

FUNDAMENTAL TAX REFORM IN CALIFORNIA: ANOTHER OPTION

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Although California has one of the highest tax burdens in the country, it is enmeshed in a revenue crisis. Moreover, economic activity in California has been significantly worse than that in the nation as a whole, perhaps in part because of the relatively high tax rates. Last month, a commission appointed by Governor Arnold Schwarzenegger proposed a revamping of the state revenue structure. The proposal would abolish the state corporate income tax, significantly reduce the state personal income tax and the state sales tax, and introduce a value-added tax. Although most observers do not expect the California legislature to adopt the commission's proposal, the proposal has highlighted the interest in tax reform as a response to California's economic crisis.

In this article, we analyze an alternative, more sweeping, approach to California tax reform. We examine the complete replacement of personal and corporate income taxes and the current sales tax with a broad based consumption-oriented retail sales tax, accompanied by rebates to address distributional concerns. We draw on readily available data sources to provide a very rough estimate of the required revenue-neutral tax rate and offer some preliminary thoughts on the advantages and disadvantages of such an approach.

As detailed below, our tax-rate estimation is very rough, due to the lack of state-level data, uncertainty about the amount of tax evasion and avoidance, and other factors. The required tax rate is also extremely sensitive to the specification of the proposal, particularly the breadth of the tax base and the generosity of the rebates. We estimate that, with a modest amount of evasion and avoidance, a sales tax rate of somewhat more than 11 percent (quoted in the tax-exclusive manner in which sales tax rates are usually quoted) would be sufficient if the sales tax base was a comprehensive measure of private consumption and if the rebates offset the tax on consumption equal to the poverty level for unmarried households and somewhat more for married households. The required tax rate would be significantly higher if important categories of consumption spending were removed from the tax base, if the rebates were more generous, or if large amounts

of evasion and avoidance occurred. The tax rate could be somewhat lower if the rebates are phased out for taxpayers with higher incomes.

We conclude that a broad-based sales tax has a number of attractions as a transparent and economically efficient tax. The attraction of the sales tax depends, however, on the preservation of a broad base on consumption and the avoidance of taxes on business inputs, a task that may be politically challenging.

The remainder of the article is organized as follows. We first provide background information on the California tax system and the commission's proposal. We then discuss the design of a comprehensive consumption-based retail sales tax and accompanying rebates and estimate the revenue-neutral tax rate. Finally, we discuss the advantages and disadvantages of this approach.

BACKGROUND

Current California Tax System

California has one of the highest state tax burdens in the nation. The Tax Foundation recently ranked California 48th among the 50 states in its state business tax climate for fiscal 2010, an unchanged rank from the preceding year.¹ California imposes high tax rates in each of its three major state revenue sources; personal income tax, corporate income tax, and sales tax.

Most notably, the state personal income tax features a marginal tax rate of 9.55 percent for taxable incomes above \$47,065 and, because of a 1 percent millionaire surtax, 10.55 percent for taxable incomes above \$1,000,000. However, the 9.55 and 10.55 percent rates are scheduled to decline to 9.3 and 10.3 percent, starting in 2011.² As of July 1, 2009, only three states had higher top marginal personal income tax rates.³

A few other features of the California income tax should be mentioned. Federal income tax is not deductible and capital gains are taxed at the same rates as other income. The state has an alternative minimum tax that closely resembles the federal AMT.⁴

The state corporate income tax rate is 8.84 percent. For multi-state firms, the tax is apportioned with weights of one-quarter on payroll, one-quarter on property, and one-half on sales. Beginning in 2010, corporations will be allowed to elect apportionment based solely on sales. California applies a 1.5 percent corporate income tax to S corporations, limited partnerships, and

¹ Kail M. Padgitt, *2010 State Business Tax Climate Index*, Tax Foundation Background Paper No. 59, September 2009 (hereafter *State Business Tax Climate*), p. 3 (available at <http://www.taxfoundation.org/research/show/22658.html>). The two states with worse rankings for fiscal 2010 were New York and New Jersey.

² California Revenue and Taxation Code (hereafter CRTC) section 17041 and 17043. Also, see *State Business Tax Climate*, p. 43.

³ *State Business Tax Climate*, pp. 43-46. The top marginal personal income tax rate was 11 percent in Hawaii and Oregon and 10.75 percent in New Jersey.

⁴ *State Business Tax Climate*, pp. 43, 48; CRTC section 17062 et seq. (alternative minimum tax).

limited liability companies that are exempt from the federal corporate income tax. A minimum tax of \$800 applies to corporations.⁵ As of July 1, 2009, only eight states, along with the District of Columbia, had higher corporate income tax rates.⁶

The California state sales tax rate is 7.25 percent. A 6.0 percent tax is paid into the general treasury while 1.25 percent is earmarked for trust funds. However, the general-revenue portion is scheduled to decline to 5.0 percent after June 30, 2011, which will bring the overall state sales tax rate down to 6.25 percent.⁷

A statewide local sales tax rate of 1.0 percent is in force.⁸ Localities are allowed to impose additional sales tax beyond the statewide rate; the Tax Foundation estimates an average additional local rate of 0.81 percent as of July 1, 2009, yielding an average state and local sales tax rate of 9.06 percent, the second-highest in the nation.⁹

Although California has relatively high state taxes, one countervailing factor limits the overall state and local tax burden on the state's residents. Property taxes, which are primarily imposed at the local level, are relatively low in California, despite the state's high property values.¹⁰

California was hard hit by the national recession that began in December 2007. As part of the response to the crisis, a commission was established to study tax reform options.

