

**AN ECONOMIC EVALUATION OF ALTERNATIVE SOURCES OF
TAX REVENUE FOR THE STATE OF TEXAS**

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Contents

Acknowledgements	ii
Executive Summary	iii
Introduction	1
Overview of Project	1
Background Information on State Financing of Education	3
An Overview of the Texas State Tax System	6
The Sales Tax	7
The Franchise Tax	8
Criteria for Evaluating the Texas State Tax System	9
Efficiency	10
Equity	16
Simplicity	20
Revenue Stability	21
Deductibility	22
Evaluating Tax Revenue Options in Texas	23
General Directions for Reform	23
An Evaluation of Specific Tax Reform Proposals	31
Conclusion	63
Appendix	67
Reference List	78
Notes	87

Acknowledgments

I would like to thank Timothy Bartik, Randall Eberts, Margaret Goertz, Harrison Keller, David Monk, Lori Taylor, and Arnold Vedlitz for helpful comments and Joyce Tung for excellent research assistance.

Executive Summary

The State of Texas is contemplating sweeping changes in its revenue structure as part of a reform of the system of K-12 school finance in the state, with the main goal being a reduction in local school property taxes coupled with increased state level funding for education. An important element of these plans is that part of the new state level funding would replace the existing “Robin Hood” school finance equalization plan, enacted in 1993, under which property tax revenues raised in school districts that are relatively “property rich” are transferred to districts that are “property poor.” Although these reform plans differ considerably in emphasis and detail, all of them would significantly increase the state share of K-12 school finance by replacing some local property tax revenues with additional state-level support of education. Moreover, some of the proposals under discussion would increase the overall funding level of education, with the additional revenues also being generated at the state level. Thus, all of the plans under consideration would require significant additional sources of state revenue.

There are, of course, many options for obtaining such extra revenue. They range from moderate adjustments of the existing state tax system focused on rate increases or modest base broadening, to sweeping overhauls of the existing system, to the introduction of new forms of taxation. The debate over which of these alternative revenue sources should be utilized will be lengthy and contentious. The goal of this paper, which builds on the earlier analysis in George Zodrow (1999), is to contribute to the debate, not by formulating specific recommendations but by providing a framework for evaluating the relative advantages and disadvantages of the main potential approaches currently under active consideration in Texas. For the more sweeping reforms—fundamental changes in the structure of existing taxes or the introduction of new taxes—the analysis will assume that, in addition to raising additional state revenue, improving the tax system in Texas by creating a tax climate that is more

conducive to economic growth and the efficient allocation of the state's resources is a primary goal of the tax reform effort.

After providing a brief description of the existing Texas state tax system, the report turns to an economic evaluation of the various alternative sources of additional state tax revenues. The evaluation utilizes the three primary criteria typically used by public finance economists to evaluate alternative tax systems: efficiency in resource allocation, the equity or fairness of the tax system, and simplicity of compliance and administration. In addition, it considers the supplementary criteria of revenue stability, both with respect to economic growth and over the business cycle, and deductibility against federal personal income tax liability.

The report argues that an application of these criteria suggests that the following four general directions for reform of the Texas state tax system are desirable:

- To the maximum extent possible, additional revenue should be raised with expanded use of benefit taxes, including those assessed on businesses. Benefit taxes have the considerable advantage of improving the efficiency of resource allocation while simultaneously raising revenue.
- Mobility considerations, coupled with historical opposition in Texas to progressive taxes, suggest that any progressivity of the state tax system should be limited to adjustment for the fact that federal income tax deductibility is worth more to high-income individuals. In addition, longstanding practice in Texas suggests that the tax system should minimize the tax burden on very low-income individuals.
- The fact that Texas businesses must compete in a national and global economy implies that non-benefit related taxation of businesses should generally be minimized. In particular, to the extent that capital is perfectly mobile, source-based taxation of business income is

largely counterproductive for the residents of the state, who ultimately bear both the direct tax burden and the efficiency costs associated with taxing mobile capital.

- Texas should avoid taxes on gross receipts and taxes that have economic effects similar to those of gross receipts taxes. The tax cascading caused by such taxes distorts business decisions regarding inputs and vertical integration, consumer decisions regarding consumption choices, impairs the efficiency of the political process by financing public services with a “hidden” tax, and creates a significant tax bias against small firms.

Given these general directions for reform, as well as the criteria for evaluating tax systems outlined previously, the analysis turns to an examination of various alternative sources of tax revenue for the state. Three types of reforms are considered: incremental reforms of the existing system, more fundamental reforms of the existing tax system, and the introduction of new taxes.

Consider first potential reforms that involve relatively moderate changes of the existing sales tax, excise taxes, franchise tax, and lottery. The analysis draws the following conclusions:

- Broadening the sales tax base to include a wider variety of consumer goods and services is generally desirable. Concerns about the distributional effects of reducing or eliminating sales tax exemptions and goods consumed disproportionately by the poor could be addressed by introducing a highly targeted means-tested sales tax rebate, perhaps involving expanded utilization of the Lone Star Card program.
- The case for expanding the base of the sales tax to include a wide variety of business services, however, is much weaker. Such an expansion would increase the extent to which the sales tax functions as an undesirable gross receipts tax, and would introduce significant administrative problems.
- Some revenues could be raised by increasing excise tax rates (such as the tax rates on motor fuels, cigarettes, or alcohol) to levels comparable to those in states that are fairly aggressive in using these tax instruments. The primary problem with this approach is that it

is regressive, at least for some taxes, even if one adopts the lifetime view of tax incidence used in the report.

- The “small open economy” argument utilized in the paper implies that the franchise tax is one of the most inefficient taxes utilized by the state. Thus, reduction or elimination of the state franchise tax on Texas businesses would be desirable. However, if this is unattainable, the tax should be applied to all forms of business, subject to a small firm exemption, and serious consideration should be given to various measures to reduce opportunities for tax avoidance, including changing nexus rules and imposing consolidation requirements.
- Expansion of the existing lottery by adding video lottery terminals could provide some additional revenues without increasing the already relatively high level of taxation of existing lottery games. Since the incidence of the lottery tax is quite regressive, its expansion should arguably be accompanied by other tax changes that offset its regressive impact.

Texas may also wish to consider more fundamental reform of its existing tax system, especially the current sales tax.

- Fundamental reform of the sales tax system would include all of the sales tax reforms described above, coupled with a concerted effort to eliminate business inputs from the sales tax base. Such an approach would insure that Texas would receive the economic benefits of a true tax on consumption, uniformly applied to all consumption goods and services to the extent politically and administratively feasible.
- The franchise tax would best be replaced by an alternative more neutral, more comprehensive business tax based on valued added that would minimize source-based income taxation of highly mobile capital.

Finally, additional revenues could be raised with entirely new forms of state-level taxation. There are three obvious options: a personal income tax, statewide taxation of nonresidential property, and some form of value-added taxation.

- Although most Texans abhor a personal state income tax, such a reform has the advantage of simplicity (at the state level) and deductibility against individual federal tax liability. Although an income tax exacerbates the distortion of saving decisions associated with the federal income tax and creates a tax incentive for high-income taxpayers to leave the state, it would avoid the differential taxation of business inputs that characterizes the current system and result in fewer distortions of consumption decisions. An income tax would also be more progressive than the sales tax (at least with respect to annual income), and would provide a simple way of exempting the poor from tax.
- Statewide taxation of nonresidential property would also be a dramatic reform. Although non-benefit property taxation of nonresidential property is generally undesirable, a state level tax would at least be somewhat less inefficient than the local tax. The distributional effects of such a reform would be small on average, but could potentially involve significant, difficult-to-predict redistributions of wealth across Texas jurisdictions.
- Finally, a strong case can be made for a consumption-based value-added tax (VAT) that has desirable efficiency properties, is relatively simple, and avoids source-based taxation of mobile capital and thus spurs investment. Consideration could also be given to the Simplified Alternative Tax version of the VAT, which allows businesses a deduction for wages and then taxes wage income at the individual level, subject to a standard deduction and personal exemptions to exempt the poor from tax. However, all of these VAT options would add a new layer of complexity to administration and compliance, and would introduce a variety of new problems not shared by the existing tax system.

Introduction

Overview of Project

The State of Texas is contemplating sweeping changes in its revenue structure. This review is prompted to some extent by current revenue shortfalls.¹ However, the primary impetus is clearly that the Texas Legislature is considering a variety of plans that would reform the system of K-12 school finance in the state, with the main goal being a reduction in local school property taxes coupled with increased state level funding for education. An important element of these plans is that part of the new state level funding would replace the existing “Robin Hood” school finance equalization plan, enacted in 1993, under which property tax revenues raised in school districts that are relatively “property rich” are transferred to districts that are “property poor.” These reform plans differ considerably in emphasis and detail. However, all of them would significantly increase the state share of K-12 school finance by replacing some local property tax revenues with additional state-level support of education. Moreover, some of the proposals under discussion would increase the overall funding level of education, with the additional revenues also being generated at the state level. Thus, all of these plans would require significant additional sources of state revenue.²

A general idea of the magnitude of the revenue involved can be obtained as follows.³ In the state’s 2002 tax year, with a statewide average effective school “Maintenance and Operations” (M&O) property tax rate of 1.46 percent (this rate is capped at 1.50 percent under current law), local governments raised \$14.6 billion. Under some of the more dramatic reforms being discussed, this rate would be cut approximately in half, to 0.75 percent. The State Comptroller’s office estimates indicate that in this case local property tax revenue would fall to \$7.5 billion; that is, the state would have to replace \$7.1 billion in revenues on an annual basis. In addition, school finance reform may involve an

increase in the overall level of school funding, financed at the state level, which might be on the order of \$1.0 billion per year. Thus, under this particular scenario, state revenues would have to increase by \$8.1 billion, which would represent a 31 percent increase in annual state tax revenues, which were \$26.3 billion in 2002.

There are, of course, many options for obtaining such extra revenue. They range from moderate adjustments of the existing state tax system focused on rate increases or modest base increases, to sweeping overhauls of the existing system, to the introduction of new forms of taxation. The debate over which of these alternative revenue sources should be utilized will be lengthy and contentious. History suggests that moderate structural changes and rate increases are the most likely outcome of the political process. However, the magnitudes of the revenues involved are huge, and the likelihood of sweeping changes of the state tax structure may be greater in the face of widespread and intense opposition to the current system of school finance. Thus, school finance reform may offer a unique opportunity for much more fundamental reforms of the existing tax structure or even the enactment of new forms of taxation. The goal of this paper is to contribute to the debate not by formulating specific recommendations but by providing a framework for evaluating, from an economic perspective, the relative advantages and disadvantages of all of the main potential approaches to raising new state tax revenue—including both incremental and fundamental reforms—that are currently under active consideration in Texas (although a few options that are not currently under discussion but might be of interest are discussed briefly as well).^{4 5} For the more sweeping reforms—fundamental changes in the structure of existing taxes or the introduction of new taxes—the analysis will assume that, in addition to raising additional state revenue, improving the tax system in Texas, especially in the direction of creating a tax climate that is more conducive to economic growth and the efficient allocation of the state’s resources, is a primary goal of the tax reform effort.

The paper is organized as follows. The following section provides a brief description of the existing Texas state tax system, focusing on aspects that will be critical to the subsequent evaluation of

reform options. The paper then discusses the criteria used to evaluate alternative revenue options, emphasizing the application of these criteria in a state (rather than a national) context. The next section analyzes a host of revenue options in terms of these criteria. It begins with a general discussion of the constraints facing state tax policymakers and their implications, and then turns to an evaluation of various reform options under consideration. The final section offers some conclusions.

Background Information on State Financing of Education

Before proceeding further, however, it may be useful to comment briefly on the case for increasing the state share of K-12 school finance in Texas, which is considered in detail elsewhere in the project report. The central point is that, from a purely tax perspective, there is much to recommend a significant level of state finance. The critical difference between state and local taxation is that virtually all individual and business tax bases are much more mobile across local jurisdictions than across state boundaries, especially for a state that is as large as Texas. The implication is that local taxes on these mobile factors—other than those directly related to the benefits of public services received—are especially costly, both in terms of driving resources out of the taxing jurisdiction and distorting decisions about how and where these resources are utilized. Since these problems are reduced considerably if a tax is imposed at the state rather than the local level, these factors provide an important efficiency argument for imposing taxes in the same way.

A second argument for state level finance is also important. Much of the dissatisfaction with the current system is directed toward the Robin Hood plan for redistributing school property taxes. In brief, under this plan, school districts in Texas are classified as “property rich” (about 10 percent of Texas school districts) or “property poor” (the remaining roughly 90 percent of school districts) depending on whether their taxable property value per weighted student exceeds or falls below a certain threshold (\$305,000 in 2003). In property-rich districts, property taxes attributable to the taxation of property in excess of the threshold are transferred to property-poor districts. In addition, school property tax rates are capped at 1.50 percent (\$1.50 per \$100 of property valuation). The essential problem with this approach is that financing additional educational expenditures by relatively poor

school districts within the state—whether the outcome of the political process or dictated by court decisions—is a statewide responsibility. It should therefore, on equity grounds, be financed with general state revenues raised from the state population as a whole, rather than from a relatively small subset of the population, that is, owners of property in property-rich districts.⁶ The movement toward increased state finance of K-12 education in Texas, coupled with reduced reliance on local property tax finance, can thus partially be justified as an attempt to distribute the cost of educating children in property-poor school districts in a more broadly based and thus more equitable fashion.

Another important rationale, emphasized by Caroline Hoxby (2001), is that the use of property tax revenues to finance redistributive educational expenditures (commonly referred to as school finance equalization, hereafter SFE) creates a variety of inefficient economic distortions, especially in the property-rich school districts that provide the funds to finance redistributive expenditures. Most obviously, the residents of such jurisdictions typically face a tax price for educational expenditures considerably in excess of one; that is, a dollar of expenditures costs more than a dollar since some fraction of revenues collected is redistributed to property-poor districts). As a result, property-rich districts tend to consume an inefficiently low level of education services.⁷ In addition, several distortions arise because, in contrast to redistributive schemes funded with statewide taxes, the tax base used to finance the redistribution—local property values—is itself a function of variables that are closely related to the good being financed. In particular, the value of schools that provide high quality services at relatively low cost will be reflected in, or “capitalized,” into higher house values, while such capitalization effects will be negative in districts with relatively poor performing schools. These capitalization effects imply that property values are a function of the productivity of local schools, local tastes for education, and the extent of redistribution implied by the school finance system. Hoxby stresses that these capitalization phenomena tend to put downward pressure on the overall level of educational expenditures, and in the most extreme cases per pupil educational spending in poor districts may actually be lower than before the enactment of SFE.

The distortions associated with these capitalization effects can take several forms. For example, under a SFE plan, property values in property-rich districts will decline, reflecting the capitalized value of the redistribution associated with the plan. This will not only reduce the level of expenditures in such districts, it will also reduce the extent of redistribution associated with the SFE plan since the base for redistribution has declined. Moreover, this effect will be magnified if the educational expenditure targets established in the SFE plan are a function of the overall level of spending. Similarly, the benefits of having highly efficient schools will be capitalized into property values. The increased level of redistributive taxation associated with this increase in property values creates an inefficient disincentive for increasing school productivity. In addition, individuals with unusually high demands for good schooling will typically be attracted to communities with good schools, and will thus bid up property values in these communities. The increased redistribution associated with these higher property values under a SFE plan effectively penalizes such individuals.⁸ Such unintended consequences associated with the use of the property tax to finance redistributive education expenditures lead Hoxby to conclude that such expenditures are better financed with revenue sources with tax bases that are not explicitly “attached” to specific school districts, such as state sales or income taxes.

These concerns favoring state level finance must, however, be weighed against a compelling argument favoring local finance. Specifically, following the celebrated work of Charles Tiebout (1956), much of the state and local public finance literature stresses the benefits of local provision of public services, including education. Local provision of public services allows matching of services to local tastes, offers greater accountability to local residents, and, through the mechanism of interjurisdictional competition, offers some incentives for cost-efficient provision of public services. These advantages of local service provision have led to increased decentralization of many public services, both in the U.S. and around the world.

Together, these considerations imply that a primary goal of state policy in Texas should be to take advantage of the benefits of imposing a significant share of combined state and local taxes at the state level, while structuring the distribution of funds to take advantage of the benefits of localized

service provision. In general, this can be achieved by raising significant revenues with broad-based state level taxes that are used to provide grants to local governments that are, to the maximum extent possible, used to finance a base level of local expenditures rather than marginal expenditures. That is, state grants can finance a significant fraction of local budgets, but incremental expenditures in as many jurisdictions as possible should be financed with own-source revenues, such as the local residential property tax.⁹ For such incremental expenditures, economic theory suggests that state funds should be available only to the extent there is an external benefit to state residents from local expenditures. Under this approach, both rich and poor jurisdictions will face the appropriate price incentives for incremental expenditures for public services, and most of the benefits of decentralization will be attained despite a significant level of state financing, which is desirable from a purely tax perspective.

Thus, there is a strong rationale for reducing—but by no means eliminating—local property tax finance in Texas and replacing the lost local revenues with state-level financing, especially since Texas relies more heavily on local property taxes to finance elementary and secondary education than any state in the nation other than Illinois (Taylor 2003a).¹⁰ The discussion thus far, however, has not addressed the central issue of how these state-level tax revenues should be raised. This question is the focus of the remainder of this paper.

An Overview of the Texas State Tax System

Although a full description of the Texas tax system is far beyond the scope of this report, this section identifies the current major sources of tax revenue in the state. It also provides an outline of the two state revenue sources that are the most pertinent to the discussion that follows: the general sales tax and the franchise tax.

The relative importance of the various sources of state revenue is shown in table A1 in the appendix. Data are provided for the years 1990-2002. For example, in 2002 total state tax revenue was \$26.3 billion. Of this amount, 55.2 percent (\$14.5 billion) was revenue from the general sales tax, 11.2 percent (\$2.9 billion) came from taxes on motor vehicle sales and rentals, 10.8 percent (\$2.8

billion) was from excise taxes on motor fuels, 7.4 percent (\$1.9 billion) from the franchise tax applied to Texas businesses, 4.2 percent (\$1.0 billion) from excise taxes on alcohol and tobacco, 4.0 percent (\$1.0 billion) from taxes on insurance premiums and hotel occupancy taxes, 3.7 percent (\$1.0 billion) from oil and gas severance taxes, and 3.5 percent (\$0.9 billion) from various other taxes.¹¹ Additional data, as well as a comparison of the Texas state tax system with those in other states, are provided in the appendix.

The Sales Tax

As shown in table A1 in the appendix, the primary source of state tax revenue in Texas is the general sales tax. The state sales tax rate is currently 6.25 percent. Add-on taxes imposed by counties, municipalities and/or metropolitan transit authorities can increase this by a maximum of two percent. Lori Taylor (2003) documents that most of the recent state revenue shortfall in Texas is due to an unexpected decline in sales and excise tax revenues.

Although commonly perceived to be a tax on retail sales to individual consumers, a significant fraction of the sales tax in Texas is instead assessed on sales between businesses; this fraction is currently estimated to be 47 percent.^{12 13} The sales tax thus imposes a significant burden on Texas businesses. Note that this occurs despite numerous provisions explicitly designed to reduce this burden.¹⁴ Note also that Texas is not at all unusual in this regard, as all state sales taxes include in their bases at least some items sold to businesses; however, the fraction of the total tax base accounted for by business sales in Texas is comparatively large. For example, Raymond Ring (1999) estimates that in 1989 the consumer share of the sales tax in Texas was 53 percent, in comparison to a national average of 59 percent.

The consumer portion of the sales tax base in Texas includes most consumption commodities; the main exemptions are for food for home consumption, prescription and non-prescription medicines, medical equipment, and utilities for residential use. In addition, many services—including the services to homeowners provided by owner-occupied housing—are not subject to the sales tax, although Texas, like many other states in recent years, has attempted to increase the sales tax base to include some

services.¹⁵ John Due and John Mikesell (1994, 89) describe the taxation of consumer services in Texas as “relatively extensive,” although still falling somewhat short of the coverage obtained in several other states. Similarly, Michael Mazerov (2003) reports that Texas taxes 24 consumer services out of a list of 40 potentially taxable services. (The average of the 45 states plus the District of Columbia that utilize the sales tax is 16 consumer services, but four states—South Dakota, Hawaii, New Mexico, and West Virginia—tax 37 or more of these services.) More generally, the state sales tax base, including selective excise taxes, is of average comprehensiveness, as Texas ranks 19th among the 45 states that levy a state sales tax in the degree of comprehensiveness of its sales tax base (Texas Comptroller of Public Accounts 1995).

The Franchise Tax

The general business tax in Texas is the franchise tax, which raised revenues of \$1.9 billion in 2002, or 7.4 percent of total state tax revenue. The range of taxable businesses is fairly broad, as it includes not only standard subchapter-C corporations but also subchapter-S corporations and limited liability companies (LLCs); however, sole proprietorships, all partnerships (including limited liability partnerships), and professional associations are not subject to the tax. A generous small business exemption is provided, as businesses are not taxable until their gross receipts exceed \$150,000.

The tax is assessed on all taxable businesses that have a Texas charter, as well as on out-of-state businesses that are determined to have a sufficient connection (nexus) to the state. Nexus is established if a firm has a physical presence in the state (payroll, property) or meets various other conditions, including serving as a general partner of a partnership doing business in Texas, hiring independent contractors to promote sales (under federal law, the existence of sales alone is not sufficient to trigger nexus), providing services in the state, or acting as a franchiser. No attempt is made to consolidate the accounts of related entities; that is, each individual legal entity is taxed separately.¹⁶

In general, the franchise tax equals the larger of (1) 0.25 percent of taxable equity capital (a deduction for debt is allowed, so the tax base is net assets), or (2) 4.5 percent of net taxable “earned surplus,” which is roughly defined as the corporation's net taxable income reported under the 1996

version of the federal corporate income tax, plus compensation paid to officers and directors of corporations that have more than 35 shareholders, less various tax credits (e.g., credits designed to promote economic development or research and development). Roughly three-quarters of the revenues raised by the franchise tax comes from firms paying tax according to the latter income-based calculation method rather than the former wealth-based approach. Thus, in a very real sense, Texas has a corporate income tax, as most of the revenues under the current state franchise tax are currently obtained under the income-based or earned surplus component of the tax, with the tax on net assets effectively serving as an alternative minimum tax. However, the 4.5 percent tax rate applied to the income-based component of the tax is among the lowest of rates in the states that have corporate income taxes (Texas Taxpayers and Research Association 2003, 47). Note that the inclusion in the tax base of compensation of officers and directors has an effect similar to that of a state personal income tax at a 4.5 percent rate on such individuals (who may not be residents of the state) with no deductions or exemptions.

