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Title

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<https://escholarship.org/uc/item/1vs1z8hz>

Journal

California Journal of Politics and Policy, 2(3)

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Publication Date

2010-10-05

DOI

10.5070/P2W304

Peer reviewed

THE CALIFORNIA *Journal of*
Politics & Policy

Volume 2, Issue 3

2010

California's Future Tax System*

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Abstract

California's fiscal problems go well beyond the design of its tax system, but its tax system has contributed to these problems. The nature of this contribution is subject to dispute. California's tax system is clearly not the outcome of a coherent design process, but more the result of a combination of historical inertia and political and legal constraints. Certain improvements to the tax system cannot be contemplated without legal changes at the state or federal level; others would involve sharp breaks with the past and with common practice in other states. In this paper I review the structure of California's tax system and consider the various criticisms to which it is subject. I also discuss the most recent organized attempt to reform California's tax system by the Commission on the 21st Century Economy.

Keywords: California budget, tax reform, fiscal oversight, economic growth

* This is a revised version of a paper presented at a conference, "Too Big to Fail? Reforming California's Constitution for the 21st Century," held at USC, February 16-17, 2010. I am grateful to participants at the conference for their comments and suggestions.



California's Future Tax System

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I. Introduction

California's fiscal problems go well beyond the design of its tax system, but its tax system has certainly contributed to these problems. The nature of this contribution, though, is subject to dispute. Some fault the tax system for relying too much on a small group of taxpayers whose unstable incomes contribute to a volatile stream of tax revenue. Others see the state's tax structure as being unnecessarily distortionary and thus hindering California's ability to attract and encourage economic activity and development. Still others point simply to the level of revenues, arguing that California is a high-tax state and as such is at a competitive disadvantage. While there is some truth to each of these arguments, the situation is more complex than any of them suggest. Further, California's tax system is clearly not the outcome of a coherent design process, but more the result of a combination of historical inertia and political and legal constraints. Certain improvements to the tax system cannot be contemplated without legal changes at the state or federal level, and others would involve sharp breaks with the past and with common practice in other states.

In this paper, I review the structure of California's tax system and consider the various criticisms to which it is subject. I also discuss the most recent organized attempt, as yet unsuccessful, to reform California's tax system by the Commission on the 21st Century Economy (COTCE) in its September 2009 Report.

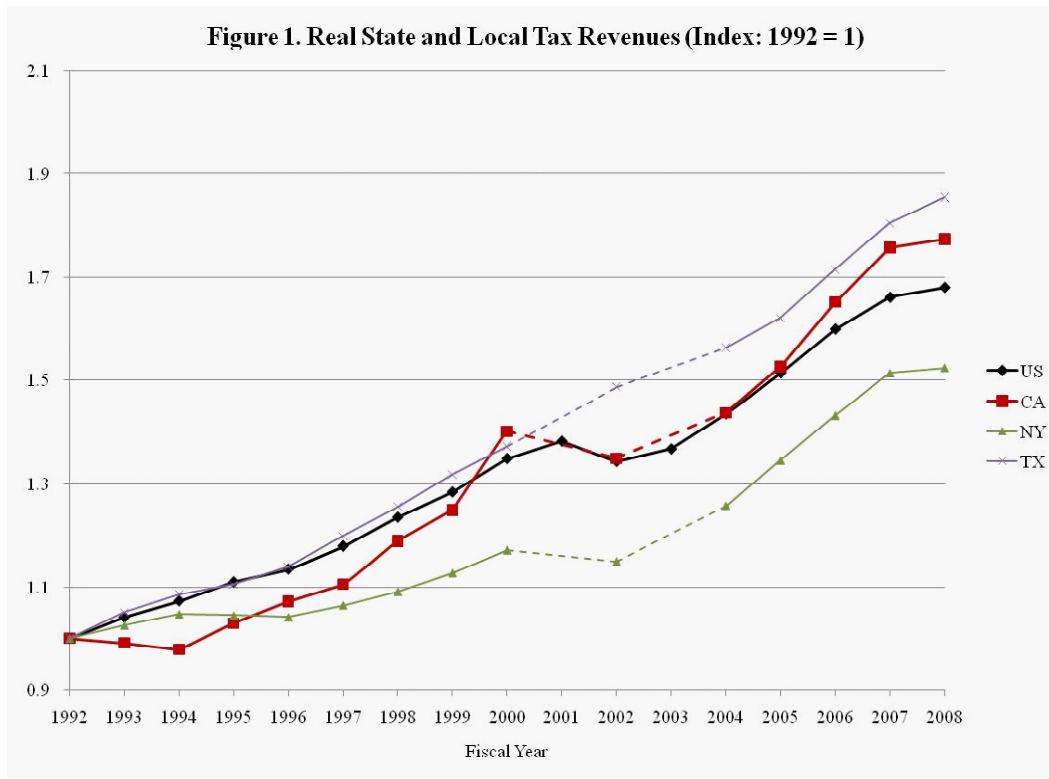
II. An Overview of California's Tax System

California relies on the standard instruments of state and local taxation. At the state level, the primary sources of tax revenue are, in decreasing order of importance, the individual income tax, the retail sales tax, and the corporate income tax. At the local level, the property tax is most important, followed by the sales tax, which by local option can be added to the state sales tax. At this level of generality, California is not unusual. Most states rely on income and sales taxes to generate the bulk of their state-level revenues and on the property tax for local revenues. But at a finer level of detail, California differs from other states in some important respects. These differences can be illustrated using a series of graphs comparing California to the U.S. states as a whole as well as other important states.

Figure 1 shows trends in state and local tax revenue for California and all U.S. states, using fiscal-year data from the U.S. Census Bureau from 1992 through 2008. Each series in the figure is an index of real state and local tax revenue using 1992 as the base year.¹ Three things are apparent from a comparison of these two series. First, state and local revenues grew quite rapidly during this period, in both California and the nation as a whole. Part of this relates to the fact that 1992 was a year of relatively weak economic performance, particularly in California, while fiscal year 2008 was a transition year at the end of a long economic expansion. Indeed, the growth is very much in line with the growth in the federal government's tax receipts, which equaled 1.63 times their 1992 value in fiscal year 2008. Second, tax revenues grew at similar rates during the period in California and the United States as a whole. Third, California's revenues exhibited more cyclical volatility than U.S. revenues, rising faster during the expansion of the late '90s, falling more sharply in the recession covering fiscal years 2001-02, and rising again more quickly in the expansion that ended midway through California's 2008 fiscal year (in December 2007).²

Also shown in Figure 1 are comparable tax revenue series for the next two largest states, ranked by personal income, New York and Texas. The growth rates for these two states are quite different, reflecting the fact that the economy of Texas has been growing rapidly while New York has grown relatively slowly, but the key thing to observe about these states is that their revenue growth has been less volatile than California's. This is especially apparent for Texas, but it is also true for New York. If one considers deviations in trend growth for the three states,³ the coefficient of variation of these deviations is .0378 for California, .0254 for New York, and .0129 for Texas. That is, California's tax revenue stream has been roughly 50% more volatile than New York's and almost three times as volatile as that of Texas.

