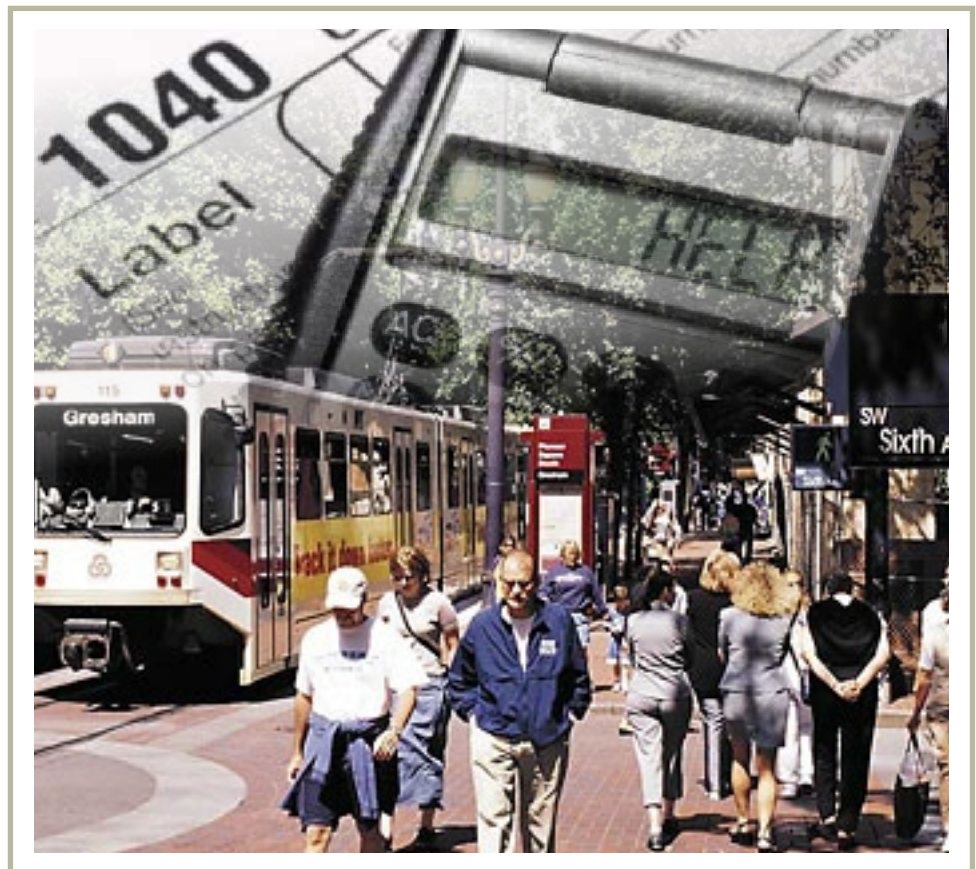




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# Tax Policy and the Oregon Economy: The Effects of Measures 66 and 67



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**QuantEcon, Inc.**

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# Introduction

This report measures the likely effects of recent, proposed tax rate increases on households and corporations in Oregon. It examines the effect of these policies on job growth in the state, and the migration of taxpayers and their income. The tax policies examined are those passed by the Oregon legislature in 2009. The Legislature passed two bills affecting, respectively, personal and corporate tax policy. These bills are subject to a referendum in January 2010 and thus are known by their ballot measure numbers: Measure 66 and Measure 67.

If passed, the measures constitute a potentially significant shift of resources from private hands to the public sector. Oregon's Legislative Revenue Office (2009) forecasts that the measures together would raise \$733 million in additional tax revenue for the 2009-11 biennium alone.

In addition, the measures selectively raise marginal tax rates on personal incomes and implement a new corporate taxation policy that has complex effects on effective marginal tax rates.

## Summary of Findings

This report first examines the rationale for the State's adoption of the proposed tax policies in the midst of a deep recession. Next, it reviews the evidence from a large body of economics literature regarding the effects of tax policy on job growth and the migration behavior of taxpayers. It then goes on to apply statistical procedures to historical data from Oregon and other states regarding tax policy and economic activity and to measure the likely impact of Measure 66 and Measure 67.

This study finds that:

- The literature is clear that raising marginal tax rates is an impediment to economic growth and employment growth.
- Measure 66 and Measure 67 will depress jobs cumulatively and significantly by reducing annual job growth:
  - For each percentage-point increase in the personal marginal tax, Oregon's employment growth decreases by one-tenth to two-tenths of a percentage point per annum.
  - For each percentage point increase in the corporate marginal income tax rate, Oregon's employment growth decreases by one-tenth to one-half a percentage point per annum.
- Similarly, the theoretical and empirical literature on migration is clear that taxpayers can be expected to react to increases in Oregon's marginal tax rates. The reaction has the effect of causing out-migration (or reducing in-migration) of taxpayers.

- Evidence from comparative migration flows between Oregon and other U.S. states shows:

- If both measures pass, net out-migration of taxpayers will be approximately 8,000 filers per year greater than otherwise.
- This is approximately one-half of one percent per annum of current filings – a finding consistent with existing employment studies reported herein despite using very different data and methods.

Statistical analysis of the type reported herein is necessarily imprecise. Actual outcomes will depend on the evolution of federal tax and spending policy and other factors. Nonetheless, despite using different methods and U.S.-specific data, the results presented herein are very similar to those found by Lee and Gordon (2005), the OECD (Johansson et al., 2008) and many other studies reviewed for this report.

This work also validates the preliminary estimates that Drs. William Conerly and Randall Pozdena provided earlier using draft legislative specifications of what have now become Measures 66 and 67. These estimates were calculated using general, related research and yielded a combined total of 70,000 or more jobs lost over time. These estimates are not vastly different from those developed herein with the benefit of the final legislative specifications and Oregon-specific modeling and data.

- The average biennial loss in Adjusted Gross Income (AGI) from Measures 66 and 67 is approximately \$1.1 billion dollars, 50 percent higher than the \$733 million first-biennial transfer of income from the private sector sought by the measures. This shrinkage of the taxable base reduces the likelihood of the measures generating their full, anticipated revenue.
- Finally, positive impacts of public infrastructure spending on state level output, if any, may be less than the negative consequences of suppressing private activity. In the literature, the case for raising taxes even to preserve education or health spending is not clear when the offsetting, long-run impacts on the private sector are considered. Raising taxes to preserve transfer payments has an even weaker base. Thus, although a seemingly well-intentioned “safety net” policy, the results actually may be to prolong the affected individuals' return to prosperity.

In summary, therefore, the consistent pattern of evidence from the literature cannot be ignored in evaluating Measures 66 and 67. Coupled with the authors' own studies reported herein, it seems certain that the passage of Measures 66 and 67 will slow the Oregon economy and delay its recovery from the current recession.



## Features of the Ballot Measures

The ballot measures have numerous features that affect personal and corporate taxation in Oregon. The most meaningful economic dimensions of the measures are the increases in top marginal rates that are imposed on Oregon incomes.

- Ballot Measure 66 increases personal income taxes. Currently, the highest marginal personal tax rate is 9 percent. Under Measure 66, the top marginal rates would increase for tax years 2009 and beyond. Specifically, for 2009, 2010 and 2011:
  - A new marginal tax rate of 10.8 percent would be levied for taxable income between \$250,000 and \$500,000 for joint filers and \$125,000 and \$250,000 for single filers.
  - A new 11 percent marginal tax bracket would be created for taxable income above \$500,000 for joint filers and \$250,000 for single filers.

