

Oregon's Death Tax

An Impediment to Economic Growth, In-Migration, and Public Revenue

Eric Fruits, Ph.D. and Randall J. Pozdena, Ph.D.

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Executive Summary

This report measures the impacts of eliminating Oregon's death tax on the state's economy, measured by employment growth, income growth, and migration. The analysis presents the impacts under two scenarios regarding the phase-out of Oregon death taxation:

1. Elimination of the tax in its entirety in 2013.
2. Phased elimination of the tax over a three-year period, beginning in 2013.

In both cases, the trajectory of impacts is presented for five years. The study reveals that by 2017 there would be significantly increased employment, personal income and net in-migration of new taxpayers, relative to the levels expected under current death tax policy. This is true under either phase-out scenario.

A. Effects of Elimination of the Oregon Death Taxation Entirely in 2013

The Oregon death taxation affects both the vigor of job and income creation by the existing residents, and the vigor of net in-migration to the state by households currently residing elsewhere. The effect of eliminating death taxation on indigenous economic growth is as follows:

- **Increased Oregon employment.** By 2017, Oregon would have approximately 44,500 more people working than if the current death tax remained in place.
- **Increased Oregon personal income.** By 2017, the personal income of state residents would be \$2.4 billion higher than if the current death tax were in place.
- **Increased Oregon income tax collections.** The increased personal income results in increased personal income tax collections. By 2017, increased Oregon income tax revenues will exceed the average death taxes revenues collected by the state over the past five years.

The effects on trends in employment, income and State income tax revenues for each year are presented in Table A-1, below.

Table A-1: Employment and Personal Income Impacts of Eliminating Oregon’s Death Tax in 2013 (Relative to No Change in Policy)

Year	Employment Impacts	Personal Income Impacts	State Income Tax Impacts
2013	8,000	\$0.3 billion	\$15.3 million
2014	16,500	\$0.8 billion	\$32.1 million
2015	25,500	\$1.3 billion	\$50.8 million
2016	35,000	\$1.8 billion	\$71.5 million
2017	44,500	\$2.4 billion	\$94.1 million

In addition to stimulating greater economic vigor of those in the state, removing Oregon’s death taxation will encourage workers, entrepreneurs and firms to migrate to the state and/or retard current residents’ out-migration. This study analyses IRS data on taxpayer mobility between all

50 states and finds that eliminating a death and gift tax rate similar to that levied by Oregon in 2009 (i.e., yielding \$90 million in revenue), would significantly increase net Oregon in-migration of households.¹ Specifically, elimination of Oregon’s death tax would:

- **Increase the net number of returns filed** by 3.6 percent to 4.1 percent.
- **Increase the associated Adjusted Gross Income (AGI)** by 2.4 percent to 4.1 percent
- **Increase taxpayer base** (as measured by exemptions filed) by 3.8 percent to 4.3 percent.

Table A-2 summarizes the cumulative effect from 2013 to 2017 of elimination of Oregon’s death taxation policy completely in 2013. The number of returns filed and the income associated with those returns grows rapidly, offering an opportunity to offset any revenues lost from elimination of death taxes.

Table A-2: Cumulative Net In-Migration Impacts of Eliminating Oregon’s Death Tax in 2013 (Relative to No Change in Policy)

Year	Filed Returns Impact	Adjusted Gross Income Impact	Filed Exemptions Impact
2013	504	\$27.7 million	862
2014	1052	\$57.9 million	1800
2015	1649	\$90.8 million	2821
2016	2299	\$126.6 million	3933
2017	3007	\$165.6 million	5143

¹ Assuming other states’ death tax policies remain unchanged.

The cumulative growth in returns filed and the potential for taxation of the income associated with those returns underscores the fact economic growth helps enlarge the tax base. This is particularly relevant in the case of migrants, since migrants tend to have higher incomes than the average Oregon taxpayer who does not migrate. According to the IRS migration statistics for the four most recent years, in fact, net in-migrating tax returns represented only 0.8 percent of the number returns filed by non-migrants, but migrants incomes (measured by AGI) were almost 3.4 percent of the AGI of returns filed by non-migrants.

B. Phased Elimination of Oregon’s Death Taxation

If Oregon’s death taxation policy were abolished in a phased manner, the economic growth and revenue opportunities of eliminating the tax will materialize more slowly. However, this may afford the opportunity for affected parties—households, businesses and government—to adjust to the change in circumstances more easily. In simulating a three-year phase-out, the authors assume a linear phase-out that starts in 2013 and results in a zero levy by 2016. The employment, personal income, and State revenue impacts are presented in Table B-1, analogous to the prior Table A-1. The State income tax revenues gains are lower than the current death tax collections in 2017, but will exceed those collections by 2018 or 2019.

Table B-1: Employment and Personal Income Impacts of a 3-year, Phased Elimination of Oregon’s Death Tax beginning in 2013 (Relative to No Change in Policy)

Year	Employment Impacts	Personal Income Impacts	State Income Tax Impacts
2013	2,000	\$0.1 billion	\$3.8 million
2014	6,000	\$0.3 billion	12.0 million
2015	13,000	\$0.6 billion	25.3 million
2016	22,000	\$1.1 billion	44.6 million
2017	31,000	\$1.7 billion	65.7 million

Eliminating Oregon death taxation on a phased basis also influences in-migration of taxpayers and their associated income, since net in-migration is affected in direct proportion to the effective tax levied. Table B-2 summarizes the impacts of a phased elimination of death taxation. Although the cumulative number of new returns grows more slowly, of course, than under the 2013 phase-out, the number of returns filed by 2017 under the phased plan is more than two-thirds that of the 2013 alternative.

Table B-2: Cumulative Net In-Migration Impacts of Phasing Out Oregon’s Death Tax over a 3-Year Period (Relative to No Change in Policy)

Year	Filed Returns Impact	Adjusted Gross Income Impact	Filed Exemptions Impact
2013	126	\$6.9 million	215
2014	400	\$22 million	684
2015	848	\$47 million	1450
2016	1498	\$82 million	2562
2017	2206	\$121 million	3773

C. Conclusion

Under either plan for eliminating Oregon’s death taxes, the Oregon economy is strengthened. The elimination of this tax provides incentives for existing Oregonians to save and invest more in the economy, thereby creating more jobs, income and revenues to support public services. Removal of the tax also encourages new Oregonians to in-migrate, and will reduce out-migration. This, too, has important economic and fiscal implications because migrants tend to have higher incomes than non-migrants by a large margin.