For firms operating in Texas and in other states, no attempt is made to use “separate accounting” to calculate directly either the profits or the taxable capital attributable to activities in the state. Instead, part of the analogous total national tax base of a business is “apportioned” to the state using a "single-factor" formula, where that factor is in-state gross receipts, including all sales as well as income attributable to intangible assets. For example, taxable profit under the income-based component of the franchise tax equals a corporation’s total national profits (as calculated under the 1996 federal corporate income tax and then adjusted as described above) times the fraction of the firm's total gross receipts determined to occur in the state.^{17 18}

Criteria for Evaluating the Texas State Tax System

Public finance economists typically use three primary criteria in evaluating alternative tax systems: efficiency, equity, and simplicity. The efficiency criterion focuses on the extent to which taxes distort decisions made by businesses, individuals, and governments; an efficient tax system will also be

conducive to economic growth in the state. The equity criterion attempts to establish whether a tax system is “fair,” although the definition of a fair tax system is inherently subjective. The simplicity criterion focuses on the relative costs of administering, enforcing, and complying with alternative tax systems.

In addition, because Texas, like most states, is subject to a balanced budget constraint, another important criterion is revenue stability, both with respect to economic growth (i.e., does the tax base grow proportionately with the state economy?) and with respect to the business cycle (i.e., is the tax base relatively stable during a business downturn?). Finally, a critical issue in Texas is whether a state tax paid by individuals is deductible against the individual’s federal income tax liability since, under current federal income tax law, state and local income and property taxes are deductible but sales and excise taxes are not. Each of these criteria is considered in detail below.

Efficiency

Economists typically focus on efficiency comparisons of alternative tax systems—that is, their relative effects on the efficiency of the allocation of resources (broadly defined) within a state. Potential state taxes can be classified under two general headings, efficiency-enhancing taxes and efficiency-reducing taxes.

Efficiency-Enhancing Taxes

A few types of taxes actually improve the efficiency of resource allocation within an economy, at least if designed appropriately, and are therefore highly desirable sources of tax revenue. The most important of these is a benefit tax, a tax that is explicitly and directly tied to the benefits received by individuals or businesses from state and local public services. Public choice theorists emphasize that benefit taxes are highly desirable on efficiency grounds because they require that the beneficiaries of public services pay for such services. As a result, benefit taxes play an efficiency-enhancing role in the public sector analogous to the role of prices in the private sector, ensuring that voters are aware of the

true costs of providing public services and do not support expansion of public services simply because they receive the benefits while the costs are financed by others. In addition, the demand for public services under a system of benefit taxes provides an indication of individual preferences for such services, information that is otherwise very difficult to obtain. Benefit taxation thus greatly increases the likelihood that the allocation of resources between the public and private sectors, as well as within the public sector, will be efficient.¹⁹ Finally, benefit taxes on businesses ensure that businesses pay the costs of the inputs they use, both public and private, in the production process—an essential condition for efficiency in resource allocation.

The primary example of a benefit tax is a direct user charge such as a toll charge, a fee for government services rendered, or an admission charge to a government-run facility. Indirect user charges, such as the gasoline tax as a proxy for the use of state-provided and maintained roads, are an approximation to a benefit tax. Other taxes may be loosely related to benefits received; in particular, the local property tax can under certain circumstances be viewed as a benefit tax or an approximation to a benefit tax.

In practice, however, the use of direct benefit taxes is fairly limited despite their considerable appeal. In some cases, benefit taxes are not feasible because the beneficiaries of public services cannot be identified or precluded from enjoying the public service if they do not pay the tax, or because the costs of administering benefit taxes is unreasonably high. Moreover, benefit taxes may be viewed as inequitable, and clearly cannot be used to finance state and local expenditures that are explicitly intended to be redistributive.

Another important example of an efficiency-enhancing tax is a tax on activities that generate external social costs or “externalities.” Externalities arise when the actions of a business affect others but the business does not take these effects into account, either directly or indirectly through the price system, in making its production decisions.²⁰ The most prominent example of a negative externality arises when a business generates harmful pollution as a byproduct of its production processes. In this case, appropriately structured taxes on emissions of environmentally harmful pollutants—which would

consider the social costs imposed by pollution as well as the interactions between the emission tax and other existing taxes—can improve economic efficiency by reducing production of pollution-intensive products or spurring firms to adopt less pollution-intensive production techniques.

Such external social cost arguments are also sometimes used to justify special excise taxes on alcohol and tobacco products. The rationale is that consumption—or at least excessive consumption, especially in the case of alcohol—of these products leads to external social costs (for example, health care costs or personal and property damage costs that are not covered under insurance policies purchased by the consumers). However, empirical evidence suggests that it is difficult to justify current levels of alcohol and tobacco taxes in Texas (and other states) on these grounds.²¹ Thus, external effects provide a rationale for some use of these taxes, but it would be difficult to support significant increases in taxes on alcohol and tobacco on these grounds. On the other hand, alcohol and tobacco taxes increase the prices of these commodities and thus will reduce their consumption, especially among youths (who in some cases may be deterred from beginning consumption of tobacco and alcohol). These results may be desirable from a social standpoint, independent of any negative consumption externalities.

Finally, the Texas state lottery can arguably be justified as an efficiency-enhancing source of tax revenue. That is, given legal restrictions against private lotteries, the state has a monopoly on sales of lottery games. It can exploit this monopoly position by extracting as tax revenue some of the gains to consumers that arise from the introduction of a legal, state-operated lottery—coupled with continued prohibition of private lotteries—and efficiency will still be enhanced, relative to the situation in which no legal lotteries exist. On the other hand, given the existence of the lottery, state lottery taxes can also be viewed as an excise tax on state provision of lottery “services.” Under this interpretation, lottery taxes inefficiently distort consumer purchases of these services, unless the tax is designed to offset negative externalities associated with the provision of lotteries, such as an increase in compulsive gambling or the offense taken by some Texas citizens at state provision and encouragement of gambling.

Efficiency-Reducing Taxes

Unfortunately, the revenues that could be raised from efficiency-enhancing taxes—even if more of their revenue potential were realized than currently—are not sufficient to meet the revenue needs of the state. Accordingly, Texas, like all other states, must rely on alternative taxes that generate significant amounts of revenue but also distort a wide variety of economic decisions and are thus efficiency-reducing taxes, a classification that includes all of the major current and proposed alternative sources of tax revenue in the state. Efficiency-reducing taxes are problematic because by distorting economic decision-making they distort the allocation of resources in the state, reducing the productivity of the state's scarce factors of production and inducing inefficient consumption choices. The resulting social costs of taxation—which are in addition to the obvious loss of income associated with taxation—are referred to as the “excess burden” or “efficiency cost” of taxation.

Several general points about the excess burden associated with taxation should be noted. First, the excess burden of a tax increases with the extent to which an individual or a firm can avoid paying the tax by changing behavior—that is, with the “elasticity” of demand or supply. Second, excess burdens increase approximately with the square of the relevant tax rate (for example, a doubling of the tax rate quadruples the excess burden), so that high tax rates are especially costly. Third, the excess burden of a tax can be large; for example, Jane Gravelle and Laurence Kotlikoff (1993) estimate that the excess burden of the federal corporate income tax due to its diversion of resources from the corporate to the non-corporate sector is more than one dollar per dollar of revenue raised. More generally, nearly all taxes—including sales and income taxes, corporate income and franchise taxes, and both residential and nonresidential (that is, commercial and industrial) property taxes—distort economic decision-making and thus impose some level of excess burden on the economy. Thus, an efficient tax or tax system is defined not as one that eliminates excess burdens, but rather as one that minimizes excess burden relative to all alternative taxes or tax systems.

From the perspective of a single state—to a much greater extent than from the perspective of the nation—the most important inefficiencies caused by the tax system reflect tax-induced out-migration of mobile factors of production, especially capital and highly skilled labor, and tax-induced diversions of sales to other jurisdictions, including purchases from remote vendors made over the Internet or via mail order.²² Indeed, any state, even one as large as Texas, is essentially a “small open economy” in the sense that it is too small to have much if any effect on the rate of return to capital or the prices of goods that are determined in national or international markets. In other words, the elasticity of supply of capital to the state, as well as the elasticity of demand for goods that are traded on national or international markets, are both very high, so that taxes on capital or tradable goods will be highly inefficient. As will be discussed in detail in the following section, one can argue that such taxes are thus counterproductive from the viewpoint of Texas residents.

State taxes distort a wide variety of other decisions made by individuals and firms, so that excess burdens in many areas must be considered in evaluating the overall efficiency properties of alternative tax structures. Most of the academic literature on tax-induced inefficiencies has focused on three areas. The first is distortions of labor supply decisions—that is, distortions of the “labor-leisure” choice. In particular, consumption taxes, such as sales taxes or consumption-based VATs, as well as taxes on labor income, such as income or payroll taxes, distort decisions regarding how much labor to supply and whether or not even to participate in the work force. The second area is distortions of saving decisions, or the “present-future consumption” choice. Indeed, at the national level, the debate regarding replacing the income tax with some form of consumption taxation has often centered around the fact that income taxes distort savings decisions while, at least under certain conditions, consumption taxes do not (Zodrow and Mieszkowski 2002). The third area of emphasis has been the distortions of investment decisions caused by source-based (that is, production-based) taxation of businesses, such as corporate income taxes and taxes on nonresidential property. In particular, business taxes distort both the level and the composition (choices across asset types and business sectors) of business investment.²³

Since much of the franchise tax in Texas is based on the federal corporate income tax, this characterization also applies to that tax.

Taxes also distort a wide variety of other decisions. Particularly important at the state level are distortions of the choice of organizational form. Since the franchise tax in Texas applies to corporations including S-corporations as well as LLCs but not to sole proprietorships, partnerships, and business associations, it provides an inefficient tax bias toward the latter forms of business organization. Taxes may also distort decisions regarding risk-taking, especially if the tax treatment of risk-taking is asymmetric.²⁴ Such asymmetric treatment of risk—for the firms for which it applies—is likely to create a tax bias against risk taking. In addition, differential treatment of debt and equity finance as occurs under the Texas franchise tax (and virtually all corporate income taxes) distorts decisions regarding the financial structure of a firm, as well as decisions regarding the level of dividends paid to shareholders.²⁵ At the individual level, differential taxation of consumption commodities (as occurs under the Texas sales tax both due to rate differentials and because business inputs are taxed in a haphazard manner) biases individual consumption decisions toward the tax-favored goods. Relatively high sales tax rates also create a tax bias for purchases over the Internet and via mail order, to the extent that such purchases avoid the use tax.²⁶ Taxes also distort individual decisions regarding investments in education and training, although the direction of these distortions depends on the details of the tax structure.

Finally, taxes can distort political decisions regarding the level and composition of public services. Non-benefit-related taxes create situations in which individuals who benefit from public services but don't pay a fair share of their cost support inefficient overspending on public services. By comparison, benefit taxes promote efficiency in political decision-making as individuals must pay for the services they receive. In addition, the "visibility" of a tax may affect public spending levels, as there may be a bias toward excessive government spending to the extent the costs of financing government programs are "hidden." In general, business taxes and indirect taxes, such as the sales tax or a value-added tax are perceived to be less visible than taxes assessed directly on individuals, such as a personal income tax. A related point is that the use of taxes on mobile factors of production, especially capital,

and to a lesser extent highly skilled labor, can result in underspending, as state and/or local governments are reluctant to impose a tax on highly mobile factors of production. On the other hand, to the extent that the public perceives that state taxes on businesses can be exported to the residents of other states, overspending is the likely result—although the previous discussion suggests that opportunities for such tax exporting are limited. Finally, taxes that increase less or more than proportionately with the economy may result in a systematic tendency for expenditure levels that are too low or high, respectively, at least in the short run before the appropriate adjustments can be made in the tax system.

Equity

Discussions of the equity properties of alternative tax systems are inevitably quite contentious, as perceptions of fairness are inherently subjective. Nevertheless, it is possible to provide some structure to discussions of tax equity. In particular, economists typically evaluate alternative tax systems in terms of two competing principles of equity: the benefit principle and the ability-to-pay principle.

The Benefit Principle

The benefit principle defines an equitable tax system as one under which individuals (and businesses) pay tax—a “benefit tax” or “user charge”—in accordance with the benefits they receive from public services. Thus, under a benefit tax system, redistribution is undesirable by definition, as the benefit principle requires that taxpayers pay for the services they utilize. Underlying the benefit principle is the implicit assumption that the existing distribution of income is socially acceptable. From the perspective of Texas residents, this can be interpreted as assuming that the income redistribution that occurs at the national level is sufficient to achieve an equitable distribution. Under these circumstances, the benefit principle can be applied to state public services without concern about the distributional implications of the resulting tax burden. This interpretation is consistent with the consensus view that the national government should bear sole or at least primary responsibility for income redistribution.²⁷

As noted above, benefit taxation is also highly desirable from the perspective of economic efficiency, especially in terms of facilitating efficient political decision-making with respect to the allocation of resources between the private and public sectors and within the public sector. In addition, for public services provided to businesses, benefit taxes ensure that the government is reimbursed for providing the firm with productive inputs — a necessary condition for efficiency in both production and consumption (as producer and consumer costs should reflect all of the public as well as private costs of production). However, in practice, it is often quite difficult to apply the benefit principle, as determining benefits received as well as structuring taxes to correspond to those benefits is problematic.

As noted above, the primary examples of benefit taxes are direct user charges such as toll charges, fees for government services rendered, and admission charges to government-run facilities, or indirect user charges, such as the gasoline tax as a proxy for the use of state-provided and maintained roads. In addition, although economists still debate the issue, most agree that some aspects of the local property tax can be considered a benefit tax.²⁸ For purposes of this discussion, I will assume that the business portion of the tax is primarily a tax on capital and the portion of the tax that falls on residential housing is some combination of a tax on housing capital and a benefit tax for local public services received.

The Ability-to-Pay Principle

A very different concept of tax equity is provided by the ability-to-pay principle. Under this approach, taxes are considered largely in isolation from public services, which are assumed to be determined independently of the tax system or simply assumed to be fixed.²⁹ Given the level of public services, the ability-to-pay approach attempts to determine the appropriate distribution of the tax burden. Proponents of the ability-to-pay approach evaluate tax systems in terms of two critical concepts. First, “horizontal” equity requires that individuals with equal ability to pay tax should pay the same tax. Second, “vertical equity” requires that individuals with more ability to pay tax should pay more tax. Beyond this characterization, however, opinions differ greatly on what vertical equity

requires, with most discussions focusing on whether a tax system is proportional, regressive, or progressive with respect to ability to pay.³⁰

Applying these notions of horizontal and vertical equity naturally requires accurate measures of tax burden and ability to pay tax. Although most analysts have historically compared annual tax burdens to annual income, this approach has recently been called into serious question. In particular, some researchers have argued that annual income is a poor measure of ability to pay tax, and that some longer term measure of taxpaying capacity—ideally, lifetime income—is a superior index of taxpaying capacity. Two arguments support this position, both of which are related to the empirical observation that individual consumption tends to be considerably more stable over time than individual income.

The first argument is based on the idea that individual consumption behavior follows the “permanent income hypothesis,” under which individuals make their consumption decisions based on an estimate of their “permanent” income, defined as average income over a long time horizon, so that consumption fluctuates much less than income. For example, individuals with a temporary increase in income will save much of that increase, spreading the increase in income over consumption in many periods. Similarly, individuals who experience a temporary decrease in income will draw down their savings to maintain their consumption levels. If one accepts this view, an estimate of permanent income is a much better measure of ability to pay than annual income.

The second argument for a longer term or even lifetime approach to measuring ability-to-pay taxes draws on the “life-cycle” model of individual behavior. This model posits that individuals go through three phases of consuming and saving during their lives: consuming and borrowing in their early years, saving to repay debt and finance retirement consumption during their peak earning years, and financing consumption (and perhaps the making of bequests) by drawing down their savings during their retirement years. As in the case of the permanent income hypothesis, the life-cycle theory implies that some estimate of lifetime income is a better measure of ability to pay than is annual income.³¹

For purposes of this discussion, the most important implication of these arguments is that annual measures of tax burden overstate the regressivity of consumption taxes and the progressivity of income

taxes.³² Numerous empirical studies, which either use annual consumption as a proxy for lifetime income or use longitudinal data to construct an estimate of lifetime income, support these arguments. For example, several studies have found that sales taxes or other consumption taxes are roughly proportional with respect to lifetime income, or roughly proportional except for the highest income classes where they become somewhat regressive.³³ Although the lifetime approach is still controversial (Barthold 1993; Reschovsky 1998a), it has considerable theoretical and intuitive appeal, and the studies noted above have made considerable progress in making the concept operational from an empirical standpoint. Indeed, even tax burden incidence studies based on annual income often make various adjustments in an ad hoc attempt to correct for some of the problems noted above.³⁴ Accordingly, the following analysis will emphasize lifetime income considerations in evaluating the equity properties of alternative sources of tax revenue for Texas. Nevertheless, it must be noted that most incidence analyses are instead conducted with respect to annual income. A standard result of such studies is that the sales tax is fairly regressive. This includes the analysis of the Texas tax system conducted by the State Comptroller, who finds that the burden of the sales tax as a percentage of annual income varies from 10.7 percent for the lowest decile³⁵ and 5.0 percent for the second lowest decile to 2.4 percent for the ninth decile and 1.6 percent for the top decile.^{36 37}

In addition to the issue of the appropriate degree of tax progressivity, a central aspect of vertical equity is the treatment of very low income individuals. On one view, fairness requires that the very poorest members of society should be exempt from contributing to the financing of public services. This view clearly underlies the federal personal income tax structure, as the standard deduction and personal exemptions imply that income roughly equal to that associated with the poverty level is tax free. An alternative view of tax equity is that all citizens, regardless of income level, should make at least some contribution to financing public services. This view presumably implies that proportional taxation of low income individuals, with few if any exemptions or deductions, is equitable.

Finally, another dimension of equity is transitional equity, which refers to reform-induced changes in wealth that occur when the tax system is changed unexpectedly. Such wealth changes can

be viewed as arbitrary and capricious and thus undesirable from a social perspective.³⁸ Most of the proposed reforms of K-12 school finance in Texas involve dramatic reductions in local property taxes. On an annual basis, such reforms would on average not result in dramatic changes in the incidence of state tax burdens. The burden of the property tax in a single state is probably borne roughly in proportion to consumption, and is thus somewhat regressive with respect to annual income and roughly proportional with respect to lifetime income; reduced property taxes would under most reform proposals be replaced with taxes that, as will be discussed below, have a similar incidence.³⁹ Nevertheless, the changes in the property tax would be likely to result in significant changes in property values, which would fully or at least partially reflect or “capitalize” not only the current but also the future fiscal effects of any reform package.⁴⁰ To the extent that property taxes were reduced in general, all property values would increase due to these capitalization factors. However, there would also be important differential effects across local jurisdictions. In particular, residential properties in areas that pay relatively high taxes in comparison to benefits received (e.g., those in the ten percent of Texas jurisdictions that are currently “property-rich” districts under the state’s Robin Hood plan for redistributing property tax revenues) would see an even larger increase in their property values. By comparison, residential properties in areas that pay relatively low taxes in comparison to benefits received (e.g., those in the ninety percent of jurisdictions that are classified as “property-poor”) would see a smaller increase in their property values.⁴¹ Thus, an inherent characteristic of the school finance reforms being contemplated is that the reform would increase property values, especially those in property-rich districts. Indeed, since the incidence of most of the tax substitutions being considered would be roughly proportional to lifetime income, these wealth effects of reducing statewide property taxes are arguably the most important distributional effects of school finance reform.

Simplicity

The third criterion commonly used by public finance economists to evaluate alternative tax systems is simplicity. A tax system that is relatively simple will minimize the amount of scarce resources

that must be used in both compliance and administration. Thus, like the efficiency criterion, simplicity requires that revenues be raised with minimal additional or indirect costs imposed upon the economy.

In the state context, it is important to note that simplicity must be defined in terms of the incremental costs associated with administering and complying with the state tax system. For example, if Texas were to adopt a state personal income tax based directly on federal personal income tax liability, administrative and compliance costs would be relatively low, even though the federal tax is notorious for its complexity.

It should also be noted that high compliance costs are disproportionately burdensome to small and emerging firms that typically do not have easy access to tax accounting expertise. Thus, a complex state tax system creates an undesirable tax bias against the formation of new firms in the state.

Revenue Stability

Since the state government in Texas, as in most states, is subject to a balanced budget constraint, revenue shortfalls are highly problematic from both a political and an economic standpoint, especially since tax changes enacted in response to urgent fiscal crises often represent tax “deform” rather than improvements in the tax structure. Thus, revenue stability is a desirable characteristic of the state tax system. The criterion of revenue stability has two dimensions.

First, revenues should increase roughly proportionately with the growth of the state economy, or at least at the rate of inflation. (In the former case, the need for government services is assumed to grow proportionately with income, while in the latter case, the implicit goal is a constant level of real government expenditures.) An often-noted problem in Texas has been that the growth in the sales tax base has not kept pace with growth in the state economy, resulting in periodic revenue shortfalls.⁴² This trend seems likely to continue, especially as an aging but wealthy society increases its consumption of largely untaxed health care, personal care, and leisure-related services (Mazerov 2003). Nevertheless, the disproportionate growth of services is not likely to be as significant as it has been in the past.⁴³ Thus, the magnitude of the revenue stability problem associated with exempting many services from the

sales tax is declining over time, although the revenue cost associated with this practice continues to increase.⁴⁴

A second potential criterion is that revenues should be roughly constant over the business cycle in order to minimize fluctuations in essential public services. In general, this argues against the taxation of business income and personal capital income, which are relatively cyclical, and for the taxation of personal consumption, especially of essential goods, which as noted above, tends to be more stable than personal income. At the same time, the criterion of revenue stability over the business cycle is less important to the extent that the Economic Stabilization Fund in Texas is well-funded and well-managed.⁴⁵ In addition, note that some reduction in public service consumption during an economic downturn may be desirable in order to mitigate cyclical reductions in private consumption.

Deductibility

Finally, an especially important factor in debates about Texas taxes is the deductibility of personal state taxes against individual federal income tax liability. Since the passage of the national Tax Reform Act of 1986, state sales taxes have not been deductible although income and property taxes continue to be deductible, creating a clear and undesirable federal tax bias against state level use of the sales tax. Texas is one of the few U.S. states that does not utilize a personal income tax and thus has no deductible state-level taxes. Thus, an obvious deterrent to replacing local property taxes with revenues raised from the state sales tax is that a fully deductible tax would be replaced with a non-deductible tax. The State Comptroller estimates that on average the tax advantage attributable to deductibility of local property taxes is 14 percent; that is, the average cost to Texans of raising one dollar of property tax revenues is 86 cents, once the benefits of deductibility are taken into account. This implies that any proposal that involves replacing property taxes with sales taxes starts out with an inherent 14 percent disadvantage, relative to proposals under which the replacement tax would be deductible.⁴⁶

The current situation is clearly biased against states like Texas that rely heavily on the sales tax, and represents an unwelcome intrusion by the federal government on state decisions regarding the mix

of taxes used to finance state and local services. Members of the Texas U.S. Congressional delegation, in conjunction with politicians from several other states, are currently attempting to reverse this situation by passing a reform that would reinstitute federal deductibility of state sales taxes. However, the likelihood of success in this area seems modest, especially in light of current projected federal budget deficits. Moreover, the proposals currently being discussed seem especially unlikely to be successful, as they would require that the residents of any given state receive a deduction for either state sales or income taxes, but not both. The net result would be that the residents of Texas and other states that do not use a state income tax would be able to deduct all of their state-level taxes, while the residents of most other states, which use some combination of sales and income taxes, would only receive a partial reduction. Such proposals are certain to spark determined political opposition from the states that benefit from the current status quo.