Beginning with the 2012 tax year:

- A top marginal tax rate of 9.9 percent for income above \$250,000 for joint filers and \$125,000 for single filers.

In addition, the measure phases out federal tax deductibility starting at an adjusted gross income (AGI) of \$250,000 for joint filers and \$125,000 for single filers. The key features of Measure 66, therefore, have the effect of permanently elevating the top marginal tax rate applied to personal income.

The measure provides for a one-year federal tax exclusion of the first \$2,400 of unemployment benefits received in 2009, which the Legislative Revenue Office (2009) forecasts will amount to \$32 million in foregone tax revenues. This amounts to a one-time transfer payment to those who have collected unemployment benefits from the individuals and businesses paying the permanently higher taxes.

- Ballot Measure 67 increases corporate taxes. The current top marginal rate on corporate income is 6.6 percent. The measure raises marginal tax rates explicitly, and it also imposes new minimum corporate tax levies based not on income, but rather on gross Oregon sales. The minimum, annual levies are “for the privilege of carrying on or doing business...within this state.” The current nominal \$10 per annum minimum level would become:
  - \$150 for S-corps, Limited Liability Companies and partnerships.
  - A C-corp minimum starting at \$150 for corporations with Oregon sales less than \$500,000 with graduated increases up to \$100,000 for C-corps with sales greater than \$100 million.

The effect of sales-based minimum tax levies can have complex effects on the effective marginal tax rate on net

income. A company with no (or negative) net income, for example, in essence faces an infinite marginal tax rate on income by imposition of a minimum levy. Under Measure 67, C-corporations are alternatively exposed to a new higher corporate income tax rate schedule if this yields a tax liability in excess of the minimum levy:

- A rate of 6.6 percent rate on first \$250,000 of net income. This rate is unchanged from the current top rate.
- For the 2009 and 2010 tax years: A new, higher marginal tax rate of 7.9 percent applied to corporate net income above \$250,000. For the 2011 and 2012 tax years, a marginal tax rate of 7.6 percent applied to net income above \$250,000.
- Beginning with the 2013 tax year, a marginal tax rate of 6.6 percent is applied to net income below \$10 million and a new, higher 7.6 percent rate is applied to net income above \$10 million.

In summary, the measures elevate current taxation of both households and businesses. Although the combination of minimum levies, variation in rates by years, and other features make the specific effect of the taxes idiosyncratic to individual taxpayers, the general effect is to elevate top marginal tax rates significantly, both for higher income households and for corporations.

## The Questionable Rationale of the Proposed Tax Increases

The Oregon economy has just suffered a deep recession. The state's most recent unemployment rate is 11.3 percent, the sixth highest among the states. The brunt of the recession has been borne by the private sector. Since employment peaked in 2008, Oregon has lost more than 125,000 private-sector jobs. On a year-over-year basis, as of the 3rd quarter of 2009, the share of jobs lost in the private sector averaged nearly 17 times the share lost in all areas of the public sector. The share of the job-loss burden is even more disproportionate in such sectors as construction and computer/electronic products, with job loss ratios relative to the public sector of 41 and 29, respectively (ODAS, 2009).

The lessons of other recessions suggest that raising taxes under these conditions endangers an economic recovery and that future growth is impaired by the elevation of marginal tax rates. The prospect of raising taxes selectively on private sector incomes, already disproportionately impaired by the deep recession, invites the question: Why would Oregon policymakers attempt to increase personal and corporate tax rates at such a vulnerable time?

- A political-economic explanation is that the influence of prospending, special interest groups in Oregon is willing to put self-preservation ahead of the well-being of the state as a whole. This problem is not unique to Oregon. The Pew

Center recently identified the 10 states with the gravest fiscal problems, with Oregon among them (Vock et al., 2009). All but one of those states (including Oregon) also ranked in the top quartile of states with the highest ratio of lobbyists to legislators in 2006 (Center for Public Integrity, 2007).

Contrary to representations of others, at \$8,060 per person, Oregon is in approximately the top third of all states in per capita state and local government expenditures, even before adjusting for demographic differences across states. After adjusting for such differences, Oregon ranks even higher, at seventh, in total spending. State and local governments spend approximately 10.6 percent more than would be expected for a state with Oregon's demographic profile (Fruits and Pozdena, 2008).

- A second explanation is that policymakers are relying on casual and inadequate models of how the economy reacts to changes in tax policy. The Legislative Revenue Office (2009) explanation of Oregon's decision to selectively tax the highest income households and the state's corporations, for example, is uncannily similar to a policy prescription floated by the Center on Budget and Policy Priorities (Orszag and Stiglitz, 2001) in an informal three-page memorandum written during the last recession that stated:

*“The conclusion is that, if anything, tax increases on higher-income families are the least damaging mechanism for closing state fiscal deficits in the short run. Reductions in government spending on goods and services, or reductions in transfer payments to lower-income families, are likely to be more damaging to the economy in the short run than tax increases focused on higher-income families.”*

A thorough read of Orszag and Stiglitz (2001) reveals, however, that even they recognize this advice is counterproductive to a prompt recovery:

*“In any case, in terms of how counter-productive they are, there is no automatic preference for spending reductions rather than tax increases. It is worth emphasizing that any state spending reductions or tax increases are counter-productive at this time: they restrain the economy at a time when it is already slowing.”*

It is important to note that Orszag and Stiglitz (2001) only looked at studies of consumption and saving by income level, and did not specifically measure the effect of taxes on economic recovery. Moreover, the memo does not address the relationship between saving and investment and the role investment plays to fuel future prosperity. Thus, they make a far-from-compelling case for further sacrificing private expenditures, saving and investment at a time when the economy is in recession.

Nonetheless, Oregon's legislature seems to have embraced the off-hand, Stiglitz/Orszag notion of selectively taxing

high-income individuals and corporations. Oregon's Legislative Revenue Office (2009) notes that, in the short term, Oregon's balanced budget requirements force the State to either cut spending or increase revenue during economic downturns. It concludes that a cut in state spending during recession would have a more negative impact than higher taxes. It also concludes that the relatively high savings rate of high-income households makes increasing taxes on these households a superior policy option to reduced government spending. The subtext of this posture, of course, is that the economy is better stimulated by legislatively chosen initiatives than those that otherwise would have been pursued by the private sector with the funds.

- A third explanation for attempting to increase taxes now is that policymakers have not been exposed to, or chosen to ignore, the large body of literature that overwhelmingly warns of the risks of raising tax rates on personal and corporate income. The literature demonstrates that doing so slows economic growth, investment, formation of new firms and numerous other processes necessary to jump-start a weakened economy. It also encourages out-migration of taxpayers. The following section demonstrates the volume of professional literature that predicts adverse economic consequences of increases in personal and corporate tax rates.

## The Economic Effects of Taxation: A Literature Review

The relationship between taxation and economic growth dates back at least as far as Adam Smith's *Wealth of Nations* (1776), when he warned of stifling industry with taxes:

*“The proprietor of stock is properly a citizen of the world, and is not necessarily attached to any particular country. He would be apt to abandon the country in which he was exposed to a...burdensome tax, and would remove his stock to some other country....By removing his stock he would put an end to all the industry which it had maintained in the country which he left.”*

Smith's observation is particularly relevant in the modern environment of interstate and global competition for labor and for businesses. In the 230 years since his statement, economists have developed a large body of research quantifying the effect of taxes on economic growth and the risks of transferring wealth from the private to the public sector.

