



FISCAL RESEARCH CENTER

ALTERNATIVE STATE BUSINESS TAX SYSTEMS: A COMPARISON OF STATE INCOME AND GROSS RECEIPTS TAXES

Laura Wheeler and Edward
Sennoga

**Fiscal Research Center
Andrew Young School of Policy Studies
Georgia State University
Atlanta, GA**

**FRC Report No. 154
May 2007**



ANDREW YOUNG SCHOOL
OF POLICY STUDIES

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

Table of Contents

Executive Summary	iii
I. Introduction	1
II. What is a Good Tax?	2
Equity/Fairness	2
Certainty and Convenience.....	3
Economy of Collection, Simplicity, and Transparency.....	3
Economic Neutrality and Efficiency	3
Revenue Reliability and Stability	4
III. Gross Receipts Taxes	5
Washington’s Business and Occupation Tax	5
Ohio’s Commercial Activity Tax	7
Pros and Cons of a Gross Receipts Tax.....	8
IV. State Corporate Income Tax	10
V. Data	12
VI. Comparison of a Gross Receipts Tax with the State Corporate Income Tax.....	14
VII. Economic Efficiency	16
VIII. Tax Burden	20
Size	20
Distribution.....	21
Change in Distribution	22
IX. Revenue Stability.....	25
X. Complexity and Administration	27
Complexity	27
Cost of Compliance and Administration	29
XI. Conclusion.....	31
References.....	33

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

Executive Summary

Nationally, there has been increased attention at the state level in a gross receipts tax as a replacement for the standard state corporate income tax.¹ Washington State has imposed a gross receipts tax since 1935.² In 2005, this tax structure was also adopted in Ohio. And in May 2006, Texas lawmakers voted to replace their franchise tax with a gross receipts tax. The reasons given for such a move include tax simplification and increased economic competitiveness, very much the same forces that are fueling the discussions of a Federal sales tax.

The expected gains associated with a move to a gross receipts tax are relative to the original tax system being replaced. Both Ohio and Texas replaced a franchise tax³ with the gross receipts tax. In most other states, the main form of state corporate taxation is a modified version of the Federal corporate income tax. Since there are substantial differences between an income tax and a franchise tax, it is not clear that states currently taxing corporations according to their corporate income would benefit by moving to a gross receipts tax.

This paper compares a gross receipts tax with the standard state corporate income tax. The basis for comparison involves several criteria such as the relative tax burdens, efficiency, the degree of progressivity, revenue stability and adequacy, complexity and administrative costs. To provide a benchmark for our comparison of the different features of the state corporate income tax and gross receipts tax, the paper begins with a general discussion of the criteria of a sound tax system followed by a discussion of both the common form of the state corporate income tax and the gross receipts tax.

¹ See Mikesell (2007) for a similar discussion of this topic.

² Delaware, West Virginia, and Hawaii also levy taxes on gross receipts. In the case of Hawaii and Delaware, the tax is levied in addition to the corporate income tax for those doing business in the state. In the case of West Virginia, the tax is levied on the receipts from the provision of health care services.

³ A franchise tax is a privilege tax imposed on each corporation and limited liability company chartered or organized in a jurisdiction (or state) or doing business in that jurisdiction. The base varies from state to state and may consist of net taxable capital, net earned surplus, income, or a flat fee. "Corporation" also includes (but is not limited to) a bank, state limited banking associations, as well as savings and loan association.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

What is a Sound Tax System?

The American Institute of Certified Public Accountants (AICPA, 2001) developed ten “guiding principles” of good tax policy; principles that aid the evaluation of proposals to adjust or change tax rules and tax systems. These principles include equity/fairness, certainty, convenience of payment, economy of collection, simplicity, and neutrality. Other principles include economic growth and efficiency, transparency and visibility, minimum tax gap, and adequate government revenues.

Gross Receipts Taxes

A gross receipts tax, also referred to as a turnover tax, is measured on the value of products sold, gross proceeds of sale (or total revenue), or gross income of the business. The specific definition of a gross receipts tax base is decided by officials when designing the tax. There are currently two gross receipts tax systems operating in the United States, one in Ohio and one in Washington State. Both bases include gross receipts from the sale of goods and services and from the operation of a business. The Washington State base includes all revenue to the firm including interest income, dividend income, rental and royalty income, and both short and long term capital gains. In this way, the Washington State tax is actually a gross income tax since all forms of income are subject to tax. The Ohio tax base, on the other hand, includes gross receipts from the sale or operation of the business as well as rental and royalty income but excludes from the base interest earnings, dividends received, and capital gains.⁴ Thus, the Ohio version of the gross receipts tax bears more resemblance to a business sales tax or consumption tax since it does not tax the return to capital.

State Corporate Income Tax (SCIT)

In 2004, the major tax on corporations in 40 out of 50 states was some form of a corporate income tax. In general, this is a tax on corporate income as defined at

⁴ Interest on credit sales is included in the base. Gross receipts from the sale of real property located in Ohio are also included in the base.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

the Federal level with several modifications imposed at the state level. For instance, the Federal definition of corporate income allows for more generous depreciation deductions than many states.⁵ By the same token, some states offer deductions that are not allowed at the Federal level.⁶ After computing the state corporate income tax base, corporate income is apportioned to represent the percent of total income that is earned in the state. The state tax rate, significantly lower than the 35 percent Federal rate, is applied to this adjusted, apportioned base to yield a firm's state tax liability.

Advantages of Gross Receipts Taxes over the State Corporate Income Tax

A gross receipts tax has some advantages over a corporate income tax. First, it is usually, as is the case in both Ohio and Washington, imposed on all business entities. This is not a necessary characteristic of the gross receipts tax as it could be applied to only a select type of business entities. Second, the wide tax base makes it a more stable source of revenue. Third, since a gross receipts tax is not a tax on net income or profits, it does not penalize business entities for being profitable. Lastly, while the gross receipts tax can be levied in a very simple form, both the Washington and Ohio versions contain fairly intricate rules.

Disadvantages of Gross Receipts Taxes

A major disadvantage of the gross receipts tax is that though it may not be passed on to consumers directly, it can be and probably is passed on to consumers indirectly via price increases. This effect can lead to tax cascading or pyramiding in which taxes are imposed upon earlier taxes. The cascading effect increases as the number of taxable transactions in the production process increase. Because of the cascading, gross receipt tax systems impose a lower burden on vertically integrated firms or production processes with fewer steps from beginning to end, such as services. Another disadvantage of the gross receipts tax is that firms can have a

⁵ These deductions include the Bonus Depreciation and the Qualified Productions Activity deduction. These deductions were not adopted by all states and consequently firms operating in some states have to add back this deduction at the state level when determining their state corporate income.

⁶ Most states allow companies special tax credits.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

positive tax liability even when they do not make a profit. That is because a firm's tax liability under a gross receipts tax is not reduced for the cost of business inputs, labor, interest payments, or capital investments. This tends to be particularly burdensome for startup firms with low sales but high business costs. This issue has been addressed by the Washington and Ohio tax systems by imposing filing thresholds that exempt a base level of gross receipts.

Empirical Comparison of a Gross Receipts Tax with the State Corporate Income Tax

This paper considers the potential effect of replacing a traditional state corporate income tax with a gross receipts tax. However, based on the results of the analysis presented in this paper, the gross receipts tax is not a complete elixir for the woes of the state corporate income tax. The results are summarized in Table A. In some categories, the gross receipts tax comes out as an improvement over the traditional SCIT when judged against the criteria of a sound tax system. For instance, the tax base of the gross receipts tax is much broader and inclusive than that of the corporate income tax. Furthermore, the gross receipts tax base is less volatile over time compared to the corporate income tax. On the other hand, based on this analysis, the gross receipts tax burden is larger on average and regressive relative to the traditional corporate income tax. Our last measure of complexity found that while conceptually the gross receipts tax is less complex, this tax is not immune to the pressures to offer special preferences to firms and industries. The more any tax system gives in to these pressures, no matter how justified, the more complex the tax system becomes. Based on these findings then, we cannot say that the gross receipts tax system is an improvement over an existing state corporate income tax. This will depend on the particular characteristics of the state and their priorities in setting tax policy.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

TABLE A. SUMMARY OF TAX MEASURES

Measure/Tax System	Corporate Income Tax	Gross Receipts Tax
Size of Tax Base	only applies to corporations; allows deductions for the cost of earning income; size of base varies from 0.44 percent to 5 percent of gross receipts;	is levied on all business entities, has fewer deductions and exclusions compared to traditional CIT;
Size of Tax Burden Per Firm	average burden for firms in sample=1.0 percent of total assets;	average burden for firms in sample=1.7 percent of total assets;
Distribution of Tax Burden	generally progressive in nature; higher estimated burden for manufacturing firms;	generally regressive in nature; higher estimated burden for manufacturing firms;
Revenue Stability	coefficient of variation for all firms = 21 percent; for manufacturing firms = 30 percent;	coefficient of variation for all firms = 13 percent; for manufacturing firms = 7 percent;
Complexity	very complex with considerable compliance costs for firms; has a long history of special preferences for firms and industries;	conceptually less complex than the traditional CIT but not immune to pressures to offer special treatment for firms and industries;

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

I. Introduction

Nationally, there has been increased attention at the state level in a gross receipts tax as a replacement for the standard state corporate income tax.¹ Washington State has imposed a gross receipts tax since 1935. In 2005, this tax structure was also adopted in Ohio. And in May 2006, Texas lawmakers voted to replace their franchise tax with a gross receipts tax. The reasons given for such a move include tax simplification and increased economic competitiveness, very much the same forces that are fueling the discussions of a Federal sales tax, for example the Fair Tax proposal. The expected gains associated with a move to a gross receipts tax are relative to the original tax system being replaced. Both Ohio and Texas replaced a franchise tax² with the gross receipts tax. In most other states, the main form of state corporate taxation is a modified version of the Federal corporate income tax. Since there are differences between an income tax and a franchise tax, it is not clear that states currently taxing corporations according to their corporate income would benefit by moving to a gross receipts tax.

