Analysis of the 1987-88 Tax Expenditure Budget

Volume I
Overview and Analysis of
Selected Individual Programs

Preface

This report has been prepared pursuant to Assembly Concurrent Resolution 17 (Resolution Chapter 70, Statutes of 1985), which requires the Legislative Analyst to prepare a biennial review of the state's tax expenditure programs. These programs, as defined by ACR 17, include the various tax exclusions, exemptions, preferential tax rates, credits and deferrals which reduce the amount of revenues collected from the state's basic tax structure. These provisions of law are called **tax expenditure programs** because the benefits they provide to individuals and businesses make them very much like direct governmental expenditure programs. The major difference between tax expenditure programs and direct expenditure programs is that their "cost" is measured by reduced tax collections, rather than by the level of expenditure authorized through the normal legislative appropriation process.

The objective of this report is to provide the Legislature with information which will enable it to subject tax expenditure programs to the same ongoing scrutiny that direct expenditure programs receive, thereby facilitating the development of proposals to renew, modify, or delete individual tax expenditure programs in conjunction with the regular budget process. Specifically, ACR 17 requires that the Legislative Analyst present estimates of the total amount and growth in tax expenditure programs, and identify those programs which, among other things, are ineffective, inefficient, or inconsistent with other state programs. The resolution also makes provision for the Analyst to conduct more detailed analyses of selected individual tax expenditure programs as part of the ongoing tax expenditure budget review process.

The report which follows is divided into two volumes:

- **Volume I** (this document) contains two parts:
  - **Part One** provides an overview of the state's tax expenditure budget for 1987-88. It summarizes the estimated individual and collective costs of the state's tax expenditure programs, the growth in these costs in the current year (1986-87) and budget year (1987-88), and how these costs compare to the state's direct expenditure budget. It also identifies which individual tax expenditure programs have recently been enacted, modified, deleted, or permitted to expire.
  - **Part Two** contains detailed reviews of selected individual tax expenditure programs, including evidence on the effectiveness of these programs in accomplishing their stated objectives.
- **Volume II** (published separately) provides a detailed compendium of the various individual tax expenditure programs which are summarized in Volume I, Part One. Altogether, nearly 300 individual programs are identified, including over 230 state-level programs and 65 state-established local property tax programs. This compendium contains a description of each tax expenditure program, the stated or apparent rationale for its establishment, its statutory authorization, and its estimated cost in terms of foregone tax revenues. Any pertinent information related to a program's background, characteristics and effectiveness also is included.

This report was prepared by Jon David Vasche (the project coordinator), Titus Toyama, Juliet Musso, John Decker, and Joan Keegan, under the supervision of Peter Schaafsma. It was typed by Lynn Kiehn and formatted for publication by Suki O'Kane. The Legislative Analyst's Office also gratefully acknowledges the assistance of the California Franchise Tax Board, the California Board of Equalization, and the California Department of Finance in providing various background information and fiscal data used in the report.

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Executive Summary

This report has been prepared pursuant to Assembly Concurrent Resolution 17 (Resolution Chapter 70, Statutes of 1985), which requires the Legislative Analyst to prepare a biennial review of the state's tax expenditure programs. These tax expenditure programs (TEPs), as defined by ACR 17, include the various tax exclusions, exemptions, preferential tax rates, credits and deferrals, which reduce the amount of revenues which normally would be collected from the state's "basic tax structure." These programs are called "tax expenditures" because the benefits they provide make them very much like direct expenditure programs, except that they are paid for by reduced tax collections rather than through normal legislative appropriations.

The purpose of this report is to provide information which will assist the Legislature in reviewing the state's tax expenditure budget, including making decisions regarding which individual TEPs should be enacted, extended, modified, or eliminated.

Principal Findings

This report's findings fall into two main categories -- those relating to the characteristics of the overall tax expenditure budget, and those relating to the characteristics and effectiveness of the individual TEPs which we have selected for review.

Findings Relating to the Overall Tax Expenditure Budget

Size of the Tax Expenditure Budget. Determining the exact size of the state's tax expenditure budget is extremely difficult. One reason for this involves differences of opinion about whether or not certain tax provisions are TEPs, as opposed to part of the "basic" tax structure.

Another reason involves the numerous data limitations which make it hard to quantify the revenue losses from many TEPs. Given these problems, no one can say precisely what the size of the tax expenditure budget is. Rather, the best that can be done is to provide a general indication of the budget's overall magnitude. Our research indicates the following:

- There are over 230 individual state-level TEPs, plus an additional 65-plus state-established local property tax TEPs.
- Identifiable revenue losses from state-level TEPs total $16.9 billion for 1987-88. The identifiable costs of the state's tax expenditure programs are equal in magnitude to about 45 percent of the Governor's proposed 1987-88 direct expenditure budget. In addition, 1987-88 local revenue losses from TEPs are estimated to exceed $3.2 billion, including over $1.9 billion from property tax TEPs and $1.3 billion for the local share of sales and use tax TEPs.

Composition of the Tax Expenditure Budget. Altogether, state-level TEPs will reduce by about 32 percent the amount of revenues which otherwise would be produced by the basic tax structure in 1987-88. With respect to individual taxes:

- Personal income tax TEPs amount to at least $12.2 billion, or nearly 73 percent of total state tax expenditures.
- Sales and use tax TEPs amount to at least $3.9 billion, or over 23 percent of total state tax expenditures.
- TEPs for the bank and corporation tax and other state-level taxes have identifiable costs of about $720 million, or approximately 4 percent of total state tax expenditures.

Growth in the Tax Expenditure Budget. The state's tax expenditure budget is estimated to grow in 1987-88 by $1.2 billion, or 7.8 percent, from its 1986-87 level. By comparison, the *1987-88 Governor's Budget* proposes growth in 1987-88 of only 1.2 percent for General Fund expenditures and 3 percent for total direct

expenditures (including those from special funds but excluding bond funds). Thus, the tax expenditure budget is projected to increase at a much **greater** rate than the direct expenditure budget. The projected net growth in the 1987-88 tax expenditure budget is explainable by **economic factors** (such as expanded economic activity, inflation, and increased numbers of taxpayers), not the expansion or enactment of new TEPs.

Findings Relating to Individual Programs

The following TEP programs were selected for individual review in Part Two of this year's report (the number of individual program reviews in this first year's report was limited by the workload requirements of developing the tax expenditure compendium presented in Volume II):

- The sales and use tax exemption for organic materials and various waste by-products used as fuel;
- The bank and corporation tax credit and liberalized charitable deduction for donations of computers and scientific equipment to educational institutions;
- The personal income tax deduction for charitable donations made by nonitemizing taxpayers; and
- The personal income tax itemized deduction for nonmortgage interest expenses.

The main criterion we use in evaluating the merits of a tax expenditure program is whether it has achieved its objectives in the most cost-effective manner. That is, has the program accomplished its objectives less expensively than could other approaches available to the state? We believe a program that is not cost-effective should either be modified or eliminated, unless it can be justified on some other grounds such as that it produces significant tax administration savings or eliminates undesirable inequities in the treatment of different taxpayers.

Our review of the above TEPs found that while their objectives, performance characteristics and revenue costs differ considerably from one another, they **do** have at least one thing in common -- namely, they are **not** particularly cost-effective approaches to achieving their objectives. Furthermore, only in the case of the first program cited above did we find evidence that tax administration savings and improved tax equity were sufficient to justify continuation of the program.

Recommendations

The recommendations contained in this report are of two general types--those relating to the Legislature's overall review of the tax expenditure budget, and those relating to the selected individual programs which we have reviewed.

Recommendations Relating to Review of the Tax Expenditure Budget

Regarding the Legislature's review of the tax expenditure budget, **we recommend that:**

- The Legislature require, on a **selective** basis, taxpayers to **provide information** regarding certain TEPs they claim, so that data necessary for evaluating the effects of these TEPs will be available. This recommendation applies to programs for which insufficient data currently are available to evaluate their effects. In addition, we recommend that in the future, in order for any new TEP to be enacted, provision be made for data to be collected to analyze its cost-effectiveness.
- In cases where evidence is lacking that a TEP is a particularly cost-effective means of achieving its objectives, the Legislature ordinarily should consider either **eliminating** the TEP altogether, or **replacing** it with a direct expenditure program whose costs and benefits may be more accurately identified.

Recommendations Regarding Individual Programs

Based upon our selected reviews of individual TEP programs (Part Two of Volume I), **we recommend that:**

- The sales and use tax TEP for organic materials

and waste by-products used as fuel be **maintained.** We recommend this on the grounds that the program's cost-inefficiencies are more than offset by the tax equity it produces, combined with the administrative savings to the California Board of Equalization from not having to undertake the exceedingly complex task of establishing taxable values for the exempt items.

- The bank and corporation tax TEP for contributions of computers, software and scientific equipment be **discontinued,** on the grounds that it is not a cost-effective means of providing such equipment to California's educational institutions.

- The personal income tax TEP for deductions of charitable donations by nonitemizing taxpayers **not be reenacted,** given the absence of evidence that this program is a cost-effective means of stimulating charitable donations and supporting charitable programs.

- The personal income tax TEP for deductions of nonmortgage interest expenses be **restricted,** through full conformity with new federal law.■

Part 1

Part One

Overview of the 1987-88 Tax Expenditure Budget

A. Introduction

This part of the report provides an overview of the state's tax expenditure budget for 1987-88. It first briefly discusses exactly what the term "tax expenditure" means, and the issues involved in measuring the dollar value of the state's total tax expenditure budget and its individual components. It next presents estimates of the state's revenue losses due to tax expenditures in 1987-88, and compares these costs to the costs of tax expenditures in both the current year (1986-87) and the prior year (1985-86). It also provides a listing of recent changes in the individual tax expenditure programs that collectively comprise the state's total tax expenditure budget, including tax expenditure programs that have been recently enacted, extended, modified, deleted, or permitted to expire. (A complete compendium of all of the state's individual tax expenditure programs appears in Volume II of this report.) Lastly, this part of the report discusses various issues which the Legislature faces in reviewing the tax expenditure budget.

B. What is a Tax Expenditure?

In this report, tax expenditures are defined as in ACR 17 to include "the various tax exclusions, exceptions, preferential tax rates, credits and deferrals which reduce the amount of revenue collected from the state's basic tax structure." These provisions are called **tax expenditures** because the benefits they provide to individuals and businesses make them very much like regular direct governmental expenditures, except that they are paid for by reduced tax collections rather than through the normal legislative appropriation process. Obviously, in order to apply ACR 17's definition of tax expenditures, it is necessary to first define the term "basic tax structure."

The "Basic Tax Structure"

At first glance, one might think that defining the term "basic tax structure" is a fairly straightforward and simple task. In practice, however, this is not so. In fact, although countless books, reports and articles have been written on the subject, the issue of what the "basic tax structure" is has never been--and probably never will be--fully resolved. This is because although individual economists and public policymakers generally agree with the fundamental concept of a "basic tax structure," they often differ as to the specific individual tax provisions that should be included within it. For example, there are some individuals who feel that an extremely comprehensive definition should be used for the tax base, and their listing of tax expenditures thus includes every identifiable deviation from this comprehensive base. In contrast, other individuals feel

that the basic tax system should not be defined so all-inclusively, and that there are some features of the tax system which reduce the comprehensiveness of the tax base but nevertheless should be considered to be part of the "basic tax structure." For these latter individuals, tax expenditures tend to be viewed more as providing special or selective, as opposed to general, tax relief, and their listing of tax expenditures therefore tends to be more restrictive.

Given the above, a certain amount of disagreement is inevitable regarding exactly how the term "basic tax structure" should be defined, and therefore which features of the tax system should be included in a listing of state tax expenditure programs. Typical examples of tax provisions about which disagreement often arises include, to name but a few, the standard deduction and personal tax credits for income tax filers, the portion of capital gains that is due solely to inflation, the portion of accelerated depreciation that merely serves to offset inflationary price increases in depreciable assets, and the sales and use tax exemption for food. The specific reasons why these and various other individual tax provisions pose special classification problems are discussed on a case-by-case basis within the tax expenditure compendium contained in Volume II.

The Rationale for a Comprehensive Listing

This report adopts a fairly broad view of tax expenditures and the basic tax structure, by including provisions which provide either general or selective tax benefits. This broad view is used not because a more restrictive definition of tax expenditures is necessarily incorrect, but rather in recognition of the fact that individual legislators themselves have differing views about exactly which tax provisions should be defined as tax expenditures. Thus, by providing data on the *complete* menu of tax provisions which are potentially classifiable as tax expenditures, the report attempts to ensure that the Legislature will have at its disposal all of the information that might be needed in its review of the tax expenditure budget.

C. Measuring the Costs of Tax Expenditures

In order to develop a "tax expenditure budget," the costs of the individual tax expenditure programs (TEPs) obviously must first be determined. However, tax expenditure programs are funded not by direct appropriations, but rather by uncollected revenues, so that their costs normally are not directly recorded. Therefore, these costs must be *estimated.* Four main problems are commonly encountered when attempting to develop these cost estimates:

- First, **data limitations often make it difficult to accurately identify the revenue losses from individual tax expenditure programs.** For example, if certain types of income or transactions do not even need to be reported for tax purposes, there may be no reliable record of their exact magnitude and thus no way of estimating how much revenue their taxation would produce. Efforts to overcome this problem through the use of taxpayer surveys, special studies, and data published by governments or industry trade associations, often are only partially successful.

- Second, **even when a reasonably accurate direct revenue-loss estimate is available for an individual tax expenditure, it often will overstate what the net revenue gain would be from eliminating it.** This is because various "secondary effects" result from eliminating tax expenditures, because of behavioral changes that they induce in taxpayers. For example, the repeal of accelerated business depreciation allowances (which produces a revenue gain) may induce a drop in business investment spending (which in turn could dampen economic activity and thereby partially offset the revenue gain).

- Third, **one cannot simply add together the revenue losses from individual tax expenditure programs to obtain an accurate measure of the cost of the total tax expenditure budget.** Rather, the total revenue gain that the elimination of all tax expenditures would produce can be either greater or less than the sum of the revenue gains

from individual tax expenditures, because of interactions amongst these different TEPs. For example, eliminating the partial exemption of capital gains from income taxation would, by putting some taxpayers into higher marginal tax brackets, increase the revenue gain that a subsequent elimination of certain itemized deductions would produce.

- Fourth, **the estimated revenue loss due to a tax expenditure is but one way to portray its "cost." An alternative method is to use an "outlay equivalent" approach, which estimates what a tax expenditure program would cost if it were funded through a direct appropriation.** The costs of many programs are different under the outlay-equivalent approach than under the revenue-loss approach. For example, costs under the outlay-equivalent approach may be *higher* in cases where individuals and businesses would owe income taxes on certain benefits directly paid to them by the government and, therefore, must be given more money to begin with if their net benefits are to remain the same under both measurement approaches. On the other hand, costs under the outlay-equivalent approach may be *lower* if a tax expenditure program performs inefficiently by giving large unintended windfall benefits to certain taxpayers who are either not the target of, or whose behavior is unaffected by, a TEP. In either event, however, the attractiveness of the outlay-equivalent approach is that it can provide an internally consistent basis for comparing the costs of tax expenditure programs to the costs of other government programs.