California Commission on the 21st Century Economy

In an October 30, 2008 executive order, Governor Arnold Schwarzenegger established a 14-member Commission on the 21st Century Economy (hereafter "Commission"), with seven members appointed by the governor and seven by the legislature. The Commission, chaired by Gerald Parsky of Aurora Capital Group, was tasked with recommending a "21st century tax structure" that is "fair and equitable," reduces revenue volatility, promotes long-term economic prosperity, improves California's ability to compete for jobs and investment, and reflects sound

⁵ CRTC sections 23151 (tax rate), 25128 and 25128.5 (apportionment), 23802 (S corporations), 17935 (limited partnerships), 17941 (limited liability companies), and 23153 (minimum).

⁶ *State Business Tax Climate*, pp. 39-40. Jurisdictions with higher corporate income tax rates are Iowa (12 percent), Pennsylvania (9.99 percent), District of Columbia (9.98 percent), Minnesota (9.8 percent), Massachusetts (9.5 percent), Alaska (9.4 percent), New Jersey (9.36 percent), Rhode Island (9 percent), and Maine (8.93 percent).

⁷ CRTC sections 6051 (4.75 percent tax for general fund), 6051.3 (0.25 percent for general fund), 6051.7 (1.0 percent for general fund, expiring June 30, 2011), 6051.2 (0.5 percent for Local Revenue Fund) and 6051.5 (0.25 percent for Fiscal Recovery Fund). Also, section 35 of Article XIII of the California Constitution imposes a 0.5 percent tax for the Local Public Safety Fund. For a breakdown, see <http://www.boe.ca.gov/news/sp111500att.htm>.

⁸ CRTC section 7203.1.

⁹ *State Business Tax Climate*, pp. 22, 49. Tennessee had the highest combined average state and local sales tax rate, 9.42 percent.

¹⁰ The Tax Foundation reports that property tax collections in California are 2.72 percent of personal income, below the levels of 34 other states, *State Business Tax Climate*, p. 57.

tax policy principles including “simplicity, competitiveness, efficiency, predictability, stability, and ease of compliance and administration.”¹¹

In a 425-page report released on September 29, 2009, a nine-member majority of the Commission recommended a wholesale revamping of the state revenue structure.¹² Notably, the state corporate income tax would be abolished, effective January 1, 2012.

Also, the state personal income tax would be reduced, with a 2.75 percent tax rate on the first \$28,000 of taxable income (\$56,000 for couples) and a 6.5 percent tax rate above that level. Because the millionaire surtax would remain in place, however, the marginal tax rate would be 7.5 percent for taxable incomes above \$1,000,000. The personal income tax base would also be broadened, with deductions retained only for charitable contributions, mortgage interest, and property taxes. The revised personal income tax system would take effect in 2014, but there would be some reductions in the current system in 2012 and 2013.

The general-revenue portion of the state sales tax would be repealed. The general-revenue tax rate, which will be 5.0 percent after June 30, 2011, would phase down by one percentage point per year, starting in 2012, and would be eliminated beginning in 2016, although the phase-out could be adjusted to maintain revenue neutrality. The remaining 1.25 percent state sales tax would remain in place, along with the 1.0 percent statewide local tax and the additional sales taxes imposed by localities.

The revenue loss from these reductions would be offset with a new value-added tax, called the Business Net Receipts Tax (BNRT). Firms would be taxed on gross receipts minus purchases from other firms, but with no deduction for employee compensation. The tax would apply to firms doing business in California, with sales-factor apportionment for multi-state firms. Some small firms would be exempt from the tax. The BNRT would take partial effect in 2012 and would be fully effective in 2016, when the tax rate is envisioned to be about 4 percent.

Governor Schwarzenegger endorsed the proposal and called for a special session of the California legislature to consider it.

DESIGNING A CONSUMPTION-BASED RETAIL SALES TAX

Before discussing a comprehensive consumption tax, we examine the limitations of the current California sales tax.

Current Sales Tax

¹¹ Executive Order S-12-2008 (October 30, 2008), <http://gov.ca.gov/executive-order/10928/>.

¹² The Commission’s report (hereafter “Report”) is available at http://www.cotce.ca.gov/documents/reports/documents/Commission_on_the_21st_Century_Economy-Final_Report.pdf.

As in the typical state sales tax, California generally defines the tax base as sales of tangible personal property, other than property purchased for resale.¹³ Other statutory provisions modify this definition for particular types of sales, either to expand or contract the tax base.

Relative to a comprehensive consumption tax, the typical state sales tax, including California's, is both under-inclusive and over-inclusive. The tax is under-inclusive in that it generally exempts the sale of services to consumers. Because services do not constitute tangible personal property, their sale is not taxed, except when a statutory provision provides for taxation of a particular type of service. The focus on sales of tangible personal property greatly narrows the tax base, by excluding such items as medical care, rental of housing and the sale of owner-occupied homes.

Jerome and Walter Hellerstein's authoritative casebook on state and local taxation aptly comments that the failure to tax services is a "fundamental structural flaw" of the typical sales tax and that "many of the most difficult legal controversies spawned by the retail sales tax" concern the tax treatment of transactions that involve a mix of services and tangible personal property.¹⁴ In a recent report, Michael Mazerov of the Center on Budget and Policy Priorities notes that bringing services into the sales tax base would allow states to raise more revenue at a given tax rate, reduce annual volatility of tax collections, improve the allocation of economic resources, and simplify administration and compliance. Mazerov notes that the exclusion of services is becoming more troublesome due to the shift of consumer spending toward services.¹⁵

This base narrowing is particularly pronounced for the California sales tax. Mazerov reports that California taxes only three out of a list of 40 household consumer services; only four other states tax fewer of these services.¹⁶ The Commission notes that the ratio of taxable sales to income in California fell from 55 percent in 1980 to 35 percent today, due to the shift of consumer spending toward services.¹⁷

Like many states, California also exempts sales of particular consumer goods that would otherwise be included in the tax base, such as food and medicines.¹⁸

¹³ CRTC sections 6051 (taxing "sale of all tangible personal property sold at retail") and 6007 (defining "sold at retail" to mean "a sale for any purpose other than resale in the regular course of business in the form of tangible personal property"). Section 6016 defines "tangible personal property" as "personal property which may be seen, weighed, measured, felt, or touched, or which is in any other manner perceptible to the senses."

