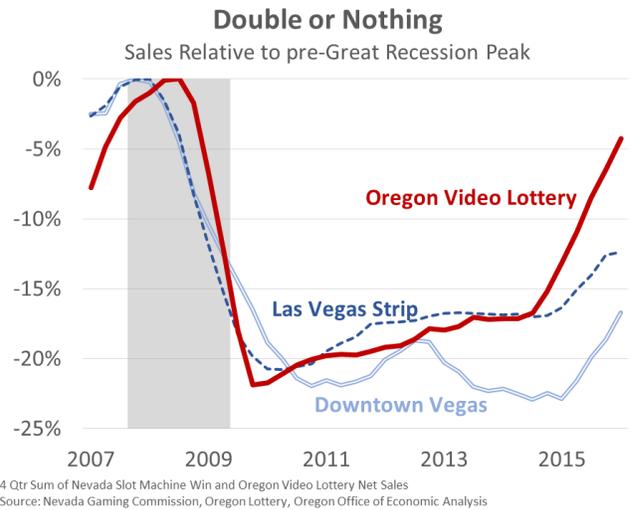
Last year (FY2015) marked a new phase in Oregon video lottery history with the capital replacement plan. Throughout this biennium, Lottery will replace the 12,000 existing video lottery terminals throughout the state, some of which will be nine

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 has been deducted from Lottery earnings prior to being transferred for general revenue purposes. The last quarterly transfer included the final portion of the \$130 million for the replacement program.

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. Every region of the state, regardless of economic performance in recent years, saw double-digit increases in video lottery sales. The second wave – one more new terminal in each retailer – is nearing completion today.

While sales remain strong, expectations are for a continued modest deceleration in growth until the Cowlitz Tribe casino opens approximately a year from now, or a little sooner. Video lottery growth has already slowed from around 10 percent year-over-year to 8 percent today. Over the next year, sales are projected to slow further to 5 or 6 percent. After that time, sales are expected to fall approximately 7 percent before resuming growth due to the underlying improvements in the economy and increases in consumer spending.

This forecast represents the first time our office has incorporated the Cowlitz Tribe casino and its expected impact on Oregon video lottery sales. The casino will be significantly closer to the Portland MSA than any other existing tribal casino. In fact, La Center, WA is in the Portland MSA, albeit 16 miles north of the state border. Overall the Portland MSA accounts for more than half of Oregon video lottery sales, thus the increased competition for gaming dollars will impact



state revenues. As the casino's opening nears, our office expects to modify and refine the estimated impact, either up or down, as we gather more information.

Other issues to watch include broader and national trends in gaming markets, demographic preferences for recreational activities, and to what extent consumers increase the share of their incomes spent on gaming. In much of the past 6 years, consumers have remained cautious with their disposable income.

The current outlook does leave room for both upside and downside risks. The Cowlitz Tribe casino may still be derailed due to legal challenges and if not, its impact may be greater or smaller than the current forecast assumes. The stronger economy and new terminals may unlock permanently higher sales. However the increases seen may also prove temporary and just a novelty-bump as Oregonians tried the new machines simply because they were new.

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

Budgetary Reserves

The state currently administers two general reserve accounts, the Oregon Rainy Day Fund¹² (ORDF) and the Education Stability Fund¹³ (ESF). This section updates balances and recalculates the outlook for these funds based on the June revenue forecast.

As of this forecast, the two reserve funds currently total a combined \$6290.2 million. Additionally there is a projected General Fund ending balance for this biennium of \$261.8 million, bringing effective reserves to \$891.1 million, or about 4.9 percent of current biennium's revenue.

The forecast for the ORDF includes two deposits for this biennium. The first, \$158.3 million, is related to the General Fund ending balance from last biennium (2013-15) and occurred in February. The second, \$10.9 million, is due to the increased corporate taxes from Measure 67. This brings the projected ORDF ending balance at the end of 2015-17 to \$387.6 million.

The forecast calls for \$197.9 million in deposits into the ESF in 2015-17 based on the current Lottery forecast. This would bring the ESF balance to \$381.6 million at the end of the current biennium.

Together, the ORDF and ESF are projected to have a combined balance of \$769.5 million at the close of the 2015-17 biennium. Provided the General Fund ending balance remains unallocated, total effective reserves at the end of 2015-17 would just over \$1 billion, or 5.7 percent of current revenues.

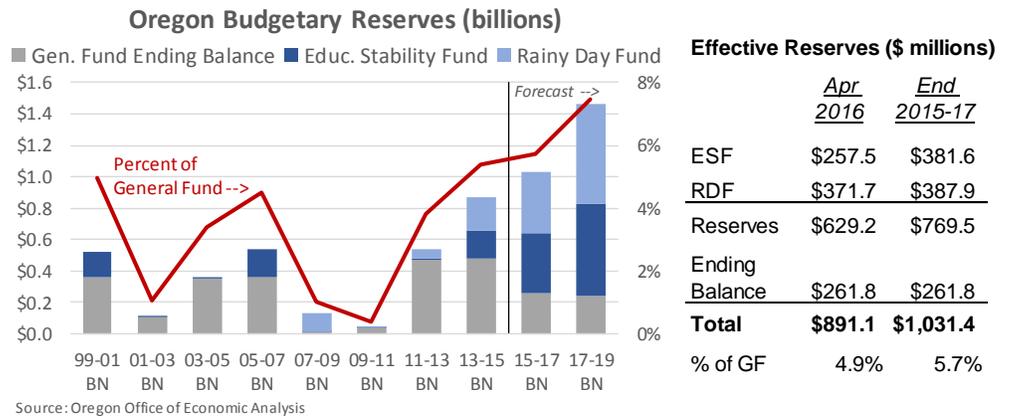
¹² The ORDF is funded from ending balances each biennium, up to one percent of appropriations. The Legislature can deposit additional funds, as it did in first populating the ORDF with surplus corporate income tax revenues from the 2005-07 biennium. The ORDF also retains interest earnings. Withdrawals 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.

¹³ 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.

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 size¹⁴.

Provided the economic expansion continues, Oregon’s reserves are projected to reach 7 percent of expenditures at the end of the 2017-19 biennium.

B.10 in Appendix B provides more details for Oregon’s budgetary reserves.



¹⁴ Based on a one standard deviation change in revenues. Larger reserves needed to insure against a more severe recession.

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 was 16th between 2010 and 2015 lagging behind all of the neighboring states, except California. 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 that followed, Oregon's population increased at a slow pace in the recent past. However, Oregon's population growth since 2014 rebounded strongly. Growth in 2015 ranked 10th fastest in the nation, surpassing Idaho and California. Based on the current forecast, Oregon's population will reach 4.39 million in the year 2022 with an annual rate of growth of 1.27 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 has already exceeded 80 percent and remain that way throughout the forecast horizon due largely to combination of increase in net migration and rise in the number of deaths among elderly population associated with increasing number of 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 past and will continue the trend in the near future exceeding 5 percent annual rate of growth 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. The annual growth rate will taper off to 1.34 percent by the end of the forecast period as a sign of baby-boom generation's transition to elderly age group. 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 has dissipated. An unprecedented fast pace of growth of population in this age group has started 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. The average annual rate of growth for this oldest elderly over the forecast horizon will be 1.0 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 remain virtually unchanged at 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 1.8 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 has 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 only after 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. Post-censal population totals for the years 2010 through 2015 are from the Population Research Center, Portland State University. The numbers of births and deaths through 2015 are from Oregon's Center for Health Statistics. All other numbers and age-sex detail are generated by OEA.

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 2010-202 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 38,000 to 48,200, averaging 43,600 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 has already rebounded and will continue high rate of growth. 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. 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.

APPENDIX A: ECONOMIC FORECAST DETAIL

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Table A.1 – Employment Forecast Tracking

Total Nonfarm Employment, 1st quarter 2016

(Employment in thousands, Annualized Percent Change)

	Preliminary Estimate		Forecast		Forecast Error		Y/Y Change
	level	% ch	level	% ch	level	%	% ch
Total Nonfarm	1,819.2	4.6	1,810.5	3.0	8.7	0.5	3.3
Total Private	1,514.4	4.9	1,503.3	2.9	11.1	0.7	3.6
Mining and Logging	7.8	2.3	7.7	4.5	0.1	1.1	(1.4)
Construction	88.4	12.6	84.9	5.0	3.5	4.1	7.4
Manufacturing	186.9	1.1	187.4	1.5	(0.4)	(0.2)	1.3
Durable Goods	130.7	(0.3)	131.0	1.2	(0.2)	(0.2)	1.0
Wood Product	22.4	(4.1)	22.9	1.3	(0.5)	(2.2)	0.3
Metals and Machinery	36.8	0.5	37.1	1.4	(0.2)	(0.6)	0.6
Computer and Electronic Product	38.1	1.8	37.5	0.6	0.6	1.6	1.4
Transportation Equipment	12.4	(0.4)	12.5	1.4	(0.1)	(1.0)	1.3
Other Durable Goods	21.0	(1.3)	21.0	1.7	0.0	0.2	1.3
Nondurable Goods	56.2	4.5	56.4	2.2	(0.2)	(0.4)	2.2
Food	28.5	7.1	28.2	2.7	0.4	1.3	3.0
Other Nondurable Goods	27.7	1.9	28.2	1.6	(0.6)	(2.1)	1.4
Trade, Transportation & Utilities	338.2	1.3	339.4	2.8	(1.2)	(0.3)	1.7
Retail Trade	204.5	3.1	205.7	3.2	(1.2)	(0.6)	2.0
Wholesale Trade	74.4	0.2	74.5	3.4	(0.1)	(0.1)	1.4
Transportation, Warehousing & Utilities	59.2	(3.3)	59.1	1.0	0.1	0.2	1.0
Information	34.1	9.5	34.0	1.2	0.0	0.1	4.5
Financial Activities	96.0	6.9	95.3	2.5	0.7	0.7	2.1
Professional & Business Services	238.1	8.5	235.1	5.6	3.0	1.3	5.7
Educational & Health Services	265.5	5.8	263.1	1.5	2.4	0.9	4.5
Educational Services	36.0	4.1	35.6	(4.7)	0.3	1.0	3.0
Health Services	229.5	6.0	227.5	2.5	2.0	0.9	4.8
Leisure and Hospitality	197.4	4.9	195.2	3.4	2.2	1.1	4.5
Other Services	62.1	3.4	61.2	(0.1)	0.9	1.4	3.6
Government	304.8	3.4	307.2	3.9	(2.4)	(0.8)	2.2
Federal	27.8	(1.7)	27.9	1.4	(0.1)	(0.3)	0.4
State	88.7	4.9	88.3	4.9	0.5	0.6	2.5
State Education	33.4	0.9	33.1	(4.6)	0.3	0.9	1.3
Local	188.3	3.4	191.1	3.9	(2.8)	(1.5)	2.2
Local Education	97.4	0.2	98.9	3.9	(1.4)	(1.5)	2.2