Given the above, even the best possible estimates of tax expenditure costs inevitably will have shortcomings. With this qualification in mind, we now turn to a discussion of the 1987-88 tax expenditure budget.

D. Analysis of the 1987-88 Tax Expenditure Budget

This section discusses the 1987-88 tax expenditure budget, including the budget's size and composition, changes to the budget from prior years, and various issues which face the Legislature when reviewing this budget.

Overall Size and Composition of the Tax Expenditure Budget

Table 1 summarizes the size and composition of the 1987-88 tax expenditure budget. This budget includes over 230 individual state tax expenditure programs, each of which is identified and separately discussed in Volume II of this report (published separately). In addition to these state-level TEPs, over 65 state-established local government property tax TEPs are identified and discussed.

Prior to proceeding further, our rationale for including property tax programs in this report deserves mention. Because property taxes are a local revenue source, legislatively enacted exemptions and preferential treatments under this tax do not technically constitute state TEPs in the same sense as do special provisions for state taxes. However, such property tax provisions do impose certain state costs. For example, property tax TEPs reduce local property tax allocations to schools, and the state is required under current law to replace the revenue lost to schools with increased school apportionments. The state also provides subventions to various other local government entities to compensate them for revenue losses from certain state-imposed TEPs, such as the property tax exemptions for homeowners and senior citizens. It is for these reasons that we have included property tax TEPs in this report. However, because these payments show up in the state's direct expenditure budget (for example, as part of the cost for state aid to K-12 school districts), we have **not** included them in our dollar totals for the state's tax expenditure budget.

Size of the Tax Expenditure Budget. In order to measure the dollar size of the tax expenditure budget, we have relied primarily upon data provided to us by the California Franchise Tax Board (which administers the personal income tax and bank and corporation tax), the California Board of Equalization (which administers all other

state taxes and state matters related to local property taxation), and the California Department of Finance (which conducts its own review of tax expenditure programs). In the case of some TEPs for which these agencies could not provide us with usable cost estimates, we have made our own estimates. As shown in Volume II, however, there also remain a significant number of TEPs for which no revenue-loss estimate currently is available from any source, due to data limitations. It also must be stressed that even in the case of TEPs for which we show cost estimates, significant error margins accompany many of them, again due to data limitations. It is our intention, through working with the tax agencies, to both increase the number and improve the quality of TEP cost estimates in the future. However, our success in doing so will depend largely on our ability to overcome these data problems.

With these data problems in mind, Table 1 indicates that the 1987-88 state tax expenditure budget totals $16.9 billion for those state programs where identifiable cost estimates are available. In addition, local property tax TEPs amount to about $1.9 billion, of which about one-third represents state costs, while the local share of revenue losses from sales and use tax TEPs totals about $1.3 billion. As noted earlier, however, there are many tax expenditure programs, especially for sales and property taxes, for which cost estimates currently do not exist. Given this, the total cost of the 1987-88 tax expenditure budget remains unknown. Nevertheless, because cost estimates do exist for at least most of the major TEP programs, the $16.9 billion figure gives a reasonable overall indication of the general magnitude of the 1987-88 state tax expenditure budget.

By comparison, the direct expenditure budget for 1987-88 as proposed in the *1987-88 Governor's Budget* totals $37.9 billion (excluding bond fund expenditures), including $31.3 billion in General Fund expenditures. Thus, as shown in Chart 1, the tax expenditure budget is nearly one-half the size (45 percent) of the direct expenditure budget.

Table 1

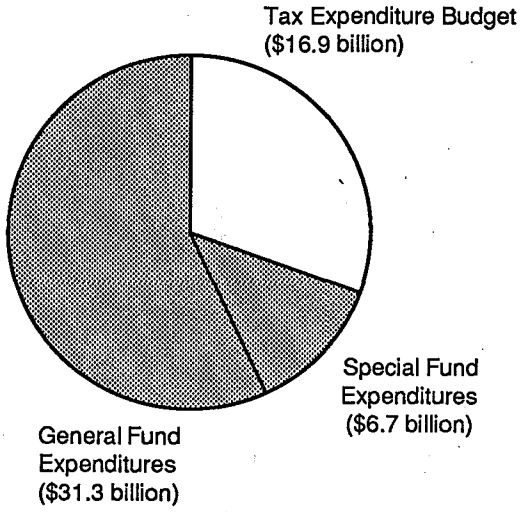
Identifiable Revenue Losses from Tax Expenditure Programs in 1987-88, by Major Program Category[a]

	Estimated Revenue Loss		
Program Category	**Amount (dollars in millions)**	**Loss as a Percent of Estimated Tax Collections**	**Loss as a Percent of Total Identifiable State-Level Tax Expenditures**
Personal income tax programs	$12,241	92.7%	72.6%
Sales and use tax programs	3,899	34.3	23.1
Bank and corporation tax programs	386	8.2	2.3
Programs for other state taxes	331	5.3	2.0
Subtotals, all state tax programs	$16,857	47.5%	100.0%
Local property tax programs	$1,934	16.1	NA
Local share of sales and use tax programs	1,287	34.3	NA
Totals, all programs	$20,078	39.2%	NA

[a] Detail may not add to totals due to rounding. Figures shown are derived from data presented in Volume II, and estimates of 1987-88 tax collections as published in the *1987-88 Governor's Budget.*

Chart 1

1987-88 Tax Expenditure Budget Compared to Governor's Budget



Composition of the Tax Expenditure Budget. Regarding the composition of the tax expenditure budget, Table 1 and Chart 2 indicate that:

- Personal income tax TEPs amount to at least $12.2 billion, or nearly 73 percent of total identifiable state tax expenditures;
- Sales and use tax TEPs amount to at least $3.9 billion, or over 23 percent of total identifiable state tax expenditures;
- Bank and corporation tax TEPs amount to at least $386 million, or 2.3 percent of total identifiable state tax expenditures; and
- TEPs related to other state-level taxes amount to at least $331 million, or 2 percent of total identifiable state tax expenditures.

Thus, personal income tax TEPs and sales and use tax TEPs account for by far the largest dollar shares of 1987-88 tax expenditures. Table 1 also shows that state TEPs amount to about 48 percent of projected 1987-88 state tax revenues, with personal income tax TEPs equaling 93 percent of projected personal income tax revenues, and sales and use tax TEPs equaling over 34 percent of projected sales and use tax revenues. Given the above, state-level TEPs will reduce by about 32 percent the amount of revenues which otherwise would be produced by the basic tax structure in 1987-88.

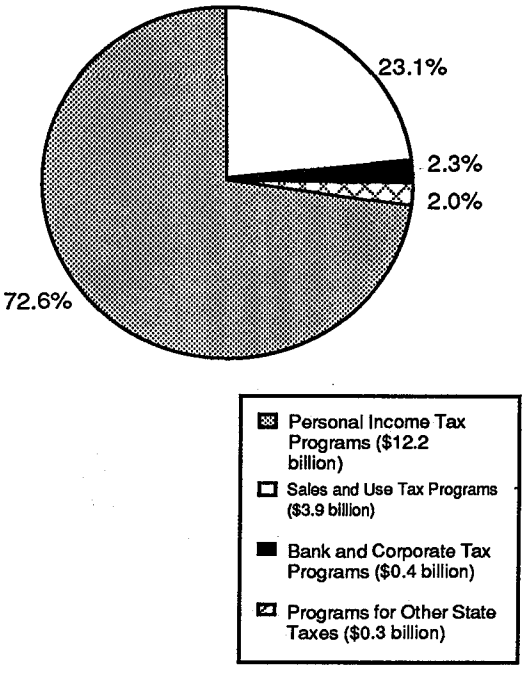
In terms of the actual number of individual TEPs, we have identified nearly 300, including 81 for the personal income tax, 36 for the bank and corporation tax, 85 for the sales and use tax, 30 for other state-level taxes, and 65 for the property tax.

Major Individual Tax Expenditure Programs

Tables 2 through 6 summarize the most significant individual TEPs for which identifiable cost estimates are available.

Chart 2

Composition of the Identifiable State Tax Expenditure Budget for 1987-88



Personal Income Tax TEPs. The largest personal income tax TEPs (Table 2) are deductions for interest expenses ($3.3 billion), income exclusions for employer contributions to pension plans ($2.1 billion) and to health plans ($925 million), the partial income exclusion of net capital gains on asset sales ($770 million), deductions for taxes paid ($693 million) and charitable contributions ($585 million), and the income exclusion for social security benefits ($520 million). Altogether, these programs amount to nearly $8.9 billion and account for 72 percent of all personal income tax TEPs. In totaling the costs of personal income tax TEPs, we have excluded the personal exemption on the grounds that a strong case exists for defining it as part of the "basic" tax structure. In addition, we have included only that portion of the standard deduction that is in excess of the deductible expenses which nonitemizing taxpayers could have claimed in the absence of the standard deduction. We have done so because it is this amount that the state would collect in additional tax revenues if the standard deduction were to be eliminated.

Bank and Corporation Tax TEPs. The largest identifiable bank and corporation tax TEPs (Table 3) are the expensing deductions for research and experimental costs ($170 million) and exploration and development costs ($90 million), and deductions for charitable contributions ($46 million). These three programs account for $306 million, or 79 percent of total identifiable costs for bank and corporation TEPs. However, other programs for which the revenue loss has not been identified, such as accelerated depreciation, may be of a larger magnitude than those identified in Table 3.

Sales and Use Tax TEPs. The largest sales and use tax TEPs (Table 4) are the exemptions for food products ($1.5 billion) and for gas, electricity and water ($1.1 billion). These two programs account for two-thirds of the total identifiable costs of sales and use tax TEPs. The remaining one-third of identifiable costs is attributable to about a dozen smaller programs. However, as shown in Volume II, there are over 70 additional sales and use tax TEPs for which revenue-loss estimates currently are not available.

TEPs for Other State Taxes. Of the remaining state taxes, the largest TEPs (Table 5) include the insurance tax exemption for nonprofit hospital service plans ($220 million), the reduced insurance tax rate for pension and profit-sharing plans ($33 million), and the excise tax exemption for jet fuel used by common carriers and the military ($58 million).

Property Tax TEPs. The most significant property tax TEPs (Table 6) include the business inventory exemption ($624 million), the exemption for furnishings and other personal effects ($622 million), the homeowners' exemption ($343 million), the exemption for property associated with charitable nonprofit activities ($193 million), and the exemption for open-space lands and historical property ($78 million).

1987-88 Changes to the Tax Expenditure Budget

Table 7 compares the 1987-88 tax expenditure budget for state-level taxes with the budgets for 1986-87 and 1985-86, both in total and by individual major tax type. The table indicates that the state tax expenditure budget is expected to increase by $1.2 billion (7.8 percent) in 1987-88. This compares to an estimated increase of $1.4 billion (9.6 percent) that occurred in 1986-87. The 1987-88 growth includes increases of $937 million (8.3 percent) in personal income tax TEPs, $223 million (6.1 percent) in sales and use tax TEPs, $29 million (8.1 percent) in bank and corporation tax TEPs, and $26 million (8.5 percent) in TEPs associated with other state-level taxes. Table 7 also shows that local property tax TEPs are estimated to increase by $87 million (4.7 percent), while the local share of sales and use tax TEPs is expected to rise by $114 million (9.7 percent).

Causes of Changes in the Budget. Changes in the size of the tax expenditure budget from year-to-year are primarily due to two factors. First, the **number and coverage** of specific individual tax expenditure programs may change, as existing programs are eliminated, modified or allowed to sunset, and new programs are enacted. Second, the **revenue losses**

Table 2

Identifiable State Revenue Losses from Personal Income Tax Expenditure Programs in 1987-88 (dollars in millions)[a]

Type of Program	1987-88 Estimated State Revenue Loss
A. *Exclusions and Exemptions from Reported Income*	
Employer contributions to pension plans	$2,058
Employer contributions to health plans	925
Net capital gains on asset sales	770
Social security benefits	520
Capital gains on sales of residences (combined programs)	244
Compensation for injuries or sickness	147
Capital gains for inherited property	133
Miscellaneous fringe benefits	122
Other programs with identifiable revenue effects	283
Subtotal	$5,202
B. *Adjustments to Reported Income*	
Employee business expenses	$289
Contributions to IRA accounts	87
Alimony payments	57
Other programs with identifiable revenue effects	85
Subtotal	$518
C. *Tax Deductions*	
Mortgage interest	$2,460
Nonmortgage interest	856
Taxes paid	693
Charitable contributions	585
Miscellaneous expenses	307
Medical and dental expenses	157
Standard deduction	137
Other programs with identifiable revenue effects	104
Subtotal	$5,299
D. *Tax Credits*	
Renters' credit	$476
Dependent exemption credit	92
Solar energy and energy conservation equipment	61
Child and dependent care expenses	32
Other programs with identifiable revenue effects	57
Subtotal	$718
E. *Other Programs*	
Special filing status for heads of household and surviving spouses	$331
Income averaging	174
Subtotal	$505
Total, personal income tax programs	$12,241

[a] Detail may not add to totals due to rounding. Personal exemption credits other than special benefits provided to heads of household and surviving spouses have been excluded, on the grounds that they constitute part of the "basic tax structure." The standard deduction revenue loss is based on the amount by which standard deductions claimed exceed the itemized deductions which nonitemizers could claim in the standard deduction's absence.

Table 3

Identifiable State Revenue Losses from Bank and Corporation Tax Expenditure Programs in 1987-88 (dollars in millions)

Type of Program	1987-88 Estimated State Revenue Loss
A. *Exclusions and Exemptions From Reported Income*	
Tax-exempt corporations	$19
Preference tax exemption	7
Subtotal	$26
B. *Tax Deductions*	
Expensing of research and experimental costs	$170
Expensing of exploration and development costs	90
Charitable contributions	46
Other programs with identifiable revenue effects	37
Subtotal	$343
C. *Tax Credits*	
Solar energy and energy conservation equipment	$15
Other programs with identifiable revenue effects	2
Subtotal	$17
Total, bank and corporation tax programs	$386

associated with an existing program may change, even though the program itself is unchanged. This may occur for a variety of reasons. For instance, the number of taxpayers who qualify for a program may increase. Or, the dollar value of the tax base that a program applies to may increase, due to inflation or expanded economic activity.

Table 8 shows the change in the state tax expenditure budget in 1987-88 due to the first factor above--changes in the number and coverage of TEPs. The table indicates that during 1986, 16 state-level TEPs were either established, extended or expanded, while 11 TEPs were either restricted, eliminated or permitted to sunset. (The latter group of changes were due in all but one case to pre-1986 legislation.) Table 8 also shows that the combined net identifiable revenue effects from these changes is to *reduce* the 1987-88 tax expenditure budget by about $200 million. This is because identifiable revenue losses from extended, expanded and enacted programs ($57 million) will be more than offset by identifiable revenue gains from programs that were terminated or restricted ($258 million).