¹⁴ Jerome R. Hellerstein and Walter Hellerstein, *State and Local Taxation: Cases and Materials*, 8th edition (St. Paul, Minnesota: Thomson-West, 2005), pp. 696-698, 702-738

¹⁵ Michael Mazerov, *Expanding Sales Taxation of Services: Options and Issues*, Center on Budget and Policy Priorities, July 2009 (<http://www.cbpp.org/files/8-10-09sfp.pdf>), pp. 10-24.

¹⁶ *Ibid.*, pp. 6-7. Massachusetts taxes none of the services while Colorado, Maine, and Rhode Island tax only two. Illinois and Michigan tax three of the services, the same number as California.

¹⁷ Report, pp. 19-20.

¹⁸ CRTC sections 6359 (exempting "food products for human consumption") and 6369 (exempting "medicines").

Relative to a comprehensive consumption tax, the typical state sales tax, including California's, is also over-inclusive in that it taxes a significant fraction of intermediate inputs and capital sold to business. Although sales of goods that are sold for resale are exempt, that exemption typically covers only goods that are physically incorporated into the item that is resold. Other goods that are used in production, such as equipment and supplies, are taxed, except when a statutory provision provides for exemption of a particular type of good.

Hellerstein and Hellerstein list the taxation of business purchases as the sales tax's other fundamental structural flaw, noting that such purchases should not be included in a consumption tax. They describe the "whole range of problems" raised by trying to distinguish between items that are incorporated into a final product and those that are "consumed" in production.¹⁹ The Tax Foundation comments that sales taxes on business purchases result in "tax pyramiding" that causes some industries to be taxed more heavily than others and cites empirical evidence establishing harmful effects of imposing sales tax on business purchases.²⁰

These problems apply to the California sales tax. Although California exempts many business-to-business transactions, it taxes business purchases of manufacturing machinery, modified canned software, office equipment, and pollution control equipment, along with leases of motor vehicles and tangible personal property.²¹ The Commission estimates that sales to businesses comprise about one-third of all taxable sales in California.²²

As in other states, the California sales tax is generally destination-based, applying to purchases by state residents. Exports, to other states or outside the United States, are not taxed because no sale occurs within the state. Imports, from other states or from outside the United States, are subject to use tax, with credit for any sales tax paid to another state.²³

Use-tax enforcement is straightforward if the tax is collected by the out-of-state seller. The U.S. Supreme Court has ruled, however, that, in the absence of congressional authorization, the dormant commerce clause of the U.S. Constitution prohibits states from requiring use tax collection by sellers that do not have a physical presence within the state.²⁴ Contrary to popular impression, imports from such sellers are not legally tax-free. Instead, the consumer is required to report and remit the use tax.²⁵ In practice, however, use tax is almost never paid on such purchases. The Commission describes the inability to collect use tax on mail-order, telephone-

¹⁹ Hellerstein and Hellerstein, *supra* note 14, pp. 696-698, 744-783.

²⁰ *State Business Tax Climate*, p. 21.

²¹ *State Business Tax Climate*, pp. 50-53.

²² Report, pp. 18-21.

²³ CRTC sections 6201 et seq. (use tax) and 6406 (credit for sales taxes paid to other states).

²⁴ *Quill Corporation v. North Dakota*, 504 U.S. 298 (1992).

²⁵ California allows consumers to report use tax liability on their state income tax returns, CRTC section 6452.1.

order, and Internet sales as a “fairly minor, yet growing” factor narrowing the California sales tax base.²⁶

Comprehensive Consumption Tax Base

The proposal considered in this article calls for a comprehensive consumption tax that applies to virtually all consumption spending, but to no business purchases. We model this tax after the national FairTax proposal, which has been introduced in the 111th Congress by Rep. John Linder (R-Georgia) as H.R. 25 on January 6, 2009 and by Senator Saxby Chambliss (R-Georgia) as S. 296 on January 22, 2009 (hereafter “H.R. 25”).

Two recent *Tax Notes* articles, Gale (2005) and Bachman et al. (2006), calculate the required sales tax rate for a revenue-neutral replacement of federal individual and corporate income taxes, payroll taxes, and estate and gift taxes by a sales tax of the type specified in H.R. 25.²⁷ Both studies use the same basic methodology, although they obtain slightly different results. We adapt the calculations to a state sales tax.

Several aspects of H.R. 25 have drawn criticism. Critics note that the bill’s provision for state administration of a federal tax would be unworkable, that enactment of a federal sales tax would impinge on a revenue source historically reserved to the states, that the proposed tax rate would not be revenue-neutral, and that a tax collected solely at the retail level might not be enforceable at the high tax rate required at the federal level. The first two objections do not apply, however, to the adoption of a sales tax at the state level. The third objection can be addressed by ensuring that the rate of any sales tax adopted in California is genuinely revenue-neutral, which is the objective of our calculations. And, since the tax rate at the state level required at the state level is much lower than that required at the federal level, the last objection also loses some of its force, although, as we discuss below, some enforceability concerns about retail collection may still be warranted.

Under H.R. 25, sales tax would apply to health care, food, newly constructed homes, and rent payments, as well as a fraction of mortgage and credit card interest payments and interest shortfalls on bank accounts that represent the implicit purchase of financial intermediation services. Business-to-business transactions would not be taxed, nor would sales of existing homes and consumer durables. Education would be considered investment and not be taxed.

Under H.R. 25, state and local government purchases, other than education, would be subject to federal sales tax. The tax would be implemented by taxing sales of inputs to such governments and the payroll of those governments. We must confront the corresponding issue of whether to tax federal and local government purchases.

²⁶ Report, p. 20.