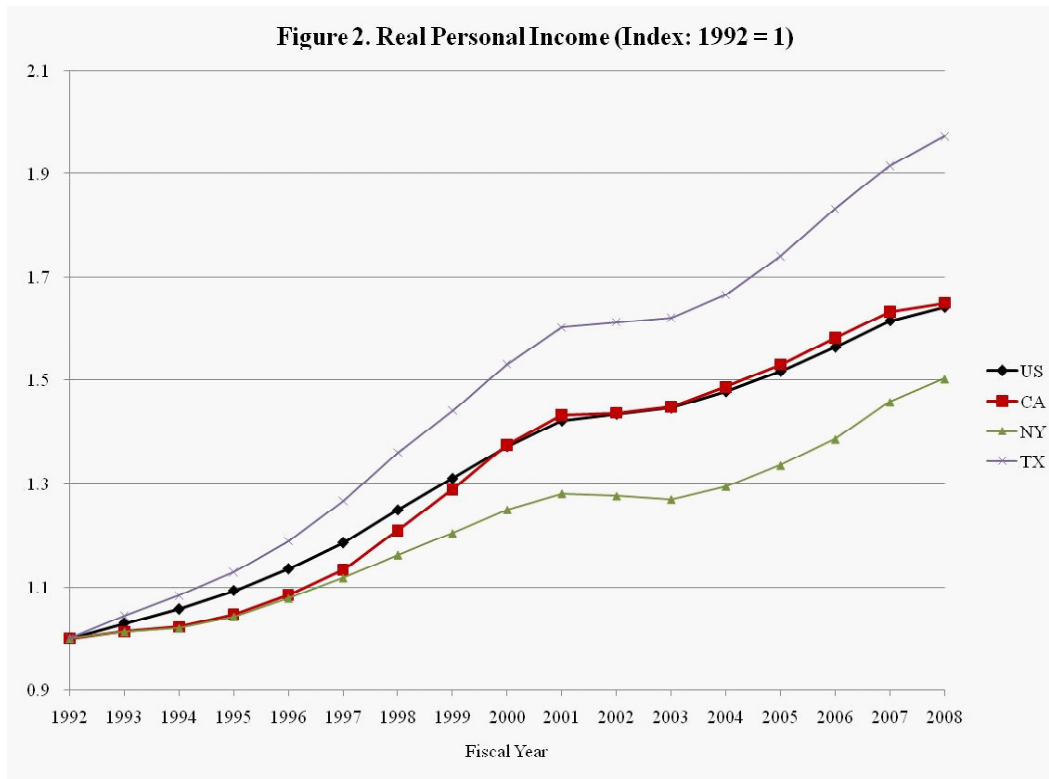
What is the source of this revenue volatility? Part of the explanation is simply underlying economic volatility. Since revenues depend on the level of economic activity, economic volatility can contribute to revenue volatility. Figure 2 presents indexes of real personal income for California, the United States as a whole, and the other two states, again using 1992 as a base year.⁴ As is well-known, the recession of the early 1990s was relatively mild at the national level but deeper and more prolonged in California. This shows up in Figure 2 in the slower growth of personal income until the mid '90s. Likewise, the strong economic expansion of the late 1990s and the recession that followed, fueled by the dot-com boom and bust, were stronger in California. Stronger growth then followed in California, and, if the figure were extended beyond 2008, we would undoubtedly see a stronger drop here as well. It is difficult to know whether this is a "standard" feature of California or simply the result of coincidence, particularly given that the sources of California's



income volatility were different in each recession: defense cuts in the early '90s, the dot-com bust in 2001, and the collapse of the real estate bubble beginning in fiscal year 2008.

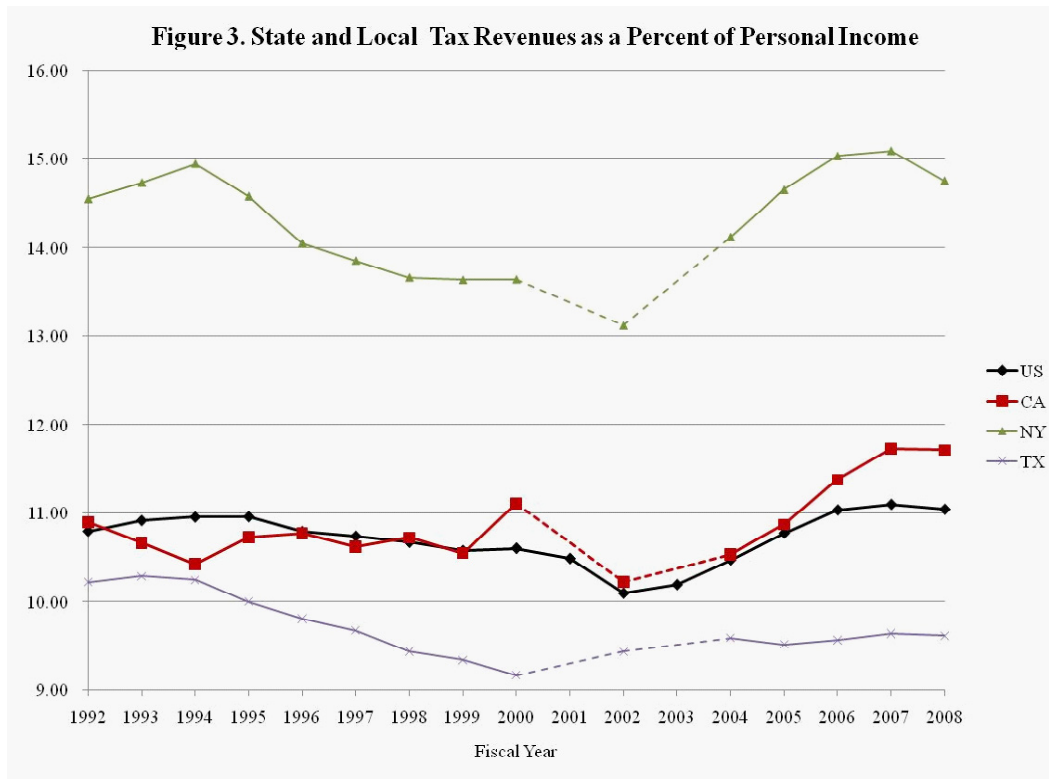
But, as Figure 3 illustrates, not all of the volatility in California's revenue stream is attributable to economic fluctuations. The figure graphs state and local tax revenue as a percent of personal income. From the figure, it is clear that the ratio fell more sharply in California in the early '90s, and then rose more quickly late in the decade, especially in fiscal year 2000. We know from other sources that this spike in fiscal year 2000 related to a flood of income tax revenues associated with executive compensation and capital gains, which under California's tax system are taxed at a relatively high rate. As this episode illustrates, there are features in California's tax structure that also contribute to tax revenue volatility.