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1 Introduction

In addition to levying taxes on income and capital gains earned during a taxpayer's lifetime, Oregon also collects revenue from taxes levied at the time of death of an owner of real or financial assets. In this way, the state taxes income twice—first when the taxpayer earns the income, and a second time on the accumulated savings at the time of the taxpayer's death. The federal government also levies taxes on current income and the accumulated value of assets at the time of death.

Such “death taxes” may be levied as an *estate tax* or as an *inheritance tax*, or both. An *estate tax* is levied against the net value of the estate of the decedent, whereas an *inheritance tax* is levied

on the recipient or recipients of the estate. The two types of taxes are collectively referred to as *death taxes* by most experts and practitioners, including the US Census Bureau.²

What is important to economists is the incidence and effect of death taxation. One issue is that, to some degree, the levy of death taxes in a setting of prior taxation of income constitutes double taxation. It is also clear that death taxes are a form of taxation of savings since the value of an estate is determined by the savings behavior of taxpayers over their lifetimes. Thus, it is likely that death taxes (like income taxes themselves) are a deterrent to savings, which in turn retards the funding of investment, with adverse effects on economic growth, and job creation.

Proponents of death taxes argue that there are offsetting virtues to limiting the size of an estate that can be passed to the beneficiaries of that estate. Among the common arguments is the populist notion that death taxes deter creation of family dynasties and the economic and political power alleged to be associated with such dynasties. Others argue that death taxes encourage charitable distribution of the estate before death, to the benefit of those who receive services from charitable organizations such as education institutions, foundations, and charitable service providers. Still others argue that providing government with an additional source of revenue creates offsetting benefits that follow from more robust public spending.

These arguments cannot be resolved easily without careful measurement of the net effect of death taxes on the economy. Namely, if one finds that the levy of death taxes leads over time to lower rates of economic and job growth, the case for taxing estates to encourage economic well-being through support of charitable or government program purposes is weakened. In fact, it weakens the general case that diverting private wealth to the public sector inures to the net benefit of the general public.

² US Census Bureau's *General Revenue by Type: Taxes* defines death and gift taxes as "Taxes imposed on the transfer of property at death, in contemplation of death, or as a gift (e.g., inheritance and estate taxes)."

As we shall see, the variation over time in state death tax policy in Oregon and other states creates a type of natural experiment by which death tax levels can be statistically associated with indicators of economic and job growth. By looking at migration patterns between states over time as state policies have changed, we can also see if migration to avoid state death taxation causes death taxes to adversely affect the turnover and durability of economic activity in a state's economy. Measuring these impacts goes a long way toward addressing the question of whether death taxes are on balance a good or bad thing for state economies. This paper presents the first, comprehensive evaluation of the effects of state death taxes, with particular focus on the state of Oregon's economy.

2 Background

The history of death taxes in the United States is the history of a tax of convenience.³ The death tax was imposed not because of carefully considered efficiency and equity effects, but because it was simple to administer. Indeed, the first four US death taxes were levied as short-term measures for emergency financing of wars at a time when generating revenue via other instruments (e.g., excise, sales or income taxes) had practical collection and evasion problems. The revenue motivation of death taxation is apparent from its 200-year history in Table 1. Only in recent years has the debate over federal death taxes become cloaked in other terms.

³ This is similar to the motivation behind other stamp or turnover taxes, such as those levied on real estates when transferred before death.

Table 1: History of Federal Death Tax Related Levies

Period of Levy	Type of Tax	Purpose
1787-1802	Stamp tax on wills and estate documents	Fund the Undeclared War on France
1862-1870	Inheritance tax	Fund the Civil War
1898-1902	Estate tax	Fund the Spanish-American War
1916-2010	Estate Tax	Initially, to fund US involvement in WWI
1976-present	Gift Tax	To penalize avoidance of death taxes by gifting estates prior to death
2010-2011	Death Tax Rate Reduction	To stimulate economic growth (part of EGTRRA)
2011-2013	Death Tax Rate	Temporarily preserves current rates

Some research on death taxes has begun to focus on the economic impacts of federal death taxes, which have imposed rates as high as 77 percent of the net estate value, as illustrated in Table 2.⁴

⁴ See, for example, “The Cost and Consequences of the Federal Estate Tax,” Joint Economic Committee, May 2006, <http://www.house.gov/jec/publications/109/05-01-06estatetax.pdf>, and Gary Robbins, “Estate Taxes: An Historical Perspective,” Heritage Foundation, January 16, 2004, <http://www.heritage.org/research/taxes/bg1719.cfm>.

Table 2: Historical Federal Death Tax Rates and Exemptions, 1916-2006

Year	Exemption (dollars)	Initial rate (percent)	Top rate (percent)	Top bracket (dollars)
	(1)	(2)	(3)	(4)
1916.....	50,000	1.0	10.0	5,000,000
1917.....	50,000	2.0	25.0	10,000,000
1918-1923.....	50,000	1.0	25.0	10,000,000
1924-1925.....	50,000	1.0	40.0	10,000,000
1926-1931.....	100,000	1.0	20.0	10,000,000
1932-1933.....	50,000	1.0	45.0	10,000,000
1934.....	50,000	1.0	60.0	10,000,000
1935-1939.....	40,000	2.0	70.0	50,000,000
1940 [1].....	40,000	2.0	70.0	50,000,000
1941.....	40,000	3.0	77.0	10,000,000
1942-1976.....	60,000	3.0	77.0	10,000,000
1977 [2].....	120,000	18.0	70.0	5,000,000
1978.....	134,000	18.0	70.0	5,000,000
1979.....	147,000	18.0	70.0	5,000,000
1980.....	161,000	18.0	70.0	5,000,000
1981.....	175,000	18.0	70.0	5,000,000
1982.....	225,000	18.0	65.0	4,000,000
1983.....	275,000	18.0	60.0	3,500,000
1984.....	325,000	18.0	55.0	3,000,000
1985.....	400,000	18.0	55.0	3,000,000
1986.....	500,000	18.0	55.0	3,000,000
1987-1997 [3].....	600,000	18.0	55.0	3,000,000
1998.....	625,000	18.0	55.0	3,000,000
1999.....	650,000	18.0	55.0	3,000,000
2000-2001.....	675,000	18.0	55.0	3,000,000
2002.....	1,000,000	18.0	50.0	3,000,000
2003.....	1,000,000	18.0	49.0	3,000,000
2004.....	1,500,000	18.0	48.0	3,000,000
2005.....	1,500,000	18.0	47.0	3,000,000
2006.....	2,000,000	18.0	46.0	3,000,000
2007.....	2,000,000	18.0	45.0	3,000,000

[1] 10-percent surtax was added.