Given the above, the net increase in the tax expenditure budget in 1987-88 is attributable to the second factor cited above -- increased costs of existing programs due to factors such as expanded economic activity, inflation, and increased numbers of taxpayers. In other words, the 1987-88 growth in the tax expenditure budget is **economically driven**, as opposed to being caused by tax policy changes. Tax policy changes also have played a relatively minor role in the tax expenditure budget's growth in other recent years. For example, as summarized in Table 9, the net first full-year effect of tax policy changes has been to increase the budget by $64 million in 1981, only $23 million in 1982 and $30 million in 1984, and to actually reduce the budget by $159 million in 1983 and $106 million in

Table 4

Identifiable State Revenue Losses from Sales and Use Tax Expenditure Programs in 1987-88 (dollars in millions)

Type of Program	1987-88 Estimated State Revenue Loss[a]
Food products	$1,507
Gas, electricity and water	1,109
Vessels and aircraft (various programs)	386
Cargo and returnable containers	207
Agricultural feed, seeds, and fertilizers	170
Prescription medicines	118
Candy and confectionery items	80
Sales of mobilehomes (various programs)	71
Custom computer programs	49
Newspapers and periodicals	48
Leases of motion pictures	38
Bottled water	25
Other programs with identifiable revenue effects	91
Total, sales and use tax programs	$3,899

[a] Estimated local revenue losses to cities, counties and transit districts equal approximately 33 percent of the state revenue losses shown, or approximately $1,287 million in total.

Table 5

Identifiable State Revenue Losses from Tax Expenditure Programs for Other Major State Taxes in 1987-88 (dollars in millions)

Type of Program	1987-88 Estimated State Revenue Loss
Insurance tax exemption for nonprofit hospital service corporations	$220
Aircraft jet fuel license tax exemption	58
Partial insurance tax exemption for employee pension and profit sharing plans	33
Cigarette tax exemption for distributions to the armed forces and Veterans' Administration	8
Other programs with identifiable revenue effects	12
Total, programs for other state taxes	$331

1985. Similarly, the revenue losses from new or expanded tax expenditure programs have amounted to $64 million in 1981, $52 million in 1982, $22 million in 1983, $43 million in 1984, and $17 million in 1985. None of these annual increases have amounted to more than a fraction of 1 percent of the total tax expenditure budget.

Given the above, tax policy changes typically tend to have relatively minor effects on the total size and growth of the tax expenditure budget. Rather, year-to-year changes in the budget are mostly attributable to the expanding tax base of the economy, which automatically increases the costs associated with most TEPs.

Issues Facing the Legislature When Reviewing the Tax Expenditure Budget

When reviewing the tax expenditure budget, there are two key issues which the Legislature must consider in making decisions regarding whether individual TEPs should be enacted, extended, modified or terminated. These are the same two issues that the Legislature must face in making its decisions regarding the direct expenditure budget:

- First, the **objective(s)** of each TEP should be reviewed and agreed upon; and
- Second, a judgment must be made regarding whether each TEP is **cost-effective**, both in its own right and relative to other programs that the Legislature has an interest in funding.

Determining TEP Objectives. It is important for the Legislature to review and agree upon each TEP's objective(s), simply because a program's effectiveness and economic sensibility cannot be properly evaluated without its purpose being known. The underlying rationales for most existing TEPs fall into three general categories--to provide tax relief to specific individuals and/or businesses, to provide economic incentives to encourage certain types of private sector economic activity, or to simplify or reduce the costs of state tax administration. We have attempted to

Table 6

Identifiable Local Revenue Losses from Property Tax Expenditure Programs in 1987-88 (dollars in millions)

Type of Program	1987-88 Estimated Local Revenue Loss
Business Inventories	$624
Household furnishings	622
Homeowners' exemption	343
"Welfare" exemption (various programs)	193
Open-space and historical properties	78
Real property owned by private colleges and seminaries	37
Computer programs	15
Other programs with identifiable revenue effects	22
Total, property tax programs	$1,934

Table 7

Growth in the Identifiable Revenue Losses from Tax Expenditure Programs 1985-86 through 1987-88 (dollars in millions)[a]

Program Category	Identifiable Revenue Losses			Growth in Identifiable Revenue Losses			
				1986-87		1987-88	
	1985-86	1986-87	1987-88	Amount	Percent	Amount	Percent
Personal income tax programs	$10,233	$11,304	$12,241	$1,071	10.5%	$937	8.3%
Sales and use tax programs	3,413	3,676	3,899	263	7.7	223	6.1
Bank and corporation tax programs	343	357	386	14	4.1	29	8.1
Programs for other state taxes	289	305	331	16	5.5	26	8.5
Subtotals, all state programs	$14,278	$15,642	$16,857	$1,364	9.6%	$1,215	7.8%
Local property tax programs	1,787	1,847	1,934	60	3.4	87	4.7
Local share of sales and use tax programs	1,089	1,173	1,287	84	7.7	114	9.7
Totals, all programs	$17,154	$18,662	$20,078	$1,508	8.8%	$1,416	7.6%

[a]. Figures shown are derived from data presented in Volume II.

Table 8

Selected Tax Expenditure Program Changes for 1987-88
(dollars in thousands)[a]

		1987-88 Estimated Revenue Effect
I.	**Program Extensions, Expansions and Enactments[b]**	
	A. State Programs	*Revenue Losses*
Ch 16/86	Carryover and Carryback of Disaster Losses (PIT, B&C)	$30,000
Ch 54/86	Farming Business Net Operating Loss Carryover (PIT, B&C)	9,000
Ch 1515/86	Exemption for Printed Advertising Materials (SALES)	8,000
Ch 1083/86	Exemption for Organic and By-Product Fuels (SALES)	7,200[c]
Ch 1444/86	Employer Ridesharing Credit and Employee Benefit Exclusion (PIT, B&C)	1,275
Ch 1087/86	Continuation of Jobs Tax Credit (PIT, B&C)	850
Ch 1156/86	Mutual Fund Interest Income on State and Local Bonds (PIT)	500
Ch 897/86	"Checkoff" Contributions (PIT)	150
Ch 510/86	Partial Fuel Tax Exemption for Tour Buses (FUEL)	45
Ch 779/86	Exclusion for National Guard Active-Duty Pay (PIT)	21
Ch 1290/86	Exemption for Qualified Recycled-Beverage-Container Redemptions (PIT, B&C)	NA
Ch 715/86	Exemption for One-Trip Permits for Trailers (SALES)	NA
Ch 1270/86	Exemption for Aerospace Museum Property (SALES)	NA
Ch 420/86	Exemption for Steam (SALES)	NA
Ch 967/86	Expanded Listing of Nonprofit Entities (SALES)	NA
Ch 216/86	Reduced Fuel Tax for School Districts (FUEL)	NA
	B. Local Property Tax Programs	
Ch 497/86	Expansion of Employee Benefit Plan Exemption	350
Ch 447/86	Expansion of Mobilehome Exemption	68
Ch 74/86	Extended Exemption for Property of Government-Incorporated Organizations	NA
Ch 61/86	Exemption for Parent-Children Transfers (ACA 2)	NA
Ch 2/86	Exemption for Replacement Value of Disaster-Damaged Homes (SCA 28)	NA
II.	**Program Terminations and Reductions**	
	A. State Programs	*Revenue Gains*
Ch 323/83	Solar Energy Credit (PIT, B&C)	151,000
Ch 660/85	Bad Debt Reserves for Nonfinancial Institutions (B&C)	52,000
Ch 488/83	Charitable Deduction for Nonitemizers (PIT)	32,000
Ch 323/83	Energy Conservation Credit (PIT, B&C)	20,000
Ch 1468/86	Exemption of Diesel Fuel in Commercial Fishing (SALES)	1,100
Ch 1327/80	Rapid Amortization for Alternative Energy Equipment (PIT, B&C)	760
Ch 1328/80	Rapid Amortization for Cogeneration Equipment (PIT, B&C)	540
Ch 1309/85	Tax Credit for Computer Donations (B&C)	150

Table 8 *(continued)*

A. State Programs (continued)		
Ch 1708/84	Special Deduction for Agricultural Product Donations (PIT, B&C)	NA
Ch 1190/85	Special Deduction for Artwork Contributions (PIT)	NA
Ch 1461/85	Special Accelerated Depreciation for Low-Income Housing (PIT, B&C)	NA
B. Local Property Tax Programs		NA
Total Identifiable State Revenue Losses		$57,041
Total Identifiable State Revenue Gains		257,550
Net Identifiable Revenue Gain		$200,509

[a] State taxes to which individual program changes apply are noted in parentheses for each program change shown, using the following notation: personal income tax (PIT), bank and corporation tax (B&C), sales and use tax (SALES), and motor vehicle fuel licence tax (FUEL).

[b] The *1987-88 Governor's Budget* proposes two tax expenditure programs which are not listed here. These programs are an income tax deduction for respite care expenses paid by families who care for disabled senior relatives, and an income tax "check off" so that taxpayers may direct a portion of their tax refund to Alzheimer's research. The estimated 1987-88 revenue loss from these proposals is $5 million.

[c] For qualifications regarding this estimate, which is at the upper end of a revenue-loss range, see the special review of this program which appears in Part Two of this report.

Table 9

Identifiable Revenue Effects of New Legislation Affecting the Number and Cost of State Tax Expenditure Programs 1981 through 1986 (dollars in millions)[a]

	First Full-Year Revenue Effects		
Year	**Revenue Gains**	**Revenue Losses**	**Net Effect**
1981	—	$63.8	-$63.8
1982	$29.4	52.0	-22.6
1983	180.8	21.8	159.0
1984	13.0	43.1	-30.1
1985	122.7	17.1	105.6
1986	257.5	57.0	200.5

[a] Figures shown for 1981 through 1985 are derived from data presented in the *1987-88 Governor's Budget*, pages 107 to 109. Figures shown for 1986 are derived from data in Table 8.

identify in Volume II of this report what the apparent rationale is for each existing TEP, based on statements of legislative intent, records of legislative bill analyses, discussions with the state's tax agencies and, in some cases, using our own judgment. In reviewing the tax expenditure budget, the Legislature needs to determine if these apparent TEP rationales are consistent with its current policy objectives and spending priorities. The objectives and rationales for some TEPs have not been reviewed by the Legislature for years and, in certain cases, the Legislature may conclude that a TEP's underlying rationale may no longer be sufficient to justify its existence. If so, the TEP should be eliminated and the revenues gained from doing so be used for a better purpose.

Determining the Cost-Effectiveness of TEPs. Assessing the cost-effectiveness of individual TEPs involves determining whether their objectives actually are being realized, whether a TEP's benefits exceed the revenue costs of providing them, and whether there is a less costly way of providing these same benefits. Assembly Concurrent Resolution 17 gives us the responsibility of providing the Legislature with this information. However, in preparing the compendium of TEPs contained in Volume II, it has become clear to us that assessing the cost-effectiveness of most TEPs, while perhaps simple in theory, faces some very significant impediments. By far the most important problem involves **data limitations**. For example:

- In the case of TEPs whose underlying rationale is to provide **tax relief** to certain types of taxpayers, there frequently are no data available on the number or characteristics of a program's actual beneficiaries. This makes it impossible to estimate the cost of the program, let alone present such information as the income levels and other characteristics of its beneficiaries.

- In the case of TEPs whose underlying rationale is to provide **economic incentives** to encourage certain types of behavior, there commonly is no record of exactly who the individual recipients of the incentive are, and how their behavior has changed as a result of the TEP.

In an attempt to overcome some of these types of data problems, we often utilize surveys of target groups of taxpayers who we think may be affected by a particular TEP. Large-scale surveys were used, for example, in preparing two of the individual TEP reviews appearing in Part Two of this report (the personal income tax TEP for computer-equipment donations, and the sales and use tax TEP for organic materials and waste-products used as fuel). However, although surveys can provide useful information about a TEP, their response rates and partial completion limits our ability to obtain from them all of the data we need.

Policy Options. Given the above, better data clearly are needed if the cost-effectiveness of many TEPs is to be determined. One step that the Legislature could take to address this problem would be to require taxpayers to effectively register, on a **selective** basis, for the TEPs they claim, such as by submitting a designated form to the state's tax agencies containing information necessary for evaluating a TEP's costs and benefits. Applying this type of reporting requirement throughout the entire tax expenditure budget would be impractical, simply because of the sheer volume of paperwork it would generate. However, such a reporting requirement would make sense if it focused on those particular TEPs for which data are especially hard to obtain and are of most interest to the Legislature. This would greatly improve the Legislature's ability to evaluate the costs and benefits of these existing individual tax expenditure programs. The Legislature may also find it beneficial to require in the future that, in order for any new TEP to be enacted, provision be made for data to be collected to analyze its cost-effectiveness.

Regarding the remaining existing TEPs, for which better data are needed but are either impractical or otherwise difficult to obtain, the Legislature has three basic options:

- First, the TEP can be **left in place**, even though its exact cost-effectiveness cannot be determined. This option makes sense when the rationale for the program is extremely strong, there are obvious administrative cost savings from using a TEP instead of a direct expenditure

program, and circumstantial evidence exists that the TEP is not bestowing large windfall benefits on taxpayers for whom the program really was not intended. In this case, however, the Legislature still should carefully review the TEP's eligibility requirements to ensure that whatever windfall benefits may be occurring are minimized.

- Second, the TEP can be **replaced with a direct expenditure program**, whose costs can be more directly controlled and whose benefits can be more accurately targeted. This option makes the most sense when a program's rationale is strong, but there do not appear to be large administrative cost savings from using a TEP, and it appears likely that the TEP is producing significant windfall benefits which cannot easily be controlled. Given the constraints of the state's constitutional appropriations limit, however, use of this option may require the elimination or curtailment of some other expenditure program to "free up" sufficient appropriation authority.

- Third, the TEP can be **eliminated altogether.** This option is especially worth considering when the Legislature feels strongly that a particular program must be cost-effective to justify its continuance, but data do not show that it is.

The use of standards such as these will help to ensure that the tax expenditure budget is subjected to the same type of cost-effectiveness requirements that apply to the direct expenditure budget. Consequently, **we recommend that the Legislature adopt these standards regarding tax expenditure programs.** ■

Part 2

Part Two

Detailed Reviews of Selected Individual Tax Expenditure Programs

Introduction and Overview

This part of the report presents detailed reviews of selected individual tax expenditure programs. Assembly Concurrent Resolution 17 provides that such individual reviews be a part of the overall tax expenditure review process which it created. Specifically, the resolution first requires that the Legislative Analyst identify those tax expenditures that are inefficient, ineffective, benefit only narrow interest groups, or are inconsistent with the objectives of other state programs. Assembly Concurrent Resolution 17 then provides that the Revenue and Taxation Committees of the Legislature may, after reviewing the Legislative Analyst's report, select specific tax expenditures for special review, and utilize the Legislative Analyst's Office and fiscal committee staffs to help conduct such reviews. These reviews are then to serve as the basis of recommendations by the committees to delete or modify specific tax expenditure programs, as part of the annual legislative budget process.

In May 1986, we recommended to the Assembly and Senate Revenue and Taxation Committees, and these committees agreed, that the Legislative Analyst be delegated the primary responsibility for annually selecting which individual tax expenditure programs would receive detailed reviews. It also was agreed that all tax expenditure studies required by statutes would be conducted under the "umbrella" of the ACR 17 process. Lastly, it was understood that the number of individual tax expenditure reviews appearing in this first tax expenditure report would be limited relative to the number in subsequent reports, because of the significant one-time initial workload required to develop the compendium of individual state tax expenditure programs (published separately as Volume II of this report).

The specific individual tax expenditures which have been selected for detailed review in this year's report include the following:

- The sales and use tax exemption for organic materials, waste by-products and still gas, when used as a fuel;
- The bank and corporation tax credit and liberalized charitable deduction for donations of computers and scientific equipment to educational institutions;
- The personal income tax deduction for charitable donations made by nonitemizing taxpayers; and
- The personal income tax itemized deduction for nonmortgage interest expenses.