Figure 3 also displays tax revenues as a share of personal income for New York and Texas, showing that New York is a high-tax state and Texas a low-tax state relative to California.⁵ The figure shows that each state has a variable revenue share, but some of the fluctuations are countercyclical and therefore contribute to greater revenue stability. For example, in the late 1990s, as incomes surged, revenues rose less rapidly in both New York and Texas, exhibiting quite different patterns than



that observed in California. I discuss the sources of such countercyclical movements below.

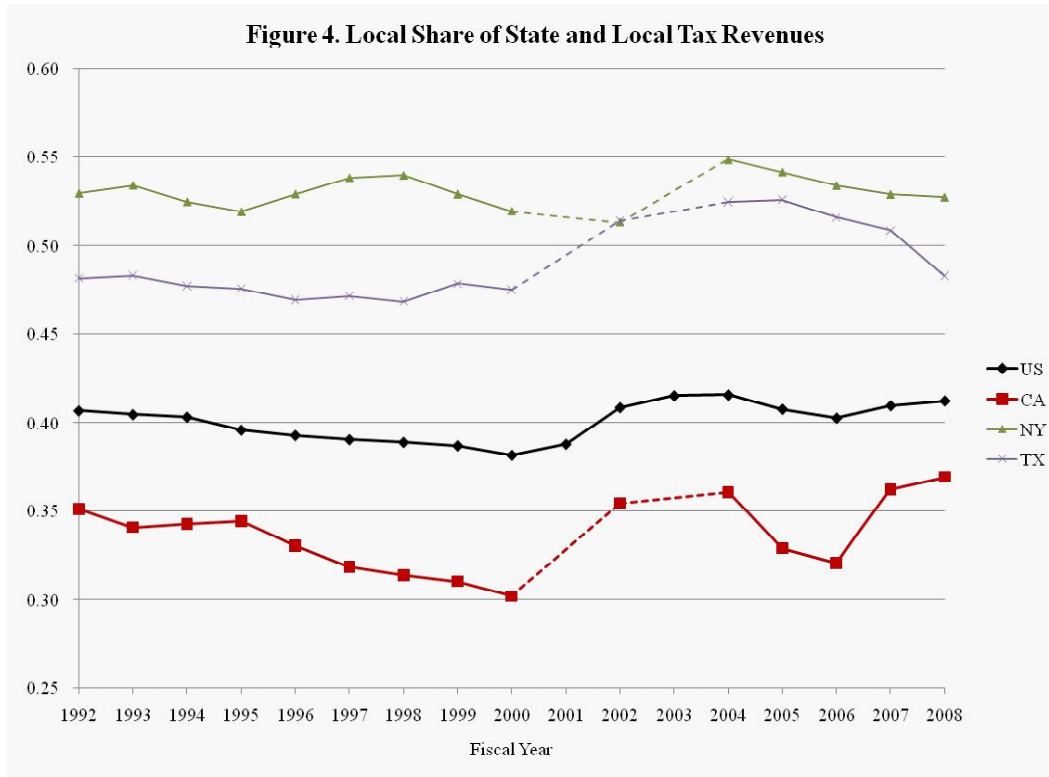
Before turning to the components of California's tax structure, though, let us note an important aspect of the revenue system of California, the division of revenues between state and local governments, i.e., all taxing authorities in the state except the state itself. Figure 4 shows the share of state and local tax revenues raised by these local governments, in California, New York, Texas, and the United States as a whole.⁶ California's local share is lower than that for the United States as a whole throughout the period, and much lower than that of either New York or Texas. There is one obvious reason for California's distinction: Proposition 13. Because property taxes account for most local tax revenue—between 71 and 76% nationwide during the years considered here—property tax limits have a considerable impact on local revenues, particularly when there are also limits on the ability of local governments to shift to alternative sources.⁷ Thus, California relies more on state-level taxes than the nation as a whole. As will be seen, this in itself contributes to the volatility of tax revenues, because the tax mix at the state level has more inherent volatility.



A. Income Taxes

Figure 5 helps illustrate this point relating revenue volatility to a dependence on state-level taxation. The figure shows the share of personal income absorbed by individual income taxes, which are raised primarily, and in California exclusively, at the state level. Quite clearly, California relies more heavily on the income tax: even though state and local tax revenue overall accounts for a similar share of personal income in California and in the United States as a whole (Figure 3), income taxes absorb a larger share of personal income in California. As to the other two states, the income tax is important in New York as well, but Texas has no income tax at all.

