THE ECONOMIC AND FISCAL IMPACTS OF PROPOSED FIRST-TIME HOME BUYER INCOME TAX DEDUCTION LEGISLATION IN THE STATE OF OREGON

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Table of Contents

1. Executive Summary

First-time home buyers are the lifeblood of local housing markets and constitute an important element of state and local economic activity. Since the economic recession and housing market downturn, many individuals and families have faced significant challenges to buying their first home. A key obstacle to home ownership is the difficulty saving for a down payment and other expenses associated with purchasing a home. The Oregon First-Time Home Buyer Savings Account Act (“proposed legislation”) in Oregon would allow potential first-time home buyers to receive a tax deduction on a portion of adjusted gross income set aside in a savings account and on accrued interest on those funds when funds are used to buy a first home. The proposed legislation is designed to make it easier for individuals and families to save to buy their first home.

As currently envisioned, the proposed first-time home buyer income tax deduction legislation would allow first-time home buyers to deduct up to $5,000 from federal adjusted gross income annually for the purpose of saving toward a down payment and other expenses associated with the purchase of a residential unit. An individual and his or her spouse would be permitted to deduct up to $10,000 annually from adjusted gross income. In addition, any interest earned on accumulated savings in a designated account would also be exempt from taxation. The total maximum contribution over a 10-year period is $50,000.

The proposed legislation could potentially benefit thousands of families, helping them buy their first home, and could also have a positive impact on the State of Oregon economy. In this report, we have analyzed the potential fiscal and economic impacts of the proposed legislation to the State of Oregon, and the results of this analysis are described in detail in the following sections.

In this report, the fiscal impact analysis estimates the type and dollar amount of new and existing tax revenues foregone and generated by the proposed legislation. The economic impact analysis estimates the number of new jobs created in the local economy as a result of the economic activity associated with the spending patterns of new first-time home buyers residing in the State of Oregon, the personal earnings of these newly created jobs, and the multiplier effect on the state economy resulting from economic activity associated with new first-time home buyer spending.

In the short-term, the State of Oregon would forego income tax revenues from first-time home buyers participating in the tax deduction program; however, the **longer-term economic benefits and fiscal impacts generated by those first-time home buyers outweigh these short-term foregone tax revenues**.

Estimated Fiscal Burden to the State of Oregon

In the short-term, the findings presented in this report indicate that if the proposed legislation is enacted, the State of Oregon will experience an initial fiscal shortfall of $3,670,564 over a five-year period.[1] The fiscal burden is the amount of foregone tax revenue to the state. This estimated shortfall is based on the

[1] In this analysis, we estimate five-year impacts associated with the proposed legislation. The costs and benefits of the proposed legislation would, of course, extend beyond five years for as long as the program continued to be administered. For the purpose of this report, we hold both tax rates and our findings constant in 2016 dollars.

assumption that the maximum annual savings contribution will be $5,000 for a one-person household and $10,000 for a two-or more person household, as well as on assumptions about program participation, described in more detail below. The estimated fiscal impact shortfall to the State of Oregon from first-time home buyer participants was found to range from a $51,693 in the first year of implementation to $2,077,752 in year five of the program. Thus, the aggregate fiscal impact burden to the State is estimated to be $3,670,564 during the first five years of program implementation.

Estimated Economic Benefits to the State of Oregon

The economic benefits generated by the implementation of the proposed first-time home buyer program will contribute to the vitality of the Oregon economy. These findings are presented in Table 1-1 below and are summarized as follows:

New Housing Construction

Of the 3,221 potential new first-time home buyer households estimated to participate in the proposed down payment savings program over the five-year period, it is estimated that 161 households (or five percent) will purchase newly constructed housing units and the remaining 3,060 households will purchase existing housing units. The total economic impact to the Oregon economy of developing new housing for these new, first-time home buyer households is estimated to be $61,176,736 in economic activity associated with construction spending outlays. These construction spending outlays are estimated to create 533 new jobs over the development period with related personal earnings of $23,273,280.

New Household Spending

A detailed review and analysis of consumer expenditure survey data by housing tenure and type indicates that the change in tenure status from renter-occupied housing to owner-occupied housing brings with that change in tenure a marginal increase in consumer spending for goods and services associated with home ownership. In Oregon, this net increase is estimated to be $2,448 in new annual household spending by each household that switches from renter-occupied to owner-occupied housing. The total economic impact to the Oregon economy of the marginal increase in new household spending by the estimated 3,221 potential new first-time home buyer households is estimated to be $11,576,532 in economic activity. Direct outlays of $7,096,507 associated with this net increase in annual household spending are estimated to create and support 101 full-time equivalent jobs with related personal earnings of $3,434,000.

Estimated Fiscal Benefits to the State of Oregon

The fiscal benefits of the proposed legislation include benefits that accrue directly to the state, as well as new revenue to the counties. These new tax revenues would come from five sources: : (1) real estate property taxes on new housing constructed and purchased by first-time home buyers; (2) real estate transfer taxes on homes (both existing and new) purchased by first-time home buyer participants in Washington County only; (3) recordation fees on deed and mortgage documents; (4) income taxes on personal earnings generated by workers building these new houses; and (5) income taxes on personal earnings generated by workers supported by the annual increase in household spending attributed to first-time home buyers.

While the State of Oregon will initially experience a fiscal revenue shortfall of $3,670,564 during the first five years of program implementation, the State is estimated to collect $4,624,754 in gross revenues over the initial five-year period. The net fiscal impact to the State, therefore, is estimated to be $954,190. Alternatively stated, estimated tax revenues associated with home ownership generated by first-time home buyers who participate in the down payment savings program could be $1.26 in new revenues to the State of Oregon and/or its counties for every $1.00 that the proposed first-time home buyer income tax deduction legislation will require in program implementation.

Table 1-1

Economic Impact Summary
Proposed First Time-Home Buyer Program
Oregon

Economic Impacts	Direct Outlays	Indirect Outlays	Total Outlays
New Home Construction			
FTHB[1] - Statewide	$ 30,000,361	$ 31,176,375	$ 61,176,736
New Jobs (Short-term/"Temporary") [2]			533
Total Within State			480
Total Outside State			53
Estimated Personal Earnings [3]			$ 23,273,280
Household Spending			
FTHB[1] - Statewide	$ 7,096,507	$ 4,480,025	$ 11,576,532
New Jobs (Long-term/"Permanent") [2]			101
Total Within State			91
Total Outside State			10
Estimated Personal Earnings of these New Jobs[3]			$ 3,434,000

Source:
Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.; Woods & Poole Economics, Inc.; U.S. Department of Commerce.

Note:
[1] FTHB = First-time Home Buyer.
[2] Includes jobs located in Oregon and outside Oregon.
[3] Only within Oregon.

Table 1-2
Fiscal Impact Summary
First-Time Home Buyer Households
Oregon

Down Payment Savings Deduction Limits (annually)		*Proposed*
	1-person Household	***$5,000***
	2+ person Household	**10,000**
Type of Revenue		**Total**
Real Estate Property Taxes-161 New Units		$ 1,961,735
Real Estate Transfer Taxes - 23 New Units (Washington County only)		$ 11,159
Real Estate Transfer Taxes - 439 Existing Units (Washington County only)		$ 171,148
Recordation Fees (Deed & Mortgage) - 161 New Units		$ 24,150
Recordation Fees (Deed & Mortgage) - 3,060 Existing Units		$ 459,000
Income Taxes - Short-term Workers - 533 Jobs		$ 1,740,717
Income Taxes - Long-term Workers - 101 Jobs		$ 256,845
	Sub-total	$ 4,624,754
Income Tax Revenues Foregone		$ 3,666,807
Income Tax on Interest Revenues Foregone		$ 3,757
	Sub-total	$ 3,670,564
Total: Net Fiscal Surplus (Deficit)		$ 954,190

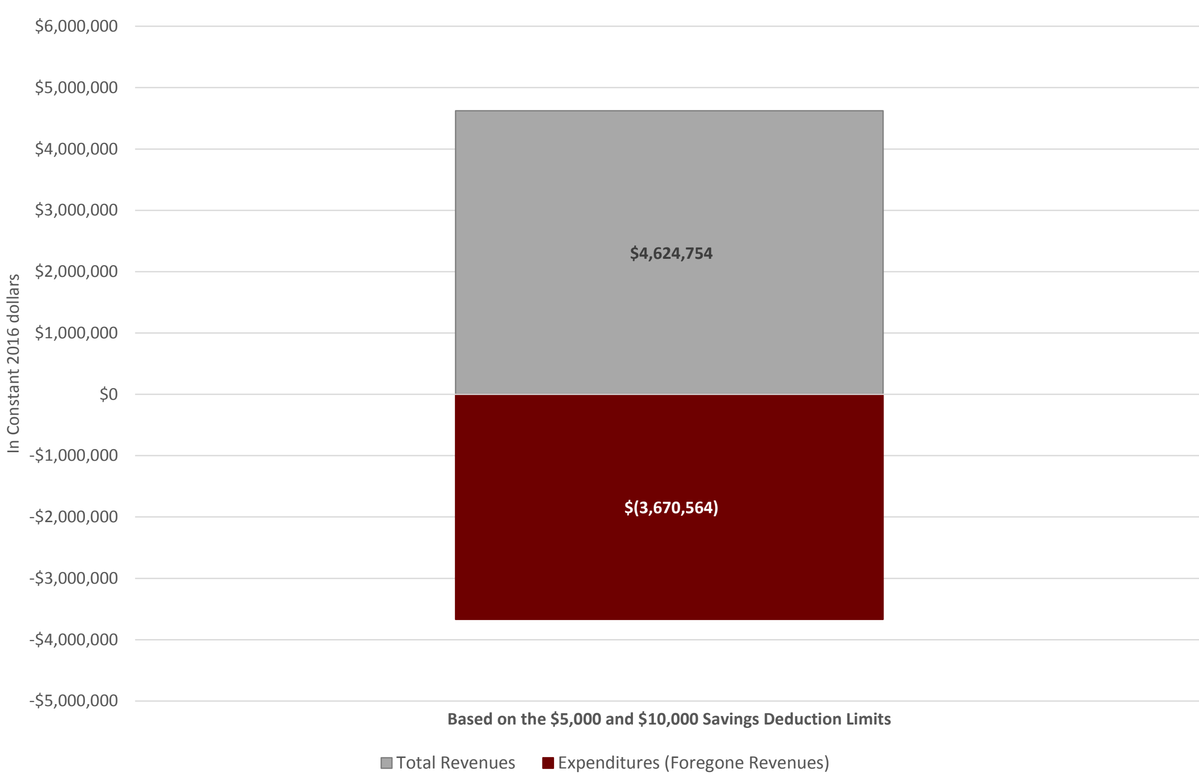
Source:
Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note:
This analysis holds tax rates and dollar amounts constant in 2016 dollars.

Summary of Key Implications

By incentivizing saving for a down payment, the proposed first-time home buyer savings program could help thousands of Oregon residents become home owners for the first time. In addition, the proposed legislation could result in new revenues for the State of Oregon and its counties through the purchase and construction of new homes, as well as through spending associated with home ownership. However, the amounts that potential home buyers are allowed to set aside as tax deductible will determine the fiscal benefits associated with the proposed program. If this proposed legislation is implemented as currently proposed ($5,000 maximum annually for individuals/$10,000 maximum annually for married couples), net fiscal revenues generated by this program are estimated to exceed the costs associated with the program to the State of Oregon. Therefore, the proposed program (if implemented as written) would provide an economic stimulus to the State of Oregon.