Table A.2 – Short-Term Oregon Economic Summary

Oregon Forecast Summary

	Quarterly					Annual					
	2016:1	2016:2	2016:3	2016:4	2017:1	2015	2016	2017	2018	2019	2020
Personal Income (\$ billions)											
Nominal Personal Income	178.5	181.4	184.0	186.8	189.8	173.2	182.7	194.5	206.9	218.7	230.2
% change	6.1	6.5	5.8	6.3	6.6	5.8	5.5	6.5	6.4	5.7	5.3
Real Personal Income (base year=2005)	162.4	164.7	166.5	168.0	170.3	158.2	165.4	173.3	180.7	187.1	192.9
% change	5.8	5.8	4.3	3.8	5.6	5.5	4.5	4.8	4.3	3.5	3.1
Nominal Wages and Salaries	94.4	96.3	98.0	99.7	101.4	90.7	97.1	104.1	110.9	116.7	122.6
% change	9.1	8.5	7.2	6.9	7.1	6.6	7.1	7.2	6.4	5.3	5.1
Other Indicators											
Per Capita Income (\$1,000)	44.1	44.6	45.1	45.7	46.3	43.1	44.9	47.2	49.6	51.8	53.9
% change	5.0	5.1	4.3	5.0	5.4	4.5	4.2	5.2	5.1	4.5	4.1
Average Wage rate (\$1,000)	51.5	52.0	52.5	52.9	53.4	50.4	52.2	54.3	56.6	59.0	61.4
% change	5.8	3.4	3.9	3.6	3.9	3.2	3.5	4.0	4.3	4.2	4.1
Population (Millions)	4.1	4.1	4.1	4.1	4.1	4.02	4.07	4.12	4.17	4.22	4.27
% change	1.1	1.3	1.5	1.1	1.1	1.3	1.3	1.2	1.2	1.2	1.1
Housing Starts (Thousands)	19.2	18.0	18.6	19.5	20.5	16.0	18.8	21.4	22.9	23.1	23.8
% change	10.5	(22.1)	12.9	20.0	22.5	2.6	17.9	13.4	7.3	1.0	2.9
Unemployment Rate	4.8	4.9	4.9	5.0	5.0	5.8	4.9	5.1	5.3	5.4	5.4
Point Change	(0.8)	0.1	0.0	0.1	0.0	(1.2)	(0.8)	0.2	0.2	0.0	0.1
Employment (Thousands)											
Total Nonfarm	1,819.2	1,834.5	1,848.6	1,862.9	1,876.5	1,778.7	1,841.3	1,896.0	1,934.0	1,954.1	1,971.8
% change	4.6	3.4	3.1	3.1	3.0	3.3	3.5	3.0	2.0	1.0	0.9
Private Nonfarm	1,514.4	1,525.6	1,538.0	1,551.0	1,563.5	1,478.3	1,532.2	1,581.4	1,615.3	1,631.6	1,644.0
% change	4.9	3.0	3.3	3.4	3.3	3.5	3.7	3.2	2.1	1.0	0.8
Construction	88.4	87.9	88.6	89.3	90.1	83.1	88.5	90.9	92.4	93.0	93.6
% change	12.6	(2.2)	3.4	3.2	3.7	3.8	6.5	2.7	1.6	0.6	0.6
Manufacturing	186.9	186.8	185.9	186.0	186.4	185.8	186.4	187.2	188.8	189.7	190.9
% change	1.1	(0.3)	(1.8)	0.2	0.7	3.5	0.3	0.4	0.9	0.5	0.6
Durable Manufacturing	130.7	130.6	129.6	129.4	129.6	130.3	130.1	130.1	131.1	131.3	131.8
% change	(0.3)	(0.6)	(2.8)	(0.5)	0.5	3.2	(0.2)	0.0	0.7	0.2	0.4
Wood Product Manufacturing	22.4	22.4	22.4	22.5	22.5	22.4	22.4	22.6	22.8	22.8	23.0
% change	(4.1)	1.0	0.5	0.5	0.2	2.1	(0.1)	0.7	1.0	(0.1)	0.8
High Tech Manufacturing	38.1	37.8	36.7	36.3	36.3	37.8	37.2	36.3	36.4	36.2	36.2
% change	1.8	(3.1)	(11.1)	(4.3)	(0.0)	3.2	(1.4)	(2.4)	0.1	(0.5)	(0.2)
Transportation Equipment	12.4	12.5	12.5	12.5	12.6	12.4	12.5	12.7	12.8	12.7	12.6
% change	(0.4)	1.4	1.0	1.9	1.1	8.1	0.3	1.6	1.3	(0.7)	(1.3)
Nondurable Manufacturing	56.2	56.2	56.3	56.6	56.8	55.5	56.3	57.1	57.7	58.4	59.1
% change	4.5	0.4	0.6	1.9	1.3	4.0	1.5	1.3	1.2	1.2	1.1
Private nonmanufacturing	1,327.5	1,338.8	1,352.1	1,365.0	1,377.1	1,292.4	1,345.8	1,394.2	1,426.5	1,441.9	1,453.1
% change	5.4	3.5	4.0	3.9	3.6	3.5	4.1	3.6	2.3	1.1	0.8
Retail Trade	204.5	206.4	208.4	210.4	212.4	202.4	207.4	215.1	220.0	221.4	222.9
% change	3.1	3.7	3.9	3.9	3.8	3.1	2.5	3.7	2.3	0.6	0.7
Wholesale Trade	74.4	74.8	75.3	75.8	76.2	73.9	75.1	76.9	78.0	78.7	79.5
% change	0.2	2.1	2.5	2.6	2.6	1.9	1.5	2.4	1.5	0.9	1.0
Information	34.1	34.4	34.9	35.3	35.7	33.1	34.7	35.9	36.5	37.0	37.3
% change	9.5	4.5	5.1	5.1	4.0	3.0	4.6	3.7	1.5	1.4	0.9
Professional and Business Services	238.1	241.2	244.6	247.9	251.2	228.3	243.0	256.1	266.5	271.0	274.6
% change	8.5	5.4	5.8	5.5	5.4	3.9	6.4	5.4	4.1	1.7	1.3
Health Services	229.5	231.8	234.0	236.1	238.2	222.7	232.8	241.1	246.7	249.9	252.4
% change	6.0	4.1	3.9	3.5	3.7	4.2	4.6	3.5	2.3	1.3	1.0
Leisure and Hospitality	197.4	199.7	202.0	204.3	206.2	191.7	200.8	208.9	213.0	215.5	216.2
% change	4.9	4.8	4.8	4.5	3.8	4.8	4.8	4.0	1.9	1.2	0.3
Government	304.8	308.9	310.6	311.9	313.0	300.4	309.1	314.6	318.7	322.5	327.8
% change	3.4	5.5	2.2	1.7	1.5	2.2	2.9	1.8	1.3	1.2	1.6

Table A.3 – Oregon Economic Forecast Change

	Quarterly					Annual					
	2016:1	2016:2	2016:3	2016:4	2017:1	2015	2016	2017	2018	2019	2020
	Personal Income (\$ billions)										
Nominal Personal Income	178.5	181.4	184.0	186.8	189.8	173.2	182.7	194.5	206.9	218.7	230.2
% change	(0.2)	(0.1)	(0.2)	(0.4)	(0.4)	0.1	(0.2)	(0.4)	(0.5)	(0.5)	(0.6)
Real Personal Income (base year=2005)	162.4	164.7	166.5	168.0	170.3	158.2	165.4	173.3	180.7	187.1	192.9
% change	(0.4)	(0.1)	0.1	(0.1)	(0.0)	0.0	(0.2)	0.0	0.1	0.1	(0.1)
Nominal Wages and Salaries	94.4	96.3	98.0	99.7	101.4	90.7	97.1	104.1	110.9	116.7	122.6
% change	0.0	0.4	0.4	0.2	0.1	0.3	0.3	0.2	(0.0)	(0.2)	(0.5)
Other Indicators											
Per Capita Income (\$1,000)	44.1	44.6	45.1	45.7	46.3	43.1	44.9	47.2	49.6	51.8	53.9
% change	(0.2)	(0.1)	(0.2)	(0.4)	(0.4)	0.1	(0.2)	(0.4)	(0.5)	(0.5)	(0.6)
Average Wage rate (\$1,000)	51.5	52.0	52.5	52.9	53.4	50.4	52.2	54.3	56.6	59.0	61.4
% change	(0.1)	(0.3)	(0.4)	(0.7)	(0.9)	0.3	(0.4)	(0.9)	(1.1)	(1.0)	(1.1)
Population (Millions)	4.05	4.06	4.08	4.1	4.1	4.02	4.07	4.12	4.17	4.22	4.27
% change	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Housing Starts (Thousands)	19.2	18.0	18.6	19.5	20.5	16.0	18.8	21.4	22.9	23.1	23.8
% change	12.5	2.6	2.6	1.1	1.6	0.5	4.5	1.2	1.0	0.1	1.2
Unemployment Rate	4.8	4.9	4.9	5.0	5.0	5.8	4.9	5.1	5.3	5.4	5.4
Point Change	(0.9)	(0.7)	(0.7)	(0.5)	(0.5)	0.0	(0.7)	(0.3)	(0.3)	(0.3)	(0.0)
Employment (Thousands)											
Total Nonfarm	1,819.2	1,834.5	1,848.6	1,862.9	1,876.5	1,778.7	1,841.3	1,896.0	1,934.0	1,954.1	1,971.8
% change	0.5	0.8	0.9	1.0	1.0	(0.0)	0.8	1.1	1.1	0.8	0.6
Private Nonfarm	1,514.4	1,525.6	1,538.0	1,551.0	1,563.5	1,478.3	1,532.2	1,581.4	1,615.3	1,631.6	1,644.0
% change	0.7	0.9	1.0	1.1	1.2	0.1	0.9	1.3	1.3	1.0	0.7
Construction	88.4	87.9	88.6	89.3	90.1	83.1	88.5	90.9	92.4	93.0	93.6
% change	4.1	2.8	2.9	2.6	2.8	0.6	3.1	3.1	3.1	3.1	3.2
Manufacturing	186.9	186.8	185.9	186.0	186.4	185.8	186.4	187.2	188.8	189.7	190.9
% change	(0.2)	(0.4)	(1.0)	(1.3)	(1.4)	0.1	(0.7)	(1.4)	(1.7)	(1.8)	(1.9)
Durable Manufacturing	130.7	130.6	129.6	129.4	129.6	130.3	130.1	130.1	131.1	131.3	131.8
% change	(0.2)	(0.4)	(1.2)	(1.6)	(1.8)	0.2	(0.8)	(1.9)	(2.4)	(2.6)	(2.6)
Wood Product Manufacturing	22.4	22.4	22.4	22.5	22.5	22.4	22.4	22.6	22.8	22.8	23.0
% change	(2.2)	(1.9)	(2.1)	(2.2)	(2.2)	(0.3)	(2.1)	(2.5)	(3.5)	(3.0)	(2.2)
High Tech Manufacturing	38.1	37.8	36.7	36.3	36.3	37.8	37.2	36.3	36.4	36.2	36.2
% change	1.6	1.0	(1.2)	(2.5)	(2.9)	0.8	(0.2)	(3.3)	(3.9)	(4.2)	(4.2)
Transportation Equipment	12.4	12.5	12.5	12.5	12.6	12.4	12.5	12.7	12.8	12.7	12.6
% change	(1.0)	(1.1)	(1.1)	(1.1)	(1.3)	0.0	(1.1)	(1.2)	(1.6)	(2.2)	(2.2)
Nondurable Manufacturing	56.2	56.2	56.3	56.6	56.8	55.5	56.3	57.1	57.7	58.4	59.1
% change	(0.4)	(0.4)	(0.6)	(0.6)	(0.7)	(0.2)	(0.5)	(0.5)	(0.1)	(0.2)	(0.3)
Private nonmanufacturing	1,327.5	1,338.8	1,352.1	1,365.0	1,377.1	1,292.4	1,345.8	1,394.2	1,426.5	1,441.9	1,453.1
% change	0.9	1.1	1.3	1.4	1.5	0.1	1.2	1.7	1.7	1.3	1.0
Retail Trade	204.5	206.4	208.4	210.4	212.4	202.4	207.4	215.1	220.0	221.4	222.9
% change	(0.6)	(0.2)	0.1	0.4	0.7	(0.1)	(0.1)	1.1	1.5	0.6	0.3
Wholesale Trade	74.4	74.8	75.3	75.8	76.2	73.9	75.1	76.9	78.0	78.7	79.5
% change	(0.1)	(0.1)	(0.2)	(0.5)	(0.3)	0.6	(0.2)	(0.3)	0.0	(0.0)	(0.2)
Information	34.1	34.4	34.9	35.3	35.7	33.1	34.7	35.9	36.5	37.0	37.3
% change	0.1	0.6	1.3	2.0	2.5	(0.6)	1.0	2.4	1.8	1.0	1.1
Professional and Business Services	238.1	241.2	244.6	247.9	251.2	228.3	243.0	256.1	266.5	271.0	274.6
% change	1.3	1.9	2.1	2.1	1.9	(0.2)	1.8	1.4	0.3	0.3	(0.3)
Health Services	229.5	231.8	234.0	236.1	238.2	222.7	232.8	241.1	246.7	249.9	252.4
% change	0.9	1.3	1.7	2.1	2.6	(0.1)	1.5	3.1	3.7	3.4	3.2
Leisure and Hospitality	197.4	199.7	202.0	204.3	206.2	191.7	200.8	208.9	213.0	215.5	216.2
% change	1.1	1.2	1.3	1.6	1.5	0.2	1.3	2.1	2.4	1.9	1.2
Government	304.8	308.9	310.6	311.9	313.0	300.4	309.1	314.6	318.7	322.5	327.8
% change	(0.8)	0.1	0.3	0.3	0.3	(0.3)	(0.0)	0.3	0.2	0.2	0.2