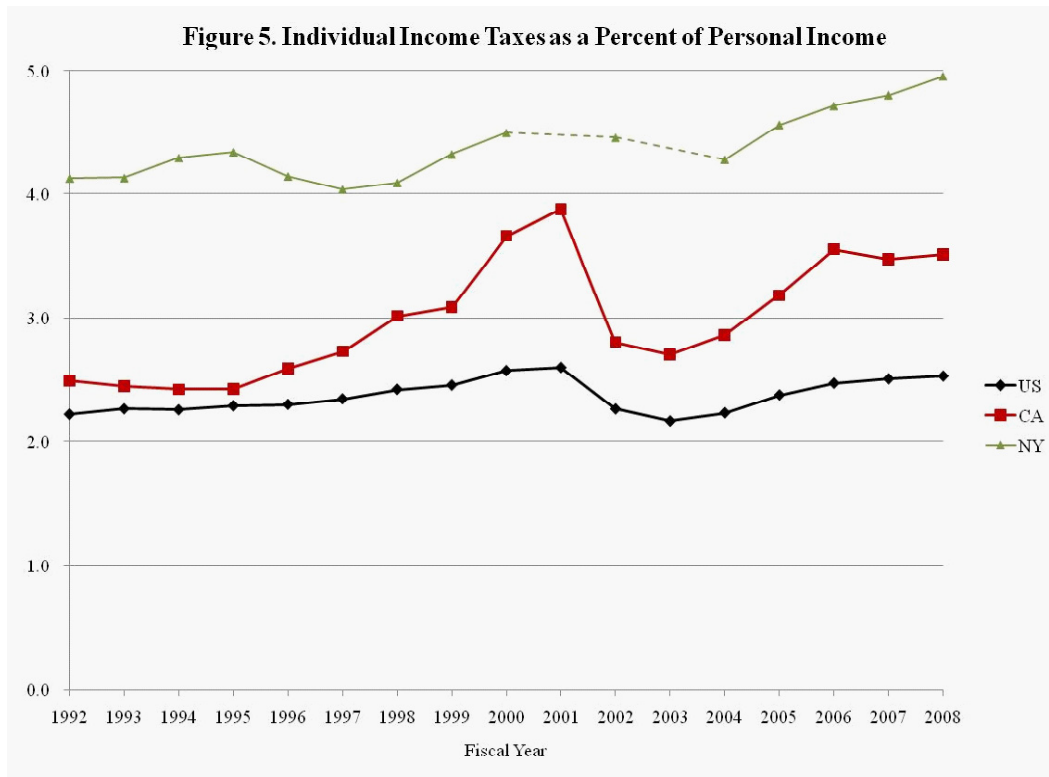
As can be seen from the figure, income tax revenues are not only cyclical, rising and falling as income rises and falls; they are more cyclical than income, rising as a *share* of income during booms (e.g., the late '90s and the mid '00s). Thus, California's heavier reliance on income taxes contributes to its greater tax revenue volatility. Moreover, this procyclical pattern is much stronger in California than it is for the United States as a whole or for New York. This further contributes to the volatility of California's revenue stream.



Why is California’s individual income tax more procyclical as a share of income than that of the typical state? Let us express the relationship between tax revenue T and income Y as:

$$(1) T = T(B(Y)),$$

where $B(\cdot)$ is a function relating the tax base to income, and $T(\cdot)$ is a function relating tax revenue to the tax base. Under a simple proportional income tax where $T(B) = \alpha B$ and where income itself is the tax base, $B = Y$, $T = \alpha Y$ and so the ratio of revenue to income is constant and equal to α . Note that this result is independent of the rate of taxation, so that fact that California’s income tax system imposes high marginal tax rates does not, in itself, contribute to its more procyclical revenue-income ratio. That is, α is constant regardless of its value. More generally, the ratio of revenue to income will rise with income if the elasticity of revenue with respect to income, $\eta_{TY} = (dT/dY)Y/T$, is greater than 1. Using expression (1), we can express this revenue elasticity as the product of two other elasticities, the elasticity of revenues with respect to the tax base and the elasticity of the tax base with respect to income:



$$(2) \eta_{TY} = \eta_{TB} \cdot \eta_{BY}$$

and we can further simplify the expression by noting that the elasticity of revenues with respect to the tax base, η_{TB} , equals the ratio of the average marginal income tax rate, T' , to the average tax rate, $\bar{T} = T(B)/B$. Thus, we can rewrite expression (2) as:

$$(3) \eta_{TY} = \frac{T'}{\bar{T}} \cdot \eta_{BY}$$

and observe that a progressive income tax system, which is defined as one for which marginal tax rates exceed average tax rates, will necessarily contribute to a procyclical revenue-income ratio.

California's individual income tax system has two elements that contribute to this progressivity: a steep marginal tax rate structure, which rises from a first rate of 1% to a top rate of 10.3% (ignoring the temporary income tax surcharge currently in place), and various credits and exemptions that shield many low-income individuals from income tax altogether.⁸ Flattening the marginal tax rate schedule or reducing

the taxpaying threshold would reduce progressivity, and of course would have important distributional implications as well.

As to the second factor on the right-hand side of expression (3), the elasticity of the tax base with respect to income, this, too, is large in California because of the full taxation of capital gains, which rise and fall very sharply with income but are not a part of personal income itself, as it is measured in the national income accounts.⁹

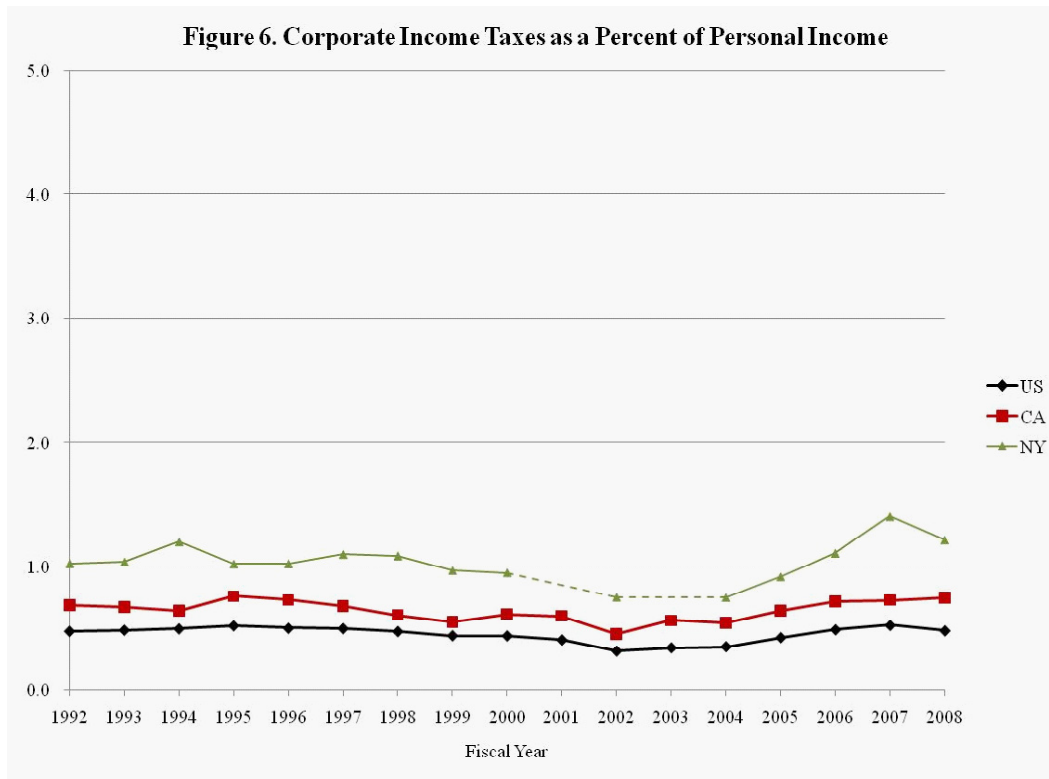
In summary, California's individual income tax contributes to the volatility of California's revenues both because the income tax is procyclical to begin with, and because of its progressivity and its heavy reliance on particularly volatile sources of income.