Figure 1-1. Net Fiscal Revenues to Implement the First-Time Home Buyer Program in Oregon



Source: Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

2. Introduction

The proposed first-time home buyer income tax deduction legislation in Oregon would allow first-time home buyers to deduct up to $5,000 from federal adjusted gross income annually for the purpose of saving toward a down payment and other expenses associated with the purchase of a residential unit. An individual and his or her spouse would be permitted to deduct up to $10,000 annually from adjusted gross income. The maximum contribution is $50,000 over a 10-year period. In addition, any interest earned on accumulated savings in a designated account would also be exempt from taxation.

It is presumed that an individual and his or her spouse would be required to meet the definition of a “first-time home buyer” which includes individuals and couples who have not purchased a home within the prior three years. Funds deposited into the account, along with any accrued interest, would be used for the purchase or construction of a home to be used as a primary residence for a minimum period of time after the purchase or construction.

A key rationale for the proposed tax deduction legislation is to assist individuals and families become home owners. In the State of Oregon, like in many places around the country, potential first-time home buyers continue to face obstacles to home ownership. In the years following the national economic recession, households have had a harder time accessing credit, as lending requirements were tightened in response to the mortgage crisis. The slow economic recovery and stagnant wage growth have also limited the abilities of individuals to buy a home. Finally, rising household debt—particularly student debt—has also made it hard for potential first-time home buyers to save for a down payment and other costs associated with buying a home.

As the national economy has started to recover and the housing market has strengthened, the opportunities for first-time home buyers have begun to improve. Lenders have started loosening mortgage requirements. However, saving remains a challenge, particularly for young individuals and families who want to buy a home. The proposed legislation in the State of Oregon is designed to help these state residents become home owners.

This report includes a summary of local housing market conditions and trends in Oregon. A review of federal and state first-time home buyer tax incentive programs is provided and the proposed Oregon legislation is described. The report concludes with estimates of the potential fiscal costs and benefits, and the overall economic impacts of the proposed legislation to the State of Oregon.

3. Overview of the State of Oregon Housing Market

Housing Market Activity

The state's housing market has improved substantially since the recession and housing market downturn, driven by relatively strong economic and population growth. According to recent data from the U.S. Census Bureau, Oregon is one of the fastest-growing states in the nation, adding nearly 70,000 people in 2016 and over a quarter of a million people in the last five years.[2] Many new Oregon residents have moved to the state from higher-cost places, including the largest number from California, and are attracted to Oregon the economic opportunities and high quality of life available in the state. Many newcomers and existing Oregonians are eager to become home owners in the state and have been fueling the recovery of the state's housing market.

Statewide, the number of home sales has increased in recent years and home prices are up in many markets. However, the impacts of an improving housing market have not been experienced by all, and young households and potential first-time home buyers, in particular, have not been able to benefit from the improving housing market.

According to data from the National Association of Realtors®, nationally, sales of existing homes were up 3.8 percent in 2016 compared to 2015. In Oregon, the pace of sales activity has also expanded. In 2016, there were an estimated 73,667 sales of existing homes statewide, reflecting an increase of 3.2 percent over 2015 (Table 3-1). The Portland area had some of the strongest market activity, with home sales up 10.3 percent in Multnomah County, 8.1 percent in Washington County, and 6.7 percent in Clackamas County.

Prices have fluctuated since the downturn. In 2016, the estimated statewide average sales price was $279,634 but prices were much higher in some parts of the state, particularly in the Portland region. In Clackamas County, for example, the average sales prices was $363,000 in 2016. In Multnomah County, the average price was $344,670 (Table 3-2). For a 20-percent down payment, a potential home buyer would have to save nearly $75,000 to purchase the average-priced home in these jurisdictions, though a three-percent down payment would amount to about $10,500. Rising home prices will create additional pressures on the ability to save for a down payment.

[2] U.S. Census Bureau. 2016. Utah is the Fastest-Growing State, Census Bureau Reports. December 20. Online https://www.census.gov/newsroom/press-releases/2016/cb16-214.html.

Table 3-1
Sales of Existing Homes
Oregon

County	*2016 Sales*	*2015-2016 Percent Change*
Baker	248	n/a
Benton	860	25.3%
Clackamas	8,139	6.7%
Clatsop	976	7.3%
Columbia	672	32.4%
Coos	988	10.3%
Crook	622	-78.7%
Curry	9	97.6%
Deschutes	5,619	4.6%
Douglas	1,994	-11.6%
Gilliam	331	17.9%
Grant	51	-104.0%
Harney	42	22.2%
Hood River	306	-29.7%
Jackson	3,329	-22.0%
Jefferson	219	-18.4%
Josephine	1,660	0.2%
Klamath	1,102	3.9%
Lake	296	30.4%
Lane	6,368	-6.8%
Lincoln	1,210	2.3%
Linn	2,307	-27.8%
Malheur	250	-36.6%
Marion	5,413	-3.6%
Morrow	57	-21.3%
Multnomah	14,212	10.3%
Polk	1,566	4.9%
Sherman	3	n/a
Tillamook	592	14.6%
Umatilla	774	-10.7%
Union	257	-4.9%
Wallowa	59	11.9%
Wasco	274	-18.6%
Washington	10,556	8.1%
Wheeler	351	-4.2%
Yamhill	1,955	7.3%
Statewide	**73,667**	**3.2%**

Source: Oregon Association of Realtors®; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Table 3-2
Avg. Sales Prices of Existing Homes
Oregon

County	*2016 Price ($)*
Baker	191,000
Benton	267,000
Clackamas	363,000
Clatsop	307,000
Columbia	218,000
Coos	178,000
Crook	197,000
Curry	232,000
Deschutes	308,000
Douglas	188,000
Gilliam	154,000
Grant	183,000
Harney	94,400
Hood River	332,000
Jackson	238,000
Jefferson	155,250
Josephine	226,000
Klamath	155,000
Lake	109,000
Lane	237,000
Lincoln	253,000
Linn	161,000
Malheur	253,000
Marion	204,000
Morrow	203,000
Multnomah	344,670
Polk	207,000
Sherman	128,000
Tillamook	295,000
Umatilla	162,000
Union	178,000
Wallowa	271,000
Wasco	178,000
Washington	315,000
Wheeler	243,000
Yamhill	264,000
Statewide	**279,364**

Source: Oregon Association of Realtors®; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

First-Time Home Buyers

While housing market conditions have improved for many households, potential first-time home buyers continue to face obstacles to home ownership in Oregon. According to data from the National Association of Realtors®, the share of home sales to first-time home buyers has declined considerably both nationally and in Oregon. In 2009, an estimated 44.0 percent of all home sales in Oregon were to first-time home buyers. In 2016, first-time home buyers made up only 28.8 percent of sales in the state (Table 3-3).]

Young households that are typically the bulk of first-time home buyers have been disproportionately left out of the benefits of home ownership in Oregon since the end of the recession and housing market downturn. In 2005, before the recession and housing bust, the home ownership rate in Oregon was 63.8 percent. About 41.9 percent of 25 to 34 year olds in Oregon were home owners 2005. Home ownership rates have declined dramatically in Oregon over the past decade. In 2015, the statewide home ownership rate was 61.1 percent. However, the home ownership rate among younger households has declined even further and was just 32.7 percent in 2015 (Table 3-4).

Table 3-3

First-Time Home Buyers as a Share of All Home Sales
Oregon

Year	*First-Time Home Buyers (%)*
2009	44.0
2010	34.5
2011	34.6
2012	26.7
2013	24.7
2014	28.1
2015	24.1
2016	28.8

Source: National Association of Realtors®; Oregon Association of Realtors®; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Table 3-4
Home Ownership Rates
Oregon
2005-2015

Year	*Overall*	*25 to 34 Year Olds*
2005	63.8%	41.9%
2006	64.8%	42.2%
2007	64.6%	41.4%
2008	64.3%	41.5%
2009	63.1%	35.6%
2010	62.5%	36.1%
2011	60.8%	31.7%
2012	61.6%	32.5%
2013	60.8%	29.6%
2014	60.7%	30.3%
2015	61.1%	32.7%
Difference 2005-2015	-2.7%	-9.3%

Source: U.S. Census Bureau, American Community Survey; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

The lower home ownership rates are likely a result of a combination of factors. First, many would-be first-time home buyers faced a severely restricted mortgage market in the years immediately following the housing market downturn. Government oversight of the mortgage industry went into high gear as the full scope of how subprime lending—and more relaxed lending requirements generally—contributed to the mortgage crisis and economic recession. As a result, the standards lenders used to approve potential home owners for a mortgage became much stricter. Many potential first-time home buyers who would have been approved for a home loan in the early 2000s found they were shut out of the mortgage market. In recent months, it appears as though the credit box is loosening and more households are able to qualify and secure a home loan which has helped to begin to draw more first-time home buyers back into the market nationally.[3]

Second, the limited inventory of homes for sale and rising home prices in the state have put the price of home ownership out of reach for many young potential home buyers, particularly as wages have grown slowly since the recession. Affordability challenges and a lack of supply of housing for first-time home buyers are major and growing obstacles to home ownership in the state.

[3] See, for example, Prashant Gopal and Heather Perlberg, There's some hope for first-time home buyers, *Bloomberg Markets* (http://www.bloomberg.com/news/articles/2016-01-22/there-s-some-hope-for-first-time-home-buyers, January 22, 2016)

Third, rising student and other debt make it increasingly difficult for many would-be home buyers to save for a down payment. According to the National Associations of Realtors® Survey of Home Buyers and Sellers, more than 80 percent of first-time home buyers in 2015 used savings for their down payment. However, more than one-fifth of home buyers said they delayed five years or more before they were able to start saving for a down payment, primarily because of other household debt. Student loan debt is a particular burden for young households. Nearly 60 percent of first-time home buyers nationally said in 2015 that student loan debt was the primary reason they delayed starting to save for a down payment. In addition to household debt, rising rents, health care costs, and education expenses are increasingly a burden for many households, leaving less and less disposable income that can be set aside to save to buy a home.

The inability for households to purchase a first home has negative implications for the ability to grow wealth. The primary source of wealth among most middle-class households in the U.S. is their home, and obstacles to home ownership can increase growing wealth gaps.

A lack of home ownership opportunities in Oregon also puts extra pressure on rents in the state. With limited opportunities for home ownership, young adult households remain renters for longer periods of time which increases demand for rental housing. If there are expanded home ownership opportunities that allow some households to shift from rental to home ownership, then there could be a positive impact on the rental market as reduced demand for rental housing could lead to less upward pressure on rents. Rental affordability has been a growing challenge in Oregon, so slower rent growth as a result of expanded home ownership opportunities would provide welcome relief for the state's renter population.