Table A.4 – Annual Economic Forecast

Jun 2016 - 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	173.2	182.7	194.5	206.9	218.7	230.2	241.4	252.7
% Ch	5.6	5.0	1.6	5.7	5.8	5.5	6.5	6.4	5.7	5.3	4.9	4.7
U.S.	13,254.5	13,915.1	14,068.4	14,694.2	15,340.4	15,932.7	16,707.3	17,557.2	18,427.8	19,338.0	20,271.3	21,225.0
% Ch	6.2	5.0	1.1	4.4	4.4	3.9	4.9	5.1	5.0	4.9	4.8	4.7
Wage and Salary												
Oregon	74.0	77.2	80.1	85.1	90.7	97.1	104.1	110.9	116.7	122.6	128.5	134.8
% Ch	4.3	4.2	3.9	6.1	6.6	7.1	7.2	6.4	5.3	5.1	4.8	4.9
U.S.	6,633.2	6,930.3	7,114.4	7,477.8	7,824.0	8,183.3	8,613.3	9,029.1	9,443.8	9,906.6	10,405.6	10,926.5
% Ch	4.0	4.5	2.7	5.1	4.6	4.6	5.3	4.8	4.6	4.9	5.0	5.0
Other Labor Income												
Oregon	18.2	19.7	20.1	19.8	20.6	21.6	22.7	24.0	25.2	26.4	27.6	28.8
% Ch	2.4	8.5	2.0	(1.6)	4.0	4.7	5.4	5.4	5.2	4.9	4.4	4.3
U.S.	1,142.0	1,165.3	1,197.8	1,224.0	1,264.3	1,311.1	1,368.0	1,418.4	1,473.1	1,531.0	1,589.1	1,648.0
% Ch	2.5	2.0	2.8	2.2	3.3	3.7	4.3	3.7	3.9	3.9	3.8	3.7
Nonfarm Proprietor's Income												
Oregon	10.1	10.7	11.1	11.8	12.3	13.2	14.2	15.1	15.9	16.7	17.7	18.6
% Ch	3.2	6.0	3.3	5.9	5.0	6.7	7.8	6.2	5.3	5.5	5.7	5.3
U.S.	1,068.1	1,179.8	1,196.3	1,268.5	1,328.4	1,390.8	1,471.2	1,532.7	1,586.8	1,660.1	1,745.6	1,831.6
% Ch	8.2	10.5	1.4	6.0	4.7	4.7	5.8	4.2	3.5	4.6	5.2	4.9
Dividend, Interest and Rent												
Oregon	27.9	30.3	30.1	31.4	32.6	33.7	35.7	38.5	41.3	43.8	46.0	47.9
% Ch	10.7	8.5	(0.4)	4.2	4.0	3.4	5.9	7.7	7.3	6.0	5.2	4.1
U.S.	2,399.2	2,649.1	2,623.8	2,728.4	2,837.1	2,878.8	2,993.4	3,209.5	3,431.1	3,617.3	3,778.8	3,933.6
% Ch	12.0	10.4	(1.0)	4.0	4.0	1.5	4.0	7.2	6.9	5.4	4.5	4.1
Transfer Payments												
Oregon	29.7	29.7	30.8	33.5	35.8	37.3	39.2	41.2	43.4	45.6	47.8	50.3
% Ch	1.5	(0.0)	3.7	8.8	6.6	4.4	4.9	5.3	5.2	5.1	4.8	5.1
U.S.	2,310.2	2,323.6	2,385.5	2,487.2	2,619.5	2,731.5	2,858.3	2,999.2	3,159.3	3,326.8	3,503.8	3,693.0
% Ch	1.2	0.6	2.7	4.3	5.3	4.3	4.6	4.9	5.3	5.3	5.3	5.4
Contributions for Social Security												
Oregon	11.6	12.1	14.2	14.9	15.8	16.8	17.8	18.8	19.8	20.9	22.1	23.4
% Ch	(7.5)	4.8	16.9	5.4	5.5	6.4	5.9	5.9	5.4	5.3	5.9	5.7
U.S.	423.9	437.2	579.4	611.8	635.9	661.3	695.8	729.9	762.7	800.2	851.3	909.1
% Ch	(17.6)	3.1	32.5	5.6	3.9	4.0	5.2	4.9	4.5	4.9	6.4	6.8
Residence Adjustment												
Oregon	(3.4)	(3.6)	(3.6)	(3.6)	(3.9)	(4.0)	(4.1)	(4.2)	(4.3)	(4.4)	(4.5)	(4.5)
% Ch	9.3	4.7	0.6	0.0	6.8	3.8	3.0	2.5	1.8	1.8	1.8	1.7
Farm Proprietor's Income												
Oregon	0.1	0.5	0.4	0.7	0.8	0.5	0.4	0.4	0.3	0.3	0.3	0.2
% Ch	(416.4)	269.3	(24.7)	86.0	17.1	(34.7)	(14.4)	(14.0)	(15.5)	(9.7)	(0.7)	(14.2)
Per Capita Income (Thousands of \$)												
Oregon	37.6	39.2	39.4	41.2	43.1	44.9	47.2	49.6	51.8	53.9	55.9	57.9
% Ch	5.1	4.3	0.7	4.5	4.5	4.2	5.2	5.1	4.5	4.1	3.7	3.5
U.S.	42.4	44.2	44.4	46.0	47.7	49.1	51.1	53.2	55.4	57.7	60.0	62.4
% Ch	5.4	4.2	0.4	3.7	3.6	3.0	4.0	4.2	4.1	4.1	4.0	3.9