Figure 6 shows corporate income taxes for California, the United States as a whole, and New York;¹⁰ Texas has no corporate income tax. Although the corporate income tax is not as important a revenue source as individual income taxes, property taxes, or sales taxes, it is more important in California than for the nation as a whole, again because California relies more heavily on state-level taxes. But, given its relatively small share of overall revenues, the corporate income tax is not a major factor in the relative volatility of California's tax revenues.

B. Sales Taxes

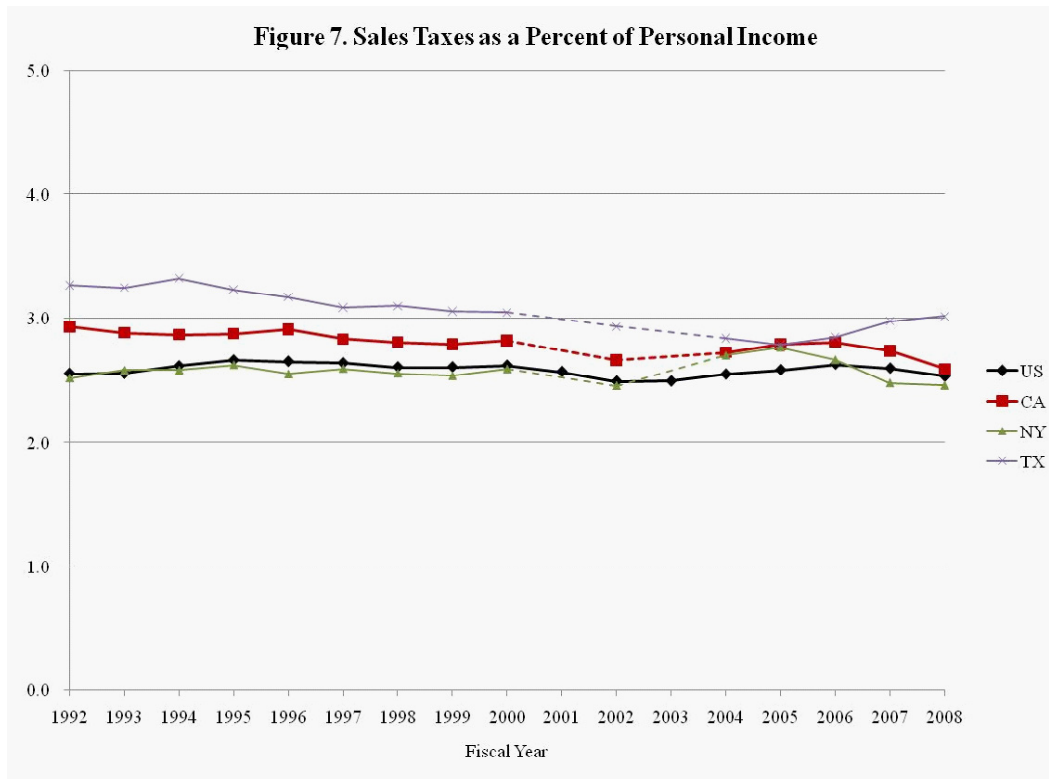
Unlike the individual income tax, the sales tax tracks personal income fairly closely, as Figure 7 shows. The figure also shows that California's dependence on sales tax revenue is similar to that for U.S. states as a whole and the other individual states. There is, however, a slight downward trend for sales taxes as a percent of personal income in California, and this is probably not just an artifact of year-to-year fluctuations over a short sample period. Indeed, if one looks over a longer period, the downward trend is more visible and pronounced.¹¹ Because the sales tax base is composed primarily of goods, and because services account for a growing share of overall consumption, the sales tax base has been declining as a share of both total consumption and personal income. It makes sense that the downward trend in Figure 7 is more apparent for California than for the nation as a whole, because most states include more services in their sales tax base than California does.¹²

Another factor contributing to the decline in sales taxes is the growth in internet sales. Under current U.S. law, as clarified by the 1992 U.S. Supreme Court decision in *Quill Corporation v. North Dakota*, states cannot require out-of-state vendors to collect sales tax on sales to in-state customers unless the vendors have sufficient economic nexus in the state; vendors selling only via mail order or the internet are not deemed to have such nexus. Though states can impose alternative "use" taxes



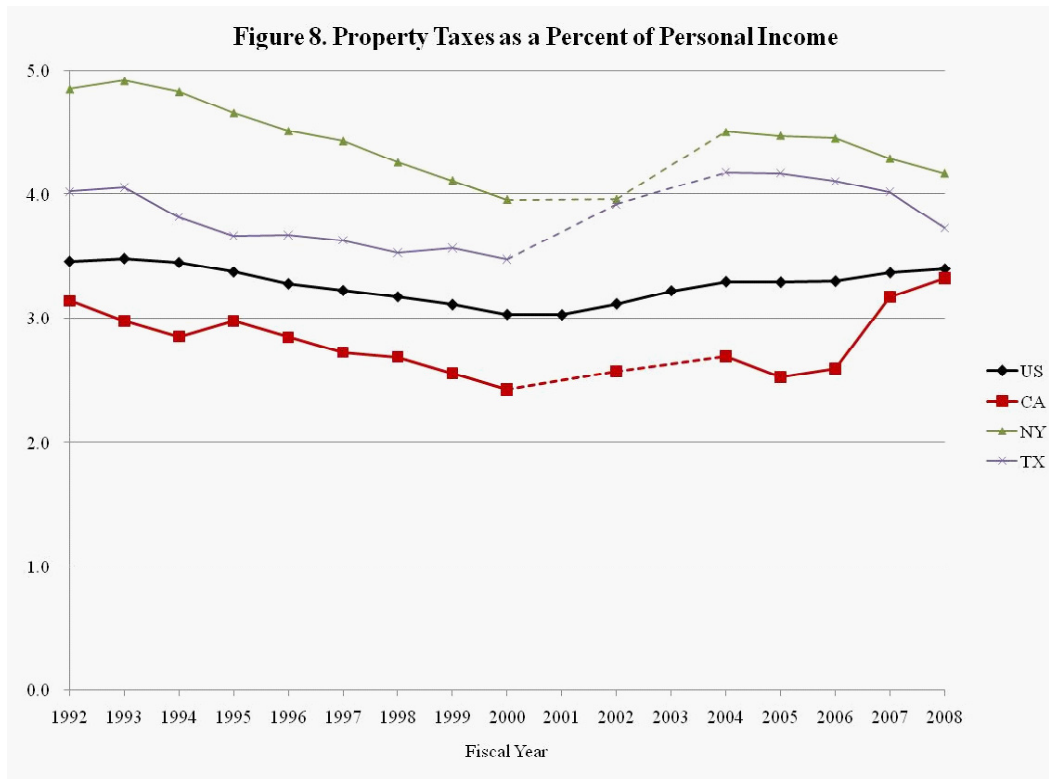
on purchasers—which California attempts to do—use taxes are difficult to enforce and rarely collected.

