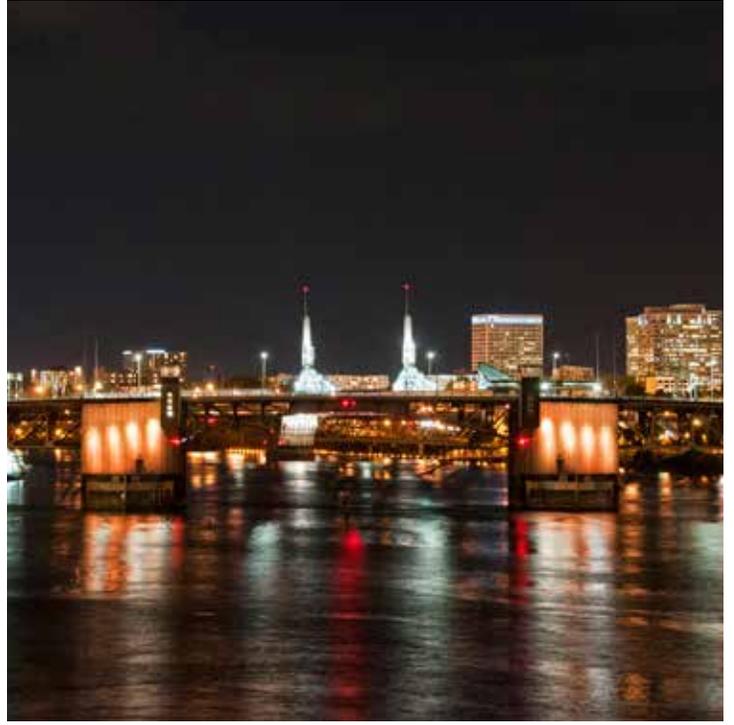


ODOT Transportation Development Division



June 2016 Revenue Forecast



Foreword

This summary report presents a selection of State Other Funds Revenue forecasts for the Oregon Department of Transportation. It is published twice a year to assist in financial planning, the formulation of transportation budgets, and to support other decision-making activities. The forecast is consistent with the Department of Administrative Services' Oregon Economic & Revenue Forecast (Vol. XXXVI, No. 2, June 2016 and the associated baseline macroeconomic forecast from IHS Global Insight Inc. (GI)).

This document is also available at:

<http://www.oregon.gov/ODOT/TD/EA/Pages/revenueforecasts.aspx> and scroll down to the "Most Recent Forecast."

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A perfect storm of strong economic growth and rapidly increasing in-migration is producing substantial growth in transportation revenues.

Forecast Summary

Transportation revenues are currently in a period of strong growth as the economy is chugging along at full steam and Oregon is experiencing in-migration at record levels. With jobs plentiful and fuel prices low, people are driving again. As Oregon attracts more people from other states this leads to additional fuel consumption and DMV transaction volumes.

The economic expansion is expected to continue at rates well in excess of 2 percent through 2017. Growth is expected to slow rapidly through 2018, reaching levels below 1 percent growth in 2019 and continuing through the remainder of the forecast. The official forecast extends through State Fiscal Year (FY) 2021. However, many figures in this document extend to 2025 to show longer run trends.

Motor Fuels revenue is on track for 4.4 percent growth in FY16, the strongest growth seen in recent history. Growth is expected to remain strong next year before slowing as the economy cools. Weighing down on growth is fuel efficiency. As vehicle manufacturers strive to meet increasing fuel efficiency standards this should lead to steady increases in the light vehicle stock fuel efficiency. As employment growth slows, the impact of this change is profound on the latter years of the forecast, ultimately leading to negative growth by FY21.

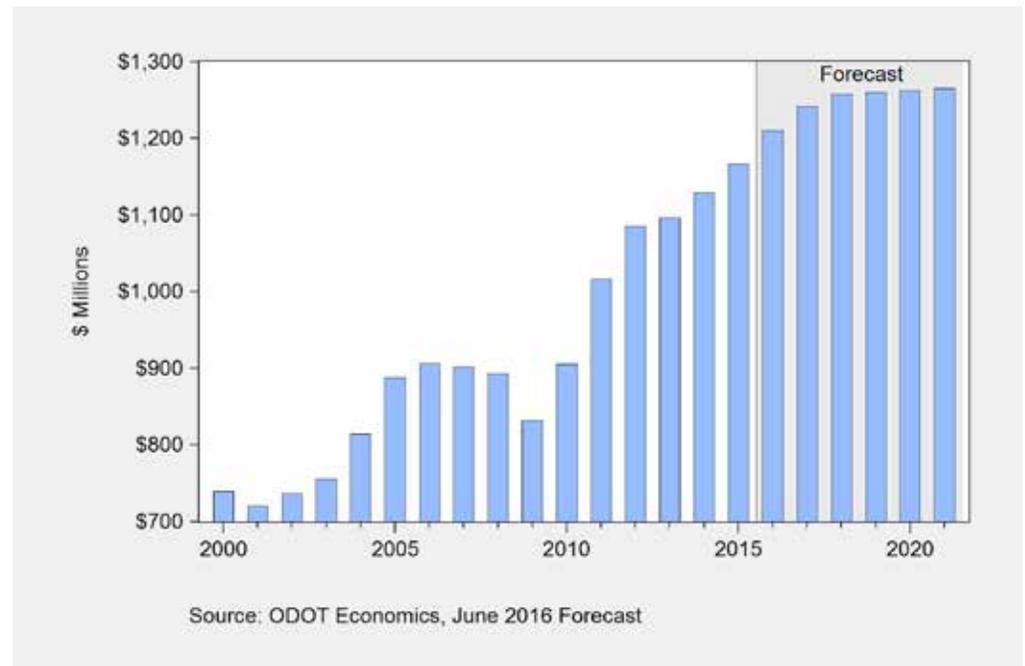
Motor Carrier revenue, led by weight-mile has seen more modest growth rates of late compared to motor fuels, having experienced recovery growth in FY14 and FY15 rather than today. Growth is expected to be 2.2 percent in FY16 and remain in the 2 percent range through FY18. Beyond FY18 growth rates are expected to closely mirror employment growth dropping to less than 1 percent.

Gross revenues were up \$37 million in FY15 over FY14 and are on pace to finish FY16 up \$44 million over FY15.

DMV revenue is experiencing a boom similar to motor fuels. A strong economy is leading to new vehicle sales and an uptick in young drivers getting their licenses. The continued rapid increase of in-migration is leading to new driver and vehicle transactions. Revenues should end FY16 up 4.5 percent, following strong growth in the prior years. Going forward growth should slow considerably as in-migration and vehicle sales slow.

Overall gross state revenues are up 6.8 percent or \$156 million in 2015-17 over what we collected in 2013-15. Compared to the prior forecast gross revenues are up just slightly by \$5 million in 2015-17. Cumulatively through 2019-21 gross revenues are down over the prior forecast by \$20 million, led by the slowing in motor fuel sales.

Figure 1. Total Gross State Highway Revenue by Fiscal Year



A sharp pullback in motor fuels growth in 2019-21 leads to overall much slower growth in the forecast out years.

Table 1. Change in Gross Revenues from the December 2015 Forecast

(\$ Millions)	2013-15	2015-17	2017-19	2019-21
Motor Fuels				
Gross	\$ (8.3)	\$ (3.4)	\$ (8.7)	\$ (34.1)
Net	\$ (3.4)	\$ 6.9	\$ 1.2	\$ (31.8)
Motor Carrier				
Gross	\$ 0.0	\$ (4.0)	\$ (2.6)	\$ (5.3)
Net	\$ 0.0	\$ (5.2)	\$ (7.0)	\$ (9.8)
DMV				
Gross	\$ (20.9)	\$ 12.2	\$ 15.0	\$ 10.4
Net	\$ (20.9)	\$ 11.5	\$ (4.0)	\$ 13.7
Total				
Gross	\$ (29.2)	\$ 4.8	\$ 3.7	\$ (29.0)
Net	\$ (24.3)	\$ 13.2	\$ (9.8)	\$ (27.8)

A penny increase in the motor fuels tax will yield about \$28 million in net revenue with the heavy equivalent included.

Forecast yields have adjusted with this forecast. A penny increase in the motor fuel tax rate will yield about \$17.7 million in revenue, net of operational costs and transfers without weight-mile and \$28.0 million in net revenue with the weight-mile tax included. The necessary disclaimer is that sales are impacted by prices; a significant increase in the tax will drive down demand reducing the yield.

Final VMT growth in 2015 matches motor fuels growth in 2015 at 4 percent.

Transportation Backdrop

After peaking in 2004, Oregon vehicle miles traveled (VMT) was essentially in decline through 2012. As the economy picked up so did VMT. Growth was slow in 2013, but accelerated into 2014 and 2015 surpassing the high of 2004. This increase in VMT of 4.0 percent in 2015 backs up the almost identical growth in motor fuel over the same period, affirming the motor fuels data.

The result of the increase in fuel consumption and VMT is an expanding economy and increasing in-migration. The Motor Fuels, Motor Carrier and DMV sections will go into specific detail regarding the factors that affect each section. There is one specific economic variable important to all three sources: Oregon total non-farm employment.

Total non-farm employment represents the sum total of all non-agricultural employment in the state. How this relates to transportation is simply that to get to work requires some sort of transportation. If you are lucky enough to live close to your place of employment it might be as easy as walking or biking. However, for many people driving is the mode of choice, which requires fuel, a license and title and registration. Also, as employment grows so does business spending leading to increase freight activity.

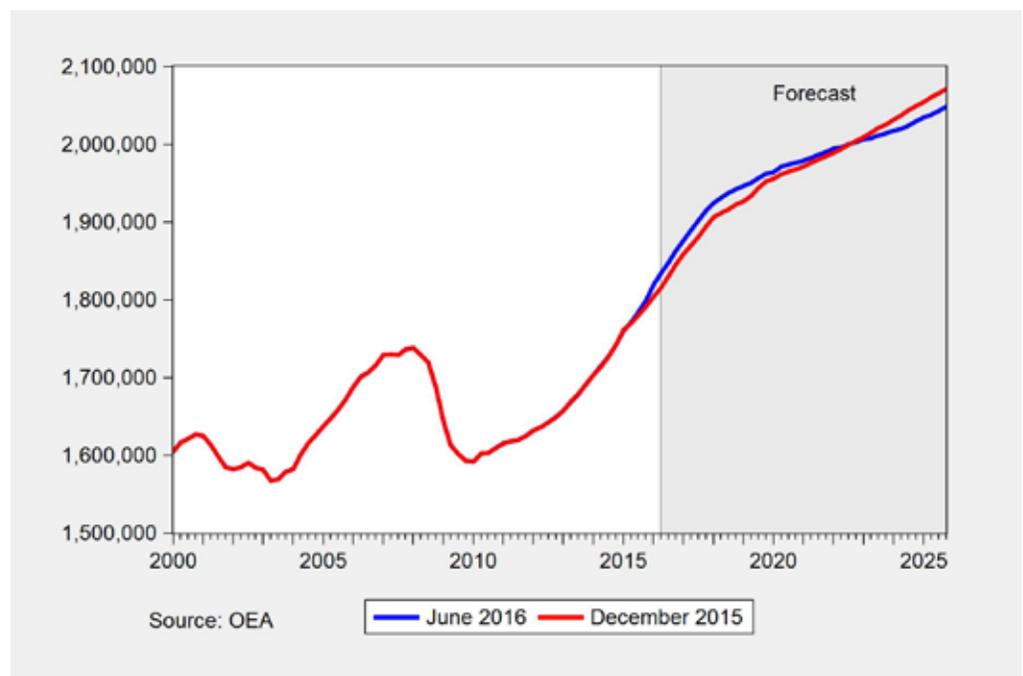
As Figure 2 shows, total non-farm employment has been growing since 2010, but initially at sluggish rates. In 2013 growth picked up substantially and has continued accelerating into 2016. This acceleration has been matched by similar growth in fuel consumption and DMV transactions.

Looking ahead, as all the labor slack is finally accounted for and some longer run issues like the retiring Baby Boomer generation impacts the labor force, growth will slow substantially. The current estimate is for growth to continue strongly through 2017, slowing in 2018 and then growing at or slightly less than the population rate of about 1.1 percent in the out years of the forecast.

Compared to the prior forecast, this acceleration in the near term and deceleration in the out years is more pronounced. Growth is expected to be stronger initially, but slower in the out years of the forecast.

Figure 2. Oregon Total Non-Farm Employment – Forecast Comparison

Economic growth is expected to remain strong through 2017 before slowing.



As noted above, total non-farm employment is a very important variable in the ODOT revenue forecast models. However, it is not the only important variable. Table 2 contains a selection of other important variables that are used in the forecast models. Table 3 highlights changes for some of the most important revenue generating variables in the ODOT revenue forecast.