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

**Jun 2016 - 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	1,722.0	1,778.7	1,841.3	1,896.0	1,934.0	1,954.1	1,971.8	1,984.8	1,998.6
% Ch	1.1	1.2	2.1	2.9	3.3	3.5	3.0	2.0	1.0	0.9	0.7	0.7
U.S.	131.9	134.2	136.4	138.9	141.8	144.5	146.5	147.9	149.0	150.5	151.9	153.4
% Ch	1.2	1.7	1.6	1.9	2.1	1.9	1.4	0.9	0.8	1.0	0.9	1.0
Private Nonfarm												
Oregon	1,324.8	1,349.1	1,385.3	1,428.1	1,478.3	1,532.2	1,581.4	1,615.3	1,631.6	1,644.0	1,655.3	1,665.7
% Ch	1.8	1.8	2.7	3.1	3.5	3.7	3.2	2.1	1.0	0.8	0.7	0.6
U.S.	109.8	112.3	114.5	117.1	119.8	122.4	124.3	125.4	126.3	127.4	128.9	130.2
% Ch	1.8	2.2	2.0	2.2	2.4	2.1	1.6	0.9	0.7	0.9	1.1	1.1
Mining and Logging												
Oregon	7.0	7.2	7.6	7.7	7.8	7.9	8.0	8.1	8.2	8.2	8.2	8.2
% Ch	4.6	3.2	4.8	1.8	0.4	1.7	1.6	1.0	0.8	0.3	(0.1)	0.0
U.S.	0.8	0.8	0.9	0.9	0.8	0.7	0.7	0.7	0.8	0.8	0.8	0.8
% Ch	11.8	7.5	1.8	3.2	(7.9)	(15.6)	(1.1)	5.3	4.6	3.5	3.0	2.3
Construction												
Oregon	68.6	69.9	74.2	80.1	83.1	88.5	90.9	92.4	93.0	93.6	94.6	95.5
% Ch	1.4	1.8	6.1	8.0	3.8	6.5	2.7	1.6	0.6	0.6	1.1	0.9
U.S.	5.5	5.6	5.9	6.1	6.4	6.8	7.1	7.3	7.5	7.7	7.9	8.1
% Ch	0.2	2.1	3.7	5.0	4.8	4.8	4.5	3.8	2.6	2.4	2.5	2.4
Manufacturing												
Oregon	168.1	171.9	175.0	179.6	185.8	186.4	187.2	188.8	189.7	190.9	192.3	193.5
% Ch	2.6	2.2	1.8	2.6	3.5	0.3	0.4	0.9	0.5	0.6	0.7	0.7
U.S.	11.7	11.9	12.0	12.2	12.3	12.3	12.4	12.4	12.5	12.6	12.7	12.7
% Ch	1.7	1.7	0.8	1.4	1.1	(0.1)	0.7	0.4	0.5	0.7	0.7	0.1
Durable Manufacturing												
Oregon	118.6	121.6	123.2	126.2	130.3	130.1	130.1	131.1	131.3	131.8	132.6	133.3
% Ch	3.2	2.5	1.3	2.4	3.2	(0.2)	0.0	0.7	0.2	0.4	0.6	0.5
U.S.	7.3	7.5	7.5	7.7	7.8	7.7	7.8	7.9	7.9	8.0	8.1	8.1
% Ch	3.0	2.7	1.0	1.7	1.1	(0.5)	1.0	0.9	0.6	0.8	1.0	0.4
Wood Products												
Oregon	19.3	19.8	21.1	22.0	22.4	22.4	22.6	22.8	22.8	23.0	23.3	23.6
% Ch	(3.7)	2.6	7.0	4.0	2.1	(0.1)	0.7	1.0	(0.1)	0.8	1.5	1.3
U.S.	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.4	0.4	0.5	0.5	0.5
% Ch	(1.5)	0.7	4.2	5.2	2.1	1.0	6.1	6.1	2.7	4.1	3.5	2.4
Metal and Machinery												
Oregon	33.3	34.7	35.4	35.9	36.8	36.9	37.2	37.6	37.9	38.3	38.7	39.1
% Ch	6.9	4.2	2.0	1.5	2.4	0.4	0.8	0.9	0.9	1.0	1.1	1.0
U.S.	2.8	2.9	2.9	3.0	3.0	2.9	2.9	2.9	3.0	3.0	3.1	3.1
% Ch	5.7	4.2	0.7	1.6	(0.2)	(2.5)	(0.2)	0.8	1.9	1.7	1.9	1.5
Computer and Electronic Products												
Oregon	36.4	37.0	36.6	36.6	37.8	37.2	36.3	36.4	36.2	36.2	36.0	36.0
% Ch	4.1	1.6	(1.0)	(0.1)	3.2	(1.4)	(2.4)	0.1	(0.5)	(0.2)	(0.4)	(0.1)
U.S.	1.1	1.1	1.1	1.0	1.1	1.0	1.1	1.1	1.1	1.1	1.1	1.1
% Ch	0.8	(1.3)	(2.1)	(1.5)	0.1	(0.3)	2.9	2.5	0.6	0.5	0.5	0.6
Transportation Equipment												
Oregon	10.7	11.1	10.9	11.5	12.4	12.5	12.7	12.8	12.7	12.6	12.6	12.6
% Ch	5.2	3.4	(2.3)	6.0	8.1	0.3	1.6	1.3	(0.7)	(1.3)	0.4	(0.7)
U.S.	1.4	1.5	1.5	1.6	1.6	1.6	1.6	1.6	1.6	1.6	1.5	1.5
% Ch	3.7	5.8	3.3	3.3	2.6	0.9	1.2	(1.4)	(2.3)	(1.0)	(0.6)	(2.8)
Other Durables												
Oregon	18.9	19.1	19.2	20.2	20.9	21.0	21.3	21.4	21.6	21.8	21.9	22.1
% Ch	1.6	1.0	0.8	5.4	3.3	0.6	1.1	0.7	0.8	0.7	0.7	0.7
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	53.4	55.5	56.3	57.1	57.7	58.4	59.1	59.6	60.2
% Ch	1.2	1.5	3.0	3.1	4.0	1.5	1.3	1.2	1.2	1.1	1.0	1.0
U.S.	4.5	4.5	4.5	4.5	4.6	4.6	4.6	4.6	4.6	4.6	4.6	4.6
% Ch	(0.2)	0.1	0.3	0.9	1.1	0.7	0.1	(0.4)	0.4	0.3	0.1	(0.3)
Food Manufacturing												
Oregon	24.2	24.8	25.9	27.0	28.0	28.5	28.8	29.1	29.3	29.5	29.7	29.8
% Ch	1.8	2.4	4.3	4.2	3.7	2.0	1.1	0.9	0.7	0.6	0.6	0.6
U.S.	1.5	1.5	1.5	1.5	1.5	1.5	1.5	1.6	1.6	1.6	1.6	1.6
% Ch	0.6	0.7	0.3	0.7	1.4	1.3	1.5	0.7	1.3	1.5	1.5	1.1
Other Nondurable												
Oregon	25.3	25.4	25.9	26.4	27.5	27.8	28.2	28.6	29.1	29.6	30.0	30.4
% Ch	0.7	0.5	1.7	2.0	4.3	1.0	1.5	1.5	1.6	1.6	1.4	1.4
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	325.7	335.3	342.2	353.4	360.8	364.0	366.9	368.7	370.2
% Ch	1.2	1.3	2.6	2.4	2.9	2.1	3.3	2.1	0.9	0.8	0.5	0.4
U.S.	25.1	25.5	25.9	26.4	26.9	27.4	27.7	27.7	27.6	27.7	27.7	27.8
% Ch	1.7	1.6	1.5	2.0	2.0	1.9	1.1	(0.2)	(0.1)	0.2	0.2	0.2

**Jun 2016 - 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	202.4	207.4	215.1	220.0	221.4	222.9	223.9	225.1
% Ch	0.9	1.2	2.4	2.5	3.1	2.5	3.7	2.3	0.6	0.7	0.4	0.5
U.S.	14.7	14.8	15.1	15.4	15.6	16.0	16.1	15.9	15.8	15.7	15.7	15.7
% Ch	1.6	1.1	1.6	1.9	1.9	2.5	0.6	(1.3)	(1.0)	(0.2)	(0.1)	(0.2)
Wholesale Trade												
Oregon	67.7	68.8	71.5	72.6	73.9	75.1	76.9	78.0	78.7	79.5	80.1	80.4
% Ch	1.0	1.6	3.9	1.5	1.9	1.5	2.4	1.5	0.9	1.0	0.7	0.4
U.S.	5.5	5.7	5.7	5.8	5.9	5.9	6.0	6.1	6.2	6.2	6.3	6.3
% Ch	1.7	2.2	1.2	1.4	1.1	1.2	1.4	1.0	1.2	1.0	0.9	0.8
Transportation and Warehousing, and Utilities												
Oregon	53.4	54.1	54.9	56.9	58.9	59.7	61.4	62.7	63.8	64.4	64.6	64.7
% Ch	2.3	1.3	1.5	3.6	3.6	1.4	2.8	2.1	1.8	0.9	0.3	0.1
U.S.	4.9	5.0	5.0	5.2	5.4	5.4	5.6	5.7	5.7	5.7	5.7	5.8
% Ch	2.4	2.3	1.6	3.2	3.7	0.8	2.0	1.8	0.8	0.5	0.3	0.3
Information												
Oregon	31.7	32.1	32.3	32.2	33.1	34.7	35.9	36.5	37.0	37.3	37.4	37.6
% Ch	(0.1)	1.5	0.4	(0.2)	3.0	4.6	3.7	1.5	1.4	0.9	0.3	0.5
U.S.	2.7	2.7	2.7	2.7	2.8	2.8	2.8	2.8	2.9	2.9	3.0	3.0
% Ch	(1.3)	0.1	1.1	0.8	0.9	1.8	0.7	0.1	1.4	1.2	1.9	1.9
Financial Activities												
Oregon	91.7	90.5	91.6	92.4	94.5	97.3	99.6	100.8	100.5	100.4	100.5	100.5
% Ch	(1.6)	(1.3)	1.2	0.9	2.2	3.0	2.4	1.2	(0.3)	(0.1)	0.0	0.0
U.S.	7.7	7.8	7.9	8.0	8.1	8.3	8.2	8.1	8.0	8.0	8.0	8.0
% Ch	0.0	1.1	1.3	1.1	1.9	1.8	(0.8)	(1.7)	(1.0)	(0.0)	0.3	0.3
Professional and Business Services												
Oregon	195.2	202.1	209.4	219.8	228.3	243.0	256.1	266.5	271.0	274.6	278.9	283.5
% Ch	3.5	3.6	3.6	4.9	3.9	6.4	5.4	4.1	1.7	1.3	1.6	1.6
U.S.	17.3	17.9	18.5	19.1	19.7	20.2	21.1	21.7	21.9	22.4	23.0	23.7
% Ch	3.6	3.5	3.3	2.9	3.1	2.9	4.2	2.8	1.2	2.2	2.7	3.0
Education and Health Services												
Oregon	234.2	237.9	242.7	248.5	258.0	269.0	277.7	283.7	287.1	289.9	292.7	295.5
% Ch	2.3	1.6	2.0	2.4	3.8	4.2	3.2	2.2	1.2	1.0	1.0	1.0
U.S.	20.3	20.8	21.1	21.4	22.1	22.7	23.0	23.1	23.4	23.6	23.9	24.1
% Ch	1.7	2.2	1.5	1.7	2.9	2.8	1.3	0.7	1.1	0.9	1.0	1.0
Educational Services												
Oregon	32.9	33.6	34.1	34.7	35.4	36.1	36.6	36.9	37.2	37.4	37.6	37.7
% Ch	3.4	2.0	1.5	1.9	1.8	2.2	1.2	1.0	0.8	0.6	0.3	0.3
U.S.	3.3	3.3	3.4	3.4	3.5	3.5	3.5	3.4	3.4	3.4	3.3	3.3
% Ch	3.1	2.8	0.4	1.8	1.4	1.5	(1.7)	(0.4)	(0.4)	(1.0)	(1.5)	(1.6)
Health Care and Social Assistance												
Oregon	201.2	204.3	208.6	213.7	222.7	232.8	241.1	246.7	249.9	252.4	255.1	257.8
% Ch	2.1	1.5	2.1	2.5	4.2	4.6	3.5	2.3	1.3	1.0	1.1	1.1
U.S.	17.1	17.4	17.7	18.0	18.6	19.2	19.5	19.7	20.0	20.2	20.5	20.8
% Ch	1.5	2.1	1.7	1.6	3.1	3.1	1.8	0.9	1.4	1.3	1.4	1.4
Leisure and Hospitality												
Oregon	165.6	170.1	176.6	182.9	191.7	200.8	208.9	213.0	215.5	216.2	215.6	214.4
% Ch	2.0	2.7	3.8	3.6	4.8	4.8	4.0	1.9	1.2	0.3	(0.3)	(0.6)
U.S.	13.4	13.8	14.3	14.7	15.1	15.6	15.8	16.0	16.1	16.2	16.4	16.5
% Ch	2.4	3.1	3.5	3.1	2.9	2.9	1.6	1.1	0.9	0.7	0.9	0.6
Other Services												
Oregon	56.8	57.3	58.0	59.2	60.6	62.4	63.6	64.8	65.6	66.0	66.4	66.8
% Ch	0.4	0.9	1.2	2.0	2.5	3.0	2.0	1.8	1.3	0.6	0.5	0.6
U.S.	5.4	5.4	5.5	5.6	5.6	5.7	5.6	5.6	5.6	5.6	5.5	5.5
% Ch	0.6	1.3	1.0	1.5	1.0	0.8	(1.1)	(0.3)	(0.2)	(0.2)	(0.2)	(0.3)
Government												
Oregon	295.0	291.0	288.8	293.9	300.4	309.1	314.6	318.7	322.5	327.8	329.6	332.9
% Ch	(1.6)	(1.4)	(0.7)	1.8	2.2	2.9	1.8	1.3	1.2	1.6	0.5	1.0
U.S.	22.1	21.9	21.8	21.9	22.0	22.1	22.2	22.5	22.7	23.0	23.0	23.2
% Ch	(1.8)	(0.8)	(0.3)	0.1	0.6	0.4	0.6	1.1	1.1	1.4	(0.0)	0.6
Federal Government												
Oregon	28.8	28.1	27.5	27.4	27.8	27.9	27.9	27.8	27.7	29.2	27.5	27.5
% Ch	(5.7)	(2.5)	(1.9)	(0.3)	1.2	0.6	(0.0)	(0.4)	(0.5)	5.6	(5.8)	(0.2)
U.S.	2.9	2.8	2.8	2.7	2.8	2.8	2.7	2.7	2.7	2.8	2.6	2.6
% Ch	(3.9)	(1.3)	(1.8)	(1.3)	0.7	0.4	(1.2)	(1.5)	(1.3)	4.8	(6.0)	(0.5)
State Government, Oregon												
State Total	80.6	80.1	81.0	84.2	87.3	90.1	91.7	92.9	93.9	94.8	95.7	96.5
% Ch	1.0	(0.6)	1.2	3.9	3.7	3.3	1.8	1.3	1.1	0.9	0.9	0.8
State Education	31.1	31.8	32.0	32.5	33.2	33.0	33.1	33.3	33.5	33.7	33.8	33.9
% Ch	4.6	2.1	0.7	1.6	1.9	(0.3)	0.2	0.6	0.6	0.5	0.4	0.2
Local Government, Oregon												
Local Total	185.6	182.8	180.3	182.3	185.4	191.0	195.0	198.0	200.9	203.8	206.4	209.0
% Ch	(2.1)	(1.5)	(1.4)	1.1	1.7	3.0	2.1	1.5	1.5	1.4	1.3	1.3
Local Education	97.0	95.1	93.6	94.5	96.2	99.0	101.5	103.1	104.4	105.6	106.8	107.9
% Ch	(3.3)	(1.9)	(1.6)	1.0	1.8	2.9	2.5	1.6	1.3	1.2	1.1	1.0