[2] Unified credit replaces exemption.

[3] Graduated rates and unified credits phased out for estates greater than \$10,000,000.

Many states also have adopted death taxes. State taxes take the form of estate taxes, inheritance taxes, or both (as in Maryland and New Jersey). These state levies have become more important as the threshold for exemption from federal taxes has increased over time (see Table 2).

Increases in the federal exemption increases the taxpayers' exposure to the state levies because state levies are generally deductible from federal levies if one is subject to the federal tax. In addition, the state instruments usually have lower exemption levels (typically \$1,000,000 or less), which means that more, ordinary estates are likely to be exposed to the state tax if one lives in a state with such taxes.

Where levied, *statutory* state death tax rates are typically over 15 percent, with Washington and Indiana levying the highest rates, at 19 and 20 percent, respectively. If an estate is exposed to both federal and state death taxes, the combined rate can be very high. Since the federal death taxes permit some deduction of death or other succession taxes paid to states and exempt a threshold level of estate value from federal taxation, one cannot simply add the federal and state rates. In addition, computing the effective state rate as a share of the estate value requires detailed data on the gross and net values of estates as valued under state law. Such detailed data are not available at the state level. One can, however, compute the effective rate of federal and state death taxation by using the federal estate value and the estate and gift tax revenue data, by state, available from the US Census. These rough computations of the effective tax rate on gross and net estates is presented in Table 3.

Table 3: Effective Federal and State Death Tax Rates, by State, 2010

State	State Death Tax? (2012)	Effective Federal Rate on Gross Estate	Effective Federal Rate on Net Estate	Effective State Rate on Gross Federal Estate	Effective State Rate on Net Federal Estate
Total	NA	10.2%	19.5%	3.6%	6.9%
Alabama		9.9%	17.9%	0.0%	0.0%
Alaska		0.0%	0.0%	0.2%	0.3%
Arizona		13.7%	21.4%	0.0%	0.0%
Arkansas		11.2%	16.7%	0.1%	0.1%
California		11.9%	21.8%	0.0%	0.0%
Colorado		15.3%	24.5%	0.0%	0.0%
Connecticut	Yes	6.7%	14.0%	10.2%	21.5%
Delaware	Yes	9.7%	14.3%	0.0%	0.0%
District of Columbia	Yes	6.0%	13.6%	NA	NA
Florida		10.2%	19.9%	0.0%	0.1%
Georgia		10.0%	17.6%	0.0%	0.0%
Hawaii	Yes	20.2%	26.8%	0.1%	0.1%
Idaho		11.4%	20.4%	0.1%	0.2%
Illinois	Yes	9.4%	16.9%	5.8%	10.4%
Indiana	Yes	1.6%	11.3%	6.7%	46.9%
Iowa	Yes	3.1%	5.4%	9.9%	17.3%
Kansas		10.8%	17.0%	2.9%	4.7%
Kentucky	Yes	9.1%	17.0%	4.9%	9.2%
Louisiana		9.0%	14.2%	0.5%	0.9%
Maine	Yes	5.5%	12.5%	9.4%	21.5%
Maryland	Yes	7.6%	15.2%	9.0%	18.0%
Massachusetts	Yes	7.7%	16.3%	8.8%	18.5%
Michigan		8.2%	22.7%	0.0%	0.0%
Minnesota	Yes	8.8%	21.6%	6.7%	16.5%
Mississippi		11.9%	21.4%	0.0%	0.0%
Missouri		14.6%	20.8%	0.2%	0.3%
Montana		3.7%	5.6%	0.1%	0.1%
Nebraska	Yes	11.9%	19.9%	0.1%	0.1%
Nevada		11.9%	28.1%	0.0%	0.0%
New Hampshire		11.4%	18.3%	0.0%	0.0%
New Jersey	Yes	9.5%	17.3%	20.0%	36.2%
New Mexico		15.8%	24.0%	0.0%	0.0%
New York	Yes	8.9%	18.9%	7.8%	16.7%
North Carolina	Yes	7.3%	13.3%	6.1%	11.1%
North Dakota		0.0%	0.0%	0.0%	0.0%
Ohio	Yes	14.0%	22.5%	2.5%	4.0%
Oklahoma		6.7%	10.0%	4.1%	6.2%
Oregon	Yes	6.1%	11.7%	6.3%	12.3%
Pennsylvania	Yes	9.7%	18.3%	23.5%	44.6%
Rhode Island	Yes	12.1%	18.0%	10.1%	15.0%
South Carolina		10.7%	17.4%	0.0%	0.0%
South Dakota		10.5%	13.8%	0.0%	0.0%
Tennessee	Yes	6.6%	14.4%	8.5%	18.5%
Texas		12.0%	21.4%	0.0%	0.0%
Utah		2.9%	15.9%	0.1%	0.3%
Vermont	Yes	11.9%	25.2%	12.3%	25.9%
Virginia		8.7%	19.4%	0.2%	0.4%
Washington	Yes	5.9%	10.6%	7.4%	13.2%
West Virginia		0.0%	0.0%	0.0%	0.0%
Wisconsin		9.5%	19.1%	2.0%	4.1%
Wyoming		16.2%	29.2%	0.0%	0.1%
Other areas [2]	Yes	23.5%	33.9%	NA	NA

Sources: US Census; IRS Statistics of Income, Oct 2011; McGuireWoods LLP, State Death Tax Chart Revised January 3, 2012
Notes: Effective state rates are as of 2009 and include gift tax revenues in the calculations.

Even states that do not levy their own death taxes enjoy revenue from estate taxation because of the use of a “pickup” tax policy by many states. This is a legal mechanism that allows a state to receive a portion of federal estate tax revenue by making use the IRS’s state death tax credit

rules. A state that uses this mechanism can collect an amount (determined by federal law) equal to the maximum credit allowed the taxpayer against the federal estate tax. If the death tax levy imposed by a state with pick-up authority is smaller than the maximum death tax credit allowed under federal law, the state can claim the difference. Since the pick-up tax does not affect the total that a taxpayer's estate must pay the state and the federal tax authorities, a state can say with a straight face that it does not levy a death tax, yet still receive revenue through the "pick-up" mechanism.