While excluding much of consumption from its base, the sales tax also *includes* in its base many transactions that do not represent consumption, in particular business-to-business sales of intermediate goods. This is noteworthy, given that there is very strong economic logic against the taxation of intermediate sales, which distort the production process away from multi-stage producers and commodities.¹³ Goods destined for taxable resale (e.g., a shirt sold by a wholesaler to a retailer) are exempt from sales tax, but goods used as production inputs (e.g., a pencil purchased by the same retailer to use in the back office) typically are not. Though there may be some superficial appeal to such a distinction, the only sensible justification seems to be that in some cases the taxation of inputs substitutes for the taxation of outputs, as when the inputs are used in the production of untaxed services. But taxing intermediate inputs is a very indirect and imperfect proxy for taxing final consumption. Thus, although the sales tax is a relatively stable source of revenue, it is shrinking in importance over time and is less efficient than a broad-based consumption tax.



C. Property Taxes

The last major source of state and local revenue is, of course, the property tax. As Figure 8 shows, property taxes raise a smaller share of income in California than they do for the United States as a whole. This is all the more remarkable given the very high property values in California; if taxes were levied at the same effective rates in California and the United States as a whole, then the property tax-income ratio would be *higher* in California than in the United States. As already mentioned, this lesser dependence on property taxes is the major factor underlying California's stronger reliance on state-level taxes. It also has important implications for the volatility of tax revenues, since property taxes tend to adjust only gradually to economic fluctuations. For example, during the boom years of the late 1990s, property taxes in both California and the United States as a whole fell relative to personal income. Thus, although they are procyclical, rising and falling with income, they are typically less sensitive to the cycle than income is.¹⁴ This is a key factor underlying the relative stability of the overall revenue streams in New York and Texas, each of which relies much more heavily on property taxes than does



California and has experienced the same countercyclical movement in the ratio of property taxes to personal income.

D. California's Tax System: A Summary

Like most other states (Texas being an important exception), California relies primarily on four sources of tax revenue: individual and corporate income taxes, sales taxes, and property taxes. Individual income taxes are more important and property taxes less important in California than the typical state. The relative importance of the different sources varies cyclically, but there are also secular trends, for example the declining importance of the sales tax as economic activity shifts toward untaxed activities, a trend more evident in California than elsewhere.

The heavier reliance on an inherently more procyclical source of revenue—the individual income tax—is one factor that helps explain why California's tax revenues are more volatile than those of a typical state. A second factor contributing to California's revenue volatility is the structure of its individual income tax, the procyclicality of which is enhanced by its progressivity and heavy reliance on unstable components of income. A third cause of California's tax revenue volatility

is simply the greater cyclicity of California's underlying economic activity, at least during recent economic cycles. Thus, the volatility of California's revenue stream can be traced in part to underlying economic factors, but the influence of political choices is unmistakable, in the suppression of the property tax and the design of the individual income tax.

At least in appearance, California's tax system, especially its income tax, is a very progressive one. In some recent years, for example, nearly half of all individual income taxes were paid by the top 1% of taxpayers.¹⁵ True tax incidence calculations—determining who actually bears the burden of taxation, not simply who remits the tax payments—are much more difficult for the income tax and especially so for other taxes, such as the property tax (where capitalization is an issue) and the corporate income tax (where out-of-state owners and customers must be taken into account). But distributional considerations, both apparent and real, are of central importance in considering how California's tax system might evolve and who might win or lose in the process.

III. Reforming California's Tax System

What is wrong with California's tax system? There are several potential answers.

A. Volatility

As already discussed, California's stream of tax revenue is more volatile than that of the average U.S. state, even when one takes into account the higher underlying volatility of income in California. This added volatility is attributable to the reliance on income taxes rather than property taxes, and the structure of the income tax itself. It is often accepted as obvious that the state would be in better fiscal circumstances with a less volatile stream of revenue, and this issue received top billing in the Governor's executive order creating the Commission on the 21st Century Economy (COTCE 2009. p. i).

But why are volatile tax revenues a problem? Since tax revenue plus after-tax income equals before-tax income, the more cyclical volatility that is shifted to tax revenue, the less cyclically volatile is after-tax income. Indeed, this is the whole point behind the concept of *automatic stabilizers*, that by sharing the cyclical fluctuations in income, the government can help cushion the effects of these fluctuations on the economy. While most of the focus on automatic stabilizers has been on federal policy, the same argument applies at the state level.¹⁶

The main argument favoring automatic stabilizers over discretionary fiscal policy is that the former are implemented with a shorter lag, because they require

no legislative action. The main argument in favor of countercyclical intervention in general, either discretionary or automatic, is that the government is in a better position than private households and businesses to weather fluctuations in income, because it has better access to capital markets. Thus, the federal government can run deficits to lessen the reductions in private economic activity that a recession would cause.

State governments face different circumstances that make countercyclical policy less attractive. First, many of the benefits of countercyclical intervention will spill over into other states, because demand stimulated in one state may be for products produced in another. Second, states face severe restrictions on their ability to run deficits, so that revenue reductions require some contemporaneous offset. However, if assets are accumulated in good times, then the offset can take the form of a reduction in rainy day funds, which is economically equivalent to debt accumulation; and a state as large as California can capture more of the benefits of fiscal stabilization than a smaller state, because much of the policy-induced demand stimulus will fall on California producers.