These individual reviews are presented below.

Review of the Sales and Use Tax Exemption for Organic Materials and Waste By-Products Used as Fuel

This tax expenditure program exempts from sales and use taxation certain organic products, waste by-products and refinery by-products, when these items are used as a fuel source. In the program's absence, these exempt items would be subject to the tax.

Statutory Authorization and Legislative History

This program is authorized by Section 6358.1 of the California Revenue and Taxation Code. The program initially was established with a December 31, 1986 sunset date by Chapter 1248, Statutes of 1980 (SB 1576). This date was extended by Chapter 1059, Statutes of 1983 (SB 1031), and the program was made permanent by Chapter 254, Statutes of 1986 (SB 1083).

Description of Provisions

Under this program, the following items are specifically exempt from state and local sales and use taxes:

- **Organic products**, such as grains and corn, grown expressly for fuel purposes.
- **Waste by-products** from agricultural or forest operations, municipal refuse, or manufacturing which are used in an industrial facility as a fuel source in lieu of oil, natural gas or coal.
- **Still gas** that is produced in the process of refining purchased crude oil. This "still gas" is a refinery waste gas which results when crude oil is heated, in order to separate the oil through a process known as "cracking" into various marketable distillates, such as gasoline, kerosene and diesel fuel.

There is a wide variety of individual items which fall into the categories of products exempt under this program. In practice, however, three general types of commodities are most significantly affected by the program. These include:

- **Biomass waste by-products** from forest-related and agricultural-related operations, which commonly include wood chips, sawdust, milling residuals, tree bark, scrap tree limbs and branches, pruning clippings, nut shells, and fruit pits. Such biomass materials can be burned as a fuel source for furnaces, steam engines and turbines, and other energy-generating equipment.
- Fuel derived from garbage, trash and other forms of **urban waste** that are deposited at dumps and landfills. Such fuel includes **landfill gas**, which accumulates underground, is captured using pipes, and is then used to fuel engines and turbines in order to produce heat and electricity. It also includes **shredded scrapped tires**, which can be burned and used in certain circumstances as a substitute for fuel oil or coal.
- Certain **refinery by-products** that are generated from the process of refining crude oil, and which subsequently are used as a fuel source. These by-products include refinery waste gases such as **still gas** (defined above) or **fuel gas**, and dry petroleum residuals, commonly known as **petroleum coke**. Another exempted commodity is **used oil** from industrial and nonindustrial sources that has been recycled into **fuel oil** and then used in industrial applications.

Initially, the above waste by-products had to be "delivered in bulk" in order to qualify for the tax exemption, and there was no specific exemption granted for still gas. However, in 1983, SB 1031 effectively extended the exemption to waste by-products which are not actually transferred between a buyer and seller, but rather are both produced *and* subsequently consumed as a fuel in the course of a given taxpayer's *own* industrial operations. This measure also explicitly extended the exemption to still gas which is produced while refining purchased crude oil, and then is itself subsequently self-consumed as a fuel source.

Tax Treatment in the Program's Absence

In the absence of this program, the by-product fuels that it exempts would be taxed in one of the following three different basic ways under current sales and use tax law and administrative regulations.

First, a sales and use tax would be levied on the item's **market value** if it is subject to a market transaction. This method would be used when items such as wood chips are purchased by their users from those who generate them. For example, if a lumber mill sold 100 tons of by-product wood chips to an industrial user for $1,500, this entire transaction would be subject to tax.

Second, if a taxpayer **self-consumes** by-products it generates (such as still gas, wood chips and landfill gas) from **purchased** raw materials (such as crude oil, timber and municipal refuse), the California Board of Equalization's (BOE) regulations provide that the amount of the tax would be based on a portion of the market value of the **raw materials**. Specifically, BOE Regulation 1525.1 provides that this taxable portion would be equal to the ratio of the net market value of the by-product to the net market value of all products (including by-products) produced from the raw materials. For example, if an oil refiner generates $8 of still gas by-products and $20 of marketable final products per $15 barrel of purchased crude oil, *and* uses the still gas as a fuel, BOE Regulation 1525.1 provides that the taxable base for the still gas would be about $4.30 [($8/$28)x$15].

Third, if a taxpayer **self-consumes** a by-product it generates from **nonpurchased** raw materials, **no** tax would be levied on it. This is because the sales and use tax applies only when some type of transaction or exchange has occurred involving an item or its raw materials. For example, there would be no tax liability in the preceding still gas example if the crude oil from which the still gas was derived came from an oil field owned by the refiner itself.

Thus, in this program's absence, the tax on a given type and quantity of by-product fuel used in identical economic applications could differ considerably, depending on whether the by-product was subject to a market exchange, or produced from proprietary versus purchased raw materials.

Rationale for the Program

This program's rationale is not specified in statute. However, several rationales have been offered for the program. These involve promoting efficient energy use, improving tax equity, and simplifying tax administration.

Efficient Energy Use. According to analyses prepared by legislative staff and the California Department of Finance of the bills which established, modified and extended the exemption, its primary purpose is to encourage the use of organic and waste materials as a fuel source, thereby reducing the state's dependence on fossil fuels, lowering energy costs, and mitigating some of the negative environmental impacts associated with disposal of waste products.

Tax Equity. Program proponents argue that it eliminates the unequal taxation of by-product fuels, discussed above, that is caused by the normal practice of taxing them depending on how they, or the raw materials from which they are derived, are acquired.

Administrative Simplicity. Assessing taxes on self-consumed by-products under Regulation 1525.1's formula requires the BOE to determine, among other things, the net market value of the products to an individual taxpayer. This value is defined as the amount that a by-product could be sold for, minus the taxpayer's costs of bringing it to market. Often, the data needed to make this computation are unavailable for by-product fuels, either because an established trading market for them does not exist, or because individual taxpayers have never attempted to sell them and therefore do not know what costs they would incur in doing so. For example, oil refiners generally have not set up pipe systems to transport still gas to outside buyers. This program eliminates the potentially significant

administrative problems which the BOE would face in such situations.

Evaluation of the Program

This section discusses the cost of this tax expenditure program in terms of foregone state tax revenues, and evaluates whether the program is achieving its intended objectives in a cost-effective manner. In preparing this analysis, we have relied on information from several different sources, including the California Board of Equalization, the California Energy Commission, the California Solid Waste Management Board, the California Department of Finance, various industry trade associations, and personal contacts with industry representatives. In addition, we conducted extensive written and telephone surveys of over 300 firms potentially affected by the exemption, including some 240 agricultural and forestry operations, 40 oil and gas companies, 30 landfill operations, and several tire shredding firms.

Findings Regarding Revenue Losses From the Program

Accurately estimating the revenue loss from this tax expenditure program is extremely difficult, both because of basic data deficiencies, the fact that taxes have never been collected in the past on most of the covered items, and uncertainties regarding exactly how the BOE would administer the sales and use tax for certain of the covered items in the absence of the exemption. There are three serious problems.

First, there are **no comprehensive data** available regarding the total physical or dollar volume of transactions involving organic and waste by-product materials and, of these, the portion of their value that normally would be subject to taxation. Such comprehensive data never have been reported for tax purposes. One reason for this is that many of these items were not widely used as industrial fuels until recently. (Recent developments in alternative energy technologies, the provision of special government financial inducements, and periods of high costs and uncertain supplies of conventional fossil fuels, have made their use more economically attractive than previously.) For example, biomass by-products were often simply burned in fields or disposed of in landfills. Even if they were used as a fuel, it was done on a rather haphazard basis. In addition, prior to this program's establishment, manufacturing by-products that were consumed in the manufacturing process, like still gas, were not subject to tax as long as this consumption met governmental standards for their disposition (BOE Business Taxes General Bulletin 67-7). For example, if still gas was internally used because it could not be flared-off due to pollution control requirements, this use was not taxed. The BOE eventually discarded this approach when it ruled that "use" and "disposal" were mutually exclusive concepts for tax administration purposes; however, by that time the exemption had been enacted.

Second, what past data have been collected on the exempt items have been rendered of questionable value, because of the unknown effects of recent dramatic **declines in crude oil prices** on the use of organic and waste by-products as fuel. Such price declines for conventional fossil fuels tend to reduce both the use and prices of substitute fuels like those qualifying under this program, and thus reduce the dollar volume of tax-exempt transactions.

Third, one can only speculate about how the BOE would, in the program's absence, **determine the taxable value** of those self-consumed by-products like still gas and landfill gas which are *not* normally traded in the marketplace, and thus for which little meaningful price data exist. The same is true for certain materials which *are* effectively traded in the marketplace, but currently have *no separately distinguishable price.* For example, landfill operators who burn urban waste as a fuel *receive* payment in the form of "tipping fees" for accepting such waste. A tipping fee, however, really is the net effect of two components: a *dumping fee* paid *to* the landfill operator for accepting wastes, and the price paid *by* the landfill operator for acquiring those urban wastes which can be used as a raw material for generating *fuel.* It can be argued that the value of the latter transaction, though not separately identified, could be taxable without this program.

Given such problems, **it is virtually impossible for the Legislature to know how much this tax expenditure program costs.** However, our data do provide some indications about the general magnitude of this cost for at least some of the exempted items. As shown in Table 1 and discussed below, it appears that the revenue loss from exempting these selected items lies somewhere in a range of **up to $7.2 million annually.** This figure is a very rough estimate based on what data we were able to find relating to the physical volumes and approximate values of these selected items, as measured within the mid-1984 through mid-1986 period, depending on the specific item involved. To the extent that recent reductions in conventional fuel costs have reduced these volumes, current revenue losses would be lower.

Table 1

Estimated State Revenue Losses from Selected Items Exempt from Sales and Use Taxation as Organic and By-Product Fuels

Type of Item	Amount
Biomass Materials	$2.7 million
Refinery By-Products	Up to $4 million
Other Materials	Under $0.5 million
Total	Up to $7.2 million

Biomass Materials. These materials primarily represent waste by-products from forest and agricultural operations. No one knows the precise volume of these materials that exists. However, according to the California Energy Commission (CEC), some 50 million dry tons of such biomass materials are generated annually in California, with about 18 million tons of these materials being potentially usable for energy-generating purposes, and somewhere between 5 million and 10 million tons actually being used in solid-fuel biomass applications as of mid-1986. Our survey data generally are consistent with these figures, as our respondents reported a total of about 5.9 million tons of biomass materials that they either purchase (2.9 million tons) or self-consume (3 million tons) for use as fuel.

In order to estimate the revenue loss associated with these biomass materials, we combined these biomass volume figures with our survey data on the average purchase price of marketed biomass by-products ($16.50 per dry ton) and other reported information on self-consumed by-products. This computation yields an estimated biomass by-product tax base of $56.3 million as of mid-1986, which translates into a state revenue loss due to the tax exemption of about $2.7 million annually.

Refinery By-Products. As discussed earlier, the most significant refinery-related by-product industrial fuel is still gas (sometimes also referred to as fuel gas). According to the BOE and oil industry representatives, most still gas is self-consumed by its producers. As explained earlier, self-consumed by-products ordinarily are taxed indirectly through taxing a portion of the raw materials from which they are derived, provided that these raw materials are themselves purchased by the user of the by-products. Thus, in the absence of the exemption, such self-consumed still gas would be taxed based on a portion of the crude oil input costs incurred to produce it (as provided by BOE Regulation 1525.1, discussed earlier), as opposed to on the basis of its actual market value. According to the CEC and oil industry data, California still gas production totaled close to 39 million barrel-equivalents in 1984-85, of which around 6.6 million barrel-equivalents (17 percent) appears to represent production by independent refiners. It is this still gas produced by these independent refiners which is most likely to be taxable in the exemption's absence, because independent refiners tend to purchase their crude oil inputs (which makes their still gas *subject* to tax), whereas nonindependent refiners rely mostly on their own proprietary crude-oil supplies (which makes their still gas *exempt* from taxation).

The price at which this volume of still gas would be valued for tax purposes is not obvious, especially given the limited trading market for this by-product. Neither our survey responses, discussions with the BOE and CEC, nor industry data sources provided us with a very confident feeling about what this valuation would be. The California Department of Finance has in the past assumed, based on discussions with independent

refiners, that the gas would be valued at about one-half the price of crude oil. At current crude oil prices, this assumption implies a 1984-85 still-gas tax base of around $53 million and a state revenue loss from the exemption of $2.5 million annually. This estimate is biased in several ways, however. First, it is understated to the extent that there is still gas which nonindependent refiners produce from purchased crude oil, and therefore could be taxable without this program. Second, it is overstated to the extent that not all self-consumed still gas can be brought to market profitably, as BOE Regulation 1525.1 requires in order for it to be taxable. We attempted to quantify these biases in our survey of refiners, but the data we received were insufficient to do so. Given this, the most that can be said from our data is that the identifiable state revenue loss from exempting still gas is uncertain, but could range up to $3 million annually.

In addition, our survey respondents reported sales of about $20 million of petroleum coke refinery by-products for use as fuel. This represents an additional $960,000 annual state revenue loss, bringing the total identifiable state revenue-loss range for refinery by-products up to $4 million annually.

Other Exempt Items

The remaining items covered under this program have smaller revenue impacts. In the case of **shredded and scrapped tires**, we have identified sales of about 8,000 tons of fuel at an average price per ton of $40, which translates into an annual state revenue loss of $15,200. In the case of **recycled used oil**, the California Solid Waste Management Board (SWMB) reports that nearly 42 million gallons of by-product fuel oil derived from recycled oil were used in 1985. However, most of this fuel normally is sold as a marine boiler-fuel supplement, and therefore only some of it would qualify for the tax exemption as an industrial fuel. Based on current fuel prices, the maximum revenue loss from recycled-fuel by-products would be under $500,000. Regarding **landfill gas**, the revenue loss at present probably would be minor, for several reasons. First, very little of such gas is traded in the marketplace, and the portion that is frequently is transported through pipes and therefore is tax exempt under California Revenue and Taxation Code Section 6353. Second, landfill gas used to generate electricity which in turn is marketed, also effectively is tax exempt under that code section. Third, the BOE's staff has indicated that it would be difficult to place a positive net marketable value on self-consumed landfill gas, until some point in the future when the marketability of this by-product is better established.

Lastly, regarding **organic products** grown expressly for fuel purposes, we have not been able to identify any significant volume of transactions.

Findings Regarding Cost-Effectiveness of the Program

The main criterion we use in evaluating the merits of a tax expenditure program is whether it has achieved its objectives (which in the case of this particular tax expenditure program means encouraging more efficient use of energy and natural resources like conventional fossil fuels) in the most cost-effective manner. That is, has the program accomplished its objectives less expensively than could other approaches available to the state? In this particular case, such "other approaches" include alternatives like providing grants, loans and other forms of direct financial assistance to companies installing and operating equipment which makes use of organic and by-product fuels.

In order to gain an understanding of the program's level of effectiveness, we asked the 300-plus companies we surveyed a variety of questions regarding their motivations for using items such as organic products, biomass materials and refinery by-products for fuel, and the effects of the sales and use tax exemption on their behavior. We also discussed these same questions with staff of the CEC, SWMB, and other knowledgable parties. This section summarizes the results of our research.