Many states exploit the "pick-up" mechanism alone, without an explicit state levy. This does not mean, however, that there is no impact of a pick-up state on the effective rate of death taxes paid by an estate. Since the federal credit for state taxes is limited by the size of the estate, if an estate has assets in multiple states, the credit may be exhausted, effectively elevating the death tax rate.

Under the Bush tax rate reforms of 2001 (EGATTRA),⁵ the federal estate tax was to be phased out over a nine-year period by reductions in rates and elevation of the exemption amount. The intention was to phase out the federal estate tax completely by 2010, which would also mean phase out of the pick-up credit mechanism. However, as of this writing, the federal estate tax continues in its original form and the timing and nature of full reform is unclear. Pick-up states that ratified the federal phase out in their own legislation without passing their own death tax levies have essentially (temporarily, at least) exposed themselves to revenue losses as the federal credit phase-out proceeds.

2.1. Oregon' Death Tax Policy

Oregon levied its own state inheritance tax prior to 1987. In that year, however, it eliminated its own levy and became a "pick-up" state—relying on revenues from the federal credit procedures discussed above. A feature of the Oregon pick-up mechanism is that it was later tied to the

⁵ The Economic Growth And Tax Relief Reconciliation Act (EGATTRA), PL 107-16.

federal state death tax credit as it was defined in 1997. Hence, even as EGATRRRA reduced federal estate tax liability, an Oregon estate's tax liability might not necessarily decline, as it is tied to the 1997 credit computation. At the extreme, an estate could still owe the equivalent of the 1997 pick-up amount even if the estate were free of federal tax obligations.

On June 28, 2011, Oregon's governor signed HB 2541 that replaced Oregon's pick-up method with up tax with a stand-alone estate tax effective January 1, 2012. The new tax has a \$1 million threshold with rates increasing from ten percent to sixteen percent between \$1 million and \$9.5 million. Measurement of the value of an estate for Oregon estate tax purposes is based mainly upon the federal taxable estate valuation principles. In effect, Oregon taxpayers with even modest estates will be paying a death tax of 10 to 16 percent. This change in policy represents a true increase in Oregon death tax liability. The revenues obtained by Oregon are no longer just a transfer to Oregon of an amount the taxpayer would otherwise have paid the IRS. In the context of a federal policy of phasing out the death tax, the new Oregon law represents a restoration of death tax exposure for Oregonians.

According to the Oregonian's PolitiFact Project, as a result of the re-institution of Oregon's own death tax rate, Oregon residents now face a death tax rate as high as 45.4 percent (including the federal death tax rate).⁶ New Jersey has the highest rate in the US at 54.1 percent. Among the 22 states with a specific death tax rate, Ohio has the lowest combined state and federal rate of 39.6 percent. However beginning in 2013, Ohio will join the majority of states without its own death tax.

Since we are interested in the macroeconomic effects of death taxation on state economies, the complexity of death taxation policy poses an analytical challenge. Specifically, it is difficult to

⁶ Har, J. (2011). Politifact Oregon: Does Oregon have the sixth highest combined "death tax" in the country? *Oregonian*. December 3. See also Legislative Revenue Office, 2011 Oregon Public Finance: Basic Facts, Research Report #1-11 for a summary and history of Oregon's death taxes.

use the statutory provisions of death tax policy to construct useful, comparative measures of the overall burden of death taxes by state, by year. Some states have separate death tax levies, some use the pick-up method (and some do not), exemption thresholds vary across states and over time, and federal death tax policy interacts with both pick-up and state death tax policies.

In our research, therefore, we have chosen to use a measure of the *effective* rate of tax paid by Oregonians and those in other states, rather than emulated statutory features. Specifically, we construct the ratio of the total, annual collections of death and gift taxes for each state to the total personal income of the state. This ratio allows us to compare each state to other states, and over time, on a consistent basis. Although the authors generally prefer to use statutory rates as indicators of tax policy rather than effective rates, the disadvantages of the latter are small in an estate tax setting,⁷ and the other method is not available to us here for the reasons given above.

The US Census maintains data on the amount of death and gift tax revenues received, by state by year. This allows construction of an effective rate of death taxation (relative to personal income) that is useful in the study of the effect of such taxes over long periods of time, across states.

Table 4 presents the effective rate in 2010 for the states with the highest levels of state death tax collections as a share of state personal income. Over the past five years, Oregon has collected an average of \$92.7 million in death and gift revenues. The table shows that, measured as a share of state personal income, in 2010 Oregon ranked fifth in death and gift tax collections at an

⁷ The theoretical disadvantage of using effective rates, rather than statutory rates, is that the effective rate, by definition, incorporates adjustments to the statutory rate that the taxpayer makes to reduce the impact of the tax. Effective rates thus are typically lower than statutory rates, inserting some bias into the statistically measured impacts. In the measure proposed here, however, the inclusion of gift tax revenues captures the extent to which the taxpayer is seeking to avoid estate taxation by early gifting of an estate's value.

effective rate of 0.07 percent of personal income.⁸ States with the highest effective rates of death tax collections tend to be clustered along the East Coast, with Oregon and Minnesota being the only states outside of the Eastern Seaboard to be in the top ten by this measure.

**Table 4: Death and Gift Tax Revenues as a Share of Personal Income,
10 States with Highest Rates of Collection, 2010**

State and Ranking	Death and Gift Tax Revenues as a Share of Personal Income
1. Pennsylvania	0.141%
2. New Jersey	0.129%
3. New York	0.092%
4. Connecticut	0.086%
5. Oregon	0.070%
6. Rhode Island	0.068%
7. Massachusetts	0.066%
8. Minnesota	0.065%
9. Maine	0.064%
10. Maryland	0.061%

Figure 1 shows that the effective death and gift tax the share has grown over time in Oregon while the share has shrunk for the rest of the states in the US. Figure 2 shows that the share of death and gift tax revenues relative to total tax collections has varied over time, and across states.

⁸ State collections data is from the US Census Bureau's Annual Survey of State Government Tax Collections. State personal income is from the US Bureau of Economic Analysis.

This variation bodes well for being able to find an association between the level of the effective rate and the macroeconomic and migration performance of a state.