In short, if revenue volatility acts to reduce the volatility of private income, it can convey economic benefits, even for a state like California.¹⁷ The reason why this is not seen as being so by those involved in the policy process lies in the manner in which fiscal policy is actually practiced. If the government is unable to accumulate rainy day funds, then it cannot practice effective countercyclical fiscal policy, for any reduction in revenues must be offset by some combination of revenue increases and spending cuts. Further, if spending then tracks revenue, and there is an asymmetry in the ease with which spending is increased and cut, revenue volatility will contribute to continual crises in which spending cuts are needed but very hard to effect. A state seeking to reduce cyclical revenue fluctuations is much like an individual with self-control problems paying a bank or a merchant for the opportunity to participate in a Christmas club or a layaway plan—it pays a price for reducing its own budget flexibility in the hope that it will not make unwise spending decisions. At least for the state, one might hope that alternative reforms of the budget process and the political environment could serve as alternatives to seeking to avoid revenue volatility. If this is infeasible, then shifting cyclical risks back onto the private sector would be an inferior, but perhaps the only, alternative.

In summary, reducing revenue volatility is a sensible objective only if political reality rules out economically better ones. The main challenge to reducing the volatility of tax revenues is that it is difficult to reduce volatility without reducing progressivity. As discussed above, the most important contribution of California's tax system to revenue volatility is the structure of the individual income tax, through its rate-structure progressivity and its relatively strong burden on unstable income components. Lessening either of these would shift the statutory tax burden away

from the high-income individuals who now pay a large fraction of the income tax. There appears to be no feasible way to compensate for this shift through other changes in the income tax, such as by broadening the income tax base, because the highest income individuals do not currently benefit that much from tax-base exclusions. The alternative appears to be either to accept the shift in statutory incidence or to seek an alternative tax change to compensate.

The first approach was effectively adopted by COTCE (2009), and one could argue in its favor that attempting to impose a high tax burden on mobile high-income individuals and businesses is not likely to succeed anyway—the tax burdens may be shifted to less mobile individuals. As to the second approach, there is one obvious candidate for increasing the burden on the affluent to compensate for reduced income-tax progressivity: increasing the property tax. As discussed above, the property tax is normally a much less volatile source of tax revenue than the income tax. Property tax reform is really the only major option for reducing revenue volatility without shifting the tax burden away from high-income individuals. Because it has been such a controversial issue, there has been little discussion of how property tax reform might be structured, other than occasional proposals for a so-called “split roll” system that would allow commercial properties to be revalued to market values. For example, property tax reform was ruled out by COTCE and therefore received no attention whatsoever in its analysis. Given practices in other states, there are clearly ways of modifying tax liabilities for the elderly and other targeted groups to lessen potential hardships caused by property tax increases, but much more thought would be useful once property tax reform were seriously contemplated.

B. Revenue Growth

A tax base should reflect an economy’s capacity to fund public expenditures, meaning that as the economy grows, the tax base should grow with it. Otherwise, it will be necessary to raise tax rates and, in doing so, worsen economic distortions. One main problem with California’s tax system in this regard is the retail sales tax. As discussed above, sales tax revenues have been declining as a share of income because of the steady shift from taxed to untaxed purchases. These include not only the goods and, especially, the services that are not subject to tax, but also the internet and mail-order sales that legally cannot be taxed.

One could certainly do better by expanding the tax to a greater range of services and at the same time cutting back on the taxation of intermediate inputs. But this would leave the problem of internet sales untouched. An alternative, and much more novel approach, was adopted by COTCE (2009), which made as the centerpiece of

its proposals a new Business Net Receipts Tax (BNRT), effectively a value-added tax (VAT) with one important difference.

Unlike the standard VAT in use around the world, the BNRT would not have been imposed on California value added, but rather on *national* value added, scaled by the ratio of California sales to national sales. This scaling is similar to the manner in which California currently apportions liability under its corporate income tax.¹⁸ One argument for this alternative, nonstandard approach to the VAT is that by adopting a structure more similar to the existing corporate income tax, the BNRT would overcome the legal hurdle to taxing internet sales. That is, while a standard VAT might, like the sales tax, not be applicable to otherwise taxable goods and services imported from other states, the BNRT might not be viewed as being like the sales tax and therefore could sidestep the restrictions affirmed by the Quill decision.

This argument aside, there is not much to be said for adopting the BNRT instead of a traditional VAT, and there are a variety of complications introduced under a tax that apportions liabilities based on sales, rather than simply taxing sales directly.¹⁹ A state VAT would be preferable if the problem of taxing sales by out-of-state vendors could be overcome, but this would require action by the U.S. Congress to overturn the Quill decision, something that is in its power but that it has appeared unlikely to do. This situation could change were the United States to adopt a national VAT, as some have proposed.

C. Economic Distortions and the Size of Government

Some critics of California's fiscal system argue that California is a high-tax state, and that its high taxes impose serious impediments to economic progress. While this general argument has some merit, there are several points of clarification needed. First, while California's tax revenue per capita is well above the national average, so is its income per capita; California is very prosperous compared to the average U.S. state.

As Figure 3 illustrated, the ratios of taxes to personal income in California and the United States as a whole are similar. (By this measure New Yorkers are taxed much more heavily than Californians.) In some years, the ratio has been lower in California; in other years, it has been higher. Due to its volatility of tax revenues, California looks more like a high-tax state in good years, such as 2000 or 2007, than in bad ones like 1994. Second, while California is not necessarily a high-tax state if one scales by income, it is a high-*income*-tax state, relying more heavily on both the individual income tax and the corporate income tax than the average state does. Third, even given its heavier reliance on the income tax, California is a high-marginal-tax-rate state, because of the progressivity of its income tax rate

structure. Thus, California appears very much to be a high tax state if one looks at its top marginal income tax rates. As already discussed, however, one cannot judge overall tax burdens without taking the property tax into account.