This paper compares a gross receipts tax with the standard state corporate income tax. The basis for comparison involves several criteria such as the relative tax burdens, efficiency, the degree of progressivity, revenue stability and adequacy, complexity and administrative costs. The paper proceeds with a general discussion of the criteria of a sound tax system followed by a discussion of both the common form of the state corporate income tax and the gross receipts tax. The paper then presents and explains the analytic results from the evaluation of both taxes using firm-level data from Compustat's industrial dataset and aggregate Statistics of Income data. The paper concludes with a side-by-side comparison of the two tax systems using the criteria of a sound tax system.

¹ See Mikesell (2007) for a similar discussion of this topic.

² A franchise tax is a privilege tax imposed on each corporation and limited liability company chartered or organized in a jurisdiction (or state) or doing business in that jurisdiction. "Corporation" also includes (but is not limited to) banks, state limited banking associations, as well as savings and loan associations.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

II. What is a Good Tax?

To provide a benchmark for our comparison of the different features of the state corporate income tax and gross receipts tax, this section discusses the characteristics of a good tax system. The attributes discussed here provide the basis of our comparison. The American Institute of Certified Public Accountants (AICPA, 2001) developed ten “guiding principles” of good tax policy; principles that aid the evaluation of proposals to adjust or change tax rules and tax systems. These principles include equity/fairness, certainty, convenience of payment, economy of collection, simplicity, and neutrality. Other principles include economic growth and efficiency, transparency and visibility, minimum tax gap, and adequate government revenues. A description of some commonly-accepted definitions follows.

Equity/Fairness

Simply stated, this principle requires that “similarly situated taxpayers be taxed similarly.” A tax, based on ability to pay, is viewed as fair by most policymakers if taxpayers with the least ability to pay have the lowest tax burdens. This principle therefore encompasses both horizontal equity (how similarly situated individuals and companies are treated) and vertical equity (how the tax burden varies with income). The former principle favors a tax system where taxpayers with equal abilities pay similar amounts in taxes, while the latter calls for a tax system in which people with greater ability to pay taxes shoulder a heavier tax burden. For a tax on income, fairness or equity can be demonstrated by a tax that is relatively progressive in nature; taxpayers with higher incomes paying taxes at higher rates than lower income taxpayers. Equity can also be demonstrated by a tax that does not exclude some types of income or economic activity from taxation, as such exclusions can lead to situations where similarly situated taxpayers are not treated equally. For taxes based on benefits received, an equitable tax is one for which the tax burdens vary with the benefits received from the services financed by the tax.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

Certainty and Convenience

The AICPA (2001) notes that “tax rules should specify when a tax is to be paid, how it is to be paid, and how the amount to be paid is to be determined.” That is, a taxpayer’s tax liability should not be ambiguous. The rules governing the imposition and collection of a tax should enable the taxpayers to determine the tax base, tax rates, and tax liabilities with certainty based on the form of business activity or transaction.

Additionally, a tax should be payable in a manner or at a time that is convenient for the taxpayer. The AICPA (2001) observes that for taxes imposed on the purchase of goods, the tax should be imposed at the time of purchase when the person still has the choice of whether or not to purchase the goods and pay the tax. Convenience of payment enhances compliance with the tax, especially since the more difficult a tax is to pay, the higher is the likelihood that it will not be paid at all.

Economy of Collection, Simplicity, and Transparency

Yet another principle states that a tax should impose only minimal administrative costs on both the government and taxpayers. Simple and unambiguous taxes are less costly to administer and comply with due to the fact that taxpayers are fully aware of the effect of their transactions on their tax liability. Simplicity and transparency enhance tax compliance, subsequently reducing the cost of tax administration.

Economic Neutrality and Efficiency

Tax laws should not influence a taxpayer’s decision to engage in one transaction or business activity versus another. The influence of tax laws on taxpayers’ decisions should at the very least be kept to a minimum. A tax should be used primarily to raise revenue for governmental activities, rather than to influence business and personal choices (AICPA, 2001).³

³ There are exceptions to this principle, such as taxing activities which create externalities for society.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

Revenue Reliability and Stability

Governments should be able to determine, with some level of predictability and reliability, the amount of revenue likely to be collected from a given tax base. Tax revenues directly affect the level of government expenditures because most state governments operate under a balanced budget constraint. Since economic changes affect tax bases in different ways, reliance on a mix of taxes, as opposed to a single tax, typically leads to more revenue stability for the levying government.

Numerous challenges arising from the desire to extend the influence of tax laws beyond that of simple revenue generation to such areas as distribution of income and economic development have, at times, hampered the integration of these principles of good tax policy into the federal and state tax systems. Frequent changes in the tax law have also reduced the certainty of tax systems, consequently challenging the principles of simplicity and economy of collection. The AICPA (2001) notes that the real challenge is that not all the “good tax principles” can be achieved to the same degree for all proposed tax changes: “to exclude a particular type of economic benefit from taxation may satisfy the simplicity principle, but not the equity or neutrality principles.” This suggests that legislators ought to carefully balance the principles of a good tax system in order to design “optimal” tax laws.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

III. Gross Receipts Taxes

A gross receipts tax, sometimes referred to as a turnover tax, is levied on the value of products sold, the gross proceeds of sale (or total revenue), or the gross income of the business. The specific definition of a gross receipts tax base is decided by state legislators when designing the tax. There are currently two gross receipts tax systems operating in the United States, one in Ohio and one in Washington State.⁴ Both bases include gross receipts from the sale of goods and services and from the operation of a business. The Washington State base includes all revenue to the firm, including interest income, sales of assets, dividend income, rental and royalty income, and both short and long term capital gains. In this way, the Washington State tax is actually a gross income tax since all forms of income are subject to tax. The Ohio tax base, on the other hand, includes gross receipts from the sale or operation of the business as well as rental and royalty income but excludes from the base interest earnings, dividends received, and capital gains.⁵ Thus, the Ohio version of the gross receipts tax bears more resemblance to a business sales tax or consumption tax since it does not tax the return to capital.

The following section compares various aspects of the traditional state corporate income tax with a Washington style gross receipts tax. Some discussion is given to the Ohio version of the tax but our data do not allow for a formal analysis of this tax base.⁶

Washington's Business and Occupation Tax

In Washington, the gross receipts tax is referred to as the Business and Occupation (B&O) tax and is calculated on gross income or gross receipts derived from business activities conducted within the State of Washington.⁷ Businesses

⁴ Filing for the Texas gross receipts tax will begin January 1, 2008.

⁵ Interest on credit sales is included in the base. Gross receipts from the sale of real property located in Ohio are also included in the base.

⁶ The major reason for this is a lack of data. For instance, the Ohio gross receipts base includes rental and royalty income. The data for these items are only available for a fraction of firms in the Compustat data set.

⁷ The State of Washington does not impose either a corporate income tax or personal income tax. By contrast, Georgia total tax collections represent about 4.4 percent of gross state product in 2000.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

report gross income under one of eight tax classifications with varying tax rates. These are listed in Table 1.

TABLE 1. BUSINESS CLASSIFICATION FOR THE WASHINGTON STATE BUSINESS AND OCCUPATION TAX

Business Activity Classification	Tax Rate
Manufacturing, wholesaling, and certain other activities such as extracting, commission of insurance agents, child care, radio and TV broadcasting and others	0.484%
Retailing, environmental cleanup, and radioactive waste cleanup for the US	0.471%
Manufacturing/selling commercial aircraft and components	
10/1/2005 – 6/30/2007	0.4235%
7/1/2007 – 7/1/2024	0.2904%
Travel agents, tour operators, stevedoring, freight brokers, licensed boarding homes, repair of aircraft, manufacturing of semiconductor materials, international investment management services	0.275%
Processing meat (at wholesale), soybeans, canola, and dry peas; manufacturing wheat into flour, and raw seafood; warehousing/reselling of prescription drugs, manufacturing of biodiesel/alcohol fuel, and manufacturing fresh fruit, vegetables, and dairy products	0.138%
Disposal of low-level radioactive waste	3.3%
Services, public/nonprofit hospitals, and all other activities	1.5%

Source: Washington State Department of Revenue, RCW 82.04.

According to the Washington State Department of Revenue, B&O tax collections in FY04 totaled just over \$2 billion, representing almost 16 percent of state tax revenues.⁸ Almost all businesses, including corporations, limited liability companies (LLCs), partnerships, sole proprietors, and nonprofit organizations, are subject to the state B&O tax. Businesses with annual gross income of \$28,000 or less do not have to file. In addition, many small firms have their liability reduced through the Small Business Credit.