Evaluating Tax Revenue Options in Texas

This section will use the criteria described above to evaluate alternative sources of state tax revenue in Texas. The analysis will proceed in two steps. The first will define some general directions for Texas tax policy and reform of the current system. These general directions, which arguably reflect a consensus on state tax policy although they are by no means uncontroversial, will be used as the basic framework for the subsequent analysis in the balance of the paper. The next step in the analysis will then be to evaluate a wide variety of specific tax reform options within this basic framework, using the five criteria detailed in the previous section.

General Directions for Reform

The discussion thus far suggests several general directions for reform of the Texas state tax system. These are considered in turn below.

Expand Benefit Taxes

A clear implication of the previous discussion is that benefit and environmental taxes should be used to the maximum extent feasible at both the state and local levels. This is particularly true for benefit taxes for public services provided to businesses, especially to the extent that the state follows the recommendation, made below, to reduce non-benefit taxation of businesses.

The most obvious form of benefit taxation is user charges. Some empirical data suggest that Texas is fairly average in the extent to which it relies on user charges. Nevertheless, these data suggest some potential for increasing the extent to which the state relies on user charges. Specifically, in 1999 the ratio of a broad definition of user charges to total state and local own-source revenue in Texas was 0.297, with the state ranking 18th out of the 50 states in this category. By comparison, the state with the highest ratio is Tennessee (0.471).⁴⁷ Thus, if Texas were to raise its utilization rate to that of Tennessee, total state and local user charges would rise by roughly 59 percent; in 1999 this would have implied an increase in total state and local user charge revenue of \$13.9 billion, from \$23.5 billion to \$37.4 billion. Although this calculation is obviously a very rough one that ignores a variety of factors, including especially differences across states in expenditure mix, it does suggest that it would be worthwhile to investigate the extent to which reliance on user charges by the state government—as well as by local governments, which provide many of the services most amenable to the implementation of user charges—could increase.^{48 49}

Note that user charges can of course also be used to finance K-12 education directly, although the use of such charges has never played a significant role in school finance, especially if one excludes school lunches (Wassmer and Fisher 2002). In addition to school lunches, these fees typically take the form of charges for tuition, textbooks, transport, and student activity and other fees. Robert Wassmer and Ronald Fisher note that on both efficiency and equity grounds the strongest case for user fees in K-12 education is for the provision of services, such as meals, transport, after-school care, and arguably sports and arts programs, which are auxiliary to the primary educational mission of local schools.

Wassmer and Fisher report that the fraction of own-source revenue accounted for by user fees in Texas (6.5 percent) is somewhat above the national average (5.4 percent), although well below the top ten states (which typically vary from 10 to 15 percent).⁵⁰ Thus, there may be some limited potential for increased funding of K-12 education in Texas through the use of higher user fees, although the user fee approach is unlikely to generate much political support.⁵¹

Finally, note also that businesses receive some benefits from the provision of quality K-12 education. For example, businesses can more easily attract high quality workers if the local education system is of high quality, and may receive other benefits from an educated local population, beyond those that are fully reflected in business costs as higher wages.⁵² However, these benefits to business would seem to be small relative to the benefits enjoyed by the direct consumers of education (Taylor 1999). Thus, the benefit principle provides only limited support for the taxation of business property to finance education expenditures, so that most school taxes applied to businesses should be viewed as non-benefit taxes applied to capital.⁵³

Limit Progressivity and Minimize Tax Burdens on the Very Poor

As discussed above, the appropriate degree of progressivity of a tax system is always a controversial issue. This is especially true at the national level, although reforms in recent years in the U.S. and around the world suggest that social tastes for highly progressive marginal rate structures have diminished in recent years. In any case, the question of the optimal progressivity of the tax system is somewhat easier to resolve at the state level for two reasons.

First, progressive marginal tax rates at the federal level imply that significant redistribution through the tax system occurs independently of state tax policy, thus reducing any need for redistribution at the state level. For example, Leonard Burman and Mohammed Adeel Saleem (2004) estimate that the average tax rate for a couple filing jointly with two children varies from -40 percent at an adjusted gross income (AGI) of \$10,000,⁵⁴ to 8.4 percent at an AGI of \$100,000, to nearly 24 percent for households with an AGI of \$1,000,000.⁵⁵

Second, concerns about individual mobility suggest that a highly progressive state tax structure is likely to be counterproductive, as it would tend to drive high-income individuals out of the state and perhaps attract low-income individuals. Indeed, in a recent study Martin Feldstein and Marian Vaillant Wrobel (1998) suggest that the mobility of high-income individuals is sufficiently great that changes in gross wages will completely offset any changes in state income taxes within the space of a few years, so that states have virtually no power to redistribute income. That is, Feldstein and Wrobel argue that attempts to redistribute income at the state level will lead to an inefficient out-migration of skilled labor, increasing the wages of scarcer high-skilled labor while lowering the wages of relatively plentiful low-skilled labor. The net result is that the tax burden is ultimately borne by relatively immobile low-skilled labor (or owners of land).^{56 57} This result, which implies perfect mobility of high-skilled labor over a rather short period of time, is quite strong and has been questioned by Andrew Reschovsky (1999) who reviews the literature and concludes that it suggests that the mobility of high-skilled labor is not sufficiently great to imply that any progressivity of a state tax structure is counterproductive. Nevertheless, the possibility that a highly progressive state tax would drive out high-skilled workers to at least some extent, coupled with the historical reluctance of Texans to utilize any form of progressive personal income tax, suggests that the state should limit consideration of alternative revenue sources to roughly proportional taxes.

There is, however, one important qualification to this suggestion. Specifically, the cost of a state income tax, taking into account federal deductibility, is lower for individuals who itemize deductions, with size of the benefit proportional to the individual's federal marginal tax rate. Both marginal tax rates and the likelihood that a taxpayer itemizes deductions increase with income.⁵⁸ Thus, a modest degree of nominal state income tax progression would be required for the actual burden of a state income tax in Texas, after federal taxes, to be proportional on average. Accordingly, for the balance of this report, consideration of potential reforms will be restricted to taxes that are "roughly" proportional, which is defined to mean approximately proportional, perhaps taking into account federal income tax deductibility.

Finally, longstanding practice in Texas—particularly the exemption from sales tax of commodities considered to be consumed disproportionately by the poor—suggests a desire to minimize the burden of the state tax system on very low-income individuals. That is, there seems to be little societal or political inclination to ensure that all Texans, even those at the very bottom of the income distribution, contribute to the financing of public services in proportion to their income or consumption levels. Accordingly, the analysis in the rest of the paper will assume that equity concerns imply that the state tax burden on very low-income individuals should be minimal or even zero.

Reduce Non-Benefit Taxation of Mobile Capital

Although the case for benefit taxation of businesses is compelling, a straightforward application of the criteria presented above suggests that the rationale for additional source-based (i.e., production-based) state-level business taxes in Texas is surprisingly weak. The argument, which is based on the idea that any state can be modeled to a first approximation as a small open economy (Gordon 1986; Razin and Sadka 1991), proceeds as follows.⁵⁹

As noted previously, any state—even one as large as Texas—is not large enough in the national or world economy to appreciably affect the rate of return to capital. Instead, since capital is in the long run highly mobile, the return to capital is determined in national and increasingly international markets. This implies that, to the extent that capital is perfectly mobile, the owners of capital invested in the state will bear none of the burden of a state-level tax on capital income. Instead, capital will leave the state until the before-tax rate of return to capital invested in the state rises by enough to entirely offset the tax. This emigration of capital lowers the productivity of the fixed factors in the state: land and labor (or at least relatively immobile labor, if relatively high-income labor is also quite mobile, as discussed above). As a result, these local factors of production ultimately bear not only the entire burden of the capital income tax but also its “excess burden” or efficiency costs.⁶⁰ The implication of this analysis is that, solely from the viewpoint of Texas residents, it is preferable simply to tax local factors (land and relatively immobile labor) or local consumers directly, and thus avoid at least the excess burden of the

tax on capital income.⁶¹ Note also that the analysis implies that any progressivity suggested by state level taxation of capital income is illusory, as such taxes are shifted to local factors of production and are thus borne roughly in proportion to wage income or consumption of non-traded goods.

Not surprisingly, there are a variety of counterarguments to this rather stark proposition. A business income tax can serve an important function as a backstop to a state personal income tax (so that personal income retained at the business level does not escape taxation), but this argument is irrelevant in the absence of a personal income tax in Texas. More important, some businesses may have market power in national or international markets or earn above-normal economic profits (economic rents) for other reasons, which can, especially if the rents are tied to location in the state, be taxed without causing inefficient capital out-migration.^{62 63} Virtually all states—and indeed all countries in the international context—tax corporate income in order to capture some of these rents (Zodrow 2003a). Note, however, that the desire to tax economic rents does not necessarily imply that a state should utilize a corporate income tax (although it is by far the most common tax instrument used to achieve this goal). In particular, economic rents are also captured by the various forms of value-added taxes (VATs), as discussed below; indeed, one of the major advantages of the consumption-based versions of these VATs is that they are relatively non-distortionary since they do not tax the normal returns to capital while taxing economic rents at the full statutory rate.⁶⁴

A separate issue is that capital may not be as responsive to tax factors as suggested by the analysis presented above. Although early empirical studies were consistent with this viewpoint, the most recent (and most carefully done) work suggests that investment is in fact relatively responsive to state and local taxes (Bartik 1991, 1994; Wasylenko 1997).⁶⁵ Finally, but perhaps most important, some level of non-benefit business taxation may be indispensable politically.

These qualifications—and political realities in Texas—suggest that elimination of all non-benefit taxation of businesses is unlikely. Nevertheless, the current level of taxation of business (described above) is almost assuredly in excess of the benefits of public services received, so the balance of the report will assume that some reductions in state business taxes would be appropriate.⁶⁶ Support for this

position is provided by Taylor (2003a), who argues that the relatively high tax burden imposed on business capital in Texas has played an important role in limiting the growth of the capital stock in the state, as capital per worker in manufacturing has grown at less than half the national average rate over the period of 1990 to 1999.

Avoid Taxation Based on Gross Receipts

The final general direction for reform of the Texas tax system to be used in this report is that the state should avoid the introduction of any new taxes on gross receipts—including proposals for so-called “license fees” that are based on gross receipts—and reduce reliance on taxes with economic effects that are similar to those of gross receipts taxes. The primary rationale for this position is based on efficiency considerations, but other factors are relevant as well.

On efficiency grounds, gross receipts taxes are problematic because they are primarily taxes on business inputs and such taxes are in general a relatively inefficient source of revenue.⁶⁷ Moreover, gross receipts taxes are a particularly undesirable form of taxation of business inputs, because they result in highly inefficient tax pyramiding, as multiple layers of taxation are applied to those products whose inputs happen to be transferred among firms at various stages in the production process. Under these circumstances, even a modest tax on gross receipts can compound into a high effective tax rate. The result is a haphazard pattern of effective tax rates across business inputs, which inefficiently distorts firm decisions regarding input choices. The resulting increases in the effective tax rate on capital income also drive capital out of the state (as stressed above) and hamper the export prospects of Texas businesses that must compete with firms in states that have tax systems that impose lower tax burdens on business inputs. In addition, the tax pyramiding attributable to gross receipts taxes creates a tax bias toward vertical integration (organizing the production process so that multiple steps are carried out within a single firm), as firms attempt to reduce their exposure to the gross receipts tax. This reduces the efficiency of resource use in the state, especially if there are economies of scale in producing some of the inputs to the production process. Note also that a bias toward vertical integration implies a bias against

small firms, especially those that might be able to provide low cost services to larger firms but would operate at a cost disadvantage (relative to in-house production) due solely to the tax. Moreover, to the extent that tax pyramiding is shifted forward as higher consumer prices (e.g., for locally produced and consumed goods), it results in a haphazard pattern of consumer price distortions that inefficiently distort consumer decisions. Finally, it must be emphasized that, as described above, the sales tax and the franchise tax in Texas have significant gross receipts components. Thus, a new gross receipts tax would exacerbate existing distortions, so that its efficiency cost would be relatively high.

Gross receipts taxes are generally undesirable in terms of other tax criteria as well. To the extent they are shifted forward as higher prices, gross receipts taxes are inequitable since they penalize those individuals who prefer to consume highly taxed goods. Since they impinge to a large extent on business inputs, the revenues of gross receipts taxes tend to be fairly cyclical (although they do tend to grow proportionately with the economy). A gross receipts tax is also a “hidden” tax, especially since the portion that is applied to business inputs is relatively high, and thus likely to promote inefficiency in political decision making. The primary advantage of a gross receipts tax is that it is relatively simple, in terms of both compliance and administration. This simplicity is the main reason that gross receipts taxes are popular in the developing world. However, in developed countries in which most businesses have well functioning accounting systems (and indeed must have such systems to comply with the federal income tax), this advantage is minimal and far outweighed by the costs described above. Finally, it should be noted that the relatively low nominal tax rate that obtains under a typical gross receipts tax is not an advantage. Once tax pyramiding is taken into account, the effective tax rate that occurs under even a low-rate gross receipts tax can be quite high. Moreover, a low nominal rate can be used to create the artificial perception of low-cost public services and thus create a bias toward undesirable over-expansion of the public sector. Thus, on balance, a tax on gross receipts is an unusually poor tax instrument, and Texas would be wise to avoid the introduction of new gross receipts taxes and reduce reliance on existing taxes that share the characteristics of gross receipts taxes.

An Evaluation of Specific Tax Reform Proposals

A wide variety of specific tax reforms is evaluated in this section in terms of the tax criteria detailed above and in light of the general directions for reform specified in the previous section. The analysis begins by discussing some modest reforms of the existing system, turns next to a number of more sweeping reforms of the existing system, and concludes by examining several new forms of taxation.

Broadening the Sales Tax Base

As the largest single source of state tax revenue, the general sales tax is an obvious source of additional state tax revenue. The State Comptroller estimates that an increase in the state sales tax rate of one percentage point (to 7.25 percent) on the existing base would increase annual revenues by \$1.9 billion. If this were accompanied by a one percentage point increase in the motor vehicles tax rate (also to 7.25 percent), the revenue increase would be \$2.3 billion. However, such a rate increase would result in Texas having the highest sales tax rate in the nation, and its rate would be significantly higher than those in neighboring states. (Texas's current state sales tax rate of 6.25 percent is the eighth highest among the 45 states that utilize the sales tax, with Tennessee, Mississippi, and Rhode Island topping the list with a rate of 7.0 percent. Texas's neighboring states of Arkansas, Louisiana, New Mexico, and Oklahoma currently have state sales tax rates that range from 4.0 to 5.125 percent.) As a result, considerable interest has been expressed in avoiding rate increases and instead broadening the base of the existing sales tax (or perhaps applying a relatively moderate rate increase to a broadened base).⁶⁸ The evaluation of such an approach depends critically on the nature of the base broadening being envisioned, specifically on whether the goods and services that are newly included in the base are consumed by individual consumers or businesses.⁶⁹

Consumer Goods and Services

In general, expanding the base of the Texas sales tax to include a wider variety of consumption goods, especially consumer services, would be desirable. The primary caveats are that base expansion should be avoided for goods or services for which administrative costs are prohibitively high,⁷⁰ or for goods that are deemed to be social “merit goods” that should be exempt from tax on political grounds, such as education, health care, and certain other government services. As described above, Texas is somewhat above average in the extent to which it taxes consumer services, but considerably below those states that most comprehensively tax consumer services. Thus, a wide variety of consumer services could potentially be included in the Texas sales tax base.⁷¹

Estimates of the revenue gains from taxing services suggest they would be significant, although it is difficult in some cases to separate the revenues attributable to taxing consumer services from those due to taxing business services. For example, the State Comptroller estimates that in 2002, sales tax revenues would increase by roughly \$0.9 billion (6.2 percent of total sales tax revenues of \$14.5 billion) from bringing the following consumer services into the sales tax base: labor used in residential construction (as a proxy for taxing housing services); residential repair and remodeling services; barber shop and beauty salon services; funeral services; child day care; miscellaneous personal services; automotive maintenance and repair; car washing services; travel arrangement services; and interior design services.⁷² At the same time, this figure represents only roughly 21 percent of the Comptroller’s estimate of the total revenue that could be obtained from taxing a wide variety of services, including business (including medical, legal, and accounting) services, educational services, and labor used in nonresidential construction (\$4.3 billion).⁷³ Thus, as has been observed in other states, the vast majority of currently untaxed services are either business services that should not be taxed under a consumption-based tax or services that are unlikely to be taxed for social reasons (Hendrix and Zodrow 2003).

The case for expanding the base of the sales tax to include as many consumer goods as possible can be made on many fronts. On efficiency grounds, many—although by no means all—economists

argue that taxation on the basis of consumption is inherently preferable to taxation on the basis of income. The basic arguments are that consumption taxes do not discourage individual saving, do not create tax disincentives to investment, and avoid many of the complexities associated with measuring real income accurately. By comparison, income taxes increase the price of future consumption and thus create a disincentive for saving and distort both the level and (typically) the allocation of investment, and attempts to measure income accurately, especially in the presence of inflation, account for much of the complexity of the current federal income tax.⁷⁴ Although these arguments are most important at the national level, state taxes based on consumption avoid exacerbating the problems associated with the federal income tax. However, the advantages of using a consumption-based tax system at the state level can be obtained only if Texas is in fact administering a tax that has a broad-based measure of consumption as its base. In addition, uniform or neutral (rather than differentiated) taxation of all consumption expenditures is likely to be relatively efficient.⁷⁵ Note also that a uniform tax on consumption goods is a relatively “visible” tax (especially relative to a tax on businesses) and thus, as discussed above, tends to promote efficiency in political decision-making. Accordingly, the analysis will assume that a “neutral” tax system that taxes all consumer goods uniformly is desirable on efficiency grounds to reduce distortions of consumer decisions, and that a movement toward greater neutrality by expanding the sales tax base to include more consumer goods, including currently untaxed consumer services, will generally improve economic efficiency (Hatta 1986). In the especially relevant case of the treatment of consumer services, some empirical support for this proposition is provided in a recent work by David Merriman and Mark Skidmore (2000), who conclude that perhaps one-eighth of the recent increase in the relative size of the service sector is attributable to sales tax differentials favoring that sector.

On horizontal equity grounds, taxing a broader base of consumer goods is also desirable because it avoids discriminating against individuals whose tastes favor taxed goods. In terms of vertical equity, expanding the tax base may reduce the regressivity of the sales tax (with respect to annual income) if the newly taxed goods tend to be disproportionately consumed by the rich. This could be the

case with many consumer services, although empirical evidence on this point suggests that this effect will be small (Siegfried and Smith 1991; Due and Mikesell 1994). A more difficult issue is whether expanding the sales tax base to include items that are exempt for distributional reasons (for example, food consumed at home, prescription medicines) is desirable on vertical equity grounds. The critical point in thinking about this issue is that sales tax exemption of goods consumed disproportionately by the poor is an extremely poorly targeted means of achieving distributional goals, since the benefit of exemption accrues not only to the poor, but to the rich as well. Indeed, in absolute terms, the rich will typically benefit more from the sales tax exemption of virtually any good, even if the proportional benefit of exemption declines with income. As a result, achieving distributional goals with sales tax exemptions is very expensive in terms of revenues forgone, and thus implies significantly higher tax rates.

A preferable approach is to eliminate or significantly curtail these sales tax exemptions and couple such a reform with a means-tested sales tax rebate that would approximately offset sales tax paid up to the amount paid on some minimum level of consumption (for example, the poverty level).⁷⁶ This approach would minimize the revenue loss (and thus the rate increases) required to achieve any particular distributional goal. Some states administer such rebates under their personal income taxes.⁷⁷ However, in the absence of a state personal income tax in Texas, the rebate could be administered as a stand-alone program, using information provided by (and perhaps administered in conjunction with) other state and federal programs affecting the poor, especially the Lone Star Card (used for food stamps and welfare payments), or perhaps the federal Earned Income Tax Credit, and the Social Security system. This approach obviously involves some increased administrative and compliance costs, especially with respect to identifying individuals eligible for the rebate and ensuring that they file for them, delivering the rebates, and limiting fraudulent claims.⁷⁸ Nevertheless, it seems likely that it would be a less expensive means of achieving distributional goals than exempting certain commodities under the sales tax.⁷⁹ Such an approach would be especially beneficial to the poor, with the burden of the sales tax increase being roughly proportional to lifetime income or regressive with respect to annual income for all other income groups.⁸⁰

In terms of simplicity, taxing a broader consumption base implies that some new goods, including previously untaxed services, would be brought into the tax base, which would increase administrative costs; exempting small service providers would mitigate this problem. In addition, if consumer services are taxed while business services are exempt, the owners of businesses will face an incentive to disguise the purchase of personal services as business expenditures, including tied arrangements with service providers where high-priced tax exempt business services are bundled with low-priced or free personal services. On the other hand, uniform taxation of consumption goods reduces the costs associated with differentiating between taxable and tax exempt goods, and thus lowers administrative costs.

Taxing a broad measure of consumption generally increases the stability of the tax system. Stability over the business cycle improves because the demand for both consumer services as well as consumption necessities is relatively non-cyclical, especially relative to the demand for consumer durables, including motor vehicles.⁸¹ Stability with respect to economic growth improves because a broader sales tax base, especially one that includes more consumer services, will tend to grow proportionately with the economy (Dye and McGuire 1992). Finally, a critical factor is that as long as sales taxes are not deductible against federal personal income tax liability, expanding the sales tax base to include consumer services implies that more Texas tax revenues are being raised using a non-deductible, and thus relatively costly, tax instrument.

Business Goods and Services

Expanding the base of the sales tax could also (as in the Dewhurst plan noted above) include taxing additional business inputs, especially services provided to businesses. Unfortunately, the case for such an expansion of the base of the sales tax is far weaker than the case for taxing consumer services. The essence of this argument is that expanding the sales tax base to include more business inputs exacerbates the glaring weaknesses of the current sales tax. It moves the system farther away from a tax on consumption, so that the benefits of consumption-based taxation are even less likely to be

realized. But more important, it increases the extent to which the sales tax assumes the characteristics of a gross receipts tax, with all of the problems of taxation on the basis of gross receipts. Recall that these problems include tax pyramiding and the associated distortions of business input and consumer choices, a tax bias favoring vertical integration and against new and emerging enterprises as well as firms that sell their products in other states, a higher tax burden on mobile capital, and a “hidden” tax burden that complicates political decision making.⁸²

From an equity perspective, taxing business inputs results in a haphazard pattern of incidence that creates horizontal inequities to the extent that tax burdens are shifted forward as higher consumer prices, since tax burdens will vary depending on tastes for various goods. Because of this fairly random incidence, the impact of taxing business inputs on vertical equity is highly uncertain, although one might expect that it would be roughly in proportion to consumption, and thus similar to the burden of the increase in sales taxation of consumer goods described above.

