

**STUDY OF THE STATE OF HAWAII'S
EXPENDITURE CEILING**

A Report to the Legislature of the State of Hawaii

**Submitted by the
Legislative Auditor of the State of Hawaii**

**Report No. 82-5
March 1982**

FOREWORD

The State of Hawaii's general fund expenditure ceiling is the result of a 1978 constitutional amendment which requires the establishment of a ceiling related to the estimated rate of growth of the State's economy.

In 1980, the Legislature enacted Act 277 to implement the constitutional provision, and the general fund expenditure ceiling went into formal effect for the first time in the 1981-83 fiscal biennium. The same act directed our office to study the various indicators of the rate of growth of the State's economy and to submit a report to the Legislature.

While our office is not required to submit a report until 1984, we believe that it would be more appropriate to submit a report at this time especially in view of the significant changes which have been made and are being considered by Congress in federal-state programs and the funding of those programs. We believe that the changes, if they result in large financial impact on the State, might require the Legislature to review the general fund expenditure ceiling prior to 1984.

For the time being, the Legislature has selected total state personal income as the indicator of the rate of growth of the State's economy. In our study, we review the personal income indicator as well as other indicators, especially from the standpoint of their appropriateness or validity as measures of the economy. We also analyze the principal factors in calculating the expenditure ceiling and conclude with a review of the pressures on the expenditure ceiling.

We were assisted in this study by Dr. John Haldi, president of Haldi Associates, Inc., economic and management counsel. Dr. Haldi served as our technical and economic adviser, and we acknowledge his contributions to this study.

We also acknowledge and express our appreciation for the insights on the subject which were shared with us by Wesley Hillendahl, chairman of the Council on Revenues; Thomas K. Hitch, senior vice president of First Hawaiian Bank; Peter C. Lewis, chairman of the Standing Committee on Taxation and Finance of the 1978 constitutional convention; John Ishikawa, chairman of the Committee of the Whole on Taxation and Finance of the same convention; and Lowell Kalapa, executive director of the Tax Foundation of Hawaii. We also express our thanks to the many public officials in this State and elsewhere in the United States who provided us with information during the course of our study.

Clinton T. Tanimura
Legislative Auditor
State of Hawaii

March 1982

TABLE OF CONTENTS

<i>Chapter</i>		<i>Page</i>
1	INTRODUCTION AND BACKGROUND	1
	Constitutional Origins	1
	Implementing Legislation	2
	Objectives and Scope of the Study	2
	Organization of the Report	2
2	ALTERNATIVE INDICATORS TO MEASURE GROWTH OF THE STATE'S ECONOMY	3
	Summary of Findings	3
	Criteria for Evaluating Alternative Indicators	3
	Population	4
	Cost of Living Index	6
	Personal Income	6
	Gross State Product	7
	Personal Income as a Proxy for Gross State Product	9
	Recommendation	9
3	FACTORS AFFECTING THE CALCULATION OF THE GENERAL FUND EXPENDITURE CEILING	10
	Summary of Findings	10
	Short Term vs. Longer Term Change in the Growth Rate	10
	Use of Personal Income Revisions in Calculating the Expenditure Ceiling	11
	Pressures on the Expenditure Ceiling	13
	Concluding Observation	16
	APPENDIX—EXPERIENCE OF OTHER STATES	17

LIST OF TABLES

<i>Table</i>		<i>Page</i>
2.1	Personal Income and Gross State Product by Income Account, 1976	8
2.2	Gross State Product and Personal Income in the State of Hawaii, 1969–1980	9
3.1	Rate of Growth in Hawaii’s Expenditure Ceiling, 1970–1981, Using 1, 3, and 5 Year Moving Average of the Growth in Personal Income	11
3.2	Revisions in Personal Income for Hawaii 1981 Data vs. 1982 Data	14
3.3	State of Hawaii General Fund Expenditure Ceilings as Presented in 1981 and 1982	14
3.4	Hypothetical Example of the Consequences of Exceeding the Expenditure Ceiling	15

LIST OF FIGURES

<i>Figure</i>		<i>Page</i>
3.1	Fluctuations in Personal Income, One-Year Rate of Change vs. Three-Year and Five-Year Averages	12

Chapter 1

INTRODUCTION AND BACKGROUND

Section 4 of Act 277, Session Laws of Hawaii 1980, directs the Legislative Auditor to “study and analyze alternative indicators of the rate of growth of the State’s economy and the appropriateness of the use of each as a basis for estimating the rate of growth of the economy and the establishment of a general fund expenditure ceiling as required by Article VII, Section 9 of the State Constitution.” Conference Committee Report No. 94–80 on S.B. No. 2795–80, S.D. 1, H.D. 1, C.D. 1 (enacted into law as Act 277), further directs the Legislative Auditor to “provide recommendations as to which indicators would be best indicative of the estimated rate of growth of the State’s economy. . .and to present such a report to the Legislature.”

This introductory chapter provides some background information on the constitutional origins of the expenditure ceiling requirement and the implementing legislation and summarizes the objectives and scope of the study.