## Taxation, Growth and Migration

The large body of research summarized by Bartik (1991) and Wasylenko (1997), ties increased state and local personal and business income taxes to lower employment and lower economic output and other effects. For example, Wasylenko (1997) cites more than 70 such research findings, most of which demonstrate a negative relationship between higher or

increasing taxes and economic and employment growth. More recent studies have used both U.S. and international data to trace the effects of taxation on growth and found similar effects.

- Myles (2009) reports that the “strongest empirical link” between taxation and growth is Plosser's (1992) study that found a negative relationship between the share of income and profit taxes (relative to gross domestic product) and the growth rate of GDP.
- Padovano and Galli's (2001) analysis of a cross-section time-series panel of 23 OECD (developed) economies for the period from the 1950s to the 1980s shows that high marginal tax rates and more progressive taxes are negatively correlated with long-run economic growth.
- Researchers at OECD (Johansson et al., 2008) find that, even after controlling for other potentially offsetting policies, such as employment protection legislation and unionization, that the combination of employment taxes and income taxes has a negative effect on the employment rate. The OECD calculates that a ten-percentage-point increase in the tax wedge (the difference between a worker's wage rate and the amount they retain after taxes) in an average OECD country would decrease the employment rate by 3.7 percentage points.
- Prescott (2004) finds that higher income taxes reduces the number of hours worked among those that are employed (Prescott, 2004).
- Using international data, Lee and Gordon (2005) find that corporate tax rates are significantly negatively correlated with average economic growth rates, even after controlling for various other determinants of economic growth, and other standard tax variables. Their statistical studies find that increases in corporate tax rates lead to lower future growth rates within countries. Specifically, they estimate that a cut in the corporate tax rate by 10 percentage points will raise the annual growth rate by one to two percentage points. By implication, a one-percentage-point increase in the corporate tax rate will lower growth annually by 0.1 to 0.2 percentage points.

The international studies may be particularly important because the impact of U.S. state taxes on state growth may be even greater than cross-country impacts. For example, Johansson et al. (2008) points out that in open economies, the design of one state's tax system is influenced by the tax systems of other states, since governments are increasingly using their tax systems to improve their ability to compete in global markets. In addition, increasing globalization means that U.S. businesses have investment opportunities outside of the U.S. and its states.

A large body of research based on US data developed since the syntheses of Bartik (1991) and Wasylenko (1997) also ties increased state and local personal and business income taxes to lower employment, lower economic output and

slower income growth. Moreover, there is significant evidence that households migrate to avoid the taxes.

- Mullen and Williams (1994) find that higher marginal tax rates impede state output growth (measured as gross state product).
- Yamarik (2000) finds that state tax policy explains state differentials in economic growth.
- Reed (2009) finds that an increase in U.S. state tax revenues as a share of state personal income results in lower economic growth. He finds that the impacts of tax burden are both immediate and persistent. He calculates that a one-percentage-point increase in tax burden over a five-year period is associated with a contemporaneous decrease in state economic growth of 0.63 percentage points. In addition, it is estimated to lower growth by 0.73 percentage points over subsequent five-year periods.
- Gentry and Hubbard (2004), using data from the Panel Study of Income Dynamics, find that both higher tax rates and increased tax rate progressivity decrease the probability that a head of household will move to a better job during the coming year, slowing the potential for household income growth.
- Cebula (2009) finds that the existence of a state income tax influences migration patterns and that higher state income tax levels have resulted in reduced per capita income growth over time.
- Gius (2009) finds income taxes have an effect on migration for most races and age groups, and that individuals move from states with high income taxes to states with low income taxes. He asserts that these results corroborate the results obtained from the use of aggregate, state-level data.
- The Public Policy Institute of California (Kolko, 2009) finds that Californians of all incomes leave California for states without income taxes. Among highest income households, 36 percent more leave than arrive in California.
- The Public Policy Institute of California (Kolko, 2009) also finds that Oregon selectively attracts the poorest income quintile Californians, while Washington (a state without an income tax) attracts the highest income quintile Californians.
- Cox and McMahon (2009) find that 1.5 million New Yorkers left the state between 2000 and 2008 due to “high costs and taxes,” and that those who left were selectively higher income households.
- Studies from other countries with variable, internal regional tax rates support the hypothesis that U.S. state-to-state migration also would be affected by tax policy. Liebig et al. (2006), for example, find that newly educated individuals, in particular, migrate in response to tax



differences. A one-percentage point increase in the tax rate effects a 2.8-percentage-point increase in the net outmigration rate.

## Tax Increases, Government Spending and the Economy

Economics theory and literature is consistent about the effect of taxing private sector activity to divert resources to preserve the public sector.

- Forty years ago, Baumol (1967) warned that imbalances in productivity growth between a “progressive” sector (such as manufacturing) and “nonprogressive” services sectors lead to perpetual expenditure shifts into the non-productive, low-productivity-growth sectors. He argues that increasing expenditure levels in sectors with low productivity advancement will cause the growth rate of overall output to decline.
- Mueller (2003) documents dozens of articles that empirically demonstrate that decision-making and operational efficiency are poorer in the public sector than in the private sector. Hence, the diversion of activity from the private sector to the public sector is inherently at high risk of being counter-productive.

Tax policies that concentrate the burden of budget instability on the private sector affect adversely the prospects of shortening the recession. The stimulation of long-run growth is crucial to the health of both the public and private sectors. Tax policies that discourage investment and spending in the short-run also tend to discourage businesses and high income tax payers from hiring.

Evidence indicates that these deleterious impacts persist for a long period of time (Reed 2008, 2009). Of the studies that have found a relationship between taxes and growth, an overwhelming majority have found that higher tax rates are associated with reduced growth. Oregon's Legislative Revenue Office (2009) argues that expenditures on infrastructure have the potential to increase the productivity of labor and capital already within a state's borders. Unfortunately, even if public spending is focused with good intentions, positive effects are not likely to be large enough to offset the negative effects on private sector activity caused by increasing tax rates.

- Barro (1996), for example, concludes that most government spending does not enhance productivity. Indeed, the ratio of government consumption expenditure to economic output has a negative association with growth and investment.
- Barro (1991) argues that government consumption has no direct effect on private productivity. Instead he finds that increased government consumption lowers saving and growth through the distorting effects caused by taxation and government-expenditure programs.

- Alicia Munnell, a Federal Reserve research official, in Munnell (1992), concludes that the implied positive impacts of public infrastructure investment on state-level output reported in early studies are “too large to be credible.” Because of interstate spillovers or “leakages,” she reports state-level impacts are approximately half those of national impacts. At the state level, a 10 percent increase in infrastructure spending is associated with, at most, a 1.5 to 2.0 percent increase in economic output. Thus, any positive effects of public efforts likely are less than the negative consequences of suppressing private investment activity.

The case for maintaining the size of the public sector in a recession is no clearer when tax revenues are diverted from the private sector to education or health spending, as opposed to infrastructure. Despite the superficial indications that such spending may preserve or enhance economic productivity, the evidence indicates the contrary. Indeed, theoretical and empirical evidence indicate that increasing taxes to increase transfer payments have a negative impact on economic growth. Measure 66's one-year federal tax exclusion of the first \$2,400 of unemployment benefits is an example of such a transfer payment.

