# IRET Congressional Advisory

#### INSTITUTE FOR RESEARCH ON THE ECONOMICS OF TAXATION

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### HOW BUSINESS PROPERTY TAX RELIEF CAN BOOST A STATE ECONOMY WITH LITTLE COST IN GOVERNMENT REVENUE: A CASE STUDY FOR IDAHO

#### Executive Summary

This paper examines how repeal of the Idaho personal property tax on business equipment would affect the incomes and employment of state residents and state tax revenues.

Repeal of the tax by localities and reimbursement by the state would cost an estimated \$108 million, on the assumption that the tax cut would have no effect on the state economy (a "static" estimate). However, the net effect on state revenues (based on 2005 revenue levels) could be as low as \$55 million, after allowing for the positive dynamic effects of repeal on economic activity in the state.

Roughly 49 percent of the static cost, or about \$53 million, could be offset by the added growth of private sector income and spending, and the resulting increases in personal and corporate income taxes, sales taxes, and excise taxes. The static cost would be only about 4% of state revenues, and the net, dynamic cost would be only about 2% of state revenues. State revenues grew over 11% between FY 2004 and FY 2005. After inflation, the cost of the tax relief would be only half of one year's revenue growth.

The full increase in investment and employment, and the full revenue reflow, would take about 5 years to develop. It would be possible to phase out the tax over the same period to match the growth of the reflow and minimize the impact on the state budget.

The state economy and its residents would benefit from elimination of the business personal property tax. State private sector product (income) would increase by about 1.5%, or \$569 million. About two-thirds would be in the form of private sector wages and salaries, or \$379 million. That translates into about 2,800 full-time equivalent workers, about a .5% rise, plus an increase in the hourly wage of about 1%, for a total rise in labor income of about 1.5%.

The income gains to the population would far exceed the cost of the tax relief to the state. The income of people in Idaho would rise by \$569 million. The state would take back about 9.3%, or

\$53 million. The federal tax share would be about 31%, or \$176 million (payroll and income taxes). The after-tax income of the population would rise by \$339 million. Put another way, every dollar the state gives up in order to cut this tax would boost the after-tax income of Idaho residents by more than \$6, a very good trade.

Removal of the business personal property tax would improve Idaho's ranking from 32nd to 30th place in the Tax Foundation state business tax climate index.

These numbers assume that the state does not raise other taxes on capital income, or the marginal state personal or corporate income tax rates, to offset the revenue loss. Either a surplus must be cut, or state spending growth restrained (very slightly), or some non-income, non-input tax must be raised, to avoid offsetting the incentive effect to add to the capital stock and employment in Idaho.

### HOW BUSINESS PROPERTY TAX RELIEF CAN BOOST A STATE ECONOMY WITH LITTLE COST IN GOVERNMENT REVENUE: A CASE STUDY FOR IDAHO

#### Why property taxes matter so much

Property taxes are a neglected area of tax study, and are often overlooked in formulating proposals for tax reform. This is a mistake, because property taxes can have a major impact on economic growth and on the competitive position of a state or locality in attracting new development.

Property taxes take several forms. There are property taxes on real estate, including land and buildings. These include owner-occupied homes, rental residential properties, commercial properties, and business plant and structures. There are personal property taxes on cars, boats, and planes owned by individuals. Then there are business personal property taxes on vehicles, furniture, inventory, and equipment of all types from computers to forklifts to assembly lines.

Property taxes may appear at first glance to be minor taxes, in part because their rates are very low, often falling between 0.5% and 1.5%. These low rates are deceiving, however. If one were to compute an income tax equivalent rate for property taxes, they would be seen to be large and important.

Property taxes apply to the value of the asset in the tax base, not just to the income from the asset. An asset's value is much larger than its annual income. In fact, the asset's market value is the present (discounted) value of all its expected future earnings.

Consider a machine or stock of inventory that is expected to yield a 10% return to a business. If the asset is valued at \$100, it will earn \$10 a year. If there is a 1% property tax on the asset, that tax will be \$1 a year, which is equal to a tax of 10% on the income from the asset.