⁸ This represents 0.79 percent of Gross State Product for Washington State. By contrast, Georgia total tax collections represent about 4.4 percent of gross state product in 2000.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

There are generally no deductions from the B&O tax for labor costs, materials, taxes, and/or any other costs of doing business.⁹ Businesses can reduce their taxable incomes by taking advantage of deductions not related to the costs of doing business, including bad debts and interstate and foreign sales. The most common B&O exemptions include incomes from farming, the sale and rental of real estate, certain nonprofit and social service organizations,¹⁰ government, and credit unions. Some businesses also qualify for tax credits based on the size (payroll), nature (high technology), and the location (distressed area) of the business. Further, businesses that perform more than one taxable activity for the same product can take advantage of the multiple activities tax credit (MATC) to reduce the risk of multiple taxation. For instance, manufacturers who also sell finished products as wholesalers are required to report each activity under the appropriate B&O classification. The MATC ensures that the B&O tax is paid only once on the same amount.

Ohio's Commercial Activity Tax

In June 2005, Ohio enacted a gross receipts tax referred to as the Commercial Activity Tax (CAT). This tax is imposed on the taxable gross receipts of almost all commercial activities and business entities in Ohio, including C corporations, S corporations, partnerships, and limited liability companies (LLCs).¹¹ The initial top rate of the CAT is 0.06 percent and is scheduled to increase to 0.26 percent when the tax is fully implemented. The tax is being phased-in over a five-year period starting in 2005. Once fully phased-in, the CAT will exclude gross receipts of up to \$1 million annually from taxation. Businesses with at least \$150,000 in Ohio taxable gross receipts in a calendar year must register for the CAT and pay a minimum \$75 fee included on the CAT form (Wilson, 2006).¹² Only a few deductions are

⁹ Since the State of Washington does not levy an individual income tax, the lack of an exemption of the labor costs from the B&O tax base does not lead to the double taxation on wages.

¹⁰ Some nonprofit organizations such as public and nonprofit hospitals are subject to the B&O tax.

¹¹ Banks and other financial institutions, insurance companies, public utilities, and dealers in intangibles such as securities are subject to special taxes and are excluded from the CAT. Further, most affiliates of financial institutions and insurance companies are also excluded from the CAT.

¹² Businesses with gross receipts of less than \$150,000 are not required to register as CAT taxpayers.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

associated with the CAT, including cash discounts, bad debts, and returns and allowances. On the other hand, several forms and sources of income are excluded from the base. These include, among others, interest and dividend income and capital gains, and compensation, including benefits, for services for an employer. In addition, non-profit organizations, dealers in intangibles, financial institutions, and insurance companies are excluded from the CAT.

Pros and Cons of a Gross Receipts Tax

A gross receipts tax has some advantages over a corporate income tax. First, it is usually imposed on nearly all business entities, as is the case in both Ohio and Washington. This is not necessarily a characteristic of the gross receipts tax, as it could be applied to only a select type of business entity but in practice this has not occurred. Second, the wide tax base increases the stability of this revenue source. Third, since a gross receipts tax is not a tax on net income or profits, it does not penalize business entities for being profitable. Lastly, many tout the simplicity of the gross receipts tax as an advantage over the corporate income tax. But tax simplicity, or conversely complexity, is not necessarily a function of the underlying tax base. Most often the complex nature of a tax structure stems from the use of the tax code to redistribute income, benefit certain taxpayers, and encourage certain types of activities. It is often the case that tailoring a tax system to increase equity is at odds with the goal of simplicity. Thus, even a tax that begins with a simple base can become quite complex. While the gross receipts tax can be levied in a very simple form, both Washington and Ohio make exceptions to the simple base, such as an exemption for farming activities in the case of Washington State and an exclusion for interest and dividend income in the case of Ohio. The potential complexity of the gross receipts tax is addressed later in the paper.

A major disadvantage of the gross receipts tax is that though it may not be passed on to consumers directly, it can be and probably is passed on to consumers indirectly via price increases. This effect can lead to tax cascading or pyramiding in which taxes are imposed upon earlier taxes. For instance, consider the case of a business that buys computer parts. The producer of the parts makes a sale to a

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

business. The producer is taxed on the sale by the gross receipts tax. The producer may increase the price to offset the impending tax. The business then assembles the computer parts and sells the computer to a home user. This transaction is also taxed. The tax is imposed on the sale price of the home computer system which implicitly includes the tax paid by the business when it purchased the parts. In this way, the price of the home system is increased by the amount of the tax paid by the business and the tax levied at the final stage of production is levied on a retail price that includes a previous tax payment.

The potential cascading effect described in this example increases as the number of taxable transactions in the production process increase. Because of the cascading, gross receipt tax systems impose a lower burden on vertically integrated firms or production processes with fewer steps from beginning to end, such as services. Some economists argue that a gross receipts tax has all the defects of a sales tax imposed on business purchases, if not worse, since sales for resale and other commonly exempt sales to businesses are subject to tax under the gross receipts tax (McLure, 2005). This is especially the case when goods and services produced by one business entity are used as inputs of another business establishment. In such a case, a gross receipts tax could be paid multiple times on a good as it progresses through the production process.¹³

Another disadvantage of the gross receipts tax is that firms can have a positive tax liability even when they do not make a profit. That is because a firm's tax liability under a gross receipts tax is not reduced for the cost of business inputs, labor, interest payments, or capital investments. This tends to be particularly burdensome for startup firms with low sales but high business costs. This issue has been addressed by the Washington and Ohio tax systems by imposing filing thresholds and exempting a base level of gross receipts.

¹³ A report, "Tax Alternatives for Washington State" (2002) concluded that Washington State's B&O tax pyramids on average 2.5 times, though this rate varies considerably across industries.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

IV. State Corporate Income Tax

In 2007, 46 out of 50 states levied some form of a corporate income tax.¹⁴ In general, this is a tax on corporate income as defined at the Federal level with several modifications imposed at the state level. For instance, the Federal definition of corporate income allows for more generous depreciation deductions than many states.¹⁵ By the same token, some states offer deductions or credits that are not allowed at the Federal level. After computing the state corporate income tax base, corporate income is apportioned to represent the percent of total income that is earned in the state. The tax rate, which is lower than the 35 percent Federal rate, is applied to this adjusted, apportioned base to yield a firm's state tax liability.

It has long been argued that the traditional state corporate income tax (SCIT) is an inferior tax on several grounds. It is complex due to its many deductions and special rules. It is distortionary in that it strongly influences economic behavior, specifically due to its numerous deductions and exclusions. The SCIT discriminates against the corporate form of business organization because it taxes returns to capital at a relatively high rate as compared to non-corporate businesses and also because it encourages debt over equity financing.¹⁶ As a revenue source it is highly volatile from year to year and has been on the decline relative to gross state product in most states over the past several years.¹⁷ Lastly, corporate net income is probably a poor yardstick by which to measure any "benefits received" from the provision of state government services.

On the positive side, the cost of administration is mitigated by costs borne by the Federal government. One can also argue that the corporate income tax base may be more inclusive than some forms of the gross receipts tax since the definition of corporate income includes income earned from nonbusiness related activities, such as

¹⁴ Federation of Tax Administrators at www.taxadmin.org.

¹⁵ These deductions include the Bonus Depreciation and the Qualified Productions Activity deduction. These deductions were not adopted by all states and consequently, firms operating in some states have to add back this expense at the state level when determining their state corporate income.

¹⁶ As part of the traditional corporate income tax, dividends are taxed twice and capital gains are taxed at the corporate rate of 35 percent.

¹⁷ See Cornia, et. al (2005).

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

dividend and interest earnings.¹⁸ Economists have long supported the notion of increased inclusion in the tax base. Generally, comprehensive bases lead to fewer distortions and less tax avoidance behavior. Lastly, because the corporate income tax is a tax on net income, (i.e. profits) it incorporates a better measure of ability to pay than a gross receipts tax that does not distinguish between firms based on their level of business expenditures.

¹⁸ For instance, the Ohio CAT excludes dividends, distributions from corporations, and interest income other than interest on credit sales as well as capital gains income.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

V. Data

The analysis presented in this report is conducted using aggregate corporate tax return data from the 2000 Statistics of Income (SOI) and firm-level data from the Compustat Industrial Annual file available from Standard and Poor's. The Compustat dataset, while not a representative sample of all US corporations, does provide detailed firm-level data on over 24,000 publicly-held companies. The S&P's Compustat data are standardized across firms to minimize reporting variability in the data. This allows better comparability between companies.¹⁹

Table 2 presents the descriptive statistics from the Compustat data for a selection of the sample used in this report. The data used in the analysis are drawn from 20,195 U.S. industrial companies, though the maximum number of observations containing all the necessary variables for this study is 6,903. This difference is due to the sizeable number of missing observations for many of the industrial companies. The standard deviations shown in Table 2 reveal a large degree of variation in the size and financial strength of the industrial companies included in the S&P's Compustat data.

Compared to the SOI corporate data, the Compustat data are skewed toward the high end of the corporate income distribution. Table 3 compares the data from the SOI corporate return sample to the Compustat data used in this analysis. As seen from the table, the Compustat firms have greater assets, net sales, and net non-operating income than those in the SOI sample, which is designed to be representative of the U.S. corporate population. At the same time, the Compustat firms have, on average, a lower average federal tax liability than those in the SOI sample. This issue is explored in more depth later in the report. While we prefer to work with a more representative data set, the Compustat data is the only publicly available micro dataset of corporations with sufficient level of detail for this type of analysis.