Jun 2016 - 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	16,348.9	16,687.2	17,157.7	17,622.6	18,050.9	18,489.7	18,932.5	19,387.1
% Ch	1.6	2.2	1.5	2.4	2.4	2.1	2.8	2.7	2.4	2.4	2.4	2.4
Price and Wage Indicators												
GDP Implicit Price Deflator,												
Chain Weight U.S., 2009=100	103.3	105.2	106.9	108.7	109.8	111.4	113.6	115.9	118.3	120.8	123.3	125.9
% Ch	2.1	1.8	1.6	1.6	1.0	1.5	2.0	2.1	2.0	2.1	2.1	2.1
Personal Consumption Deflator,												
Chain Weight U.S., 2009=100	104.1	106.1	107.6	109.1	109.4	110.4	112.2	114.5	116.9	119.4	121.9	124.6
% Ch	2.5	1.9	1.4	1.4	0.3	0.9	1.6	2.0	2.1	2.1	2.2	2.1
CPI, Urban Consumers,												
1982-84=100												
Portland-Salem, OR-WA	224.6	229.8	235.5	241.2	244.2	247.9	252.9	258.6	264.4	270.3	276.8	283.3
% Ch	2.9	2.3	2.5	2.4	1.2	1.5	2.0	2.3	2.2	2.3	2.4	2.3
U.S.	224.9	229.6	233.0	236.7	237.0	239.4	244.8	251.0	257.5	264.1	270.9	277.7
% Ch	3.1	2.1	1.5	1.6	0.1	1.0	2.2	2.6	2.6	2.6	2.6	2.5
Oregon Average Wage												
Rate (Thous \$)	45.2	46.5	47.3	48.9	50.4	52.2	54.3	56.6	59.0	61.4	63.9	66.5
% Ch	3.2	3.0	1.6	3.2	3.2	3.5	4.0	4.3	4.2	4.1	4.1	4.1
U.S. Average Wage												
Wage Rate (Thous \$)	50.3	51.7	52.2	53.8	55.2	56.6	58.8	61.1	63.4	65.8	68.5	71.2
% Ch	2.8	2.7	1.0	3.2	2.5	2.7	3.8	3.9	3.8	3.9	4.1	4.0
Housing Indicators												
FHFA Oregon Housing Price Index												
1980 Q1=100	347.4	346.0	370.9	403.7	441.7	482.6	520.8	544.3	563.9	583.1	602.7	622.3
% Ch	(6.9)	(0.4)	7.2	8.8	9.4	9.3	7.9	4.5	3.6	3.4	3.4	3.3
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	16.0	18.8	21.4	22.9	23.1	23.8	24.2	24.2
% Ch	5.3	35.5	31.5	9.3	2.6	17.9	13.4	7.3	1.0	2.9	1.5	0.2
U.S. (Millions)	0.6	0.8	0.9	1.0	1.1	1.2	1.4	1.5	1.5	1.6	1.6	1.7
% Ch	4.5	28.1	18.4	7.8	10.7	8.3	15.7	8.1	3.1	4.2	1.2	1.3
Other Indicators												
Unemployment Rate (%)												
Oregon	9.4	8.8	7.8	7.0	5.8	4.9	5.1	5.3	5.4	5.4	5.4	5.5
Point Change	(1.1)	(0.7)	(1.0)	(0.8)	(1.2)	(0.8)	0.2	0.2	0.0	0.1	0.0	0.0
U.S.	8.9	8.1	7.4	6.2	5.3	4.8	4.7	4.7	4.9	4.9	4.9	4.8
Point Change	(0.7)	(0.9)	(0.7)	(1.2)	(0.9)	(0.4)	(0.2)	0.0	0.2	0.0	(0.1)	(0.1)
Industrial Production Index												
U.S. 2002 = 100	97.3	100.0	101.9	104.9	105.2	104.4	107.3	111.0	113.9	117.0	120.0	122.8
% Ch	2.9	2.8	1.9	2.9	0.3	(0.8)	2.8	3.4	2.6	2.8	2.5	2.4
Prime Rate (Percent)	3.3	3.3	3.3	3.3	3.3	3.6	4.4	5.4	6.0	6.0	6.0	6.0
% Ch	0.0	0.0	0.0	0.0	0.3	11.8	21.1	22.7	10.9	0.0	0.0	0.0
Population (Millions)												
Oregon	3.86	3.89	3.93	3.97	4.02	4.07	4.12	4.17	4.22	4.27	4.31	4.36
% Ch	0.6	0.7	0.9	1.1	1.3	1.3	1.2	1.2	1.2	1.1	1.1	1.1
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	4,200.0	5,339.9	5,342.1	5,187.4	5,083.9	5,008.5	4,941.5	4,916.4
% Ch	13.1	2.7	12.0	(1.7)	1.8	27.1	0.0	(2.9)	(2.0)	(1.5)	(1.3)	(0.5)

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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: 3/1/2016			Forecasts Dated: 6/1/2010			Difference	
		2015-16	2016-17	Total 2015-17	2015-16	2016-17	Total 2015-17	06/1/2016 Less 3/1/2016	06/1/2016 Less COS
Taxes									
Personal Income Taxes	15,713,459,000	7,716,024,000	7,976,070,000	15,692,094,000	7,647,271,000	8,054,828,000	15,702,099,000	10,005,000	(11,360,000)
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	596,261,000	538,026,000	1,134,287,000	601,942,000	530,335,000	1,132,277,000	(2,010,000)	32,270,000
Rainy Day Fund Transfer (Minimum Tax)	(10,114,000)	(5,650,000)	(4,864,000)	(10,514,000)	(5,979,000)	(4,933,000)	(10,912,000)	(398,000)	(798,000)
Insurance Taxes	118,885,000	57,188,000	59,788,000	116,976,000	65,118,000	59,391,000	124,509,000	7,533,000	5,624,000
Estate Taxes	217,126,000	110,564,000	109,062,000	219,626,000	115,564,000	111,062,000	226,626,000	7,000,000	9,500,000
Cigarette Taxes	65,029,000	35,914,000	33,058,000	68,972,000	36,195,000	33,520,000	69,715,000	743,000	4,686,000
Other Tobacco Products Taxes	63,819,000	30,489,000	31,718,000	62,207,000	30,767,000	31,179,000	61,946,000	(261,000)	(1,873,000)
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	56,807,000	59,164,000	115,971,000	56,700,000	58,579,000	115,279,000	(692,000)	(10,699,000)
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	30,008,000	35,464,000	65,472,000	28,022,000	33,117,000	61,139,000	(4,333,000)	720,000
Securities Fees	21,859,000	12,702,000	12,050,000	24,752,000	12,104,000	11,934,000	24,038,000	(714,000)	2,179,000
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	130,358,000	135,679,000	266,037,000	130,358,000	135,679,000	266,037,000	0	(7,482,000)
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	8,829,010,000	9,177,308,000	18,006,318,000	8,776,736,000	9,246,853,000	18,023,589,000	17,271,000	25,533,040
Offsets and Transfers	(42,777,000)	(21,963,000)	(21,193,000)	(43,156,000)	(22,292,000)	(21,262,000)	(43,554,000)	(398,000)	(777,000)
Net General Fund Revenues	17,955,278,960	8,807,047,000	9,156,115,000	17,963,162,000	8,754,444,000	9,225,591,000	17,980,035,000	16,873,000	24,756,040
Plus Beginning Balance	532,887,537			528,792,871			528,792,871	0	(4,094,666)
Less Anticipated Administrative Actions*	(20,200,000)			(14,018,000)			(14,018,000)	0	6,182,000
Less Legislatively Adopted Actions**	(158,894,706)			(158,328,302)			(158,328,302)	0	566,404
Available Resources	18,309,071,791			18,319,608,569			18,336,481,569	16,873,000	27,409,778
Appropriations	17,984,668,302			18,000,635,574			18,074,633,526	73,997,952	89,965,224
Projected Expenditures	17,984,668,302			18,000,635,574			18,074,633,526	73,997,952	89,965,224
Estimated Ending Balance	324,403,489			318,972,995			261,848,043	(57,124,952)	(62,555,446)