In terms of revenue stability, adding additional business inputs to the tax base, including business services, is likely to reduce stability over the business cycle, since business spending is more cyclical than consumer spending; this is especially true for certain business services, like advertising, that are highly pro-cyclical (Quick and McKee 1988). Taxing more business inputs, especially services, might increase the stability of revenues with respect to economic growth, but this effect would likely be relatively small; in particular, the ratio of total services to GDP has not increased nearly as much as the ratio of personal services to personal consumption, and indeed has been relatively stable in recent years (Hendrix and Zodrow 2003).

Expanding the tax base to include certain business services would also raise several thorny administrative issues. As noted above, application of sales tax to small vendors in many service sectors is relatively expensive in comparison to the revenue raised. In addition, consistent application of the sales tax to services would require taxing services purchased from out-of-state vendors. This is likely to be even more difficult than in the troublesome case of tangible goods, as most out-of-state service providers will not have a physical presence (nexus) in Texas and will thus not be legally required to

collect the tax. Although Texas firms would legally be required to pay “use tax” on such purchases, enforcing this requirement would be difficult. To the extent that the use tax is not effectively enforced, Texas firms would face a strong incentive to purchase services from out-of-state vendors.⁸³ One offsetting factor, however, is that administrative and compliance costs would fall for vendors who already sell both taxable goods and previously untaxed services, as the need to separate taxable and non-taxable items would be eliminated. Finally, note that deductibility is not an issue, as sales taxes on business inputs are deductible in calculating the federal tax liability of a business.

Increasing Excise Taxes

An often-mentioned source of additional revenues is increases in the excise taxes applied to goods that are perceived to cause negative externalities (such as sin taxes and taxes on motor fuels). However, as noted above, excise tax rates in most states, including Texas, are in all likelihood already higher than those that could be justified on negative externality grounds. Nevertheless, increases in excise taxes may be a relatively efficient source of revenue as demands for the affected goods are likely to be relatively inelastic, and cross-border smuggling should not be too much of a problem as long as the rates in Texas are not too high relative to those in other states (although this will become more of an issue with the growth of electronic commerce in the relevant goods). Moreover, some observers advocate increases in excise taxes on alcohol and tobacco on paternalistic grounds, as they create a tax disincentive that may discourage individuals, especially youths, from engaging in unhealthy behaviors. Similarly, proponents of increases in excise taxes on motor fuels argue that they would encourage conservation and reduce traffic congestion.

Increases in excise taxes are relatively regressive; this effect is mitigated but not eliminated if a lifetime view of tax incidence is used to measure tax burdens.⁸⁴ Increases in excise taxes are relatively easy to administer, given that the tax collection structure is already in place, unless the increases result in rates that are so high relative to other states that monitoring smuggling becomes an expensive proposition. Given relatively price and income inelastic demands for the affected goods,⁸⁵ excise tax

revenues are relatively stable with respect to the business cycle, but tend to grow less than proportionately with the economy.

Increases in excise taxes are not likely to be a major source of new state revenue. However, a moderate amount of revenue, relative to the \$10 billion figure noted in the introduction, could be raised by increasing excise taxes in Texas to levels comparable to those in states that are fairly aggressive in using these tax instruments. For example, suppose that for each of the affected goods a reasonable target is for the excise tax rate in Texas to be the tenth highest state rate. (The current state tax rate applied to general sales and to sales of motor vehicles [6.25 percent] is the eighth highest in the country.) In this case, the combined increases in excise tax rates would raise a total of \$1.6 billion.⁸⁶ The required rate increases in the excise tax rates on cigarettes, beer, wine, liquor, gasoline, and diesel fuel, and the associated increase in revenues are shown in table 1 below:

Table 1 Potential Revenues from Excise Tax Increases

Taxed Item	Current Rate	Proposed Rate	Rate Increase	Revenue Increase
Cigarettes	\$0.41 per pack	\$1.25 per pack	\$0.84 per pack	\$0.72 billion
Beer	\$0.19 per gallon	\$0.41 per gallon	\$0.22 per gallon	\$0.08 billion
Wine	\$0.20 per gallon	\$1.21 per gallon	\$1.01 per gallon	\$0.03 billion
Liquor	\$2.40 per gallon	\$4.40 per gallon	\$2.00 per gallon	\$0.07 billion
Gasoline	\$0.20 per gallon	\$0.25 per gallon	\$0.05 per gallon	\$0.56 billion
Diesel fuel	\$0.20 per gallon	\$0.26 per gallon	\$0.06 per gallon	\$0.17 billion

Reforming the Franchise Tax

The “small open economy” analysis of source-based taxes on capital income presented above, as well as the many distortions caused by the earned surplus component of the tax, suggest that serious consideration should be given to reducing or indeed eliminating the franchise tax in Texas, while simultaneously increasing reliance on appropriately designed benefit taxes on businesses or introducing

an alternative business tax such as the value-added tax (discussed below). However, given current revenue constraints, the enactment of such a change may be difficult.⁸⁷ An alternative approach is to improve the existing franchise tax, and this section will examine such potential improvements.

On efficiency grounds, the effects of the franchise tax depend on the nature of the business being taxed. For a sufficiently profitable business that operates largely or exclusively in Texas, the franchise tax, to a first approximation, acts as a surcharge on the federal corporate income tax. It thus exacerbates the many distortions of that tax, including distortions of decisions regarding capital-labor ratios, capital asset mix, financing and payout (Gravelle 1994). Increases in distortions of the choice of organization form are more modest, since the franchise tax applies to S-corporations and limited liability companies, although not to partnerships, business associations, and sole proprietorships.

The situation is much different for large firms that operate in many states. For such businesses, formula apportionment implies that the franchise tax is primarily a tax on the factors in the apportionment formula (since any change in profits in Texas has a relatively minor effect on the corporation's total profits). Since Texas uses a single factor formula with gross receipts as the apportionment factor, this implies that the franchise tax is effectively a tax on gross receipts for such firms. Indeed, the franchise tax is much closer to a gross receipts tax than the taxation of business inputs that occurs under the existing sales tax, since the franchise tax has none of the provisions under the sales tax designed to reduce its burden on business inputs, such as exemptions for inputs that are purchased for resale or used in the manufacturing or processing of other goods. Thus, in this case, the franchise tax shares all the problems of gross receipts taxes stressed above. To sum up, the franchise tax—whether it is applied to predominantly Texas firms or to multi-state enterprises that generate only a small fraction of their profits in the state—is among the most inefficient taxes utilized by the state.⁸⁸

Another interesting efficiency aspect of the franchise tax is the effect of its net assets component. As a tax on capital, this tax shares the problems of source-based taxation stressed above and, since it is based on net assets, it exacerbates the tax bias favoring debt finance under the federal corporate income tax. In addition, the net wealth-based component of the franchise tax acts as a minimum tax. As a

result, it may create a bias against risk-taking, at least for a firm whose earnings are such that it is near the boundary that defines whether it will be subject to the income or the net assets components of the tax. In this case, firms face the prospect that if their investments are successful and the firms are profitable they must pay the income-based component of the tax, while if their investments are unprofitable, they still must pay the wealth-based component. Such asymmetric tax treatment creates a potentially important disincentive for risk-taking.⁸⁹ One might expect that these problems would be especially troublesome for small firms, especially those that are entirely or primarily based in the state. Although this argument creates a case for eliminating the net wealth component of the franchise tax, some alternative arguments related to revenue stability and benefit taxation (presented below) suggest that such a reform would be premature.

From an equity perspective, the “small open economy” analysis presented above suggests that, at least in the long run, the incidence of source-based taxes on capital income is roughly similar to that of a tax on wages or consumption. (The short run incidence would presumably be on the owners of businesses subject to the franchise tax.) Thus, the long run burden of changes in the franchise tax would be roughly proportional to lifetime income and regressive with respect to annual income. However, note that since the net wealth component of the franchise tax acts as a minimum tax, it could be justified on equity grounds as an efficiency-enhancing benefit tax. Specifically, to the extent that benefits are related to the size of the capital stock (although some measure of total in-state production would seem to be preferable on these grounds), a minimum tax ensures that firms pay some tax for the public services they consume, consumption that occurs regardless of whether the firm is profitable or not.⁹⁰

From the standpoint of administrative simplicity, the earned surplus or income component of the franchise tax is relatively simple to calculate since it is based primarily on corporate income as defined for federal tax purposes. However, since the Texas franchise tax is based on the 1996 federal law, taxable businesses in Texas face additional complexity in that they must keep a separate set of books in order to comply with the state tax law. The inclusion in the franchise tax base of the compensation of the officers and directors of the business also adds considerable complexity, as the definition of a

corporate officer is not clear, resulting in frequent classification disputes. Moreover, the existence of the net asset component of the tax creates potentially significant complexity, since in making long run investment decisions firms must predict which of the two components of the franchise tax will apply at all future times.

In addition, the structure of the tax creates opportunities for tax avoidance. Most obviously, a corporation could reorganize as a partnership and avoid the franchise tax. Alternatively, state franchise tax liability can be virtually eliminated using the so-called “Delaware sub” strategy. Under this approach, a Texas corporation enters a partnership, typically as the general partner with a one percent ownership share, with a subsidiary organized another state (e.g., Delaware) that is a limited partner with a 99 percent ownership share. The partnership entity is of course not subject to the franchise tax, and under current law the limited partner subsidiary does not have nexus in the state. Thus virtually all of the income of the partnership is not subject to the franchise tax. The income of the out-of-state subsidiary is then distributed as dividends to the Texas parent, and is not subject to tax since dividends from subsidiaries are exempt under franchise tax provisions designed to avoid double taxation.

Although the treatment of such subsidiaries is largely a legal issue, two economic perspectives deserve mention, both of which, if applied to the Texas franchise tax, would significantly limit avoidance opportunities. First, from an efficiency perspective, if a state decides to impose a tax on businesses (that is not explicitly related to benefits received from public services), it should be applied to all businesses regardless of organizational form. In the case of Texas, this would imply extending the franchise tax to partnerships, business associations, and sole proprietorships. The only exception should be for small firms (currently defined in Texas as those with gross receipts under \$150,000, although this exemption level seems far too generous) on simplicity grounds with respect to both administrative and compliance costs.^{91 92} Second, the legal rules used to determine in-state tax liability should attempt to reflect economic reality, even if only in an approximate way. This implies that Texas should consider following the lead of many other states that impose business taxes and introduce some consolidation or combination provisions under which related entities are treated as a single entity for purposes of taxing

that fraction of their combined income determined to be earned in the state.⁹³ Similarly, Texas could follow many other states in defining nexus sufficiently broadly to include out-of-state entities that are limited partners in partnerships doing business in the state (again, subject to provisions that would exclude sufficiently small limited partners and perhaps certain passive investors).⁹⁴

From the perspective of revenue stability, the state franchise tax is—at one level—a relatively unstable tax, since its tax base is primarily highly cyclical corporate income. Moreover, in recent years revenues have been reduced because of the enactment of several tax credits as well as various successful court challenges. Nevertheless, as stressed by TTARA, Texas Taxpayers and Research Association, (2003), revenues from the franchise tax in Texas have been relatively stable in recent years, during a period that included a serious economic slowdown as well as expansion of credits available under the tax and increased use of tax avoidance strategies. Two factors explain this relative revenue stability. First, in contrast to most state corporate income taxes, the tax applies to subchapter-S corporations and limited liability companies, so that recent growth in these organizational forms has not resulted in a loss of franchise tax revenue. Second, the net assets component of the tax implies that even firms with losses (or low profit levels) must pay tax. Thus, TTARA (2003, 45) concludes that the “real story of Texas’ franchise tax is not one of eroding revenues, but it is one of surprising resilience in the face of a tremendous economic slowdown.”

Thus, if Texas decides to keep the franchise tax, the most important reform would be to enact some or all of the provisions described above in order to close existing loopholes. The State Comptroller’s office estimates that such reforms would raise \$0.24 billion.

Expanding the Lottery

Like many other states, Texas has in recent years (since 1992) relied on a state lottery to supplement state tax revenues. The total revenue from the lottery is relatively small, \$1.39 billion in 2002, but still represents about 3.8 percent of own-source revenues.⁹⁵ Charles Clotfelter (forthcoming) reports that the share of own-source revenue from the lottery in Texas is above the average for the 38

states that had lotteries in 2000. Although lotteries will never become a major source of revenue, expansion of the lottery is another potential revenue source at the margin. For example, the Texas Comptroller has proposed that video lottery terminals be installed in racetracks in locations where voters have already approved gaming, and estimates that this would generate \$0.56 billion in annual revenue.⁹⁶ Expansion of the state lottery can, at least in principle, be evaluated on the same basis as other potential revenue sources.⁹⁷

The special characteristics of lotteries as both state production of a service and a source of tax revenues imply that their efficiency properties must be analyzed carefully. In running a state lottery, the state provides a service to its residents, a service for which there are no legal competitors, so that the state is in something of a monopoly position (although some legal and illegal imperfect substitutes exist, including legal lotteries in neighboring states). Moreover, a relatively high level of taxation of this service is the primary rationale for its provision by the state. These factors imply that the efficiency and equity properties of the state lottery can be analyzed from two perspectives: as the provision of a service and as the taxation of consumption of that service.

By legalizing the lottery, the state creates a new market that benefits consumers, despite a relatively high level of tax; the evidence to support this contention is clear, since consumers elect to play voluntarily. Thus, the combination of legalization and taxation generates net benefits, relative to the case in which lotteries are outlawed. Accordingly, as noted previously, the introduction of a state-run and state-taxed lottery is an example of an efficiency-enhancing tax, and some empirical estimates suggest that the efficiency gains from such an introduction, even taking into account the typically high level of taxation (but neglecting any negative external effects), may be quite large (Rodgers and Stuart 1995). Under this interpretation, tax revenues simply reflect the monopoly rents earned by the state as the sole legal provider of lottery services in the state, and the effective tax rate on lotteries reflects the state's monopoly markup over the marginal cost of providing such services. Indeed, one could easily argue that lotteries should be designed to maximize state revenue.

Alternatively, if one assumes that the lottery is legal and the state should not take advantage of its monopoly position, the taxation component of lotteries can be viewed as an excise tax on consumption of that service—analogous to state excise taxes on alcohol, tobacco, or motor fuels—that reduces consumption of lottery services, relative to the efficient competitive level.⁹⁸ Under this interpretation, which appears often in the literature, the level of excise taxation applied to lotteries is typically quite large. In Texas, the effective tax rate is approximately 61 percent, with revenues equal to 38 percent of lottery expenditures, relative to a payout rate of 50 percent and administrative expenditures of 12 percent ($0.61=0.38/0.62$) (Price and Nowak 1999). This is somewhat higher than the average tax rate in the U.S., which is about 50 percent, with revenues of 33 percent of the amount spent on lottery products, relative to a payout rate of 55 percent and administrative costs of 12 percent (Clotfelter, forthcoming).

Under this latter interpretation, lottery taxation causes efficiency losses analogous to those induced by excise taxation of other consumption items. The primary efficiency issue is thus whether the relatively high tax rate applied to lotteries can be justified on efficiency grounds. Several arguments support high levels of taxation. The demand for at least some lottery products may be relatively inelastic, suggesting that relatively high tax rates may be desirable on efficiency grounds.⁹⁹ In addition, lotteries generate some external social costs, such as increased compulsive gambling and negative reactions from those morally opposed to gambling or state provision and encouragement of gambling, that in principle also justify higher taxes (as a means of compensating society for these costs or providing resources to help deal with them, such as assistance for compulsive gamblers). On the other hand, high tax rates on state lotteries may induce more illegal gambling. Nevertheless, on balance, these arguments suggest that relatively high tax rates on lotteries are justifiable on efficiency grounds. Since effective tax rates in Texas are already quite high, however, any new lottery revenues should probably come from new games rather than higher effective tax rates on existing games. The estimates by Rodgers and Stuart (1995) provide some supporting evidence for this point, as they suggest that the marginal excess

burdens associated with tax rates typical of existing lotteries, neglecting any negative externalities, are very high relative to alternative sources of state revenue.¹⁰⁰

The primary objection to the use of state lotteries to raise tax revenue is that the incidence of the resulting tax burden is inequitable, falling disproportionately on the poor; that is, the lottery is a highly regressive tax.¹⁰¹ As in the case of efficiency, an evaluation of the equity properties of a lottery depends on the perspective adopted. For example, suppose, consistent with empirical evidence (discussed further below), that the fraction of income spent on lotteries declines as income increases. If one considers the combination of legalization and taxation, this expenditure pattern suggests that lotteries are in fact pro-poor: the benefits that consumers receive from participating in a legal lottery, as measured by their willingness to participate, given the pricing/tax structure, are disproportionately concentrated among the poor.¹⁰²

Alternatively, under the more common interpretation, if one assumes the existence of the lottery and that the state should not take advantage of its monopoly position in providing legal lottery services, then revenues simply reflect excise taxation of providing lottery services. In this case, as stressed by Clotfelter (forthcoming), the empirical evidence is “virtually unanimous” in demonstrating that the excise taxes applied to state lotteries are regressive.^{103 104} Thus, it is hard to justify expansion of the lottery on equity grounds, unless other tax (or expenditure) changes can be made simultaneously that would offset its regressive impact on the poor.

Critics of lotteries also often argue that their administrative costs are extraordinarily high. For example, in Texas, the estimates cited above indicate that administrative costs are about 12 percent of revenues. However, such figures are not informative in the case of lotteries, since the administrative costs include not only the costs of tax collection (of the excise tax on lottery sales) but also the costs of providing the service. There seems to be no particular reason to think that the administrative costs of collecting the excise tax component of lottery sales, given state provision of the lottery, are higher than the costs of collecting other excise or sales taxes and, indeed, since the sellers of lottery tickets must be

monitored in any case, the administrative costs of using them to also collect the excise tax component of the tax may be small.¹⁰⁵

Lotteries are also notoriously unstable sources of revenue, as the amount of revenues raised depends on many factors that tend to vary significantly over time. These include changes in consumer tastes for various lottery products; the introduction of new games; the extent and effectiveness of advertising; the introduction and scale of operation of lotteries in nearby states and other competing products (such as gambling over the Internet); and even the actual outcomes of the lotteries themselves (lotto games become especially popular as the jackpots become huge when there are no winners for an extended time period). Thus, lottery revenues are not particularly likely to be stable with respect to economic growth or the business cycle. This is confirmed by Andrew Szakmary and Carol Matheny Szakmary (1995) who demonstrate that lottery revenues are much more volatile than revenues from more traditional sources. However, they also note that the variations in lottery revenues (due primarily to the factors noted above rather than cyclical fluctuations) are not highly correlated with variations over time of other revenue sources. They argue that lotteries thus provide state governments with an attractive source of diversification of revenue risk, and show empirically that for most states adding a lottery actually stabilizes revenues slightly (even though lottery revenues do vary significantly over time). Thus, as long as the lottery provides general revenues (as is the current situation in Texas) or, in the case of earmarked taxes (as is currently being debated), state government revenues can easily be reallocated across alternative expenditures, the results presented by Szakmary and Szakmary (1995) suggest that adding a lottery has little effect on overall revenue stability.

Finally, it should be noted that the payment of the implicit excise taxes in lottery games is not deductible. Indeed, lottery winnings are subject to federal income taxes, thus reducing further the expected returns to lottery participants.

Fundamental Reform of the Sales Tax

First under the general heading of more sweeping reforms of the Texas state tax structure is a thorough overhaul of the state sales tax. The discussion of the sales tax base broadening reform options presented above suggests how this could be accomplished, and why it would be desirable, so the discussion here will be brief.

Fundamental reform of the sales tax would proceed in three steps. The first would be to broaden the base to include as many of the consumption items that are currently tax exempt as politically and administratively feasible. In particular, most consumer services and goods that are exempt for distributional reasons should be brought into the base. Second, the adverse distributional consequences of taxing the latter items should be offset with a means-tested rebate that would effectively exempt a level of consumption approximately equal to that associated with the poverty level, along the lines described above. Finally, all business inputs should be exempt from tax.

Such an approach would convert the Texas sales tax into a true tax on retail sales, as long recommended by tax experts specializing in the sales tax (Due and Mikesell 1995; McLure 2000).¹⁰⁶ It would thus, as described above, achieve the efficiency, equity, simplicity, and revenue stability advantages associated with broadening the consumption tax base, exempting the poor from sales tax in a highly targeted and inexpensive (in terms of revenues foregone) manner, and avoiding the (often multiple) taxation of business inputs. Indeed, the latter feature suggests that such a reform package would be an effective and equitable pro-growth investment tool — more so than current ad hoc economic development efforts (Zodrow 2003).

A critical issue in effecting such a reform would be devising a means of exempting business inputs from tax. Under the current system, businesses are issued an exemption certificate that allows them to make tax free purchases. However, many goods are not eligible for exempt purchases, partly out of concern that such purchases would be diverted to personal consumption use. This approach has the unfortunate feature of relying on vendors to determine whether or not a sale should be tax exempt, a

determination that vendors are ill-equipped to make.¹⁰⁷ Charles McLure (2000) suggests that businesses be allowed to purchase all business inputs on a tax-free basis, with business inputs defined as those that are deductible under the federal income tax and firms required to substantiate claims of business use of inputs upon audit.

Malcolm Gillis, Peter Mieszkowski, and George Zodrow (1996) discuss an alternative approach that would be administratively more cumbersome but arguably less subject to abuse. Under this approach, businesses would have to pay sales tax on any purchases of “dual use” goods (those that are used as both business inputs and consumption items) and then apply for monthly or quarterly rebates of sales tax paid. This approach would involve additional administrative costs, as much revenue would be collected only to be refunded. Nevertheless, it might also be much less susceptible to evasion since businesses could evade tax only by fraudulently petitioning the tax authorities for a refund on purchases of personal consumption items (rather than merely misrepresenting their intentions to the vendor). As stressed by John Mikesell (1997), businesses may be much more reluctant to explicitly misrepresent their purchases to the government than to an anonymous vendor at the point of sale. In addition, on policy grounds, Texas might elect to tax certain business expenditures that are allowed as (full or partial) deductions under the federal income tax, especially meals and entertainment expenses.^{108 109}

The net revenue impact of such a fundamental reform of the existing sales tax is unclear. Broadening the tax base to include more consumer goods, including consumer services as well as currently exempt consumption goods (net of any rebate program), would raise revenues, while eliminating the pervasive taxation of business inputs would reduce revenues.

Introducing a Personal State Income Tax

Another potential source of additional revenue for the state of Texas is the introduction of a personal state income tax. This reform faces formidable obstacles, as a state personal income tax is anathema to many Texans and to virtually all Texas politicians, who wish to maintain the image of Texas

as a low tax state that has no personal income tax.¹¹⁰ This sentiment is codified in the Texas Constitution, which precludes the introduction of a state income tax without a state referendum.