¹⁹ To increase the sample size of the Compustat data, this report employs data from both active and inactive companies incorporated in all fifty states as well as the District of Columbia for calendar year 2000. All analyzes were run on a sub-sample containing only active firms and the original pattern of results were upheld.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

TABLE 2. DESCRIPTIVE STATISTICS OF COMPUSTAT DATA FOR 2000

Variable	Observations	Mean	Standard Deviation	Minimum	Maximum
Total Assets (Millions \$)	8,955	\$3,311	\$25,526	\$0	\$902,210
Net Sales (Millions \$)	8,958	\$1,341	\$6,906	-\$0.7	\$206,083
Non-Operating Income (Millions \$)	8,929	\$5	\$232	-\$10,375	\$5,625
Federal Corporate Income Tax Liability (Millions \$)	6,944	\$24	\$153	-\$1,261	\$3,809

Source: Standard and Poor's Compustat data.

**TABLE 3. COMPARISON OF SOI CORPORATE RETURNS AND
COMPUSTAT DATA FOR 2000**

Variable	SOI	Compustat
Number of Observations	5,045,274	8,955
	<i>Mean SOI</i>	<i>Mean Compustat</i>
Total Assets (Millions \$)	\$9	\$3,311
Net Sales (Millions \$)	\$3	\$1,341
Non-Operating Income (Millions \$)	\$0.6	\$5
Federal Corporate Income Tax Liability (Millions \$)	\$40	\$24

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

VI. Comparison of a Gross Receipts Tax with the State Corporate Income Tax

The current gross receipts tax is levied in Washington State and Ohio on both corporate and noncorporate firms. The dataset used here contains information on corporate firms only. Therefore, this analysis can only compare the effects of a gross receipts tax and a corporate income tax on corporate firms and not all business entities. In addition, the Compustat dataset does not provide enough observations to accurately model the Ohio version of the gross receipts tax which excludes interest and dividend income and earnings from capital gains. Our analysis is therefore, focused on the comparison between the Washington State version of the gross receipts tax and the traditional state corporate income tax. It is not our intent to hold the Washington State B&O tax up as the standard-bearer for all gross receipts tax systems. The exercise undertaken in this report is not to diminish the B&O tax but to consider the effect of replacing an existing corporate income tax with a gross receipts tax. Since the B&O tax has been around so long, Washington has an established history and experience with this tax system. It is hoped others can learn from their experiences.

Some explanation of our key variables is necessary before proceeding further with the results of the analysis. The overall analysis consists of several comparisons. Two comparisons, the size of the tax bases and revenue volatility are performed in this analysis using aggregate data from the 2000 SOI corporate file. Two additional comparisons require a firm-level calculation and comparison of the size and distribution of the tax burden under both the corporate income tax and the gross receipts tax systems. To construct a firm-level estimate of the tax liability under a Washington State gross receipts tax, we use the sum of the Net Sales variable and the Non-operating Income variable found in the Compustat database.²⁰ Taken together these two variables capture gross receipts from sales and services net of returns and net income from non-operating sources. A preferred measure would be gross non-operating income, which is the value included in the Washington gross receipts base,

²⁰ Net Sales (data12) is gross sales net of returns. The non-operating income (data61) variable captures net income from dividends, interest, rent, royalties, and capital gains.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

but this variable is not available. Therefore, the gross receipts base used in this analysis is smaller (due to the deduction of non-operating expenses) than that reported by firms operating in Washington State.

The Compustat file contains only an aggregate value for all state corporate tax liabilities. The amount owed to each state is not broken out. Instead, this analysis uses the federal corporate income tax liability as the point of comparison. The federal corporate income tax liability variable found in the Compustat database is income tax liability after federal credits have been subtracted out. The distribution of federal tax credits is highly skewed. Based on the 2000 SOI data, the ratio of the value of federal tax credits to after-credit tax liability is about 3 percent for firms with positive assets of less than \$100,000.²¹ This ratio rises to 8 percent for firms with assets between \$100 and \$250 million and then jumps to 36 percent for firms with assets in excess of \$250 million.²² Because of the large value of credits at the upper end of the asset distribution and their uneven distribution, care must be taken when interpreting some of the results of this analysis. Furthermore, to make an appropriate comparison between the distributional effects of the corporate income tax and the gross receipts tax, any credits associated with the gross receipts tax should be included in the computation of the gross receipts tax liability. Unfortunately, that information is not available, with one exception. The Business & Occupation tax does allow a small business credit worth at most \$420 per year per firm. The value of the credit is reduced by \$5 for every \$5 increase in tax liability. The credit completely phases out at tax liabilities of more than \$841. The simulation does incorporate this small business credit.

Once computed for each firm, the two tax liabilities, one for each tax system, are then analyzed on a firm by firm basis to compare the tax burden and distribution of the two tax systems. In addition, the tax systems are compared on the basis of the size of their tax base, revenue volatility, complexity, and administrative costs. The results of each comparison are presented and discussed in the remainder of this paper.

²¹ Figures are based on author's calculations from SOI corporate data. See Table 2 for 2000.

²² Ibid.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

VII. Economic Efficiency

A fundamental tenet of public finance theory is that preferred tax systems are those that induce the least amount of welfare loss to society while achieving the desired revenue goal.²³ That is, in general, tax systems that induce the least amount of change in economic behavior due to the imposition of the tax are preferred to systems that induce a larger change in consumption or production activity. Conceptually, we can identify several characteristics that tend to increase or decrease this welfare loss. Low rates and broad tax bases come to mind immediately as attributes of a tax system that result in lower welfare losses. To that end, relatively few deductions or preferences are characteristic of efficient or preferred tax systems.

One general measure of efficiency can be captured by measuring the size of the tax base. A broad base is considered more efficient because it captures all sources of income and creates fewer options for tax-induced behavior. The calculation of tax liabilities of both tax systems considered in this analysis begin with gross receipts but the corporate income tax then subtracts from that the costs associated with earning income. The 2000 data from SOI sample of Form 1120 returns reveal that the ratio of the corporate income tax base (before credits) to business receipts (a proxy for the gross receipts tax base) is on average 3.7 percent.²⁴ It varies from a low of 0.44 percent for firms with positive assets under \$100,000 to a maximum of 5 percent for firms with assets in excess of \$250 million. Therefore, the gross receipts tax which applies the tax rate directly to the base of gross receipts has a broader base than the base of the corporate income tax implying a more efficient tax system.

Preferred tax systems tax all income, regardless of source or type, at the same rate. Under the corporate income tax, all corporations are taxed at the Federal statutory rate of 35 percent.²⁵ On the other hand, many, many preferences exist for various industries and activities. For instance, small businesses are allowed greater depreciation deductions than larger corporations, a tax credit is allowed for expenses

²³ Welfare loss refers to the reduced well being of society as a result of an artificial change in price such as occurs with the imposition of taxes or subsidies.

²⁴ Statistics of Income for 2000 Corporate Income Tax Returns, Table 2 – Selected Balance Sheet, Income Statement, and Tax Items by Asset Size.

²⁵ S-corporations are not included in this analysis. These entities are taxed under the individual income tax system.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

associated with research and development activities but only a deduction is allowed for expenses associated with advertising or renting. Moreover, there are numerous provisions in the corporate tax code pertaining to the depreciation allowances for various kinds of capital assets. These differences in deductions and depreciation allowances alter the effective tax rate imposed on a corporation and create preferential treatment of some industries or businesses through the tax code. Even in the absence of these deduction and depreciation issues, the corporate tax system discriminates against corporate-owned businesses. Since the corporate income tax does not apply to noncorporate businesses, it provides an incentive for business owners to organize as noncorporate entities so that their income is taxed under the individual income tax system at lower rates. Several authors have considered this aspect of the corporate income tax.²⁶ Although not measured in this analysis, applying a uniform gross receipts tax to all businesses eliminates this source of tax-induced behavior and will represent a gain in efficiency over the current state corporate income tax.

On the other hand, the Washington B&O tax has its own sources of inefficiencies. It deviates from its most “equal treatment” by applying different tax rates across industries. In the Washington tax system, income from wholesale agricultural production is completely exempt while the manufacturing sector is taxed at a 0.484 percent rate and the services sector is taxed at a 1.5 percent rate. In fact, the B&O tax system includes 8 different tax rates (Table 1). This unequal treatment of business receipts could increase the welfare losses over its purest form in which all business receipts are treated in the same manner. In addition, the B&O tax includes several deductions such as a deduction for charitable contributions, investment income of nonfinancial businesses, and a temporary deduction for the expenses associated with processing beef. The B&O offers several credits as well, such as a jobs credit for software developers in rural counties and a credit for pre-production expenses associated with certain aircraft.

Another distortionary effect associated with the gross receipts tax stems from the cascading of the gross receipts tax. Our analysis does not take into account the

²⁶ See Goolsbee (1998) and Gravelle and Kotlikoff (1989).