Program Has Limited Effect on Utilization. Although this program clearly provides an economic incentive for the use of exempt fuels,

it appears that the program most likely has only a **limited** impact on the level of their use. In the case of biomass materials, for example, only **20 percent** of surveyed biomass-fuel users indicated that they would reduce their own use of such fuel in the absence of the program, and **less than half** believed that elimination of the exemption would significantly reduce the number of biomass facilities and use of biomass fuel throughout the state in the future. Furthermore, when asked what factors have been the most responsible for increased use of biomass fuel in recent years, these respondents ranked the state tax exemption **well behind** such other factors as alternative fuel prices, disposal costs for biomass wastes, favorable federal tax provisions for biomass investments, and the ability to sell biomass-produced electricity to utility companies at favorable prices.

Existing Utilization Often Attributable to Pollution Control and Disposal Costs. Our research indicates that some of the exempt items are being used for fuel purposes because disposing of them in alternative ways is impractical, due to pollution control standards or cost considerations. For example, producers and users of still gas generally indicated that state and federal **pollution control standards**, combined with **high disposal costs**, are by far the primary reasons for internally consuming still gas as a fuel. There was a time when such gas was simply flared-off into the air; however, as pollution standards became more restrictive, many refiners found that it made the most economic sense to "dispose" of the gas by converting their plants to use it as a fuel.

Although elimination of the tax exemption obviously would lessen the economic advantage of using still gas as a fuel, the basic economic logic for continuing to self consume it **still** would remain in many if not most cases. Data provided by certain independent refiners show exactly that--namely, removing the exemption would reduce, but **not** eliminate, the economic gain from using still gas internally, versus disposing of it in some other legal fashion and substituting an alternative fuel source for it.

Thus, although the profitability of such refiners **would** be reduced in the program's absence, their usage of still gas would **not** be changed as long as they continued to refine oil. We also have been told that, in the case of landfill gas, environmental considerations can sometimes require the gas to be recovered from the ground in order to prevent, in addition to possible eventual escape into the air, underground water and soil contamination.

Given the above, we do **not** find the evidence convincing that this program is a particularly cost-effective incentive for stimulating the use of organic and various waste by-products as fuel. Rather, it appears that the program's effect on fuel-use decisions is limited, and that most of the state revenues foregone in providing this program represent windfall benefits to businesses whose behavior is dominated by factors other than the tax exemption. Given this, the objective of stimulating use of the exempt fuels probably could be better addressed by some alternative state program, such as by targeting direct financial assistance only to those fuel users whose decisions to use the exempt fuels can in fact be shown to be dependent on receiving a state subsidy. This approach would eliminate the windfall benefits provided by the present program, thereby enabling the state to achieve its objectives at less cost to taxpayers.

Conclusions

Available evidence suggests that this program's effectiveness is relatively **limited** and that it has unattractive cost-benefit characteristics. Although its exact cost is difficult to pinpoint, it could be costing as much as $7.2 million annually in foregone state sales and use tax revenues, plus additional local revenues. Most of this cost probably is **not** having much effect in terms of increasing the use of the exempted items.

These findings would seem to suggest that this program should be eliminated and, if its objectives are still sought, replaced with a more cost-effective alternative such as a direct expenditure program. However, this program does have a unique aspect because of the tax equity issue that it addresses. As discussed earlier, the sales and use tax is a transactions-based tax. Because of this, the tax levied on a

given by-product fuel used in an identical industrial application can differ considerably, depending on whether the by-product fuel is purchased, self-consumed after being derived from purchased raw materials, or self-consumed after being derived from proprietary raw materials. While this problem is intrinsic to how the sales and use tax is administered and levied, it makes little sense from a strict economics perspective. In fact, the differential tax burdens it produces clearly can place some businesses at a distinct disadvantage when they directly compete in the economic marketplace with other businesses. A case in point is the disadvantage faced by an oil refiner who does not have a proprietary source of crude oil, relative to a refiner who does use proprietary crude oil. In this program's absence, the first refiner could be taxed on its self-consumption of by-product still gas, whereas the second refiner would not be taxed.

The Legislature has never specified a general rule for determining which tax inequities inherent in the law it should address. However, in establishing this particular program, the Legislature appears to have indicated that it does not feel that the inequities produced when taxing by-product fuels should exist. Given this, **we recommend that this program be maintained, on the grounds that its inefficiencies are more than offset by the the tax equity it produces, combined with the administrative savings to the BOE from not having to undertake the exceedingly complex task of establishing taxable values for the exempt items.** ■

Review of the Bank and Corporation Tax Expenditure Program for Contributions of Computers, Software, and Scientific Equipment to Educational Institutions

This tax expenditure program provides special tax benefits to businesses which donate computers, software, scientific and test equipment, and related property, to educational institutions in California. Donations of such property to schools (kindergarten through high school) qualify for a special tax *credit*, while donations to a college or university qualify for a larger-than-normal tax *deduction.*

Statutory Authorization and Legislative History

This program is authorized by sections 23606, 23606.1, 24357.8, and 24357.9 of the California Revenue and Taxation Code. It initially was established by Ch 1559/82 (AB 3194), with a sunset date of June 30, 1984. Chapter 1309, Statutes of 1985 (AB 2274) extended the *credit* to cover computer and equipment donations made through December 31, 1986, and Ch 1423/85 (AB 430) extended the sunset date for the *deduction* until December 31, 1987. Chapter 1308, Statutes of 1985 (AB 1306) expanded both the credit and deduction to include software and other specified equipment donated through December 31, 1987. The 1985 legislation also requires the Legislative Analyst to evaluate the effectiveness of the credit and deduction programs.

Description of Provisions

Bank and corporation (B&C) tax law ordinarily allows corporate taxpayers to claim a tax deduction for contributions of cash and property to charitable and other specified nonprofit organizations. In the case of donated property, the deduction generally is limited to the taxpayer's "basis" in the property (that is, the cost to produce or acquire it). This program provides additional tax benefits in cases where businesses donate computers, software, and other scientific equipment to educational institutions.

Tax Credit for Donations to Schools. This program permits corporate taxpayers to claim a **25 percent tax credit** for computers, software, and other scientific equipment donated to K-12 schools and schools in correctional institutions and state hospitals. The credit, which is in lieu of the regular charitable deduction, is computed based on the fair market value of the donated property. For example, a corporation which donates personal computers having a market value of $100,000 could claim a total tax credit of $25,000. The credit claimed, however, cannot exceed the taxpayer's basis in the property.

The credit is allowed for **computers and equipment** which are contributed between January 1, 1983 and June 30, 1984, and between January 1, 1985 and December 31, 1986. (The program was not in effect between these two time periods because its legal authorization had expired and had not yet been reinstated.) The credit for donated **software** is allowed for contributions made between January 1, 1986 and December 31, 1987. To qualify for the credit, the donated property (1) must be new and less than one year old, (2) must be used directly for educational purposes, and (3) cannot be sold or exchanged by the school for money, other property, or services. Also, in the case of computer software, the software must be usable by the school, and the school may not have received any other offer for the donation of comparable software having a lower retail value.

Corporate taxpayers who claim the credit are not allowed any deduction for charitable contributions for the donated property. If the credit amount exceeds the corporation's tax liability, the excess credit may be carried over and applied against future taxes.

Tax Deduction for Donations to Colleges and Universities. This program also allows corporate taxpayers to claim a larger-than-normal tax deduction for contributions of computers, software, scientific, and testing equipment to colleges and universities. The amount of the deduction is equal to the lesser of (1) the taxpayer's basis in the property, plus one-half of the amount by which its market value exceeds this basis, or (2) twice the taxpayer's basis in the property.

To illustrate how the deduction works, suppose a corporation donates a computer to a college. The computer costs $250,000 to manufacture, and it has a retail market value of $500,000. Under this program, the corporation can claim a total tax deduction of $375,000, which is the sum of its basis in the property ($250,000) plus one-half of the amount by which the market value exceeds this basis ($125,000). Without this special provision, the allowable deduction would be limited to the taxpayer's basis ($250,000). Thus, the taxpayer is provided with an additional deduction of $125,000. Given the B&C tax rate of 9.6 percent, the additional deduction translates into a tax savings for the corporation of $12,000.

As with the credit, the special deduction program is allowed for donations of computers, software, and scientific equipment or apparatus. The special deduction, however, also covers donations of new or used ancillary or test equipment. This is equipment which is used to install, activate, diagnose, maintain, or repair scientific research or instructional equipment.

Taxpayers can claim the deduction for computers and scientific equipment which are contributed between January 1, 1983 and June 30, 1984, and between January 1, 1985 and December 31, 1987. (As with the credit, the special deduction was not in effect between these two time periods because it had expired and had not yet been extended.) The deduction for software and ancillary or test equipment is allowed for contributions made between January 1, 1986 and December 31, 1987. The other requirements that apply to the tax credit for donations to schools (described earlier) also generally apply to the deduction for donations to colleges and universities.

Comparison Between State and Federal Law. Current federal law does **not** provide for a special tax **credit** for contributions of computers and scientific equipment to schools. However, it **does** allow a special **deduction** for corporate donations of this type of equipment to institutions of **higher education**, as provided under federal Internal Revenue Code Section 170 (e). The federal program generally is the same as the state's special B&C deduction program. Thus, for federal purposes, taxpayers also are allowed to deduct the lesser of (1) their basis in the property, plus one-half of its market value in excess of this basis, or (2) twice their basis in the property.

Although the state and federal special deduction programs are similar, the available federal tax benefit for an equipment donation is substantially **larger** than the state benefit, due to the differences in tax rates. For instance, suppose that a taxpayer donates equipment and claims a special additional deduction of $1,000. This provides the taxpayer with a net state tax benefit of $96 (given the state's 9.6 percent tax rate), while the federal tax benefits could range as high as $307 (given the maximum 34 percent federal tax rate, and adjusting for the deductibility of state taxes on federal returns).

However, in contrast to state law, the federal deduction is allowed only for equipment which is constructed by the **taxpayer**, and the equipment can be used only for **research** as opposed to instructional activities. The first restriction limits the deduction to equipment manufacturers as opposed to distributors and retailers of such products. The second restriction, in effect, prevents taxpayers from claiming the special federal deduction for donations to *community colleges*, since they usually do not engage in research. In addition, federal law (unlike state law) does not have a sunset date.

Rationale for the Program

This program is intended to provide corporations with an incentive to make additional donations of computers, software, scientific equipment, and related property to educational insti-

tutions. It attempts to do this by reducing the donation's net after-tax cost, as illustrated by the above examples.

The program was established based on the belief that training in computers and "high tech" equipment is an important educational priority. It often is argued that computers, for example, are needed to make students "computer literate" so that they can function competently as adults in a society that is becoming increasingly dependent on computer technology. Nonetheless, educational institutions point out that their lack of equipment often makes it difficult for them to provide students with this type of training. For example, acquiring adequate amounts of the necessary equipment, along with companion software, tends to be very expensive. This, along with many schools' limited experience with new computer-related technologies, has caused some educational entities to be hesitant about allocating their own funds for this purpose.

Given such factors, the underlying rationale for enacting this tax expenditure program was to encourage companies to make more equipment available for educational institutions. Apple Computer Corporation, for example, indicated that special tax benefits would enable it to contribute large numbers of computers to schools in California. In fact, the measure which authorized the tax credit for computer donations to schools later became known as the "Apple bill."

Evaluation of the Progam

This section provides our analysis of the effects of this state tax expenditure program. It first describes the extent to which the program has been used, its costs in terms of foregone state tax revenues, and the geographic distribution of the donated equipment. It then evaluates whether or not the incentives have had a significant effect on the level of donations (that is, the program's "effectiveness"), and whether the donations have been sufficient to justify the program's cost (that is, the program's "efficiency").

In conducting this evaluation, we have relied upon information from three main sources. First, we examined **tax return data** collected by the California Franchise Tax Board (FTB) for 1983, 1984, and 1985 (the latest full year of data available). These data include information on the number and characteristics of businesses who filed the required statements indicating that they were claiming credits and deductions under this program. Second, we conducted a **written survey** of several hundred corporations which we identified as being manufacturers, wholesalers, or retailers of computers and related equipment, and therefore potential users of this program. Third, we discussed the program and its effects with various individuals who are associated with computer education programs in California, or who support such activities at educational institutions throughout the state. These include individuals who help schools solicit funding for computers, as well as individuals who administer gift and endowment programs for higher-education institutions.

Findings Regarding Usage and Revenue Losses from the Program

Tax information from both the FTB and our survey indicates that only a relatively small number of corporations have made donations and claimed tax benefits under this program. The majority of these companies appear to have made donations to K-12 schools, as opposed to colleges and universities.

Tax Credit for Donations to Schools. The number and amount of claims filed for the *tax credit* on an annual basis are displayed in Table 1. The table indicates that corporate taxpayers filed 31 claims for the credit, totaling approximately $7 million, from 1983 through 1985. Nearly all of the claims--$6.8 million--were filed for 1983 and 1984. Table 1 also shows that the program's first year was the most significant. In addition, our data indicate that the total claims filed during these years are mainly attributable to significant donations by a small number of large corporations. In fact, three firms accounted for 90 percent of the total claims.

The table also shows that the level of claims dropped significantly between 1984 and 1985. The exact reasons for the decline are unknown,

although we note that it coincided with the general downturn in the computer industry after many years of rapid growth. However, the reduction in tax credit claims also may reflect the increasing use by companies of strategies other than donations to promote the use of computers in schools. In fact, the classroom has become a lucrative market for the computer industry, probably as a result of increases in direct funding for computer education. Thus, rather than making large donations, some companies may be using other promotions, such as substantial discounts on volume purchases or free technical support, in order to increase their share of the market.

Finally, Table 1 shows that the revenue loss to the state from the credit differs from the total amount of credits claimed. This is because corporate taxpayers who claim the credit are not allowed to claim the regular tax deduction for charitable contributions that otherwise would be allowed. The disallowance of this regular charitable contribution deduction for the donations partially offsets the reduced tax collections due directly to the credit. Our analysis indicates that, in the absence of the tax credit, taxpayers would have been able to claim *deductions* of $9.8 million. This translates into approximately $940,000 in increased tax revenues to offset against the $7 million direct loss from the credit. Thus, we estimate that the cumulative net revenue loss from the credits claimed in 1983 through 1985 amounts to about $6.1 million.

Tax Deductions for Donations to Higher Education. The use of the special tax deduction for donations to colleges and universities is less certain than the credit's usage, because taxpayers were not required until 1985 to indicate on their tax returns whether they claimed the deduction. (Instead, such donations were comingled with deductions for all other charitable contributions by taxpayers.) Nonetheless, based on our survey results and tax return data for 1985, it does *not* appear that many deductions have been claimed under this program. For instance, only seven survey respondents indicated to us that they made donations and claimed the special deduction from 1983 through 1985. Altogether, these companies claimed deductions for donations of equipment with an estimated total retail value of approximately $12.5 million. We also are aware of donations of computer equipment with an estimated value of $27.9 million to the University of California (Berkeley and UCLA) during this period, which evidently were not reported in our survey responses but probably were claimed as deductions under this program.