Nevertheless, a state personal income tax is sometimes suggested as a revenue option, especially as an alternative to greater reliance on an unreformed sales tax.¹¹¹ The discussion above suggests that a state personal income tax should be roughly proportional—perhaps adjusting for the fact that the benefits of deductibility are greater for high-income households—and, like the federal income tax, should exempt the poor from tax. Despite the vehement political opposition to any form of state income tax, such a reform, like all of the other approaches analyzed in this report, has both positive and negative aspects. These can be summarized as follows.

The most obvious advantage of a state personal income tax is that it would be deductible against federal tax liability for those individuals who itemize their deductions (or would do so in the presence of additional deductions for a state personal income tax). Thus, replacing local property tax revenues with funds obtained from a state personal income tax would involve replacing one deductible tax with another, implying that there would be only relatively minor changes in the fraction of state taxes that are deductible. This is in marked contrast to the case where the replacement revenues would come from increased utilization of the state sales tax, where only the portion of the tax that falls on business inputs is deductible. Thus, a state personal income tax has an inherent advantage relative to the state sales tax that, as detailed above, has been estimated by the State Comptroller's office to be on the order of 14 percent of the revenues involved. This sizable advantage would of course disappear if federal law were changed to allow deductibility of state and local sales taxes. However, as noted previously, although one can argue that such a policy change is highly desirable, it seems unlikely to be effected soon, especially in the form proposed by the State Comptroller and backed by numerous members of the U.S. Congress from Texas and other states.

On efficiency grounds, a personal state income tax is a residence-based tax on Texas citizens. It thus avoids the problems of a production-based or source-based tax on capital income stressed above. Note that to the considerable extent the sales tax applies to purchases of business inputs, it

shares the problems of a production-based tax. Thus, if a personal income tax were used to replace lost property revenues rather than an increase in the sales tax, the taxation of business inputs would decline, as would the many problems (described above in the discussion of the pitfalls of taxation on the basis of gross receipts) associated with such haphazard taxation of business inputs. Nevertheless, a state income tax would distort savings decisions, adding to the distortions attributable to the federal income tax, and—like any tax on wages, income, or consumption—distort decisions regarding labor supply. However, it would distort choices across consumption goods much less than the sales tax, which results in a haphazard pattern of effective consumption tax rates, due both to differential rates on consumption products (including zero rates in many cases) and pervasive taxation of business inputs. A state income tax would also have some tendency to drive high-income high-skilled workers out of the state in the long run. However, as long as the income tax were roughly proportional and imposed at a modest rate, these effects might be fairly moderate. Finally, a personal income tax would be considerably more visible than the sales tax (especially the component that falls on business inputs), and thus would likely lead to more efficient political decision-making.¹¹²

Many proponents of a state income tax argue that its primary advantage is that it is less regressive than the sales tax and thus an inherently fairer tax instrument.¹¹³ However, if a state personal income tax is roughly proportional and one adopts a lifetime perspective on tax incidence, the distributional differences between the two taxes are modest.¹¹⁴ Nevertheless, an income tax would impose a greater tax burden than the sales tax on the very rich, which is arguably desirable on vertical equity grounds, and would reduce the overall regressivity of the Texas state tax system with respect to annual income. Perhaps more important, a state income tax would be effective at exempting the very poor from tax, while exemptions under the sales tax are both very costly in revenue terms and much less successful in reducing tax burdens on the very poor.¹¹⁵ Note, however, that the income tax has two relatively less important equity disadvantages relative to the sales tax, as the latter is more effective in taxing the elderly who are wealthy but have relatively little current taxable income, and in taxing tourists

and business travelers, who are also consumers of public services and thus, according to the benefit principle, should pay at least some tax.

As long as a state personal income tax were closely tied to the federal individual income tax, it would be a relatively simple tax to administer (even though the federal tax can be quite complex). In particular, if state income tax liability were simply roughly proportional to federal taxable income, then the tax would be quite simple in terms of both compliance and administration (where joint federal-state audits would be a possibility).¹¹⁶

A state income tax should be roughly similar to the existing sales tax in terms of revenue stability over the business cycle. At first glance, one might expect that the sales tax, as a tax primarily on consumption, would be significantly more stable than the income tax, which includes a relatively unstable capital income component. However, the base of the sales tax in Texas does not include many necessities and thus foregoes the benefit of taxing a highly stable component of the tax base. In addition, nearly half of the sales tax base consists of purchases of business inputs, which are highly cyclical. Thus, much of the inherent stability of a tax on consumption is lost under the current state sales tax.

A state income tax should, however, be more stable than the sales tax with respect to economic growth, as it avoids the central problem with the sales tax — the sales tax base largely misses the relatively rapidly growing service and government sectors. Moreover, as long as the income tax were roughly proportional with respect to income, the “automatic” or unlegislated increases in revenues attributable to a progressive tax system would not be an issue.

The revenue raised by a personal income tax would depend on the specifics of the plan enactments. The simplest approach would be to apply a flat rate to the federal definition of taxable income, including all the deductions and exemptions allowed under federal law, without any state-specific modifications. The State Comptroller estimates that such a personal income tax would raise \$3.0 billion per percentage point of tax, implying that a tax rate of 2.75 percent would raise annual revenues of \$8.1 billion.

Introducing Statewide Taxation of Nonresidential Property

Another approach to obtaining additional revenues to increase state-level financing of K-12 education expenditures would be the introduction of some form of statewide property taxation (a reform that would require an amendment to the Texas Constitution). A wide variety of options might be considered. The following discussion will focus on statewide taxation of nonresidential property for four reasons. First, it is unequal distribution of such property that gives rise to much of the problems associated with property tax finance of education. Second, a significant source of local revenue is essential if the benefits of decentralized local service provision (discussed above) are to be obtained and, given current reliance on the property tax, residential property taxation is the natural choice for such revenues. Third, the statewide taxation of residential property that effectively occurs under the current Robin Hood plan is the primary factor driving the current reform movement, so that statewide taxation of residential property is not likely from a political standpoint. Fourth, such a “split roll” reform is the state property tax option that has most often been discussed in the Texas context, most recently by Governor Rick Perry. In addition, for reasons that will be presented below, the analysis will also assume that nonresidential property would be taxed at a single statewide rate.

The efficiency argument for such a reform is a “backhanded” one. In general, for the reasons discussed above, non-benefit property taxation of nonresidential property is undesirable because it is a source-based tax on mobile capital. This is especially true for property taxes in Texas, which apply not only to structures, land and equipment, but also to commercial and industrial personal property. Since commercial and industrial personal property is highly mobile, the arguments against source-based taxation of mobile capital are particularly relevant for this form of capital. Accordingly, serious consideration should be given to removing commercial and industrial personal property from the tax base regardless of what property tax reform measures are adopted.

Nevertheless, if one assumes for political or other reasons that such a tax is to be imposed, state-level taxation of nonresidential property at a uniform rate does have important efficiency

advantages over local taxation. In particular, the former approach would at least avoid distortions of business location decisions within the state, as well as the tendency for local officials to under-spend on local public services financed in part with taxes on nonresidential property that is highly mobile (at least in the long run).¹¹⁷ In addition, statewide taxation of nonresidential property would eliminate the tendency for local jurisdictions with large amounts of nonresidential property perceived to be immobile to overspend on public services, given that residents face a significantly reduced effective price for such services. Moreover, if revenue constraints permit, the effective state-level tax rate on nonresidential property could be lower than the current average rate, reducing the overall extent of non-benefit taxation of mobile capital. Finally, note that efficiency requires that local governments should still be free to assess some form of benefit taxes on local businesses. These could be assessed directly, but some mechanism for local taxation of nonresidential property related as closely as possible to benefits of public services received and environmental costs imposed would also be highly desirable. Alternatively, the state could rebate some of the funds collected from state-level taxation of nonresidential property, preferably in a form tied to the levels of local public services provided to business (and perhaps environmental costs).¹¹⁸

The primary equity rationale for statewide taxation of nonresidential property would of course be to remove one of the main causes of differences in potential tax bases across local school districts (although differences in residential property wealth would still remain). From a tax perspective, the average distributional effects of moving from the current system of local taxation to state level taxation of nonresidential property should be relatively small. However, this average tendency could mask potentially significant redistributions among property owners, from those in jurisdictions with current rates lower than the new state rate to those in jurisdictions with relatively high current rates. Note in particular that these effects would be magnified as the effects of expected change in future property tax liabilities were capitalized into current property values. On the other hand, some such redistribution is already occurring under the existing Robin Hood system, so that the changes would not be as great as they would be if the initial equilibrium were characterized purely by local property finance. In addition,

any reduction in property taxation associated with greater state level K-12 education finance would also have important positive effects on property values overall and differential effects across tax jurisdictions (as described above). Thus, if a statewide property tax is ever to be adopted, transitional equity issues would be relatively smaller if such a reform were accompanied by the school finance reforms currently under consideration. The magnitude of all of these effects could be gauged only with an explicit general equilibrium analysis of a specific reform proposal, taking into account the redistribution of funds and any remaining local taxation of nonresidential property, as well as the capitalization of changes in property taxation on the values of both nonresidential and residential property. The social costs of effecting these redistributions would have to be weighed against both the efficiency gains obtained from reform as well as any equity gains that would be obtained from the associated redistribution of school expenditures. These gains would depend greatly on the specific formula used to distribute education funds. In particular, to the extent that central city schools benefit from relatively large amounts of nonresidential property and have a disproportionate number of socioeconomically disadvantaged students, it is certainly feasible that the net result of using state-level taxation of nonresidential property to finance K-12 education would have negative effects on the poor, unless a sufficiently pro-poor distribution formula were utilized (Ladd 1976). However, because the existing Texas school finance formula removes much of the benefits associated with relatively large amounts of nonresidential property, this drawback is largely moot.

Moving from local to state level taxation of nonresidential property would appear to have fairly limited effects in terms of additional administrative and compliance costs and revenue stability, and would have no effects in terms of deductibility. Such a substitution would have no net revenue effects if the state tax rate were the current average effective tax rate, although the state “share” of school finance would obviously increase. Nonresidential property currently accounts for slightly less than 60 percent of the total property tax base.

Finally, it should be noted that a move to statewide taxation of nonresidential property could also be accompanied by a structural change in the property tax such that the land component was taxed

at a higher rate than the structures or capital component.¹¹⁹ Such a reform, which would move the state tax system toward increasing reliance on land value taxation, has long been advocated by some economists on both efficiency and equity grounds.¹²⁰ In terms of economic efficiency, the basic rationale for a tax on land values is that the tax is relatively non-distortionary, since the supply of land within the taxing jurisdiction is fixed. Thus, increasing the tax rate applied to land while reducing the tax rate applied to capital, which is highly mobile in the long run, will improve efficiency.^{121 122} On equity grounds, proponents of land value taxes argue that they approximate a benefit tax, as a significant fraction of increases in land values are attributable to the provision of government services. In addition, since land ownership is relatively concentrated among the wealthy, a land value tax is relatively progressive. Moreover, if a land value tax were implemented as part of reform that reduced property taxation of capital, then capitalization effects would be relatively small, as the effects of the land value tax increase would be at least partially offset by the effects of the reduction in capital taxation. Since a differentially high tax on land value would also be a relatively stable source of revenue,¹²³ can arguably be administered reasonably well (provided that land value is assessed accurately),¹²⁴ and is deductible, it would deserve serious consideration as an element of any move toward statewide taxation of nonresidential property.

Introducing a Value-Added Tax or “Simplified Alternative Tax”

The final revenue option to be considered is some form of state value-added tax (VAT). National VATs have often been proposed but never adopted in the U.S., although the VAT is currently used as a major revenue source by some 120 countries around the world. In the U.S., Michigan and New Hampshire utilize variants of a VAT at the state level.¹²⁵

There are many alternative structures for a VAT (Gillis, Mieszkowski, and Zodrow 1996). This discussion will focus on consumption-based VATs that allow full expensing of all purchases of capital equipment and inventories (rather than the depreciation and inventory accounting required under an income tax), but no deductions for labor costs or interest expense.¹²⁶ Such a consumption-based VAT

is thus quite similar in its economic effects to a retail sales tax, except that revenues are collected at various stages of the production process rather entirely at the retail stage, and there is an automatic and effective mechanism for ensuring that business inputs are not taxed.¹²⁷ Although most national VATs are destination-based taxes (tax is assessed in the jurisdiction of consumption, implying that exports are untaxed while imports are subject to tax), for the reasons noted previously, most discussions of state VATs assume an origin basis (tax is assessed in the jurisdiction of production, with exports taxed but imports exempt).¹²⁸ Accordingly, the following discussion will focus on consumption-based, origin-based versions of the VAT. The flat rate “business activity tax” or “Flat BAT” proposed by the Texas-based Lone Star Foundation (Hartman 2003) is a consumption-based origin-based VAT.

In addition, the discussion will consider briefly a tax system that has been described as a “Simplified Alternative Tax” or SAT (Zodrow 1999; Zodrow and McLure 1991), which is a variant of the David Bradford (1986) X-Tax, which is in turn a multi-rate variant of the Flat Tax proposal constructed by Robert Hall and Alvin Rabushka (1985, 1995). This approach provides for a tax that is similar to an origin-based, consumption-based VAT at the business level, except that firms get a deduction for labor compensation, which is then taxed at the individual level, subject to a standard deduction and personal exemptions.¹²⁹ All forms of business, perhaps subject to a low exemption, are subject to tax. The rate structure at the individual level can be progressive, with a top rate equal to the business rate. All forms of capital income, including dividends, interest and capital gains, are not taxed at the individual level. As noted previously, the analysis will assume that if adopted as a state tax in Texas, the SAT would be roughly proportional; that is, the tax would either have a single rate or any progressivity would be limited to roughly offsetting the greater benefits of deductibility to high-income taxpayers.¹³⁰

The following discussion evaluates these two VAT derivatives.¹³¹ Common elements are considered first, and then differences among the two alternative tax options.

On efficiency grounds, the VAT has the important advantage of avoiding the problems associated with gross receipts taxes—especially haphazard, cascading, and distortionary taxation of

business inputs—and can also be applied to all business sectors, including services (to the extent administratively feasible). In addition, consumption-based VATs avoid source-based taxation of mobile capital, and are thus especially well-suited tax instruments for a small open economy; they also avoid worsening the various distortions of the federal corporate income tax.¹³² They also do not tax capital income at the individual level, and thus avoid exacerbating the bias against saving that occurs under the existing federal personal income tax. However, any VAT would distort the labor supply decisions of Texas residents and would encourage out-migration of labor, particularly high-skilled labor, to some extent.¹³³ Note that the SAT is more visible than a standard VAT, since most of its tax burden would be assessed at the individual level; the SAT would thus be more conducive to efficient political decision-making, with the standard VAT similar to the sales tax in terms of this criterion.¹³⁴

On equity grounds, the incidence of a consumption-based VAT would be roughly similar to that of a sales tax or a payroll tax.¹³⁵ (Thus, from a lifetime incidence perspective, there is relatively little difference between these taxes.) A major advantage of the SAT is that it is structured so that poor families can easily be exempted from tax and a modest degree of progressivity can easily be achieved if deemed desirable. However, distributional concerns about the effects of a VAT could, as under the sales tax, be addressed with a tax rebate program tied to an expanded version of the Lone Star Card.¹³⁶ The primary equity problem with the SAT is that the explicit exemption of ordinary returns to capital from the individual tax base is often perceived to be inequitable, given the long history of income taxation in the U.S.; however, the importance of this point may be muted in Texas, given the historical opposition to income taxation in the state.¹³⁷ Finally, a VAT could be justified as a proxy for a benefit-related tax on businesses, assuming that business demand for public services is roughly proportional to the value-added attributable to production in the state.¹³⁸ Of course, some businesses will always object to paying tax when they are not profitable (as can easily occur under a state VAT); indeed, this complaint was apparently the major factor in the recent (phased-in) downfall of the Michigan VAT, the “single business tax.” However, it is important to note that under the benefit tax interpretation of the VAT, it is to be expected that firms in a loss position will still pay tax; that is, the payment of benefit

taxes is not contingent upon profitability, any more than payments to other factors of production. Moreover, payment of tax by unprofitable firms might not be a particularly troublesome issue in Texas, where most businesses are accustomed to paying the net asset component of the franchise tax even in years in which they are not profitable.

In general, the VAT options are relatively simple taxes, especially when compared to an income tax. However, since they would be new tax instruments in Texas (rather than taxes that can “piggyback” on existing federal taxes), they would add a new layer of complexity to administration and compliance for businesses (and for individuals under the SAT); of course, there is much VAT experience around the world on which Texas tax administrators could draw, and all of the information required for the VAT should be readily available since it is already required for federal income tax accounting.

A serious issue under the VAT options would be the treatment of multi-state firms. Since exports are included in the tax base and imported inputs are deductible (under the origin-based approach utilized), the system is subject to transfer pricing problems if tax liability is calculated on a separate entity basis (Bradford 2003). For this reason, separate accounting is not desirable under a state VAT. In addition, since the treatment of interest income and expense differs from that under an income tax, potentially significant opportunities for tax avoidance and evasion are created that would be difficult to monitor and control (McLure and Zodrow 1996). Of course, one potential solution to the transfer pricing problem and some of the avoidance problems would be to use formula apportionment to allocate VAT (or SAT) revenues as under the current franchise tax. The use of a single gross receipts factor would be consistent with current practice under the franchise tax. However, this would effectively convert the VAT to a levy assessed on gross receipts for such firms, negating much of its efficiency advantages; although, in contrast to formulas that use property or payroll taxes, using a single factor (sales) formula would have the advantage of avoiding the imposition of what would effectively be a source-based tax on mobile capital and mobile high-skilled labor. Another approach, consistent with the notion of an origin-based, consumption-based tax, would be to use payroll (or total labor

compensation) as the apportionment factor; the rationale for this approach is that a consumption-based tax like the VAT can be viewed primarily as a tax on labor since ordinary returns to capital are exempt from tax. Alternatively, both labor compensation and capital (or property) could be used in the apportionment formula, on the grounds that the VAT does include in its tax base above-normal returns to capital and, for a lengthy transition period, returns to old capital.¹³⁹ Finally, a separate issue is that financial institutions are not easily taxed under either of the VAT options, and a separate tax on such institutions might be required (Zodrow 1999).¹⁴⁰

To the extent that the VAT options were successful in taxing a comprehensive measure of consumption, they should be relatively stable taxes. Note in particular that the individual tax base of the SAT, which excludes capital income, would be more stable than the base of a personal income tax which includes relatively volatile capital income components, especially capital gains.¹⁴¹

Finally, the consumption-based VAT options would presumably be deductible taxes. Given that a consumption-based VAT is essentially a multi-stage sales tax, one could potentially argue that it should not be deductible. However, since much of the VAT would be collected at the pre-retail level, a strong case could be made for treating it as a deductible business tax, and the Michigan consumption-based VAT is deductible. The SAT would also probably be deductible, since much of the tax base would be taxed at the individual level under a tax that looks generally like a state personal income tax (albeit one that exempts capital income). Thus, one could make a strong argument that the tax should be deductible as a type of state personal income tax.¹⁴²

Revenue estimates are available only for the consumption-based VAT. Significant revenues could be obtained with a comprehensive state VAT with a minimal exemption level on the order of \$25,000 of gross receipts; this would be especially true if non-profit institutions were included in the tax base, presumably subject to a large exemption level, say, on the order of \$100,000 of gross receipts.¹⁴³ Note that although application of the VAT to large non-profit institutions would be difficult from a political standpoint, it would be entirely appropriate in the context of a sweeping reform that would attempt to apply the tax system more evenly across all entities providing consumer goods and services.

Since tax exempt institutions already benefit from property tax exemption and exemption from sales tax on their output as well as on most of their inputs, it would not be unreasonable for such institutions to pay a low-rate VAT to promote education and economic growth within the state. This is especially true since the VAT can be viewed to a large extent as a tax on labor compensation, and there is no particular reason to effectively exempt from tax individuals who happen to work for tax-exempt institutions. In addition, as noted previously, the VAT discourages labor supply and this distortion can be minimized by keeping the base as broad and the rate as low as possible.

The enactment of a state VAT would presumably be politically viable only if it were accompanied by repeal of the existing franchise tax, which would raise state level revenue required to \$10 billion. This could be raised with a truly comprehensive VAT at a rate of approximately 1.6 percent.^{144 145} If non-profit institutions were excluded from the tax base, the required rate would increase to 2.0 percent. More important, however, exempting non-profits would open the door to demands for exemption from countless other “worthy” entities, increasing the likelihood that a broad-based, low-rate VAT would be politically unattainable.

Summary of Tax Reform Proposals

The discussion in this section has evaluated a wide variety of potential reforms of the Texas state tax system, ranging from modest changes in the existing structure designed primarily to raise revenues to finance a larger state share of K-12 school finance to fundamental reform of the existing system and the introduction of new taxes, designed to significantly improve the tax system as well as raise revenue. Table 2 attempts to summarize this discussion in the form of a “four-star” ranking, providing an admittedly rather subjective ranking of each of the alternative revenue options in terms of the various criteria utilized in this report; for comparison purposes, the options of simply increasing the tax rates under the current sales and franchise taxes are ranked as well. For the equity criterion, the evaluation reflects either the ease with which the poor can be exempted from tax or horizontal equity issues; that is, the comparison assumes that a lifetime incidence approach is adopted for evaluating vertical equity, so

that all of the various reform options (with the exception of some of the increases in excise taxes) have roughly the same vertical equity properties since they are all approximately proportional to lifetime income. Note that if an annual income approach were instead utilized for measuring vertical equity, a proportional or mildly progressive personal income tax would be more progressive than all of the other reform options considered — an advantage that is not reflected in the table.

Table 2 Summary of Evaluation of Alternative Revenue Options

Reform Option	Efficiency	Equity	Simplicity	Stability (cyclical)	Stability (growth)	Deductibility
Increasing rate under current sales tax	*	*	***	**	*	*
Increasing rate under current franchise tax	*	*	***	***	***	****
Taxing consumer services under sales tax	****	***	**	****	***	*
Taxing business services under sales tax	*	**	*	**	***	****
Increasing excise taxes on alcohol, tobacco, fuel	**	*	****	**	*	*
Reforming the franchise tax (closing loopholes)	**	**	*	***	***	****
Expanding the lottery (video lottery terminals)	***	*	**	*	*	*
Converting sales tax to true consumption tax	****	***	**	****	****	*
Introducing a state personal income tax	***	***	****	**	****	****
Introducing state non-residential property tax	**	**	****	***	***	****
Introducing value-added tax (consumption based)	****	**	***	****	****	****
Introducing Simplified Alternative Tax (SAT)	****	****	**	****	****	***

Rankings: ****=very good, ***=good, **=acceptable (some improvement, relative to the existing system), *=poor (for deductibility, **** indicates deductible, * indicates non-deductible, and *** indicates probably deductible)

Conclusion

This paper has provided an economic evaluation of various alternative sources of additional revenues for the State of Texas that might be used to finance a greater state share of K-12 education spending and perhaps an increase in the overall level of education spending. The evaluation utilized the three primary criteria typically used by public finance economists to evaluate alternative tax systems—efficiency, equity, and simplicity—as well as the supplementary criteria of revenue stability, both with respect to economic growth and over the business cycle, and deductibility against federal personal income tax liability. Although the primary purpose of the study is to provide tax policymakers with an analysis of the relative advantages and disadvantages of the various reform options rather than making definitive recommendations, some concluding observations may be in order.