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	7,647.3	8,054.8	8,528.1	8,969.3	9,405.0	9,961.9	10,500.8	10,975.9	11,447.3	11,951.6
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	601.9	530.3	525.2	520.6	524.9	532.8	544.8	556.7	563.2	571.6
Offsets and Transfers	(6.9)	(5.4)	(6.0)	(4.9)	(18.9)	(19.8)	(20.3)	(20.5)	(20.5)	(20.7)	(18.8)	(22.7)
Insurance	59.8	61.3	65.1	59.4	63.2	66.1	68.3	70.5	72.8	75.1	77.5	79.8
Estate	85.5	111.0	115.6	111.1	114.1	119.3	123.8	128.6	133.9	137.6	141.6	145.6
Cigarette	36.1	37.2	36.2	33.5	31.8	29.9	28.4	26.8	25.3	23.9	22.5	21.2
Other Tobacco Products	30.2	29.9	30.8	31.2	31.9	32.7	33.5	34.3	35.1	35.9	36.9	38.0
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	128.5	135.6	133.3	140.2	136.4	143.4	137.7	144.7	140.1	146.6
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	130.4	135.7	125.6	133.2	141.2	149.7	158.7	168.2	178.2	188.9
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	8,776.7	9,246.9	9,579.3	10,043.3	10,500.5	11,095.5	11,659.1	12,171.2	12,662.8	13,201.0
Net General Fund	7,612.1	8,418.3	8,754.4	9,225.6	9,544.0	10,007.2	10,463.8	11,058.6	11,622.2	12,134.2	12,627.5	13,161.8
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%	15,702.1	12.5%	17,497.4	11.4%	19,366.9	10.7%	21,476.7	10.9%	23,399.0	9.0%
Corporate Excise & Income	1,116.5	26.3%	1,132.3	1.4%	1,045.8	-7.6%	1,057.7	1.1%	1,101.5	4.1%	1,134.8	3.0%
Insurance	121.0	22.2%	124.5	2.9%	129.4	3.9%	138.8	7.3%	147.9	6.5%	157.3	6.4%
Estate Taxes	196.5	-3.5%	226.6	15.3%	233.4	3.0%	252.4	8.1%	271.4	7.5%	287.1	5.8%
Cigarette	73.3	-1.8%	69.7	-4.8%	61.8	-11.4%	55.1	-10.7%	49.3	-10.6%	43.7	-11.4%
Other Tobacco Products	60.1	3.2%	61.9	3.1%	64.6	4.3%	67.7	4.8%	71.0	4.8%	75.0	5.6%
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%	264.1	3.0%	273.4	3.6%	279.8	2.3%	282.5	0.9%	286.7	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%	266.0	7.8%	258.8	-2.7%	290.9	12.4%	326.8	12.4%	367.1	12.3%
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%	18,023.6	11.9%	19,622.6	8.9%	21,596.0	10.1%	23,830.4	10.3%	25,863.8	8.5%
Net General Fund	16,030.5	13.3%	17,980.0	12.2%	19,551.2	8.7%	21,522.3	10.1%	23,756.4	10.4%	25,789.4	8.6%

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	
<i>Personal Income Tax Total</i>	\$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	
<i>Corporate Income Tax Total</i>	\$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
<i>Other Tax Total</i>	\$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									
	June 2016									
	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	2017:2	FY 2017
WITHHOLDING	1,551,517	1,644,209	1,711,568	1,612,280	6,519,574	1,661,533	1,757,492	1,823,856	1,729,101	6,971,982
%CHYA	6.6%	7.9%	8.6%	7.1%	7.6%	7.1%	6.9%	6.6%	7.2%	6.9%
EST. PAYMENTS	309,470	141,009	327,008	395,473	1,172,960	266,363	227,813	309,010	417,036	1,220,223
%CHYA	16.9%	-40.3%	7.0%	-1.4%	-2.9%	-13.9%	61.6%	-5.5%	5.5%	4.0%
FINAL PAYMENTS ¹	99,618	321,345	141,818	767,070	1,329,851	81,161	110,520	126,750	904,178	1,222,608
%CHYA	7.5%	122.8%	-9.2%	-10.3%	6.5%	-18.5%	-65.6%	-10.6%	17.9%	-8.1%
REFUNDS	85,113	203,981	577,546	570,384	1,437,024	83,930	215,854	623,217	478,511	1,401,513
%CHYA	-15.5%	17.6%	11.0%	52.1%	22.9%	-1.4%	5.8%	7.9%	-16.1%	-2.5%
OTHER	(163,398)	-	-	225,308	61,910	(225,308)	-	-	266,836	41,528
TOTAL	1,712,094	1,902,583	1,602,848	2,429,748	7,647,271	1,699,818	1,879,971	1,636,399	2,838,641	8,054,828
%CHYA	11.7%	9.9%	5.6%	-4.7%	4.3%	-0.7%	-1.2%	2.1%	16.8%	5.3%
	2017:3	2017:4	2018:1	2018:2	FY 2018	2018:3	2018:4	2019:1	2019:2	FY 2019
WITHHOLDING	1,768,984	1,871,146	1,940,511	1,839,491	7,420,131	1,881,928	1,990,613	2,040,463	1,930,426	7,843,430
%CHYA	6.5%	6.5%	6.4%	6.4%	6.4%	6.4%	6.4%	5.2%	4.9%	5.7%
EST. PAYMENTS	280,886	240,235	326,190	444,364	1,291,675	299,292	255,977	347,239	468,970	1,371,478
%CHYA	5.5%	5.5%	5.6%	6.6%	5.9%	6.6%	6.6%	6.5%	5.5%	6.2%
FINAL PAYMENTS ¹	85,035	116,631	133,951	1,023,564	1,359,182	89,665	123,248	137,947	1,096,275	1,447,136
%CHYA	4.8%	5.5%	5.7%	13.2%	11.2%	5.4%	5.7%	3.0%	7.1%	6.5%
REFUNDS	83,996	217,535	688,794	556,649	1,546,974	92,369	240,659	762,408	616,072	1,711,508
%CHYA	0.1%	0.8%	10.5%	16.3%	10.4%	10.0%	10.6%	10.7%	10.7%	10.6%
OTHER	(266,836)	-	-	270,921	4,085	(270,921)	-	-	289,648	18,727
TOTAL	1,784,073	2,010,477	1,711,858	3,021,691	8,528,098	1,907,595	2,129,179	1,763,242	3,169,247	8,969,263
%CHYA	5.0%	6.9%	4.6%	6.4%	5.9%	6.9%	5.9%	3.0%	4.9%	5.2%
	2019:3	2019:4	2020:1	2020:2	FY 2020	2020:3	2020:4	2021:1	2021:2	FY 2021
WITHHOLDING	1,975,126	2,089,187	2,148,944	2,034,259	8,247,517	2,081,312	2,201,507	2,258,216	2,136,693	8,677,728
%CHYA	5.0%	5.0%	5.3%	5.4%	5.2%	5.4%	5.4%	5.1%	5.0%	5.2%
EST. PAYMENTS	318,865	273,151	369,839	503,093	1,464,947	339,827	291,080	394,012	533,901	1,558,819
%CHYA	6.5%	6.7%	6.5%	7.3%	6.8%	6.6%	6.6%	6.5%	6.1%	6.4%
FINAL PAYMENTS ¹	96,190	130,831	153,585	1,134,533	1,515,139	99,986	135,875	160,253	1,149,407	1,545,520
%CHYA	7.3%	6.2%	11.3%	3.5%	4.7%	3.9%	3.9%	4.3%	1.3%	2.0%
REFUNDS	101,918	265,821	772,801	618,720	1,759,260	107,766	280,178	811,768	650,319	1,850,032
%CHYA	10.3%	10.5%	1.4%	0.4%	2.8%	5.7%	5.4%	5.0%	5.1%	5.2%
OTHER	(289,648)	-	-	226,308	(63,340)	(226,308)	-	-	256,142	29,833
TOTAL	1,998,614	2,227,349	1,899,567	3,279,473	9,405,002	2,187,050	2,348,283	2,000,713	3,425,823	9,961,869
%CHYA	4.8%	4.6%	7.7%	3.5%	4.9%	9.4%	5.4%	5.3%	4.5%	5.9%
	2021:3	2021:4	2022:1	2022:2	FY 2022	2022:3	2022:4	2023:1	2023:2	FY 2023
WITHHOLDING	2,186,158	2,312,407	2,370,040	2,242,189	9,110,794	2,294,109	2,426,592	2,478,688	2,343,624	9,543,013
%CHYA	5.0%	5.0%	5.0%	4.9%	5.0%	4.9%	4.9%	4.6%	4.5%	4.7%
EST. PAYMENTS	357,577	305,827	414,835	559,936	1,638,176	377,133	322,553	437,253	586,810	1,723,749
%CHYA	5.2%	5.1%	5.3%	4.9%	5.1%	5.5%	5.5%	5.4%	4.8%	5.2%
FINAL PAYMENTS ¹	104,531	142,269	162,605	1,215,676	1,625,080	106,179	146,306	165,988	1,260,777	1,679,250
%CHYA	4.5%	4.7%	1.5%	5.8%	5.1%	1.6%	2.8%	2.1%	3.7%	3.3%
REFUNDS	113,373	294,141	842,973	675,612	1,926,099	117,901	305,259	886,582	710,910	2,020,653
%CHYA	5.2%	5.0%	3.8%	3.9%	4.1%	4.0%	3.8%	5.2%	5.2%	4.9%
OTHER	(256,142)	-	-	308,975	52,834	(308,975)	-	-	359,503	50,528
TOTAL	2,278,751	2,466,362	2,104,507	3,651,164	10,500,784	2,350,546	2,590,191	2,195,347	3,839,804	10,975,888
%CHYA	4.2%	5.0%	5.2%	6.6%	5.4%	3.2%	5.0%	4.3%	5.2%	4.5%
	2023:3	2023:4	2024:1	2024:2	FY 2023	2024:3	2024:4	2025:1	2025:2	FY 2025
WITHHOLDING	2,397,953	2,536,430	2,592,101	2,451,056	9,977,539	2,507,866	2,652,691	2,715,336	2,568,300	10,444,193
%CHYA	4.5%	4.5%	4.6%	4.6%	4.6%	4.6%	4.6%	4.8%	4.8%	4.7%
EST. PAYMENTS	395,234	338,034	458,259	615,259	1,806,785	414,395	354,422	480,531	645,847	1,895,194
%CHYA	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.8%	4.9%	5.0%	4.9%
FINAL PAYMENTS ¹	114,954	156,672	177,200	1,315,858	1,764,685	115,801	159,207	180,414	1,364,010	1,819,431
%CHYA	8.3%	7.1%	6.8%	4.4%	5.1%	0.7%	1.6%	1.8%	3.7%	3.1%
REFUNDS	123,676	320,489	923,304	740,564	2,108,033	128,723	333,334	963,477	773,044	2,198,577
%CHYA	4.9%	5.0%	4.1%	4.2%	4.3%	4.1%	4.0%	4.4%	4.4%	4.3%
OTHER	(359,503)	-	-	365,854	6,351	(365,854)	-	-	357,259	(8,595)
TOTAL	2,424,960	2,710,647	2,304,256	4,007,463	11,447,326	2,543,485	2,832,985	2,412,804	4,162,373	11,951,646
%CHYA	3.2%	4.7%	5.0%	4.4%	4.3%	4.9%	4.5%	4.7%	3.9%	4.4%