The state incurs a revenue loss from this aspect of the program because taxpayers are allowed to claim a larger-than-normal tax deduction for their

Table 1
Tax Credit for Donations of Computers and Related Property to Schools
Total Number and Amount of Claims and Revenue Losses
(1982 through 1985 Income Years)[a]

Income Year	Number of Claims	Amount of Claims	Estimated Revenue Loss[b]
1983	8	$3,751,332	$3,247,153
1984	16	3,073,919	2,660,785
1985	7	181,888	157,444
Totals	31	$7,007,139	$6,065,382

[a] Source: California Franchise Tax Board.
[b] The actual annual revenue loss may differ from the amounts shown due to the carryover of credits that cannot be used entirely in one year.

donations. Our analysis of tax return information indicates that on the average, participating taxpayers appear to have been able to claim deductions equal to about twice their basis in the property, or about double the amount that otherwise would have been allowed. According to tax information from FTB, for example, taxpayers' average basis in donated property of this type was about 35 percent, thereby entitling them to claim an average deduction of approximately 70 percent of the property's value. This suggests that the *additional* deductions allowed by the program have amounted to about $14.1 million of the $40.4 million in total reported donations. This translates into reduced tax liabilities (and thus reduced tax revenues) of $1.4 million over the three-year period, or an average of about $470,000 per year.

This estimate may understate the actual losses of state revenue from the deduction, since there undoubtedly are corporations which have made donations under this program but which did not respond to our survey. Nonetheless, it appears unlikely that the total revenue losses have substantially exceeded our survey-based estimate, since our list of respondents included most of the largest equipment manufacturers and our survey relating to the tax credit produced a revenue loss estimate similar to the FTB's. Even if the level of donations were 50 percent more than what our data suggest, the revenue loss to the state from the tax deduction still would have averaged less than $750,000 per year.

Summary. The total state cost of the credit and special deduction for donations of computers and related equipment amounts to an estimated $7.5 million for the period 1983 through 1985, with about 80 percent of this amount attributable to the credit.

Findings Regarding Types of Donations and Their Geographic Distribution

Types of Donations. Computers and computer-related equipment, such as disk drives and monitors, account for over 95 percent of the dollar value of property donated under this program to schools. Certain large companies have donated complete, "stand-alone" systems to schools. For example, under its "Kids-Can't-Wait" program, Apple Computer Corporation contributed 10,000 computer systems, each consisting of an Apple IIe computer, monitor, disk drive, and basic operating software, to schools located throughout the state. In 1985, the tax expenditure program was expanded to allow companies to claim the deduction and credit for donations of both computer software and testing equipment. However, our survey and FTB tax return data indicate that very few companies have made donations of these types of property under this program.

Geographic Distribution of Donations. The donations of equipment, particularly by large corporations, have been made to educational institutions located *throughout* California. More than half of the survey respondents said that their donations were spread generally throughout the state. It does appear, though, that the majority of the donations have been to institutions located in the state's major urban areas--Los Angeles, San Diego, the San Francisco Bay Area, and Sacramento--primarily because these are the areas where most of the schools, major colleges and universities are located.

Beyond determining this, however, we were unable to obtain more specific data regarding the exact geographic distribution of equipment donations, for several reasons. First, our survey respondents generally were not able or willing to provide detailed information of this sort. Second, corporations using the program have provided little such data to the FTB or various state educational entities, even though current law requires them to do so. Third, neither the California Department of Education, the California State University, the University of California, nor other state agencies are able to provide comprehensive data regarding equipment donations under this program.

Selection of Individual Recipients. We also asked companies how they happened to select the particular institutions to which they donated equipment. Although a wide variety of reasons were cited, the most common reasons

were the institution's reputation and orientation toward computer-related education or research work, and the company's hopes of selling additional equipment to an institution in the future. Some corporations also indicated that they prefer to make donations to institutions which are located in their own general geographic area. This is understandable because geographic proximity makes it more practical for company employees to provide assistance to the recipient in the use of the equipment. It also is consistent with our finding that many educators involved with computers in rural school districts indicated that schools in their areas had *not* received any significant equipment donations, other than the donations received from Apple Computer Corporation under the Kids-Can't-Wait program. They attributed this to the lack of computer businesses located in their surrounding areas.

There also is some evidence that the amount of donations provided to institutions of higher education is affected by an institution's size. For example, our survey findings suggest that the recipients of most donations under the special deduction program included the major public and private universities in the state, such as the University of California (particularly the Berkeley and Los Angeles campuses) and Stanford. A majority of the responding companies also reported that their donations were made to schools and colleges which had directly solicited equipment donations.

Findings Regarding Cost-Effectiveness of the Program

We evaluated this tax expenditure program on the basis of whether it appears to have achieved its objectives, and whether it has done so in a cost-effective manner. For the program to achieve its objectives, it should increase the amount of computers, software, and scientific equipment available to schools. Moreover, it should do so less expensively compared to the cost of other approaches available to the state, such as directly purchasing computers for schools. In order to obtain some indication of the program's likely effectiveness, we asked the surveyed corporations a number of questions regarding their motivation for making equipment donations and the relative importance of the program in determining the level of such donations. Our analysis of their responses indicates the following:

State Tax Benefits Are of Limited Importance. Although this program clearly provides corporations with an economic incentive to make donations of computers and other qualifying property to educational institutions, it appears that the program is having only a **limited** impact on the actual level of donations. For example, the most commonly cited reason given by our survey respondents for making donations was that the corporation wanted to demonstrate its **general support for education,** followed by the desires to expose products to **potential future customers,** and have recipient institutions provide feedback to the company that is useful in **improving company products.**

Furthermore, the corporations that responded to our survey indicated that tax benefits were a relatively unimportant consideration to them in making donations compared to other factors, and none ranked tax benefits first. Moreover, to the extent that tax consequences did affect an individual corporation's decision to donate, federal tax benefits generally were reported to be a more important consideration than state tax benefits. This is not surprising in the case of the special deduction, since the higher federal tax rates make the direct federal tax savings to the corporation for donations significantly greater than its state tax savings. In addition, any reduction in state taxes, whether due to the credit or special deduction, is partially offset by an increase in a corporation's federal taxes. This is because state taxes are deductible for federal purposes. Clearly, this diminishes the benefits provided by the state's tax provision.

Program Provides Windfall Benefits. When asked what percentage of the value of their donations can be attributed to state tax benefits, only a handful of companies were willing to venture a guess. However, of those that did, the average attribution figure given was only about 10 percent. Given that the program applies to the **entire** amount of a company's donations--

including the 90 percent share that these respondents said was **not** due to the state tax benefits--the program appears to have provided large windfall benefits to companies that would have donated their products anyway.

This latter survey finding, if representative, implies that the program is **not** a very cost-effective way to put computer equipment into California schools. To illustrate, suppose that a company donates $10,000 worth of computers to an elementary school, of which 10 percent ($1,000) represents the portion that is directly attributable to the 25 percent tax credit. The company, however, is able to claim total tax credits of $2,500, based on the entire amount of its donation. Thus, in order to provide the school with $1,000 in additional computers, the state ends up paying $2,500. Clearly, it would be more cost-effective in this case for the state to provide a $1,000 grant to the school rather than to allow the 25 percent tax credit. Or, alternatively, the state could provide a $2,500 grant and the school could end up with two-and-a-half times the equipment that it could have under the tax expenditure program.

Findings Regarding Program Administration

Tax expenditure programs often are chosen over direct expenditure mechanisms because of the administrative advantages they can offer. For example, tax expenditure programs often result in less "red tape," because their recipients are self-selected, and are responsible (rather than the government) for determining their own eligibility, calculating the appropriate tax benefit, and "distributing" the funds. The government plays a role only to the extent that the recipient is selected for a tax audit. However, while these characteristics of a tax expenditure program may make it easy for the government to administer it, they also weaken legislative oversight of the program.

To help the state monitor this program, the Legislature enacted a reporting requirement. This requirement specifies that companies claiming the credit or deduction must provide certain information about the donated equipment and the recipient institution. The information must be reported on a separate tax form (FTB Form 3519), both to the FTB and the state educational agency which has jurisdiction over the recipient institution, such as the California Department of Education in the case of donations to schools. This reporting requirement applies to contributions made from 1985 through 1987.

Our analysis indicates, though, that the statutory reporting requirement has *not* significantly improved the state's ability to monitor the program. Only *two* of the seven credit claims for 1985 processed by FTB were accompanied by the appropriate form, although two others did include other documentation. The California Department of Education also has no record of receiving copies of these forms, as required by the law. In fact, only one form (for the deduction) has been received by a state educational agency.

Oversight of the program also is weakened because the information collected directly from tax returns is not verified or adjusted on a current basis to account for the number and amount of *invalid* credit or deduction claims. The FTB generally allows a credit or deduction when it processes a taxpayer's return, even if the proper documentation is not provided. Thus, a claim cannot be validated unless the return is audited. However, even if a tax return is audited, this usually is not done for several years after it is filed. This makes it difficult to monitor--on a timely basis--whether the program's objectives are being accomplished. Clearly, despite the reporting requirement, the difficulty of collecting reliable information on an ongoing basis continues to limit legislative oversight of this tax expenditure program.

Conclusions

The evidence we have suggests that this program's effectiveness is somewhat **limited**, and that it does **not** have positive cost-benefit characteristics. Given this, we believe that a direct expenditure program would be a more cost-effective approach for helping educational institutions acquire computers and scientific equip-

ment. This is because a direct expenditure program will avoid the problem of providing windfall benefits to companies for donations which they would have made anyway.

In fact, the state already has various ongoing direct-expenditure programs of this type. Among these, the most significant is the Education Technology Program, which was established by Ch 1133/83 (AB 803). Under this program, the state provides direct funding to support the use of new technologies in the classroom. Over the past three years, a total of $66 million has been appropriated for this program, with about 90 percent of this amount used to support computer technology. Most of the funds are used to award matching grants on a competitive basis to schools for computer hardware, software, and teacher training. Approximately 2,600 elementary schools and 1,500 secondary schools have received grants under this program.

The state also has allocated a significant amount of funds to public higher education institutions for computers and scientific equipment. These institutions also plan to use funds from the State Lottery to purchase equipment. For example, in 1985-86 the California State University expended over $10.8 million in lottery proceeds for instructional equipment, including computers and related hardware.

Given the lack of conclusive evidence that the program is a very significant determinant of donations, we would *not* expect a dramatic drop off in donations to occur if the program were terminated. (Some drop off might occur as a result of the new reduced federal tax rates that are effective beginning in 1987; however, this effect would occur independently of this program's termination.) After all, corporations still would be able to deduct their donations as regular charitable contributions on both their state and federal tax returns, using normal rules. Furthermore, the absence of special state tax incentives is not likely to affect a corporation's basic philanthropic philosophy and its interest in advertising its products through increased market exposure. These factors, rather than state tax incentives, appear to be the most important reasons why some corporations make equipment donations to schools and colleges, while others do not. On this basis, **we recommend that the B&C tax expenditure program for contributions of computers, software, and scientific equipment be discontinued.** ■

Review of the Personal Income Tax Deduction for Charitable Donations Made by Nonitemizing Taxpayers

This tax expenditure program allows taxpayers who claim the standard deduction on their personal income tax returns to **also** claim a special **itemized deduction** for their charitable contributions. In the program's absence, nonitemizing taxpayers claiming the standard deduction would receive **no** tax benefits as a result of their charitable donations.

Statutory Authorization and Legislative History

This program was incorporated into California law by Chapter 488, Statutes of 1983. This measure partially conformed state Personal Income Tax Law to a similar provision in the federal Internal Revenue Service Code (IRC), which Congress enacted as part of the Economic Recovery Tax Act of 1981 (ERTA). Specifically, Ch 488/83 adopted by reference, in Section 17131 of the California Revenue and Taxation Code, a federal program established by ERTA for the deduction of charitable contributions made by nonitemizing taxpayers [IRC Section 170(i)]. The federal program was phased-in over a five-year period beginning with the 1982 income year, and was scheduled to expire after the 1986 income year unless otherwise extended. Chapter 488, Statutes of 1983 also made continuation of California's program beyond 1986 dependent on continuation of the federal program beyond 1986. Because the Federal Tax Reform Act of 1986 failed to extend the federal program, California's program expired under current law as of January 1, 1987. Thus, at present, there exists neither a federal nor a state special itemized deduction for charitable contributions made by nonitemizing taxpayers.

Given the above, the key issue currently facing the Legislature regarding this program is whether or not to reinstate it for income years beyond 1986.

Description of Provisions

This program allowed taxpayers claiming a standard deduction in lieu of itemizing their deductions to also claim a special income tax deduction for their charitable contributions, as follows:

- For 1984, 25 percent of qualified charitable contributions up to $300 (that is, a maximum deduction of $75).
- For 1985, 50 percent of qualified contributions.
- For 1986, 100 percent of qualified contributions.

These provisions conform to federal law. The state program also provided that the total special deduction claimed in any of these years may not exceed 20 percent of California adjusted gross income (AGI). Although the state program was not in effect prior to 1984, a special nonitemizers' deduction *was* allowed for *federal* income tax purposes in both 1982 and 1983. This federal deduction was equal to 25 percent of qualified contributions up to $100 (that is, a maximum deduction of $25).

Example

A joint-return taxpayer with two dependent children and $20,000 of AGI, donates $200 to various charitable organizations in 1986. However, this taxpayer claims the standard deduction instead of itemizing deductions, because the 1986 value of the standard deduction ($3,420) happens to exceed his total itemizable deductions. Without this program, this taxpayer's state taxes amount to $192, and he receives no tax benefits from making his charitable contributions. Under this program, however, he may claim an additional $200 special deduction, which reduces his tax liability by $6. Thus, the program reduces the taxpayer's net cost of making the $200 of charitable contributions, from $200 to $194.

Because this taxpayer is in the 3 percent state marginal income tax bracket, this program saves the taxpayer 3 cents for each $1 of charitable contributions he makes.

Rationale for the Program

The primary rationale for this program is to provide a tax incentive to encourage taxpayers who claim the standard deduction to make, or increase their level of, charitable donations. Underlying this rationale are the beliefs that such charitable donations provide funding for socially beneficial programs that are deserving of indirect public financial support, and that the level of charitable contributions increases when the after-tax cost of making them is reduced.

The federal program also has a similar rationale. According to Congressional hearing transcripts, the federal charitable deduction for nontemizers originally was proposed in 1979 as a means of counteracting presumed declines in charitable giving caused by a post-1970 fall in the proportion of taxpayers who were itemizing their deductions. For example, the portion of joint-return federal taxpayers itemizing their deductions fell from nearly 48 percent in 1970 to under 29 percent by 1978. This decline primarily occurred because the standard deduction was increased on a number of occasions over this period, from $1,000 in 1970 to $2,000 in 1972, $2,800 in 1976 and $3,400 in 1978. Proponents of the special federal charitable deduction for nonitemizers believed that, as taxpayers found it profitable to claim the increasingly large federal standard deduction, they in turn reduced their charitable contributions because the after-tax cost of making them went up.

Some proponents of this program also believe that it is appropriate simply to provide tax relief to taxpayers who make charitable donations on their own volition. The amount of charitable donations made by many of these types of taxpayers may not be affected at all by the program; however, this rationale reflects the belief that these taxpayers should nevertheless get a measure of tax relief in recognition of the socially beneficial causes that they voluntarily support.