Figure 1: Death and gift tax as share of personal income, 1990-2010

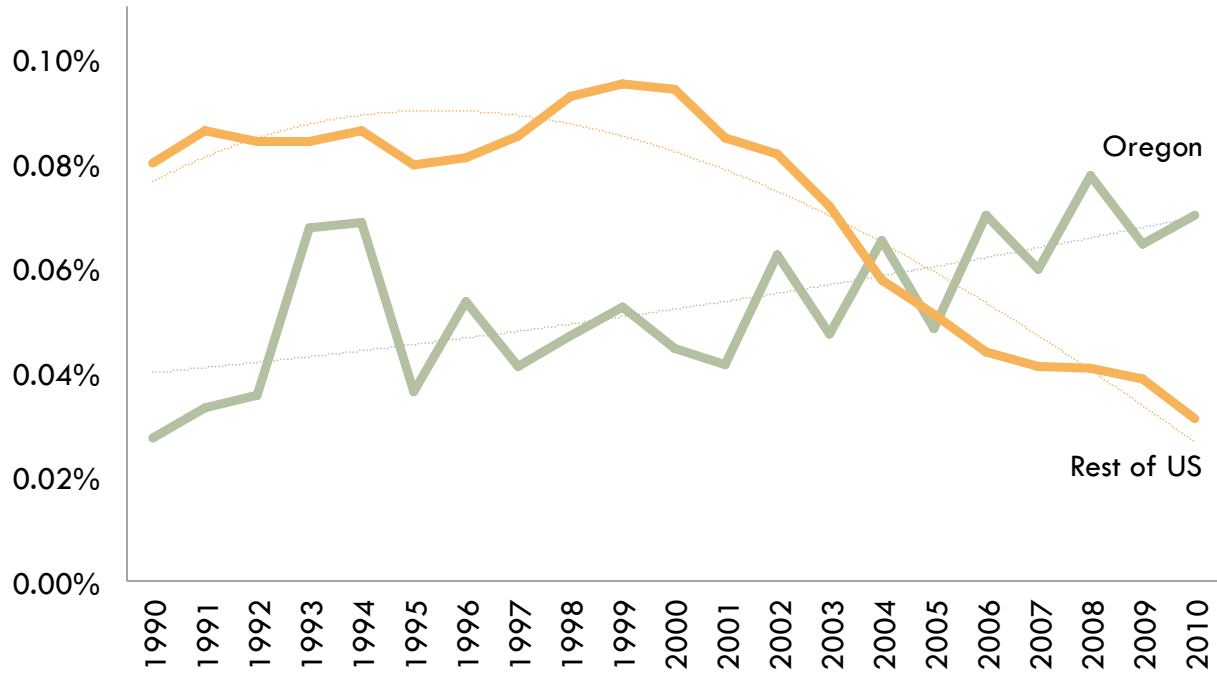
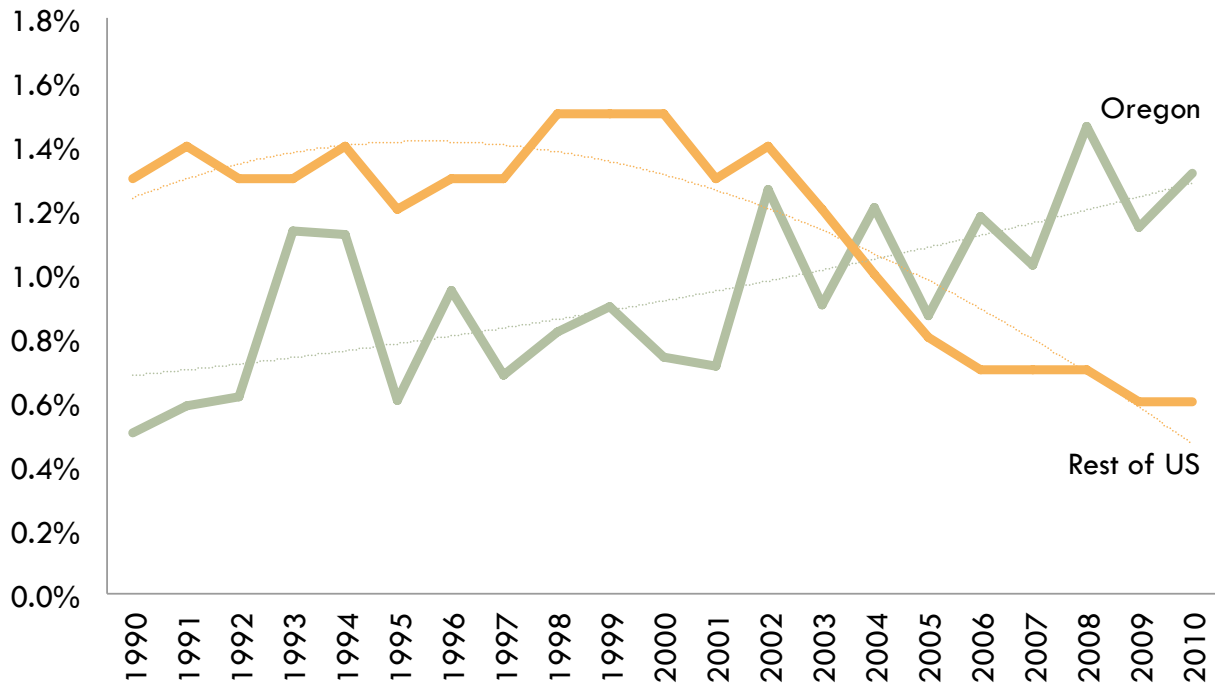


Figure 2: Death and gift tax as share of total state tax collections, 1990-2010



3 General Research Approach

There have been a small number of studies of the effect of state death tax policy on the economic performance of the state economy. Most other studies are small case studies of the effect of a change in death tax policy and the subsequent performance of the economy, or use relatively simple comparisons of growth differences between states that do or do not levy death taxes. For example, research by the State of Connecticut’s Department of Revenue Services (2008) concludes that annual employment growth in states without death taxes was 1.08 percentage points higher than states that impose death taxes. Connecticut’s research also concludes that annual personal income growth for those states without death taxes was 1.02 percentage points higher than states imposing death taxes. The study was a careful study, but did not have the opportunity to control for other tax policy or other factors that might also influence economic growth.

The research in this report takes a more comprehensive approach to measuring the effect of death taxation. It is a comprehensive study that uses data covering 50 states and the District of Columbia and spans a time period of up to 34 years (1976 through 2009).

In this report, the economic impacts of death taxation are measured in two ways:

1. Using a database spanning 34 years for all 50 states, the effects of death and gift taxes on employment and income growth are measured empirically using regression analysis.
2. Using 21 years of Internal Revenue Service (IRS) Statistics on Income (SOI) data, the pattern of migration of tax filers between pairs of all 50 states is associated statistically with differences in the effective rate of death and gift taxation in each state pair.