The effective property tax rate is somewhat lower than that, because it is a deductible expense under the income tax. For example, assume a business pays a 35% federal corporate tax rate and a 5% state corporate tax rate. The combined federal/state corporate rate is then 38.25% (allowing for the deductibility of the state tax against taxable federal income, which reduces the effective state rate to 3.25% for profitable companies).

The property tax is deductible against both state and federal taxable income, which makes a 1% gross property tax rate into a net rate of 0.6175% (= 1 -0.3825). The net property tax is \$0.6175, for a net income tax equivalent of 6.175% on the \$10 annual income from the asset. Hence, the property tax is nearly twice as large as the net state corporate income tax in this example. Even a property tax with a nominal rate of 1% can rival a state income tax in size and damage.

A business property tax is actually worse than an equivalent business income tax. If a business is not profitable in a given year, it owes no income tax. By contrast, a business must pay the property tax each year, whether it has made a profit or not. Furthermore, if a business is not profitable, there is no income tax saved from the deduction of the property tax, and the effective rate of the property tax is the gross rate.

#### The Idaho issue

Idaho, like many other states, allows its local jurisdictions to impose a personal property tax on

business assets, such as equipment. This tax is distinct from the real property tax on land and buildings.

A few years ago, the Idaho tax was lifted for agricultural businesses, and the tax rate on other businesses has been reduced by about 20 percent by the state's assumption of certain school maintenance costs. Business leaders have recommended that the tax on equipment for other businesses be eliminated, and that the state reimburse the local governments for the lost revenue. Similar steps were taken by Kansas and Colorado in recent years.

The Institute for Research on the Economics of Taxation examined the proposal. Our objective was to estimate the degree to which the tax relief would portion of the initial static cost of the repeal, resulting in a lower net figure. Under one set of plausible economic assumptions, described below, we estimate that other tax revenues would increase by as much as \$53 million (annual rate), leaving a net cost of \$55 million (annual rate).

## How taxes affect output, investment, employment, and wages

The output of a state or nation varies directly with the quantities of capital and labor employed. Capital includes physical capital, such as buildings, machinery, land, and natural resources. It also includes human capital, in the form of education, and technological and managerial skill, which affect the quality and productivity of labor.

benefit the state's economy, and how much the increased economic activity would raise state revenues from other taxes to offset the initial cost of eliminating the personal property tax.

### Gross versus net cost

The estimated revenue from the remaining business personal property tax, and the gross





Capital and labor are complements. The more capital there is in place. the more productive the labor force is. which raises the demand for labor and the gross wage. The higher the labor force, and the more skill it possesses, the higher are the return to capital and quantity the of capital employed in the region.

Taxes imposed on labor force up the gross cost of labor (the pre-tax wage) and drive down the net (post-tax) wage, discouraging employment. (Chart 1.) Similarly, taxes on capital increase the cost of employing capital (the service price), and reduce the quantities offered and employed. (Chart 2.) The shaded areas in the diagrams represent the "tax wedges" driven between the gross and net prices paid by the employers and received by the suppliers of the labor and capital services. As Chart 1 indicates, the national supply of labor is not very elastic. That is, the quantity of labor offered changes only modestly as the after-tax wage rises or falls, producing the steep supply curve pictured here. Consequently, much of any tax imposed on labor is borne by the workers. The shaded tax wedge primarily reduces the after-tax wage, with only a modest increase in the gross wage cost to the employer.

There are several reasons for a low elasticity of labor supply. Most households or families must provide a primary worker to the labor force to have a satisfactory income, and are already committing a worker to the labor force. It requires a noticeable increase in wages to attract new entrants. There are barriers to attracting labor from abroad. Nonetheless, country than to enter it from abroad. Additional workers may be attracted from out of state. For a region, there is less of a time constraint on obtaining skilled workers, because people who already have the needed skills may be hired away from businesses in other states.