4. Oregon's Proposed First-Time Home Buyer Income Tax Deduction Program

The proposed first-time home buyer tax deduction legislation in Oregon is designed to make it easier for individuals and families to save to buy their first home. The state is in good company when it comes to proposing programs and incentives to assist first-time home buyers. Policymakers at all levels of government are aware of the important role that first-time home buyers play in a successful housing market and strong economy. In a May 2015 report, researchers at the Urban Institute referred to first-time home buyers as "the lifeblood of our housing system."[4] First-time home buyers reduce the inventory of unsold homes. They are necessary for existing home owners to be able to sell their homes in order to move to take a new job in another community or simply to move into another home that better fits their families' needs. The cycling of first-time home buyers into the market spurs new construction, including the construction of both starter and move-up homes.

Even as the economy has slowly recovered from the Great Recession, potential first-time buyers continue to face challenges to becoming home owners, including slow wage growth, mounting student debt, and growing affordability challenges. Agencies at all levels of government have implemented programs to help make it easier for individuals and families to buy their first home.

Background on Key Federal and State First-Time Home Buyer Programs

2008 Federal First-time Home buyer Tax Credit: As part of broad efforts to restore the housing sector and to help encourage economic recovery, federal policymakers passed a first-time home buyer tax credit as part of the Housing and Economic Recovery Act of 2008. The tax credit program was modified and extended in 2009. First-time home buyers, defined as those who had not purchased a home within the three years prior, were eligible for a tax credit of up to $8,000 when they purchased a home. It is estimated that the federal first-time home buyer tax credit program helped more than three million first-time home buyers become home owners and ultimately cost the federal government an estimated $22 billion dollars.[5] The federal first-time home buyer credit expired in 2010 as the federal government began to see signs of recovery in the housing market.

State first-time home buyer initiatives. Along with the federal home buyer tax credit, a number of states provided additional incentives to home buyers in the early years of the economic recovery. At least 18 states offered some type of state tax credit, loan or grant for first-time home buyers in 2009.[6] Most of the programs that were adopted immediately after the recession were meant to be short-term incentives—like the federal tax credit program—and nearly all of them expired in 2010.

[4] Bing Bai, Jun Zhu and Laurie Goodman, *A Closer Look at the Data on First-time Home buyers* (Washington, DC: The Urban Institute, 2015)
[5] Karen Dynan, Ted Gayer and Natasha Plotkin, *The Recent Home buyer Tax Credit: Evaluation and Lessons for the Future* (Washington, DC: The Brookings Institution, 2013)
[6] Dynan, Gayer and Plotkin (2013)

However, states continue to support first-time home buyers. Today, more than six years after the end of the recession, virtually all states offer some type of assistance to first-time home buyers. Home buyer counseling, down payment assistance, below-market interest rates on home mortgages, second mortgages and home ownership programs for veterans are among the most common. Many states offer first-time home buyers a special state tax credit associated with interest paid on their mortgages (often referred to as the "Mortgage Credit Certificate program.") More recently, a small number of states have adopted first-time home buyer savings account programs, which provide a tax incentive for individuals and families to save money for a down payment to purchase their first home.

Montana's First-time Home Buyer Act allows households to contribute money to a savings account that can be used for a down payment or other expenses associated with the cost of buying a first home (e.g. closing costs, credit history report, appraisal costs, points, etc.) As long as this money is used for an eligible expense within 10 years of the establishment of the account, it is not included as taxable income at the state level. Individuals can reduce their state taxable income by up to $3,000 annually; the maximum allowable reduction for a married couple household filing jointly is $6,000. In addition, none of the interest that accumulates on funds in the first-time home buyer savings account—assuming the funds are ultimately used for an eligible expense—are subject to state taxes.[7] The savings program in Montana has been on the books since 1998. As of 2013, the number of individuals participating in the program each year ranged from between 125 and 225.[8]

Virginia has also established a first-time home buyer savings account program. In Virginia, residents can deposit up to $50,000 in a savings account to use for expenses associated with buying a first home. All interest and capital gains earnings on those funds are excluded from state taxes if the funds are used for eligible expenses. The state allows the funds to be used by the depositor or the person making the contributions can give the money to any other first-time home buyer in the state and still take advantage of the tax benefit.[9] The state has not published information on the number of participants in the first-time home buyer savings program.

Colorado adopted a first-time home buyer savings account program in 2016. In late May, the Colorado General Assembly passed a bill that allows taxpayers to claim a deduction on the interest and other income earned on funds contributed to a first-time home buyer savings account. The contributions can be used by the depositor or by another qualified beneficiary (e.g. a child or grandchild) to pay a down payment and/or closing costs associated with buying their first home. Individuals can contribute up to $14,000 *per year* and households filing joint tax returns can contribute up to $28,000 *per year* to the account. The maximum overall contribution is capped at $50,000; however, there is no limit to how long the funds can stay in the account. The account balance can grow to up to $150,000 and all interest income is exempt from state tax liability.

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[7] Marsha A. Goetting and Brian Olsen, *First-time Home Buyer Savings Account* (Bozeman, MT: Montana State University, 2015)
[8] Lisa Prevost, Tax-free accounts for homes, *New York Times* (http://www.nytimes.com/2013/08/11/realestate/tax-free-accounts-for-homes.html, August 8, 2013)
[9] Ben Lan, Virginia launches investment plan to spur first-time home buyers (*Housing Wire* http://www.housingwire.com/articles/30522-virginia-launches-tax-free-investment-plan-to-spur-first-time-buyers, July 1, 2014)

In **New York**, a proposed first-time home buyer income tax deduction legislation would allow first-time home buyers to deduct up to $5,000 from Federal adjusted gross income annually for the purpose of saving toward a down payment and other expenses associated with the purchase of a residential unit. An individual and his or her spouse would be permitted to deduct up to $10,000 annually from adjusted gross income. Interest earned on accumulated savings would also be exempt from taxation.

An individual and his or her spouse would be required to meet the definition of a “first-time home buyer” as specified in the proposed legislation. Funds deposited into the account, along with any accrued interest, must be used for the purchase or construction of a home to be used as a primary residence for at least two years after the purchase or construction.

There is a proposed first-time home buyer income tax deduction legislation in **Iowa** that would allow individuals to deposit funds into a savings account and to deduct up to $3,000 from adjusted gross income annually if those funds are ultimately used for the costs associated with a first-time home purchase in the state. Married couples would be permitted to deduct up to $6,000 annually from adjusted gross income. Any interest earned on accumulated savings in a designated account would also be exempt from taxation.

Mississippi’s proposed first-time home buyer income tax deduction legislation originally allowed individuals to deduct up to $5,000 and married couples to deduct up to $10,000 annually from adjusted gross income if those funds are ultimately used for the costs associated with a first-time home purchase in the state. Similar to other programs, any interest earned on accumulated savings in a designated account would also be exempt from taxation. Based on an analysis of the potential fiscal and economic impacts, the state of Mississippi is considering modifications to the proposed legislation to lower the annual cap on contributions exempt from taxation.

Oregon's Proposed First-Time Home Buyer Savings Programs

The proposed first-time home buyer income tax deduction legislation in Oregon shares some of the same characteristics as programs proposed and implemented in other states, and has the same goal of expanding home ownership by making it easier for first-time home buyers to save for a down payment.

Under the Oregon First-Time Home Buyer Savings Account Act, first-time homebuyers would be allowed to deposit funds into a savings account and to deduct up to $50,000 from adjusted gross income over a 10-year period if those funds are ultimately used for the costs associated with a first-time home purchase in the state. In addition, any interest earned on accumulated savings in a designated account would also be exempt from taxation. The Act does not specify an annual cap on contributions in the current version of the proposed legislation.

In order to be eligible for the tax deduction, households would be required to meet the state's definition of a "first-time home buyer" as an individual who is a resident of Oregon and has not owned or purchased, either individually or jointly, a single family residence during a period of three years prior to the date of the purchase of a single family residence.

5. Estimated New Households and New First-Time Home Buyers in Oregon

The proposed first-time home buyer tax deduction could potentially benefit thousands of individuals and families in Oregon, helping them to buy their first home. In addition, the legislation is estimated to have a positive impact on the state's economy. While there are also fiscal costs associated with the proposed legislation, these costs are estimated to be offset by the benefits to the state. In this report, we have analyzed the potential fiscal and economic impacts of the proposed legislation to the State of Oregon, and the results of this analysis are described in detail in the following sections.

The first step to calculating the potential fiscal and economic impacts of the proposed legislation is to estimate the number of households that would take advantage of the tax deduction. Specifically, we need to estimate how many individuals and married couples would contribute to a first-time home buyer savings account program and file for the tax deduction.

In the proposed legislation, there is a 10-year time limit placed on the deduction associated with savings for a first home; however, for the purpose of our analyses, we have estimated the fiscal and economic impacts over a five-year period. Over this period, the potential participants in the first-time home buyer savings account program and recipients of the tax deduction come from two sources: 1) current Oregon renters who have been excluded from the for-sale market in recent years ("Pent-Up Demand") and 2) new households in Oregon who will become first-time home buyers ("New Demand").

Pent-Up Demand

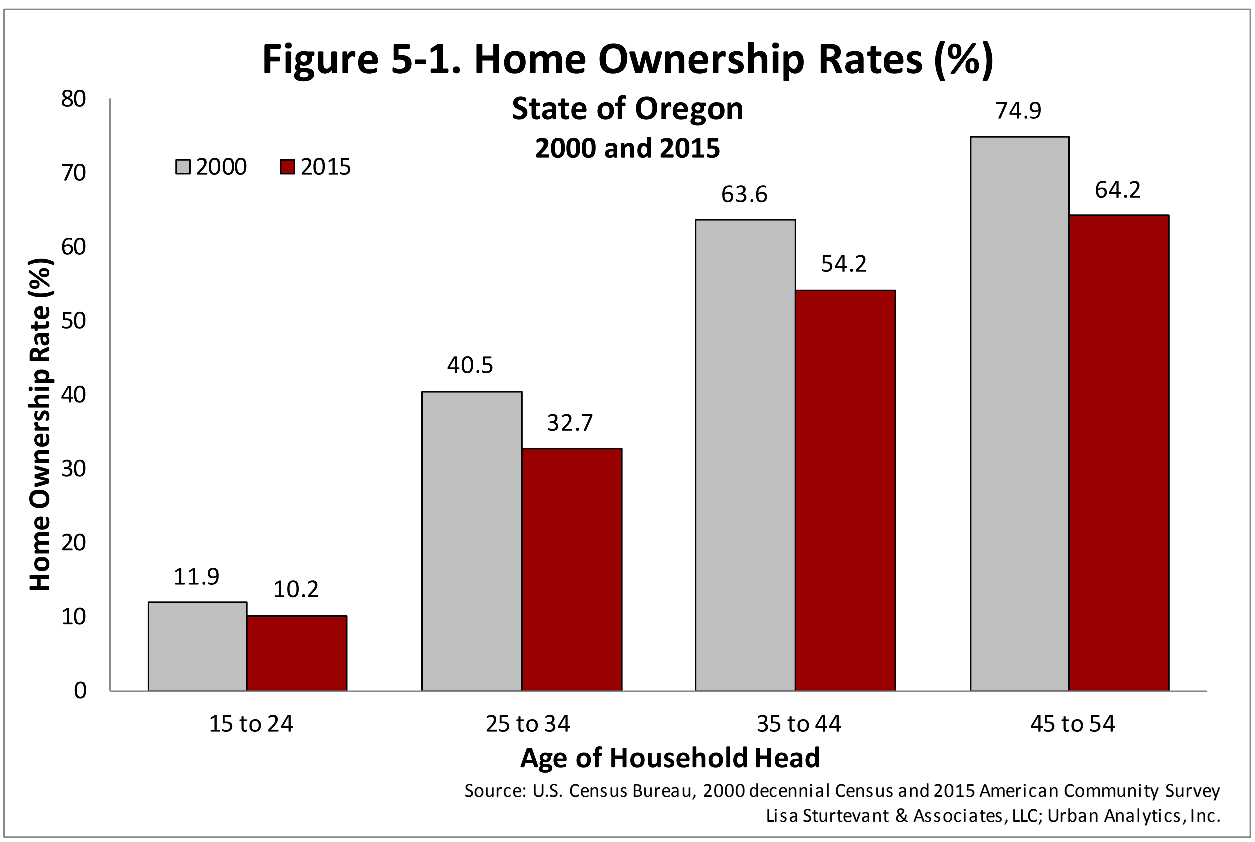
We analyzed home ownership rates by age in Oregon in 2000 and 2015 to estimate the potential first-time home buyers that might be participants in the proposed savings account and tax deduction program. As noted earlier, in 2000, home ownership rates were higher than in 2015 for every age group in the state. We calculated how many home owners there would have been in the state in 2015 if home ownership rates remained at the same year 2000 level in 2015 (Table 5-1). Not all of these households would become first-time home buyers simply because of the proposed legislation. For this analysis, we assumed approximately three percent of the pent-up demand between 2000 and 2015—or 2,218 out of 73,918 households—would be first-time home buyers that would take advantage of the tax deduction in the proposed legislation over the five-year period (Figure 5-2). This take up rate is meant to be a conservative estimate of the number of participants, particularly in the early years of the program, and reflects new evidence of relatively slow participation from other states that have adopted similar programs.