The first analysis allows us to examine the effect on economic growth of elimination of death taxation in Oregon by statistically associating the effective rate of death and gift taxation with various measures of Oregon's economic performance. Application of the analysis of economic growth and death taxation rates to Oregon reveals that elimination of Oregon's new death tax would be associated with higher growth than if the state continued imposing a death tax. Analysis of the 21 years of migration data reveals that net in-migration would be stronger (or out-migration weaker) if Oregon did not levy a death tax. The next two sections report our methodologies and findings in greater detail.

4 Effects on Employment and Income Growth

The economic impacts of state death taxes is measured empirically using a panel of the 50 states pooled for the years 1976 through 2009. Thus, the data and methodology employed for this study can be applied to any state considering elimination of its death and gift taxes. In this report, our focus is on the effect eliminating Oregon death tax on the state's employment growth and income growth in Oregon.

4.1. Data used

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

- Employment information is from the US Bureau of Labor Statistics. Nonfarm employment information is available from 1939 to the present.
- Personal income information is from the US Bureau of Economic Analysis and is available from 1929 to the present.
- Population and state tax revenue (including death and gift taxes) information is from the US Census Bureau. Annual population information is available from 1900 to the present. State tax revenue information is available every other year from 1942 to 1952 and annually from 1952 through 2010.
- Tax rate information is from the National Bureau of Economic Research and the Tax Foundation and is available from 1976 through 2010.
- Corporate bond information is from Board of Governors of the US Federal Reserve System and is available from 1919 to the present.

4.2. Methodology

The study employs regression analysis, a widely used econometric technique. It measures the relationship between employment growth and income growth for a given state at a given point in time, and the explanatory variables—including measures of death tax burden—in each of the various states. The study examines the relationship between death and gift tax collections on growth in employment, manufacturing employment, total personal income, wage and salary income, and proprietors' income.

The study uses a panel of the 50 states pooled for the years 1976 through 2009. Cornell and Trumbull (1994) and Levitt (2001) describe the benefits and other considerations related to panel data. In particular, a panel allows for variation across states and for variation over time within each state. As a result, it is possible to measure coefficients that more accurately demonstrate causation.

Ordinary least squares (OLS) regressions employed. The dependent variable is the year-over-year percent change in employment or income for each state. The specification regresses the dependent variable against a right-to-work indicator (i.e., dummy variable), population, the sum of employment in other states, and the sum of personal income in other states.⁹ Corporate bond rates are included as a variable to control for variations in the national business environment that are unlikely to be associated with state-level policies. The models produce the expected signs on the coefficients, with significant negative impacts associated with state death taxes. The model fits the data well with R-squared measures in excess of 0.60.

4.3. Results

This report forecasts future employment and income growth if Oregon eliminated its death taxes in 2013. The empirical results indicate that the state would see a permanent boost in employment and income growth. Eliminating Oregon's death tax would be associated with a 0.5 percentage point addition to state employment growth and a 0.3 percentage point addition to annual state personal income growth. The employment growth rate within the range provided by the Research Institute for Small and Emerging Businesses (1998) for the impacts of the federal estate tax and by the State of Connecticut (2008) for the impacts of state death taxes. While increase in growth rates may seem small, Barro (1996) points out that "increases in growth rates by a few tenths of a percentage point matter a lot in the long run and are surely worth the trouble."

⁹ Variables such as population, employment, and personal income are measured as year-over-year percent changes.

Using the state’s Office of Economic Analysis forecasts, Table 5 shows that after five years, in 2017, Oregon’s employment would be 44,500 higher without a state death tax burden. Table 6 shows the state’s personal income would be 1.2 percent higher (approximately \$2.4 billion higher). The increased employment and increased incomes would provide a much needed boost to the Oregon economy, reduce burdens on state and local “safety net” budgets, and enlarge state and local tax revenues.

Table 5: Employment Impacts of Eliminating Oregon’s Death Tax in 2013

Year	State Forecast	Forecast Without Death Tax	Effect of Eliminating Death Tax
2013	1,685,500	1,693,500	8,000
2014	1,729,500	1,746,000	16,500
2015	1,770,000	1,795,500	25,500
2016	1,806,500	1,841,500	35,000
2017	1,839,000	1,883,500	44,500

Table 6: Personal Income Impacts of Eliminating Oregon’s Death Tax in 2013

Year	State Forecast (\$ bil.)	Forecast Without Death Tax (\$ bil.)	Effect of Eliminating Death Tax (\$ bil.)
2013	\$159.0	\$159.3	\$0.3
2014	168.0	168.8	0.8
2015	177.8	179.1	1.3
2016	187.5	189.3	1.8
2017	197.0	199.4	2.4

Income tax collections are highly dependent on personal income. Over the long run, in Oregon, every \$100 of additional personal income is associated with approximately \$4 of additional state personal income taxes collected. Applying this relationship to the personal income projections provided in Table 6 finds that by 2017, personal income collections would be approximately \$94.1 million higher with the elimination of Oregon’s death tax, and amount that exceeds the average death taxes revenues collected by the state over the past five years.

4.4. Impacts of Three Year Phase Out of Oregon Death Tax

An alternative to an immediate elimination of the death tax in 2013 would be a three year phase out of the death tax, beginning in 2013, with a 25 percentage point reduction in the rate each year. Using the state’s Office of Economic Analysis forecasts, Table 7 shows that after five years, in 2017, Oregon’s employment would be 31,000 higher without a state death tax burden. Table 8 shows the state’s personal income would be 0.8 percent higher (approximately \$1.7 billion higher).

Table 7: Employment Impacts of Three-Year Phase Out of Oregon’s Death Tax Beginning in 2013

Year	State Forecast	Forecast Without Death Tax	Effect of Eliminating Death Tax
2013	1,685,500	1,687,500	2,000
2014	1,729,500	1,735,500	6,000
2015	1,770,000	1,783,000	13,000
2016	1,806,500	1,828,500	22,000
2017	1,839,000	1,870,000	31,000

Table 8: Personal Income and State Tax Impacts of Three-Year Phase Out of Oregon’s Death Tax Beginning in 2013

Year	State Forecast (\$ bil.)	Forecast Without Death Tax (\$ bil.)	Effect of Eliminating Death Tax (\$ bil.)	State Income Tax Impacts
2013	\$159.0	\$159.1	\$0.1	\$3.8 million
2014	168.0	168.3	0.3	12.0 million
2015	177.8	178.4	0.6	25.3 million
2016	187.5	188.7	1.1	44.6 million
2017	197.0	198.7	1.7	65.7 million

The estimated impact on State income tax receipts in Table 8 indicates that the current revenue from the existing death taxation will not be exceeded until after 2017. Estimated revenues in 2018 and 2019 are \$88.8 million and \$114.0 million, respectively.