²⁷ William G. Gale, “The National Retail Sales Tax: What would the Rate Have to Be?” *Tax Notes*, May 16, 2005, pp. 889-891, and Paul Bachman, Jonathan Haughton, Laurence J. Kotlikoff, Alfonso Sanchez-Penalver and David G. Tuerck, “Taxing Sales Under the FairTax: What Rate Works?” *Tax Notes*, November 13, 2006, pp. 663-682.

The taxation of federal government purchases would be difficult, due to intergovernmental tax immunity. Without congressional authorization, states may not impose any tax that places legal incidence on, or discriminates against, the United States.²⁸ The taxation of inputs sold to the federal government would be possible only if the legal incidence of the tax was placed on the seller.²⁹ Similarly, the legal incidence of the payroll tax would have to be placed on federal government employees. Even then, the levies might be viewed as discriminating against the United States. Also, it would not be possible to tax federal government purchases that are provided to California residents in keeping with the destination basis of the sales tax; it would instead be necessary to tax federal government production in California, which would put that part of the tax on an origin basis. In view of these complications, we assume that federal government purchases would not be taxed.

We make the same assumption for local government purchases. A substantial component of such purchases would be exempt in any event as education spending. Other components, such as police and fire protection to businesses, should be exempt as intermediate inputs. And, taxing local governments would be politically difficult.

In short, we assume that the sales tax would apply only to private consumption.

The replacement of the progressive California tax structure with a sales tax, particularly one that applies to necessities such as food, would have the potential to dramatically shift tax burdens toward those with lower standards of living. That problem can be addressed by providing rebates to legal residents that offset the taxes imposed on a specified level of consumption. Along this line, H.R. 25 provides rebates equal to the sales tax rate multiplied by a family consumption allowance. Under this approach, a household with consumption equal to the family consumption allowance would receive a rebate equal to the tax paid on its consumption purchases; households with consumption below the family consumption allowance would receive rebates exceeding their tax payments and have a negative net tax burden. As explained below, H.R. 25 sets the family consumption allowance equal to the federal poverty guideline for unmarried taxpayers and somewhat above the poverty guideline for married couples.

BASELINE ESTIMATE OF REVENUE-NEUTRAL RATE

We now provide some illustrative, very rough, computations of the revenue-neutral rate that would be required for the adoption of this reform in California. As we detail below, this estimate is a first pass, based on readily available data and some tentative assumptions. Given the data limitations and the uncertainty about the assumptions, the actual required tax rate is likely to

²⁸ See Hellerstein and Hellerstein, *supra* note 14, pp. 1039-1053 (discussing *United States v. New Mexico*, 455 U.S. 720 (1982) and related cases).

²⁹ H.R. 25 imposes the legal incidence on the buyer. The current California sales tax, however, imposes the legal incidence on the seller, CRTC section 6051 et seq. California currently exempts sales to the United States (section 6381), but taxes the sale of tangible personal property to a contractor for use in the performance of contracts with the United States (section 6007.5).

differ from the rate that we compute. Our estimates are intended to provide a framework for thinking about the reform rather than a definitive revenue estimate. Readers should keep these limitations in mind as they review our estimates.

Formula

Gale (2005) sets forth the basic formula for the tax rate required to meet a given revenue target. Bachman et al. (2006) confirm the validity of the Gale formula and use it as the foundation for their calculations.³⁰ The required tax rate is given by

$$t_i = R/(C+G-X).$$

In this formula, R is the revenue to be replaced, C is the consumption tax base, G is the spending (transfers, government purchases, and interest) of the government that imposes the tax, and X is the aggregate value of the family consumption allowances on which tax is rebated.

As Gale and Bachman et al. emphasize, the formula is invariant to two features that one might think would be important. First, the required tax rate does not depend on how the consumer price level adjusts to the tax, because price-level changes do not alter the real values of revenues or the tax base. Second, the required tax rate does not depend on whether sales tax applies to the purchases of the government that imposes the tax. Exempting such purchases results in no net fiscal loss because the revenue forgone by the exemption is offset by a reduction in the cost of the (now tax-free) purchases.

In the above formula, t_i is a tax-inclusive rate. A tax-exclusive tax rate, such as the current 7.25 percent rate for the California state sales tax, is computed by dividing the tax paid by the before-tax cost of the good. Ignoring local sales tax, a good that costs \$100 before tax is subject to \$7.25 tax and costs \$107.25 after tax. In contrast, the tax-inclusive rate is the ratio of the tax payment to the total cost *including the tax*. So, the 7.25 percent tax-exclusive rate corresponds to a tax-inclusive rate of $7.25/107.25 = 6.76$ percent. The tax-inclusive rate is always lower. One can easily move between the two values:

$$t_e = t_i/(1-t_i), \quad t_i = t_e/(1+t_e),$$

where t_e is the tax-exclusive rate.

These are just two ways to report the same tax, but it is important to be clear which rate is being quoted. Because sales taxes are uniformly reported on a tax-exclusive basis in the United States, we will follow this practice. All sales tax rates in this article are reported in the higher, tax-exclusive, form, except when expressly stated otherwise.

Data

³⁰ Bachman et al. (2006) make a few minor modifications pertaining to tax collection and administration costs.

We use data for calendar year 2007, a relatively stable year unaffected by the subsequent financial crisis. That selection seems appropriate because our goal is to find a tax rate that will provide a revenue-neutral basis for the long term. Also, temporary tax increases that are now in place in California were not in place then, making it an appropriate benchmark year for evaluating the rate required to replace the permanent component of the taxes. It is important to stress, though, that the revenue-neutral rate could differ in future years.

The comprehensive sales tax would replace the California personal and corporate income taxes and sales tax. To approximate the required revenue for calendar year 2007, we average the revenue raised from those taxes in fiscal years 2007 (July 1, 2006 through June 30, 2007) and 2008 (July 1, 2007 through June 30, 2008). The revenue to be replaced, R, is \$98.4 billion, including \$54.5 billion from the personal income tax, \$32.3 billion from the sales tax, and \$11.5 billion from the corporate income tax.³¹ Total state revenue was \$124.0 billion, as the state raised \$25.6 billion from other taxes and fees that would not be replaced by the new sales tax. State expenditures were \$134.0 billion.