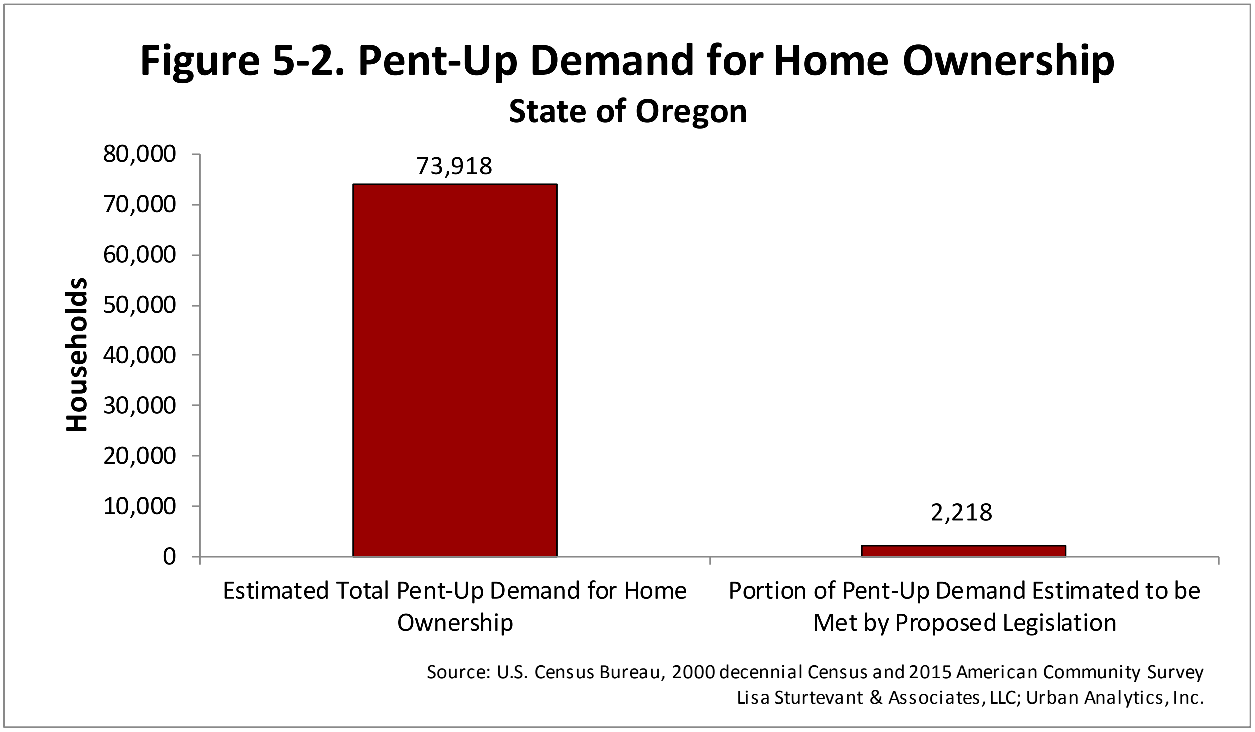
Table 5-1

Estimated Potential First-Time Home Buyers Among Current Oregon Residents (Potential "Pent-Up Demand")

	2000		2015			
Age	No. of Home Owners	Home Ownership Rate (%)	No. of Home Owners	Home Ownership Rate (%)	Owners in 2015 if 2000 Home Ownership Rates Persisted in 2015 (2015 Estimated)	Difference Between 2015 Estimated Home Owners and Actual Home Owners
15 to 24 years	9,932	11.9	6,322	10.2	7,392	1,070
25 to 34 years	90,814	40.5	75,925	32.7	94,222	18,297
35 to 44 years	178,911	63.6	143,596	54.2	168,405	24,809
45 to 54 years	215,658	74.9	179,539	64.2	209,281	29,742
Total Estimated Pent-Up Demand for Home Ownership						**73,918 households**

Source: U.S. Census Bureau, 2000 decennial Census and 2015 American Community Survey; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.





New Demand

While pent-up demand will be the primary source of beneficiaries of the proposed first-time home buyer savings account tax deduction program, there will be additional participants resulting from new household growth in the state. According to the data from the U.S. Census Bureau (as reported by Woods and Poole Economics, Inc., 2016 State Profile for Oregon), over the five-year period, Oregon will add an estimated 109,386 new households. These new households reflect the overall new demand for housing over the period.[10] Household growth is driven by migration (i.e., households moving into Oregon from other places) and in-state household formation (e.g., young adults moving out of their parents' homes to form their own households).

A small share of these new households will be potential participants in the first-time home buyer savings program each year. Using data from the national Realtors® Confidence Index Survey (RCI) and adjusting for State of Oregon home sales data, we estimated that 1.5 percent of new owner-occupied housing units will be first-time home buyers that participate in the savings account program. Over the five-year period, it is estimated that there will be a total of 1,003 new households that will take advantage of the proposed first-time home buyer savings account tax deduction.

[10] Households are often used as a proxy for housing units in forecasts of housing demand. However, because a small percentage of housing units remain vacant at any given time, total housing unit demand will always be slightly higher than total household growth. This slight difference is ignored in this analysis.

Table 5-2 below summarizes the estimates of first-time home buyer participants in the proposed down payment savings program over the five-year period.

Table 5-2

Estimated New Households by Tenure and First-time Home Buyer
Oregon
Years 1-5

	Year 1	Year 2	Year 3	Year 4	Year 5	*5 Years* Total
Oregon						
New Households - Total	24,277	22,910	21,449	20,601	20,149	109,386
Owner-Occupied	14,831	13,996	13,104	12,586	12,309	66,826
Renter-Occupied	9,446	8,914	8,345	8,015	7,840	42,560
Potential First-Time Home Buyers						
Pent-Up Demand (2000-2015)	55	148	296	444	1,275	2,218
New Demand (current year)	25	67	134	201	576	1,003
Total	80	215	430	645	1,851	3,221

Source : U.S. Census Bureau, American Community Survey; Woods and Poole Economics, Inc.; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Estimated New First-Time Home Buyers by Household Size

In order to estimate the foregone revenue associated with the proposed first-time home buyer tax deduction, we need to estimate the number of single- and married couple filers among program participants. Of the estimated 3,221 potential total first-time home buyers who participate in the proposed program, it is estimated that 892 of these households (or 27.7 percent) will be one-person households (or households with a single filer claiming the deduction) and the remaining 2,329 households (72.3 percent) will be 2+ person households (where a married couple files jointly and claims the deduction). These shares are based on the distribution of home owners in 2015 in the state of Oregon. These findings are presented in Appendix Table A-2. These historical trends were used to develop a baseline scenario to estimate the potential total first-time home buyers who could participate in this program. However, as the final legislation is passed and enacted, these projections could change depending on a number of variables (both external and internal) that could have an effect on the State's economy, population growth, and housing stock growth.

6. Estimated Fiscal Shortfall of Proposed First-Time Home Buyer Legislation

The costs of the proposed legislation to the State of Oregon include the foregone income tax revenue on income deducted from federal adjusted gross income, as that income is reported on the state income tax returns for the State of Oregon. In addition, interest earned and accrued on the dedicated savings account will be exempt from state income taxes. In the proposed legislation, there is a 10-year time limit placed on the deduction associated with savings for a home; however, for the purpose of our analysis, we have estimated the fiscal and economic impacts over a five-year period. We limited our analysis to five years as short-term forecasts tend to be more accurate; in other words, economic and policy forecasts longer than five years typically have a higher degree of inaccuracy in the estimates.

Foregone Tax Revenues on Income to Oregon

We estimated 80 households will participate in the program in the first years. The total amount of income that could be deducted from aggregate adjusted gross income of these 80 potential first-time home buyers in year one is estimated to be $690,000 (See Appendix Table A-3). Each year of implementation, a greater number of households are expected to participation in the program as knowledge about the program and its benefits increase. At the end of five years of program operations, the accumulated amount of income that could be deducted from aggregate adjusted gross income of the estimated 3,221 potential first-time home buyers is estimated to be $49,025,000. First-time home buyers will claim a deduction for each year the household saves for a down payment. Whether a first-time home buyer household claims a deduction for one year or two years or longer is a function of the average home value in the part of the state where that home buyer decides to purchase a house.

For the purpose of our analysis, we estimated that first-time home buyers would claim a deduction in each year as these potential new home buyers enter into this down payment savings program. This assumption was made in order to calculate the *potential maximum* ("worst-case" scenario) dollar amount of foregone fiscal revenues to the State in each of the five-years of this fiscal impact analysis. (Details are provided in Appendix Table A-3 which shows the estimated annual and aggregate deduction from adjusted gross income for all potential first-time home buyer households in Oregon.)