A full discussion of the state and national economic forecasts can be found on Oregon Office of Economic Analysis website located here. <http://www.oregon.gov/DAS/OEA/Pages/index.aspx>

Table 2. Percentage Change in Key Economic Variables

	Actuals			Forecast					
	CY 13	CY 14	CY 15	CY 16	CY 17	CY 18	CY 19	CY 20	CY 21
OREGON EMPLOYMENT--TOTAL	2.1%	2.9%	3.3%	3.5%	3.0%	2.0%	1.0%	0.9%	0.7%
EMPLOYMENT--CONSTRUCTION	6.1%	8.0%	3.8%	6.5%	2.7%	1.6%	0.6%	0.6%	1.1%
EMPLOYMENT--TRANSPORTATION	1.5%	3.6%	3.6%	1.4%	2.8%	2.1%	1.8%	0.9%	0.3%
EMPLOYMENT--DURABLE GOODS	1.3%	2.4%	3.2%	-0.2%	0.0%	0.7%	0.2%	0.4%	0.6%
OREGON HOUSING STARTS	31.5%	9.3%	2.6%	17.9%	13.4%	7.3%	1.0%	2.9%	1.5%
OREGON POPULATION	0.9%	1.1%	1.3%	1.4%	1.4%	1.4%	1.3%	1.2%	1.2%
PORTLAND METRO CONSUMER PRICE INDEX	2.5%	2.4%	1.2%	1.5%	2.0%	2.3%	2.2%	2.3%	2.4%
OREGON REAL PERSONAL INCOME	0.3%	4.2%	5.5%	4.5%	4.8%	4.3%	3.5%	3.1%	2.7%
NATIONAL REAL PRICE OF GASOLINE	-4.3%	-5.8%	-26.9%	-17.6%	8.0%	9.6%	8.5%	8.5%	6.5%
NATIONAL UNIT SALES OF NEW LIGHT VEHICLES	7.5%	5.8%	5.4%	2.5%	2.4%	-0.6%	-2.1%	-2.4%	-1.3%

Table 3. Percentage Change in Transactions for Key Oregon Transportation Variables

	Actuals			Forecast					
	CY 13	CY 14	CY 15	CY 16	CY 17	CY 18	CY 19	CY 20	CY 21
MOTOR VEHICLE FUELS (GALLONS)	1.0%	1.4%	4.1%	4.9%	1.2%	0.7%	0.2%	-0.2%	-0.3%
ORIGINAL CLASS C LICENSES	9.7%	7.8%	10.3%	1.0%	-2.9%	-1.4%	-0.8%	-0.1%	0.1%
PASSENGER VEHICLE REGISTRATIONS	0.6%	1.3%	3.4%	1.8%	1.2%	0.2%	0.5%	-0.2%	0.4%
TITLE TRANSFERS	2.5%	4.4%	1.3%	1.6%	1.3%	0.2%	-0.2%	0.1%	0.0%
TRUCKING ACTIVITY (WEIGHT-MILE)	3.7%	4.2%	4.1%	3.0%	2.6%	1.4%	0.7%	0.9%	1.1%

DMV has the largest number of transactions to forecast but only a handful have significant impacts on revenue.

DMV

The Driver and Motor Vehicle Services Division (DMV) is responsible for administration of driver and motor vehicle related activities. Revenues collected from the fees charged for the various DMV activities flow into the State Highway Fund, the Transportation Operating Fund and into other funds administered by ODOT divisions such as Public Transit and Passenger Rail. Additionally some fees net of costs are transferred to outside entities. For example, RV-related fees are transferred to the Oregon Parks and Recreation Department. Lastly, revenues remaining after transfers and costs are deducted are apportioned to cities and counties statewide for local road repair, maintenance and construction.

The DMV forecast is produced at the transaction level and rolled up to the summary level. The transactions are grouped into three different business lines, Vehicle, Driver, and Business Regulation. The Vehicle program area contains the transactions related to legal ownership and operation of a vehicle, including titling, plates, registrations and permits. The Driver program contains the transactions related to the legal right to operate a vehicle, including permits, licenses, endorsements and the associated tests to obtain these rights to drive. The Business Regulation program is tasked with ensuring proper licensing for Oregon businesses involved with selling, dismantling or transporting vehicles.

In total the DMV forecast contains over 240 individual product transactions and over 100 different forecast equations. However, most of these transactions have little significant impact on the overall forecast as their volumes and fee levels are small. Of the total number of transactions, over 90 percent of the revenue is collected by about 10 types of DMV transactions. These are led by passenger vehicle registrations, which alone account for almost 50 percent of all revenue collected by DMV. Other significant contributors are truck and light trailer registrations, light vehi-

cle trip permits, light title transactions, vehicle and driver related record fees and class C non-commercial licenses and renewals.

DMV activities are affected by various economic and demographic variables and provide a reflection of some very broad undercurrents in the state. The impacts of changes in population, employment, migration, and economic production are readily evident in many of the DMV data series. In general, DMV activities are more strongly affected by demographic changes rather than by economic changes. As a result, they are generally more immune to cyclical swings typical with economic variables. Of the three business lines in DMV, the Vehicle and Business Regulation programs are most susceptible to economic influences, especially related to vehicle titles and new vehicle titles in particular.

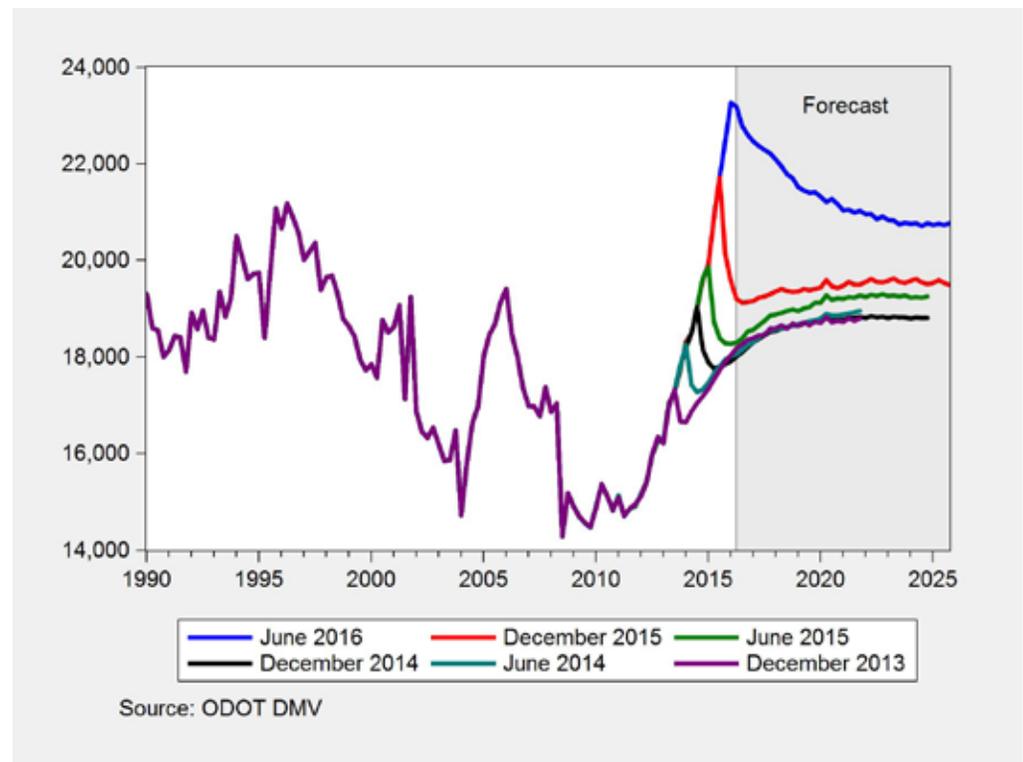
Strong in-migration growth and new vehicle sales are increasing DMV sales over both the Driver and Vehicle program areas.

Currently DMV is experiencing a period of robust growth in volumes of transactions processed across both the Vehicle and Driver business lines. The reason for this broad increase is found in both the significant increase of in-migration and the current economic expansion. Both these two factors working in concert compounds what each could do by itself. Figure 3 shows how these factors impact DMV transactions beginning with surrendered licenses.



Current pace of growth in out-of-state surrendered licenses should lead to over 90,000 total surrendered in 2016, setting a new all-time record.

Figure 3. Out-of-State Surrendered License - Forecast Comparison (quarterly frequency - seasonally adjusted)



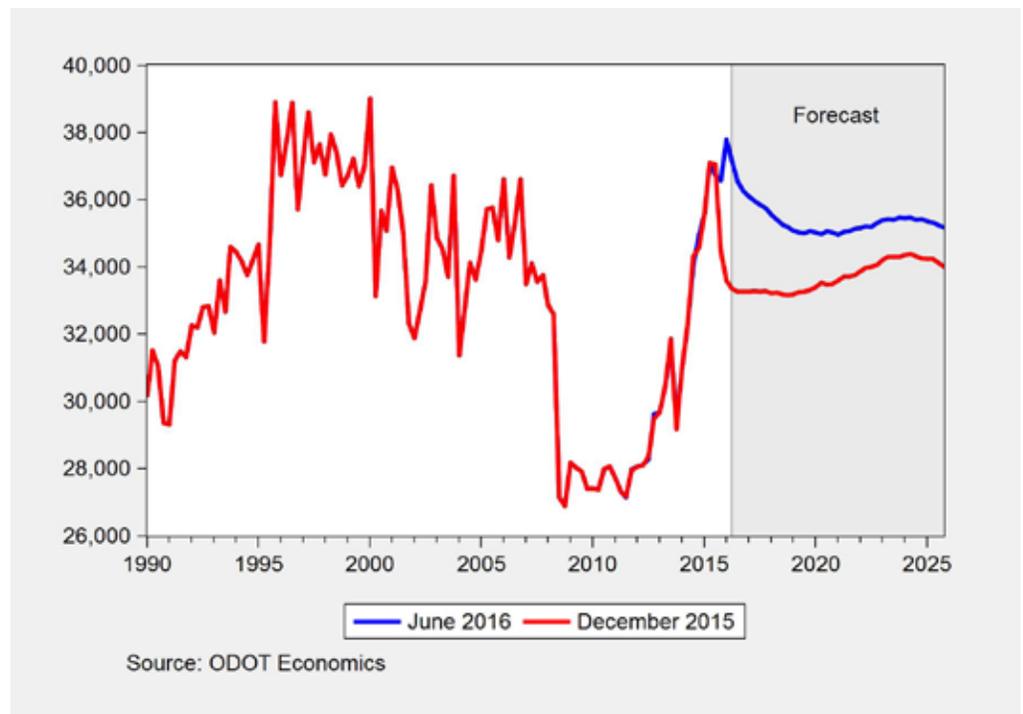
A surrendered license transaction occurs when a person moves into Oregon from another state and surrenders their out-of-state license to DMV. This is the first contact with DMV for these people. Unfortunately we lack additional information about who these people are, such as their age and location they are moving to. Regardless, it is a valuable statistic that influences other DMV transactions. The above chart shows the surrendered license history and last six forecasts. As is readily apparent, each of the past forecasts have predicted the number of surrendered licenses to peak as of the last actuals point and then drop off. However, this did not occur and a new peak is reached in each successive forecast. The most current forecast attempts to minimize this by

As people move into Oregon this starts a chain reaction of transactions in DMV, beginning with getting an Oregon driver license.

having the drop-off from the peak not be as severe, but whether this truly is the peak or not is unknown.

The impact that surrendered licenses have on other DMV transactions begins first with non-commercial class C licenses. When an individual moves into Oregon and surrenders their old license they get a new Oregon issued license. Figure 4 compares the current forecast to the prior one. As Figure 4 shows, license sales bottomed out in 2011 at about 110,000 licenses sold before growing rapidly in a very similar pattern to the surrendered license chart above. If it peaks this year, the 2016 total should be just under 150,000, getting us close to our peak years during the late 1990's as technology companies expanded and attracted a lot of outside talent.

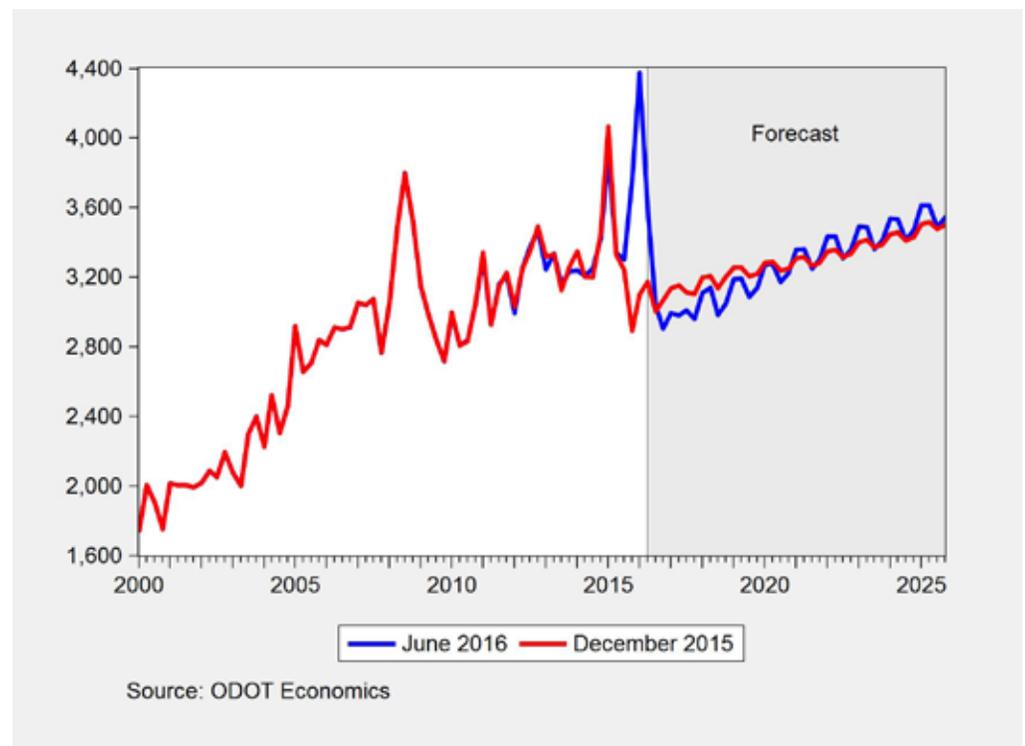
Figure 4. Original Class C Non-Commercial License - Forecast Comparison (quarterly frequency - seasonally adjusted)



TEAM Oregon is an ODOT sponsored motorcycle safety training program that has greatly reduced motorcycle accident fatalities.

As license growth increases from people moving into the state so does growth among other Driver program transactions. One noticeable transaction this impacts is motorcycle endorsements. An individual moving into Oregon with a motorcycle endorsement from another state can get an Oregon motorcycle endorsement without having to go through the TEAM Oregon classes. As Figure 5 shows, these endorsements have spiked recently and have been growing in general for some time.