In particular, the analysis suggests the following four general directions for reform of the Texas state tax system:

- To the maximum extent possible, additional revenue should be raised with expanded use of benefit taxes, including those assessed on businesses. Benefit taxes have the considerable advantage of improving the efficiency of resource allocation while simultaneously raising revenue.
- Mobility considerations, coupled with historical opposition in Texas to progressive taxes, suggest that any progressivity of the state tax system should be limited to adjustment for the fact that deductibility is worth more to high-income individuals. In addition, longstanding practice in Texas suggests that the tax system should be designed to minimize the tax burden on very low-income individuals.
- The fact that Texas businesses must compete in a national and global economy implies that non-benefit related taxation of businesses should generally be minimized. In particular, to the extent that capital is perfectly mobile, source-based taxation of business income is

largely counterproductive for the residents of the state, who ultimately bear both the direct tax burden and the efficiency costs associated with taxing mobile capital.

- Texas should avoid taxes on gross receipts and taxes that have economic effects similar to those of gross receipts taxes. The tax cascading caused by such taxes distorts business decisions regarding inputs and vertical integration, consumer decisions regarding consumption choices, impairs the efficiency of the political process by financing public services with a “hidden” tax, and creates a tax bias against small firms.

Given these general directions for reform, as well as the criteria for evaluating tax systems outlined previously, the analysis turned to an examination of various alternative sources of tax revenue for the state. Three types of reforms were considered: incremental reforms of the existing system, more fundamental reforms of the existing tax system, and the introduction of new taxes.

Consider first potential reforms that involve relatively moderate changes of the existing sales tax, franchise tax and lottery. The analysis draws the following conclusions:

- Broadening the sales tax base to include a wider variety of consumer goods and services is generally desirable. Concerns about the distributional effects of reducing or eliminating sales tax exemptions and goods consumed disproportionately by the poor could be addressed by introducing a highly targeted means-tested sales tax rebate, perhaps involving expanded use of the Lone Star Card program.
- However, the case for expanding the base of the sales tax to include a wider variety of business services is much weaker. Such an expansion would increase the extent to which the sales tax functions as an undesirable gross receipts tax, and would introduce significant administrative problems.
- Some revenues could be raised by increasing excise tax rates to levels comparable to those in states that are fairly aggressive in using these tax instruments. The primary problem with this approach is that it is regressive, at least for some taxes, even if one adopts the lifetime view of tax incidence used in the report.

- The “small open economy” argument utilized in the paper implies that the franchise tax is one of the most inefficient taxes utilized by the state. Thus, reduction or elimination of the state franchise tax on Texas businesses would be desirable. However, if this is unattainable, the tax should be applied to all forms of business, subject to a small firm exemption, and serious consideration should be given to various measures to reduce opportunities for tax avoidance, including changing nexus rules and imposing consolidation requirements.
- Expansion of the existing lottery by adding video lottery terminals could provide some additional revenues, without increasing the already relatively high level of taxation of existing lottery games. Since the incidence of the lottery tax is quite regressive, its expansion should arguably be accompanied by other tax changes that offset its regressive impact.

Texas may also wish to consider more fundamental reform of its existing tax system, especially the current sales tax.

- Fundamental reform of the sales tax system would include all of the sales tax reforms described above, coupled with a concerted effort to eliminate business inputs from the sales tax base. Such an approach would insure that Texas would receive the economic benefits of a true tax on consumption, uniformly applied to all consumption goods and services to the extent politically and administratively feasible.
- The franchise tax would best be replaced by an alternative more neutral, and more comprehensive business tax based on value added that would minimize source-based income taxation of highly mobile capital.

Finally, additional revenues could be raised with entirely new forms of state-level taxation. There are three obvious options: a personal income tax, statewide taxation of nonresidential property, and some form of value-added taxation.

- Although most Texans abhor a personal state income tax, such a reform has the advantage of simplicity (at the state level) and deductibility against individual federal tax liability. Although an income tax exacerbates the distortion of saving decisions associated with the

federal income tax and creates a tax incentive for high-income taxpayers to leave the state, it would avoid the differential taxation of business inputs that characterizes the current system and result in fewer distortions of consumption decisions. An income tax would also be more progressive than the sales tax (at least with respect to annual income), and the tax provides a simple way of exempting the poor from tax.

- Statewide taxation of nonresidential property would also be a dramatic reform. Although non-benefit property taxation of nonresidential property is generally undesirable, a state level tax would at least be somewhat less inefficient than the local tax. The distributional effects of such a reform would be small on average, but could potentially involve significant redistributions of wealth across Texas jurisdictions that would be difficult to predict.
- Finally, a strong case can be made for a consumption-based VAT that has desirable efficiency properties, is relatively simple, and avoids source-based taxation of mobile capital and thus spurs investment. Consideration could also be given to the Simplified Alternative Tax version of the VAT, which allows businesses a deduction for wages and then taxes wage income at the individual level, subject to a standard deduction and personal exemptions to exempt the poor from tax. However, all of these VAT options would add a new layer of complexity to administration and compliance, and would introduce a variety of new problems not shared by the existing tax system.

Appendix

The appendix provides some details on trends in Texas state taxes, as well as a comparison of the tax system in Texas with those in the ten most populous states in the union, and in Texas's four neighboring states —Arkansas, Louisiana, Oklahoma, and New Mexico.

Trends in Texas Taxes

The state tax mix has changed considerably over the last twenty years. Table A1 indicates that the share of total tax revenues attributable to the general sales tax has increased from 39.7 percent in 1980 to 55.2 percent in 2002. The tax share of the excise tax on motor fuels has been in the 10 to 12 percent range since 1987, although it was somewhat lower in earlier years. Not surprisingly, given the nature of price fluctuations in the international oil market as well as the evolution of oil and gas production in the state, the tax share of oil and gas severance taxes has declined significantly since the early 1980s. For example, the tax share of oil and gas severance taxes was 28.3 percent in 1981, but has generally been in the five percent range since 1994, with a share of only 3.7 percent in 2002. The tax share of excise taxes on cigarettes and tobacco declined fairly steadily over this period, as it was 5.1 percent in 1980 but only 2.1 percent by 2002; a similar though less pronounced decline has occurred for the share of tax revenues accounted for by taxes on alcohol. The franchise tax had been fairly stable at roughly 7 to 9 percent of revenues since 1993, which represents a modest increase in tax share relative to the previous years considered. The tax shares of the other taxes listed in table A.1 have been relatively stable over the last twenty years.

Table A2 indicates that state taxes per capita (without adjustments for inflation) increased from \$444 in 1980 to \$1,206 in 2002. The ratio of state taxes to personal income has remained fairly constant, ranging within the relatively narrow band of 4.2 to 5.1 percent, with somewhat lower ratios in recent years; the ratio of state taxes to personal income was estimated to be 4.2 percent in 2002.

A Brief Comparison with Other States

This section compares the overall level of taxation and the tax mix in Texas to those in other states. Table A3 shows per capita state tax revenues and state tax revenues as a percentage of personal income for the 10 most populous states and for Texas's four neighboring states for 2000, as well as the state percentage of total state and local tax revenue for fiscal year 1999-2000. State taxes in Texas were \$46.70 per \$1,000 of personal income, which is considerably below the 50-state average of \$64.25; similarly per capita tax revenue in Texas was \$1,315, below the U. S. average of \$1,922. Note that Texas ranks last among the 10 most populous states in terms of state tax revenue as a percentage of personal income and per capita state tax revenues, and that only New York has a lower level of state taxes as a percentage of total state and local tax revenue. Texas also ranks lowest in terms of state tax revenue as a percentage of personal income and per capita state tax revenues when compared to its four neighboring states of Arkansas, Louisiana, Oklahoma, and New Mexico.

Table A4 compares revenue sources across the ten most populous states in the union and in Texas and its four neighboring states in the year 2000. The primary factor that distinguishes the tax mix in Texas from that in most other states is of course that Texas does not have either a personal income tax or (nominally) a corporate income tax, although, as stressed in the text, the franchise tax is largely based on corporate income. The tax mix in Texas is thus characterized by heavy reliance on sales taxes, with the sales tax share of total revenue in Texas of 51.1 percent—relative to a national average of 32.3 percent—exceeded only by the 60.5 percent share in Florida among the ten most populous states in the union. Similarly, 81 percent of total tax revenue in Texas is generated by general or selective sales taxes—the highest figure among the ten most populous states and considerably higher than the national average of nearly 47 percent. By comparison, the national average for the percentage

of state tax revenues derived from the personal income tax is 36 percent, while Texas does not have a personal income tax. The sales tax share of total state revenues is also higher in Texas than in any of its neighboring states, all of which have personal income taxes.

Finally, table A5 compares Texas to all other states in terms of the tax mix for combined state and local revenue for 2000. These data demonstrate that Texas places relatively heavy reliance on general sales and property taxes, as the revenue share of each tax is roughly 4 to 4.5 percent greater than the national average. Note that the share of total taxes in total revenues (54.7 percent) is very close to the national average share (56.6 percent).

**Table A1 Texas State Tax Revenues by Source, as a Percentage of Total Tax Revenues,
1980-2002**

Year	General Sales Tax	Excise Tax on Motor Fuels	Motor Vehicle Sales and Rental Taxes	Cigarette and Tobacco Taxes	Taxes on Alcohol	Corp. Franchise Tax	Oil and Gas Severance Taxes	Insurance Occupation Taxes	Other Taxes
1980	39.7	7.6	6.9	5.1	3.2	5.4	24.0	2.8	5.3
1981	38.5	6.2	6.6	4.4	3.1	5.4	28.3	2.4	5.1
1982	40.0	5.8	6.7	4.0	3.1	5.6	27.4	2.3	5.1
1983	38.9	5.8	6.9	4.2	3.2	6.5	26.5	2.6	5.4
1984	40.7	5.7	7.7	3.7	3.1	6.5	23.8	3.9	4.9
1985	39.1	9.2	8.3	3.5	3.1	8.0	20.2	3.4	5.2
1986	42.3	9.9	8.5	3.7	3.4	8.8	15.1	4.0	4.3
1987	45.0	12.4	7.8	3.6	3.2	8.5	11.5	4.1	3.9
1988	50.5	11.9	7.7	3.4	2.6	7.5	8.5	4.4	3.5
1989	53.6	11.6	7.9	3.3	2.5	5.3	9.1	3.4	3.3
1990	55.7	11.1	8.0	3.2	2.4	4.3	8.0	3.8	3.5
1991	55.3	10.1	7.2	4.3	2.5	4.0	9.0	4.0	3.6
1992	54.0	12.3	7.7	3.7	2.4	6.9	6.4	3.3	3.4
1993	53.6	12.3	8.4	3.6	2.3	7.0	6.9	2.7	3.2
1994	54.2	12.0	8.9	3.2	2.2	7.0	5.1	4.2	3.3
1995	54.4	11.9	9.5	3.4	2.2	7.5	4.7	3.2	3.2
1996	54.6	11.7	9.9	2.9	2.1	8.3	4.2	3.2	3.1
1997	53.5	11.2	9.7	3.1	2.0	8.5	5.4	3.3	3.2
1998	55.0	11.1	10.1	2.5	2.0	8.6	3.9	3.3	3.6
1999	55.3	11.0	10.5	2.6	2.0	8.8	3.0	3.4	3.3
2000	55.3	10.6	11.0	2.1	2.0	8.2	4.4	3.2	3.2
2001	53.8	10.2	10.7	2.1	2.0	7.2	7.5	3.0	3.5
2002	55.2	10.8	11.2	2.1	2.1	7.4	3.7	4.0	3.5

Source: Texas Comptroller of Public Accounts, Texas Revenue History by Source, 1978-2002
<http://www.window.state.tx.us/taxbud/revenue.html>

Table A2 Trends in Texas State Tax Collection, 1980-2002

Fiscal Year	State Tax Collections (billion)	Resident Population (millions)	Per Capita Tax Collections (\$)	Percentage Change of Per Capita Tax Collections	Taxes as Percentage of Personal Income
1980	6.3	14.3	444	14.1	4.7
1981	7.7	14.7	527	18.5	4.9
1982	8.7	15.2	567	7.7	4.9
1983	8.5	15.7	542	-4.5	4.6
1984	9.3	16.0	582	7.5	4.6
1985	10.7	16.2	660	13.3	4.9
1986	10.2	16.5	620	-6.1	4.5
1987	10.3	16.6	618	-0.3	4.5
1988	12.4	16.7	742	20.1	5.1
1989	12.9	16.8	768	3.6	5.0
1990	13.6	17.0	801	4.2	4.9
1991	14.9	17.3	862	7.6	5.0
1992	15.8	17.6	899	4.4	5.0
1993	17.0	18.0	946	5.2	5.0
1994	18.1	18.3	988	4.4	4.9
1995	18.9	18.7	995	2.2	4.7
1996	19.8	19.0	1026	3.1	4.5
1997	21.2	19.4	1076	4.9	4.5
1998	22.6	19.7	1119	4.0	4.4
1999	23.6	20.0	1146	2.4	4.4
2000	25.3	20.9	1211	5.7	4.3
2001	27.2	21.4	1271	5.0	4.5
2002	26.3	21.8*	1206*	-5.1*	4.2

*Estimated population for 2002, U.S. Census Bureau, Annual Population Estimation by State.

<http://eire.census.gov/popest/data/states/tables/ST-EST2002-01.php>

Table A2 (continued)

Sources:

Texas Comptroller of Public Accounts, Texas Revenue History by Source, 1978-2002.

<http://www.window.state.tx.us/taxbud/revenue.html>

U.S. Census Bureau, Statistical Abstract of the United States.2002. Table 18: Resident Population-States: 1980 to 2001.

<http://www.census.gov/prod/2003pubs/02statab/pop.pdf>

U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business. Regional Data for States.2003. Table J: State and Region Tables.

U.S. Department of Commerce, Bureau of Economic Analysis, Comprehensive Revision of State Personal Income, 2000.Table: Personal Income by State and Region, 1969-99.

<http://www.bea.gov/bea/ARTICLES/REGIONAL/PERSINC/2000/0600spi.pdf>

Table A3 State Tax Revenue in the 10 Most Populous States and in Neighboring States**2000**

Ten Most Populous States	State Tax Revenue Per \$1,000 of Personal Income (\$)	State Tax Revenue Per Capita (\$)	State Percentage of State-Local Tax Revenue FY 1999-00	State Tax Revenue (\$ Million)	Personal Income (\$ Million)	State-Local Tax Revenue (\$Million)
Michigan	77.47	2,289.84	72.3	22,756	293,744	31,474
California	76.23	2,474.25	69.8	83,807	1,099,375	120,067
Ohio	61.42	1,733.14	57.5	19,676	320,377	34,238
New York	62.77	2,199.40	48.0	41,735	664,927	86,868
Pennsylvania	61.56	1,829.40	61.4	22,466	364,953	36,581
Georgia	58.19	1,650.53	58.1	13,511	232,179	23,253
Illinois	56.83	1,834.99	56.6	22,788	401,030	40,256
New Jersey	57.19	2,156.83	55.3	18,147	317,346	32,837
Florida	54.65	1,552.83	59.2	24,817	454,106	41,936
Texas	46.70	1,315.18	52.5	27,424	587,228	52,226
50-State Average	64.25	1,921.51	61.9	539,655	8,398,871	872,351
Texas and Four Neighboring States						
Arkansas	82.27	1,822.13	81.7	4,870	59,205	5,961
Louisiana	62.73	1,457.23	59.8	6,512	103,824	10,887
New Mexico	94.11	2,057.82	78.0	3,743	39,772	4,800
Oklahoma	70.33	1,692.27	70.8	5,840	83,035	8,251
Texas	46.70	1,315.18	52.5	27,424	587,228	52,226

Table A3 (continued)

Sources:

- U.S. Census Bureau, State Government Finances: 2000. Table: State Government Finances, Summary Table Spreadsheet. <http://www.census.gov/govs/www/index.html>
- U.S. Census Bureau, State and Local Government Finances. Table 1: State and Local Government Finances by Level of Government and by State: 1999-2000. <http://www.census.gov/govs/www/estimate.html>
- U.S. Department of Commerce, Bureau of Economic Analysis, Survey of Current Business, 2002. State Personal Income: Revised Estimates for 1999-2001. Table A: Personal Income by State: 1999-2001. <http://www.bea.gov/bea/ARTICLES/2002/10October/SPI1002.pdf>

Table A4 Percentage Distribution of State Tax Revenue by Major Taxes in the 10 Most Populous States and in Neighboring States, 2000

Ten Most Populous States	Total Sales Tax	General Sales Tax	Selective Sales Tax	Licenses	Individual Income Tax	Corporation Income Tax	Other
California	35.3	28.0	7.4	4.4	47.2	7.9	5.1
Florida	77.1	60.5	16.6	6.1	0.0	4.8	12.1
Georgia	42.5	34.3	8.3	3.5	47.1	5.3	1.6
Illinois	47.7	28.1	19.6	6.9	33.5	9.9	2.0
Michigan	43.0	33.7	9.3	5.3	31.6	10.5	9.6
New Jersey	45.2	30.4	14.8	4.4	39.7	7.4	3.3
New York	31.9	20.5	11.4	2.3	55.6	6.6	3.6
Ohio	46.0	31.8	14.2	7.9	41.9	3.2	1.0
Pennsylvania	46.6	31.4	15.2	10.1	30.1	7.6	5.6
Texas	81.0	51.1	29.9	13.9	0.0	0.0	5.1
50-State Avg.	46.7	32.3	14.4	6.0	36.1	6.0	5.2

Table A4 (continued)

Texas and Four Neighboring States	Total Sales Tax	General Sales Tax	Selective Sales Tax	Licenses	Individual Income Tax	Corporation Income Tax	Other
Arkansas	48.5	35.0	13.5	5.3	30.2	4.9	11.1
Louisiana	57.1	31.6	25.5	7.5	24.3	3.4	7.7
New Mexico	53.6	40.1	13.5	5.5	23.5	4.3	13.1
Oklahoma	37.3	24.7	12.6	14.2	36.5	3.3	8.7
Texas	81.0	51.1	29.9	13.9	0.0	0.0	5.1

Note: The Texas franchise tax is classified under the "Licenses" category.

Source: U.S. Census Bureau, State Government Finances: 2000. Table: State Government Finances, Summary Table Spreadsheet. <http://www.census.gov/govs/www/index.html>

**Table A5 Combined State and Local General Revenue by Source, Percentage Distribution
(and Dollar Amounts), 1999-2000**

	Income Taxes	General Sales Taxes	Property Taxes	Other Taxes	Total Taxes	Charges and Misc. Sources	Inter- governmental Transfers	Total
U.S. Average	2.3 (\$36.1)	14.0 (\$215.1)	16.2 (\$249.2)	24.1 (\$372.0)	56.6 (\$872.4)	24.5 (\$377.0)	18.9 (\$291.9)	100.0 (\$1,541.3)
Texas	0.0 (\$0.0)	18.1 (\$17.3)	20.7 (\$19.8)	15.8 (\$15.1)	54.7 (\$52.2)	25.9 (\$24.7)	19.5 (\$18.6)	100.0 (\$95.5)

Source: U.S. Census Bureau, State and Local Government Finances: 2000. Table1: Summary of State and Local Finance by Level of Government: 2000-01.
<http://www.census.gov/govs/www/estimate.html>

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Notes

¹ See Lori Taylor (2003) for a recent discussion of revenue shortfalls in Texas.

² In general, the analysis of alternative revenue options is little affected by the fact that most of the resulting increase in state revenues will be going to finance K-12 educational expenditures rather than other public services; that is, the criteria used to evaluate these revenue options are largely independent of the use of the revenue. However, an increased role for the state in funding education may imply that the criterion of revenue stability (defined and discussed at length below) may be relatively more important than it would be if less essential services were being financed. In addition, to the extent that the reform involves substituting a state-level tax for a similar local-level tax (as with the proposals for a statewide property tax at a rate below the one currently charged in most districts), the economic effects of reform may fairly minimal.

³ The primary focus of this paper is a conceptual analysis of the relative advantages and disadvantages of alternative sources of state tax revenue in Texas. However, to place the analysis in the current context in Texas, some suggestive revenue estimates will be provided as well. Note that the specific proposals discussed are meant to be illustrative only. Unless otherwise noted, all revenue estimates and comparisons with other states mentioned in this report are based on figures very generously provided to the House Select Committee on Public School Finance by the State Comptroller of Public Accounts.

⁴ This paper draws on an earlier analysis of state sales and income taxes in Texas (Zodrow 1999), as well as a more recent analysis of proposals to broaden the sales tax base to include a wide range of services (Hendrix and Zodrow 2003). In addition, Billy Hamilton (1989) provides an excellent set of papers that analyze many of the issues regarding Texas taxes addressed in this paper. These sources should be consulted for additional details as well as comprehensive lists of references.

⁵ Since the discussion focuses solely on alternative sources of state tax revenue, reforms of the local property tax, including reforms of assessment practices, are not considered.

⁶ More generally, Robert Schwab (1998) argues that the residential property tax ranks poorly in terms of the tax criterion of “horizontal equity” (discussed below), since the tax individuals pay depends on their preferences for housing.

⁷ Note, however, that this result does not obtain if the jurisdiction is property rich because it has a disproportionately large amount of nonresidential property. In this case, SFE may increase the price of educational expenditures closer to one.

⁸ See Hoxby (2001) for further details.

⁹ This principle does not, however, define a uniquely optimal state-local mix of school finance, as many different combinations of state and local school finance satisfy the goal of ensuring that most incremental expenditures are financed with locally-raised funds. Instead, the ultimate mix of state and local finance is likely to be determined by the constitutional requirement that the State of Texas must provide adequate funds to ensure “the general diffusion of knowledge,” rather than by purely economic considerations.

¹⁰ In 2001, local property taxes accounted for 48 percent of combined state and local tax revenues in Texas and 51 percent in Illinois. Texas Education Agency budget figures indicate that the local property tax share for Texas increased to 55 percent in 2003.

¹¹ See table 1 in the appendix, taken from Texas Comptroller of Public Accounts, Table: Texas Revenue History by Source, 1978-2002, at <http://www.window.state.tx.us/taxbud/revenue.html>.

¹² This information was obtained from the office of the Texas Comptroller of Public Accounts. This figure is an upper bound on the business share of the sales tax base, since the estimation methodology—which is similar to that used by Raymond Ring (1999)—calculates the consumer share of the tax base and then assumes that the remainder is attributable to businesses. In particular, no attempt is made to reduce the estimate of the business share for sales to tourists, non-profit organizations and government agencies. Although corrections for these factors would lower the fraction of the sales tax base attributable to business purchases, it seems clear that the remaining fraction would still be quite large.

¹³ The business tax burden under the sales tax arises primarily due to the taxation of office furniture and computers and some office equipment, some services, fuels, various intermediate goods, certain machines and tools, certain raw materials, and certain transportation and delivery charges. In addition, although purchases of nonresidential structures are not taxed explicitly, they are subject to an implicit tax since sales taxes are paid on the purchases of many of the components of business structures and are thus incorporated in their prices.