The supply of capital is more elastic, and more sensitive to taxes, than is the quantity of labor. The highly elastic supply of capital is represented by the nearly flat supply curve in Chart 2. The demand curve for capital slopes downward. Employers of capital are willing to pay an amount equal to what additional units of capital add to output (its marginal product). The first units of capital employed increase output substantially; their return is high due to their scarcity. As the capital stock increases, added units

workers have some choices — to take or reject overtime, to contribute а second family earner to the labor force, how long to vacation, and when to retire. Secondary workers in a family, such as spouses or teenagers, are in more elastic supply primary than earners.

The long run elasticity of labor supply is greater than the short-run

elasticity. For the nation as a whole, an increase in the demand for labor with certain skills (e.g. doctors, nurses, engineers) may require waiting while additional workers are trained, especially if there are quotas on immigrants with the required skills. Over time, however, the supply of skilled workers will respond to higher wages and salaries.

In the case of a state or a region, the supply of labor is much more elastic than for the nation as a whole. It is easier for labor to move about within the



add less to output, and the return is lower.

When a tax is imposed on capital, quantity the of capital employed falls until the rate of return on the remaining quantity rises to cover the leaving the tax. after-tax return about where it was before the tax. Savers and investors do not willingly engage in capital formation when

returns are below normal, and disinvest, letting the stock of capital fall. On the other hand, they are quick to add to investment when returns are unusually high. People can consume instead of save, or invest abroad instead of in the United States, if the rate of return on saving and investment is driven down by rising taxes. Moving across national borders is more of an option for capital than for labor, and firms may relocate production facilities abroad if national tax rates are too high. Similarly, savers and investors may redirect their activity from abroad to the United States if U.S. taxes fall, and firms may move their operations from one state to another if tax differentials make the move attractive.

Because of the shapes of the supply and demand curves for capital, a tax on capital is largely passed on to users of capital and those who work with it. Capital is easily reproduced (elastic supply) and it takes a moderately large change in the quantity to make a large change in its rate of return. As a result, even a small tax wedge can cause a large change in the quantity of capital employed.

#### How taxes on capital harm labor

The more there is of any one type of factor, the higher will be the productivity and incomes of the

other factors that work with it and gain from its presence. A tax reduces the that quantity of capital lowers the productivity of labor. which reduces the demand for labor. which reduces employment and wages. (Chart 3.) Labor thus bears much of the burden of a tax on capital. Conversely a reduction in a tax on capital benefits labor by increasing

capital formation. Productivity and wages would be higher (Chart 3 in reverse), leaving workers with higher gross wages and more after-tax income.

Consider a small trucking company with five vehicles. Suppose that a local property tax is imposed on trucks, or that the federal or state rules for depreciating trucks for tax purposes change such that the trucks must be written off over five years instead of three. The owner has had enough business to run four trucks flat out, and a fifth truck part time. He is barely breaking even on the fifth truck under old law. It is now time to replace one of the trucks. Under the new tax regime, it does not quite pay to maintain the fifth truck. The owner decides not to replace it, and his income is only slightly affected. But what happens to the wages of the fifth truck driver? If he is laid off, who bears the burden of the tax increase on the capital?

# Estimating the effect of a change in taxes on capital

The key to estimating the economic effect of a change in the tax treatment of capital is to determine what has happened to the tax wedges pictured above, and how much the quantities of capital and labor will change as a result.

> A cut in the tax on capital will boost after-tax initial returns on existing above the assets required normal The capital level. stock will increase until returns are driven back to normal levels. The higher capital stock will boost the pretax and after-tax wage, which will increase the supply of labor, the wage, and the level of employment. The

increased supply of labor will further encourage additional capital formation, and so on until a new equilibrium level of capital, labor, and output is reached.

Tax considerations will act to dampen the expansion. As output expands, incomes of the owners of capital and the workers will rise. Taxpayers will face higher marginal tax rates as their incomes climb due to the progressive nature of the federal and state tax systems. The rising tax rates



increase the service price of capital, offsetting some of the initial reduction from the initial tax cut. The rising marginal tax rates on labor income offset some of the initial increase in the after-tax wage. A new equilibrium is reached in which the net effects of these interactive changes are reconciled.