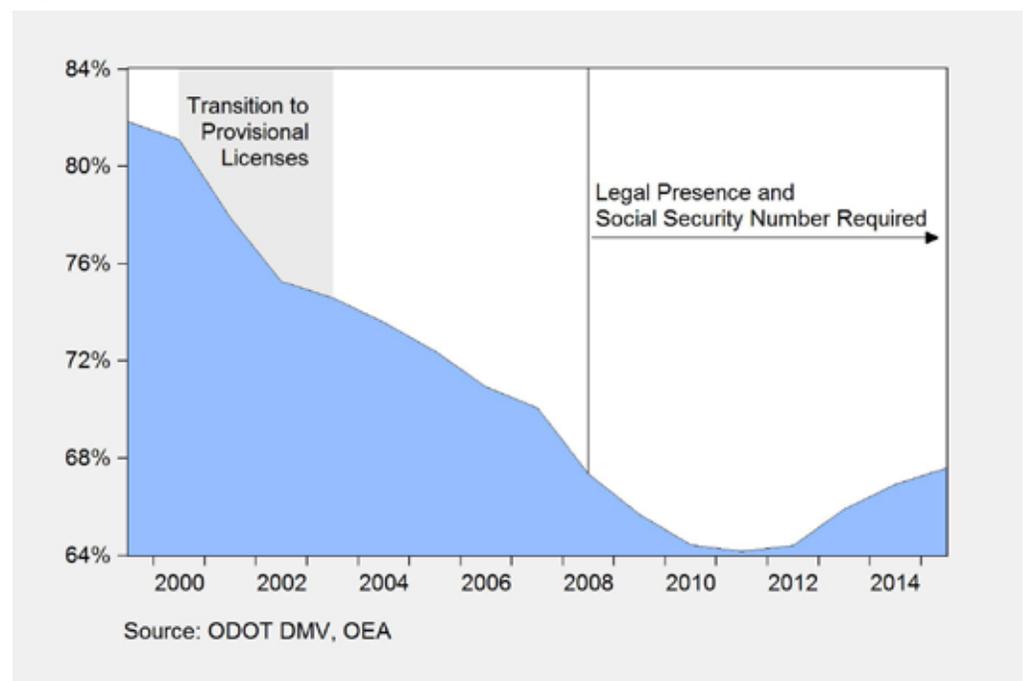
Figure 5. Original Motorcycle Endorsement - Forecast Comparison (quarterly frequency – seasonally adjusted)



Another factor increasing the Driver program transactions is for the last few years we've seen an increase in the share of young people getting their driver license. In 1999, about 83 percent of youth aged 16 to 19 had a driver license. As we move forward in time that percentage has fallen substantially to just over 64 percent by 2011. Part of the reason for the decline was due to legislative action, with the creation of the provisional license program and then the proof of legal presence requirement. Even without these legislative actions the share continued to decline. However, as the economy recovers things have slowly turned around. By the end of 2015, the percentage of this age group with a license has increased to 68 percent. How long this increase will continue is uncertain as it will depend on what is causing these young people to drive again. But, as the economy is expected to continue expanding at a solid rate through 2017, we're most likely in for at least another two years of increase, which is adding to the impact on DMV's workload.

The share of young people getting their license is growing again, will this continue into the future?

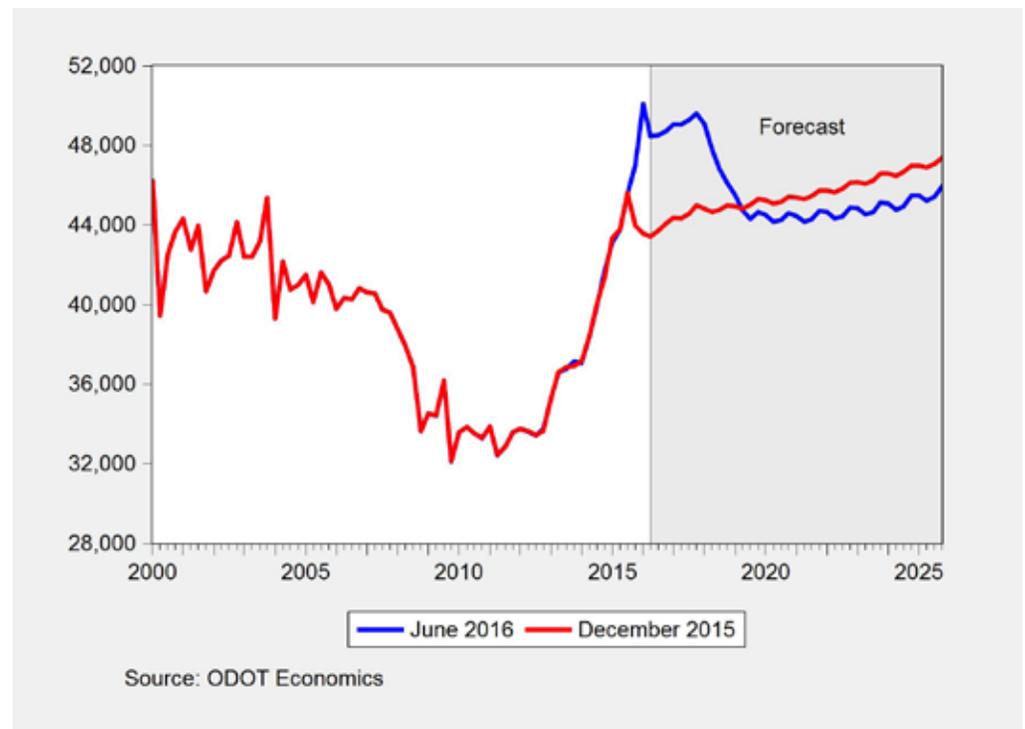
Figure 6. Share of 16 to 19 Year Olds with a Driver License



This increase in DMV workload from in-migration and from existing Oregon residents, impacts the Driver program and the Vehicle program as well. When someone surrenders their license they most likely have a vehicle or multiple vehicles they want to legally title and register in Oregon. This leads to an increase in what DMV calls First Oregon Light Vehicle Titles. The increase closely resembles the surrendered license increase from 2012 to current. The forecast shows strong sales through 2017 before falling off to a level just above our pre-recession average from the mid-2000s.

Figure 7. First Oregon Light Vehicle Titles - Forecast Comparison (quarterly frequency – seasonally adjusted)

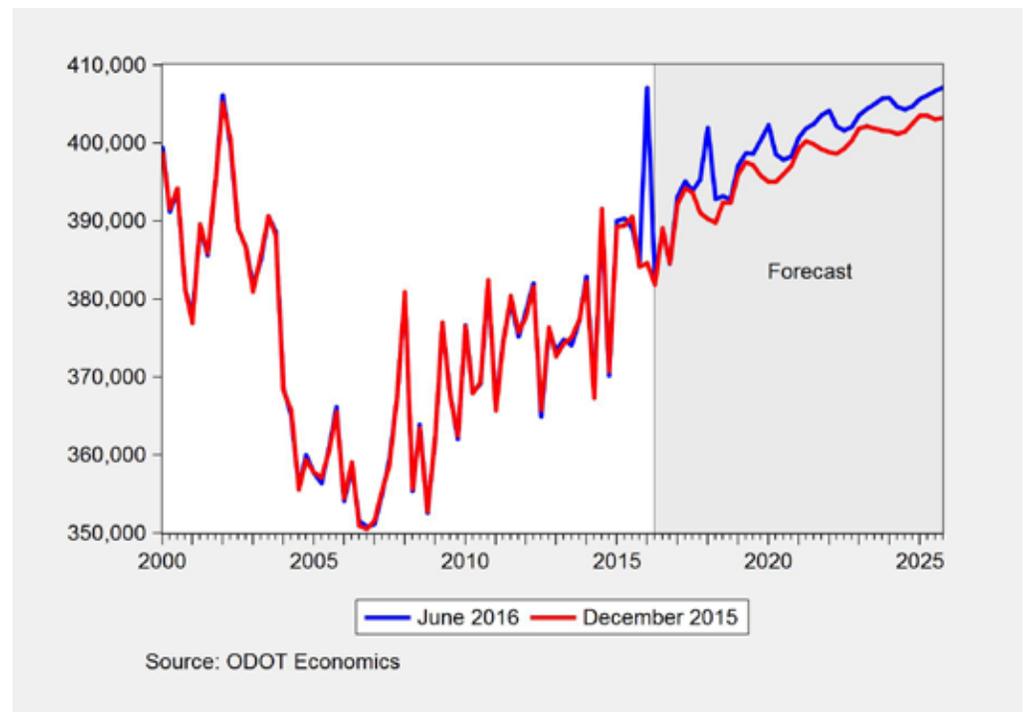
As people move to Oregon their vehicles generally move with them.



While having an Oregon title provides documented ownership of a vehicle, to drive it legally on the road, it needs to be registered. A brand new vehicle is registered for four years and used vehicles brought into the state or vehicles in the state renewing their registration register for two years. The two year registration forecast is shown in Figure 8 and accounts for over 40 percent of total DMV revenue. The forecast is mostly dependent on registration renewals of the existing fleet. However, as new vehicles sales increase and renew four years later, along with vehicles brought in as people move into the state, this pushes growth upwards. Figure 8 shows a spike in sales during the first quarter of 2016 leading to an increase in renewals two years later causing the overall forecast to be stronger than the prior forecast.

Figure 8. Two-Year Passenger Vehicle Registrations - Forecast Comparison (quarterly frequency – seasonally adjusted)

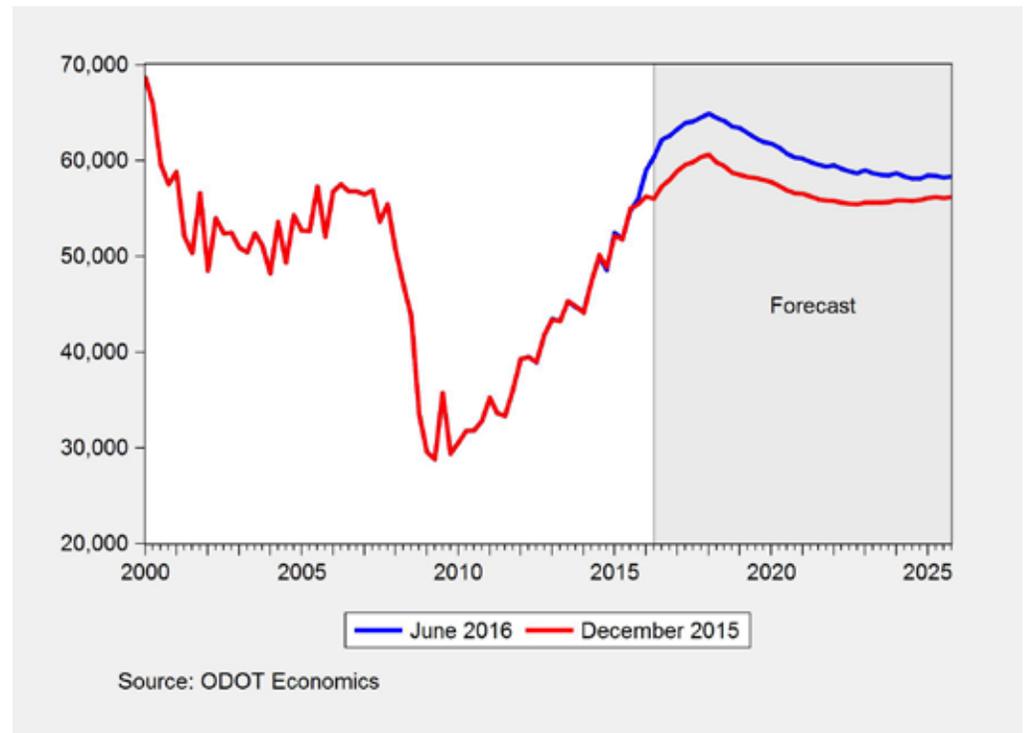
There are over 3.4 million registered passenger vehicles in Oregon.



While the economic impact on DMV can be felt indirectly through in-migration growth it can also be directly felt through new vehicle sales. The recession created pent up demand for new vehicle sales that has led to consistent growth in sales since 2012. As growth continues, sales should remain strong, surpassing the pre-recession levels, but not quite reaching our prior sales peak in 2000. In the out years of the forecast sales should drop back down as the pent up demand is completely released.

Figure 9. New Light Vehicle Titles - Forecast Comparison (quarterly frequency – seasonally adjusted)

New vehicle sales remain strong as pent up demand from the recession is released.



The combined impact of the economic expansion and population growth is currently having a profound impact on DMV transaction growth. This is translating into a sharp increase in revenues. Table 4 shows this revenue impact as well as other changes

The driver license renewal cycle is quite severe, ranging from a low of 170,000 in 2009 to a high of 340,000 in 2013.

impacting DMV. The gross revenue portion of Table 4 is grouped into three major components reflecting the primary revenue sources: vehicle registrations, driver licenses, and vehicle titles. Rows one and three contain the Vehicle program revenue which is dominated by light vehicle title transfer and passenger vehicle registration revenue. Growth is expected to continue into FY18 as the economy expands but should stagnate in the out years as the economy cools.