Evaluation of the Program

This section discusses the cost of this tax expenditure program in terms of foregone state tax revenues, presents data on the characteristics of the program's participants, and evaluates whether the program is achieving its intended objectives in a cost-effective manner. In preparing this analysis we have relied upon tax return information provided by the California Franchise Tax Board (FTB). In addition, we have reviewed the findings of the U.S. Department of the Treasury and various economic research studies regarding the effects of the federal charitable deduction for nonitemizers.

Findings Regarding Revenue Losses from the Program

The most reliable data on the revenue costs of this program come from the FTB's data base of personal income tax returns. The most recent year for which these data were available (as of December 1986) was the 1984 income year. As discussed above, this was the first year in which California offered a special charitable deduction for nonitemizers, with the allowable deduction equaling 25 percent of donations up to $300 (that is, a maximum deduction of $75).

According to the FTB's data, this program was used by 2.3 million nonitemizing taxpayers in 1984. Table 1 shows that these claimants, which represented about one-half of total nonitemizers and 65 percent of nonitemizers with positive tax liabilities, reported a total of $120.6 million in tax-deductible charitable donations under this program. Data on the income characteristics and marginal tax brackets of these claimants indicates that these donations reduced their 1986 state tax liabilities, and thus state revenues, by approximately *$6 million.* For 1985 and 1986, we estimate that the revenue costs of the program total *$13 million* and *$29 million*, respectively. These estimates take into account assumptions regarding both the underlying growth in itemized deductions over time, and the phasing-in over time of the maximum-allowable deductible amount under this program (from 25 percent in 1984 to 50 percent in 1985 and 100 percent in 1986).

Table 1

Estimated Deductions and State Revenue Losses from the Special Charitable Deduction for Nonitemizers (dollars in millions)

Income Year	Charitable Deductions Claimed	Estimated State Revenue Loss
1984	$120.6	$6.0
1985	265.0	13.0
1986	585.0	29.0

Findings Regarding Program Usage and Characteristics of Claimants

Table 2 presents data on the program's usage, including the income characteristics of its claimants. Included in the table are data regarding the frequency of program use, the dollar amount of deductions claimed under the program, and the savings to taxpayers from claiming these deductions. The data shown are based on tax returns filed for 1984, the most recent income year for which such information currently is available. As discussed earlier, the special deduction was limited in that year to the lesser of 25 percent of contributions, or $75. Table 2 indicates the following:

Frequency of Program Usage. About one-half of all taxpayers are nonitemizers, and therefore are eligible for the program. Of these eligible taxpayers, about 65 percent (or one-third of all taxpayers) claim the special deduction that this program offers. Table 2 shows that the portion of nonitemizing taxpayers who claim the deduction does not vary much by income level; however, because nonitemizers account for a larger share of taxpayers in lower-income ranges than in higher-income ranges, the majority of taxpayers claiming the special deduction have low-to-middle income levels. For example, Table 2 shows that nearly two-thirds of claimants have incomes under $20,000, while less that 15 percent of claimants have incomes above $30,000.

Amount of Deductions Claimed. The average deduction claimed averaged $36 in 1984, and ranged from a low of $23 for low-income taxpayers to about $57 for high-income taxpayers. About 55 percent of total nonitemizers' deductions were claimed by taxpayers with incomes below $20,000, while less than 20 percent of deductions were claimed by taxpayers with incomes over $30,000. (Higher-income taxpayers accounted for a larger share of deductions than of numbers of claimants, because their average deductions were higher than those of lower-income taxpayers.)

Savings to Taxpayers. The right-hand columns of Table 2 provide estimates of the average amount of taxpayers' state tax savings in 1984 from the special deduction, based on the claimants' reported charitable contributions, their average income levels, and the state's marginal tax rate structure. It indicates that the average tax savings in 1984 amounted to $3.24 for single-return taxpayers and $1.44 for joint-return taxpayers, and ranged up to $6.27 for high-income taxpayers. In the under-$20,000 income range where most claimants are found, however, the savings averaged only $1.40 for single taxpayers and $0.70 for joint-return taxpayers.

Comparative Data for Itemizers. Table 3 compares the charitable contributions reported by nonitemizers under this program to those reported by regular itemizers. This comparison provides perspective on the basic donating behavior of nonitemizers that qualify for this program. In making this comparison, we quadrupled the special deduction amounts shown in Table 2 for nonitemizers, so as to adjust for the fact that the

Table 2

Summary Data on Special Charitable Deductions Claimed by Nonitemizing Taxpayers (1984 income year)[a]

Adjusted Gross Income Level	Percent of Taxpayers Who Are Non-itemizers	Percent of Nonitemizing Taxpayers Claiming the Special Deduction	Average Deduction Claimed	Percentage Distribution by Income Level of:		Average State Tax Savings to Claimants from Deduction	
				Claimants	Deductions Claimed	Single-Return Taxpayers	Joint-Return Taxpayers
Under $10,000	93.1%	64.2%	$23	20.1%	13.1%	$0.46	$0.23
$10,000 to $20,000	78.1	64.2	35	43.2	41.7	1.40	0.70
$20,000 to $30,000	50.2	66.6	40	22.6	25.4	2.80	1.20
$30,000 to $50,000	23.1	68.0	49	11.9	16.3	5.39	2.45
$50,000 to $75,000	8.6	74.8	54	1.8	2.8	5.94	4.32
$75,000 to $100,000	5.6	63.0	57	0.2	0.4	6.27	6.27
Over $100,000	4.1	67.1	53	0.2	0.3	5.83	5.83
Totals	49.6%	65.0%	$36	100.0%	100.0%	$3.24	$1.44

[a] Figures in table are based upon data provided by the California Franchise Tax Board for taxable returns in 1984.

special deduction was restricted to only 25 percent of nonitemizers' contributions in 1984. The table indicates that itemizers reported substantially larger amounts of charitable contributions in 1984--over eight times as much on the average--than did nonitemizers. This indicates that nonitemizers were much less oriented towards making charitable donations in 1984 than were itemizers, despite the partial deductibility of their donations. It also suggests that the stimulative effects on nonitemizers' donations of the full phasing-in of the special deduction in 1985 and 1986 would have to be incredibly large in order to bring their average donations up to the level reported by itemizers.

Conclusions. Given the above, the following can be said about the program's usage and claimants' characteristics:

- First, in 1984 the program was used by about two-thirds of qualified taxpayers, and with about equal frequency at all income levels. However, most of its participants had low-to-moderate incomes. This is because nonitemizing taxpayers are concentrated in these income ranges.

- Second, the average dollar amount of charitable deductions claimed under the program in 1984 was fairly small, averaging only $36. (By comparison, the standard deduction granted to nonitemizers in 1984 was $1,630 for single-return taxpayers and $3,210 for joint-return taxpayers.) As a result, the average dollar tax benefits provided by the program also were not very large.

- Third, the average charitable deduction claimed under the program in 1984 was significantly smaller than -- only about one-eighth the size of -- the average charitable deduction claimed by itemizing taxpayers.

Table 3

Comparative Data on Charitable Contributions Reported by Itemizing and Nonitemizing Taxpayers (1984 income year)[a]

Adjusted Gross Income Level	Reported Average Charitable Contributions		Implied Average State Tax Savings for a Joint-Return Taxpayer	
	Itemizers	Nonitemizers[b]	Itemizers	Nonitemizers[c]
Under $10,000	$652	$92	$6.52	$0.92
$10,000 to $20,000	664	140	13.28	2.80
$20,000 to $30,000	727	160	21.81	4.80
$30,000 to $50,000	898	196	44.90	9.80
$50,000 to $75,000	1,415	216	113.20	17.28
$75,000 to $100,000	2,066	228	227.26	25.08
Over $100,000	7,171	212	788.81	23.32
Totals	$1,219	$144	$48.76	$5.76

[a] Figures in table are based upon data provided by the California Franchise Tax Board for taxable returns in 1984.

[b] Amounts shown represent four-times the average deduction claimed for the 1984 income year shown in Table 2. This reflects the fact that only 25 percent of actual charitable contributions were deductible in 1984.

[c] Amounts shown represent tax savings which would result from allowing nonitemizers to deduct 100 percent of their contributions. These figures are four-times the actual 1984 savings shown in Table 2, because only 25 percent of charitable contributions could be deducted by nonitemizers in that year.

Findings Regarding Cost-Effectiveness of the Program

The major criterion we use in evaluating the merits of a tax expenditure program is whether it has achieved its objectives (which in this case involves stimulating the level of charitable donations) in the most cost-effective manner. That is, has the program accomplished its objectives less expensively than could other approaches available to the state?

Given this criterion, the central issue associated with this particular program is whether the amount of new charitable donations it induces is greater or less than the program's cost to the state in terms of foregone income tax revenues. For example, if the induced increase in donations is less than the state's revenue loss from the program, this means that significant amounts of "windfall" tax benefits are accruing to taxpayers who benefit from the program but whose charitable giving is unaffected by it. In this event, the program is **not** cost-effective. This is because the state could, by eliminating the program and instead directly appropriating its own tax revenues to support socially beneficial charitable programs, increase the funding available for these programs at no increased state cost (or alternatively, provide the same funding at less cost). On the other hand, the special deduction makes sense from a cost-effectiveness standpoint if the level of new charitable giving that it induces **exceeds** the state revenue loss that it causes.

Limited State Data Exist to Evaluate Cost-Effectiveness. Assessing this program's cost-effectiveness is difficult because no state data currently are available from the FTB to show how the special deduction has affected charitable donations by nonitemizers. Ideally, one would compare the level of such donations both before and after the program was established. However, this is not possible using FTB data because nonitemizers never reported their charitable donations on their state tax forms prior to 1984. A second source of data--federal tax returns--does contain certain information on charitable donations by California nonitemizers, since the federal government permitted a limited special deduction beginning in 1982. However, 1985 federal data are not yet available, and 1984 federal data are badly distorted because the maximum-allowable federal deduction was tripled in that year (this makes it next-to-impossible to sort out the independent effects on donations of the 1984 first-year phasing-in of the state program).

Eventually, when California tax return data for 1985 and 1986 are tabulated, some useful information about the program's impacts may become available. For instance, we may be able to determine whether nonitemizers' donations increased in response to the 1985 and 1986 increases in the portion of their charitable donations that they may deduct, which effectively reduced the after-tax "price" of making charitable contributions. However, until such data are available, there is no way to identify exactly how donations have responded to the program.

Given the above state data limitations, the next-best approach to assessing the program's likely cost-effectiveness is to consider what is known about the effects of federal tax policies on charitable donations, and what these findings might imply regarding the state program.

Conclusive Evidence of Cost-Effectiveness Is Lacking. Dozens of empirical studies have been conducted by economists in recent years to determine exactly how the federal deductibility of charitable donations affects the level of such donations. The most up-to-date and, by far, single most comprehensive study was published by the National Bureau of Economic Research (NBER) in 1985 (see Charles T. Clotfelter, *Federal Tax Policy and Charitable Giving*, 321 pages). This study provides a review of all previous research, plus new empirical findings, regarding the effects of itemization on charitable donations. We have reviewed both the NBER study and the findings of the other major empirical studies in this area. Our review indicates that economists have not been able to determine very precisely the sensitivity of donations to tax policies. Nevertheless, the "weight of the evidence" does suggest that the following appears to be the case:

- For **high-income** taxpayers (gross incomes above $100,000), the increase in donations induced by allowing deductibility **exceeds** the associated revenue loss. This implies that allowing deductions for donations can be a cost-effective tax policy for this income group.

- For **middle-income and upper-middle-income** taxpayers (gross incomes between $20,000 and $100,000), the increase in donations is about **equal** to the associated revenue loss. This implies that allowing deductions for donations is neutral from a cost-effectiveness standpoint for this group.

- For **lower-income taxpayers** (gross incomes under $20,000) the picture is, as the NBER puts it, very "murky" regarding whether deductibility increases donations by more than the revenue loss it causes. However, in conducting its simulations regarding how tax policies can be expected to affect charitable giving, the NBER study did find it appropriate to assume that donations for low-income taxpayers do **not** offset the revenue losses caused by deductibility, and therefore that deductibility is **cost-ineffective** as a tax expenditure for this group. As indicated earlier in Table 2, it is precisely these same lower-income taxpayers who most frequently claim the state's nonitemizer deduction for donations.

Given the above, research studies by economists offer no conclusive evidence in favor of, and some evidence against, the view that the state's program is cost-effective. This same conclusion has been reached by the U.S. Department of the Treasury regarding the federal program for nonitemizers. Specifically, in 1984 the Treasury recommended eliminating the federal program, partly on the grounds that it found little data indicating that the program was having any significant effect on charitable giving by nonitemizers (see *Tax Reform for Fairness, Simplicity, and Economic Growth: The Treasury Department Report to the President*, Volume 2, November 1984, pages 78-79).

The conclusion that the state's program is not cost-effective is buttressed by several other considerations:

- First, the state program's effects on charitable giving probably are even **weaker** than the federal program's questionable effects. This is because state marginal income tax rates are lower than federal rates, meaning that the effect of permitting deductibility on the after-tax cost of making donations has a much less visible effect at the state level than at the federal level. This is an especially important point for the Legislature to consider in light of the fact that the federal program is not in effect after 1986. That is, were the state's program to be extended beyond 1986, it would not be able to benefit from "piggy-backing" onto the larger federal incentive.

- Second, properly administering the state program can be unduly costly. The Treasury notes, for example, that such programs pose serious enforcement problems. This is because nonitemizers make relatively small donations which are difficult to track, and are expensive to monitor on a per-dollar basis. This, in turn, may encourage certain taxpayers to over-report their donations, and thereby further reduce the program's cost-effectiveness.

Conclusion

There is no conclusive evidence that this program is a cost-effective means of stimulating the amount of charitable donations made by nonitemizing California taxpayers. In the absence of the program there may be some reduction in the volume of charitable donations made by nonitemizers. However, empirical studies provide no solid evidence for believing that this reduction will be large. In fact, what evidence does exist suggests that this program costs the state more in foregone revenues than the amount of new charitable donations that it induces.

Given the absence of evidence that this program is a cost-effective means of stimulating charitable donations and supporting charitable programs, **we recommend that the Legislature not re-enact the program.** ■

Review of the Personal Income Tax Deduction for Nonmortgage Interest Expenses

This tax expenditure program allows taxpayers to claim an itemized personal income tax deduction for interest expenses associated with their nonmortgage debt. This has the effect of allowing taxpayers who itemize their deductions to borrow at a government-subsidized interest rate. In the program's absence, taxpayers who borrow money for nonmortgage-related purposes generally would receive no such interest rate subsidy.

Statutory Authorization and Legislative History

This program is authorized by Section 17201 of the California Revenue and Taxation Code, which partially conforms state law to federal Internal Revenue Code Section 163.

The nonmortgage interest deduction has been part of the state's personal income tax law since its inception in 1935. The deduction was adopted primarily to conform state law with federal law, which has allowed this deduction since 1913.

Description of Provisions

This program allows taxpayers to claim an itemized tax deduction for the amount of all qualified nonmortgage interest which is paid or accrued within a taxable year.

Types of Tax Deductible Interest. The tax deduction permitted by this program applies to interest paid by a taxpayer on loans for business-related purposes, personal investment purposes, and consumer installment debt, such as credit card financing charges. However, taxpayers are *not* allowed to deduct (1) interest on indebtedness incurred to carry obligations that pay tax-exempt interest (such as interest on loans used to purchase tax-exempt state and local government bonds), and (2) interest on indebtedness associated with certain life insurance policies and annuities.