¹⁴ These include the exemption of (1) goods sold for subsequent resale, (2) property that becomes a component of a manufactured product, (3) property (including equipment) that will either be directly used or consumed in manufacturing or processing, is essential for pollution and quality control, improving efficiency of water use, or complying with government regulations, (4) services performed directly on a product prior to final sale, (5) gas and electricity used directly in manufacturing, and (6) wrapping and packing necessary for the sale of products. See State Sales and Use Tax, Subchapter O of title 34, Part 1, Chapter 3, under Texas Administrative Code at [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac_view=5&ti=34&pt=1&ch=3&sch=O&rl=Y](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=5&ti=34&pt=1&ch=3&sch=O&rl=Y).

¹⁵ For example, services subject to tax include most non-automotive repairs, amusements, laundry and dry cleaning, cable television, mortician services, nonresidential repairs and remodeling of real property, certain telecommunications services, data processing, security services, landscaping and lawn maintenance, janitorial and extermination services, garbage removal, credit reporting and certain debt collection services, certain information services, land surveying, certain insurance services, and Internet access services in excess of \$25 per month. See State Sales and Use Tax, Subchapter O of Title 34, Part 1, Chapter 3, under Texas Administrative Code at [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tac_view=5&ti=34&pt=1&ch=3&sch=O&rl=Y](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tac_view=5&ti=34&pt=1&ch=3&sch=O&rl=Y).

¹⁶ See Franchise Tax, Subchapter V of Title 34, Part 1, Chapter 3, under Texas Administrative Code at [http://info.sos.state.tx.us/pls/pub/readtac\\$ext.ViewTAC?tacview=5&ti=34&pt=1&ch=3&sch=V&rl=Y](http://info.sos.state.tx.us/pls/pub/readtac$ext.ViewTAC?tacview=5&ti=34&pt=1&ch=3&sch=V&rl=Y). In addition, this discussion draws heavily on the excellent description of the current franchise tax provided by the Texas Taxpayers and Research Association (TTARA), based in Austin (TTARA 2003).

¹⁷ Although formula apportionment is the standard approach to allocating corporate profits among the states in the U.S. that have a corporate income tax, the use of a single-factor formula is somewhat unusual. Many states instead use a “three-factor” formula, under which a firm’s national tax base is apportioned to a state using a weighted average of the fractions of the firm’s total property, payroll and sales that are located in the state.

¹⁸ The specification of “source rules” (to determine how gross receipts or other apportionment factors should be allocated across states) is among the most complicated features of the franchise tax (TTARA 2003)

¹⁹ In addition, as will be discussed below, benefit taxes are by definition consistent with the benefit principle of tax equity, and the use of benefit taxes may under certain circumstances generate extra revenue that can be used to reduce other distortionary taxes.

²⁰ The discussion will focus on negative externalities caused by firms that should be offset with the appropriately designed taxes. Note, however, that individual actions can also cause externalities, and that externalities can be positive in which case subsidies are called for on efficiency grounds.

²¹ For example, see Stephen Smith (forthcoming) and Sijbren Cnossen and Michael Smart (forthcoming).

²² The discussion in this paper will treat interstate competition in the markets for tradable goods and mobile factors of production from a broad perspective, as competition among states in the U.S. (and even among the nations of the world). It should, however, be noted that in some cases competition with neighboring states may be more pressing, at least in the short run, especially for tradable goods. (Accordingly, the appendix provides some data on the tax structures of these neighboring states.) However, this distinction is not particularly important in the long run and, at least in the case of Texas, may be relatively unimportant even in the short run since Texas is such a geographically large state with no major cities particularly near state borders, and because Texas and its four neighboring states (Arkansas, Louisiana, New Mexico, and Oklahoma) are all relatively low-tax states; for example, the rankings of all five states in terms of per capita combined state and local tax revenues range between 32 and 49, with Texas ranked 35th. In addition, the importance of geographic proximity is declining with the increasing importance of electronic commerce, although the revenue impact of tax avoidance via purchases over the Internet is not yet large (Zodrow 2000). Note also that the effects of tax increases in Texas must be measured with respect to the current equilibrium; that is, even though Texas is a relatively low-tax state, increases in state tax rates will nevertheless disturb that equilibrium, leading to outflows of mobile factors and reduced sales of tradable goods until a new equilibrium is attained.

²³ Indeed, a primary motivating factor behind passage of the Tax Reform Act of 1986 at the national level was a desire to “level the playing field” by providing for more uniform taxation of different types of capital assets and thus different types of industries. Significant improvements on this score were implemented, although some distortions—primarily those favoring investment in owner-occupied housing and capital expenditures that are deducted immediately rather than depreciated, such as some intangible expenses and advertising, and research and development expenditures—still remain (Gravelle 1994).

²⁴ Such asymmetric treatment may occur for some businesses under the two components of the franchise tax in Texas. For example, consider a marginally profitable firm whose tax liability is roughly the same under either component of

the franchise tax. If such a firm is contemplating a large risky investment, it faces the following scenario. If the investment is successful, the firm will pay tax under the income or earned surplus component of the franchise tax. On the other hand, if the investment is unsuccessful, the firm will not see a significant reduction in its tax liability as its losses reduce its taxable income (the usual result under a corporate income tax). Instead, the firm will be subject to the net asset component of the franchise tax and pay a higher tax than before it made the investment (since its capital stock will be larger). Thus, in contrast to the case under a pure income tax in which the government shares in both the return and the risk to the investment, under these circumstances the structure of the franchise tax in Texas implies that the government shares the returns but not the risk

²⁵ Equity financing implies that a new project is financed with either retained earnings or the proceeds of issuing new shares. The franchise tax favors debt over equity finance because, under the earned surplus component of the tax, interest payments are deductible while dividend payments are not, and, under the net asset component of the tax, debt financed investments are not included in the tax base.

²⁶ Remote vendors (those located outside the state) are not required to collect the use tax (a tax that complements the sales tax by assessing tax on goods that are purchased out of state but consumed within the state) unless they have a sufficient connection (nexus) to the state, typically established by a physical presence within the state. Although sales tax revenue losses attributable to sales over the Internet are still quite small and will remain so for some time (Cline and Neubig 1998), the potential for significant revenue losses is a cause for serious concern (Bruce and Fox 2000). Texas is currently cooperating with most of the states that utilize the sales tax in the Streamlined Sales Tax Project, an effort to simplify the sales tax system in the U.S. to a sufficient extent that it would be reasonable for either Congress or the Supreme Court to impose a requirement on remote vendors to collect use tax. It remains to be seen if this effort will be successful. For comprehensive discussions of the issues related to sales taxation of electronic commerce, see William Fox and Matthew Murray (1997), Charles McLure (1997, 2002) and George Zodrow (2002a).

²⁷ The rationale underlying this view is that any state that attempts to redistribute income to any significant degree will experience an outflow of high-income individuals and an inflow of low-income transfer recipients; for example, see Wallace Oates (1972) and Helen Ladd and Fred Doolittle (1982). However, it is clear that current U.S. policy has

tended to shift some responsibility for redistribution from the federal to the state level, and that there is some scope for redistribution at the state level (Reschovsky 1998a).

²⁸ This issue is still a controversial one in the literature; for example, see George Zodrow (2001) and William Fischel (2001). One particularly contentious issue is the conditions under which the benefit principle applies. The basic model of the property tax as a benefit tax requires precise zoning in highly homogeneous local communities for the benefit result to obtain, while a model with heterogeneous communities requires fully developed communities and the availability of homogeneous community alternatives.

²⁹ Thus, the efficiency-enhancing properties of taxation according to benefits received are ignored.

³⁰ A progressive (regressive) tax system is typically defined as one where the fraction of income paid as taxes increases (decreases) with income.

³¹ A separate issue is that even if one accepts annual income as a measure of ability to pay, the definition of annual income is problematic since the federal definition of income differs considerably from a comprehensive measure of accrual income and all income is not reported; see George Zodrow (1999) for further discussion.

³² For example, under the permanent income hypothesis, individuals experiencing relatively high (low) income years will have low (high) consumption levels relative to their annual incomes. Similarly, under the life-cycle hypothesis, young and old individuals will have high consumption levels relative to their annual incomes, while middle-aged individuals will have low consumption levels relative to their annual incomes. As a result, tax progressivity measures based on annual income will make a tax based on consumption (income) appear more regressive (progressive) than it is relative to lifetime income.

³³ For example, see Gilbert Metcalf (1994), who focuses on state and local taxes, as well as Don Fullerton and Diane Lim Rogers (1991, 1993), and Eric Casperson and Metcalf (1994).

³⁴ For example, Randy Fritz (1989) adopted this approach in his analysis of the incidence of the Texas tax system.

³⁵ As noted by the Comptroller, estimates of tax incidence for low income groups are quite uncertain since it is difficult to account for the component of their income accounted for by transfers.

³⁶ See Texas Comptroller of Public Accounts, Tax Exemptions and Tax Incidence, Texas Tax Incidence, Table 1, Initial Distribution and Final Incidence of Total Limited Sales and Use Tax Revenue, Final Incidence of Tax by Family, Fiscal 2002, at http://www.window.state.tx.us/taxinfo/incidence/table1_49.html. This estimate assumes that nearly 25

percent of the sales tax burden is exported to residents of other states; for the reasons discussed in the text, this seems to be quite optimistic.

³⁷ Michael Ettliger and Robert McIntyre (1996) provide a similar analysis based on annual income for the tax systems of all fifty states.

³⁸ For a recent discussion of economic, legal and political perspectives on transitional equity, see George Zodrow (2002).

³⁹ See Paul Courant and Susanna Loeb (1997). Although, as noted previously, the incidence of the national system of property taxation is a highly controversial issue (Fischer 2001 and Zodrow 2001), there is more agreement on the view that the burden of the tax imposed by a single jurisdiction is either borne by local factor owners (primarily land and relatively immobile labor) and consumers of non-tradable goods such as housing. The empirical evidence suggests that housing consumption increases less than proportionally with respect to annual income (for example, see Keith Ihlanfeldt [1982]) and is roughly proportionally with respect to lifetime income, except at the lowest income levels (for example, see Don Fullerton and Diane Lim Rogers [1993]).

⁴⁰ Although the empirical evidence on the capitalization of fiscal differentials in property values is mixed, most studies suggest at least partial, and in some cases full, capitalization; see William Fischel (2001) for a review of the capitalization literature.

⁴¹ These capitalization effects would also depend on the mix of residential and nonresidential property within a jurisdiction. For example, the prices of homes in a district with a high proportion of nonresidential property would decline to the extent that local expenditures were not subsidized by property taxation of nonresidential property. A complete analysis of these capitalization effects would be extremely complex, as it would also require estimates of migration across jurisdictions in response to the tax reform. For a recent analysis of a move to statewide property taxation in New Hampshire, see Lisa Shapiro, Richard England, Daphne Kenyon and Charles Connor (2000).

⁴² It should, however, be noted that automatic revenue growth in excess of the growth rate of the economy, as occurs with a progressive income tax or a property tax during a period of rapid growth in a house values, is also undesirable as it creates a bias favoring overexpansion of government services.

⁴³ For example, the ratio of personal services to personal consumption expenditures increased from 33.1 percent in 1950 to 45.0 percent in 1970 (a 36 percent increase) and to 55.3 percent in 1990 (a 22.9 percent increase). By

comparison, this ratio increased, but only to 58.4 percent in 2000 (a 5.6 percent increase over the ten-year interval), and in 2002 was 59.1 percent. See U.S. Department of Commerce, Bureau of Economic Analysis, National Income and Product Accounts, Table 1.1, Gross Domestic product, at <http://www.bea.doc.gov/bea/dn/nipaweb/TableViewFixed.asp#Mid>.

⁴⁴ Note that much of the increase in the relative importance of services arises because productivity increases have thus far been relatively small in services (although productivity in the service sector is difficult to measure). Thus, much of the increase in the fraction of consumption accounted for by services reflects relative price declines in other sectors. The extent to which this phenomenon will continue over time is not clear (Tannenwald 2002).

⁴⁵ The Economic Stabilization Fund is the Texas version of a “rainy day” or revenue stabilization fund in which funds are to be deposited during periods of high economic growth so that they can be withdrawn during recessionary periods.

⁴⁶ This figure is roughly comparable to earlier “back of the envelope” calculations which suggested that the advantage of deductibility was on the order of 10 percent (Brown 1989; Zodrow 1999).

⁴⁷ See U.S. Census Bureau, Government Finances. Table No 420, State and Local Governments: Revenues by State 1999 at <http://www.census.gov/prod/2003pubs/02statab/stlocgov.pdf>. This calculation follows Dick Netzer (1992, 504), in which user charge revenue is defined fairly broadly as the sum of current charges, utility revenue, and revenue from motor fuel and motor vehicle license taxes, and own-source revenue is defined as total own-source general revenue plus utility revenue.

⁴⁸ A similar picture emerges at the local level. Again following the methodology in Dick Netzer (1992), the ratio of local user charges per dollar of local taxes is identical in Texas to the national average rate of 0.358; however, seven states had ratios of 0.5 or more. See U.S. Census Bureau, Government Finances. Table No 431, Local Governments: Revenues by State 1999, at <http://www.census.gov/prod/2003pubs/02statab/stlocgov.pdf>.

⁴⁹ For detailed discussions of the application of user charges in various functions, see U. S. Advisory Commission on Intergovernmental Relations (1987), Paul Downing (1992), Richard Bird and Thomas Tsiopoulos (1997), and Bird (2001). Texas has recently increased user fees in various areas, raising approximately \$1.3 billion; see <http://www.window.state.tx.us/taxbud/newfees/>.

⁵⁰ The state of Hawaii is an outlier in these data (which are taken from the 1991-92 school year), as nearly 80 percent of own-source revenues are raised from user fees, which include significant tuition charges.

⁵¹ In addition, many public schools engage in fundraising efforts to supplement their finances (Brunner and Sonstelie 1996).

⁵² This is not to say that businesses do not benefit from having access to an educated workforce; indeed, active participation by businesses in efforts to improve the quality of education clearly suggest otherwise. Rather, the point is that, at least in a reasonably competitive environment, businesses will pay for most of these benefits in the form of higher compensation packages for workers with more advanced skills.

⁵³ In addition, environmental fees provide another source of revenue that could be utilized to an increasing extent in Texas, although state governments in the U.S. typically do not rely on environmental taxes and fees to any large extent. Joseph Cordes (1992) reports that in 1989 Texas raised \$10.6 million from this source, ranking 13th among the states in total revenues raised from environmental taxes and fees. The potential of this revenue source thus may be fairly limited. Nevertheless, options for environmental taxes and fees should be explored thoroughly; Barry Rabe (2003) provides a discussion of recent state efforts in the environmental area.

⁵⁴ This negative average tax rate reflects the refundable earned income and child care tax credits.

⁵⁵ Note also that even if the state tax system is roughly proportional or moderately regressive, it may still involve redistribution from the rich to the poor, since the consumption of many state public services does not increase significantly, if at all, with income.

⁵⁶ For a similar argument, see David Wildasin (1993) and, for an opposing view which argues that high individual mobility is limited to certain geographical areas, see Howard Chernick (1996).

⁵⁷ Note that this argument is largely independent of the fact that most other states in the union currently have an income tax. The argument assumes that the combination of state income taxes in most other states, coupled with no income taxes in Texas and a few other states, has resulted in an equilibrium in which households are relatively indifferent among states, given their existing tax systems. If Texas were to implement a reform such as a progressive income tax that resulted in a higher net tax burden on relatively high-income individuals, the analysis of Martin Feldstein and Marian Vaillant Wrobel (1998) implies that such individuals would move to other states until after-tax

incomes were such that a new equilibrium—where individuals were again relatively indifferent among alternative locations—was attained.

⁵⁸ The percentage of itemizers varies from seven percent for taxpayers with AGI between \$10,000 and \$15,000, to 45 percent for taxpayers with AGI between \$40,000 and \$50,000, to 81 percent for taxpayers with AGI between \$75,000 and \$100,000, to 89 percent and above for taxpayers with AGI in excess of \$100,000; see <http://www.irs.gov/pub/irs-soi/00in12ar.xls>.

⁵⁹ See William Oakland (1992) for an excellent exposition of this argument in the context of state and local taxes on business.

⁶⁰ These efficiency costs arise for at least three reasons. First, the overall capital intensity of production is inefficiently low due to the tax-induced outflow of capital from the taxing state. Second, use of the capital income tax creates a tax bias favoring production of labor-intensive goods. This effect arises because the tax-induced reduction in wages that occurs as the capital income tax is shifted to labor is less pronounced for goods with a relatively large labor income share, causing an inefficient reallocation of labor to the labor-intensive production sector. Third, state government officials, concerned about tax-induced emigration of mobile capital, may reduce public services below their efficient level as a means of reducing reliance on a distortionary capital income tax. Note, however, that other factors—including the perception that some state taxes can be exported to non-residents and the political power of special interest groups or governmental workers—can result in tendencies for over-expansion of public services.

⁶¹ Note also that if state taxation of capital income takes the form of a state corporate income tax based on the federal corporate tax, the many inefficiencies of the latter tax instrument (Gravelle 1994) will be exacerbated.

⁶² The “small open economy” assumption typically also applies in commodity markets—that is, Texas firms are unlikely in most cases to have sufficient market power to affect the prices of goods that are traded on national or international markets. Moreover, even in cases where some market power in commodity markets exists, a tax on capital income is a rather indirect means of attempting to tax the associated economic rents.

⁶³ Similarly, Texas may provide multinational firms with opportunities for diversification of investment risk, and capital income taxation could be viewed as “charging a price” for that service; it is, however, difficult to imagine that this is often a quantitatively significant factor.

⁶⁴ A consumption-based VAT allows expensing of depreciable assets, rather than deductions for depreciation; such treatment is sufficiently generous to exempt the normal return to capital, although above-normal returns are still subject to full taxation. See George Zodrow and Charles McLure (1991) for a demonstration of this well-known proposition. In addition, during a lengthy transition period, the returns to “old capital,” that is, capital in place prior to the implementation of the consumption-based VAT, would be subject to tax, unless special transition provisions were included to relieve this burden; see Zodrow (2002) for a discussion of these issues. The use of transitional rules would have to be considered with the implementation of a new VAT in Texas, although transitional problems would be minimized if the base were extremely broad with a very low rate, especially if the VAT replaced the franchise tax and the VAT rate were below the 4.5 percent rate of the current franchise tax.

⁶⁵ For a more cautious assessment of this literature, see Therese McGuire (2003).

⁶⁶ Taylor (2003a) argues that Texas businesses pay considerably more in business taxes than they receive in public services, even taking into account business benefits from education. General empirical support is provided by William Oakland and William Testa (2000), who estimate that the ratio of business taxes to tax-financed services rendered to businesses averages roughly 2.4 for a sample of Midwest states, with a minimum value of 1.9, and that the business share of local public services averages roughly 13 percent. See Thomas Pogue (1998) for a similar discussion.

⁶⁷ Indeed, one of the basic tenets of the branch of public finance known as optimal taxation theory is the “production efficiency theorem” which states that—under the appropriate circumstances—taxes on business inputs should be avoided entirely. The basic intuition behind this result is that the appropriate set of taxes on consumption goods alone can achieve any outcome that would obtain under taxation of production inputs, but consumption taxes avoid the distortions of input choices that arise with production taxes. This result is subject to a number of qualifications; in particular, it requires that commodity taxes be set optimally, and that any above-normal profits be subject to tax (Slemrod 1990). Nevertheless, the production efficiency theorem suggests that, at least to a first approximation, taxes on business inputs should be avoided, especially if—as seems inevitable—they are not explicitly designed to offset any problems that arise under the system of taxation of final goods in the state.

⁶⁸ The most prominent example of this approach is the proposal made by Lieutenant Governor David Dewhurst and passed by the Texas State Senate in May 2003. This proposal would finance a fifty percent reduction in local

property taxes (which would cost on the order of \$7.1 billion) with an increase in the state sales tax rate to 7.25 percent, an increase in the motor vehicles sales tax rate to 9.25 percent, and broadening of the sales tax base, including the taxation of many currently exempt services.

⁶⁹ The following discussion draws on Michele Hendrix and George Zodrow (2003), which should be consulted for further details. See also William Fox and Matthew Murray (1988), Perry Quick and Michael McKee (1988), Fox (1992a), Kirk Stark (2003), and Michael Mazerov (2003).

⁷⁰ Thus, taxing very small service providers, such as gardeners and housekeepers, would raise very little revenue at high administrative cost and should be avoided, although large providers of these same services — professional landscapers and maid services—should be subject to tax.

⁷¹ See Michael Mazerov (2003) for a comprehensive list of potentially taxable consumer services.

⁷² See Texas Comptroller of Public Accounts, Tax Exemptions and Tax Incidence Report, Table 3, Limited Sales and Use Tax, at <http://www.window.state.tx.us/taxinfo/incidence/table6.html>. Note, however, that a significant fraction of this amount is accounted for by labor used in new residential construction as a proxy for taxing housing services (\$0.26 billion) and child day care services (\$0.15 billion); both of these items would be difficult to tax from a political perspective, and a child care services arguably should not be taxed because they are primarily a cost of employment rather than personal consumption. As an alternative to taxing labor used in new residential construction, housing services could be taxed directly under the sales tax, either by taxing sales of new homes (which would tax only the future services of new homes) or by applying an “imputed” rate of return to assessed home values under the property tax, in an attempt to approximate the housing services provided by such homes; however, such measures would seem to be politically infeasible, especially in the context of a reform designed to reduce tax burdens on homeowners.

⁷³ Note that such estimates are inherently difficult to make accurately, as they should include estimates of the effects of reduced consumption in response to higher (tax-inclusive) prices as well as the extent of evasion.

⁷⁴ These arguments are particularly compelling if individuals tend to be far-sighted, since distortions of savings decisions are especially costly in this context. For reviews of the relative advantages and disadvantages of consumption and income taxes, see David Bradford (1986) and George Zodrow and Charles McLure (1991); for a recent collection of articles examining this debate in the national context, including discussions of the efficiency

gains that might be obtained by replacing the current income tax with a consumption tax, see Zodrow and Peter Mieszkowski (2002).

⁷⁵ The optimal taxation literature shows that uniform taxation, which would not distort consumer decisions across consumption commodities, is desirable under certain conditions, especially if distributional concerns are addressed with the (federal) income tax. More generally, a differentiated commodity tax structure is desirable, as goods that are relatively inelastically demanded or consumed disproportionately by the rich should face relatively high tax rates. However, since these factors tend to offset one another, a uniform tax may not be far from optimal. This is especially true once one takes into account the difficulties of administering differential rates, and the likelihood that any sales tax rate differentials will be determined by political factors rather than efficiency considerations.

⁷⁶ An alternative but less precise approach would be to increase public expenditures targeted toward the poor.