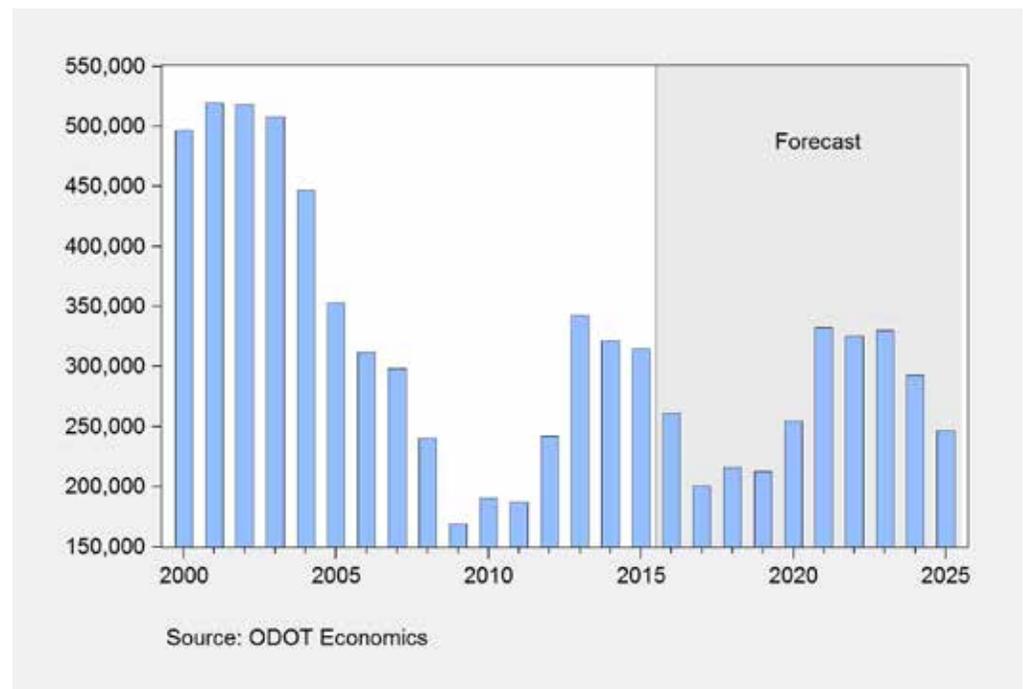
Driver revenue includes original issuance, renewal, and replacement of commercial and non-commercial licenses and permits, testing fees and other associated fees. Gross revenues are shown in row 2, and despite strong sales of new licenses and endorsements, revenues are expected to fall in the coming years due to the renewal cycle of the non-commercial licenses. For example, as shown below the large increase in 2013 is from licenses renewed for eight years beginning in October of 2004 and expiring in October of 2012. The number of eight-year renewals peaked in early 2005, and fell steadily through 2008. This is the dominant factor for the overall decline in revenues through most of the forecast. While this cycle will continue to repeat itself into the future, growth in revenues controlling for this fluctuation will depend on the renewal rate of license holders.

Licenses that were issued/renewed in October of 2000 or later were issued/renewed for an eight year period instead of the previous four year period. These licenses began expiring in October of 2008. What the average renewal rate would be from this shift to an eight year cycle, was, and still is, a relevant consideration. Currently the renewal rate is about 72 percent, which is higher than our original expectation of 63 percent and has been increasing over the last couple years. This increase could be partly related to the economic expansion as people may have a reason to renew for employment purposes. But it might also be possible that individuals unable to meet the requirements for

Prior to creation of the 8 year licenses, renewals were more consistent, averaging about 500,000 per year.

renewal of their license after the documentation requirements were increased in 2008 have now acquired the correct documentation and have adjusted to the new way of doing business with DMV.

Figure 10. Class C Non-Commercial Driver License Renewals



Rows 6 through 11 and 13 through 15 of Table 4 give the costs associated with administration of DMV and transfers of the DMV revenues out to support JTA and OTIA projects and for other statutory purposes.

DMV program costs primarily change when personal services costs change or programs are phased in or phased out. ODOT's approved budget for 2015-17 includes expenditure authorization for two major packages, the first phase of a DMV computer system modernization project and a project allowing DMV to accept debit and credit card payments from customers.

With almost half of the \$90 million in planned system upgrade expenditures occurring during the 2017-19 biennium, net DMV revenues will drop.

The larger of the two projects is the computer system upgrade. Essentially this project is to replace a system created in the 1960's with a system using current technologies to meet customers' expectations today. The total cost of the project is estimated to be \$90 million spread over 10 years. During the 2015 legislative session the legislature decided to fund the project one phase at a time and allocated \$30.4 million in the 2015-17 biennium. However, DMV estimates they will likely only spend \$16 million in 2015-17 so this forecast includes just the \$16 million project cost estimate, which matches the cost estimate from the prior forecast. However, in 2017-19, estimated expenditures are expected to grow considerably to \$41 million, which drives the big increase in costs for 2017-19 in the forecast and represents an increase of \$21 million in expenditures over the prior forecast. Currently, 2019-21 expenditures are expected to be \$18 million.

The smaller of the two projects adds the hardware to allow the use of debit and credit cards in field offices. It also includes the associated merchant fees for these transactions. This project has a budgeted amount of \$6.3 million in the 2015-17 biennium. DMV expects actual expenditures to be slightly less at \$4.8 million in 2015-17, increasing to \$5.8 in the 2017-19 biennium and holding at that rate going forward, which are the numbers used in this forecast and match the prior forecast.

Net DMV revenues, as represented in row 12, show the impact of the DMV projects on revenue growth as well as general inflation impacts on DMV programs. Basically the growth in gross revenues we're experiencing now is countering the increased costs associated with DMV. However, as we move into the out years of the forecast, costs rise faster than revenue, driving down net revenues.

Row 5 summarizes the change in gross revenues from the previous forecast. Overall, there is an expected cumulative increase of \$37.5 million from FY16-FY21. This increase is primarily driven by

stronger than anticipated in-migration as discussed above, causing an increase in many different DMV transactions.

However, note that the history has been revised downward. This is because plate manufacturing revenue was double counted in the forecast history. It is one of the few DMV transactions that does not have its own accounting line item and has to be estimated separately. Since it does not have its own accounting code, the historical revenue is rolled into the connected registration revenue. As revenues are pulled from ODOT's accounting system for the historical revenue portion of the forecast, this revenue has been counted twice, once with the registration revenue and again with its own separate estimate. This does not impact the forecast as the two items are forecasted separately and the fees are separated.

Demand for products are sensitive to price changes. Even seemingly mandatory products can be affected.

Row 9 has been added to show the incremental revenue increase from the electronic driver records sold to disseminators who sell driver records to businesses like insurance companies. The initial forecast estimated incremental revenues would average about \$5.6 million per year, and the first full fiscal year of revenue in FY13 matched that estimate. Sales softened through FY15 and are expected to slowly decline in the forecast as the increased cost deters businesses from ordering these records as frequently as they used to.



Table 4. Highway Fund Revenue Collected by DMV (Millions of Current Dollars)

	Actual		Forecast						Actual BI 13-15	Forecast		
	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21		BI 15-17	BI 17-19	BI 19-21
1 VEHICLE REGISTRATIONS	\$175.9	\$181.1	\$188.6	\$193.0	\$195.6	\$195.2	\$195.7	\$194.9	\$357.0	\$381.7	\$390.8	\$390.6
2 DRIVER LICENSES & OTHER	\$34.6	\$35.4	\$35.5	\$31.8	\$31.4	\$31.4	\$31.6	\$34.4	\$70.0	\$67.4	\$62.8	\$66.0
3 TITLE, PLATE & OTHER	\$99.1	\$105.1	\$111.9	\$114.5	\$115.7	\$114.0	\$112.8	\$112.2	\$204.2	\$226.4	\$229.7	\$224.9
4 TOTAL DMV COLLECTIONS	\$309.6	\$321.6	\$336.1	\$339.4	\$342.7	\$340.6	\$340.0	\$341.5	\$631.2	\$675.5	\$683.3	\$681.5
5 Change from Previous Forecast	(\$9.9)	(\$10.9)	\$4.3	\$7.8	\$8.6	\$6.3	\$5.8	\$4.6	(\$20.9)	\$12.2	\$15.0	\$10.4
6 COLLECTION/ADMINISTRATION & PROGRAM COST	(\$78.4)	(\$80.0)	(\$92.6)	(\$94.4)	(\$110.7)	(\$113.0)	(\$102.2)	(\$104.3)	(\$158.4)	(\$187.0)	(\$223.7)	(\$206.5)
7 TRAFFIC SAFETY TRANSFER	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)	(\$1.0)	(\$1.1)	(\$1.2)	(\$1.3)
8 DEPARTMENT OF EDUCATION TRANSFER	(\$0.1)	\$0.0	(\$0.1)	\$0.0	(\$0.1)	\$0.0	(\$0.1)	\$0.0	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)
9 E-GOV RECORDS INCREMENTAL REVENUE TRANSFER	(\$5.3)	(\$5.2)	(\$5.3)	(\$5.2)	(\$5.2)	(\$5.1)	(\$5.1)	(\$5.0)	(\$10.5)	(\$10.5)	(\$10.3)	(\$10.1)
11 ODOT CENTRAL SERVICES ASSESSMENT	(\$24.2)	(\$24.7)	(\$27.7)	(\$28.3)	(\$30.1)	(\$30.7)	(\$31.1)	(\$31.7)	(\$48.8)	(\$56.0)	(\$60.8)	(\$62.8)
12 NET DMV REVENUE	\$201.2	\$211.3	\$209.9	\$210.9	\$196.1	\$191.2	\$200.9	\$199.8	\$412.4	\$420.8	\$387.2	\$400.7
13 REVENUE SET-ASIDE TO OTIA I & II - memo	(\$7.0)	(\$7.0)	(\$7.0)	(\$6.8)	(\$6.8)	(\$6.8)	(\$6.7)	(\$6.8)	(\$14.0)	(\$13.9)	(\$13.6)	(\$13.5)
14 REVENUE PLEDGED TO OTIA III - memo	(\$75.5)	(\$78.9)	(\$82.1)	(\$83.4)	(\$84.4)	(\$83.7)	(\$83.6)	(\$83.2)	(\$154.4)	(\$165.4)	(\$168.1)	(\$166.8)
15 REVENUE DUE TO JTA (HB 2001) - memo	(\$99.7)	(\$104.1)	(\$109.1)	(\$110.5)	(\$111.9)	(\$111.1)	(\$110.8)	(\$110.3)	(\$203.8)	(\$219.6)	(\$223.0)	(\$221.1)

The weight-mile tax was created in 1933 based on loaded weight and number of miles traveled each year.

Motor Carrier

Trucking activity and the freight industry affect the amount of revenue available to the State Highway Fund through the weight-mile tax, heavy vehicle registration fees, and other Motor Carrier fees. Changes in economic conditions within Oregon and the nation as a whole influence each of these revenue sources. In addition, state and federal legislation can impact trucking activity.

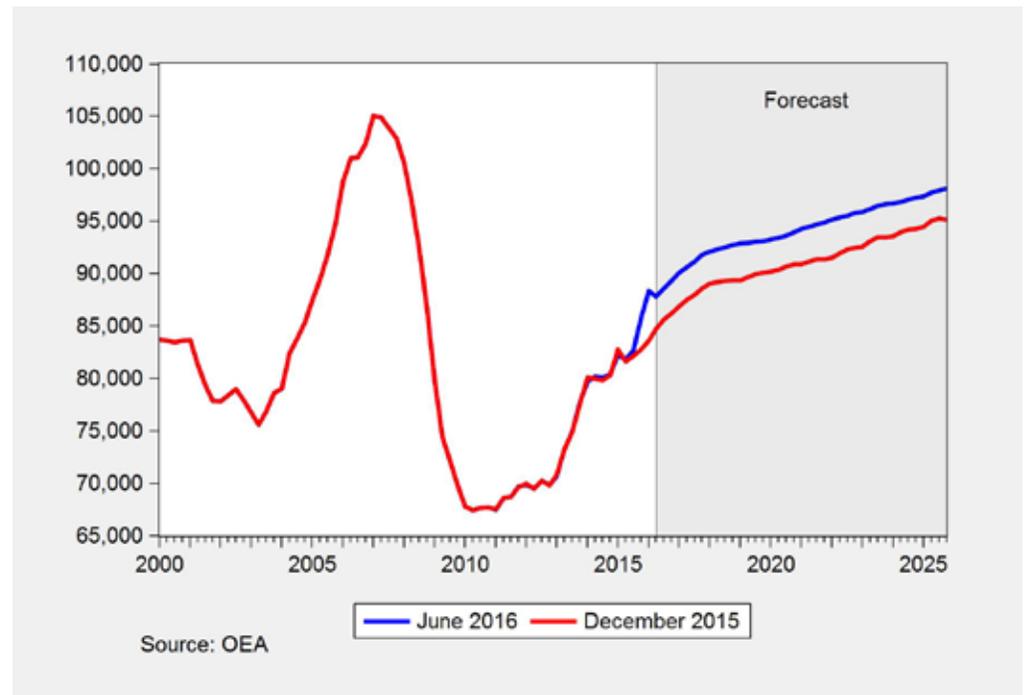
The weight-mile tax is the largest source of trucking-related revenue. This highway use tax applies to trucks with a gross weight over 26,000 pounds. Generally, the tax paid by a motor carrier varies with the weight of the vehicle, the number of miles traveled, and the axle configuration. The carriers generally have the option of paying on a monthly or quarterly schedule but in some cases will pay by the trip. Certain qualifying motor carriers, such as those transporting logs, wood chips, or sand/gravel, may pay the highway use tax based on a flat monthly fee. The weight-mile revenue and transaction totals discussed in this report include the trip based, monthly, quarterly and “flat-fee” revenue, as well as revenues from a small number of other trip-related fees.

An estimate of weight-mile “transactions” provides the basis for the current forecast of weight-mile revenues. This methodology, also used for prior forecasts, constructs a measure of weight-mile transactions by normalizing revenue by the tax rate paid for a typical heavy vehicle. The forecasting model regresses the normalized weight-mile transactions on Oregon construction and durable goods employment, real fuel prices, real consumer spending on durable goods, and industrial production and sales of heavy trucks to estimate weight-mile transactions. The variables in the model that have the most significant impact on the forecast are real consumer spending on durable goods and Oregon construction employment. Real consumer spending on durable goods has the strongest effect on the forecast and is slightly

Housing affordability is becoming a serious problem in the Portland area, this recent uptick in construction employment could signal and increase in housing is coming.

lower over the last two quarters compared to the prior forecast. This is counteracted by Oregon construction employment. Figure 11 shows the change in Oregon construction employment compared to the prior forecast.