- Romans and Subrahmanyam (1979) argue that if tax revenues are used to fund transfer payments, then there is no flow or no perceived flow of benefits to resident firms and employed or employable individuals. Their empirical analysis finds that a more progressive personal tax structure and systems with a higher proportion of tax revenues flowing to transfer payments are negatively and significantly correlated with growth in state personal income.
- Bartik (1991, 1995) finds that to foster business growth, reducing business taxes is superior to increasing or maintaining the same levels of transfer payments.
- Helms (1985) finds that state and local tax increases significantly retard economic growth when the revenue is used to fund transfer payments.
- Heckman et al. (1998) note that increased government spending on education may increase the amount of education available. However, they also note that a progressive labor income tax discourages education, since the taxes saved while in school are more than offset in present value by the future taxes expected to be due on the resulting extra earnings. Thus, Heckman et al. (1998) conclude that the net effects of funding public education with tax increases are not clear-cut.
- More recently, Myles (2007) confirms that empirical evidence finds that a progressive income tax actually discourages education.
- Oliveira Martins et al. (2007) find that the impact of taxes on investment in higher education can be powerfully adverse. Their policy simulations show that a five-percentage-point increase in marginal tax rates leads to a 0.3



percentage point decrease in higher education graduation rates.

- Hartwig (2009) finds no evidence that additional spending on health care will aid capital formation or economic growth in the U.S. or other OECD countries. On the contrary, further spending from current levels would lower the rate of economic growth.

Thus, the arguments for maintaining the size of the public sector in a recession – to preserve education, welfare and health care spending – most likely will slow the recovery from a recession. Though a well-intentioned “safety net” policy, the results actually may be to prolong the affected individuals' return to prosperity.

## The Impacts of Measures 66 and 67: Methodologies and Findings

The literature just reviewed points the way to data and methods for measuring the effects of Measure 66 and Measure 67. In this report, the likely economic impacts of the proposed tax policies are measured in two ways:

- Using a database spanning 31 years for the 48 continental states, the effects of tax rate increases on job growth is measured empirically using regression analysis. This exercise finds that the proposed tax rate increases will perpetually impair the rate of job growth in Oregon.
- Using recent Internal Revenue Service (IRS) Statistics on Income (SOI) data, the pattern of migration of tax filers between Oregon and the other 49 states is examined statistically. This allows us to associate the rate of migration of tax filers and the income they report with the relative tax rates levied in Oregon versus its competitor states.

### Effects on Oregon Job Growth

The effects of state tax policies is measured empirically using a panel of the 48 continental U.S. states pooled for the period 1977 through 2008. Thus, the data and methodology employed for this study can be applied to any state considering a change in top marginal tax rates. In this report, the focus is on the effect of the Measure 66 and Measure 67 tax rates on employment growth in Oregon.

#### Data Used

The data used in this study consists of employment, tax, and regional economic and demographic characteristics of the states. The sources of the data are as follows:

- Employment information is from the U.S. Bureau of Labor Statistics.
- Marginal tax rates and sales tax rates are from the Tax

Foundation.

- Regional economic/demographic variables are from the U.S. Bureau of Economic Analysis.

To measure tax rates, this study employs the top statutory marginal tax rate faced, respectively, by households and businesses. As Myles (2009) notes, economic theory dictates that the marginal tax rate is the most relevant variable to link taxes and growth. This is because the decision whether or not to earn additional income depends on how much of that income can be retained. For this reason, he suggests that the link between growth and taxation should focus more on how the marginal rate of tax affects growth. Lee and Gordon (2005) indicate that the top statutory tax rate approximates the tax rate faced by potential entrepreneurs.

#### Study Method

The study employs regression analysis, a widely used econometric technique. It measures the relationship between employment growth for a given state at a given point in time, and the statutory tax rates in place in the various states.

Reed (2008) suggests that using lagged tax effects may provide a better explanation of the relationship between tax rates and growth than a model that does not include lagged effects. This is because the variables may interact over time in complex ways that are difficult to model or that the data are not well suited to relating to each other contemporaneously.

The tax measures under consideration in Oregon raise the prospect of these concerns. Although the tax rates will not be known definitively until after the referendum votes in January 2010, if the measures pass, the biggest increases in taxes will be applied retroactively to 2009 income. Policymakers likely are hopeful that retroactive application of these tax increases will limit the ability of taxpayers to behave in offsetting ways. However, taxpayers have been aware of these proposals for some time. One could therefore argue that the 2009 tax rates may have an effect not only on 2009 activity but also a lagged effect on future decisions.

#### Results

The regressions provide the expected signs on the long run impacts of taxes on employment growth: Higher marginal tax rates are associated with reduced employment growth. While various specifications provide slightly different coefficient estimates, the regressions are robust across the specifications and simulations of the Measure 66 and Measure 67 top marginal tax increases applied to each of the models, and provide very similar results.

The coefficients that measure the response of employment growth with respect to the various tax rates considered are as follows:

- Personal income tax rate increases of one percentage



point reduce annual employment growth by 0.1 to 0.2 percentage points (depending on the model specification). For example, if the long run growth rate in employment were 1.5 percent per annum, the effect of a one percentage point increase in top, personal marginal tax rate would lower Oregon's job rate growth to the range of 1.4 to 1.3 percent per annum.

- Corporate income tax rate increases have a similar, but wider potential range (given different model specifications). Each percentage point increase in the top marginal rate would lower growth rates by 0.1 to 0.5 percentage points.
- If Measures 66 and 67 both pass, therefore, Oregon's annual job growth from their income tax rate increase features alone would decline by 0.2 to 0.7 percentage points per annum. Through 2015, cumulative employment losses would be 24,000. Through 2018, cumulative employment losses would be approximately 47,000. If, however, as speculated later in this paper, the rates do not decline as scheduled, then cumulative employment losses through 2015 might well be 26,000, and through 2018 might well be 55,000.
- The employment impacts are much greater through 2018 because the growth slowing impacts of the taxes increase over time. This is consistent with existing research, such as Barro (1996): “[I]ncreases in growth rates by a few tenths of a percentage point matter a lot in the long run and are surely worth the trouble [to preserve].”
- The employment studies also yielded findings for the sales tax, since many states have them, permitting us to measure the effect of implementation of a sales tax. Were this tax to be implemented in Oregon, each percentage point of the tax would depress employment growth rates by 0.2 to 0.3 percentage points.

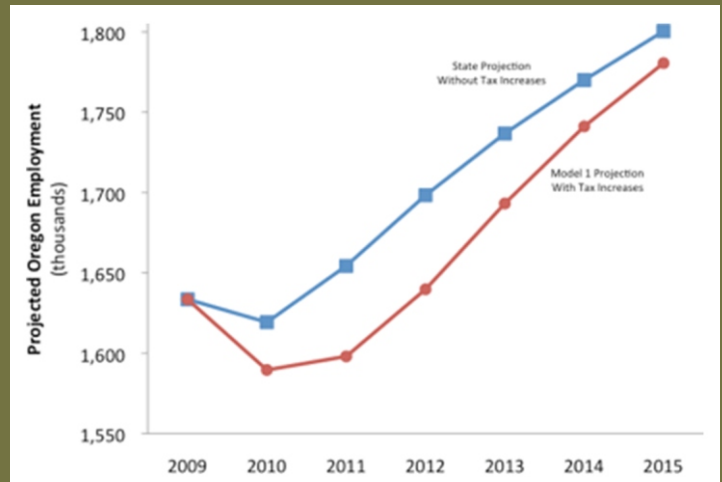
Exhibit 1 shows the employment forecast under the regression model, using the changes in top marginal rates over time specified in the legislation. For comparison, the figure shows the employment projections by the state economics office (which do not account for the impacts of the tax measures on employment) (Office of Economic Analysis, 2009). The figure shows that the tax increase will cause steeper employment declines in 2010 and a slower recovery from the recession that will persist for years.