The deduction in the case of interest on debt used to acquire investment property is restricted to $10,000, plus the amount of the taxpayer's net investment income and certain deductions associated with leased property.

Comparison with Federal Law. Federal law also allows a tax deduction for certain nonmortgage interest expenses.

Prior to 1987, the federal program generally was the same as the state program. **Beginning in 1987,** however, the federal Tax Reform Act of 1986 phases out the federal deduction for **consumer interest** (that is, nonmortgage interest other than that on investment-related debt) over a five-year period. Under this act, taxpayers will be allowed a deduction for 65 percent of their consumer interest expenses in 1987, 40 percent in 1988, 20 percent in 1989, 10 percent in 1990, and none thereafter. The only exception to these new federal provisions involves interest on loans for medical or educational expenses. Such interest will continue to be deductible, to the extent that it is secured by a taxpayer's home equity. In addition, under the new federal law, the deduction for investment-related interest payments is limited to the taxpayer's net investment income.

Rationale for the Program

The original rationale for allowing the deduction of interest expenses is not entirely clear. However, the historical record suggests that the program probably was established to ensure that taxpayers would be allowed to deduct legitimate business-related interest expenses, even if these were not specifically deducted under the formal heading of a "regular business expense." Years ago, there was little need to formally distinguish for tax purposes between "business" and "consumer" interest expenses, primarily because the latter constituted only a very small proportion of total nonmortgage interest expenses. This is because consumer installment debt was not

widely used. Given the very low interest rates of those times, the deduction for "consumer" nonmortgage interest imposed a relatively small cost on the government in terms of foregone tax revenues.

Today, however, consumer-related interest is the dominant form of nonmortgage interest paid and deducted by taxpayers. Given this, the program's original justification is no longer very relevant. Rather, the deductibility of consumer interest is now justified by its proponents on two different grounds. First, it is argued that the deductibility of such interest facilitates the acquisition of consumer goods by individuals who have insufficient income to purchase the goods outright. For example, the deduction provides **tax relief** to young families without significant savings to better-afford expensive durable goods, such as automobiles and large home appliances. Second, because the deduction reduces the net cost of debt-financed goods, proponents argue that it also provides an **incentive** for increased consumption and production in the economy.

Evaluation of the Program

This section provides our evaluation of this tax expenditure program, including the program's usage by taxpayers, its costs to the state in terms of foregone income tax revenues, and its cost-effectiveness in achieving its intended objectives. In preparing this analysis, we have relied on tax return data provided by the California Franchise Tax Board (FTB), and also have incorporated the findings of various economic research studies regarding the effects of the federal income tax deduction for nonmortgage interest.

Findings Regarding the Program's Overall Use and Revenue Losses

Program Usage. The deduction for nonmortgage interest is the second largest itemized deduction currently claimed on state tax returns, exceeded only by the deduction for mortgage interest. According to FTB estimates, California taxpayers will report deductions of about $12.2 billion in nonmortgage interest for the 1987 income year, up from $11.1 billion in 1986. The deduction will be claimed on over 4.4 million California tax returns, which represents approximately 35 percent of all tax returns and 85 percent of returns claiming itemized deductions.

Table 1 shows the number of taxpayers claiming the nonmortgage interest deduction and the total amount of deductions claimed since 1980. The deductions claimed include interest paid by taxpayers on loans for:

- Personal purposes, such as consumer installment loans and home improvement loans;
- Personal income-producing purposes, such as interest on loans taken out to purchase stock in a company; and
- Business purposes, such as loans to finance equipment for a business.

As the table shows, the use of the program has grown steadily over the period shown. Since 1980, for example, total deductions claimed increased at an average annual rate of about 11 percent. About half of the increase is due to inflation. This is not surprising--as prices of goods and services in the economy increase, so too does the amount of debt that taxpayers must incur in order to acquire them. The remainder of the increase reflects normal growth in the state's economy and in the number of state taxpayers. Table 1 also indicates that the program continued to grow despite significant declines in overall economy-wide interest rates. This is attributable to the fact that interest rates charged on many types of consumer borrowing did not decline the way that most other interest rates did during most of this period. For instance, the prime rate dropped from over 18 percent in 1981 to less than 8 percent in 1986; yet, the interest rate charged on credit cards over this period remained around 18 percent.

Revenue Losses. The state incurs a revenue loss from this program because taxpayers are able to reduce their taxable incomes by the amount of their interest payments for nonmortgage debt. Table 1 shows the annual revenue loss from this

Table 1

Itemized Tax Deductions for Nonmortgage Interest Expenses
1980 through 1987
(dollars in millions)[a]

Income Year	Number of Returns	Deductions Claimed	Estimated State Revenue Loss
1980	3,402,319	$5,720	$400
1981	3,546,771	6,928	485
1982	3,596,860	7,333	513
1983	3,729,824	7,973	558
1984	4,051,240	9,264	618
1985	4,222,517	10,122	693
1986	4,307,358	11,075	777
1987	4,413,881	12,162	856

[a] Source: California Franchise Tax Board. Data for 1985, 1986 and 1987 are estimated.

program between 1980 and 1987. According to FTB estimates, the revenue loss in 1987-88 will be $856 million. This estimate reflects an average marginal tax rate of about 7 percent for taxpayers who claim the deduction. As shown in the table, the cost of this program has more than doubled over the past eight years.

Characteristics of Claimants. The extent to which this program is used by taxpayers in different income categories is shown in Table 2. The table provides information for the 1984 income year, the most recent tax year for which such data are available.

Table 2 indicates that, although the deduction is used by taxpayers throughout the entire income spectrum, the frequency with which it is claimed clearly increases with income. For example, the deduction is claimed by 21 percent of taxpayers who have adjusted gross income (AGI) between $10,000 and $20,000 and by 44 percent of those who have AGI between $20,000 and $30,000. In contrast, over 80 percent of taxpayers with AGI above $50,000 claim the deduction. These high-income taxpayers, moreover, account for over 45 percent of the total dollar amount of deductions claimed, even though they comprise only about 24 percent of those who use the deduction. This is because the average dollar deduction claimed rises with income.

Higher-income taxpayers are the heaviest users of the program, both in terms of the frequency of claims and deduction amounts. This is because they are more likely than other taxpayers to engage in certain economic activities that generate tax-deductible interest expenses. For example, higher-income taxpayers are most likely to borrow funds for personal income-producing purposes, such as buying stock or investing in limited partnerships. Evidence of this is seen from the fact that a disproportionate share of the taxable income from dividends, partnerships, and capital gains is reported by taxpayers in high income classes. In addition, these higher-income

Table 2

Distribution of Nonmortgage Interest Expense Deductions by Adjusted Gross Income 1984 Income Year[a]

Adjusted Gross Income	Tax Returns Claiming the Deduction: Number of Returns	Percent of Total Claimants	Percent of Taxpayers[b]	Deductions Claimed (dollars in millions): Amount	Percent of Total Deductions	Average Dollar Deduction
Negative AGI[c]	32,056	0.8%	31.4%	$331	3.6%	$10,326
$0 to $10,000	195,547	4.8	5.3	295	3.2	1,509
$10,000 to $20,000	579,566	14.3	21.0	703	7.6	1,213
$20,000 to $30,000	842,710	20.8	44.3	1,168	12.6	1,386
$30,000 to $40,000	838,031	20.7	65.4	1,389	15.0	1,657
$40,000 to $50,000	605,215	14.9	77.4	1,179	12.7	1,948
$50,000 to $75,000	590,055	14.6	84.6	1,419	15.3	2,405
$75,000 to $100,000	222,713	5.5	85.0	894	9.7	4,014
$100,000 and over	145,347	3.6	82.9	1,888	20.4	12,990
Total	4,051,240	100.0%	34.8%	$9,264	100.0%	$2,287

[a] Source: California Franchise Tax Board. Detail may not add to totals due to rounding.

[b] Claimants as a percent of taxpayers in each income class.

[c] Taxpayers with negative AGI include those for whom total adjustments to income exceed total reportable income, but who nevertheless are subject to paying certain preference taxes.

taxpayers often have other large tax-deductible expenses in areas other than nonmortgage interest, such as home mortgage interest. This generally means that they are more likely to itemize their deductions, and therefore to claim the deduction for nonmortgage interest expenses. Conversely, lower-income taxpayers are more likely to be **nonitemizers**, in which case they are **not** able to take advantage of the deduction. Finally, the ability of a taxpayer to obtain credit generally is related to his or her income level. More credit is made available to taxpayers with higher incomes, which therefore increases their ability to make large debt-financed purchases of consumer goods.

It also should be stressed that high-income taxpayers receive the greatest dollar tax benefit per dollar of interest expense. This is because of the state's progressive marginal tax rate schedule. For example, a joint-return taxpayer with taxable income of $75,000 falls into the state's highest marginal tax bracket (11 percent), and therefore receives an $11 tax reduction for every $100 in interest expenses claimed. In contrast, a joint-return taxpayer with $30,000 in taxable income falls within the 5 percent marginal tax bracket, and therefore receives only a $5 tax reduction for the same $100 of interest expenses.

In summary, then, the program's greatest dollar benefits tend to accrue to high-income taxpayers.

Findings Regarding Cost-Effectiveness of the Program

The major criterion for evaluating the merits of a tax expenditure program is whether it has achieved it objectives in the most cost-effective manner possible. That is, has the program accomplished its objectives less expensively compared to other approaches available to the state? Generally speaking, this program scores poorly under this criterion, for several reasons.

Tax Relief is Not Properly Targeted. To the extent that the deductibility of nonmortage interest is intended to assist needy individuals with financing their purchases of basic durable goods, the program is **inefficient** because its benefits are **not well targeted.** All itemizing taxpayers, even wealthy ones, can receive the interest rate subsidy. On the other hand, many low-income taxpayers receive **no** direct subsidy at all because they are unable to itemize. Moreover, high-income taxpayers receive an even **larger** subsidy per dollar of interest paid than do low-income itemizing taxpayers, because of the former's higher marginal income tax rates. Furthermore, the subsidy is available for **all** types of purchases, including luxury goods, as opposed to only necessities such as basic automobiles, refrigerators, and other standard appliances.

Effect on Consumption Probably is Minor. In theory, the tax deduction for nonmortgage consumer debt provides taxpayers with an incentive to make purchases "sooner" rather than "later," because it lowers the after-tax cost of debt financing. This, in turn, may increase the level of consumption and production in the economy, at least in the near term. It is questionable, however, whether the **state** tax deduction has any significant effect in this regard, since state income tax rates are relatively low and the federal deductibility of state income taxes further reduces the total net benefit to the taxpayer. For example, suppose a taxpayer takes out a four-year $10,000 loan at 10 percent to purchase a new car. The total interest payments on the loan over four years amount to $2,174. Even if the taxpayer fell within the state's top marginal tax bracket of 11 percent, his net savings from the deductibility of the interest payments (after federal interactions) would only average $3.58 per month. Given such small savings, it is doubtful whether a taxpayer's decision as to whether, when, or how expensive a car to purchase would be much affected by the state tax deduction for nonmortgage interest payments. Thus, the majority of the interest rate subsidy made available under this program probably accrues as a windfall benefit to taxpayers whose purchasing decisions would have been essentially the same even in its absence.

Higher Consumer Debt Levels May be Undesirable. One of the economic side effects of the program is that it encourages consumers to *borrow* to finance their purchases, instead of financing them through their earned income, even if they can afford to do the latter. Economists recently have become increasingly concerned about the high overall level and continuing growth of outstanding consumer debt, and many have cautioned that such trends, if they continue, could eventually lead to financial problems for many consumers in the future and dampen the economy's overall growth rate.

Although this program probably has only a limited impact on total consumer spending and economic growth generally, it nonetheless does contribute to the creation of a pro-borrowing atmosphere and the promotion of debt-financing by consumers for a wide variety of purchases. It is not at all clear whether this promotion of borrowing is desirable. It also should be noted that the pro-spending thrust of this program appears to be inconsistent with those present policies of both the state and federal government which seek to encourage savings. For instance, the state authorizes deductions from gross income for individual contributions to various retirement plans and deferred compensation programs as a means of encouraging savings.

Given all of the above, this program appears to score poorly under the cost-effectiveness criterion.

Conclusions

Permitting the deductibility of nonmortgage interest has been justified on several grounds, including the right to deduct legitimate business expenses, the desire to provide tax relief to financially needy taxpayers, and the promotion of increased consumption and production in the economy.

Our analysis indicates that it is entirely appropriate for taxpayers to be allowed to deduct the nonmortgage interest that they incur for **income-producing purposes**--the first rationale

cited above. This is consistent with the tax treatment of other items of expense that a taxpayer incurs in the process of earning taxable income.

In contrast, however, there does **not** appear to be adequate justification for allowing taxpayers to deduct the interest on loans for various **personal purposes**, such as consumer-related debt. Permitting such deductions does not appear to be a cost-effective means of either providing tax relief to needy individuals or stimulating economic activity. On this basis, **we recommend that the nonmortgage interest deduction for personal-related purposes, such as consumer expenditures, be eliminated. We further recommend that the Legislature implement this change by fully conforming state law to the new federal law regarding nonmortgage interest that is effective beginning in 1987.**

In recommending full federal conformity, we realize that there actually are two basic approaches that the Legislature could choose from if it were to restrict the deductibility of nonmortgage interest:

- First, the Legislature could simply **fully conform** California law to the recent action taken by Congress in the 1986 Tax Reform Act (our recommendation), which sharply restricts the federal deduction for consumer nonmortgage interest.

- Second, the Legislature could eliminate the interest deduction subject to its **own** restrictions and qualifications, which might differ in certain respects from the federal law.

The first approach--full federal conformity--has the obvious advantages of simplifying computations for taxpayers (this is because both federal and state returns would use similar rules) and facilitating tax administration (this is because the FTB could rely on federal audit data regarding interest deductions).

The second approach--partial conformity--would be advantageous only if the Legislature decided that federal law has shortcomings sufficiently serious that they outweigh the benefits of full conformity. For example, federal law allows taxpayers considerable latitude to take second mortgages out on their homes (the interest on which is deductible), and then use the proceeds for personal consumption purposes. In addition, federal law allows taxpayers to deduct nonmortgage interest expenses on loans for educational and medical purposes, that are secured by their home equities. Under full federal conformity, they could do the same for state tax purposes. To limit such tax manipulations, the Legislature could restrict the allowable state tax deduction for mortgage interest to loan amounts which correspond to the taxpayer's original debt for the home. Taking steps like these would help to effectively limit use of the nonmortgage interest deduction to its appropriate purpose--offsetting interest expenses incurred in the earning of one's income. However, given our earlier findings about the limited effect that state deductibility seems to have on taxpayers' behavior, we believe that the public gain from taking these steps probably would be **limited**, and thus that the benefits of full federal conformity probably would **exceed** the drawbacks.

According to FTB estimates, the state revenue gain from full federal conformity during the phase-in period would be in the range of $185 million in 1987-88, $257 million in 1988-89, $335 million in 1989-90, and increasing amounts thereafter. These estimates assume that the state would phase-out the deductibility of nonmortgage consumer interest according to the same timetable adopted for federal purposes. ■