#### The model

We adapted a Cobb-Douglas model of the national economy to forecast the effect of state tax changes on the private sector of the Idaho economy. Output is determined by inputs of labor and capital. Labor's share of the output is about two-thirds. Capital's share is about one-third. Initial conditions were set to replicate the 2005 state output. Amounts of capital and labor employed in the state's private sector in 2005 were entered, and scale parameters were set to generate the observed private sector state product for that year. Labor supply equations were written to allow us to gauge the effect on employment under various assumptions as to the responsiveness of labor to the changes in after-tax wages.

*The service price of capital drives the model.* The model is driven by changes in the service price of capital. The service price of capital is the annual rate of return that an investment must earn to pay the taxes owed, recover its cost over its lifetime (measured annually as its depreciation in value over time due either to physical or economic obsolescence), and yield a normal after-tax return to its owners.

The size of the capital stock and the level of investment depend on the service price, which depends in part on the tax rates on capital. A tax on capital (either on the income from the asset or on the asset's value, as with a property tax) raises the service price, and renders impractical any investment projects that cannot meet the higher service price. A reduction in a tax on capital, such as elimination of the business personal property tax, lowers the service price, and makes additional investment projects possible. When capital is put to work in the economy, its earnings, or rate of return, equals its marginal product, which is what an added unit of capital adds to output. That return must be sufficient to satisfy investors, or they will reduce the amount of capital they will supply. Therefore, the marginal product must equal the service price. As tax rates rise or fall, the capital stock employed must fall or rise until the marginal product (as calculated in the model) just matches the new service price. As the capital stock changes, the model shows the corresponding changes in the marginal product of capital, and the associated changes in labor productivity, employment, and output.

Marginal tax rates are required to determine the service price of capital and the after-tax wage rate, which are needed to run the model. We employed a service price calculator and federal income tax calculator furnished by Gary Robbins of Fiscal Associates and the Heritage Foundation Center for We constructed an Idaho state Data Analysis. income tax calculator to determine marginal state income tax rates. These calculators allowed us to estimate the tax rates needed to compute the service prices on various types of capital as federal and state tax rates are altered. They also permitted us to estimate the weighted average marginal tax rates on non-corporate business income, interest, dividends, and capital gains, and on labor income, at the initial levels and as the economy responded to the tax changes.

Marginal tax rates on labor income affect the supply of labor, because people work for an after-tax wage. The standard labor response in our national work is an elasticity of 0.3 - a 10 percent rise in the after-tax wage will yield a 3 percent increase in hours worked (Case 1). The labor response should be higher for a state because it is easier for labor to move across state lines than across national borders. Therefore, we also ran results assuming an elasticity of 1.0 for the state — a 10 percent rise in the after-tax wage would yield a 10 percent rise in hours worked (Case 2). We would emphasize the higher estimate for a state or region.

*Initial capital inputs.* To estimate the capital stock in Idaho, we multiplied the elements of the national capital stock by the ratio of Idaho state product to national output. Idaho gross state product was .3645 percent of the U.S. GDP in 2005, according to BEA data. A slight reduction from this initial estimate of the state capital stock was made to bring the marginal product of the capital in the initial model setup into line with the service price derived from the known Idaho and federal tax rates, hours worked, and state product.<sup>1</sup> The stocks estimated by this method are about 53 percent larger than the state-reported assessed property tax base. It is not unusual for assessed values for property taxes to be lower than market values.

*Initial labor inputs.* Data on employment for the state is available from the Bureau of Economic Analysis Regional Economic Accounts. Full-time and part-time employment was 868,400 in Idaho in 2005, of which government and government enterprises employed 125,105. We used private employment (excluding government), and converted the jobs statistic into hours worked using the national average hours per worker data from the Bureau of Labor Statistics special requests series (available on the web at ftp://ftp.bls.gov/pub/special.requests/opt/ lpr/hwhpannueal.txt).