5 Effects on the Migration of Taxpayers and Their Incomes

For tax policy to have a differential effect on a state’s economic growth, the policy has to affect either indigenous growth rates in the state, or the spatial reallocation of activity among the various states. In this section, we focus on the effect of the differential death and gift tax collection rates on interstate migration patterns. Since labor and capital are mobile, theory would suggest that policies that disadvantage income and employment growth in one state relative to one or more other states would be resolved at least partly by migration of labor and capital between states.

There will always be idiosyncratic factors that make migration from state A to state B attractive to some, and from state B to state A attractive for others. Migration occurs not only as the result of seeking more attractive labor market conditions, but also because of family relationship

considerations, climate considerations, and/or the special attractiveness of some other labor or non-labor difference in the policy environments of the two states.

There are also factors that impede mobility, making most factors of production reluctant or slow to relocate. Family and school ties, the relative illiquidity of markets for housing and other capital, the distance between states and the cost and uncertainties associated with relocating makes spatial adjustment to policy differences slow.

The available data only permit observation of household movement, and not migration of physical or financial capital. However, the tendency of households to relocate in search of employment is the genesis of historical migrations big and small. Thus, migration is a natural indicator of the differential virtues of the origin and destination communities. Specifically, we expect the gross migration flows between the various state pairs to be greater the larger are the differences between the origin and destination states. States can differ in many dimensions that we expect will influence migration behavior, with differences in tax policy being one important dimension.

Although the flow of migrants between two states is generally small relative to the non-migrant population, there are features of migration data that offer advantages when studying tax policies. The nature of migration data is such that one enjoys the statistical advantages of relatively large datasets. This is because interstate migration is a bidirectional phenomenon, measurable on a state-pair basis. Thus, there is a gross flow measure for both in- and out-migration for each state in a state pair. This generates a number of unique migration volume observations equal approximately to the square of the number of states for a single year.¹⁰

¹⁰ Although data is available for both in- and out-migration for every state pair, gross in-migration to A from B is the same as gross out-migration from B to A. Thus, having both gross in-flow and out-flow data does not provide twice the observations. There are 2,601 unique data pairs for the 50 states plus the

The sample size is further enlarged by a time series dimension. If one also obtains migration data over a period of time, the resulting pooled- and panel-datasets can be quite large. In our case, the authors built a database that uses bidirectional gross migration flows for all 50 states plus the District of Columbia¹¹ over a period of 21 years. This results in approximately 26,000 observations to support regression analysis.¹²

Large databases offer many statistical advantages, especially in settings where, *ex ante*, one expects the behavior of interest to be confounded by many, idiosyncratic factors. Simply put, having a large number of observations allows better filtering of information from “noise” generated by random factors. Migration is just such a phenomenon, since there are so many personal and business factors that influence individual migration decisions.

Second, isolation of a causal relationship between tax policy and economic performance is better achieved if one has a large, cross-sectional sample. With 50 state pairs, and data on flows both from state A to state B as well as from state B to state A, one is able to provide approximately 2,500 cross-sectional comparisons for each year of available data. One does not have to rely on a change in the policy variable of interest to observe its influence. One can study the effect of persistent differences between two states’ policies on migration patterns among the many pairs of states in the sample. Having both cross-sectional and time series cases gives one the opportunity to not only capture the effect of changes in policy, but also the dynamic effect of persistency differences in policies.

District of Columbia. In addition, the same-state data pairs (51 of them) are not usable because they do not measure interstate migration, by definition.

¹¹ There is no death taxation revenue data available for the District of Columbia, so it is not included in the death tax analysis.

¹² There is some missing data in the IRS files. For example, AGI information was not collected early in the data program. In some cases, therefore, the full, national sample is not available to support the regression analysis.

Finally, by having a panel of state-pair data over many years allows one to incorporate special procedures that allow individual state idiosyncrasies to be accommodated, better isolating the policy impact one is studying.¹³

5.1. Data

For state level tax, employment, income and other explanatory variables, the sources used in the migration analysis are as described earlier in the employment activity analysis. Migration data is uniquely available from the Internal Revenue Service's Statistics of Income analysis.

Specifically, the IRS has published each year since 1989 the number of tax returns that have "migrated" between pairs of states between filing years. For most of those years, it also has published the adjusted gross income (AGI) and number of exemptions associated with those returns. The AGI data allows one to get a sense of the incomes associated with migration, and the exemptions calculations give a very rough proxy for family size.

5.2. Methodology

Migration models have a number of unique features. First, because they are trying to predict flows of activity between two regions (states) at a time, they have to employ variables that respect the fact that flows between two regions are likely to be larger, everything else being equal, the larger the involved regions are. In addition, the distance between two regions is likely a deterrent to migration, not only because relocation and travel is costly, but also because the familiarity with the other region is likely greater if the region is nearby than if it is farther away.

To address both of these basic concerns, economists have drawn on basic concepts of physics and employ a so-called "gravity" formulation of distance and regional scale factors. Specifically,

¹³ These are called "fixed effect" regressions. In fact, regressions run on panel datasets allow one to assume "fixed" or "random" variations among individual state panels. In all of the results reported here, the simple fixed effect variation is employed. The results are not sensitive to this choice.

the gravity model, in its simplest form from physics indicates that the flow between two regions will be approximately proportional to the product of the two regions' overall size, and inverse to the square of the distance. We adopt this basic formulation in our statistical models of gross migration flows, but do not impose the rigid functional form that follows from simple physics. We allow instead the coefficients on the origin and destination sizes and the distance between them to be solved econometrically. We use employment levels in the respective states as the measure of regional scale, and the distance in kilometers between the population centroids of each state as the separation indicator.

Second, we must respect the fact that death and gift tax policies in each of a pair of states is unlikely to be the only policy factor motivating migration. Other key policy features include tax rates, such as the rates of income, sales, and estate taxes. In our analyses, we employ the highest marginal rate as the tax rate indicator, in keeping with the notion that market equilibria tend to be determined by marginal, rather than average rates. However, in the case of death and gift taxes, multi-state, multiyear data is available only on the dollar value of death and gift taxes collected, not the marginal rates. In this one case, therefore, we construct an average rate as a ratio of taxes paid relative to total personal income in each of the states.