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

cascading effects of the gross receipts tax. Accounting for tax cascading results in a lower revenue neutral tax rate for all firms by increasing the size of the tax base as the tax is passed along. This results in a smaller tax burden for those firms that are first on the production chain, such as wholesalers, or firms which use fewer raw materials. This smaller burden comes at the expense of firms further down the production chain, such as retailers or manufacturers who face the same tax rate but whose tax base (gross receipts) has been expanded to incorporate the tax payments made by firms at previous stages of production. Therefore, the gross receipts tax creates a distortion between the economic returns faced by wholesalers and retailers and provides an incentive for firms to vertically integrate in order to reduce their tax exposure.

Based on a 2002 study by the Washington State Tax Structure Committee, the degree of pyramiding statewide in Washington was estimated to be 2.5.²⁷ This means that on average, the effective tax on the final sale of a product is 2.5 times higher than it would be if only the final sale is taxed. This degree of pyramiding was found to vary greatly by industry. The study found that the degree of pyramiding on services was 1.6 while the degree of pyramiding on manufactured goods was between 6.7 and 2.2.²⁸

The base of the Ohio gross receipts tax excludes several sources of income such as interest, dividends, royalties, and capital gains. Based on 2000 SOI data of corporate tax returns, the base of the Ohio gross receipts tax is estimated to be on average 86 percent of the Washington base.²⁹ For firms with positive assets of less than \$100,000, the Ohio base is 98 percent of the Washington base. The ratio falls steadily as asset values rise. In the case of firms with assets in excess of \$250 million, the Ohio style base is 80 percent of the more inclusive Washington style base. While still much larger than the corporate income tax base, this version of the

²⁷ Washington State Tax Structure Study (2002), p. 112 and Appendix C-12.

²⁸ Ibid. Stated differently, value-added from service firms was inflated by a factor of 1.6 due to tax pyramiding and value-added from manufacturing firms was inflated by a factor of 6.7.

²⁹ Statistics of Income for 2000 Corporate Income Tax Returns, Table 2 – Selected Balance Sheet, Income Statement, and Tax Items by Asset Size.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

gross receipts tax provides an incentive to redefine business income as these other nontaxed forms. This introduces a different source of inefficiency that is not associated with the existing corporate income tax because the base of the corporate income tax captures these other sources of income. On the other hand, the exclusion of returns to capital may have positive implications for investment and employment in the state.

It is not fair or perhaps useful to hold the Washington B&O tax or any other specific state tax up as the standard for the gross receipts tax. States have the right to allow any deductions and credits they deem appropriate, so that it is conceivable that a state could levy a gross receipts tax without allowing any special credits or deductions. But experience shows that significant pressure is exerted on tax systems to allow for special treatment of certain businesses or industries. This special treatment is often justified in the name of fairness, such as special credits for small businesses or struggling industries. These pressures will exist regardless of the form of the tax imposed on business. Thus, as is made clear from the discussion above, replacing a corporate income tax with a gross receipts tax may not eliminate the complexity and special rules associated with the current corporate income tax.

In terms of the more efficient tax, it is clear from the discussion above that both the gross receipts tax and the corporate income tax create opportunities to “play favorites” between industries and businesses. Neither system is immune from this pressure.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

VIII. Tax Burden

Size

Efficiency is only one characteristic of a good tax system. In this analysis we also consider the size of the tax burden associated with the gross receipts tax. We use the firm-level Compustat data to compute for each firm the corporate income and the gross receipts tax burden, which is defined for this purpose as the ratio of a firm's tax liability to its total assets. In order to make a fair comparison between the two tax systems, we determine a gross receipts tax rate that produces an amount of revenue equal to the Federal corporate income tax paid by the firms in the Compustat sample.³⁰ For our Compustat sample, this revenue neutral gross receipts tax rate is calculated to be 1.68 percent. That is, a 1.68 percent rate applied to the Compustat sample gross receipts base raises the same amount of revenue as these firms paid in Federal tax in 2000.³¹

The unweighted mean burden for the corporate tax, computed as the ratio of tax liabilities to total assets, is estimated to be 1 percent and the unweighted mean burden for the gross receipts tax as constructed is 1.7 percent.³² Care should be taken when interpreting these results. These values represent the mean values experienced only by the firms in this sample and may not be representative of all firms. Our results indicate that the gross receipts tax burden overall is approximately 70 percent higher than the corporate tax burden. This is not an unexpected finding given that the gross receipts tax does not allow for the deduction of expenses associated with earning income.

Table 4A shows the tax burden, computed as the ratio of tax liabilities to total assets, of the corporate income tax and the gross receipts tax by asset category.³³ For firms with assets less than \$250 million, the tax burden is larger under a gross

³⁰ As explained earlier, we do not have data on the amount of state taxes paid by each firm to an individual state. Therefore, we model the gross receipts tax as a federal level tax and compare it to a federal level corporate income tax. Since we are only concerned with relative effects and not absolute ones, this should not distort our results.

³¹ A corporate income tax of 6 percent is associated with a gross receipts tax of 0.29 percent.

³² Because the rates of both taxes are set to raise the same amount of revenue, the weighted means will be equal.

³³ An alternative version of this table based on aggregate SOI data was constructed. It shows a similar pattern of results.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

TABLE 4A. TAX BURDEN BY ASSET SIZE

Asset Size (Number of Firms)	Corporate Tax Burden	Gross Receipts Tax Burden
\$0<Assets<\$100,000 (73)	0%	5.1%
\$100,000<Assets<\$250,000 (41)	0%	1.1%
\$250,000<Assets<\$500,000 (59)	-1.7%	2.2%
\$500,000<Assets<\$1,000,000 (82)	-0.3%	2.2%
\$1,000,000<Assets<\$5,000,000 (392)	0.3%	2.1%
\$5,000,000<Assets<\$10,000,000 (345)	0.3%	1.6%
\$10,000,000<Assets<\$25,000,000 (548)	0.5%	1.9%
\$25,000,000<Assets<\$50,000,000 (522)	0.8%	1.8%
\$50,000,000<Assets<\$100,000,000 (633)	0.9%	1.6%
\$100,000,000<Assets<\$250,000,000 (841)	1.2%	1.6%
\$250,000,000 or more< Assets (1959)	1.5%	1.4%

Source: Compustat Industrial File and authors' own calculations.

TABLE 4B. TAX BURDEN BY SECTOR (\$ IN MILLIONS)

Economic Sector (Number of Firms)	Corporate Tax Burden	Gross Receipts Tax Burden
Manufacturing (2718)	1.2%	1.7%
Service (2777)	0.8%	1.6%

Source: Compustat Industrial File and authors' own calculations.

receipts tax than under the existing corporate income tax.³⁴ Only for those firms with assets in excess of \$250 million is the corporate income tax burden greater than the gross receipts tax burden.

Table 4B shows the same tax burden calculation by industry sector. The results indicate a higher burden under the gross receipts tax for the service and manufacturing sectors. Under the existing corporate income tax, the service sector faces a lower burden than the manufacturing sector. This pattern is continued under the gross receipts tax system.

Distribution

Another key characteristic of a tax system is its degree of progressivity or regressivity. As can be seen in Table 4A, in general tax burdens under the gross

³⁴ This burden calculation incorporates the Washington rules for a small business credit for the gross receipts tax.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

receipts tax decline as asset value increases, indicating a larger burden for firms with a smaller asset base or a regressive tax system. Tax burdens under the corporate income tax increase slightly with asset size, indicating a relatively more progressive tax system.³⁵ (The gross receipts tax could be made more progressive by allowing a tax credit based on the asset size of the firm.)

While the Washington State tax as modeled here reveals a regressive system, an Ohio version of the gross receipts tax would reveal a more regressive system. That is because the Ohio version of the gross receipts tax does not include income from dividends, interest, or capital gains. These sources of income increase with firm assets and make up a larger portion of corporate income as firm assets increase. By excluding this income from taxation, the Ohio style gross receipts tax will be more regressive than the Washington State style gross receipts tax with its more inclusive definition of taxable income.³⁶

Change in Distribution

In this measure of the tax burden, our aim is to determine the change in relative tax burdens when shifting to a gross receipts tax from a corporate income tax. That is, to determine if the move to a gross receipts tax alters the distribution of tax burdens between firms from the baseline distribution of the standard state corporate income tax. We do not measure the absolute burden in this measure but only the change in a firm's status relative to other firms.

In the procedure we organize the firms into quintiles by ranking them first by their corporate tax burden. We then rank the same firms into quintiles based on their estimated gross receipts tax burden. To determine the extent to which the move to a gross receipts tax alters the relative distribution of tax burdens, we compare the gross

³⁵ The corporate income results reported for firms with assets of less than \$1 million in Table 4A are not reliable. The Compustat sample contains only 1 nonzero corporate tax burden for these categories. In the case of the gross receipts results all asset categories are well represented except for the lowest in which only 3 firms have nonzero gross receipts data.

³⁶ The Ohio CAT remedies this issue in part via gross receipts thresholds and exclusions, both of which are aimed at reducing the regressivity of the CAT.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

receipts ranking of firms relative to their corporate income tax ranking. The results are presented in Table 5.³⁷

TABLE 5. CHANGE IN TAX BURDEN DISTRIBUTION

Corporate Tax Quintile	-----Gross Receipts Tax Quintile-----				
	1 st (n=1380)	2 nd (n=1381)	3 rd (n=1381)	4 th (n=1381)	5 th (n=1380)
1 st (n=629)	10%	17%	25%	26%	22%
2 nd (n=3243)	35%	21%	15%	14%	16%
3 rd (n=270)	14%	27%	20%	22%	17%
4 th (n=1381)	9%	23%	25%	22%	20%
5 th (n=1380)	1%	15%	25%	30%	30%

Source: Compustat Industrial File and authors' own calculations.