The necessary data to compute the consumption base on the state level are unavailable. Like other analysts before us, we are forced to scale national data to obtain a rough approximation of the state-level tax base.³² For this reason and others, the resulting numbers must, we emphasize yet again, be regarded as illustrative rather than definitive.

Bachman et al. (2006) estimated that private consumption, as defined in H.R. 25, but excluding government purchases, would be \$9.235 trillion in 2007. Their estimate was based on 2004 and 2005 National Income and Product Account (NIPA) data, which they projected forward to 2007 by using the Congressional Budget Office's January 2006 projections for national GDP and making various assumptions about how different components of the tax base would grow over time.

In computing this base, they subtracted an estimated \$263 billion of state and local sales taxes on consumption purchases, because such taxes would be excluded from the base of the national sales tax under H.R. 25. Those taxes will also be excluded from the base of the proposed state sales tax, but we add the taxes back in at this stage and make a California-specific adjustment below to reflect their exclusion. That increases the national sales-tax base to \$9.498 trillion, which was 68.04 percent of the \$13.959 trillion GDP then projected for calendar year 2007.³³

³¹ *Governor's Budget Summary 2009-10*

(<http://www.ebudget.ca.gov/pdf/BudgetSummary/FullBudgetSummary.pdf>), Appendix 6 (Schedule 3). Details do not add to total, due to rounding.

³² Mazerov, *supra* note 15, pp. 4-5, similarly scales national data by personal income in order to estimate the value of potentially taxable services in each state.

³³ Gale (2005) computes a somewhat smaller tax base. We follow the Bachman et al. (2006) computations, which appear to be more detailed. Laurence J. Kotlikoff, an author of Bachman, et al. (2006), described the differences between the two computations in a presentation at a February 28, 2007 American Enterprise Institute conference,

The ratio of consumption to GDP would undoubtedly be somewhat different if computed for another year. Indeed, it would probably be slightly different if recomputed for 2007 using the data now available for that year.³⁴ Given the unavoidable imprecision that will be introduced in the state-level computations in the next paragraph, however, we do not refine this estimate.

Instead, we estimate the 2007 California consumption tax base to be 68.04 percent of the \$1.802 trillion California gross state product for that year, or \$1.226 trillion. Other methods of allocating the national tax base to California, such as through the use of personal income, yield very similar results.³⁵

As discussed earlier, the state sales tax is computed in a tax-exclusive manner that excludes both state and local sales tax imposed on final consumption. We account for the exclusion of the state sales tax itself by computing a tax-exclusive rather than a tax-inclusive rate, but we need to separately deduct the sales tax imposed on final consumption by California localities. We subtract \$9 billion of such taxes, reducing the base to \$1.217 trillion.³⁶

Next, we account for the rebates. For households not including a married couple, H.R. 25 sets the family consumption allowance equal to the federal poverty guideline prescribed by the Secretary of Health and Human Services. For 2007, that guideline was \$10,210 for a one-person household plus \$3,480 for each additional person. (The 2009 guidelines are 6 to 7 percent higher.)³⁷ For a household that includes a married couple, H.R. 25 increases the family consumption allowance by a fixed amount for all household sizes such that the allowance for a two-person married couple is twice that of a one-person household. So, the 2007 family consumption allowance is \$20,420 for a two-person married household plus \$3,480 for each additional person; in other words, the allowance for each household size is increased by \$6,730 if the household includes a married couple. For a married couple with two children, the 2007 family consumption allowance is \$27,380, roughly 133 percent of the \$20,650 poverty guideline for a four-person household.

To calculate the rebate base X, we update Table 4 from Bachman et al. (2006). Using 2007 data on the number of households of each size, with and without married couples, yields a national

http://www.aei.org/docLib/20070302_kotlikoffPresentation.pdf. In any case, the differing estimates represent still another source of uncertainty in the computations.

³⁴ It should be noted that re-doing the computations for a later year would probably yield a lower revenue-neutral tax rate. According to NIPA data, the ratio of personal consumption expenditures to GDP has risen since 2007, due to a decline in national saving (manifested by a dramatic increase in government dissaving).

³⁵ GDP data by state are available at <http://www.bea.gov/regional/gsp/>. In 2007, California accounted for 13.14 percent of national GDP and 13.07 percent of national personal income.

³⁶ Census Bureau data (http://www.census.gov/govs/estimate/0605casl_1.html) indicate that local governments in California imposed \$12.1 billion of general and selective sales taxes in fiscal year 2006. We increase this number to reflect growth over the subsequent 18 months and then multiply by two-thirds on the premise that one-third of the taxes fall on intermediate inputs (which would not be removed from the state sales tax base).

³⁷ The 2007 poverty guidelines were published at 72 *Federal Register* 3147 (January 24, 2007) and the 2009 guidelines at 74 *Federal Register* 4199 (January 23, 2009).

value of X equal to \$2.192 trillion.³⁸ Because data on household size and marital status are not available for California, we multiply the national value of X by 12.07 percent, California's share of the national population, which yields \$265 billion. This procedure effectively assumes that the distribution of household size and marital status in California is the same as for the entire United States.

The above calculations do not reflect the fact that rebates would not be paid to non-citizens who lack legal authorization to live in the United States, a group that is more heavily represented in California than in the remainder of the country. Although available data do not permit a precise adjustment, we reduce X by 5 percent, to \$251 billion, to reflect the ineligibility of this group.³⁹

Revenue-Neutral Tax Rate

Our analysis has yielded values of \$98.4 billion for R, \$1,217 billion for C, \$251 billion for X, and \$134 billion for G. With no further adjustments, the required tax-exclusive rate would be 9.82 percent. It is necessary, however, to account for tax evasion and avoidance and for federal limitations on state sales taxation.