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

TABLE B.5	OREGON CORPORATE INCOME TAX REVENUE FORECAST - QUARTERLY COLLECTIONS									
	Thousands of Dollars - Not Seasonally Adjusted									
	June 2016									FY
										FY
	2007:3	2007:4	2008:1	2008:2	2008	2008:3	2008:4	2009:1	2009:2	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
										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
										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
										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									
										June 2016
	2015:3	2015:4	2016:1	2016:2	FY 2016	2016:3	2016:4	2017:1	2017:2	FY 2017
ADVANCE PAYMENTS	173,329	220,326	118,673	176,044	688,372	177,584	161,731	109,138	184,593	633,046
%CHYA	-10.3%	6.9%	11.2%	-4.1%	-0.2%	2.5%	-26.6%	-8.0%	4.9%	-8.0%
FINAL PAYMENTS	67,305	59,752	63,509	86,353	276,918	41,269	42,360	33,313	108,734	225,675
%CHYA	133.6%	-18.8%	10.9%	20.9%	19.9%	-38.7%	-29.1%	-47.5%	25.9%	-18.5%
REFUNDS	42,388	156,984	85,446	78,530	363,348	82,871	90,898	60,572	94,045	328,387
%CHYA	-15.1%	1.0%	46.4%	123.3%	21.6%	95.5%	-42.1%	-29.1%	19.8%	-9.6%
TOTAL	198,245	123,094	96,736	183,867	601,942	135,982	113,192	81,879	199,282	530,335
%CHYA	15.2%	-0.9%	-8.4%	-16.4%	-3.2%	-31.4%	-8.0%	-15.4%	8.4%	-11.9%
	2017:3	2017:4	2018:1	2018:2	FY 2018	2018:3	2018:4	2019:1	2019:2	FY 2019
ADVANCE PAYMENTS	169,804	160,958	110,605	186,087	627,454	171,198	161,736	112,163	188,310	633,406
%CHYA	-4.4%	-0.5%	1.3%	0.8%	-0.9%	0.8%	0.5%	1.4%	1.2%	0.9%
FINAL PAYMENTS	38,065	46,387	35,905	109,450	229,807	37,101	51,886	38,470	111,831	239,288
%CHYA	-7.8%	9.5%	7.8%	0.7%	1.8%	-2.5%	11.9%	7.1%	2.2%	4.1%
REFUNDS	77,326	94,092	63,057	97,615	332,091	79,124	102,516	67,207	103,211	352,057
%CHYA	-6.7%	3.5%	4.1%	3.8%	1.1%	2.3%	9.0%	6.6%	5.7%	6.0%
TOTAL	130,542	113,253	83,453	197,921	525,170	129,175	111,106	83,426	196,930	520,637
%CHYA	-4.0%	0.1%	1.9%	-0.7%	-1.0%	-1.0%	-1.9%	0.0%	-0.5%	-0.9%
	2019:3	2019:4	2020:1	2020:2	FY 2020	2020:3	2020:4	2021:1	2021:2	FY 2021
ADVANCE PAYMENTS	173,546	164,664	114,246	191,871	644,327	176,701	167,805	116,710	196,041	657,257
%CHYA	1.4%	1.8%	1.9%	1.9%	1.7%	1.8%	1.9%	2.2%	2.2%	2.0%
FINAL PAYMENTS	37,930	59,384	42,156	117,163	256,634	39,648	66,964	45,960	123,089	275,661
%CHYA	2.2%	14.5%	9.6%	4.8%	7.2%	4.5%	12.8%	9.0%	5.1%	7.4%
REFUNDS	82,383	111,882	72,057	109,734	376,056	85,962	121,249	76,810	116,101	400,124
%CHYA	4.1%	9.1%	7.2%	6.3%	6.8%	4.3%	8.4%	6.6%	5.8%	6.4%
TOTAL	129,093	112,167	84,345	199,299	524,904	130,387	113,519	85,860	203,028	532,794
%CHYA	-0.1%	1.0%	1.1%	1.2%	0.8%	1.0%	1.2%	1.8%	1.9%	1.5%
	2021:3	2021:4	2022:1	2022:2	FY 2022	2022:3	2022:4	2023:1	2023:2	FY 2023
ADVANCE PAYMENTS	180,520	171,587	119,517	200,584	672,207	184,795	175,519	122,208	204,809	687,331
%CHYA	2.2%	2.3%	2.4%	2.3%	2.3%	2.4%	2.3%	2.3%	2.1%	2.2%
FINAL PAYMENTS	42,160	75,475	50,428	130,131	298,193	45,080	83,734	54,420	136,072	319,307
%CHYA	6.3%	12.7%	9.7%	5.7%	8.2%	6.9%	10.9%	7.9%	4.6%	7.1%
REFUNDS	89,795	131,052	81,869	122,843	425,559	93,669	140,576	86,616	129,112	449,972
%CHYA	4.5%	8.1%	6.6%	5.8%	6.4%	4.3%	7.3%	5.8%	5.1%	5.7%
TOTAL	132,884	116,009	88,075	207,873	544,841	136,206	118,678	90,013	211,769	556,666
%CHYA	1.9%	2.2%	2.6%	2.4%	2.3%	2.5%	2.3%	2.2%	1.9%	2.2%
	2023:3	2023:4	2024:1	2024:2	FY 2024	2024:3	2024:4	2025:1	2025:2	FY 2025
ADVANCE PAYMENTS	188,361	178,653	123,914	206,996	697,924	189,873	179,587	124,621	208,442	702,523
%CHYA	1.9%	1.8%	1.4%	1.1%	1.5%	0.8%	0.5%	0.6%	0.7%	0.7%
FINAL PAYMENTS	47,004	91,346	72,738	161,398	372,486	61,408	130,367	88,921	184,491	465,186
%CHYA	4.3%	9.1%	33.7%	18.6%	16.7%	30.6%	42.7%	22.2%	14.3%	24.9%
REFUNDS	97,160	149,945	105,710	154,403	507,218	111,383	188,300	121,280	175,133	596,096
%CHYA	3.7%	6.7%	22.0%	19.6%	12.7%	14.6%	25.6%	14.7%	13.4%	17.5%
TOTAL	138,206	120,054	90,942	213,990	563,192	139,898	121,655	92,261	217,799	571,613
%CHYA	1.5%	1.2%	1.0%	1.0%	1.2%	1.2%	1.3%	1.5%	1.8%	1.5%

Table B.6 Cigarette and Tobacco Tax Distribution

June 2016											
TABLE B.6											
Cigarette & Tobacco Tax Distribution (Millions of \$)											
	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
<u>Distribution Forecast*</u>											
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	36.195	138.159	5.606	18.920	198.879	10.918	209.797	30.767	23.738	2.640	57.145
2016-17	33.520	130.636	5.211	21.331	190.698	10.422	201.120	31.179	24.056	2.675	57.910
2015-17 Biennium	69.715	268.795	10.817	40.250	389.577	21.340	410.917	61.946	47.794	5.316	115.055
2017-18	31.814	123.990	4.946	20.911	181.661	9.891	191.553	31.922	24.630	2.739	59.291
2018-19	29.937	116.674	4.654	20.412	171.676	9.308	180.984	32.683	25.216	2.805	60.704
2017-19 Biennium	61.752	240.663	9.600	41.323	353.338	19.199	372.537	64.605	49.846	5.544	119.995
2019-20	28.385	110.625	4.413	19.354	162.777	8.825	171.602	33.461	25.816	2.871	62.148
2020-21	26.754	104.268	4.159	18.241	153.422	8.318	161.740	34.256	26.430	2.939	63.626
2019-21 Biennium	55.139	214.893	8.572	37.595	316.199	17.143	333.342	67.717	52.246	5.811	125.774
2021-22	25.341	98.759	3.939	17.278	145.317	7.879	153.196	35.069	27.058	3.009	65.136
2022-23	23.949	93.337	3.723	16.329	137.338	7.446	144.784	35.901	27.699	3.081	66.681
2021-23 Biennium	49.290	192.096	7.662	33.607	282.655	15.325	297.980	70.970	54.757	6.090	131.817
2023-24	22.512	87.736	3.500	15.349	129.098	6.999	136.097	36.942	28.503	3.170	68.615
2024-25	21.162	82.472	3.290	14.428	121.352	6.579	127.931	38.014	29.329	3.262	70.605
2023-25 Biennium	43.674	170.209	6.789	29.778	250.449	13.579	264.028	74.956	57.832	6.432	139.219