The results indicate a fair degree of reranking of firms when switching from a corporate income tax to a gross receipts tax. This is not unexpected given the difference in the distribution of the burdens shown in Table 4A. For example, of those firms ranked in the lowest (1st) quintile under a corporate income tax, only 10 percent remained in the lowest quintile under a gross receipts tax. 17 percent of the firms rose to the 2nd quintile, 25 percent to the 3rd, 26 percent to the 4th and 22 percent of firms that were in the lowest quintile based on a corporate tax regime were ranked in the highest quintile based on a gross receipts tax regime. All firms in the 1st quintile based on the corporate income tax had negative corporate income tax burdens. All firms in the 2nd quintile based on the corporate income tax had a zero tax burden.³⁸ Firms in the 3rd through 5th quintile had positive tax burdens.

Although there is a fair amount of change for firms in the lower quintiles, in the 5th quintile we see a larger degree of stability. That is, 30 percent of those firms that are in the highest quintile under a corporate income tax are also found in the highest quintile under a gross receipts tax. This is probably due to the deductibility

³⁷ Our analysis only compares the statutory tax burdens and we do not make any assumptions regarding the shifting patterns of these burdens. Therefore, "tax burden" and "tax liability" in this report refer to statutory tax burdens and liabilities only.

³⁸ The number of firms in the 2nd quintile of the corporate tax ranking is larger than 20 percent. It represents 48 percent of the firms in the sample instead of 20 percent. This is because all firms in this quintile had a zero tax liability. Because they all had the same tax liability the computer program placed them in the same quintile. An artifact of this is that both the 1st quintile and the 3rd quintile contain less than 20 percent of the firms each.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

of expenses allowed under the corporate income tax. Firms with high gross receipts and low expenses do not look very different in terms of tax liability under the two systems. But firms with high gross receipts and high expenses have a significantly lower tax liability under the corporate income tax than under a gross receipts tax.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

IX. Revenue Stability

In addition to issues of efficiency and equity, good tax systems provide a steady and predictable flow of revenues for the levying government. Predictable revenue streams are easier to forecast and allow state officials more confidence in their future budgets. To determine the stability of each tax system, we compute the coefficient of variation for each system over the 1995-2003 time period using aggregate data from SOI to represent both tax bases.³⁹ The calculation uses aggregate total receipts as a proxy for the gross receipts tax base. This is compared to the variation in the aggregate net taxable income which is the Federal corporate income tax base. This comparison is also computed separately for the manufacturing industry. The results, shown in Table 6, indicate a higher level of variation associated with the corporate income tax when all industries are considered and also when computed specifically for the manufacturing industry. Figure 1 shows the annual rates of change for each of the revenue streams. As is seen in this graph, the corporate income tax revenues for all industries and for manufacturing are more volatile over this time period than gross receipts for either all industries combined or manufacturing individually.

TABLE 6. REVENUE STABILITY

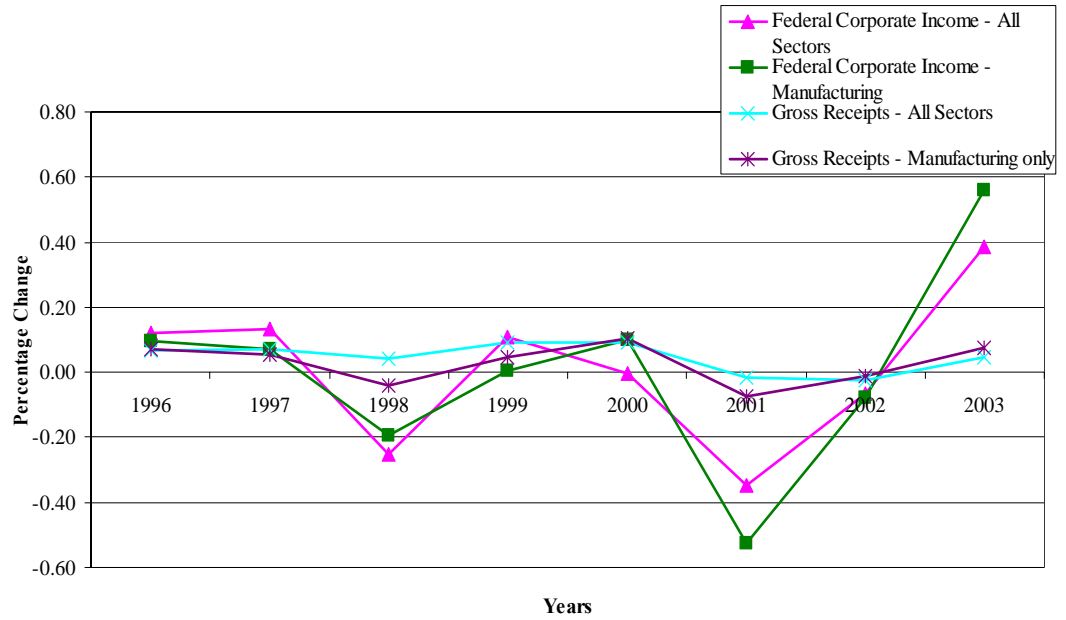
Coefficient of Variation	1995-2003
Federal Corporate Income – All Sectors	21%
Federal Corporate Income - Manufacturing	30%
Gross Receipts – All Industries	13%
Gross Receipts – Manufacturing	7%

Source: 1995-2003 SOI Corporate Data, Table 14A and 14B.

³⁹ The coefficient of variation (CV) is a measure of dispersion computed as the ratio of the standard deviation to the mean. In this case, it refers to the value of the standard deviation of federal corporate revenues during the 1995-2003 time period divided by the mean of federal corporate revenues during the same time period. Higher values of the CV are associated with greater volatility over the time period.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

FIGURE 1. ANNUAL CHANGE IN REVENUE



Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

X. Complexity and Administration

One of the major factors driving tax reform at the state and federal level is simplicity. As discussed earlier in this paper, less complex tax systems are typically associated with higher rates of compliance and lower administrative and compliance costs. Less complex tax systems may also be perceived as more transparent so that taxpayers have a better sense of the relationship between their tax payments and the provision of government services. In comparing two tax systems and holding all other factors equal, less complex tax systems are preferred to more complex systems. On the other hand, such simple tax systems may not be politically popular or even feasible. The simplest and most economically efficient tax system is a head tax or lump sum tax. In this tax system, every person is assessed a tax liability that they are unable to alter by changes in behavior. While not very popular, this tax system is very simple. Tax systems become increasingly complex as they attempt to address issues of fairness and as they attempt to induce changes in taxpayer behavior. Much of the complexity associated with the federal corporate income tax is due to the inclusion of provisions designed to level the playing field between industries and firms. Examples of such provisions include special deductions for small businesses or special preferences for industries with high capital expenditures. Therefore, much of the stress of a tax system stems from the desire to balance the demands for equity with the demands for simplicity. As a further means of comparison between the corporate income tax and a gross receipts tax we consider the complexity of the tax system and the cost of administration of each system borne by the levying government.

Complexity

There seems to be a popular opinion among the public that any tax system is an improvement in terms of simplicity over the existing income tax. There is no doubt that the existing federal corporate income tax is far from a simple tax structure. The complexity stems from several general sources, a few of which are unique to the income tax and some of which are not. Some unique sources of complexity have to do with defining taxable sources of income and allowable deductions. Other sources

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

of complexity, which could be associated with any tax system, stem from the attempt to either level the playing field between industries or to give advantage to one industry over another. To do either requires special provisions with complex rules to determine which firms may take advantage of the provisions. Between 1954 and 2005 there was a 615 percent growth in the number of sections of the federal tax code relating to the taxation of income.⁴⁰ Many of these changes were incorporated to address perceived unfairness in the tax code.

While conceptually less complex than the income tax, the gross receipts tax used in Washington and Ohio does have its own source of complexity. For example, there are eight different tax rates associated with the B&O tax in Washington. Because gross receipts are taxed at different rates, it is necessary to have an extensive and comprehensive list of definitions of various business activities, some of which may be open to debate. In addition, the B&O tax contains several exemptions and deductions. Examples of exemptions include: income from the sale or rental of real estate, wholesale agricultural producers, fund-raising activities of nonprofits, credit unions, and income of small timber harvesters. Examples of deductions include: interstate commerce income, membership dues and tuition fees, cash discounts taken by purchasers, credit losses incurred by taxpayers who use accrual accounting, interest from first mortgage residential loans and certain agricultural loans, and a temporary deduction for income associated with beef processing. In addition, several tax credits exist, such as small business credits, R&D credits, various new job credits, and a fairly involved multiple activities credit to prevent the double taxation of firms engaged in two or more economic activities. So, while the gross receipts tax as levied in Washington State may be less complex in terms of the calculation of income, it is not necessarily simple and it is just as susceptible to pressure to provide preferential industry treatment as the existing income tax. In addition, as of 2006, the Washington tax system is subject to apportionment of multistate tax bases in the same manner as traditional corporate income tax systems.