The NIPA data used above include an estimate of "underground economy" transactions in legal goods and services, with payments made in cash and not reported to the authorities. Because sales tax would generally be evaded on these transactions, just as income tax is now generally evaded, it is necessary to reduce the estimated tax base to reflect this evasion. Although sales of illegal goods and services, such as prostitution and narcotics, would also escape sales taxation (and currently escape income taxation), no adjustment is needed to reflect such evasion, because the NIPA data do not include those goods and services.⁴⁰

Bachman et al. (2006) argue that evasion would be modest under a federal sales tax because the vast majority of taxable retail sales occur in major retail outlets. Evasion is a more serious concern at the state level, however, because use tax is almost never paid on telephone-order, mail-order, and Internet sales from sellers with no physical presence in the state. In a presentation to the Commission, the California Department of Finance stated that compliance was 96 percent for the state sales tax, but "very low" for the use tax.⁴¹ Tax avoidance is another concern.

³⁸ The data are drawn from <http://www.census.gov/population/www/socdemo/hh-fam/cps2007.html>. Table F-2 provides data on married households and Table H-2 provides data on total households.

³⁹ The Pew Hispanic Center estimates that 2.4 million undocumented immigrants lived in California in 2002-2004, more than 7 percent of the population, Jeffrey Passell, "Estimates of the Size and Characteristics of the Undocumented Population," March 21, 2005 (<http://pewhispanic.org/files/reports/44.pdf>).

⁴⁰ Although some sales-tax supporters claim that the sales tax, unlike the income tax, would be collected on these illegal transactions, it is easy to see that this claim is incorrect. Just as prostitutes and drug dealers currently fail to report and pay income tax on their profits, they will surely fail to collect and remit sales tax from their customers.

⁴¹ "Overview of the California Tax and Revenue System," January 22, 2009 presentation to Commission on the 21st Century Economy by Phil Spilberg, Chief, California Department of Finance

Federal limitations on state sales taxation would also prevent the comprehensive tax base outlined above from being fully attained. For example, some purchases by Native Americans would escape sales tax, due to the restrictions that federal common law imposes on state taxation of Indians within Indian country.⁴² Also, federal statutes prohibit state sales taxation of food purchased with Supplemental Nutrition Assistance Program benefits (“food stamps”) and airline travel.⁴³ Other federal statutory restrictions on state sales taxation may also exist. Although the impact of the federal restrictions would probably not be large, they would narrow the base of the proposed sales tax base to some extent.

To reflect evasion, avoidance, and the federal restrictions, we reduce the private consumption tax base by 10 percent, from \$1,217 billion to \$1,095 billion.⁴⁴ That adjustment raises the tax-exclusive rate to 11.18 percent. We consider this to be our baseline estimate of the revenue-neutral rate for a pure implementation of a comprehensive sales tax. We stress yet again, however, the rough and tentative nature of this estimate. The appropriate magnitude of this adjustment is a major source of uncertainty; in particular, it is possible that the 10 percent value is too small. Although we adopt the 10 percent estimate for present purposes, we consider possible additional base shrinkage in the next section.

At first glance, it may seem surprising that an 11.18 percent comprehensive sales tax could replace a state sales tax that was imposed at a 6.25 percent rate in 2007 while also replacing a personal income tax that then had a top rate of 10.3 percent (for millionaires) and an 8.84 percent corporate income tax. The primary reason that such a low tax rate is feasible is that the base of the proposed sales tax is far broader than the current sales tax base and somewhat broader than the personal income tax base.

Adopting a tax with such a broad base may be politically difficult. As detailed below, any significant narrowing of the tax base would substantially increase the required tax rate.

MODIFICATIONS TO TAX-RATE ESTIMATE

We now compute the impact on the rate of narrowing the base and making other modifications.

Narrower Base

(http://www.cotce.ca.gov/meetings/testimony/documents/Spilberg_Presentation_IDU-E%204%20without%20notes-2.pdf), p. 21.

⁴² For a thorough discussion of federal restrictions on state taxation of Indians, see David F. Getches, Charles F. Wilkinson, and Robert A. Williams, Jr., *Cases and Materials on Federal Indian Law*, 5th edition (St. Paul, MN: West Publishing Company, 2004), pp. 554-595. For a description of how the current California sales tax addresses these issues, see *Tax Tips for Sales to American Indians and Sales on Indian Reservations*, California State Board of Equalization, Publication 146, August 2008 (<http://www.boe.ca.gov/pdf/pub146.pdf>).

⁴³ 7 U.S.C. section 2013(a) (food purchases) and 49 U.S.C. section 40116(b) (air travel).

⁴⁴ The adjustment can also be viewed as reflecting the possible filing of false rebate claims, including claims by non-citizens who lack legal authorization to live in the United States, although it would be more precise to explicitly model such claims by altering X.

It may be politically impossible to achieve the broad base set forth in H.R. 25. Also, evasion, avoidance, and the impact of the federal restrictions could have a greater impact than the 10 percent reduction estimated above. With a narrower base, the required tax rate would be higher, as shown in Table 1. Note that the reductions in Table 1 are computed relative to the baseline estimate of C, which already reflects the 10 percent reduction assumed above; in other words, the listed base shrinkage is in addition to that 10 percent.

Base Shrinkage (Percent)	Tax Rate (Percent)
No Reduction	11.18
5	11.93
10	12.78
15	13.75
20	14.89
25	16.24
30	17.86
35	19.83
40	22.29

We now discuss some of the possible pressures for base shrinkage.

As noted above, H.R. 25 taxes the implicit purchases of financial intermediation services by consumers. For example, homeowners would be taxed on their mortgage interest payments to the extent that the mortgage interest rate exceeded a specified rate on Treasury debt instruments; the same treatment would apply to consumer loans. Conversely, bank account holders would be taxed on the amount by which their interest income (if any) falls short of a Treasury rate. At the risk of understatement, this tax would be unfamiliar to most taxpayers. The administrative complications of computing the tax base would also be unwarranted for a state-level tax, even if they might be justified for a federal tax. In the calculations in Bachman et al. (2006), financial intermediation accounts for 3 percent of the private consumption tax base.