The summary of the foregone income tax revenue to the State of Oregon from the implementation of the proposed legislation is shown in Table 6-1. A detailed version of Table 6-1 (including the break-outs for 1-person and 2+ person households) is shown in Appendix Table A-4. Using the effective income tax rate of 7.48 percent in tax year 2013,[11] (according to the LRO report, 2013 is the latest tax year where information from the Oregon Department of Revenue is publicly available), the aggregate foregone tax revenues on income to the State of Oregon is estimated to be $51,608 in year one. At the end of five years, the total

[11] State of Oregon, Legislative Revenue Office, 2016 Oregon Public Finance: Basic Facts. Research Report #1-16. Dated February 1, 2016. According to the LRO report, personal income tax rates range from 5% to 9.9% (page C1). "Because taxable income is generally less than AGI, the average effective tax rate is roughly 5.8% of AGI." (page C1.). The supporting financial table for this calculated rate is shown on page C10 ($5,457,180 Net Tax / $94,404,957 AGI = 0.578 = 5.8%). In this same table on page C10, the average effective tax rate on taxable income is 7.48% ($5,457,180 Net Tax / $72,962,183 Taxable Income = 0.0748 = 7.48%). For the purpose of the analysis in this report, we used the 7.48% average effective tax rate on taxable income.

aggregate foregone tax revenue on income is estimated to be $3,666,807.

Table 6-1

Estimated Foregone Income Tax Revenue to Oregon from New FTHB[1] Households (Years 1-5)

Oregon	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Demand (2000-2015)[2]	$ 35,527	$ 130,891	$ 321,617	$ 607,706	$ 1,429,326	$ 2,525,067
Demand (current year)	$ 16,081	$ 59,088	$ 145,476	$ 274,870	$ 646,226	$ 1,141,740
Total	$ 51,608	$ 189,978	$ 467,093	$ 882,577	$ 2,075,551	$ 3,666,807

Source : U.S. Census Bureau, American Community Survey; Woods and Poole Economics, Inc.; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

[1] FTHB = First-time Home Buyer

[2] Reflects "pent-up" demand for *potential* FTHB participants excluded from the *for-sale* market (from 2000-2015) who could *potentially* enter the market over the Years 1-5.

Foregone Tax Revenues on Interest Earnings to Oregon

In addition to the foregone income tax revenues to the State of Oregon, we also estimated the foregone tax revenues from interest earned and accrued on the dedicated savings accounts. In the first year of program implementation, the total amount of tax revenues foregone from interest income to the State of Oregon from the estimated 80 potential first-time home buyer participants is estimated to be $31. This very low estimate of foregone tax revenues on interest earned is not surprising. The average interest rate on deposit accounts with a minimum balance of $2,500 and a maximum balance of less than $100,000 nation-wide as of February 21, 2017 in the United States was 0.06 percent.[12] At the end of five years of program operations, the total foregone tax revenue on interest earned in the dedicated savings accounts of the potential 3,221 participants is estimated to be $3,757. First-time home buyers will claim a deduction for each year that they deposit savings into these designated savings accounts. The length of time (or duration) that these savings accounts will remain open correlates with our analysis of the potential annual claim for a deduction against adjusted gross income. That is, if a first-time home buyer, for example, makes a claim for one year against adjusted gross income, then interest income foregone to the State of Oregon was set to one year as well. Whether a first-time home buyer household claims a deduction for one year or two years or longer is a function of the average home value in the county where that home buyer decides to purchase a house. For the purpose of our analysis, we estimated that first-time home buyers would claim a deduction in each year, as these potential new home buyers enter into this down payment savings program. This assumption was made in order to calculate the *potential maximum* ("worst-case" scenario) dollar amount of foregone fiscal revenues to the State in each of the five-years of this fiscal impact analysis.

[12] Federal Deposit Insurance Corporation (FDIC), survey of deposit products most commonly offered by federally insured banks and branches, between 49,000 and 81,000 locations across the United States, as of February 21, 2017. The deposit rates on credit unions are not included in the FDIC survey.

In Table 6-2, total forgone tax revenues to the State of Oregon from income tax revenue and tax revenue on the interest in these dedicated savings accounts are estimated to be $3,670,564 over a five-year period, assuming maximum annual contributions of $5,000 for individuals and $10,000 for married couples, as currently proposed. This amount, therefore, represents the cost to the state of Oregon, excluding administrative costs associated with implementing the program.

Table 6-2

Estimated Total Foregone Tax Revenues to Oregon from New FTHB[1] Households (Years 1-5)

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Oregon						
Tax on Income	$ 51,608	$ 189,978	$ 467,093	$ 882,577	$ 2,075,551	$ 3,666,807
Tax on Interest	$ 31	$ 145	$ 425	$ 955	$ 2,201	$ 3,757
Total Taxes Foregone	$ 51,639	$ 190,123	$ 467,518	$ 883,532	$ 2,077,752	$ 3,670,564

Source : State of Oregon, Legislative Revenue Office; Federal Deposit Insurance Corporation; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

[1] FTHB = First-time Home Buyer

7. Estimated Economic and Fiscal Impacts of Proposed First-Time Home Buyer Legislation

For the purpose of this report, an economic impact analysis and a fiscal impact analysis are defined as follows: an *economic impact* analysis estimates the number of new jobs created in the local economy as a result of the economic activity associated with this proposed legislation including the personal earnings of these newly created jobs, the multiplier effect on the local economy resulting this economic activity, and the multiplier effect on the local economy resulting from new, annual first time home buyer household spending. A *fiscal impact* analysis estimates the type and dollar amount of new tax revenues generated to the State of Oregon and/or its counties by these first time home buyers.

The economic impact analysis presented in this report is two-fold. First, the analysis estimates the number of new jobs created in the local economy as a result of the economic activity associated with the construction of new housing units that will be purchased by a subset of the total potential first-time home buyers participating in this new tax deduction program. Second, the economic impacts associated with annual household spending of all potential first-time home buyers purchasing housing (both existing and new units) are estimated. This analysis includes the new spending patterns of first-time home buyers residing in the State of Oregon, the personal earnings of newly created jobs resulting from new, annual first-time home buyer spending (the marginal increase in direct outlays annually resulting from a change in tenure status from renter to owner), and the multiplier effect on the State economy resulting from this new economic activity. This analysis includes estimates of impacts based on the current proposed contributions limits.

Economic Benefits Associated with New Housing Unit Construction

Of the estimated 3,221 potential new first-time home buyers over the five-year period, it is estimated that 161 households (or five percent) will purchase newly constructed housing units and the remaining 3,060 households will purchase existing housing units. During the construction phase of these newly built housing units, economic impacts involve both on-site and off-site spending that supports locally based employment and personal earnings. These activities extend from pre-construction design, engineering and project development activities through the actual construction and related construction management activities. Direct outlays in support of these construction activities will generate additional economic benefits in the form of new jobs and related earnings over the construction period.

The total economic impact of construction spending for new first-time home buyer units are shown in both Table 7-1 and in Appendix Tables B-1 and B-2. It is estimated that the total direct outlays for developing new first-time home buyer units (net of land acquisition costs and leakage in spending that is estimated to occur outside of the region) is $40,000,481. The economic benefits generated by the direct outlays of $40,000,481 for the construction of new first-time home buyer housing units is estimated to contribute an additional $40,806,491 in spending in the State of Oregon for a total of $80,806,972 to the State's economy. Direct outlays of $40,000,481 are estimated to generate a total of 533 new jobs (both on-site, short term construction jobs and off-site jobs) supported by construction-related spending and the re-spending of construction payroll over the development period. Direct outlays of $40,000,481 are estimated to generate $23,273,280 in total personal earnings.

Included in the $40,000,481 in direct outlays are soft costs associated with new housing development including (but not limited to) professional services (e.g., design and engineering), marketing, accounting and legal, real estate and insurance brokerage, and other soft costs associated with new building construction. The construction on new housing for purchase by first-time home buyers participating in the proposed legislative program (if passed) will contribute to economic growth in the State of Oregon.

Table 7-1

Economic Impact Summary
Proposed First Time-Home Buyer Program
Oregon

Economic Impacts	Direct Outlays	Indirect Outlays	Total Outlays
New Home Construction			
FTHB[1] - Statewide	$ 30,000,361	$ 31,176,375	$ 61,176,736
New Jobs (Short-term/"Temporary") [2]			533
Total Within State			480
Total Outside State			53
Estimated Personal Earnings [3]			$ 23,273,280
Household Spending			
FTHB[1] - Statewide	$ 7,096,507	$ 4,480,025	$ 11,576,532
New Jobs (Long-term/"Permanent") [2]			101
Total Within State			91
Total Outside State			10
Estimated Personal Earnings of these New Jobs[3]			$ 3,434,000

Source:
Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.; Woods & Poole Economics, Inc.; U.S. Department of Commerce.

Note:
[1] FTHB = First-time Home Buyer.
[2] Includes jobs located in Oregon and outside Oregon.
[3] Only within Oregon.

Economic Benefits Associated with the Change in Tenure Status from Renter to Owner

A detailed review and analysis of 2015 consumer expenditure survey data by housing tenure and type indicates that the change in tenure status from renter-occupied housing to owner-occupied housing brings with that change in tenure a *net* (or marginal) increase in consumer spending for goods and services associated with home ownership. In Appendix Table B-3, it was estimated that in the State of Oregon, the marginal increase in first-time home buyer household spending (once these buyers purchased their first home) would be an additional $2,448 annually. Of this $2,448 in additional household spending associated with the purchase of one's first home, the largest category was maintenance, repairs and other related improvement expenses at $1,119 (or 45.7 percent) of the marginal increase in household spending. The second highest category was household furnishings and equipment at $569 annually, followed by personal services of household operations ($400), spending on pets, toys, hobbies and playground (e.g., backyard) equipment ($241), and housekeeping supplies ($119).

This increase of $2,448 in annual household spending by households who change their tenure status from renter-occupied to owner-occupied housing generates an additional economic impact to the State of Oregon. In Appendix Table B-4, the estimated 3,221 potential new first-time home buyers are estimated to pump an additional $7.1 million annually into the Oregon economy as a result of additional spending associated with home ownership. The total economic impact of this $7,096,507 in new annual spending is $11,576,532, an increase of $4,480,025 in indirect outlays to the Oregon economy. This additional $4,480,025 in indirect outlays is the multiplier effect of new annual spending by first-time home buyer households. That is, this spending would not have occurred in the Oregon state economy had these estimated 3,221 potential first-time home buyers elected to remain renters instead of becoming first-time home owners.

In Appendix Table B-5, the economic impact of new employment and personal earnings is shown. The additional $7,096,507 in household spending annually is estimated to support 101 new, full-time equivalent jobs on an annual basis. These 101 full-time equivalent jobs are estimated to receive $3,434,000 annually in personal earnings.

Fiscal Benefits Associated with Household Spending and Home Ownership

The longer-term fiscal benefits to the State of Oregon associated with the first-time home buyer households participating in the tax deduction program is estimated to offset the initial estimated fiscal shortfall to the State from program implementation. The findings presented in this report indicate that the State of Oregon will experience a fiscal shortfall of $3,670,564 during the first five years program implementation. Over that time, there will be fiscal benefits, as well, coming from five revenue sources. These five revenue sources are: (1) real estate property taxes on new housing constructed and purchased by first-time home buyers; (2) real estate transfer taxes on homes (both existing and new) purchased by first-time home buyer participants in Washington County only; (3) recordation fees on deed and mortgage documents; (4) income taxes on personal earnings generated by workers building these new houses; and (5) income taxes on personal earnings generated by workers supported by the annual increase in household spending attributed to first-time home buyers. The fiscal impacts of these five sources are described below and the findings of our analysis are summarized in Table 7-2.