Federal and state marginal income tax rates. Idaho's per capita income was roughly 82 percent of the national average in 2005 (BEA Regional Economic Accounts, Bearfacts 1995-2005, available on the web at http://www.bea.gov/bea/regional/ bearfacts/stateaction/cfm). We did not attempt to adjust for differences in family size. We used a national taxpayer sample taken from the IRS public use file, modified for the ratio of Idaho average income to national average income. Applying the sample through the tax calculators gave federal and state marginal tax rates on business income, wages, dividends, capital gains, and interest. For simplicity in constructing the combined marginal federal and state tax rates, we assumed that business owners itemized, while recipients of wage and investment income were split between itemizers and nonitemizers as indicated by federal tax data for Idaho.

Initial property tax rates. The effective Idaho personal property tax rate on equipment and the effective rate on other business property taxes were calculated by dividing the respective amounts of tax reported by the Idaho State Tax Commission for 2005 by the estimated capital stocks.<sup>2</sup> Because the estimated capital stocks exceed the assessed values, the statutory tax rates of between 1.3% and 1.5% on assessed value become effective tax rates of 0.81% on equipment and 0.88% on other business assets. These 2005 tax rates were further reduced by 20 percent, to 0.65% for equipment and 0.71% for other assets, to reflect the recent assumption by the state of school maintenance fees and the matching reduction in property tax rates. The effective property rates were part of the initial service price calculations for the elements of the capital stock, and the rate on equipment was subsequently set to zero to model the proposed tax change.

#### **Economic results**

Elimination of the Idaho Percent changes. business personal property tax was estimated to reduce the service price for private sector capital by slightly more than 2% (from a required 15.12% to 14.8%). The marginal product of capital declines by about two-thirds percent for every percent increase in the capital stock. Therefore, each 1% reduction in the service price of capital increased the capital stock over time by about 1.5%. The effect of the removal of the personal property tax on equipment was to increase the equilibrium capital stock, initially, by a The resulting increase in the bit over 3%. productivity of labor increased the demand for labor, raised wages, and induced additional labor supply. The added labor supply triggered a further increase in the capital stock. The expansions were moderated as the higher incomes pushed individuals into higher tax brackets. The net effects are shown in Table 1:

In Case 2, the private sector GDP rises by about 1.5%, with about two-thirds going to labor income and about one-third going to capital income, pre-tax. The capital stock rises by over 3.6%, but requires a lower gross return, netting an increase in capital income of 1.5%. About two-thirds of the increase in

Table 1 Effect of Property Tax RepealOn Output, Capital, Wage Rate, and Employment				
	Case 1: Labor supply elasticity = 0.3	Case 2: Labor supply elasticity = 1.1		
State private sector output (= change in factor income)	1.30%	1.51%		
Change in capital stock	3.44%	3.66%		
Change in wage rate	1.05%	1.05%		
Change in employment	0.25%	0.46%		

income is captured by labor. The hourly wage rate increases by a bit over 1%, and the level of employment rises by nearly half a percent, for a combined increase in labor income of 1.5%. Various layers of government take a bit over 30% of the increase in income as taxes.

These numbers are the long run equilibrium. The stock of equipment would increase gradually, with the full adjustment taking about 5 years. Due to planning and start-up considerations, one would expect a bit less than 20% of the adjustment to occur in the first year of the expansion, more than 20% in each of years 2 through 4, and a small residual amount remaining to be finished in year 5.

These numbers assume that the state does not raise other taxes on capital income, or the marginal state income tax rate, to offset the revenue loss. Either a surplus must be cut, or state spending growth restrained (very slightly), or some nonincome, non-input tax must be raised, to avoid offsetting the incentive effect to add to the capital stock or hiring.