The taxation of medical care would also be politically explosive. Medical care is not broken out separately in the calculations of Bachman, et al. (2006). But, 2007 NIPA data show that health care services, pharmaceutical and other medical products, and therapeutic appliances and equipment are 18.2 percent of personal consumption expenditures.⁴⁵

Excluding health care and financial intermediation services would therefore reduce the private consumption tax base by about 20 percent. As shown in Table 1, a 20 percent base reduction would push up the tax-exclusive rate from 11.18 percent to 14.89 percent.

The taxation of housing could also be politically difficult, particularly because housing is already subject to property taxation. NIPA data show that rental of tenant-occupied nonfarm dwellings accounted for 3.2 percent of personal consumption expenditures in 2007. In the calculations of Bachman, et al. (2006), purchases of new homes, including brokers' commissions, account for 5.4 percent of the base and improvements to homes accounts for another 1.8 percent. So, a broad exclusion for housing would reduce the tax base by roughly another 10 percent. Note from Table 1 that a 30 percent base reduction (financial intermediation, health care, and housing) would push up the tax-exclusive rate to 17.86 percent.

Further base narrowing is possible. For example, NIPA data show that food and non-alcoholic beverages purchased for off-premises consumption accounted for 6.4 percent of personal consumption expenditures. Any additional base narrowing would further increase the required tax rate.

More Progressivity

Excluding some forms of income from this tax will often be justified by distributional arguments. To the extent that distributional concerns arise, however, a more direct approach for addressing them would be to adjust the rebates.

In this regard, it should be noted that the federal poverty guidelines reflect average living costs in the United States, rather than the higher costs in California. Even with the rebates, the tax shift proposed in this article is likely to shift the tax burden from upper-income groups toward the middle class. Increasing the rebates would be one way to address such concerns.

Table 2 shows the change in the required tax-exclusive rate as the family consumption allowance is multiplied by the listed factors (while maintaining the broad base). The required tax rate would increase from 11.18 to 13.05 percent, for example, if the rebates were 50 percent more generous than those specified in H.R. 25.

Table 2: Increasing the Rebate

⁴⁵ NIPA Table 2.4.5 provides annual data on the breakdown of personal consumption expenditures by product.

Rebate (Percentage of H.R. 25 specification)	Tax Rate (Percent)
100	11.18
125	12.05
150	13.05
175	14.24
200	15.66

A different strategy for promoting progressivity would actually reduce the required statutory sales tax rate. Under this approach, the rebate would be phased out at high income levels. Taxpayers could be required to claim the rebate on a form on which they would report their adjusted gross income from their federal income tax returns (recall that they would no longer file state income tax returns) and would reduce their rebates if their incomes exceeded prescribed amounts.

Consider, for example, a proposal to abruptly eliminate the rebate at an adjusted gross income level of \$100,000. According to 2007 IRS data, 14.3 percent of California tax filers had adjusted gross incomes greater than \$100,000. A \$100,000 cutoff would therefore reduce X by 14.3 percent and would lower the tax-exclusive rate from 11.18 to 10.75 percent, as charted in Table 3. Note that the table assumes that the broad base is maintained and that the family consumption allowances are equal to the levels set forth in H.R. 25.

To avoid the cliff situation where an extra dollar of income can result in a family losing their entire rebate, we also model the required rates needed to incorporate a phase-out of the rebate over various income ranges of width \$25,000.⁴⁶ Although it might be more realistic to vary the phase-out levels and ranges based on household size and marital status, the numbers in Table 3 provide a sense of the extent of rate reduction that can be achieved by phasing out the rebates.

Table 3: Phasing Out the Rebate	
Phase-out	Tax Rate (Percent)

⁴⁶ For these calculations we assume that income is evenly distributed within each income range in the AGI table. These figures come from IRS Statistics of Income data available at <http://www.irs.gov/pub/irs-soi/07in05ca.xls>.

None	11.18
Cliff at \$100,000	10.75
50,000-75,000	10.35
75,000-100,000	10.63
100,000-125,000	10.78

The lower statutory sales tax rate is, to some extent, an optical illusion because the phase-out of the rebate increases the effective marginal tax rate on the earning of income. Because the rebate increases with household size, while our assumed phase-out range is constant across household sizes, the contribution of the rebate phase-out to a family's effective marginal tax rate increases with household size. For the phase-out from \$100,000 to \$125,000, for example, a married couple with two children would experience an effective marginal tax rate increase of 10.6 percentage points within that range.

An income-based phase-out of the rebate might require changes in how the rebate is administered. If the rebate were paid throughout the year, as provided in H.R. 25, it would be necessary to estimate the household's adjusted gross income, with an adjustment after the end of the year. To avoid such complications, it might be desirable to pay the rebate after the end of the year, the manner in which the earned income tax credit is disbursed to most recipients.

Different Revenue Requirement

The above calculations aim to replace \$98.4 billion of 2007 revenue. A larger amount of revenue would be needed if other taxes, such as insurance taxes or vehicle registration fees, were replaced. Conversely, a smaller amount of revenue might be needed if spending cuts were adopted or some components of the current state tax system were left in place. Table 4 shows the impact of the assumed 2007 revenue requirement on the tax rate, holding all other features of the tax at their baseline specifications.

Table 4: Changing the Revenue Requirement	
2007 Revenue (\$ billions)	Tax Rate (Percent)
85	9.52
90	10.14

98.4 (baseline)	11.18
110	12.67
120	13.99

In practice, a number of the modifications set forth above are likely to be made simultaneously. Although adding the tax-rate impacts from each modification would provide rough guidance on the impact of the combined modifications, such a calculation would not be exactly correct. Due to interactions between the modifications, the impacts are not strictly additive.