The employment impacts found here are likely smaller than the actual impacts of the tax measures. This study only evaluates the impact of the increased top marginal tax rate increases. It does not measure the impacts of the phase-out of the federal tax deduction for higher incomes and does not measure the impacts of the increased corporate minimum taxes. Therefore, the earlier preliminary estimates by Conerly (Conerly 2009) and Pozdena (Pozdena 2009) of 70,000 jobs lost over time are entirely plausible and may even be conservative.

The Legislative Revenue Office (2009) estimates the increased corporate minimum taxes will raise \$384 million through 2015 but does not provide a breakout estimate of the taxes associated

## EXHIBIT 1

### Simulated Effects of Tax Rate Increases



with the phase-out. Thus, at least 20 percent of the total estimated tax increases associated with Measures 66 and 67 are not quantified in this paper.

Even if the State were to phase out the tax increases to some degree (as the measures contemplate), it may be difficult to shift the perception among potential investors in the state that Oregon selectively burdens its private sector generally, and its business and higher-income households specifically, to support expanding state spending. Thus, the trend in employment modeled here may be generous to Measures 66 and 67.

### Effects on the Migration of Oregon Taxpayers and Their Income

The notion that different taxing jurisdictions compete on the basis of fiscal policy, amongst other dimensions, was formalized as the “Tiebout Hypothesis” (Tiebout, 1956) and has been the motivating logic behind many decades of migration analysis. In our view, the balance of this research is that the location of households and businesses is influenced in no small way by the comparative tax policies of competing jurisdictions.

The migration of taxpayers offers another perspective on the effects of the proposed increases in Oregon personal and corporate tax rates. Particularly in an economic downturn, entrepreneurs or former owners of failed businesses may be especially prone to migrate. Indeed, many of the effects of taxation on employment growth may have migration of taxpayers or the locus of investment of income as the transmission mechanism for spatial job losses. Moreover, out-migration or reduced in-migration can influence the income distribution of those who comprise an economy and influence its future growth by virtue of this changing composition.

Although many characteristics of a state influence where households and businesses are located, many of these characteristics are unchanging (such as weather) or change



only slowly over time (such as the composition of the work force, housing availability, social and political attitudes, educational and transportation infrastructure, etc.). In contrast, tax policy can and does change abruptly. This situation facilitates statistical measurement of the effect of tax policies on the migration behavior of taxpayers because such policies vary largely independently of more persistent, relative state attributes.

### Data Used

The Internal Revenue Service aids the study of tax effects on migration by assembling and publishing data annually on the changes in taxpayer location that occur between tax years. The IRS Statistics of Income (SOI) data allow the researcher to observe gross and net migration between any two counties or states in the United States.

The measures reported in the SOI are the number of filers, the Adjusted Gross Income (AGI) associated with the filed returns and the number of exemptions claimed on the filed returns. The filer data permits measurement of the migration of taxpayers, while the AGI and exemptions data provide some indication of the economic characteristics of the taxpayers.

Data on tax rates, by type of tax, state and year, was obtained from the sources cited earlier in the employment growth study. A variety of measures of tax potency are available, such as effective average tax rates, effective marginal tax rates, and various measures of statutory rates. For the reasons given earlier in this report, we expect the top marginal tax rates to be the most influential in affecting behavior on the margin, including migration.

### Study Method

For most of the past two decades, Oregon has enjoyed positive, net in-migration of taxpayers, as illustrated by the data displayed in Exhibit 2 for migration activity between the 2006 and 2007 tax years. Between those two years, for example, approximately 33,000 filers moved from another state to Oregon, while 23,855 moved from Oregon to another state, adding about 9,150 net filers over the course of this one year. This net migration effect, of course, is in addition to indigenous changes in the number of tax filers that were in Oregon in both years.

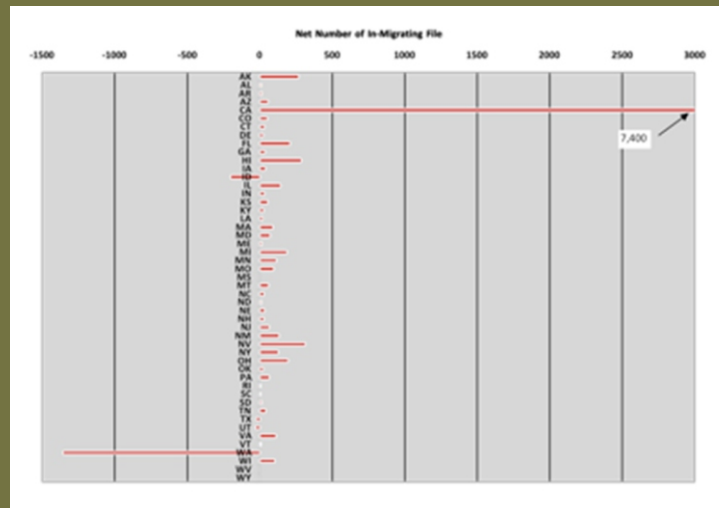
Even with the proposed tax increases, weather, esthetic and other persistent characteristics may continue to yield net in-migration. The effect of tax policy thus will be revealed in changes relative to this background trend, and the statistical analysis needs to be set up accordingly. Some features of even the background trend bear adversely on the prospects for the tax policies advanced in the proposed measures.

- First, while the net migration trends are small (relative to the total number of tax filers in Oregon), the gross trends are large, making the state susceptible to an abrupt change in net in-migration of filers.
- Second, there are tendencies for some states to attract higher

-income Oregon taxpayers than those states send to Oregon (such as Washington), and vice versa in other cases. To the extent the proposed tax reforms selectively encourage high-income out-migration, these patterns (displayed in Exhibit 3) likely would change to reduce average filer incomes in Oregon. This potentially bodes ill for support of both public and private enterprise even if the number of net in-migrants were to remain positive.