**Results in dollars, Case 2.** State private sector product (income) would increase by about 1.51%, or \$569 million. About two-thirds would be in the form of private sector wages and salaries, or \$379 million. That translates into about 2,800 full time equivalent workers (about a 1/2% rise, split between some workers taking longer hours and some new hiring),

plus an increase in the hourly wage of about 1%, for a total rise in labor income of 1.51%. Some of the new workers would be current residents, including some young people who would stay in Idaho rather than seek jobs elsewhere. Some would be new residents moving into the state. Business earnings would rise by the remaining third of the total.

#### **Revenue estimates**

Increases in state private sector income of 1.3% to 1.51% would return a tax reflow to the state that would cover a significant portion of the cost of reimbursing the localities for the repeal of the property tax. Table 2 lists state revenues by source for 2005, followed by estimated collections after the full expansion in income is achieved (all shown at 2005 revenue levels).<sup>3</sup>

In case 2, the revenue offset to the state would be over 49% of the static cost, or a bit over \$53 million. The net cost would be under \$55 million, just over half the static estimate. The revenue reflow and the net cost would be nearly equal.

The static cost would be only about 4% of state revenues, and the net, dynamic cost would be only about 2% of state revenues after the full effect of the expansion is realized. State revenues grew over 11% between FY 2004 and FY 2005. After inflation, the cost of the tax relief would be only half of one year's revenue growth.

on Equipment (Dollar amounts in millions, based on 2005 revenues.)				
	current law	Case 1	case 2	
		growth factor +1.30%, labor elasticity .3	growth factor +1.51, labor elasticity 1.0	
Personal income tax	\$1241.29	\$1263.08	\$1266.62	
Corporate Income Tax	162.70	164.82	165.15	
Sales & Use Tax	1125.32	1138.04	1140.02	
Excises: Cigarette, Tobacco, Beer, Wine	58.74	59.07	59.12	
Electricity	1.53	1.54	1.54	
Mine License Tax	.05	.05	.05	
Motor Fuels	222.66	224.54	224.84	
Subtotal	2812.29	2851.10	2857.35	
Other	40.22	40.22	40.22	
Total	2852.52	2891.33	2897.57	
Change in Revenue		38.81	45.01	
Revenue from Eliminating Deduction of Property Tax		8.09	8.09	
Total Offset		46.91	53.15	
Percent Offset		43.40%	49.22%	
Net Cost		\$61.09	\$54.85	

Table 2 Static and Dynamic Cost of Eliminating the Idaho Personal Property Tax

Based on FY 2005 Idaho state revenues. Assumes a \$108 million reduction in the personal property tax for equipment. Private output = 86% of state product. Assumes a .5 elasticity for excise taxes, electricity tax (primarily household consumer and retail). Assumes unit (1.0) elasticity for corporate, mine tax. Assumes .5 and 1.0 elasticities for personal and business use of motor fuels, respectively. Assumes "other" taxes are not affected by increase in economy. Low labor elasticity assumes growth of hours worked is primarily restricted to existing work force. High labor elasticity assumes growth of hours accommodated in part by inflow of population from other states. The higher labor response case yields a larger increase in state output and revenue reflow. In both cases there is some increase in real incomes through the state tax brackets, generating some real "tax bracket creep" even in an indexed tax system, which causes revenue to rise faster than income.

The full increase in investment and employment, and the full revenue reflow, would take about 5 years to develop. It would be possible to phase out the tax over the same period to match the growth of the reflow and minimize the impact on the state budget. To avoid destroying the incentive to add to the stock of equipment during the phase-out, the path of interim tax payments would have to be limited to some set amounts related to the depreciating equipment already in place. The tax should not fall on any new investment purchases.

In calculating the revenue reflows, we noted that the private sector is about 86% of the Idaho economy. We assumed that the revenue gains from increased income and expenditure would apply only to 86% of the original tax base.

We used our Idaho tax calculator for the rise in income tax revenues. The state income tax has a steeply graduated rate structure. Although many people are in the top bracket, even a small increase in incomes across the board will drive some people onto the tax rolls, and boost others' incomes either into a higher bracket, or subject more of their income to the rate in their top bracket. The result is that income tax receipts would grow by a bit more than the percentage change in income.