⁴⁰ Moody, et. al. (2005), p. 6.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

Cost of Compliance and Administration

There are several nonrevenue costs associated with a tax system. These consist of the cost to the taxpayer of complying with the code and the cost to the levying government of collecting the tax. Minimizing these costs are goals of any tax system. Estimates of the cost of compliance are difficult to obtain since firms do not report such statistics. Several studies though have surveyed firms about their compliance costs. Based on a survey of large firms, Slemrod and Blumenthal (1993) estimate the ratio of the cost of compliance with state and local taxes to firm state and local corporate revenue to be 5.6 percent. This is more than double their estimate for the ratio associated with federal taxes which was estimated to be 2.6 percent. This estimate is best considered an upper limit on compliance costs since it is based on a sample of firms with disproportionately large compliance costs. The Slemrod-Blumenthal report attributes the high compliance costs in the case of nonfederal taxes to the lack of conformity among state tax systems, especially the differences in state apportionment and depreciation rules. Research by Gupta and Mills (2003) confirms this conclusion by finding increases in compliance costs as states move away from conformity with other tax systems and each other. Thus, given the current majority of states using a corporate income tax, some firms may experience an increase in compliance costs because of a move toward a nonincome tax system, especially if those firms operate in multiple states. In a second study focusing on the compliance cost of small and mid-size firms, Slemrod and Venkatesh (2002) find that compliance costs for these firms are much greater relative to their sales when compared to the larger firms. Results from this study indicate that the ratio of total compliance cost to tax revenue is about 28 percent in the case of mid-size firms.⁴¹ Another study by Hall (1993) of the Tax Foundation showed similar results, with the ratio of compliance cost to sales decreasing with the size of firms. While none of these studies grant us any insight into whether the gross receipts tax is any less costly in terms of compliance, it does emphasize the importance of compliance costs when considering

⁴¹ This figure represents the ratio of all tax (federal, state, and local) compliance costs to total revenue paid by all firms.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

the choice of a state tax system. Furthermore, the findings do indicate that non-conforming tax systems may induce higher compliance costs for firms.

In addition to firm compliance cost, government administrative costs are an important factor in the design of a tax system. As a rough estimate of the administrative cost of taxes in Georgia, we divide the Georgia Department of Revenue expenditures by the total own-source receipts to the state. This figure represents the cost per dollar of revenue for all revenue sources, not only the state corporate income tax. This figure is \$0.66 per \$100 collected for fiscal year 2005.⁴² If we calculate a similar figure for Washington State, we find a slightly higher collection cost of \$0.88 per \$100 for 2005.⁴³ These estimates are not rigorous enough to use in a comparison between the two tax systems but are offered as a guide to the existing cost of administering these systems.

⁴² See Chart C page 7 and Chart A page 6 of the 2005 Statistical Report from the Georgia Department of Revenue. This calculation does not include administrative costs associated with the collection of user fees or the insurance premium tax.

⁴³ See Table 6 Department of Revenue Expenses and Collections: Average Cost of Collection for Past 30 Years. Available at: http://dor.wa.gov/content/statistics/2005/Tax_Statistics_2005/default.aspx

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

XI. Conclusion

Spurred by calls for improved compliance, increased fairness, and greater simplicity, states have begun to consider alternatives to the existing taxes on corporations. This analysis considers the potential effect of replacing a traditional state corporate income tax with a gross receipts tax. Washington State has levied a gross receipts tax for several decades and both Ohio and Texas have or are in the process of implementing their own versions of this tax. Based on the results of the analysis presented in this paper, the gross receipts tax is not a complete elixir for the woes of the state corporate income tax.

The results of the analysis are summarized in Table 7. In some categories, the gross receipts tax comes out as an improvement over the traditional SCIT. For instance, the tax base of the gross receipts tax is much broader and inclusive than that of the corporate income tax. Furthermore, the gross receipts tax base is less volatile over time compared to the corporate income tax. On the other hand, this analysis suggests that the gross receipts tax burden is larger for many firms and more regressive relative to the traditional corporate income tax. Our last criteria of complexity found that while conceptually the gross receipts tax is less complex, this tax is not immune to the pressures to offer special preferences to firms and industries. The more any tax system gives into these pressures, no matter how justified, the more complex the tax system becomes. Based on these findings we cannot say that the gross receipts tax system is an improvement over an existing state corporate income tax, it will most likely depend on the particular characteristics of the state and their priorities in setting tax policy.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

TABLE 7. SUMMARY OF MEASURES.

Measure/Tax System (Data Used in Analysis)	Corporate Income Tax	Gross Receipts Tax
Size of Tax Base (aggregate SOI data)	only applies to corporations; allows deductions for the cost of earning income; varies from 0.44 percent to 5 percent of gross receipts;	is levied on all business entities, has fewer deductions and exclusions compared to traditional CIT;
Size of Tax Burden (firm-level Compustat data)	average burden for firms in sample=1.0 percent of total assets;	average burden for firms in sample=1.7 percent of total assets;
Distribution of Tax Burden (firm-level Compustat data)	generally progressive in nature; higher estimated burden for manufacturing firms;	generally regressive in nature; higher estimated burden for manufacturing firms;
Revenue Stability (aggregate SOI data)	coefficient of variation for all firms = 21 percent; for manufacturing firms = 30 percent;	coefficient of variation for all firms = 13 percent; for manufacturing firms = 7 percent;
Complexity (aggregate data from state Department of Revenue offices)	very complex with considerable compliance costs for firms; has a long history of special preferences for firms and industries;	conceptually less complex than the traditional CIT but not immune to pressures to offer special treatment for firms and industries;

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

References

- AICPA (2001). *Guiding Principles for Evaluating Tax Proposals*. New York: American Institute of Certified Public Accountants, Inc.
- Bird, M. R. (1996). *Why Tax Corporations?* International Center for Tax Studies, University of Toronto.
- Bird, M. R. & Mintz, J. M. (1994). *Future Developments in Tax Policy*. Federal Law Review 22: 402-13.
- Bird, M. R. & Tsiopoulos, T. (1996). *User Charging for Public Services: Potentials and Problems*. Center for the Study of State and Market and International Center for Tax Studies, University of Toronto.
- Georgia Department of Revenue (2005). "Statistical Report." Available at <http://www.etax.dor.ga.gov/gaforms/publica.shtml>.
- Goolsbee, Austan (1998). "Taxes, Organizational Form, and the Deadweight Loss of the Corporate Income Tax." *Journal of Public Economics* 69: 143-52.
- Gravelle, Jane G. and Laurence J. Kotlikoff (1989). "The Incidence and Efficiency of Corporate Taxation when Corporate and Noncorporate Firms Produce the Same Good." *Journal of Political Economy* 97(4): 749-80.
- Gupta, S. & Mills, L. F. (2002). *Do Differences in State Corporate Income Tax Systems Affect Compliance Cost Burdens?* Accessed from the Social Science Research Network (www.ssrn.com).
- Gupta, S. & Mills, L. F. (2003). "Does Disconformity in State Corporate Income Tax Systems Affect Compliance Cost Burdens?" *National Tax Journal* 56(2): 355-71.
- Hall, A. P. (1993). "The High Cost of Tax Compliance for U.S. Business." Tax Foundation Special Report #25. November.
- Healy, J. C. & Schadeewald, M. S. (2006). *2006 Multistate Corporate Tax Guide*. Vol. 1. Chicago, CCH Inc.
- Ip, I. K. & Mintz, J. M. (1992). *Dividing the Spoils: The Federal-Provincial Allocation of Taxing Powers*. Toronto, C.D. Howe Institute.
- McLure, C. E. (2005). "How and How not to Tax Business." *State Tax Notes* (April 4): 29-34.
- Messere, K. (1993). *Tax Policy in OECD Countries*. Amsterdam, IBFD Publications.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

- Mikesell, John L. (2007). "State Gross Receipts Taxes and the Fundamental Principles of Tax Policy." *State Tax Notes* 43: 615.
- Mintz, J. M. (1995). *The Corporation Tax: A Survey. Fiscal Studies* 16: 23-68.
- Moody, M. A., Wendy Warcholik, Scott A. Hodge (2005). "The Rising Cost of Complying with the Federal Income Tax." Tax Foundation Special Report #138. December.
- Slemrod, J. & Blumenthal, M. (1993). "The Income Tax Compliance Cost of Big Business." *Public Finance Quarterly* 25(4): 411-38
- Slemrod, J. & Venkatesh, V. (2002). *The Income Tax Compliance Cost of Large and Mid-Size Businesses*. A Report to the IRS LMSB Division by the Office of Tax Policy Research, Ann Arbor, MI., University of Michigan.
- Washington State Tax Structure Study Committee (2002). *Tax Alternatives for the State of Washington (2002): A Report to the Legislature*. Vol. 1.
- Wilson, C. M. (2006). *The Trend Toward Alternative Taxes And How They Are (or Must Be?) Apportioned*. *State Tax Notes* (July 3), Vol. 41(1): 35-44.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

About the Authors

Laura Wheeler is a Senior Researcher at the Fiscal Research Center with the Andrew Young School of Policy Studies. She received her Ph.D. in economics from the Maxwell School at Syracuse University. Prior to coming to FRC, Laura worked for several years with the Joint Committee on Taxation for Congress and as an independent consultant on issues of tax policy. Her research interests include state and local taxation, corporate taxation, and welfare policy.