⁷⁷ For example, six states (Hawaii, Idaho, Kansas, Oklahoma, South Dakota, and Wyoming) tax food for home consumption at the standard sales tax rate while offering the poor partial relief for sales taxes paid with income tax credits or rebates; Georgia taxes food at a lower rate and also provides a credit, and four other states (Illinois, Louisiana, Missouri and North Carolina) tax food at a lower rate. Nine states (Alabama, Arkansas, Mississippi, New Mexico, South Carolina, Tennessee, Utah, Virginia and West Virginia) tax food for home consumption at the standard rate without any credits or rebates (Nicholas Johnson and Iris Lav 1998).

⁷⁸ See Johnson and Lav (1998) for a recent discussion of such sales tax rebate plans.

⁷⁹ Note that this argument could in theory also be applied to sales tax exemption of “merit goods,” such as education and health care goods and services, although such an approach is presumably politically infeasible.

⁸⁰ Another potential source of revenue, which would also increase the progressivity of the state tax system, would be to introduce special excise taxes or differentially higher sales tax rates on goods believed to be luxury goods. Although this might be desirable on vertical equity grounds, especially to the extent that any reform package increases the regressivity of the state tax burden (with respect to annual income), it is fraught with difficulties, especially with respect to creating incentives for out-of-state purchases of the highly taxed goods and a host of problems in classifying which goods are subject to differentially high taxation. The relatively negative European experience with luxury tax rates under the value-added tax (Cnossen 2002) suggests that Texas should approach this option with great caution.

⁸¹ There are, however, exceptions to this general rule; for example, Robert Bohm and Eleanor Craig (1987) found that adding housing repair services to the sales tax base reduced its stability.

⁸² It should be noted that it is theoretically possible that, given that the existing sales tax system already taxes many business inputs, taxing more business inputs would improve efficiency by reducing distortions of business input choices (since more would be taxed). In addition, taxing business inputs provides a means of indirectly taxing consumption goods, especially housing and some consumer services, that are currently exempt from sales tax, and taxing business inputs allows a lower overall sales tax rate. However, the likelihood that these factors imply that taxing business services is on balance efficiency-enhancing seems slim, and it is much more likely that expanding the tax base to include more business inputs, including business services, would only exacerbate the already significant distortions of the existing sales tax system.

⁸³ Furthermore, applying sales tax to certain services, such as telecommunications and transportation, is difficult since the location of consumption is difficult to ascertain. Previous experience in Florida and in other states that have attempted to tax business services also suggests that a wide variety of legal issues will arise and have to be resolved if the use tax is applied to sales of business services (Hellerstein 1988; Fox and Murray 1988).

⁸⁴ For example, James Poterba (1989) examines this issue, assuming that annual consumption is a reasonable proxy for permanent or lifetime income, and that the latter provides a much better indicator of a household's economic status or ability-to-pay tax than does annual income. He shows that excise taxes on alcohol, tobacco, and gasoline are highly regressive relative to annual income because the income share devoted to purchases of the taxed good declines with income; for example, the income share of gasoline for the lowest quintile in his sample averages 15.0 percent, and declines uniformly to 2.8 percent for the highest quintile. In marked contrast, when measured as a share of total consumption expenditures, gasoline and alcohol purchases are a roughly constant fraction of income over the first four quintiles, with a relatively small decline for the fifth quintile. For example, for gasoline, the consumption share of the lowest quintile is 6.0 percent, ranges between 6.6 and 7.2 percent for the next three quintiles, and then drops to 3.9 percent for the top quintile; a similar pattern obtains for alcohol consumption. However, excise taxes on tobacco remain regressive (although the degree of regressivity declines) even under a lifetime view of incidence; specifically, Poterba finds that the annual income share of tobacco expenditures declines uniformly from 4.6 to 0.5 percent, while the annual consumption share declines uniformly from 2.2 to 0.7 percent. See also Andrew Lyon and

Robert Schwab (1995) who obtain similar results for excise taxes on alcohol and tobacco, using a model in which they attempt to estimate lifetime income; they also conclude that most of the differences between the lifetime and annual incidence approaches come from life cycle rather than transitory income effects.

⁸⁵ For example, Ian Irvine and William Sims (1993) estimate that the demand for alcohol products is price inelastic (around -0.65), and Sijbren Cnossen and Michael Smart (forthcoming) note that the empirical literature suggests that the demand for cigarettes is price inelastic, especially among adults (-0.4 for adults but -0.8 for youths).

⁸⁶ Note, however, that under current law only 25 percent of the increases in motor fuels taxes (gasoline and diesel fuel) is earmarked for education, with the remainder allocated to state road and highway funds. The revenue calculations in table 1 assume that the current rules for allocating motor fuels taxes would be altered so that all of the increased revenue in these two categories would be available for local property tax relief or higher educational expenditures. If this did not occur, only 25 percent of the revenue increases for excise taxes on motor fuels shown in table 1 would be available for these purposes.

⁸⁷ Recall that the franchise tax currently generates revenues of about \$1.9 billion.

⁸⁸ One potential “pro-growth” reform of the franchise tax would be to leave the statutory rate unchanged while enacting an investment incentive such as an investment tax credit or an employment incentive like a jobs credit. However, such measures complicate the tax system and typically are relatively costly in revenue terms, since it is difficult to apply them only to new investment or new employment that would not have occurred in the absence of the credit (if indeed any effort is made to apply the credits only to new investment or employment). Moreover, for large multi-state firms subject to formula apportionment, the main effect of adding such credits would be to lower the measure of overall national profit, with only a limited effect on the primary factor determining franchise tax revenues in the state, that is, gross sales within the state. Finally, some potentially significant fraction of any employment gains attributable to a jobs credit at the state level will reflect jobs for new rather than existing residents, and much of any investment generated by an investment tax credit will be reflected in goods purchased from out-of-state firms. For these reasons, this report does not consider such measures further. However, see Timothy Bartik (2001) for a more favorable assessment of state employment credits, especially if there are important external benefits to reducing involuntary employment, and Edward Gramlich (1987) for a critical analysis of the conventional wisdom (reflected above) that a state should not attempt to use fiscal policy to affect the level of investment or employment in the state.

⁸⁹ In addition, the Texas franchise tax is biased against risk-taking because its provisions for carrying forward losses are among the harshest of any state (TTARA 2003). Relaxing these provisions, including extending the period for loss carried forward, is a reform that should be given serious consideration, even though it would result in short run revenue losses.

⁹⁰ Note, however, that businesses are also subject to local property taxes, a levy that is also sometimes justified on benefit tax grounds.

⁹¹ Such an approach is adopted by Michigan's Single Business Tax and New Hampshire's Business Enterprise Tax, which apply to all forms of business, subject to fairly generous exemption levels. In addition, Illinois levies its income tax on partnerships and West Virginia levies its assets-based franchise tax on partnerships. In general, however, most states with a corporate income tax also have a personal income tax which is applied to sole proprietorships, while partnerships can elect to be taxed either as corporations or on a "pass through" basis, with income attributed to the partners and taxed under the personal income tax. California charges partnerships a fee, while Florida exempts both partnerships and sole proprietorships. For further details, see Texas Taxpayers and Research Association (2003, 47).

⁹² An alternative approach would be to apply the franchise tax only to entities that benefit from any type of liability protection. Such an approach could be partially justified on grounds of simplicity and as an application of the benefit principle—the franchise tax would be a fee for the benefit of state liability protection. However, such benefits are not closely related to the base of the franchise tax, while businesses that do not receive liability protection nevertheless receive the benefits of all other public services. This approach would also imply that many large partnerships would escape the tax entirely. Accordingly, a simple exemption based on the level of gross receipts, designed to exempt only small firms from tax, seems preferable.

⁹³ Note that such rules should also eliminate opportunities to abuse small business tax exemptions by splitting up a single entity into numerous smaller entities, each of which falls below the threshold defining a non-taxable "small business."

⁹⁴ Such efforts would also limit tax avoidance opportunities available through the transfer of intangible property such as patents or trademarks to "passive investment companies" (subsidiaries established in states like Delaware or

Nevada that treat royalty payments favorably) coupled with deductible royalty payments to such subsidiaries; alternatively, royalty payments to such entities could be made non-deductible.

⁹⁵ See <http://www.window.state.tx.us/etexas2003/gg26.html>.

⁹⁶ Another gambling option would be to expand considerably the currently very minimal extent of casino gambling allowed on Texas's Indian reservations. In 2002, Louisiana (with less than one quarter of the population of Texas) raised slightly over \$0.4 billion in revenue from taxing casino gambling (American Gaming Association 2003, 4).

⁹⁷ The following discussion draws heavily on the excellent recent survey of gambling taxes by Charles Clotfelter (forthcoming).

⁹⁸ Taxes on lotteries are sometimes described as "voluntary" taxes, but this characterization applies to all excise taxes, and for that matter general sales taxes and income taxes—one pays tax only if one engages in the taxed activity.

⁹⁹ In addition, lottery products may be complementary with untaxed leisure, in which case optimal commodity taxation considerations would suggest that relatively high tax rates are appropriate.

¹⁰⁰ Charles Clotfelter and Philip Cook (1989) also argue on optimal commodity tax grounds that the typical implicit tax on lotteries is too high, relative to the excise taxes typically applied to alcohol and tobacco.

¹⁰¹ In addition, some individuals object strenuously to the basic notion of the state providing and indeed encouraging legalized gambling.

¹⁰² Note, however, that this argument loses relevance to the extent that consumer demands reflect addictive behavior or misinformation about the likelihood of winning the lottery.

¹⁰³ For example, Charles Clotfelter notes that in Virginia the percentage of income spent on "scratch-off" lottery tickets varies from 0.81 percent for individuals with annual incomes of less than \$15,000 to 0.03 percent for individuals with annual incomes greater than \$50,000. In a recent study of three Texas lottery games (lotto, Pick 3 and instant or "scratch off" games), Donald Price and Shawn Novak (1999) also find a regressive incidence pattern (although the degree of regressivity is not as marked as in some other studies). They note that all three games are roughly twice as regressive as the sales tax (using an index of regressivity known as the Suits index), which is of course often criticized for being a regressive tax. Price and Nowak find that lotto is the least regressive of the three games, while

the instant or scratch off games were slightly more regressive than the Pick 3 games. They also find that African-Americans, Hispanics, the poorly educated and the elderly are more likely to play the relatively regressive games

¹⁰⁴ Note, however, that this study is an annual incidence study and thus subject to the criticisms of such studies noted above.

¹⁰⁵ One could argue that calculations of the regressivity of lotteries should take into account the incidence of any revenues that are earmarked for specific expenditures that are disproportionately consumed by the poor. However, several empirical studies suggest that such earmarking is largely an illusion, as state legislatures undo earmarking by diverting general revenue funds that would have otherwise gone to the earmarked function (Clotfelter, forthcoming).

¹⁰⁶ Charles McLure (2000) recommends that all states adopt this “ideal sales tax” approach as a means of simplifying the sales tax system in the U.S. (as opposed to the more modest reforms recommended by the ongoing Streamlined Sales Tax project) so that a compelling case could be made that either Congress or the Supreme Court should require out-of-state vendors to collect use tax, including tax on goods sold over the Internet.

¹⁰⁷ Moreover, competitive pressures imply that vendors will tend to err on the side of granting exemptions.

¹⁰⁸ Care would also have to be taken to ensure that personal services were not commingled with tax-exempt purchases of business services.

¹⁰⁹ Yet another alternative would be the enactment of a destination-based value-added tax (VAT) of the type utilized in Europe and many other countries around the world. The VAT is effectively a sales tax that is imposed at each stage of the production process. Most discussion of state VATs assume that a “subtraction method” VAT under which tax is assessed on the difference between receipts and allowed deductions. By comparison, under the popular “invoice credit” method of implementing a VAT, firms receive credits for all taxes paid on inputs, so that the final tax liability is the same as under a retail sales tax; indeed, this crediting mechanism is the primary advantage of the VAT, relative to the sales tax as administered in the U.S. states, as the credit mechanism ensures that business inputs are not included in the tax base. However, a destination based tax (under which tax is paid where consumption occurs) would be difficult to implement at the state level (especially if the tax were adopted only by a single state), as it would require refunds of tax paid on goods exported out of state, and would not allow deductions for purchases of out-of-state business inputs. The former feature would be administratively cumbersome and would create serious tax evasion and avoidance opportunities; the latter treatment would be perceived as extremely harsh by out-of-state

producers and might be interpreted as unconstitutional state taxation of imports (Carlson and McLure 1985). Accordingly, a destination-based VAT is not considered further in this report, although an origin or production-based VAT is one of the potential reforms considered below.

¹¹⁰ Recall that although this assertion is sometimes buttressed by the claim that the state also has no corporate income tax, the state franchise tax is primarily on tax on corporate income as defined by the federal corporate income tax. A state personal income tax would thus to some extent complement the existing tax on corporate income.

¹¹¹ For example, Scott McCown and Dick Lavine (2004) argue that a state personal income tax is the best way for Texas to finance reduced reliance on the local property tax for K-12 school finance.

¹¹² In addition, a personal income tax would diversify the state's revenue sources, making it less susceptible to revenue fluctuations attributable to factors that affect some tax bases but not others (Tannenwald 2002).

¹¹³ For example, using annual incidence analysis, the Texas Governor's Task Force on Revenue (1991) report estimates that families in the \$0 to \$10,000 income class pay somewhat under eight percent of their income in state taxes, while the remaining families bear a burden in the range of 4.7 to 5.7 percent of income.

¹¹⁴ For example, Erik Casperson and Gilbert Metcalf (1994) analyze a national VAT on the assumption that it is fully shifted forward to consumers; they first use annual consumption expenditures as a proxy for lifetime income and then construct an estimate of lifetime income using Panel Study of Income Dynamics (PSID) data. They find that although a broad-based VAT is quite regressive with respect to annual income, it is roughly proportional with respect to annual consumption and only mildly regressive with respect to their estimates of lifetime income. They also analyze a VAT with zero ratings for food, housing, and health expenditures. In this case, the VAT is less regressive (than a comprehensive VAT) with respect to annual income, roughly proportional with respect to their estimates of lifetime income, and moderately progressive with respect to annual consumption. See also Metcalf (1994) and Don Fullerton and Diane Lim Rogers (1991, 1993).

¹¹⁵ Note, however, that the means-tested rebate program discussed above as a potential reform of the existing sales tax would be even more highly targeted and thus less costly in revenue terms than standard deductions and personal exemptions under the income tax; the means-tested rebate would apply only to poor families, while standard deductions and personal exemptions are available to many high-income individuals under the income tax (although personal exemptions are phased out at the very highest income levels).

¹¹⁶ In addition, by structuring the state personal income tax appropriately, including refundable credits for low income families, the sales tax could be reformed in the direction of a much more comprehensive tax base (including many currently exempt necessities) and the equity problems associated with more widespread utilization of user charges would also be alleviated.

¹¹⁷ Note that the incentive to under-spend on public services financed by taxes on mobile capital is not likely to arise under a state school finance equalization system that guarantees that districts will raise a specified amount of revenue per penny of tax regardless of the change in the local tax base.

¹¹⁸ Another potential problem with statewide taxation of nonresidential property is that the incentive for businesses to monitor the performance of local schools might be reduced, since they would no longer be directly contributing to local school finance. However, this problem should be fairly minimal, as businesses would still be concerned about local schools for a variety of reasons, including the need to ensure an educated and skilled work force and in order to be able to attract new employees (and transferred employees) from other jurisdictions.

¹¹⁹ See Andrew Reschovsky (1998) for a discussion of the desirability of state tax on land value. Although increased land value taxation is not currently being discussed in the Texas context, Reschovsky suggests that the need for additional state revenues, coupled with strong political opposition to an income tax, increases the likelihood that Texas might at some point in time adopt a land tax.

¹²⁰ For a recent review of the debate, which dates back to the work of Henry George, see the articles in Dick Netzer (1998). Note that individual local governments could also move toward increased taxation of land values.

¹²¹ Thomas Nechyba (1998) argues that the efficiency gains from such a reform could be significant, and Wallace Oates and Robert Schwab (1997) provide empirical evidence that differentially higher property taxation of land in Pittsburgh has been highly successful in stimulating economic growth within the city.

¹²² Strictly speaking, a land value tax is efficient only if land is assessed at the value that would obtain under its most profitable use; otherwise, inefficiencies in the timing of development will occur. Wallace Oates and Robert Schwab (1997) argue that this consideration did not appear to be important in the Pittsburgh context, which attempted to tax land at the value in its “highest and best” use.

¹²³ For example, Andrew Reschovsky (1998) concludes that a tax on land values is somewhat more stable than either income or general sales taxes.

¹²⁴ For a discussion of the feasibility of accurate land value taxation, see Andrew Reschovsky (1998). Note that current practice is not very informative since most property taxes apply the same rate to both land and capital improvements, so that tax assessors have little incentive to separate the values of land and capital accurately.

¹²⁵ The Michigan VAT, known as the Single Business Tax, is currently scheduled to be phased out.

¹²⁶ An alternative is an income-based VAT, under which expensing of capital purchases is replaced with deductions for depreciation, as under a standard income tax. The “Single Business Tax” utilized in Michigan is an origin-based, consumption-based VAT (Cline 1988). The New Hampshire Business Enterprise Tax is a modified version of an origin-based, income-based VATs that does not include rents, retained earnings, or the labor earnings of sole proprietors or partners in a partnership (Kenyon 1996).

¹²⁷ The same result is obtained under the “credit invoice” approach to implementing the VAT used in Europe and elsewhere, under which businesses pay tax on all their sales, but receive a credit for taxes paid by their suppliers. The credit invoice approach is widely used as a national tax because it is more easily enforced and more resistant to pressures for preferential treatment than the alternative “subtraction” approach described in the text (Cnossen 2002). However, the subtraction method is preferable for a state tax since it avoids all issues related to interstate credits.

¹²⁸ Thus, under the destination-based approach, imported business inputs would not be deductible, while under an origin-based tax, imported business inputs would be deductible.

¹²⁹ Pensions would be treated as under current law—deductible to the firm, with earnings tax exempt but all pension payments to individuals fully taxable.

¹³⁰ The following discussion of the state SAT option is fairly cursory; for further details, see George Zodrow (1999).

¹³¹ A payroll tax is another tax reform option occasionally mentioned as a new source of revenues for Texas. Since the economic effects of a payroll tax are similar to the labor compensation component of a VAT (in particular, the individual component of a flat-rate SAT), the analysis will not also discuss the payroll tax option. Note, however, that there may be one very important difference between the VAT and payroll tax (and perhaps the SAT) options from a political standpoint. Specifically, it may be easier politically to impose a payroll tax on the non-profit and government sectors, relative to requiring these sectors to be subject to the VAT. Uniform taxation of the for-profit, non-profit, and government sectors is desirable on both efficiency and equity grounds, and such a broad base is

desirable—as will be discussed in more detail below—to keep the VAT rate relatively low. Note also that a VAT differs from a payroll tax in that only the former taxes the income to old capital (depending on transition rules) as well as above-normal returns to new capital.

¹³² More accurately, as noted previously, expensing under a consumption-based VAT is sufficiently generous that the normal return to capital investment is exempt, but above-normal returns and returns to old capital (depending on transition rules) are still subject to tax. Note that taxation of such rents and returns to old capital is generally efficient, although the taxation of rents may discourage businesses with firm-specific rents from locating in Texas and the taxation of old capital may be perceived to be inequitable (although this concern would be reduced if the VAT replaced a higher rate franchise tax).

¹³³ Note that as an origin-based tax, a state VAT is more like a tax on in-state production than a true consumption tax (McLure 1987). Accordingly, especially for tradable goods, its burden would more likely be reflected as lower factor returns (lower wages, economic rents, and returns to old capital) than as higher prices. Note also that to any extent that a VAT were not either shifted forward as higher prices or backward as lower wages (as seems likely), it would create a tax bias against hiring labor.

¹³⁴ Note that the VAT is no more “hidden” than the sales tax, as long as retailers are required—as they should be if the VAT were to be implemented in Texas—to show the VAT separately on all invoices, calculated at the standard rate (or whatever rate applies to the commodity in the case of differential rates). Thus, concerns that the VAT is more conducive to expansion of the public sector than the sales tax are misplaced (Zodrow 1999a).

¹³⁵ Note that although an origin-based VAT would apply to exports, the extent to which a VAT imposed by Texas could be shifted to residents of other states would be limited by the “small open economy” considerations noted previously. Thus, the VAT on tradable goods would be likely to be borne by in-state labor (Papke 2000). For a general discussion of distributional issues related to the VAT and other consumption-based taxes, see the articles in David Bradford (1995).

¹³⁶ Alternatively, firms could be allowed a deduction from the VAT base for some amount, such as the minimum wage, for each employee.

¹³⁷ Note that exemption of normal returns to capital is appropriate under the lifetime view of equity described above, and that above-normal returns to capital and returns to old capital are subject to tax under the SAT.

¹³⁸ Alternatively, some proponents of an income-based VAT, which taxes capital income by allowing only deductions for depreciation rather than expensing of depreciable assets, argue that its base serves as a better proxy for the benefits received by businesses from state and local public services (Cline 1988; Papke 2000; Bird 2003). Even if this were true, however, business capital is already taxed under the nonresidential component of the property tax, so that it is far from clear that additional taxation under an income-based state VAT could be justified on benefit tax grounds.

¹³⁹ In addition, it should be noted that the use of formula apportionment creates its own efficiency problems (McLure 1980; Gordon and Wilson 1986).

¹⁴⁰ In addition, the enactment of transition rules for any of the VAT options would have to be considered, especially for old capital including inventories and depreciable assets existing at the time of implementation of the reform. For example, existing inventories would presumably be deductible against VAT liability, and deductions for depreciation (or even expensing) for existing depreciable assets could be allowed. Such rules would limit the extent to which the income from old capital is subject to the VAT, and would thus reduce the revenues obtained from the VAT during a lengthy transition period. Note that the need for such transitional issues would be minimized to the extent that base of the VAT were extremely broad so that the rate would be low, especially if the VAT were replacing a higher-rate franchise tax. See George Zodrow (2002) for a discussion of the transitional issues raised by consumption tax reforms.

¹⁴¹ Lori Taylor (2003) notes that revenues of states that utilize the income tax revenues have been highly unstable in recent years as capital gains taxes first soared and then plummeted during the recent boom-and-bust cycle of the U.S. stock market.

¹⁴² Of course, describing the individual component of the SAT as a personal income tax might make it a politically infeasible option in Texas.

¹⁴³ Taxing government institutions would also increase the size of the base, but is probably politically infeasible. In any case, the amount of net revenue raised would be difficult to predict, as some of the VAT might be reflected in higher wages, which would then increase the revenue required to achieve a given level of public services.

¹⁴⁴ This figure would have to be adjusted to reflect the revenue cost of any transitional provisions included in the VAT.

¹⁴⁵ As noted previously, state VATs are typically referred to as “business activity taxes” (BATs) in the U.S., and proponents of the VAT in Texas are no exception (Hartman 2003). Note, however, that non-profit institutions might object to paying the BAT on the grounds that they are not “businesses.” This issue could be avoided by following the Canadian example and referring to the tax as the “Texas Goods and Services Tax.”