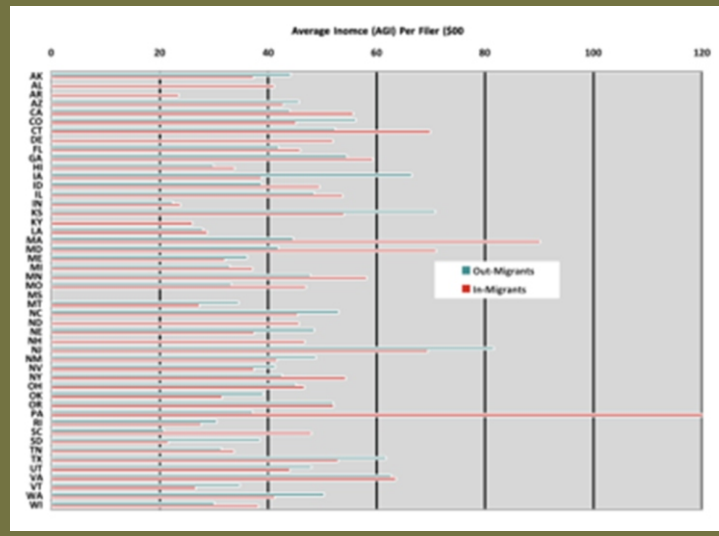
### EXHIBIT 2

Net In-Migration of Tax Filers to Oregon, by State, 2006-2007



### EXHIBIT 3

Average AGI per Filer, In- versus Out-Migrating from Oregon, by State, 2006-2007



The research presented here measures those changes using SOI data for four tax years, 2004, 2005, 2006, and 2007, coupled with data on state-level personal, corporate, and sales tax rates. This study focuses exclusively on the migration of taxpayers in and out of Oregon. As far as we know, this is the first Oregon-specific tax migration study to be published.



Presentation of the statistical details of the study is not appropriate here. However, the key elements of the study method are as follows:

- The tax migration measures are calculated as the net of gross in-migration and out-migration. The migration measures include the number of filers, the associated AGI, and the number of exemptions.
- Tax rates are measured using the highest (statutory) marginal tax rate, in keeping with the theoretical expectation that behavior on the margin (such as net migration) are influenced by differences between marginal tax rates levied in Oregon versus its "competitor" states.
- The specification of the model also recognizes that the larger the two competing economies are, and the closer they are in space, the greater are the prospects for cross-influence (and the potential for migration). As in other spatial economics analysis, a so-called "gravity model" specification is used to characterize this phenomenon. Such specifications have been used to study both domestic and international US migration. See, for example, Greenwood (1985) and Karemera, et al. (2000).
- The data is arranged as a pool of cross-sections, where each cross section pairs Oregon with each of the other forty-nine states.

The model is estimated econometrically and yields coefficients on each tax variable that can be interpreted as the effect of a one percentage point increase in Oregon's tax rate on the net migration between Oregon and an average "other" state. The total migration effect is thus this measure across all forty-nine other states.

Other coefficients allow measurement of net migration between Oregon and other states in the absence of tax changes, and the effect of the size and separation between Oregon and another state due to the gravity model effects.

## Results

The results of this study are consistent with theoretical expectations and the findings of the large literature cited earlier in the literature review. Specifically:

- Increases in personal, corporate or sales tax rates have a negative effect on net in-migration trends. That is, relative to background trends, fewer tax filers will remain in or migrate to Oregon than would be the case without the tax increase.
- The effects are largest and most significant statistically for personal income tax and corporate income tax rate increases, relative to the same rate increase applied to retail sales. This is precisely the relative effect discovered by the OECD study of industrialized countries' rates of economic growth. The total explanatory power of the specification is also similarly low, reflecting the importance of "fixed effects" specific to

individual state-to-state relationships.

- The larger and nearer is the "other" state, the greater is the net in-migration of tax filers into Oregon. This is consistent with the gravity model of spatial interaction of economies.
- All coefficients are of the expected sign and order of magnitude. Only the sales tax variable is of below-standard statistical significance. Even this finding, however, is consistent with expectations. The OECD (Johnson 2008) study, for example, found that consumption (sales) taxes had the least adverse effects on economic growth prospects. Since the taxpayer has greater discretion over exposure to consumption taxes, many economists believe they are less distortionary to the economy. Oregon, of course, does not have a sales tax (i.e., it has a zero sales tax rate), but the study permits measurement of its effect nonetheless because most of its competitor states do have such taxes.

## Implications for the Effects of Measures 66 and 67

The implications of this research for the effects of the proposed Oregon measures are dire. It suggests that large and persistent reductions in Oregon's generally positive trend in net in-migration will result from the passage of either or both of the measures.

Exhibit 4 shows the reductions in filers, their incomes and their exemptions that can be expected each year that a given tax rate increase is in place. (Neither measure proposes a sales tax; the results for this tax are presented only for comparative purposes.)

Application of the findings of this table to the proposed measures is a matter of applying the proposed rate increases to the measures presented in this exhibit. One of the dilemmas in doing so, however, is whether it is realistic to assume the partial phase-out of marginal tax hikes promised in the measures. There are several reasons to doubt that these rates will evolve as legislated.

### EXHIBIT 4

#### The Effect of Tax Rate Increases on Taxpayer Migration from Oregon, 2004-2007

Top Rate Increase:	1.0%	2.0%	3.0%
<i>Net Out-Migration of Taxpayers in Oregon (Lost Filers per Year)</i>			
Personal Income	3,710	7,419	11,129
Retail Sales	495	990	1,485
Corporate Income	3,283	6,566	9,850
<i>Net Out-Migration of Income, per Year (Millions of Dollars, AGI)</i>			
Personal Income	\$253.45	\$506.90	\$760.34
Retail Sales	\$48.09	\$96.17	\$144.26
Corporate Income	\$236.47	\$472.93	\$709.40
<i>Average Income per Net Out-Migrating Taxpayer (\$AGI per Filer)</i>			
Personal Income	\$68,321	\$68,321	\$68,321
Retail Sales	\$97,124	\$97,124	\$97,124
Corporate Income	\$72,022	\$72,022	\$72,022
<i>Net Out-Migration of Exemptions, per Year</i>			
Personal Income	8,087	16,174	24,261
Retail Sales	1,235	2,471	3,706
Corporate Income	7,068	14,137	21,205

EXHIBIT 5

The 10-Yr. Effect of Measures 66 and 67 on Tax Filers and AGI (Assuming Persistent Rates)

Tax Base	Rates Follow Measure Schedule		Highest Measure Rates Persist	
	Measure 66	Measure 67	Measure 66	Measure 67
	<i>Lost Filers</i>			
Personal Income	45,629		69,000	
Corporate Income		34,802		42,682
Total		80,431		111,682
	<i>Lost AGI (\$millions)</i>			
Personal Income	\$3,117		\$5,069	
Corporate Income		\$2,507		\$3,074
Total		\$5,624		\$8,143
	<i>Lost AGI per Filer</i>			
Personal Income	\$68,321		\$68,321	
Corporate Income		\$72,022		\$72,022
Total		\$140,343		\$140,343

- First, the implication of the migration findings is that the out-migrating filers will, in general, have much higher taxable income potential (AGI) than those who in-migrate or remain. Thus, the measures may fail to generate the desired revenues, with the result that there may be pressure to extend the maximum rate increases and not partially lower the rates as programmed in the measures.
- Second, the high-income households that are the target of Oregon's tax reforms are also targeted for additional taxation at the federal level. A current version of the health reform plan contemplates a five-percentage-point increase in top personal tax rates, and Social Security and Medicare tax reform also contemplates further burdens on high-income households. For example, lifting the cap on the maximum income subject to Social Security payroll taxes would add another six percentage points to the marginal tax rate exposure of taxpayers with payroll incomes above \$106,800 (in 2009). Add to this the currently proposed increment for Medicare taxes, the sunseting of the Bush tax cuts, campaign proposals for increases in capital gains tax rates, etc., and the prospect of discouraging economic activity and taxable incomes may materially shrink the Oregon tax base on which the measures rely.
- Finally, to the extent that the income-redistributive policy is echoed in Oregon political circles, the sentiment for restoring lower tax rates on high-income individuals and corporations will be weak.