Figure 11. Oregon Construction Employment

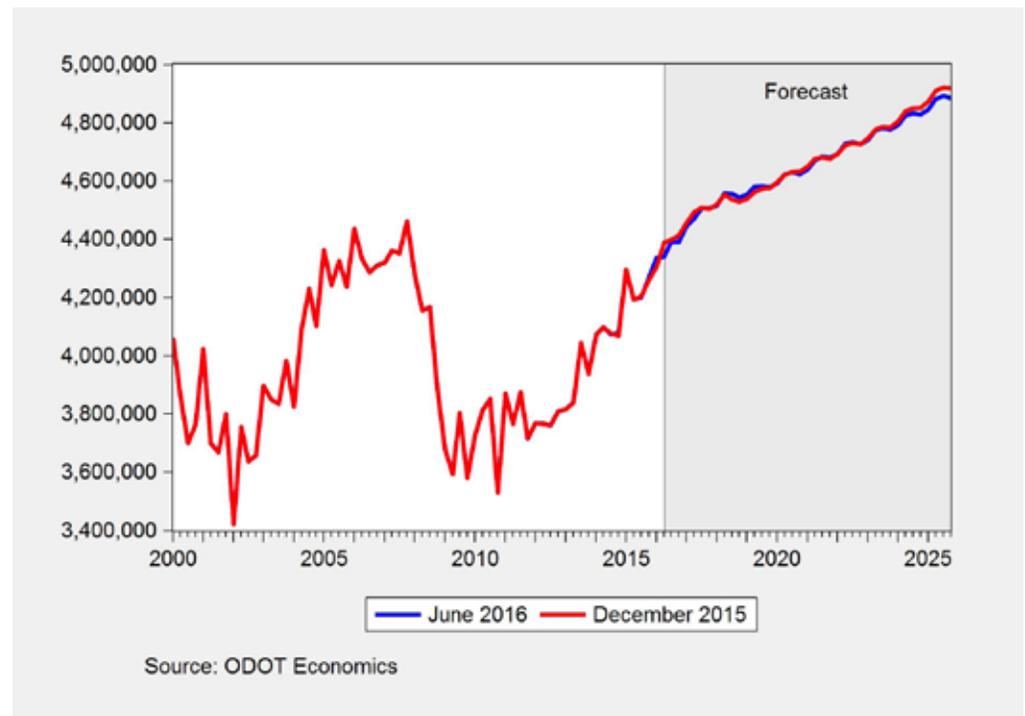


Compared to the prior forecast, Oregon construction employment saw an increase over the last two quarters shifting the forecast up. However, the forecast shape remains the same showing faster growth through 2017 before slower growth in the remainder of the forecast. This is very similar to the forecast for real consumer spending on durable goods.

These two variables, along with the other forecast variables, combine to produce the forecast shown in Figure 12. Compared to the prior forecast there is little change, since the two most significant variables had offsetting changes. The prior forecast accurately predicted the past two quarters, helping to preserve the initial condition of the forecast.

While weight-mile is expected to generally grow in the coming years, the business cycle will influence the shape of the forecast.

Figure 12. Weight-Mile Transactions - Forecast Comparison



With no growth in heavy registrations, continually increasing weight-mile revenues imply the existing trucks are driving more miles.

Row 1 of Table 5 shows the amount of weight-mile and flat fee revenues collected each fiscal year. In FY15, weight-mile and flat-fee revenues totaled \$283.9 million, increasing 2.9 percent over FY14. As discussed above growth in consumer spending and construction employment is pushing weight-mile revenues higher in FY16 and FY17, with expected average growth of 3.3 percent. However, as the economy cools beyond FY17 growth is expected to slow to about 1 percent in the out years, closely matching employment and population growth.

Row 2 of Table 5 shows heavy vehicle registration fee revenues. It includes both International Registration Plan (IRP) registration fees paid by interstate carriers and Commercial registration fees paid by intrastate carriers. Together these heavy vehicle registration fees totaled \$42.8 million in FY15, a 2.3 percent increase over FY14. However, revenues dip back down in FY16 to the FY14 level and are expected to essentially remain flat through the remainder of the forecast.

An interesting result from the continued growth in weight-mile revenues while registration revenue remains flat is that these extra miles need to be absorbed by the existing fleet. This implies there is excess capacity, which at some point will be filled resulting in an increase in registration revenue.

Row 3 shows the revenues from Road Use Assessment Fees (RUAF), permits, passes, and credentials such as weight receipts and cab cards. This row also includes OTIA III Local Fund fee increments from the commercial driver permits, licenses, and tests, along with weight receipts. Overall, total revenue from these heavy vehicle sources was \$10.9 million in FY15, an 11.5 percent increase over FY14. Beyond FY15, revenue is expected to drop in FY16 to about \$10.0 million and remain essentially flat through the remainder of the forecast.

Row 4 reports the total gross revenues for the Motor Carrier Transportation Division (MCTD) and row 5 the change from the prior forecast. Overall gross revenues are expected to grow at a 1.5 percent annual rate through FY21, a 0.1 percentage point decrease over the prior forecast. The cumulative change from the prior forecast is \$11.9 million lower over FY16-FY21. Given the volatility in weight-mile revenue, this is a mild change.

As costs grow faster than revenues, net revenue growth is not as strong.

Row 9 reports the revenues net of collection costs. Net revenues are expected to grow throughout the forecast. However, costs are expected to grow slightly faster than revenues leading to a 1.4 percent overall annual growth rate in net revenues from FY16-FY21.

Rows 10 through 12 highlight the amounts Motor Carrier contributes to the OTIA and JTA programs, either as a portion of the OTIA I set-aside shown in row 10 or as the incremental revenues from the OTIA III and JTA programs shown in rows 11 and 12.



Table 5. Highway Fund Revenue Collected by MCTD (Millions of Current Dollars)

	Actual		Forecast						Actual	Forecast		
	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	BI 13-15	BI 15-17	BI 17-19	BI 19-21
1 WEIGHT-MILE TAX	\$275.8	\$283.9	\$293.4	\$303.1	\$310.0	\$312.4	\$314.9	\$318.0	\$559.7	\$596.4	\$622.4	\$632.9
2 IRP & COMMERCIAL VEHICLE REGISTRATIONS*	\$41.8	\$42.8	\$41.7	\$41.4	\$41.6	\$41.4	\$41.3	\$41.2	\$84.6	\$83.0	\$82.9	\$82.5
3 RUAUF, PERMITS, PASSES & CREDENTIALS**	\$9.5	\$10.9	\$10.0	\$9.4	\$9.5	\$9.5	\$9.6	\$9.7	\$20.3	\$19.4	\$18.9	\$19.3
4 TOTAL MCTD COLLECTIONS	\$327.1	\$337.6	\$345.0	\$353.8	\$361.0	\$363.3	\$365.8	\$368.9	\$664.7	\$698.9	\$724.3	\$734.7
5 Change from Previous Forecast	\$0.0	\$0.0	(\$1.4)	(\$2.6)	(\$1.7)	(\$0.9)	(\$2.2)	(\$3.1)	\$0.0	(\$4.0)	(\$2.6)	(\$5.3)
6 COLLECTION/ADMINISTRATION & PROGRAM COST	(\$29.7)	(\$30.3)	(\$31.2)	(\$31.8)	(\$32.8)	(\$33.4)	(\$33.7)	(\$34.4)	(\$60.0)	(\$63.0)	(\$66.2)	(\$68.1)
7 IFTA BUDGETED EXPENDITURES***	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$1.1	\$2.2	\$2.2	\$2.2	\$2.2
8 ODOT CENTRAL SERVICES ASSESSMENT	(\$9.7)	(\$9.9)	(\$8.8)	(\$9.0)	(\$9.9)	(\$10.1)	(\$10.3)	(\$10.5)	(\$19.5)	(\$17.7)	(\$20.1)	(\$20.7)
9 NET MCTD REVENUE	\$288.8	\$298.5	\$306.2	\$314.2	\$319.4	\$320.8	\$322.9	\$325.2	\$587.4	\$620.3	\$640.2	\$648.0
10 REVENUE SET-ASIDE TO OTIA I & II - memo	(\$9.5)	(\$9.6)	(\$9.4)	(\$9.4)	(\$9.5)	(\$9.5)	(\$9.5)	(\$9.5)	(\$19.0)	(\$18.8)	(\$18.9)	(\$19.0)
11 REVENUE PLEDGED TO OTIA III - memo	(\$29.0)	(\$29.9)	(\$30.5)	(\$31.0)	(\$31.6)	(\$31.7)	(\$31.9)	(\$32.2)	(\$58.9)	(\$61.5)	(\$63.3)	(\$64.1)
12 REVENUE DUE TO JTA (HB 2001) - memo	(\$76.7)	(\$78.8)	(\$80.0)	(\$81.8)	(\$83.3)	(\$83.7)	(\$84.1)	(\$84.7)	(\$155.4)	(\$161.8)	(\$166.9)	(\$168.8)

*IRP: International Registration Plan.
 **RUAUF: Road Use Assessment Fees.
 ***IFTA: International Fuel Tax Agreement.

Oregon implemented the nation's first gasoline tax in 1919 at 1 cent per gallon.

Motor Fuels

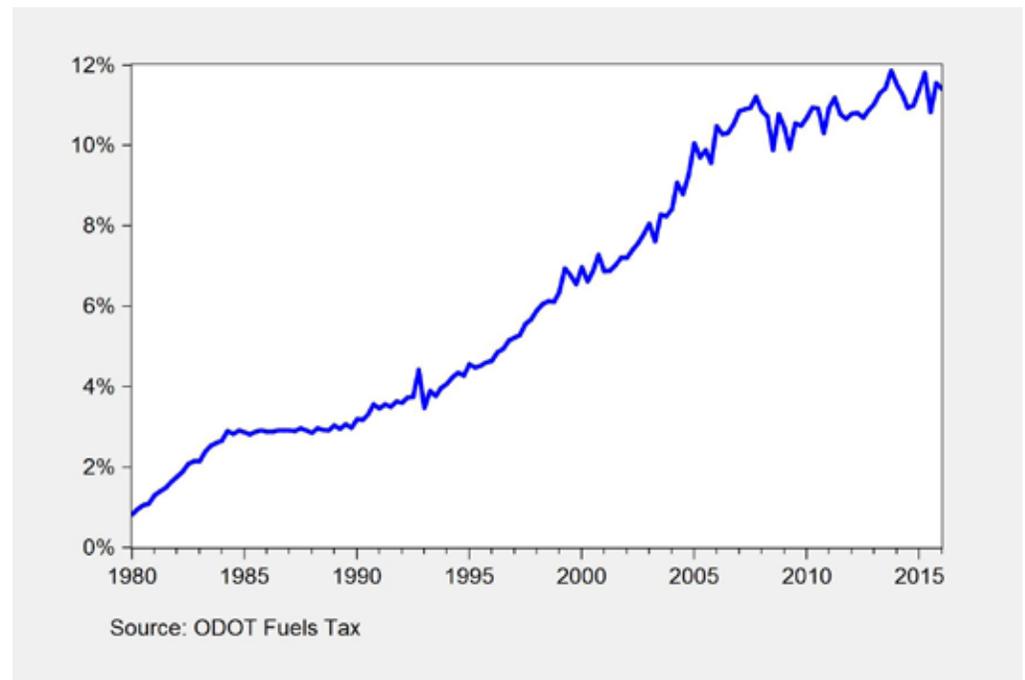
Motor Fuels revenue is derived from the tax paid on the sale of motor vehicle fuels and use fuels. Essentially motor vehicle fuels are gasoline and use fuel is predominantly diesel fuel. The distinction is important due to where in the supply chain the tax is collected. Gasoline is taxed at the point of first sale, when the dealer or distributor purchases the fuel from the terminal. Diesel on the other hand, is taxed later in the supply chain at the retail level. This gives retailers like card lock stations the option of not imposing the tax for heavy trucks that pay the weight-mile tax instead of the motor fuels tax.

Gasoline comprises the largest share of taxed fuel at around 90 percent, while diesel comprises around 10 percent. This has not always been the case. In the past taxable diesel was less than one percent of sales and has steadily been increasing its share as more vehicles that are required to pay the fuels tax switch to diesel as the source of motive power. The separation between when a vehicle pays the fuels tax or pays the weight-mile tax is at a weight of 26,000 pounds. Generally a vehicle up to 26,000 pounds will pay the fuels tax and register their vehicle through DMV, while vehicles over this weight will pay the weight-mile tax and register their vehicle through Motor Carrier.



As more vehicles that pay the fuels tax consume diesel, diesel's share of total motor fuels has grown steadily.

Figure 13. Use Fuel Share of the Tax Paid Total Motor Fuels Gallons



Weighing on the future viability of the motor fuels tax as a stable revenue source is the fuel efficiency of the vehicles paying the fuels tax. For many years through the 1990's and early 2000's the fuel efficiency of the light vehicle fleet did not change much as fuel prices remained low and vehicle manufacturers had no real incentive to improve the fuel economy of the vehicles they produced. However, in 2007 legislation was passed establishing new fuel efficiency standards for light vehicles in a two phase approach. Phase 1 impacts model year 2012-2016 vehicles setting a fuel efficiency target of 34.1 miles per gallon by model year 2016. Phase 2 builds on this by continuing to expect improvements with each model year until reaching a model year 2025 target of 54.5 miles per gallon. The actual standard is expected to be about 49.6 miles per gallon by 2025, with the remaining 5 miles per

Increasing CAFE standards aimed at reducing emissions will lead to light vehicles getting increasingly better fuel economy.

gallon equivalent reached through improvements in vehicle air conditioners. Also, the 54.5 target would be met under test conditions that are not replicable on the road, so the actual on-road average is expected to be around 38 miles per gallon. Still at a minimum this is an improvement of over 10 miles per gallon compared to the previous standards.