The general sales tax revenues were projected to rise in line with private income. Excise tax revenues were projected to rise by about half the percentage change in income, reflecting national patterns of income elasticities of spending on alcohol and tobacco. Other assumptions are listed in the table.

#### Benefits to the population.

The income gains to the population would be far larger than the cost of the tax relief to the state.

Income of the population would rise by \$569 million. The state would take back about 9.3%, or \$53 million. The federal tax take would be about 31%, or \$176 million (payroll and income taxes). The after-tax income of the population would rise by \$339 million.

Put another way: To generate a dollar of reflow at a 9.6% marginal state tax take (from all sources), pre-tax income of the population must rise by more than \$10.71. For every dollar of net cost to the state from the tax cut, pre-tax income of the population would rise by \$10.38. After state and federal taxes, the after-tax income of the population would rise by \$6.19 for every dollar of net cost to the state.

In other words, every dollar the state gives up in order to cut this tax would boost the after-tax income of Idaho residents by more than \$6. If you ask the voter if they would like to make that trade, they would surely say "Yes".

#### The effect on the business climate.

The property tax is a direct tax on the asset value of the equipment. The asset value is much larger than the annual income from the asset, which means that a property tax rate is equivalent to a much higher income tax rate. That is why even a seemingly small property tax can have a large impact in the investment decision, and on the competitive business climate position of the state.

According to Curtis Dubay and Chris Atkins of the Tax Foundation, removal of the business personal property tax would raise Idaho from 32nd to 30th in the Tax Foundation state business tax climate index.<sup>4</sup>

#### Conclusion

Repeal of the Idaho business personal property tax would be an efficient way to improve the competitive business climate of the state. It would involve minimal cost to the state government. The improvement in the Idaho economy would allow the state to recover nearly half the projected cost of the repeal through higher taxes on incomes and sales. Benefits to the population in terms of higher after-tax incomes would far outweigh the net impact on the state budget.

Stephen J. Entin, President & Executive Director Michael Schuyler, Senior Economist

#### Endnotes

1. The national capital stock data was taken from the federal Bureau of Economic Analysis series on private wealth, which is the starting capital stock at the beginning of each year plus investment less depreciation. It is broken down into corporate business stocks, non-corporate business stocks, and household and institution stocks. Each in turn is separated into equipment and software, non-residential structures, residential structures, inventories, nonfarm land, and farmland. We omitted assets in the household and institution sector to exclude owner-occupied housing and other assets that are not part of the proposed tax change. This initial estimate left the return on capital in the state a bit below the calculated service price necessary to generate after-tax returns in line with the national historical average. This may reflect a slightly lower capital-to-labor ratio in Idaho than the national average, consistent with a slightly lower-than-national-average per capita income in the state.

2. To get the effective tax rate on equipment eligible for the proposed tax relief, the amount of property tax collections on non-industrial, non-agricultural assets were taken from Idaho State Tax Commission, "Revised 2005 Personal Property Taxes and Industrial Property Taxes," Chart 1. The tax amount was divided by the estimated equipment and software stock. To get the effective tax rate on other business property, we took total business property tax collections less the amount levied on equipment. This amount was divided by total business sector assets less equipment and software, using information from Idaho State Tax Commission, "2005 Market Values and Property Taxes and the Effects of the Homeowner's Exemptions," Chart 1, page 16.

3. The static cost of the repeal, \$108 million, may be based on 2006 tax collections. We did not have final 2006 revenue estimates from the state. Insofar as the revenue base for 2006 may be several percent higher than for 2005, the revenue reflows would be about the same percent higher than shown here.

4. Curtis S. Dubay and Chris Atkins, "State Business Tax Climate Index," Background Paper No. 52, Tax Foundation, Oct 11, 2006. In the latest in this series, the Tax Foundation ranks Idaho 32nd among the 50 states on its index of the tax treatment of business (first being the best climate, fiftieth, the worst). Dubay and Atkins have calculated that removal of the business personal property tax would lift Idaho two places, to 30th in the ranking.