Consequently, the 10-year estimates of the migration impacts presented in Exhibit 5 assume, alternatively, that taxpayer perceptions of rates follow (a) either the schedule of the highest marginal tax rates as presented in the measures or (b) persistence of the highest marginal tax increases contemplated by the measures. Readers with contrary expectations about future trends can use the parametric measures in Exhibit 4 to derive their own expected impacts. In our professional view, however, it is risky, under current and likely future conditions, to expect any relief from the proposed measures without a dramatic reversal in policymaker attitudes toward corporations and high-income individuals, and the private sector in general.

These simulations, derived from actual, historical behavior of interstate taxpayer migration, indicate that Oregon will lose a significant amount of net taxpayer in-migration, relative to its trend. Specifically, even under the conservative assumption of compliance with scheduled partial relief in top rates proposed in the measures:

- Measures 66 and 67 will reduce net tax filer in-migration by approximately 80,000 filers over a 10-year period. Approximately two-thirds of this impact derives from the proposed changes to personal income tax rates and one-third to the proposed increase in corporate income tax rates.
- Approximately \$5.6 billion in adjusted gross income that otherwise would have been earned and taxed in Oregon will not materialize in the state over that 10-year period. About 70

percent of the income lost is associated with the personal income tax channel, with 30 percent arising from changes in corporate income taxes.

- Not surprisingly, the out-migrating taxpayers are selectively higher income (high AGI) individuals than other taxpayers. The average AGI per out-migrating filer is approximately 35 percent higher than the average AGI per Oregon filer in 2007. This phenomenon is consistent with similar effects measured after a 3-year, temporary 1.25 percentage point income tax surcharge was levied in Multnomah County after Ballot Measure 26-48 passed in May 2003. The effects are larger than measured here, as would be expected given the comparative ease of moving residences within the state.
- Should Oregon taxpayers perceive that the highest contemplated rates in the Measures are a risk then, as Exhibit 5 indicates, the impacts will be approximately 30 percent higher over a ten-year period.

It is important to note that the loss of filers is not necessarily the same as loss of jobs, per se. This is because some filers enjoy their incomes through investments rather than labor market activity, but the increases in taxes may propel them to establish residence in locations friendlier to their income situation nonetheless. However, in a dynamic sense, the loss of any taxpayer ultimately will translate into reduced employment and incomes, as investment and spending effects are lost.

It also should be noted that the average biennial loss in AGI from Measures 66 and 67 over the 10-year period, by even the lowest of our measures, is approximately \$1.1 billion dollars, a number 50 percent larger than the first biennial transfer of income from the private to the public sector sought by the measures. In essence, the potential Oregon tax base will shrink by a larger amount than the revenue gained, each biennium.



# Summary

Measurement of the future effects of policy changes is a difficult statistical exercise. The economy is itself dynamic and can be influenced by myriad policy and economic conditions. At this time in U.S. history, there are many major policies in flux, and world economic conditions are volatile. Therefore, any forecast of the effects of a single state's policies should be embraced guardedly. This is true of the analysis presented herein as well as projections made by others.

Nevertheless, absent other dramatic and offsetting forces, we believe that the proposed measures will, on balance, harm the Oregon economy in the long run. This paper reports two separate efforts to quantify the potential impact of Measures 66 and 67. Both approaches use historical data specific to Oregon on the relative tax rates of the 50 states to reveal the influence that Oregon's tax rate policy has had on its economy.

One of the studies looks at this issue from the standpoint of job growth, and the other from the standpoint of net migration of taxpayers. As we have emphasized elsewhere in this paper, the effects are not additive. Rather they are alternative views of how behavior is affected by tax policy. But the studies reveal a common scale and direction of effects that bodes ill for Oregon's future economic prospects. These effects are (a) slower job growth, (b) weaker net in-migration of future taxpayers and (c) selectively, a net tendency for higher income filers to live elsewhere.

- Passage of the measures will result in a decline in job growth per annum of 0.2 to 0.7 percentage points. The effects will persist and compound job losses over time.
- The reduced employment growth will exacerbate Oregon's persistently high unemployment. Reduced employment is associated with reduced revenues to state and local governments, while increased unemployment is associated with increased costs to state and local agencies. The net effect would be increased challenges to balance the state and local government budgets.
- A reduction in net in-migration of taxpayers by approximately 80,000 filers over a 10-year period. Two-thirds of this impact is from Measure 66 and one-third from Measure 67 effects on tax rates. Any additional out-migration of taxpayers that may be caused by the corporate minimum tax features of Measure 67 are not taken into account here.
- A loss of approximately \$5.6 billion in adjusted gross income that otherwise would have been reported in Oregon over a 10-year period.
- Taxpayers leaving the state have incomes 35% higher than the average 2007 tax filer.

Our measures of impact aside, one can find little support in the literature for the notion that raising tax rates and diversion of resources away from the private sector will be anything but counterproductive to a recessed economy. Specifically, the literature does not support the notion that raising marginal tax rates and diverting resources away from the private sector is somehow growth enhancing. Indeed, numerous threads of the literature suggest the opposite:

- US and international studies of tax policy both conclude that taxation of corporate and personal incomes depresses economic growth.
- Both theory and empirical study support the notion that the public sector has slower productivity growth. Thus allocation of an economy's resources away from the private sector will impair future economic prospects. To better advance the prosperity of Oregon overall (including public employment and programs), resources should not be diverted from sectors with the greatest prospects for increasing productivity and the ability to retain and create private market jobs.
- We accept that preservation of government spending in areas such as transfer payments temporarily eases the painful burden on some caused by the weakened economy. The issue is that the scale of the side effects of doing so comes at the expense of the private sector. As in medicine, these side effects must be balanced against short-term treatment of the pain. The literature of others argues that diversion of private resources for short run benefit may aggravate job loss or the duration of job loss in the long run.

## The Counter-Productivity of Selective Taxation

Proponents of the measures claim that the tax increases only affect the wealthy and corporate targets of the statutes. Further, they argue that this class of targets can “afford it” and have not been contributing their “fair share” to the tax system. There is no economic evidence in favor of using tax policy to wage such class warfare.

- The targets of taxation from these two measures also happen to be the source of incomes for most other Oregonians. Hence, the burdens put on the targets of the measures will propagate to all income classes and enterprises. The Federal Reserve's 2007 Survey of Consumer Finances confirms the fact that higher income individuals tend to be business owners and managers, and invest at a rate far out of proportion to their share of total income. Specifically, households in the top 10 percent of incomes invest 14 times more than the median household, even though their income is only 4.3 times that of the median households (Bucks, B., A. Kennickell, T. Mach, and K. Moore 2009). In effect, therefore, Measures 66 and 67 target the very class of individuals and businesses who fund, operate and develop businesses, jobs and new technologies.



- Ironically, as this is being written, Congress is considering tax concessions to businesses to try to stimulate growth in recognition of the importance of stimulation of business activity. The philosophical inconsistency between Congressional policy and Oregon's two measures could not be starker.