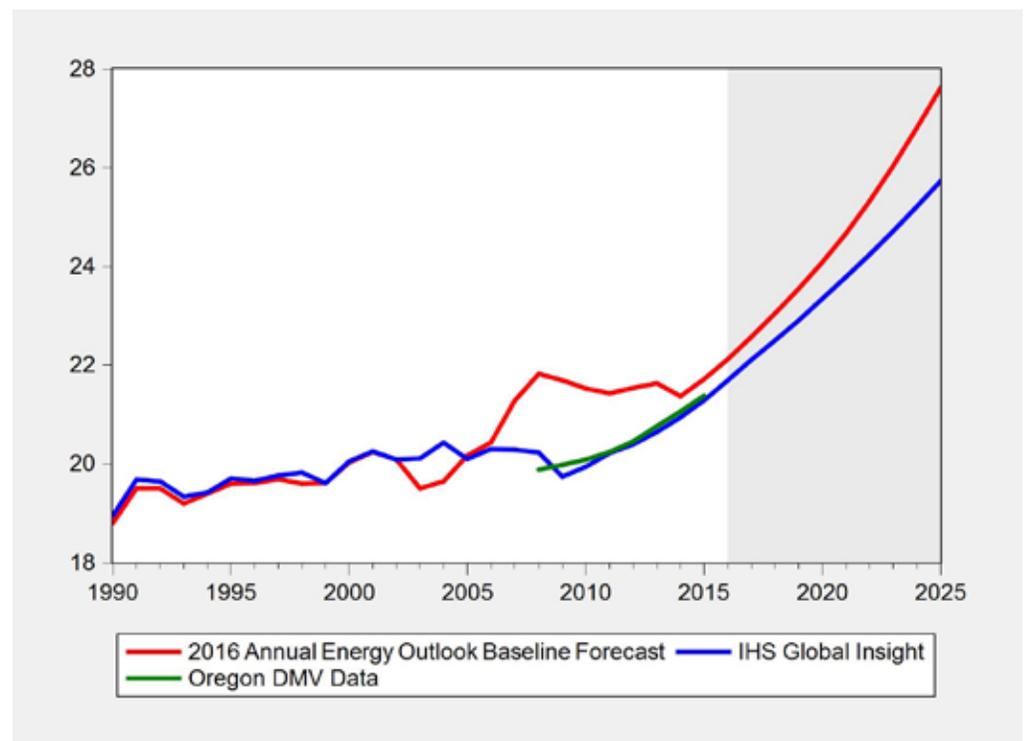
While the new vehicle fuel economy is expected to increase rapidly over the next 10 years, the stock fuel efficiency will grow much more slowly. With 3.4 million registered passenger vehicles and new registrations of 140,000 a year and an average vehicle age of just over 12 years it will take quite some time for these new higher efficient vehicles to replace the older less fuel efficient ones. Additionally the health of the economy impacts vehicle purchase decisions. Prior to the recession the average vehicle age was only 10 years but during and after the recession people have hung onto their vehicles for longer. As of the end of 2015 the average vehicle age was just over 12 years. This also could be due to the quality of vehicles, which now last longer. When people do replace their older vehicle the type of vehicle they replace their older one with will impact the overall fleet fuel economy. Are they replacing the older vehicle with one of the same class that is more fuel efficient or with a larger or smaller vehicle class? These decisions will mute or intensify the impact of the fuel efficiency improvement.

Figure 14 shows the history and forecast for two popular measures of the light vehicle stock fuel efficiency. It also shows the available data on Oregon's estimated fuel efficiency rating. This is calculated by matching DMV registration data with EPA combined fuel efficiency ratings and taking the average over all vehicles. The history differs between the U.S. Department of Energy's 2016 Annual Energy Outlook and the IHS Global Insight forecast due to revisions made by the Department of Energy. But as the chart shows Oregon's stock fuel efficiency closely matches the

The impact of the increasing fuel efficiency standards is evident in the Oregon data where in 2008 the average stock light vehicle mpg was under 20 and by 2015 was over 21.

IHS Global Insight data. Regardless of which one is the most accurate, they both expect significant annual increases in the stock fuel efficiency through 2025 and beyond as the CAFE standard for new vehicles affect the light vehicle stock.

Figure 14. Light Duty Vehicle Stock Fuel Efficiency Comparison

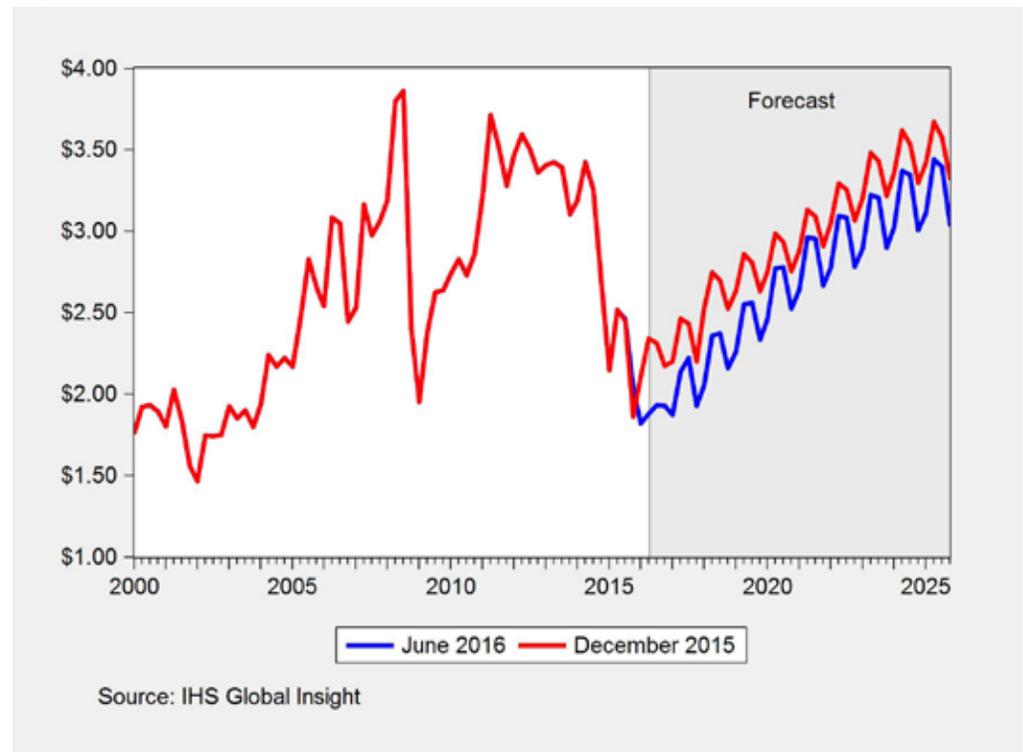


Consumption of motor vehicle fuel is generally considered a means to an end, not an end itself. People are not generally buying fuel just to drive, they are purchasing fuel to drive somewhere. Because of this the price of fuel is not as significant a consideration of whether a person will choose to drive as other considerations like the reason for the trip. However, the price of fuel impacts the disposable income of a person looking to drive, and at higher price levels has a greater impact on a decision to drive than at lower price levels.

Fuel prices have experienced a lot of volatility over the last decade compared to the stability of prior decades. This is due mainly to the run up in oil prices beginning in 2004, peaking in the summer of 2008. After falling briefly during the recession oil and fuel prices rose again and sustained elevated levels through the summer of 2014 before falling to levels we see today. Looking into the future, abundant crude oil stocks and production are expected to keep retail prices low through 2017 as we slowly draw down stocks. As we head into 2018 oil prices are expected to rise resulting in fuel prices steadily increasing throughout the forecast. Figure 15 shows the forecast for the average price for gasoline adjusted for inflation.

High oil inventories and mild global demand have allowed oil prices to remain low and are expected to stay low through 2017.

Figure 15. Real Gas Price Forecast



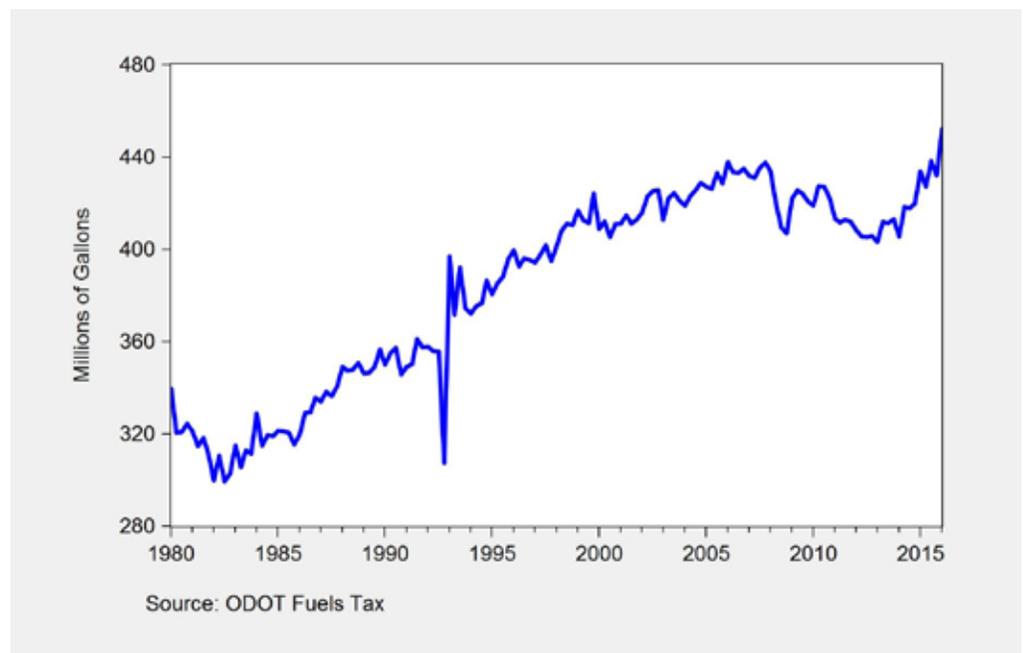
The current motor fuels model includes both taxable diesel and gasoline.

Table 6 shows the results of the motor fuels forecast. The current forecast model combines the use fuel and motor vehicle fuel to produce one forecast including both sources. Model variables include fuel efficiency, total Oregon nonfarm employment, real Oregon personal income, Oregon's population weighted by the labor force participation rate, fuel price, the change in consumer sentiment and a shift variable to control for the change to the 10 percent ethanol blending mandate. The model forecasts the quantity of fuel consumed and is multiplied by the fuels tax rate to arrive at the gross revenues reported in row 1.

There have been a couple significant changes compared to the prior forecast. First, the historical values have been matched with actual values from the ODOT accounting system rather than the previously used model fitted values. This allows us to better true up our history with how much revenue has actually been received. Secondly, the sample interval over which the model has been estimated has been reduced, which has a profound impact on the forecast. In the prior forecast the sample interval included motor fuel gallons from 1980 to current. Figure 16 shows this time series. Visible is the drop in consumption related to the early 1980's recession followed by a steady increase in consumption leading up to the 2009 recession. After rebounding somewhat from the recession sales fell through 2012 before slowly growing in 2013 with growth picking up steam in 2014 and 2015. Also evident is a data problem in 1992 and 1993 that previously had been removed as part of the model.

Motor fuels consumption generally grew from the mid 1980's through the mid 2000's, twenty years of consistent growth.

Figure 16. Total Motor Fuels Tax Paid Gallons (quarterly frequency – seasonally adjusted)



Estimation of this model over the interval including the 1980's produces results in the out years of the forecast that, while slowing, is still positive. Given the weakness in employment growth in these latter forecast years and expected strength in fuel efficiency this result is questionable. Analysis of the sensitivities of the model variables shed some important insight into the reason why, specifically the sensitivity of the fuel efficiency variable with respect to consumption. In a static environment holding all else constant, a ten percent increase in the fuel efficiency roughly equates to a nine percent decrease in consumption. However, there is a rebound effect associated with fuel efficiency where miles driven increase as fuel economy increases. This effect has been measured in the short-run at around 0.2 to 0.4 percent for a one percent increase in fuel efficiency. Adjusting the consumption for this increase in miles driven yields an approximate decrease in consumption of

A rebound effect means that a person is likely to drive slightly more miles in a more fuel efficient vehicle.

between five and seven percent for a ten percent increase in fuel efficiency.