POLICY ISSUES

We do not provide a complete discussion of the advantages and disadvantages of the proposed comprehensive sales tax, which we have offered only as a basis for discussion. Nevertheless, we allude below to some of the major factors that bear on the merits of the proposal, relative to the current California state tax system and relative to the Commission's proposal.

Comparison to Current System

A comprehensive sales tax would provide a highly economically efficient source of revenue for California by eliminating most of the distortions associated with the state's current tax system. The proposed tax would not have the current sales tax's bias in favor of services relative to goods and would not tax intermediate business inputs. It would not penalize saving as the current personal income tax does. And, it would not discourage the location of economic activity in California in the way that the current corporate income tax does.

The proposal may raise distributional concerns. While the rebates are intended to shield the poor from tax, the proposal is likely to result in a shift of the tax burden toward the middle of the distribution. A detailed distributional analysis would be required to fully evaluate this concern.

Some transitional issues would have to be addressed. For example, the consumer price level in California would probably rise by several percentage points, due to part of the tax system moving from an origin to a destination basis. The higher price level would be accompanied by higher nominal disposable incomes for California workers and other producers. For a revenue-neutral reform, there should be roughly no net change in real after-tax income, but the change in the consumer price level could pose some disruption.

Compliance issues may also be a problem. Many observers argue that a retail sales tax is difficult to enforce at high tax rates, with some claiming that compliance problems become severe if the rate exceeds 10 percent.⁴⁷ The tax rates considered in this article are much lower

⁴⁷ See the sources cited in Gale (2005), p. 898, note 24.

than those that would be needed for revenue neutrality at the federal level, but they are above 10 percent. If compliance is a problem, it may be possible to adopt some of the administrative mechanism of value added taxation while preserving the sales tax label.⁴⁸

Comparison to Commission's Proposal

There are two important differences between our approach and the Commission's proposal. First, we completely replace the personal and corporate income taxes and sales tax while the Commission replaces only part of those taxes. Second, we impose a sales tax rather while the Commission proposes a value-added tax in the form of the BNRT.

On the first point, the Commission's proposal offers smaller efficiency gains because it leaves part of the current tax system in place. At the same time, the more modest scope of the reform limits the scope of the distributional and transition concerns.

On the second point, a sales tax and a value added tax are conceptually identical. But, there are some potential differences in practice. As noted above, a retail sales tax may face compliance problems that could be avoided under a value added tax that is collected at multiple stages of production.

A key difference is the manner in which inter-jurisdictional issues are handled. The sales tax proposed here would aspire to place a destination-based tax on the consumption of California residents. There would be some limitation, of course, because tax would generally not be paid on telephone-order, mail-order, and Internet purchasers from sellers with no physical presence in California. The Commission's proposal takes a different approach. It would require each firm doing business in California, other than certain small firms, to compute tax on its nationwide value-added (on a unitary-group basis) and would then apportion the resulting tax liability by sales. The BNRT therefore seeks to reach sellers with no physical presence in California, on the premise that the dormant commerce clause may allow states to require firms without such presence to collect and pay taxes other than sales taxes.⁴⁹ If successful, this approach sidesteps a limitation of the sales tax base. On the other hand, the use of apportionment prevents the BNRT from functioning as a uniform tax on California consumption, because its effective tax rate varies across firms depending on the nationwide ratio of sales to value added for each firm's unitary group.

A value added tax has some potential advantages over a retail sales tax. Historically, sales taxes have been prone to exclusion of services from the tax base and inclusion of business inputs while value added taxes have been largely immune to such pressures. Our proposal assumes that these pressures can be resisted with a sales tax, but a value added tax might be more effective in that

⁴⁸ See George R. Zodrow, "The Sales Tax, the VAT, and Taxes in Between-Or, is the Only Good NRST a VAT in Drag?" *National Tax Journal*, 52(3), September 1999, pp. 429-442.

⁴⁹ For a discussion of the legal uncertainty on this point, see Hellerstein and Hellerstein, *supra* note 14, pp. 370-402.

regard.⁵⁰ Exclusions of necessities and favored goods tend to occur under both kinds of taxes, although even that pressure might be avoided under the Commission's proposal, so long as the BNRT is perceived as a business tax rather than a consumer tax.

The latter point reveals a significant disadvantage of the BNRT. It would be vastly less transparent than a retail sales tax; the latter would be openly described as a consumption tax and that would be listed on customer receipts. The sales tax would therefore make much clearer to consumers how, and in what amount, they are being taxed.

CONCLUSION

In this article, we have set forth a reform option for the California tax system, under which the current state personal and corporate income taxes and sales tax would be replaced by a comprehensive consumption-oriented sales tax. Our very rough estimates suggest that, with a modest amount of evasion and avoidance and a truly comprehensive tax base, a sales tax rate of somewhat more than 11 percent would be revenue-neutral. A higher tax rate could be necessary, however, due to additional evasion or legislative narrowing of the tax base.

Due to the considerable uncertainty that surrounds our (or anyone else's) estimate of the revenue-neutral tax rate, it might be desirable to make some provision for an increase in the tax rate if the rate initially selected fails to raise sufficient revenue. This uncertainty is a particularly pressing concern for California, in view of the state's ongoing fiscal difficulties.

The enactment of a comprehensive sales tax in California would have the potential to provide significant economic benefits. The advantages depend, however, upon how the tax is structured, particularly whether the broad tax base can be maintained. And, as with any reform, a number of complicating factors must be addressed. A definitive assessment of the merits of this proposal must await further analysis.

⁵⁰ See John L. Mikesell, "Is the Value Added Tax Really Inferior to the Value-Added Tax?" in *The Sales Tax in the 21st Century*, ed. Matthew N. Murray and William F. Fox (Westport, CT: Praeger, 1997), pp. 75-87, at pp. 78-81.