The objective of this fiscal impact analysis is to estimate the *total* fiscal impacts to the State of Oregon from the implementation of the proposed legislation. Some fiscal impacts will accrue to the State of Oregon and some impacts will accrue to the counties through local taxes and fees. We elected to include all state and local impacts in our calculations.

Real Estate Taxes Paid Annually on New Housing Units Purchased by First-Time Home Buyers

Of the 3,221 potential new first-time home buyer households estimated to participate in this down payment savings program, it is estimated that 161 households will purchase newly constructed housing. We estimated the annual value of this new housing for each year in the five-year period in the state, and estimated the total amount of real estate taxes that would be paid to the counties. Based on our analysis, we found that the 161 new first-time home buyer housing units would generate a total of $1,961,735 in real estate taxes over the five-year period at full build-out and occupancy of these units.

Real Estate Transfer Taxes on the Sale of Housing Units to First-Time Home Buyers

According to our review of the Oregon Department of Revenue website, there are no real estate transfer taxes paid in the State of Oregon, with the exception of Washington County. In Washington County the real estate transfer tax is $1 for every $1,000 of value. Of the 3,221 units to potential first-time home buyers statewide, it is estimated that 462 units will be located in Washington County (23 New Units + 439 Existing Units = 462 Total Units). It is estimated that the 23 new units will generate $11,159 in real estate transfer taxes to Washington County and the 439 existing units will generate $171,148 for a total of $182,307 in transfer taxes.

Mortgage and Deed Recordation Fees Paid on Homes Purchased by First-Time Home Buyers

Some states across the United States have a mortgage recordation fee based on the dollar value of the mortgage recorded. In Oregon, counties charge a flat fee for the first page and a flat fee for each subsequent page. In Oregon, we interviewed the top seven counties in terms of total number of housing sales as a percentage of total sales in the state in 2016. These counties were: Washington (10,556 home sales), Multnomah (14,212), Clackamas (8,139), Deschutes (5,619), Lane (6,368), Marion (5,413), and Jackson (3,329). Collectively home sales in these seven counties accounted for 72.8 percent of total home sales in the state in 2016. We spoke to the appropriate county clerk in charge of collecting recordation fees. Fees ranged from a low of $41 to record the first page of the mortgage plus $5 per page for each subsequent page in Washington County, to a high of $63 for first page of the mortgage plus $5 per page for each subsequent page in Jackson County.

Based on our conversations with these county clerks the average number of pages per mortgage range from a low of four pages to a high of 40 pages per mortgage. For the purpose of our analysis in this report we assumed that the average mortgage was ten pages, a flat fee of $50 for the first page and $5 for pages 2-10. (As a point of reference, the State of Oregon Legislative Revenue Office uses the Clackamas County recordation fee of $53 to estimate statewide recordation fees. We decided to be slightly more conservative in our analysis and elected to use the lower $50 fee.)

For deeds the fees were the same (with the exception of Jackson County which charged $54 to record the first page of the deed). These county clerks stated that the average size of a deed ran between 1-4 pages. For the purpose of this analysis we used an average of 2 pages per deed.

Sales Taxes Paid on Annual New First-Time Home Buyer Household Spending

According to the *2016 Basic Facts* report prepared by the Legislative Revenue Office there are no general sales taxes paid in the State of Oregon (page A2 of the report). Oregon has a category called "selective sales taxes". This category included the following taxes: gasoline, tobacco, alcoholic beverages, excise taxes on specific purchases, health provider, severance, and estate taxes. We did not include any of these selective sales taxes in our analysis.

Income Taxes on Personal Earnings Associated with Construction and Construction-related Activity of New Housing Units

Of the 533 new construction and construction-related jobs estimated to be created by the construction of 161 new units for first-time home buyers, it is estimated that these jobs will receive $23,273,280 in personal earnings. We applied the Oregon State effective income tax rate of 7.48 percent to these earnings to determine potential new income taxes from these workers. It is estimated that $1,740,717 in total income taxes to the State will be generated by these workers.

Income Taxes on Personal Earnings of Workers Associated with New Household Spending by First-Time Home Buyers

Of the new 101 full-time equivalent jobs estimated to be supported by the annual household spending of 3,221 new first-time home buyer households, it is estimated that these jobs will receive $3,434,000 in personal earnings. We applied the Oregon State effective income tax rate of 7.48 percent to these earnings to determine potential new income taxes from these workers. It is estimated that $256,845 in income taxes to the State will be generated by these workers.

Table 7-2
Fiscal Impact by Revenue Type: First-Time Home Buyer Households (Years 1-5)
Oregon

	Type of Revenue	Source	One-time	5-Year Total
1	Real Estate Property Taxes	161 New Units		$ 1,961,735
2	Real Estate Transfer Taxes[1]	23 New Units[2]	$ 11,159	
3	Real Estate Transfer Taxes[1]	439 Existing Units[2]	$ 171,148	
4	Recordation Fees (Deed & Mortgage)	161 New Units[3]	$ 24,150	
5	Recordation Fees (Deed & Mortgage)	3,060 Existing Units[3]	$ 459,000	
6	Income Taxes (Short-Term/Temporary)	533 Jobs		$ 1,740,717
7	Income Taxes (Long-Term/Permanent)	101 Jobs		$ 256,845
	Total		$ 665,457	$ 3,959,297

Source: Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc. **Note:** These are the estimated revenue figures that may be generated during the five-year period (Years 1-5) assuming program implementation and full FTHB household participation. [1]Only Washington County has transfer taxes. [2]Of the 3,221 units to potential first-time home buyers statewide, it is estimated that 462 units will be located in Washington County (23 New Units + 439 Existing Units = 462 Total Units). [3]Of the 3,221 units to potential first time home buyers statewide, it is estimated that 3,060 units in the state will be existing units and 161 units in the state will be new units (3,060 Existing Units + 161 New Units = 3,221 Total Units).

Phasing of the Findings of the Analysis over the Five-Year Period

The summary findings of our analysis was phased (the timing of the estimated revenues were distributed) over a five-year period and is shown in Table 7-3. This phasing schedule is illustrative to show how the State of Oregon could potentially receive the estimated gross revenues, costs to implement, and net fiscal revenues from program implementation. As we estimate that there will be fewer participants in year 1, it is estimated that the State of Oregon will receive a net fiscal surplus of $28,480 in year 1. By year 5 (when we estimate that a greater amount of first-time home buyers will be participating), we estimate that the State of Oregon will receive a net annual surplus of $664,092.

Table 7-3
Estimated Net Fiscal Surplus to Oregon from New FTHB[1] Households (Years 1-5)

Oregon	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Gross Revenues	$ 80,120	$ 249,764	$ 566,914	$ 986,111	$ 2,741,844	$ 4,624,754
Less: Foregone Revenues	$ 51,639	$ 190,123	$ 467,518	$ 883,532	$ 2,077,752	$ 3,670,564
Net Annual Surplus	$ 28,480	$ 59,641	$ 99,396	$ 102,579	$ 664,092	$ 954,190

Source : Oregon Department of Revenue; Federal Deposit Insurance Corporation; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :
[1] FTHB = First-time Home Buyer

8. Conclusions,

The findings presented in this report indicate that the initial fiscal shortfall resulting in the short-term from the implementation of the proposed first-time home buyer savings account tax deduction is offset by longer-term economic and fiscal benefits. Under the current proposal that allows for individuals to set aside $5,000 annually and couples to set aside $10,000 annually, the benefits of the proposed program would exceed the costs over the five-year period. In addition, the program will provide a modest stimulus to the state economy in the form of new spending and job creation.

Key Findings

- Potential first-time home buyers continue to face challenges to buying a home. In addition to a lack of access to credit and rising affordability challenges, difficulty saving for a down payment is a major hurdle to home ownership.

- There is considerable pent-up demand for home ownership in Oregon. The proposed tax deduction on contributions to a down payment savings account could provide an incentive for thousands of current and future Oregon residents to buy their first home.

- Statewide, the tax revenues associated with home ownership generated by home buyers purchasing a home for the first time are estimated to bring in $1.26 in new revenues to the State of Oregon and/or its counties for every $1.00 that the proposed first-time home buyer income tax deduction legislation will require in program implementation.

- It is estimated that direct outlays associated with new construction and construction-related economic activity directly resulting from first-time home buyers electing to purchase new housing (instead of existing re-sale housing) will generate an additional 533 new jobs (of which 480 are estimated to be located throughout the State of Oregon) with related personal earnings of $23,273,280 million to the State.

- It is estimated that the direct, marginal increase in new household spending by first-time home buyer households will be an additional $2,448 per household annually. The aggregate of this additional household spending (that is, 3,221 participant households times $2,448 per household) in additional direct outlays in the State's economy will support an additional 101 jobs (of which 91 are estimated to be located throughout the State of Oregon) on an annual basis.

Appendix

Methodology

Fiscal Impact Analysis

A fiscal impact analysis estimates the type and dollar amount of new tax revenues generated by new legislative programs (at implementation) and compares these new revenues to the cost to implement these programs. We conducted a literature search and review of other potential first-time home buyer programs in other states. This literature review revealed that previous studies do not adequately analyze the fiscal impacts of first-time home buyer programs in these states. Having discerned this, we examined the various tax programs in place in Oregon, as reported on the web site of the Oregon Department of Revenue. We examined the fiscal flows associated with home ownership, using these various tax programs but also analyzing the historical spending patterns of consumers using the Consumer Expenditure Survey data findings. We isolated spending patterns between renters and owners in order to identify any substitution effects for the purpose of mitigating any double-counting in the fiscal impact analysis. We developed an annual effective marginal income tax rate for personal income using tax data prepared by the State of Oregon Legislative Revenue Office (LRO). We used nominal real estate property tax rates for each of the 36 counties in Oregon. The fiscal impact model is sensitive to various variables including (*but not limited to*): the value of new housing versus existing housing; household size; household tenure status; and the annual rate of increase in property value appreciation.

Economic Impact Analysis

An economic impact analysis estimates the number of new jobs created in the local economy, the spending effects (personal earnings) of these newly created jobs, and the multiplier effect on the local economy resulting from new spending. The total economic impact of the direct and indirect outlays are calculated by applying sector-specific multipliers computed for the State of Oregon by the Bureau of Economic Analysis (U.S. Department of Commerce) and published in *Regional Multipliers-Regional Input-Output Modeling System [RIMS II]* (2007 National and 2015 Regional). This time period is the latest time period available for the State of Oregon. These multipliers permit the total output values (i.e., their contribution to the region's gross regional product) to be calculated from the proposed legislation's direct dollar outlays, and for employment and personal earnings impacts of these direct outlays to be estimated.