Regardless of whether California is a high-tax state in comparison to others, a more relevant question is whether its level of taxation is too high in an absolute sense—whether the government-provided goods, services and transfer payments justify the revenues devoted to financing them. Those favoring tax limitations clearly feel that the justification is lacking, and this question relates to the choice of tax structure. Those who worry about the tendency of government to grow too large would prefer not to make the government's road easier by providing it with efficient tax instruments. By this argument, broadening the base of the income tax or the retail sales tax, or adopting a more rational property tax, might be good tax policies for a given level of revenues, but not necessarily if they cause revenues to grow.²⁰ As with the question of whether reducing revenue volatility is a good objective, considered above, the right answer here depends on how constrained we are in our policy choices. A bad tax system seems to be a very high price to pay to hinder the growth of government.

D. Centralization of Revenues

One of the key questions in the literature on fiscal federalism concerns how different fiscal functions should be apportioned to different levels of government. Oates (1972) argued that lower levels of government should provide public goods except in cases where interjurisdictional spillovers or central government cost advantages were important. Although the subsequent literature has added much to the discussion, the basic point here is that local governments can be more responsive to variations in preferences across jurisdictions.

In principle, a centralization of revenue collection need not interfere with this process. If, for example, a state were more efficient at collecting taxes than local governments, the state could serve as the revenue agent for local jurisdictions, collecting most of the taxes and remitting them to localities that would supplement these revenues as necessary to provide their desired bundles of local public goods and services. As discussed above, revenue collection is indeed more centralized in California than it is in other states, but this centralization goes far beyond the collection of revenue itself, with decisions that would be made locally in other states about funding levels for local public goods, most notably elementary and secondary education, being made at the state level in California.

The centralization of education funding may be a consequence of low levels of local taxation, but the centralization of spending policy relates more to the constitutional restrictions on variations in education spending that resulted from

the decision in *Serrano v. Priest*. Limits on interjurisdictional spending variation require some central enforcement mechanism, and the simplest way to implement this is to make spending policy directly at the state level. After several decades, it is difficult to judge this experiment in centralization to have been a success. But the centralization cannot be undone simply through the process of tax reform.

IV. Conclusion: California's Future Tax System

California's tax system is in need of reform. But the reforms it needs depend on the political environment in which they will occur. Reducing the volatility of the tax system might be desirable, but only if better ways to smooth government spending are unavailable. Reducing the centralization of government revenues and spending could help make public spending decisions more responsive to individual preferences, but not without modification of constitutional spending restrictions. A more efficient tax system would promote economic activity, but not necessarily if it contributes to excessive government expansion. Improvements in the sales tax, or its replacement by a value added tax, would help the tax system keep pace with changes in the economy, but only if a viable method could be found to tax interstate sales. And many problems can be attacked through a reform of the property tax, if anyone is able to figure out how to accomplish this.

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Notes

¹ The nominal revenue series are deflated using the average of current and past calendar year GDP deflators, reflecting the fact that fiscal years begin during the prior calendar year, although not in all cases like California, half-way through the calendar year. The personal income series in Figure 2 are deflated in the same manner.

² Data for local governments in California and other states are not readily available from the census web site for fiscal years 2001 and 2003, for which aggregate local government revenues by state are not presented. These missing observations are highlighted in Figure 1 and subsequent figures by dashed lines. State-level revenues are available for these two years.

³ Trends are estimated using a regression on a constant, time and time squared.

⁴ Personal income series by state are available from the Bureau of Economic Analysis web site.

⁵ The gap between New York and California is smaller if one uses alternative measures of the revenue-income ratio. New York has a higher ratio of state GDP to state personal income than California, and California raises a greater share of its revenue through nontax sources. Thus, if one considers all own-source revenues as a share of state GDP, rather than tax revenues as a share of personal income, both factors cause the gap between the two states to narrow. For example, in 2008, the tax-personal income ratios shown in Figure 3 are 11.7% for California and 14.7% for New York; the respective revenue-GDP percentages are 14.8 and 16.3. For Texas, the percentage shown in the figure is 9.6 and the alternative is 11.0. Thus, the percentage rises by 1.6 points for New York and 1.4 points for Texas when the alternative measure is used, but by 3.1 percentage points for California.

⁶ The revenues attributed to local governments are those raised by the governments directly and therefore exclude intergovernmental grants.

⁷ For example, California imposes a ceiling of 1.5 percentage points on local add-ons to the sales tax rate.

⁸ In 2008, for example, a joint-filing couple with two dependents would have begun paying taxes only at an income of \$48,335. See COTCE (2009), p. 15.

⁹ The fact that most capital gains accrue to high-income individuals and therefore face higher average marginal tax rates than personal income as a whole also contributes to the volatility of the revenue-income ratio, as if the base were effectively expanding even more rapidly with respect to an overall increase in personal income.

¹⁰ New York's upward trend from 2004 to 2007 appears due to the financial boom that peaked in 2007; this explanation is consistent with the falloff that occurred in 2008.

¹¹ See COTCE (2009), Figure 2.9.

¹² According to COTCE (2009, p. 20), 41 states include more services in their sales tax base than California does.

¹³ The standard reference here is Diamond and Mirrlees (1971) although the benefits of avoiding a cascade of intermediate goods taxation have long been recognized, this recognition providing the basis for the implementation of value added taxes in Europe to replace turnover taxes.

¹⁴ This characteristic seems not to have applied in the years 2005-08 for the United States as a whole or, especially, for California. For California, property taxes rose sharply as a share of income during the most recent economic expansion. This is probably attributable to the fact that the expansion was accompanied by a big (and unsustainable) real estate boom that was concentrated in certain states, including California. For New York and Texas, the cyclical pattern in the most recent expansion is similar to that observed in the past.

¹⁵ COTCE (2009), Figure 2.8.

¹⁶ For a recent discussion of tax-based automatic stabilizers at the federal level, see Auerbach and Feenberg (2000).

¹⁷ It is possible, of course, for revenue volatility to contribute to private income volatility. For example, if tax rates fluctuated from year to year in a manner unrelated to underlying economic fluctuations, then this would not only make revenues more volatile, but also private after-tax incomes. But this type of variation is clearly not the major source of California's tax revenue fluctuations.

¹⁸ Corporations pay tax based on a "three-factor" formula based on California payroll, assets and sales, with sales given twice the weight as the other two factors. Under changes adopted in 2009, corporations will be able to apply a sales-only weighting scheme beginning in 2011.

¹⁹ The types of distortions associated with formula apportionment have been discussed at some length in the literature, for example by Gordon and Wilson (1986), although there is no such analysis relating specifically to a tax structured like the BNRT, with a value added base.

²⁰ This argument has appeared frequently in the literature over the years, at least since the work of Brennan and Buchanan (1980).