Thirdly, migration may be affected by other characteristics of the states and their populations and thus we included measures of educational attainment and manufacturing employment share in some specifications of the model. In general, inclusion of these measures does not appreciably improve the models' ability to fit or predict the observed gross migration flows.

Two other special features of the models are incorporated to respect the nature of the behavior being examined. Specifically, since we expect that it is differences between two states' policies and characteristics that predispose migration between them, all of the policy and state characteristic variables are expressed as differences between the two states. (The gravity model specification, of course, is not treated this way.) All tax rate variables are treated as decimal percentages, and all level variables are represented in their natural logarithm form.

Since we know that in-migration gross flows and out-migration gross-flows are generally different between any two states, the model is implemented in such a way that the net in-migration impact is measured. In addition, since our data can be structured as a panel dataset, either fixed or randomly varying effects can be accommodated. This is an important aspect of migration analysis, since there are likely numerous small factors that influence individual migration streams. The methods described above help offset the incompleteness of the model specification.

5.3. Results

As with the economic growth analysis reported earlier, specifications of varying complexity were examined within the overall framework described above. In addition, because of the special importance this study has for the State of Oregon, separate models were run using only Oregon data. Specifically, only data for which Oregon was either the origin or destination of migration were employed. The findings regarding are presented in Table 9 for both the national and Oregon-focused datasets.

Table 9: Summary Migration Impacts Associated with State-Level Death and Gift Taxes

Data Used to Estimate Migration Effect	Resulting Increase in Relative In-Migration*
<i>Migration measure: Tax Returns</i>	
All state-pairs	4.1%
Oregon state-pairs only	3.6%
<i>Migration measure: Adjusted Gross Income</i>	
All state-pairs	4.1%
Oregon state-pairs only	2.4%
<i>Migration measure: Exemptions</i>	
All state-pairs	4.3%
Oregon state-pairs only	3.8%

*Between Oregon and Other States. This can take the form of reduced out-migration from Oregon to these states, or increased in-migration from these states.

Note 1: All measurements are different from zero at 99.9% level of confidence or higher.

Note 2: Data is from year-to-year IRS tax filing activity from the years 1989-2009.

The results indicate that eliminating a death and gift tax rate that is similar to that levied by Oregon in 2009 (and generated \$90 million in revenue), would significantly increase net Oregon in-migration (assuming other states's policies did not change). Specifically, Table 9 indicates that there would be a net increase of:

- 3.6 percent to 4.1 percent in tax Returns filed by in-migrants
- 2.4 percent to 4.1 percent in the Adjusted Gross Income of in-migrants
- 3.8 percent to 4.3 percent in the number of Exemptions associated with in-migrant returns

To project the future gains in net in-migration that might arise from elimination of Oregon's death taxes, future base case migration uses the historical trend in the in-migration rate adjusted by the factors presented in Table 9.¹⁴

Table 10 displays the forecast impact of complete elimination of death taxes in 2013, and Table 11 displays the phased-elimination case. The three-year phase-out still yields a cumulative annual volume of additional returns filed (by in-migrants) in 2017 that is over two-thirds that of a complete phase out in 2013.

The top panel of each table displays the incremental impact of net in-migration, and the bottom panel displays the cumulative effect as increased net in-migration accumulates. The cumulative growth in returns filed and the potential for taxation of the income associated with those returns underscores the fact economic growth helps enlarge the tax base. This is particularly relevant to the case for caring about migration effects, since migrants tend to have higher incomes than the average Oregon taxpayer who does not migrate. According to the IRS migration statistics for the four most recent years, in fact, net in-migrating tax returns represented only 0.8 percent of the returns filed by non-migrants, but their total incomes (measured by AGI) were almost 3.4 percent of the total value of returns filed by non-migrants—nearly a factor of four difference.

Oregon generally has enjoyed positive net in-migration in recent years and even into the most recent recession. This fact encourages some casual observers to assume that there is no negative impact of tax policy. Factors such as the state's lack of a sales tax, its weather and natural attractions likely spare Oregon from the full effect of its tax policies. But it is clear that death taxation retards retention and/or attraction of taxpaying migrants.

¹⁴ The additional net in-migration is measured by the applying the percentages changes in net in-migration derived from Table 9. Specifically, the historical trend is derived from a logarithmic regression against time of the various net in-migration measures over the 2001-2009 tax-year period. For the starting year (2012) it is assumed that the rate of net in-migration recovers to its average level in the pre-recession

Table 10: Net In-Migration Impacts of Elimination of the Oregon Death Taxes in 2013

Year	Impact on Filed Returns	Impact on Filed Adjusted Gross Income	Impact on Filed Exemptions
<i>Incremental In-Migration Gains</i>			
2013	504	\$27.7 million	862
2014	548	\$30.2 million	938
2015	597	\$32.9 million	1021
2016	650	\$35.8 million	1112
2017	708	\$39.0 million	1210
<i>Cumulative In-Migration Gains</i>			
2013	504	\$27.7 million	862
2014	1052	\$57.9 million	1800
2015	1649	\$90.8 million	2821
2016	2299	\$126.6 million	3933
2017	3007	\$165.6 million	5143

Table 11: Net in-Migration Impacts of Phased Elimination of Oregon Death Taxes

Year	Impact on Filed Returns	Impact on Filed Adjusted Gross Income	Impact on Filed Exemptions
<i>Incremental In-Migration Gains</i>			
2013	126	\$6.9 million	215
2014	274	\$15.1 million	469
2015	448	\$24.7 million	766
2016	650	\$35.8 million	1112
2017	708	\$39.0 million	1210
<i>Cumulative In-Migration Gains</i>			
2013	126	\$6.9 million	215
2014	400	\$22 million	684
2015	848	\$47 million	1450
2016	1498	\$82 million	2562
2017	2206	\$121 million	3773

6 Conclusion

Under either plan for eliminating Oregon’s death taxes, the Oregon economy is strengthened. Analysis of both historical economic data and migration data confirms a potent, and statistically-significant adverse effect of inheritance and estate taxation on economic growth and the net in-migration of taxpayers. The elimination of this tax provides incentives for existing Oregonians to save and invest more in the economy, thereby creating more jobs, income and revenues to support public services. Removal of the tax also encourages new Oregonians to in-migrate, and will reduce out-migration. This, too, has important economic and fiscal implications because migrants tend to have higher incomes than non-migrants by a large margin.