* 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									June 2016
Liquor Apportionment and Revenue Distribution to Local Governments (Millions of \$)									
	Liquor Apportionment Distribution								Cigarette Tax Distribution ²
	Total Liquor Revenue Available	General Fund (56%)	Mental Health ¹	Oregon Wine Board	City Revenue			Counties	
					Revenue Sharing	Regular	Total		
2013-14	213.810	121.426	8.626	0.294	26.557	37.938	64.495	18.969	11.086
2014-15	221.681	125.959	8.720	0.295	27.589	39.413	67.001	19.706	10.727
2013-15 Biennium	435.491	247.385	17.345	0.589	54.146	77.351	131.497	38.675	21.813
2015-16	228.906	130.358	8.818	0.308	28.452	40.646	69.098	20.323	10.918
2016-17	238.249	135.679	9.178	0.321	29.613	42.305	71.918	21.152	10.422
2015-17 Biennium	467.154	266.038	17.997	0.629	58.065	82.950	141.016	41.475	21.340
2017-18	233.074	125.601	9.417	0.332	31.094	44.420	75.514	22.210	9.891
2018-19	245.786	133.170	9.662	0.344	32.649	46.641	79.290	23.320	9.308
2017-19 Biennium	478.861	258.772	19.079	0.677	63.743	91.061	154.804	45.530	19.199
2019-20	259.195	141.185	9.913	0.357	34.281	48.973	83.254	24.487	8.825
2020-21	273.338	149.670	10.171	0.370	35.995	51.422	87.417	25.711	8.318
2019-21 Biennium	532.533	290.855	20.084	0.726	70.276	100.395	170.671	50.197	17.143
2021-22	288.256	158.654	10.435	0.383	37.795	53.993	91.788	26.996	7.879
2022-23	303.992	168.166	10.706	0.397	39.685	56.692	96.377	28.346	7.446
2021-23 Biennium	592.248	326.820	21.141	0.779	77.480	110.685	188.165	55.343	15.325
2023-24	320.591	178.235	10.985	0.411	41.669	59.527	101.196	29.764	6.999
2024-25	338.099	188.896	11.270	0.426	43.752	62.503	106.256	31.252	6.579
2023-25 Biennium	658.690	367.131	22.255	0.837	85.421	122.030	207.452	61.015	13.579

¹ Mental Health Alcoholism and Drug Services Account, per ORS 471.810² For details on cigarette revenues see TABLE B.6 on previous page

Table B.8 Track Record for the December 2015 Forecast

Table B.8 Track Record for the March 2016 Forecast*

(Quarter ending March 31, 2016)

Personal Income Tax				Forecast Comparison		Year/Year Change	
(Millions of dollars)	Actual Revenues*	Latest Forecast	Percent Difference	Prior Year	Percent Change		
Withholding	\$1,711.6	\$1,705.2	0.4%	\$1,576.2	8.6%		
Dollar difference		\$6.4		\$135.4			
Estimated Payments	\$327.0	\$328.7	-0.5%	\$305.6	7.0%		
Dollar difference		-\$1.7		\$21.4			
Final Payments	\$141.8	\$122.3	16.0%	\$156.2	-9.2%		
Dollar difference		\$19.5		-\$14.4			
Refunds	-\$577.5	-\$684.1	-15.6%	-\$520.3	11.0%		
Dollar difference		\$106.5		-\$57.3			
Total Personal Income Tax	\$1,602.8	\$1,472.2	8.9%	\$1,517.7	5.6%		
Dollar difference		\$130.7		\$85.2			
Corporate Income Tax*				Forecast Comparison		Year/Year Change	
(Millions of dollars)	Actual Revenues	Latest Forecast	Percent Difference	Prior Year	Percent Change		
Advanced Payments	\$118.7	\$109.2	8.7%	\$106.7	11.2%		
Dollar difference		\$9.5		\$12.0			
Final Payments	\$63.5	\$28.5	123.0%	\$57.3	10.9%		
Dollar difference		\$35.0		\$6.2			
Refunds	-\$85.4	-\$53.5	59.7%	-\$58.4	46.4%		
Dollar difference		-\$31.9		-\$27.1			
Total Corporate Income Tax	\$96.7	\$84.2	14.9%	\$105.6	-8.4%		
Dollar difference		\$12.6		-\$8.9			
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	\$1,699.6	\$1,556.3	9.2%	\$1,623.3	4.7%		
Dollar difference		\$143.2		\$76.3			

* A new processing system for the personal income tax program was brought online at the end of November. Financial reporting has yet to match past norms.

Table B.9 Summary of Lottery Resources

Summary of Lottery Resources	Jun 2016 Forecast										
	2015-17			2017-19		2019-21		2021-23		2023-25	
	Current Forecast	Change from Mar-16	Change from COS 2015	Current Forecast	Change from Mar-16						
(in millions of dollars)											
LOTTERY EARNINGS											
Traditional Lottery	134.586	6.181	16.782	125.451	1.633	125.205	2.032	124.584	2.192	124.560	2.165
Video Lottery	1,146.374	31.000	75.722	1,120.209	(56.721)	1,211.499	(48.859)	1,316.250	(21.628)	1,400.409	(23.012)
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	1,221.760	37.181	92.504	1,245.660	(55.088)	1,336.705	(46.827)	1,440.834	(19.436)	1,524.969	(20.847)
ECONOMIC DEVELOPMENT FUND											
Beginning Balance	20.500	0.000	1.181	39.911	39.911	0.000	0.000	0.000	0.000	0.000	0.000
Transfers from Lottery	1,221.760	37.181	92.504	1,245.660	(55.088)	1,336.705	(46.827)	1,440.834	(19.436)	1,524.969	(20.847)
Other Resources ¹	9.425	0.000	2.085	2.000	0.000	2.000	0.000	2.000	0.000	2.000	0.000
Total Available Resources	1,251.684	37.181	95.770	1,287.571	(15.177)	1,338.705	(46.827)	1,442.834	(19.436)	1,526.969	(20.847)
ALLOCATION OF RESOURCES											
County Economic Development	39.084	0.000	0.000	43.016	(2.178)	47.248	(1.906)	52.650	(0.865)	56.016	(0.920)
Education Stability Fund ²	219.917	6.693	16.651	224.219	(9.916)	240.607	(8.429)	259.350	(3.499)	274.494	(3.752)
Parks and Natural Resources Fund ³	183.264	5.577	13.876	186.849	(8.263)	200.506	(7.024)	216.125	(2.915)	228.745	(3.127)
HECC Collegiate Athletic & Scholarships ⁴	8.240	0.000	0.000	12.457	(0.551)	13.367	(0.468)	14.408	(0.194)	15.250	(0.208)
Gambling Addiction ⁴	11.349	0.056	0.056	12.457	(0.551)	13.367	(0.468)	14.408	(0.194)	15.250	(0.208)
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	746.056	41.277	41.277	258.600	0.000	258.600	0.000	258.600	0.000	258.600	0.000
Total Distributions	1,211.773	53.603	71.859	741.245	(21.459)	777.343	(18.295)	819.190	(7.668)	852.003	(8.22)
Ending Balance/Discretionary Resources	39.911	(16.422)	23.911	546.326	6.282	561.362	(28.532)	623.644	(11.769)	674.965	(12.630)

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

Jun 2016

Rainy Day Fund

(Millions)	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25
Beginning Balance	\$61.9	\$211.8	\$387.9	\$634.5	\$917.7	\$1,239.8
Interest Earnings	\$1.3	\$6.6	\$27.1	\$48.5	\$67.9	\$90.0
Deposits ¹	\$148.7	\$169.2	\$219.5	\$234.7	\$254.2	\$276.6
Triggered Withdrawals	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Ending Balance²	\$211.8	\$387.6	\$634.5	\$917.7	\$1,239.8	\$1,606.4

Education Stability Fund³

(Millions)	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25
Beginning Balance	\$7.4	\$179.4	\$381.6	\$583.4	\$799.9	\$944.8
Interest Earnings ⁴	\$1.0	\$5.8	\$26.6	\$44.9	\$58.7	\$67.7
Deposits ⁵	\$171.9	\$197.9	\$201.8	\$216.5	\$144.9	\$121.8
Distributions	\$1.0	\$5.8	\$26.6	\$44.9	\$58.7	\$67.7
Oregon Education Fund	\$0.7	\$0.1	\$0.0	\$0.0	\$0.0	\$0.0
Oregon Opportunity Grant	\$0.2	\$5.8	\$26.6	\$44.9	\$58.7	\$67.7
Withdrawals	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
Ending Balance	\$179.4	\$381.6	\$583.4	\$799.9	\$944.8	\$1,066.6

Total Reserves

(Millions)	2013-15	2015-17	2017-19	2019-21	2021-23	2023-25
Ending Balances	\$391.2	\$769.2	\$1,217.9	\$1,717.6	\$2,184.6	\$2,673.0
Percent of General Fund Revenues	2.4%	4.3%	6.2%	8.0%	9.2%	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.3 Population of Oregon: 1990-2022

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	4,013,845	51,135	1.29%
2016	4,072,100	58,256	1.45%
2017	4,129,800	57,699	1.42%
2018	4,185,400	55,600	1.35%
2019	4,239,100	53,700	1.28%
2020	4,290,700	51,601	1.22%
2021	4,339,400	48,700	1.14%
2022	4,386,200	46,800	1.08%

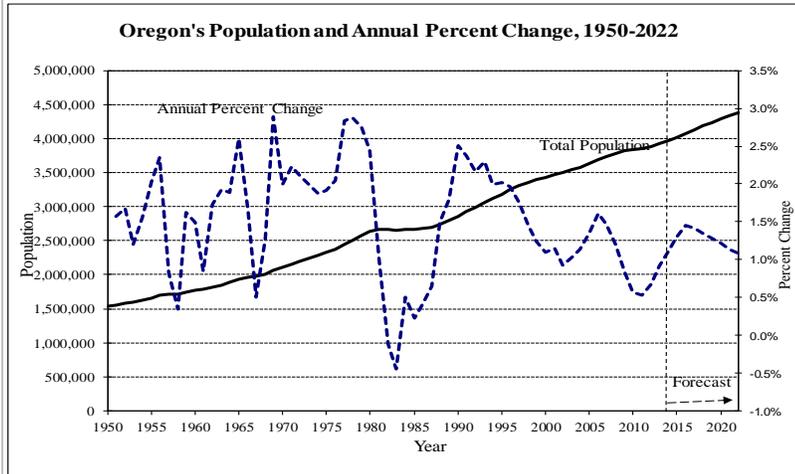


Table C.4 Children: Ages 0-4

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

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

Year (July 1)	Children: Ages 0-4			School Age Population: Ages 5-17			Young Adult Population: Ages 18-24		
	Population	Number	% Change from previous decade/yr. Percent	Population	Number	% Change from previous decade/yr. Percent	Population	Number	% Change from previous decade/yr. 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	229,604	228	0.10%	633,307	1,531	0.24%	370,168	1,599	0.43%
2016	231,644	2,040	0.89%	634,915	1,608	0.25%	370,188	21	0.01%
2017	234,241	2,597	1.12%	637,323	2,408	0.38%	370,679	491	0.13%
2018	236,714	2,473	1.06%	638,067	744	0.12%	372,420	1,741	0.47%
2019	238,948	2,234	0.94%	639,507	1,440	0.23%	373,766	1,345	0.36%
2020	241,300	2,352	0.98%	641,854	2,347	0.37%	373,567	-199	-0.05%
2021	243,525	2,224	0.92%	643,813	1,958	0.31%	373,287	-280	-0.07%
2022	245,419	1,894	0.78%	645,265	1,452	0.23%	373,093	-194	-0.05%