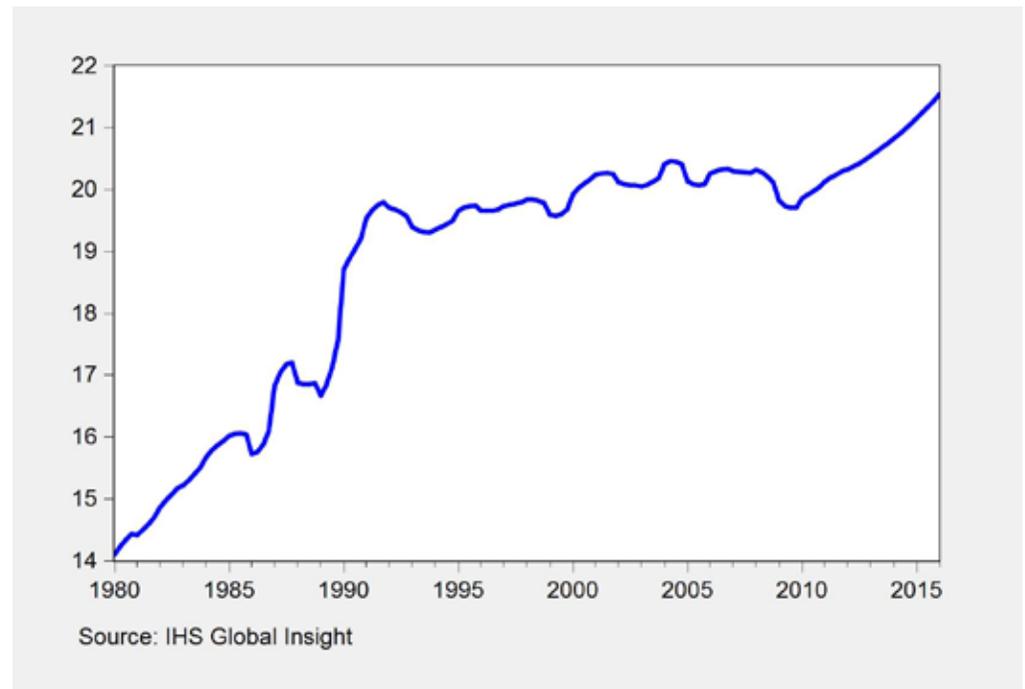
The sensitivity of the fuel efficiency variable over the estimation sample interval including the 1980's was approximately -0.15, so a one percent increase in fuel efficiency led to a 0.15 percent decrease in consumption. Estimating the same model over the shorter interval beginning in 1994 produces a fuel efficiency sensitivity of -0.64 with respect to fuel consumption, where a one percent increase in fuel efficiency leads to a 0.64 decrease in consumption. For a ten percent increase in fuel efficiency this leads to a 6.4 percent decrease in fuel consumption, falling within the expected range above.

The fuel efficiency data itself provides a good explanation as to the difference in sensitivities. In 1980 the light vehicle stock fuel efficiency was just over 14 miles per gallon. By 1990 this had increased to 19 miles per gallon including a two miles per gallon jump between 1989 and 1990. At the same time motor fuel consumption grew over this period, and particularly strong from 1986 through 1990. This weakens the negative correlation between fuel efficiency and fuel consumption. Additionally the jump in miles per gallon by two in one year for the stock of the light vehicle fleet calls into question the validity of this data during that time period.



The estimated two mpg increase in the stock light vehicle fleet in 1989 seems highly improbable and degrades the impact of fuel efficiency in the motor fuels model.

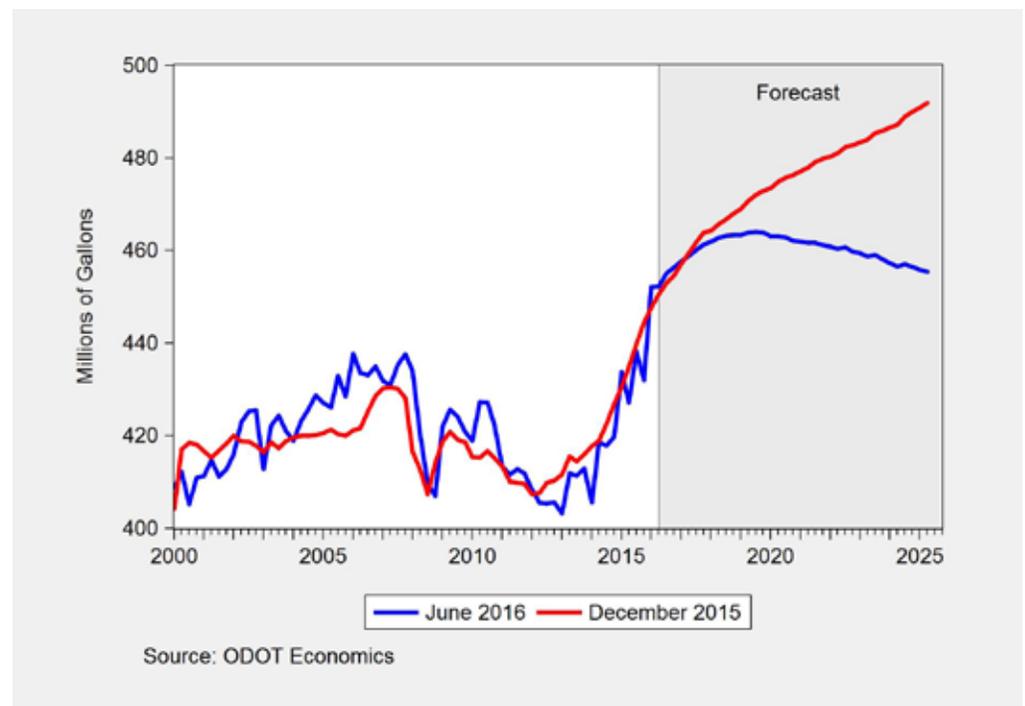
Figure 17. Average Light Duty Vehicle Stock Fuel Efficiency



Estimating the model using a shortened interval from 1994 to current not only corrects the fuel efficiency question but also jumps over the data problems in 1992 and 1993. This change results in a forecast that is very similar to the prior one in the near term through 2017 before growth slows, peaking in 2019 and slowly declining in the out years. Of course with seven forecasts between now and the expected peak in sales, there is a lot of room for adjustments. The strength of the economy and the pace of fuel efficiency increases in the light vehicle fleet will both have a strong impact on the sales in the future.

As fuel efficiency exerts a stronger influence in the updated model, overall fuel consumption will begin to decline in the outer forecast years.

Figure 18. Gallons of Motor Fuels Tax Paid – Forecast Comparison (quarterly frequency – seasonally adjusted)



Row 2 of Table 6 shows the total gross revenue from the motor fuels taxes. FY15 finished with \$507.5 million in gross revenues while FY16 is on pace to add \$22.2 million growing at a 4.4 per cent rate. FY17 growth is expected to remain strong at 3.6 per cent as the economy continues to rapidly expand. However, as the economy cools and the increase in fuel efficiency remains strong, growth slows, from 1.0 per cent in FY18, to 0.4 per cent in FY19, to zero growth in FY20, and then turning negative in FY21.

Row 3 shows the change from the prior forecast. The change in history is due to the use of actual historical revenues rather than model predicted values. This use of actuals in history also impacts the forecast, turning what would have been a slight increase in

The fuels tax program is very efficient. Collection costs are only about 0.3% of total revenue collected.

the FY16 forecast into a decrease and impacting the other years as well. However, beginning in FY19 the decrease from the prior forecast is due primarily to the change in the sample estimation interval used in the model.

Rows 4 through 13 lists the costs associated with the Fuels Tax program and the statutory transfers that occur prior to apportionment. Row 14 is a special memo row to show the impact of the B20 biofuels tax exemption program. In prior forecasts this was deducted from total gross revenues in calculation of total net revenues. However, since the B20 fuel is tax exempt, it is not included in the gross revenue above and taking it out in calculation of net revenues would be double counting. It is left in as a memo item but is not part of the net revenue calculation shown in row 15.

Rows 16 through 18 highlight the amounts that the motor fuels tax contributes to the OTIA and JTA programs, either as a portion of the OTIA I set-aside shown in row 10 or as the incremental revenues from the OTIA III and JTA programs shown in rows 11 and 12. Note that the OTIA III legislation did not increase the motor fuels tax rate so the incremental amount is zero.



Table 6. Highway Fund Revenue Collected by Fuels Tax (Millions of Current Dollars)

	Actual		Forecast						Actual	Forecast		
	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	BI 13-15	BI 15-17	BI 17-19	BI 19-21
1 MOTOR FUELS TAXES	\$492.7	\$507.5	\$529.7	\$548.5	\$553.9	\$556.3	\$556.5	\$554.8	\$1,000.2	\$1,078.2	\$1,110.2	\$1,111.3
2 TOTAL FSB COLLECTIONS	\$492.7	\$507.5	\$529.7	\$548.5	\$553.9	\$556.3	\$556.5	\$554.8	\$1,000.2	\$1,078.2	\$1,110.2	\$1,111.3
3 Change from Previous Forecast	(\$1.9)	(\$6.4)	(\$4.8)	\$1.5	(\$2.7)	(\$6.0)	(\$12.0)	(\$22.1)	(\$8.3)	(\$3.4)	(\$8.7)	(\$34.1)
4 COLLECTION/ADMINISTRATION COST	(\$1.5)	(\$1.5)	(\$1.8)	(\$1.8)	(\$1.9)	(\$1.9)	(\$1.9)	(\$2.0)	(\$3.1)	(\$3.6)	(\$3.8)	(\$3.9)
5 ODOT CENTRAL SERVICES ASSESSMENT	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.4)	(\$0.8)	(\$0.8)
6 SNOWMOBILE TRANSFER	(\$0.7)	(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)	(\$0.6)	(\$1.3)	(\$1.2)	(\$1.2)	(\$1.2)
7 CLASS I ATV TRANSFER	(\$2.9)	(\$2.9)	(\$2.7)	(\$2.7)	(\$2.7)	(\$2.7)	(\$2.6)	(\$2.6)	(\$5.8)	(\$5.5)	(\$5.4)	(\$5.3)
8 MARINE BOARD TRANSFER	(\$5.0)	(\$4.1)	(\$4.1)	(\$4.1)	(\$4.1)	(\$4.0)	(\$4.0)	(\$4.0)	(\$9.1)	(\$8.1)	(\$8.1)	(\$8.1)
9 CLASS II ATV TRANSFER	(\$1.1)	(\$1.1)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)	(\$2.2)	(\$2.0)	(\$2.0)	(\$2.0)
10 CLASS III ATV TRANSFER	(\$1.1)	(\$1.1)	(\$1.1)	(\$1.1)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)	(\$2.2)	(\$2.1)	(\$2.1)	(\$2.1)
11 CLASS IV ATV TRANSFER	(\$0.4)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.8)	(\$0.9)	(\$0.9)	(\$0.9)
12 TRANSPORTATION OPERATING FUND (TOF)	(\$5.4)	(\$5.4)	(\$5.5)	(\$5.5)	(\$5.6)	(\$5.6)	(\$5.7)	(\$5.7)	(\$10.8)	(\$11.0)	(\$11.2)	(\$11.4)
13 AVIATION TRANSFER	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.1)	(\$0.2)	(\$0.2)	(\$0.2)	(\$0.2)
14 HB 2435 (2013 Session) B20 FUEL TAX EXEMPTION -memo	(\$0.5)	(\$4.1)	(\$5.1)	(\$5.1)	(\$5.1)	(\$5.1)	(\$2.5)	\$0.0	(\$4.6)	(\$10.1)	(\$10.1)	(\$2.5)
15 NET FSB REVENUE	\$474.3	\$489.9	\$512.1	\$530.9	\$536.1	\$538.4	\$538.6	\$536.9	\$964.2	\$1,043.0	\$1,074.5	\$1,075.4
16 REVENUE ALLOCATION TO OTIA I & II SET-ASIDE - memo	(\$19.1)	(\$19.0)	(\$19.2)	(\$19.3)	(\$19.3)	(\$19.4)	(\$19.4)	(\$19.3)	(\$38.2)	(\$38.5)	(\$38.7)	(\$38.7)
17 REVENUE PLEDGED TO OTIA III - memo	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$1.0	\$2.0	\$0.0	\$0.0	\$0.0	\$3.0
18 REVENUE DUE TO JTA (HB 2001) - memo	(\$99.0)	(\$101.9)	(\$106.4)	(\$109.7)	(\$110.8)	(\$111.2)	(\$111.3)	(\$110.9)	(\$200.9)	(\$216.1)	(\$222.0)	(\$222.2)

Highway Revenue Forecast Summary

The forecasted revenue is based on current law tax and fee rates. While it is likely that sometime in the near future rates will increase, this forecast is based on rates as they stand today.

As discussed above, we are in a period of robust growth leading to increases across all three revenue sources. Table 7 shows the combined revenues and row 4 summarizes the total gross revenue. The prior two fiscal years, FY14 and FY15, have shown solid growth of 3.0 and 3.3 percent respectively. FY16 is expected to grow even stronger at 3.8 percent, yielding peak growth in our current business cycle. Growth is still strong in FY17 at 2.6 percent but falls as our expansion slows, dropping to basically zero growth in the outer forecast years. Average annual growth from FY16-FY21 is 1.4 percent. Compared to the prior forecast, gross revenues are stronger through FY19 but fall in FY20 and FY21 as motor fuels revenue growth stagnates. Overall gross revenues are down \$20 million between FY16 and FY21.

Row 5 of Table 7 sums all the collection and program costs for DMV, Motor Carrier, and Motor Fuels, and the pre-apportionment transfers. It also includes the incremental revenues from the OTIA III and JTA programs. Row 6 is the total gross revenue minus the amount in row 5. Taking costs and transfers into consideration this brings down the overall average annual growth rate to just 1.1 percent over the FY16-FY21 period.

Rows 7 through 15 are memo items creating summaries of different components of and affecting forecast revenues. Noteworthy are the incremental revenues from the OTIA and JTA programs and the associated debt service from bond sales associated with these programs.

Rows 17 through 21 summarize the net revenue for each OTIA and JTA program disaggregated by amounts to the local governments or to the state. Row 22 represents the total net revenue for distribution by summing rows 17 through plus row 6.

Table 8 separates the total from row 22 in Table 7a into county, city and state apportionments by apportionment formula, whether it was pre-OTIA, OTIA I&II, OTIA III or JTA program. A separate monthly forecast of the County/City Apportionments is available under "Highway Revenue Apportionment Forecasts" at <http://www.oregon.gov/ODOT/TD/EA/Pages/revenueforecasts.aspx>.