Direct outlays are defined in this report as the estimated outlays incurred (captured) within the State of Oregon to implement the proposed legislation (at full participation) over a designated time period (implementation period). In the case of the proposed first-time home buyer income tax deduction legislation, the designated time period (implementation period) has been determined to be five years. Direct outlays are the initial spending and other initial economic activity generated to build or support new housing stock that would be purchased by first-time home buyers (including materials and payroll) necessary to develop the new housing units. Direct outlays received by vendors, suppliers and other entities associated with providing goods and services to the builder (or builders) of the proposed new residential units, in turn, purchase goods and services from other companies. Additionally, employees of the builder (or builders) and employees of the vendors, suppliers and other entities purchase goods and services in from their payroll earnings. These purchases (including the effects of payroll spending in the local economy) are known as indirect impacts or indirect outlays. *Indirect outlays* are defined in this report as the net increase in direct outlays that deliver a dollar of output to its final use. We estimated the percentage of direct outlays leaving the state's economy (leakage) and occurring within the state's economy (capture).

We reviewed the report "Economic Impact of Real Estate Activity: Oregon" prepared by NAR Research on December 2016. The findings reported in the NAR report reflect the economic impacts of the real estate industry in Oregon. Our report is limited only to the estimation of the economic impacts of proposed first-time home buyer legislation in the state. The methodology of the two reports are similar but the assumptions (and data) used in each report are different. For example, the NAR report analyzed gross outlays of $4,572 per household from the Consumer Expenditure Survey (CES) while we analyzed the marginal increase in *new* CES spending that would occur as residents changed their tenure status from renter-occupied to owner-occupied ($2,448 per household *net* increase on gross outlays of $4,348 per household). The NAR report used a median home price of $285,700 while we used a median home price of $279,364 for existing homes and $353,885 for new homes.

Appendix Table A-1
Counties in Oregon (36 Counties)

No.	Counties	No.	Counties
1	Baker County	19	Lake County
2	Benton County	20	Lane County
3	Clackamas County	21	Lincoln County
4	Clatsop County	22	Linn County
5	Colombia County	23	Malheur County
6	Coos County	24	Marion County
7	Crook County	25	Morrow County
8	Curry County	26	Multnomah County
9	Deschutes County	27	Polk County
10	Douglas County	28	Sherman County
11	Gilliam County	29	Tillamook County
12	Grant County	30	Umatilla County
13	Harney County	31	Union County
14	Hood River County	32	Wallowa County
15	Jackson County	33	Wasco County
16	Jefferson County	34	Washington County
17	Josephine County	35	Wheeler County
18	Klamath County	36	Yamhill County

Source:
Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Appendix Table A-2

Estimated New FTHB[1] Households by Household Size - Oregon (Years 1-5)

Oregon	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Demand (2000-2015) [2]	55	148	296	444	1,275	2,218
1-person households	15	41	82	123	353	614
2+ person households	40	107	214	321	922	1,604
Demand (current year)	25	67	134	201	576	1,003
1-person households	7	19	37	56	159	278
2+ person households	18	48	97	145	417	725
Total	80	215	430	645	1,851	3,221
1-person households	22	60	119	179	512	892
2+ person households	58	155	311	466	1,339	2,329

Source : U.S. Census Bureau, American Community Survey; Woods and Poole Economics, Inc.; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

[1] FTHB = First-time Home Buyer

[2] Reflects "pent-up" demand for *potential* FTHB participants excluded from the *for-sale* market (from 2000-2015) who could *potentially* enter the market over the Years 1-5.

Appendix Table A-3

Estimated Deduction from New FTHB[1] Households Adjusted Gross Income (AGI) in Oregon (Years 1-5)

Oregon	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Demand (2000-2015) [2]	$ 475,000	$ 1,750,000	$ 4,300,000	$ 8,125,000	$ 19,110,000	$ 33,760,000
1-person households	$ 75,000	$ 280,000	$ 690,000	$ 1,305,000	$ 3,070,000	$ 5,420,000
2+ person households	$ 400,000	$ 1,470,000	$ 3,610,000	$ 6,820,000	$ 16,040,000	$ 28,340,000
Demand (current year)	$ 215,000	$ 790,000	$ 1,945,000	$ 3,675,000	$ 8,640,000	$ 15,265,000
1-person households	$ 35,000	$ 130,000	$ 315,000	$ 595,000	$ 1,390,000	$ 2,465,000
2+ person households	$ 180,000	$ 660,000	$ 1,630,000	$ 3,080,000	$ 7,250,000	$ 12,800,000
Total	$ 690,000	$ 2,540,000	$ 6,245,000	$ 11,800,000	$ 27,750,000	$ 49,025,000
1-person households	$ 110,000	$ 410,000	$ 1,005,000	$ 1,900,000	$ 4,460,000	$ 7,885,000
2+ person households	$ 580,000	$ 2,130,000	$ 5,240,000	$ 9,900,000	$ 23,290,000	$ 41,140,000

Source : U.S. Census Bureau, American Community Survey; Woods and Poole Economics, Inc.; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

[1] FTHB = First-time Home Buyer

[2] Reflects "pent-up" demand for *potential* FTHB participants excluded from the *for-sale* market (from 2000-2015) who could *potentially* enter the market over the Years 1-5.

Appendix Table A-4

Estimated Foregone Income Tax Revenue to Oregon from New FTHB[1] Households (Years 1-5)

Oregon	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Demand (2000-2015) [2]	$ 35,527	$ 130,891	$ 321,617	$ 607,706	$ 1,429,326	$ 2,525,067
1-person households	$ 5,610	$ 20,942	$ 51,608	$ 97,607	$ 229,620	$ 405,387
2+ person households	$ 29,918	$ 109,948	$ 270,009	$ 510,099	$ 1,199,706	$ 2,119,680
Demand (current year)	$ 16,081	$ 59,088	$ 145,476	$ 274,870	$ 646,226	$ 1,141,740
1-person households	$ 2,618	$ 9,723	$ 23,560	$ 44,503	$ 103,965	$ 184,369
2+ person households	$ 13,463	$ 49,364	$ 121,915	$ 230,367	$ 542,261	$ 957,371
Total	$ 51,608	$ 189,978	$ 467,093	$ 882,577	$ 2,075,551	$ 3,666,807
1-person households	$ 8,227	$ 30,666	$ 75,169	$ 142,110	$ 333,584	$ 589,756
2+ person households	$ 43,381	$ 159,313	$ 391,924	$ 740,467	$ 1,741,967	$ 3,077,051

Source : U.S. Census Bureau, American Community Survey; Woods and Poole Economics, Inc.; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

[1] FTHB = First-time Home Buyer

[2] Reflects "pent-up" demand for *potential* FTHB participants excluded from the *for-sale* market (from 2000-2015) who could *potentially* enter the market over the Years 1-5.

Appendix Table B-1

Economic Impact of Construction Spending
New Residential Units Purchased by First-Time Home Buyers
Oregon

(Hard Costs) Construction Outlays	Estimated Hard Costs [2] Direct Outlays	Regional Data RIMS II Multiplier	Estimated Hard Costs Indirect Outlays	Estimated Hard Costs Total Outlays
FTHB[1] - Statewide	$ 30,000,361	2.0392	$ 31,176,375	$ 61,176,736
Subtotal	$ 30,000,361		$ 31,176,375	$ 61,176,736

(Soft Costs) Construction Outlays	Estimated Soft Costs [3] Direct Outlays	Regional Data RIMS II Multiplier [4]	Estimated Soft Costs Indirect Outlays	Estimated Soft Costs Total Outlays
FTHB[1] - Statewide	$ 10,000,120	1.9630	$ 9,630,116	$ 19,630,236
Subtotal	$ 10,000,120		$ 9,630,116	$ 19,630,236

Construction Outlays	Estimated Total Direct Outlays	Estimated Total Indirect Outlays	Estimated All Costs Total Outlays
Hard Costs - Statewide	$ 30,000,361	$ 31,176,375	$ 61,176,736
Soft Costs - Statewide	$ 10,000,120	$ 9,630,116	$ 19,630,236
Total - Oregon	$ 40,000,481	$ 40,806,491	$ 80,806,972

Source:
U.S. Department of Commerce, Bureau of Economic Analysis Regional Multipliers-RIMS II; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note:
[1] FTHB = First-time Home Buyer.
[2] Hard Costs exclude land acquisition costs, soft costs, and leakage from region.
[3] Soft Costs exclude leakage from region.
[4] Composite multiplier.

Appendix Table B-2

Economic Impact: Construction Jobs and Personal Earnings
New Residential Units Purchased by First-Time Home Buyers
Oregon

Construction Outlays	Estimated Direct Outlays	GDP Deflator[2]	Inflation-Adjusted Direct Outlays[3]	Regional Data RIMS II Jobs Multiplier[4]	Total Jobs[5]
Hard Costs					
FTHB[1] - Statewide	$ 30,000,361	0.9915	$ 29,744,572	12.7889	380
Sub-total	$ 30,000,361				380
Soft Costs					
FTHB[1] - Statewide	$ 10,000,120	0.9915	$ 9,914,857	15.4142	153
Sub-total	$ 10,000,120				153
Total - Oregon	$ 40,000,481				533

Construction Outlays	Regional Data RIMS II Earnings Multiplier	Total Local Earnings[6]
Hard Costs		
FTHB[1] - Statewide	0.5392	$ 16,176,194
Sub-total		$ 16,176,194
Soft Costs		
FTHB[1] - Statewide	0.7097	$ 7,097,085
Sub-total		$ 7,097,085
Total - Oregon		$ 23,273,280

Source:

U.S. Department of Commerce, Bureau of Economic Analysis Regional Multipliers-RIMS II; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note:

1 FTHB = First-time Home Buyer.

2 Estimated using the Personal Consumption Expenditure (PCE) Price Index (2009 = 100). Chain-type price index. U.S. Department of Commerce.

3 Adjusted to constant 2015 dollars.

4 Per $1,000,000 in direct outlays.

5 Includes jobs on the construction site, off the construction site, in the region, and outside the region.

6 Current dollars.

Appendix Table B-3

Marginal Increase in FTHB[1] Household Spending
Change in Tenure Status from Renter-Occupied to Owner-Occupied
Oregon

Household Expenses	Marginal Increase in HH Spending[2]
Maintenance, repairs & other related	$ 1,119
Household operations (personal services)	$ 400
Housekeeping supplies	$ 119
Household furnishings and equipment	$ 569
Pets, toys, hobbies & playground equipment	$ 241
Total	$ 2,448

Source : U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, 2015; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Notes :

[1] FTHB = First-time Home Buyer

[2] Based on the median income of a FTHB in Oregon of $52,505 in 2015.

Appendix Table B-4

Economic Impact of Household Spending
by First-Time Home Buyers (Net Change in Annual Outlays)
Oregon

Household Spending	Estimated [2] Direct Outlays	Regional Data RIMS II Multiplier [3]	Estimated Indirect Outlays	Estimated Total Outlays
FTHB[1] - Statewide	$ 7,096,507	1.6313	$ 4,480,025	$ 11,576,532
Total - Iowa	$ 7,096,507		$ 4,480,025	$ 11,576,532

Source:

U.S. Department of Commerce, Bureau of Economic Analysis Regional Multipliers-RIMS II; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note:

[1] FTHB = First-time Home Buyer.

[2] See Appendix Table B-3 for the composition of the outlays.

[3] Composite multiplier.