- Proponents of the measures wish to advance the notion that the wealthy and corporations "do not pay their fair share" of taxes. This is a common, and particularly divisive, mischaracterization of reality. First, the statement ignores the fact that the targeted taxpayers pay Federal taxes as well as Oregon taxes, and that they already contribute a share of total Federal revenue that is unmatched in the world. A study done by the Organization of Economic Cooperation and Development found that the top 10 percent of US taxpayers pay the largest percent of national taxes of any of the OECD countries. Specifically, this 10 percent pays over 45 percent of all income taxes, versus earning 33 percent of all income, a ratio of tax to income share of 1.35. This is almost 50 percent more progressive than Switzerland, at the opposite end of the scale, and more progressive than Sweden, Britain, the Netherlands, etc. On the corporate tax side, only Japan has a higher corporate income tax rate than the US.

- Campaign proponents of Measure 67 justify their "fair share" representations by comparing tax treatment of companies in Oregon with that of companies in other states. In fact, Oregon is merely middle-of-the-pack in the effective, average rate at which businesses are taxed. Moreover, the focus on the average burden ignores the more important, marginal tax rate stance of the State, which economists argue is more influential in regard to growth stimulus than average burdens. Much as the margins of landforms (e.g., wetlands) are the birthplace of wildlife, the marginal activity of entrepreneurs is the engine of innovation and growth. The high marginal tax rates of the Measures discourage this important activity.

- Tax burdens are compounded by other state policies that affect the cost of operating a business. In its 2009 survey, the Small Business & Entrepreneurship Council (SBEC) found:

*"The biggest obstacle to entrepreneurship [is] "Public policy gone awry," that is, higher taxes, regulations, and government spending."*

The 2009 survey rates Oregon in the bottom quartile of US states in terms of having a policy climate supportive of entrepreneurship (Small Business & Entrepreneur Council 2009).

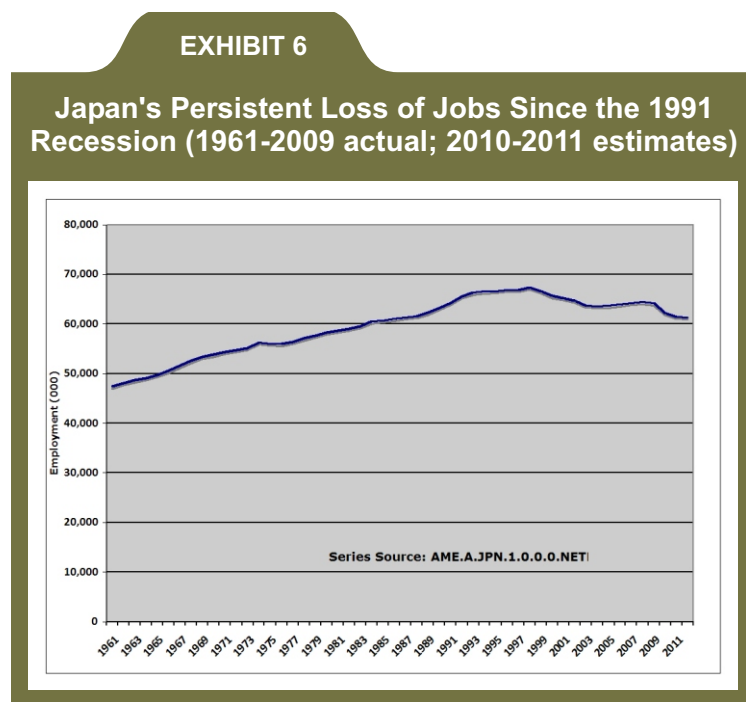
Many of us may be jealous of, or put off by, the levels of income and the wealth that some enjoy. But we have to be careful to recognize that many others are encouraged by this evidence of the unlimited opportunity our economy offers, and recognize that middle- and lower-class lives are better for their success. As Larry Gatlin, lead singer for The Gatlin Brothers (a famous

country music group) humorously opined, "I am no economist, but I do know...I never got a job from a poor man..." (Wall Street Journal, August 29, 2004).

## The Japanese Mega-Recession: A Cautionary Tale?

The complacency of measure proponents about job growth is of concern to the authors of this report. As two economists who together have studied the behavior of markets and economies for over five decades, the authors know that prosperity, like respect, is hard won but easily lost.

The experience of Japan is a case in point. As Exhibit 6 illustrates, Japan's once-rapidly growing economy stagnated in 1991 and job growth has been negative, on average, for 15 years now. The circumstances of the stumbling of this great economy are eerily familiar.



- Japan suffered the bursting of a bubble of real estate, banking and securities markets in 1990 created by government regulatory and monetary policy (Shiratsuka 2003).

- To get out of recession, Japan tried public sector stimulus, especially spending on massive public infrastructure ventures. Ten separate stimulus packages implemented since 1991 have left the country littered with special-interest projects that, as Exhibit 6 suggests, failed to generate jobs. It also has left Japan with one of the highest ratios of debt to GDP in the world, and the share of government spending in the economy has increased by 27 percent since 1990.

- Although a tax cut in 1994 is credited by some to have restarted growth (Okamoto 2004), deficit demands necessitated a 2-percentage-point increase in personal



consumption tax rates in 1997, arguably precipitating the subsequent decline in employment.

- Japan taxes income aggressively; an individual earning 18 million yen (approximately \$200,000 dollars) faces a 50 percent marginal tax rate at federal, prefecture and municipal levels, and a 5 percent consumption tax. Corporations in Japan face the world's highest rate of tax in the world, at nearly 40 percent.

Japan's recovery strategy favored spending increases and tax rate maintenance or increases, especially as the deficits mounted from the massive fiscal stimulus efforts. Although the Japanese experience includes missteps in monetary policy as well, the overall banking and budgetary parallels between Japan in the 1990s and the U.S. today leads experts on both countries to conclude:

*“While the U.S. plans are still in flux, it appears that U.S. is at risk for running into some of the same problems that hobbled the Japanese policies” (Hoshi and Kashyap 2008).*

*“Japan's biggest policy mistake came in 1997 when the government raised its consumption tax....Revenue-neutral reductions in marginal tax rates – more things taxed at lower rates--is the best policy alternative. Further subsidies to already oversubsidized sectors of the American economy--like real estate--would be unwise. [They] constitute part of the problem we are now facing, not a desirable part of the solution” (Makin 2008).*

## Conclusions

Whether the economic impacts contained herein are too high or too low by 10 percent or 50 percent is not as material as the fact that Oregon has chosen to embark on a policy that likely will suppress and repel economy activity in the state. The application of Measures 66 and 67 at a time when the economy is struggling to get on its feet portends aggravating economic conditions and delayed recovery.

Evidence from the literature is supportive of the special studies performed herein. In contrast, the hopes of avoiding these adverse consequences hang on extremely thin threads.

- The focus of high tax burdens on those with relatively high incomes, for example, assumes that they will pay their increased taxes, but not alter their investment, consumption, hiring or location decisions. The assumption is that the targeted taxpayers will simply grin and bear a \$733 million biennial diversion of their already-stressed incomes.
- Similarly, the retroactivity of the tax increases back to the beginning of 2009 and the use of minimum corporate tax hikes reflects a sentiment of the State that, if deprived of the opportunity to plan for tax burdens, tax increases will elicit no behavioral response. In fact, of course, taxpayers are aware of legislative sentiments before the fact; they form

impressions of both short-term and long-term tax policy; and they plan accordingly. In addition, such experiences cause them to reassess the risk of increased, future selective taxation.

Raising taxes in the midst of a recession after rapid, pre-recession state budget growth cannot help but send a signal that Oregon has an agenda that does not favor private sector economic activity.

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