Edward Sennoga is a Principal Associate at the Fiscal Research Center with the Andrew Young School of Policy Studies. He received his Ph.D. in economics from Georgia State University. His research interests include tax evasion and tax structure. He is currently a Professor at Makerere University in Kampala, Uganda.

About The Fiscal Research Center

The Fiscal Research Center provides nonpartisan research, technical assistance, and education in the evaluation and design of state and local fiscal and economic policy, including both tax and expenditure issues. The Center's mission is to promote development of sound public policy and public understanding of issues of concern to state and local governments.

The Fiscal Research Center (FRC) was established in 1995 in order to provide a stronger research foundation for setting fiscal policy for state and local governments and for better-informed decision making. The FRC, one of several prominent policy research centers and academic departments housed in the School of Policy Studies, has a full-time staff and affiliated faculty from throughout Georgia State University and elsewhere who lead the research efforts in many organized projects.

The FRC maintains a position of neutrality on public policy issues in order to safeguard the academic freedom of authors. Thus, interpretations or conclusions in FRC publications should be understood to be solely those of the author.

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

FISCAL RESEARCH CENTER STAFF

David L. Sjoquist, Director and Professor of Economics
Peter Bluestone, Research Associate
Margo Doers, Administrative Coordinator
Jaiwan M. Harris, Business Manager
Kenneth J. Heaghey, State Fiscal Economist
John W. Matthews, Senior Research Associate
Nara Monkam, Research Associate
Lakshmi Pandey, Senior Research Associate
Rob Salvino, Research Associate
Nikola Tasic, Research Associate
Dorie Taylor, Assistant Director
Arthur D. Turner, Microcomputer Software Technical Specialist
Sally Wallace, Associate Director and Professor of Economics
Laura A. Wheeler, Senior Research Associate
Tumika Williams, Staff Assistant

ASSOCIATED GSU FACULTY

James Alm, Chair and Professor of Economics
Roy W. Bahl, Dean and Professor of Economics
Spencer Banzhaf, Associate Professor of Economics
Carolyn Bourdeaux, Assistant Professor of Public Administration and Urban Studies
Robert Eger, Assistant Professor of Public Administration and Urban Studies
Martin F. Grace, Professor of Risk Management and Insurance
Shiferaw Gurm, Associate Professor of Economics
Gary Henry, Professor of Public Administration and Urban Studies
Douglas Krupka, Assistant Professor of Economics
Gregory B. Lewis, Professor of Public Administration and Urban Studies
Jorge L. Martinez-Vazquez, Professor of Economics
Theodore H. Poister, Professor of Public Administration and Urban Studies
David P. Richardson, Professor of Risk Management and Insurance
Jonathan C. Rork, Assistant Professor of Economics
Bruce A. Seaman, Associate Professor of Economics
Erdal Tekin, Assistant Professor of Economics
Geoffrey K. Turnbull, Professor of Economics
Mary Beth Walker, Associate Professor of Economics
Katherine G. Willoughby, Professor of Public Administration and Urban Studies

PRINCIPAL ASSOCIATES

David Boldt, State University of West Georgia
Gary Cornia, Brigham Young University
Kelly D. Edmiston, Federal Reserve Bank of Kansas City
Alan Essig, Georgia Budget and Policy Institute
Dagney G. Faulk, Indiana University Southeast
Catherine Freeman, U.S. Department of Education
Richard R. Hawkins, University of West Florida
Julie Hotchkiss, Atlanta Federal Reserve Bank
Mary Mathewes Kassis, State University of West Georgia
Jack Morton, Morton Consulting Group
Ross H. Rubenstein, Syracuse University
Michael J. Rushton, Indiana University
Edward Sennoga, Makerere University, Uganda
William J. Smith, West Georgia College
Jeanie J. Thomas, Consultant
Kathleen Thomas, Mississippi State University
Thomas L. Weyandt, Atlanta Regional Commission

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

RECENT PUBLICATIONS

(All publications listed are available at <http://frc.aysps.gsu.edu> or call the Fiscal Research Center at 404/651-2782, or fax us at 404/651-2737.)

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes (Laura Wheeler and Edward Sennoga) This report provides a five-point comparison between a state corporate income tax and a state gross receipts tax. [FRC Report/Brief 154](#) (May 2007)

Status of Women in Atlanta: A Survey of Economic Demographic, and Social Indicators for the 15-County Area (Rachel Ferencik, John Matthews, Christine Moloji, Lakshmi Pandey, Dawud Ujamaa, Sally Wallace) This report provides a detailed overview of economic, demographic and social aspects of women and girls in the metro Atlanta region. [FRC Report 153](#) (May 2007)

Forecasting Pre-K Enrollment in Georgia Counties (Nikola Tasić and Sally Wallace) This report provides a manual that documents the forecasting methodology and provides the actual forecast of Pre-K enrollment by county for 2007-2011. [FRC Report 152](#) (April 2007)

A Description of the Proposed Comprehensive Revision of Georgia's Tax Structure: HR 900 (David L. Sjoquist) This brief is a summary of the provisions of the comprehensive revision of Georgia's tax structure contained in HR 900. [FRC Brief 151](#) (April 2007)

Revenue Structures of States Without An Income Tax (David L. Sjoquist) This report compares Georgia's revenue structure to states without an income tax in order to explore how Georgia's revenue structure would have to change if it were to eliminate its income tax. [FRC Report/Brief 150](#) (April 2007)

Property Rights Reform: A Fiscal Analysis (Peter Bluestone) This report analyzes the fiscal effects of a proposed statute revising the legal standard for regulatory takings in Georgia, as well as recent changes in Georgia's eminent domain law. [FRC Report 149](#) (April 2007).

Self Sufficiency in Women in Georgia (Sally Wallace) In this brief, we use one measure of self sufficiency to estimate the number of female headed households in metro Atlanta that fall below the self sufficiency standard. [FRC Brief 148](#) (March 2007)

An Analysis of the Implementation of Program Budgeting in Georgia (Carolyn Bourdeaux) This report discusses the challenges faced by the State of Georgia in the transition to program budgeting. [FRC Report/Brief 147](#) (March 2007)

Alternative State Business Tax Systems: A Comparison of State Income and Gross Receipts Taxes

Analysis and Recommendations for the Property Tax on Motor Vehicles in Georgia (Laura Wheeler) This report discusses the economic effects, including revenue effects, of eliminating or reducing the state property tax in motor vehicles. FRC Report/Brief 146 (March 2007)

Georgia's Economy: Trends and Outlook (Ken Heaghey) This report tracks some of the key trends that have shaped and will continue to shape Georgia's economy. These include the decline in manufacturing employment, the aging of Georgia's population, the importance of high tech and tourism industries and globalization. FRC Report 145 (March 2007)

Financing Georgia's Future II (Sally Wallace, David L. Sjoquist, Laura Wheeler, Peter Bluestone, William J. Smith) This second release of a biennial report focuses on Georgia's taxes, making cross-state comparisons of their structure and exploring revenue performance over time. FRC Report 144 (March 2007)

The Price Effect of Georgia's Temporary Suspension of State Fuel Taxes (James Alm and David L. Sjoquist) This report explores the effect of the fuel tax suspension on the price of gasoline in Georgia. FRC Report/Brief 143 (February 2007).

An Analysis of the Financing of Higher Education in Georgia (Nara Monkam) This report addresses the issue of the financing of higher education in Georgia by comparing financing in Georgia with other states and examining how financing affects the student population in terms of performance, and retention rates. FRC Report 142 (February 2007)

Intergovernmental Fiscal Relations in Georgia (David L. Sjoquist, John Stavick and Sally Wallace) This report documents the intergovernmental fiscal system in Georgia, with a focus on the expenditure, revenue, and intergovernmental grant system in the state. FRC Report 141 (February 2007)

Comparing State Income Tax Preferences for the Elderly in the Southeast (Jonathan C. Rork) This brief looks at the current state of these tax preferences in the Southeast for those states that impose a major income tax and estimates the dollar value of these preferences. FRC Brief 140 (February 2007)

State Tax Incentives for Research and Development Activities: A Review of State Practices (Laura Wheeler) This report documents state tax incentives offered around the country designed to encourage state level R&D activity. This report also simulates the effect of various credit components in the value of the credit FRC Report/Brief 139 (January 2007)

(All publications listed are available at <http://frc.aysps.gsu.edu> or call the Fiscal Research Center at 404/651-2782, or fax us at 404/651-2737.)

Document Metadata

This document was retrieved from IssueLab - a service of the Foundation Center, <http://www.issuelab.org>

Date information used to create this page was last modified: 2014-02-15

Date document archived: 2010-05-20

Date this page generated to accompany file download: 2014-04-15

IssueLab Permalink:

http://www.issuelab.org/resource/alternative_state_business_tax_systemsa_comparison_of_state_income_and_gross_receipts_taxes

Alternative State Business Tax Systems:A Comparison of State Income and Gross Receipts Taxes

Publisher(s): Fiscal Research Center of the Andrew Young School of Policy Studies

Author(s): Edward Sennoga; Laura Wheeler

Date Published: 2007-05-01

Rights: Copyright 2007 Fiscal Research Center of the Andrew Young School of Policy Studies

Subject(s): Community and Economic Development; Government Reform