Appendix Table B-5

Economic Impact: Employment and Personal Earnings by First-Time Home Buyers (Net Change in Annual Outlays) Oregon

Household Spending	Estimated Direct Outlays	GDP Deflator[2]	Inflation-Adjusted Direct Outlays[3]	Regional Data RIMS II Jobs Multiplier[4]	Total Jobs[5]
By Region					
FTHB[1] - Statewide	$ 7,096,507	0.9915	$ 7,036,001	14.3747	101
Total - Iowa	$ 7,096,507				101

Household Spending	Regional Data RIMS II Earnings Multiplier	Total Local Earnings[6]
By Region		
FTHB[1] - Statewide	0.4839	$ 3,434,000
Total - Iowa		$ 3,434,000

Source:

U.S. Department of Commerce, Bureau of Economic Analysis Regional Multipliers-RIMS II; Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note:

[1] FTHB = First-time Home Buyer.

[2] Estimated using the Personal Consumption Expenditure (PCE) Price Index (2009 = 100). Chain-type price index. U.S. Department of Commerce.

[3] Adjusted to constant 2015 dollars.

[4] Per $1,000,000 in direct outlays.

[5] Includes jobs in the region and outside the region.

[6] Current dollars.

Population and Household Growth in Oregon

It is important to place the findings of the economic and fiscal impact analyses presented in this report in the overall context of historical and future growth patterns in the State of Oregon. While at first glance, the reader might be inclined to think that the potential 3,221 new first time home buyer households might seem extraordinarily large and unrealistic, in reality, this estimate of program participants is quite feasible, assuming that there are no technical or administrative changes to the proposed legislation as it is currently written and proposed.

Population Growth

Historical and projected population growth in Oregon is shown in Table C-1. In 1970, the total population in the State of Oregon was 2,102,966. By 2015, the population of the State grew by 90.64% percent to 4,009,177. It is projected that over the next 35 years, the population of the State will grow by 1,508,579 (or 37.63 percent) to 5,517,756 in 2050.

Appendix Table C-1
Population Growth[1]
Oregon
1970 - 2050

		Estimated		*Trend over Time*	
	Historical[2]	*Current*	*Projected*	45 Years	35 Years
	1970	**2015**	**2050**	1970-2015	2015-2050
Oregon	2,102,966	4,009,177	5,517,756		
Change in Number				1,906,211	1,508,579
Change in Percent				90.64%	37.63%

Source : U.S. Department of Commerce (1970-2010 data); Woods & Poole Economics, Inc. (2010-2050 data);
Table Construction and Analysis : Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

[1] Residential population as of July 1st of each year.

[2] Footnote from the U.S. Department of Commerce: All historical data are subject to revision.

Household Growth

Historical and projected household growth in Oregon is shown in Appendix Table C-2. In 1970, the number of households in the State of Oregon were 697,449. By 2015, total households in the State grew by 136.06 percent to 1,646,400. It is projected that over the next 35 years, the total number of households in the State will grow by 596,405 (or 36.22 percent) to 2,242,805 in 2050.

Appendix Table C-2

Household Growth[1]
Oregon
1970 - 2050

	Historical[2]	*Estimated Current*	*Projected*	*Trend over Time*	
				45 Years	35 Years
	1970	**2015**	**2050**	1970-2015	2015-2050
Oregon	697,449	1,646,400	2,242,805		
Change in Number				948,951	596,405
Change in Percent				136.06%	36.22%

Source : U.S. Department of Commerce (1970-2010 data); Woods & Poole Economics, Inc. (2010-2050 data);
Table Construction and Analysis : Lisa Sturtevant & Associates, LLC; Urban Analytics, Inc.

Note :

1 Number of households as of July 1st of each year.

2 Footnote from the U.S. Department of Commerce: All historical data are subject to revision.

The proposed first-time home buyer income tax deduction program provides an opportunity for residents of the State of Oregon to participate in the dream of home ownership. Of the 596,405 projected new households that will be needed in the State of Oregon (between 2015 and 2050) to satisfy the current projected demand in population during this same period, the estimated 3,221 new first-time home buyer households represents less than one percent of that projected growth. If this legislation is not passed and the program not implemented, then these potential owner-occupied households would remain as renters. This fact alone is not troubling. There will always be a demand for new renter-occupied housing stock. However, the economic and fiscal benefits to the State of Oregon and its counties could be less; specifically, $954,190 less, reflecting the *estimated* total *net* foregone fiscal impacts (foregone revenues) to the State if this proposed legislation is not implemented.

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Lisa Sturtevant & Associates, LLC is an Alexandria, Virginia-based consulting firm providing public and private sector clients with high-quality, comprehensive analysis of economic, demographic and housing market data to support better housing policy and development decisions. We specialize in comprehensive housing market analyses, affordable housing needs assessments, program and policy evaluation and development, and in-person and web-based training on using local data.

Lisa Sturtevant, PhD is President and founder of Lisa Sturtevant & Associates, LLC. Dr. Sturtevant has been involved in research and analysis on local economic, demographic and housing market conditions for more than 15 years. She has worked on projects for local governments, non-profit organizations and private sector clients and has an established track record of providing insightful, high-quality analysis. She has led and been part of consulting teams with academic institutions as well as with other real estate consulting firms. Dr. Sturtevant's areas of research include housing, migration, demographics and regional economic development.

Examples of Dr. Sturtevant's recent projects include housing market analyses for the Northern Virginia Association of REALTORS®, forecasts of housing demand in the Washington DC and Hampton Roads (Va.) metropolitan areas, monthly reports on the Washington DC and Baltimore area housing markets for the Metropolitan Regional Information Service (MRIS), analysis of regulatory requirements associated with new construction in the Washington DC metropolitan area, and evaluation of local inclusionary housing programs nationwide. She has written academic articles for the Journal of the Center for Real Estate Studies published by the Rosenthal Center at REALTOR® University. She is a frequent speaker at conferences of the National Association of REALTORS® and local and state REALTOR® associations.

Dr. Sturtevant served as Vice President for Research for the National Housing Conference (NHC) between 2013 and 2016. She was responsible for setting NHC's research agenda and managing on-going research projects. In her time at NHC, Lisa was particularly focused on developing best practices for local affordable housing policy and planning and connecting NHC's research to the broader housing community.

Prior to NHC, Lisa served as Deputy Director of the Center for Regional Analysis and Associate Research Professor at the George Mason University School of Public Policy. She also worked from 2000 to 2005 in the Arlington County, Virginia Department of Community Planning, Housing and Development. She is an adjunct professor at George Mason University and Virginia Tech.

Lisa completed her PhD in public policy from George Mason University in May 2006. She received her master's degree in public policy from the University of Maryland and a BS in mathematical economics from Wake Forest University.

Urban Analytics, Inc.
President, Dean D. Bellas, Ph.D.

From the Latin word "Urbanus" which means *of or relating to the city* and from the classical Greek "Analytikos" which means *of or relating to analysis*, Urban Analytics, Inc., is a real estate and urban planning consulting firm providing high-level urban development analytical services. Now in its twentieth-year of operations, Urban Analytics has provided specialized real estate financial analyses, market research studies, economic and fiscal impact studies, portfolio analyses, and real estate asset management services to private, public and institutional sector clients. Urban Analytics is committed to providing its clients with the most effective analytical techniques available. These techniques include building models for almost any kind of economic, fiscal and financial assessment.

Examples of the Company's public sector assignments include: a study of housing conditions in Charles County, Maryland for the Charles County Board of County Commissioners; a countywide fiscal and economic study for the Prince William County, Virginia Planning and Finance Departments; a citywide and countywide fiscal study (with multiple school districts) for the City of Topeka and Shawnee County, Kansas; a countywide fiscal study with long-term growth scenarios (including a no-growth scenario) for the Queen Anne's County, Maryland Economic Development Authority; a town-wide fiscal, economic, and capital asset impact study for the eastern shore towns of Trappe, Denton and Vienna, Maryland; an economic and fiscal impact analysis of a proposed video lottery terminal (slots) gaming facility in Cecil County, Maryland and the Town of Perryville, Maryland; a fiscal impact analysis of the U.S. Government *Department of Defense* spending statewide in the State of Virginia; application review services for the U.S. Government *Department of the Treasury* Community Development Financial Institutions Fund; a fiscal and economic impact analysis of a proposed training facility for foreign service personnel for the U.S. Government *Department of State*, Bureau of Diplomatic Affairs; a fiscal impact analysis for the Government of the District of Columbia for hosting the federal government; and revenue enhancement analyses of the relocation of the *National Science Foundation (NSF)* and *Transportation Security Administration (TSA)* headquarters buildings to the City of Alexandria, Virginia.

Examples of the Company's private sector assignments include: developing long-term financial forecasting and market simulation scenarios on almost eight million square feet of existing and build-to-suit commercial office buildings in northern Virginia; developing a pro forma model for the proposed Cold War Museum in Lorton, Virginia; and various economic and fiscal impact analyses of large-scale residential and non-residential land use projects.

Dean D. Bellas, Ph.D., is president of Urban Analytics, Inc., an Alexandria, Virginia-based real estate and urban planning consulting firm providing urban development analytical services to public, private, and institutional – sector clients. Consulting services include fiscal and economic impact studies, market research analysis, real estate asset management, real estate development economics, and project feasibility studies. Since 1996, Dr. Bellas has provided consulting services in Arizona, California, Illinois, Indiana, Kansas, Maryland, Michigan, Minnesota, Virginia, West Virginia, Wisconsin, and the District of

Columbia. Dr. Bellas has analyzed the fiscal impact on over 96,000 residential units and over 38.7 million square feet of non-residential space. The total value of all land-uses analyzed is estimated to be over $27 billion. In addition, Dr. Bellas has authored or co-authored over 120 research reports on the fiscal and economic impact of real estate development.

In addition to Urban Analytics, Dr. Bellas is also an adjunct faculty member in the Real Estate program in the School of Continuing Studies at Georgetown University. He has previously been an adjunct faculty member in the School of Architecture and Planning at the Catholic University of America, an adjunct faculty member in the School of Professional Studies in Business and Education at the Johns Hopkins University, an adjunct faculty member in the School of Management at George Mason University, and a graduate teaching fellow at the George Washington University. Dr. Bellas has also taught candidates for the CFA designation on behalf of the Washington Society of Investment Analysts.

Dr. Bellas received a Bachelor of Science in Business Administration from Western New England University with a concentration in Finance (1982), a Master of Urban and Regional Planning from the George Washington University (1993), and his Doctorate in Public Policy with a concentration in regional economic development policy at George Mason University (2005). His doctoral dissertation was entitled, *"Fiscal Impact Simulation Modeling: Calculating the Fiscal Impact of Development."* His research interests include regional and local developmental growth patterns, economic and fiscal impact effects of real estate development on municipal government, and economic development policy. Dr. Bellas is a member of the National Economists Club and Lambda Alpha International, an honorary society for the advancement of land economics. He is a full member of the Urban Land Institute. Dr. Bellas sits on ULI's national *Public Development and Infrastructure Council*, regionally on the ULI Baltimore-Washington, DC *Transit-Oriented Development (TOD) Council*, and locally on ULI's Washington District *Regionalism Initiatives Council*. Dr. Bellas was the economic advisor to the Southeast Fairfax Development Corporation Board of Directors in calendar year 2012. He was appointed to the Board of Directors for the 2013 – 2014 term by Supervisor Jeffrey C. McKay (Lee District, Fairfax County, Virginia).