Table 7. Highway Fund Revenue by Fiscal Year and Biennium (Millions of Current Dollars)

	Actual		Forecast						Actual	Forecast		
	FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	BI 13-15	BI 15-17	BI 17-19	BI 19-21
1 TOTAL MCTD COLLECTIONS	\$327.1	\$337.6	\$345.0	\$353.8	\$361.0	\$363.3	\$365.8	\$368.9	\$664.7	\$698.9	\$724.3	\$734.7
2 TOTAL FSB COLLECTIONS	\$492.7	\$507.5	\$529.7	\$548.5	\$553.9	\$556.3	\$556.5	\$554.8	\$1,000.2	\$1,078.2	\$1,110.2	\$1,111.3
3 TOTAL DMV COLLECTIONS	\$309.6	\$321.6	\$336.1	\$339.4	\$342.7	\$340.6	\$340.0	\$341.5	\$631.2	\$675.5	\$683.3	\$681.5
4 TOTAL GROSS HIGHWAY FUND	\$1,129.4	\$1,166.7	\$1,210.8	\$1,241.7	\$1,257.6	\$1,260.2	\$1,262.3	\$1,265.2	\$2,296.1	\$2,452.5	\$2,517.8	\$2,527.5
5 COLLECTION, PROGRAMS, & TRANSFERS (incl.obligated OTIA & JTA)	(\$526.4)	(\$543.2)	(\$571.7)	(\$581.5)	(\$606.5)	(\$609.6)	(\$597.5)	(\$598.1)	(\$1,069.6)	(\$1,153.2)	(\$1,216.1)	(\$1,195.6)
6 NET REVENUE TO HIGHWAY FUND	\$603.0	\$623.5	\$639.1	\$660.2	\$651.2	\$650.5	\$664.8	\$667.1	\$1,226.5	\$1,299.3	\$1,301.7	\$1,331.9
7 OTIA I & II SET ASIDE - memo	\$35.6	\$35.6	\$35.6	\$35.6	\$35.6	\$35.6	\$35.6	\$35.6	\$71.2	\$71.2	\$71.2	\$71.2
8 DEBT SERVICE (OTIA I & II) - memo	(\$32.4)	(\$34.6)	(\$36.2)	(\$34.3)	(\$33.4)	(\$31.8)	(\$29.9)	(\$26.9)	(\$67.0)	(\$70.4)	(\$65.2)	(\$56.8)
9 OTIA III Dedicated Revenues - memo	\$97.2	\$101.1	\$104.7	\$106.7	\$108.2	\$107.8	\$107.8	\$107.6	\$198.3	\$211.4	\$216.0	\$215.4
10 DEBT SERVICE (OTIA III) - memo	(\$111.2)	(\$106.3)	(\$110.4)	(\$110.0)	(\$106.0)	(\$104.0)	(\$99.9)	(\$103.5)	(\$217.5)	(\$220.4)	(\$210.0)	(\$203.4)
11 JTA Total Gross Revenues - memo	\$275.4	\$284.7	\$295.5	\$302.0	\$305.9	\$306.0	\$306.2	\$305.9	\$560.1	\$597.4	\$611.9	\$612.1
12 JTA Allocation for Long-Range Planning and TIC Transfers - memo	(\$24.0)	(\$24.0)	(\$24.0)	(\$24.0)	(\$24.0)	(\$24.0)	(\$24.0)	(\$24.0)	(\$48.0)	(\$48.0)	(\$48.0)	(\$48.0)
13 DEBT SERVICE (JTA) - State Only - memo	(\$17.5)	(\$29.1)	(\$40.2)	(\$53.6)	(\$56.7)	(\$60.0)	(\$66.2)	(\$71.2)	(\$46.5)	(\$93.8)	(\$116.7)	(\$137.4)
14 Oregon Travel Experience Transfer - State Only - memo	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$13.1)	(\$13.1)	(\$13.1)	(\$13.1)
15 E-GOV Records Incremental Revenue Transfer - memo	(\$5.3)	(\$5.2)	(\$5.3)	(\$5.2)	(\$5.2)	(\$5.1)	(\$5.1)	(\$5.0)	(\$10.5)	(\$10.5)	(\$10.3)	(\$10.1)
17 NET OTIA I & II REVENUE FOR DISTRIBUTION	\$3.2	\$1.0	(\$0.6)	\$1.3	\$2.2	\$3.8	\$5.7	\$8.7	\$4.2	\$0.8	\$6.0	\$14.4
18 NET OTIA III REVENUE FOR DISTRIBUTION - LOCAL	\$28.5	\$33.9	\$38.2	\$35.5	\$33.8	\$35.3	\$38.2	\$37.1	\$62.4	\$73.7	\$69.1	\$75.3
19 NET OTIA III REVENUE FOR DISTRIBUTION -STATE	(\$35.2)	(\$31.4)	(\$36.0)	(\$31.2)	(\$23.9)	(\$23.9)	(\$22.6)	(\$25.2)	(\$66.6)	(\$67.2)	(\$47.7)	(\$47.8)
20 NET JTA REVENUE FOR DISTRIBUTION - LOCAL	\$125.7	\$130.4	\$135.7	\$139.0	\$141.0	\$141.0	\$141.1	\$141.0	\$256.1	\$274.7	\$282.0	\$282.0
21 NET JTA REVENUE FOR DISTRIBUTION ABOVE D/S -STATE	\$47.0	\$37.8	\$29.4	\$17.6	\$15.6	\$12.2	\$6.1	\$1.1	\$84.7	\$47.0	\$27.8	\$7.2
22 TOTAL NET REVENUE FOR DISTRIBUTION	\$772.2	\$795.2	\$805.8	\$822.5	\$819.8	\$819.0	\$833.3	\$829.7	\$1,567.4	\$1,628.3	\$1,638.8	\$1,663.1

Note: Row and column sums may vary slightly due to rounding.

Table 8. Distribution of Total Net Revenues (Millions of Current Dollars)

	Distribution Percentage	Actual		Forecast						Actual	Forecast			
		FY 14	FY 15	FY 16	FY 17	FY 18	FY 19	FY 20	FY 21	BI 13-15	BI 15-17	BI 17-19	BI 19-21	
1	COUNTY APPORTIONMENT (ORS 366.739)	24.38%	\$133.7	\$138.1	\$141.3	\$146.0	\$143.6	\$143.4	\$146.9	\$147.5	\$271.8	\$287.3	\$287.0	\$294.4
2	SPECIAL COUNTY (ORS 366.772)		(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)
4	COUNTY APPORTIONMENT (OTIA I & II)	30.00%	\$1.0	\$0.3	(\$0.2)	\$0.4	\$0.7	\$1.1	\$1.7	\$2.6	\$1.3	\$0.2	\$1.8	\$4.3
5	COUNTY APPORTIONMENT (OTIA III)	25.48%	\$24.8	\$25.8	\$26.7	\$27.2	\$27.6	\$27.5	\$27.5	\$27.4	\$50.5	\$53.9	\$55.0	\$54.9
6	DEBT SERVICE (OTIA III)	84.07%	(\$16.8)	(\$14.0)	(\$11.9)	(\$14.7)	(\$16.7)	(\$15.2)	(\$12.9)	(\$13.8)	(\$30.9)	(\$26.6)	(\$32.0)	(\$26.7)
7	COUNTY APPORTIONMENT (OTIA III-Local)	60.00%	\$4.4	\$4.6	\$4.7	\$4.6	\$4.6	\$4.6	\$4.6	\$4.7	\$9.0	\$9.3	\$9.2	\$9.3
8	COUNTY APPORTIONMENT (JTA)	30.00%	\$75.4	\$78.2	\$81.4	\$83.4	\$84.6	\$84.6	\$84.7	\$84.6	\$153.6	\$164.8	\$169.2	\$169.2
9	NET COUNTY APPORTIONMENT		\$221.9	\$232.5	\$241.6	\$246.4	\$243.8	\$245.5	\$252.0	\$252.5	\$454.3	\$488.0	\$489.3	\$504.5
10	CITY APPORTIONMENT (ORS 366.739)	15.57%	\$85.4	\$88.2	\$90.2	\$93.3	\$91.7	\$91.6	\$93.8	\$94.2	\$173.6	\$183.5	\$183.3	\$188.0
11	SPECIAL CITY (ORS 366.805)		(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)
12	CITY APPORTIONMENT (OTIA I & II)	20.00%	\$0.6	\$0.2	(\$0.1)	\$0.3	\$0.4	\$0.8	\$1.1	\$1.7	\$0.8	\$0.2	\$1.2	\$2.9
13	CITY APPORTIONMENT (OTIA III)	16.99%	\$16.5	\$17.2	\$17.8	\$18.1	\$18.4	\$18.3	\$18.3	\$18.3	\$33.7	\$35.9	\$36.7	\$36.6
14	DEBT SERVICE (OTIA III)	15.93%	(\$3.2)	(\$2.7)	(\$2.2)	(\$2.8)	(\$3.2)	(\$2.9)	(\$2.4)	(\$2.6)	(\$5.9)	(\$5.0)	(\$6.1)	(\$5.1)
15	CITY APPORTIONMENT (OTIA III-Local)	40.00%	\$2.9	\$3.1	\$3.1	\$3.1	\$3.1	\$3.1	\$3.1	\$3.1	\$6.0	\$6.2	\$6.2	\$6.2
16	CITY APPORTIONMENT (JTA)	20.00%	\$50.3	\$52.1	\$54.3	\$55.6	\$56.4	\$56.4	\$56.4	\$56.4	\$102.4	\$109.9	\$112.8	\$112.8
17	NET CITY APPORTIONMENT		\$152.0	\$157.6	\$162.6	\$167.0	\$166.3	\$166.8	\$169.9	\$170.6	\$309.7	\$329.6	\$333.1	\$340.5
18	HIGHWAY DIVISION (including small City/County)	60.05%	\$329.3	\$340.2	\$348.0	\$359.7	\$353.7	\$353.3	\$361.8	\$363.3	\$669.4	\$707.7	\$707.0	\$725.1
19	SPECIAL COUNTY (ORS 366.772)		(\$0.3)	(\$0.3)	(\$0.3)	(\$0.3)	(\$0.3)	(\$0.3)	(\$0.3)	(\$0.3)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)
20	SPECIAL CITY (ORS 366.805)		(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$0.5)	(\$1.0)	(\$1.0)	(\$1.0)	(\$1.0)
21	HIGHWAY DIVISION: TOTAL (OTIA I & II)	50.00%	\$1.6	\$0.5	(\$0.3)	\$0.7	\$1.1	\$1.9	\$2.9	\$4.3	\$2.1	\$0.4	\$3.0	\$7.2
22	HIGHWAY DIVISION: TOTAL (OTIA III)	57.53%	\$55.9	\$58.2	\$60.2	\$61.4	\$62.3	\$62.0	\$62.0	\$61.9	\$114.1	\$121.6	\$124.3	\$123.9
23	DEBT SERVICE (OTIA III)	100.00%	(\$91.1)	(\$89.6)	(\$96.3)	(\$92.6)	(\$86.1)	(\$85.9)	(\$84.6)	(\$87.1)	(\$180.7)	(\$188.8)	(\$172.0)	(\$171.7)
24	STATE APPORTIONMENT (OTIA III)	0.00%	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0	\$0.0
25	HIGHWAY DIVISION: NON-DEDICATED JTA REVENUES	48.75%	\$61.3	\$63.6	\$66.2	\$67.8	\$68.7	\$68.7	\$68.8	\$68.7	\$124.8	\$133.9	\$137.5	\$137.5
26	HIGHWAY DIVISION: DEDICATED JTA DEBT SERVICE	51.25%	\$64.4	\$66.8	\$69.6	\$71.2	\$72.2	\$72.3	\$72.3	\$72.2	\$131.2	\$140.8	\$144.5	\$144.5
27	DEBT SERVICE (JTA)		(\$17.5)	(\$29.1)	(\$40.2)	(\$53.6)	(\$56.7)	(\$60.0)	(\$66.2)	(\$71.2)	(\$46.5)	(\$93.8)	(\$116.7)	(\$137.4)
28	OREGON TRAVEL EXPERIENCE TRANSFER		(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$6.6)	(\$13.1)	(\$13.1)	(\$13.1)	(\$13.1)
29	NET HIGHWAY DIVISION		\$396.6	\$403.3	\$399.9	\$407.3	\$407.9	\$405.0	\$409.7	\$404.9	\$799.9	\$807.2	\$812.9	\$814.6
30	Memo: HIGHWAY MODERNIZATION PROGRAM (included in NET HIGHWAY DIVISION)		\$74.3	\$76.6	\$79.9	\$82.7	\$83.8	\$84.1	\$84.5	\$84.8	\$150.9	\$162.6	\$167.9	\$169.3
31	NET COUNTY APPORTIONMENT		\$221.9	\$232.5	\$241.6	\$246.4	\$243.8	\$245.5	\$252.0	\$252.5	\$454.3	\$488.0	\$489.3	\$504.5
32	NET CITY APPORTIONMENT		\$152.0	\$157.6	\$162.6	\$167.0	\$166.3	\$166.8	\$169.9	\$170.6	\$309.7	\$329.6	\$333.1	\$340.5
33	NET HIGHWAY DIVISION		\$396.6	\$403.3	\$399.9	\$407.3	\$407.9	\$405.0	\$409.7	\$404.9	\$799.9	\$807.2	\$812.9	\$814.6
34	NET HIGHWAY FUNDS REVENUE		\$770.5	\$793.4	\$804.1	\$820.7	\$818.0	\$817.3	\$831.6	\$828.0	\$1,563.9	\$1,624.8	\$1,635.3	\$1,659.6
35	SPECIAL COUNTY/CITY TRANSFERS TO ALLOTMENT FUND		\$1.8	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8	\$1.8	\$3.5	\$3.5	\$3.5	\$3.5
36	TOTAL NET REVENUES FOR DISTRIBUTION		\$772.2	\$795.2	\$805.8	\$822.5	\$819.8	\$819.0	\$833.3	\$829.7	\$1,567.4	\$1,628.3	\$1,638.8	\$1,663.1

Note: Row and column sums may vary slightly due to rounding.



June 30, 2016