Constitutional Origins

The issue of the rate of growth of the State’s economy and its relationship to a general fund expenditure ceiling has its origins in a 1978 amendment to the State Constitution. Article VII, Section 9 of the 1978 Constitution states:

“General Fund Expenditure Ceiling

Notwithstanding any other provision to the contrary, the legislature shall establish a general

fund expenditure ceiling which shall limit the rate of growth of general fund appropriations, excluding federal funds received by the general fund, to the estimated rate of growth of the State’s economy as provided by law. No appropriations in excess of such ceiling shall be authorized during any legislative session unless the legislature shall, by a two-thirds vote of the members to which each house of the legislature is entitled, set forth the dollar amount and the rate by which the ceiling will be exceeded and the reasons therefor.”

A complementary provision, Article VII, Section 8, specifies that: “The proposed general fund expenditures in the plan of proposed expenditures, including estimates of the aggregate expenditures of the judicial and legislative branches, submitted by the governor shall not exceed the general fund expenditure ceiling established by the legislature. . . .”

As reported by the 1978 Constitutional Convention’s Committee on Taxation and Finance, which developed the spending limit proposal, “. . .the necessity of establishing some form of limitation on state government spending . . .has its origins in the genuine concern of taxpayers that the costs of government should not consume an increasing proportion of their income. Your Committee concurs that discipline needs to be exercised in the development and execution of spending policies and that the constitution is the proper place to exert and motivate such discipline.”¹

1. Committee on Taxation and Finance, 1978 Constitutional Convention, *Standing Committee Report No. 66*, September 1, 1978, p. 11.

Implementing Legislation

The aforementioned Act 277 implemented the constitutional requirement. The main features of the act are:

1. The rate of growth of the State's economy is to be measured by the rate of increase in total state personal income, averaged over the three preceding calendar years.

2. Fiscal year 1978-79 is the base year for calculating the rate of growth of general fund appropriations.

3. While the total general fund appropriations are limited by the rate of growth of the State's economy, the appropriation requests of the executive branch and the judiciary branch, separately, are likewise limited to the rate of growth of the State's economy as measured by the rate of increase of personal income.

The act is scheduled to expire on June 30, 1984. The intent of the "sunset" provision is to require the Legislature to conduct a review of the appropriateness of the expenditure ceiling formula established by the act. The study requested of the Legislative Auditor is intended to assist the Legislature in that review.

Objectives and Scope of the Study

Objectives. The objectives of the study are:

1. To describe the various indicators which might be used to measure the growth of the State's economy.

2. To develop a framework by which the various indicators can be assessed.

3. To evaluate the indicators against the framework developed.

4. To make recommendations, if appropriate.

Scope and emphasis. The emphasis of the study is on measures of state economic growth and the appropriateness of using the measures to limit state expenditures. The study does not go into such questions as to whether the State should have an expenditure limitation, whether a limitation should be tied to the growth of the State's economy, whether the limitation should be allowed to be exceeded by an extraordinary majority of the Legislature, whether federal and special funds should be covered by a limitation or whether revenues, rather than expenditures, should be limited. These questions are assumed to have been settled by the constitutional amendment which was adopted. Therefore, the scope of the study is limited to that question for which the Constitution permits the Legislature to exercise discretionary authority, i.e., the selection of an appropriate measure of the growth of the State's economy and how such a measure can be used to limit state expenditures.

Organization of the Report

This report is comprised of three chapters and an appendix.

Chapter 1 is this introductory and background chapter.

Chapter 2 presents criteria by which indicators of the growth of the State's economy can be assessed and assesses various alternative indicators against the criteria presented.

Chapter 3 reviews the application of the present indicator, total personal income, and identifies some of the factors which might be considered if the indicator is retained.

The appendix summarizes the provisions and experience of other states which have adopted expenditure or revenue limitations.

Chapter 2

ALTERNATIVE INDICATORS TO MEASURE GROWTH OF THE STATE'S ECONOMY

This chapter establishes basic criteria to assess the alternative indicators or statistical measures that might be used to estimate the rate of growth of the State's economy. These criteria are then used to evaluate a number of indicators or statistical measures.

Summary of Findings

Our review and analysis of the possible indicators of the growth of the State's economy point to the following:

1. When evaluated against the criteria presented in this chapter, all of the indicators reviewed reveal shortcomings, but total state personal income, the indicator currently being used, comes closest to satisfying the criteria of appropriateness, comprehensiveness, timeliness, accuracy, and cost.

2. One alternative indicator, gross state product, is a more comprehensive measure of the growth of the State's economy, but the measure has other shortcomings, and in any event, total state personal income is a reasonably accurate proxy—or substitute—for gross state product.

Our discussion follows on the foregoing points.

Criteria for Evaluating Alternative Indicators

A number of possible ways of measuring the estimated rate of growth of the State's economy have been suggested and discussed before the Legislature. Such alternatives include:

- . Population
- . Cost of Living Index
- . Total State Personal Income
- . Gross State Product

A framework is needed to evaluate systematically these and other alternative measures that might be suggested. In this study the following five criteria have been used:

1. Appropriateness;
2. Comprehensiveness;
3. Timeliness;
4. Accuracy; and
5. Cost.

The basic rationale for each criterion is summarized in the following paragraphs.

Appropriateness. Of the five criteria, this one is clearly the most important. By appropriateness, we mean validity, i.e., whether an indicator actually measures what is intended to be measured—in this case, the growth of the State's economy. If an indicator does not measure the growth of the State's economy, then it can be discarded on the basis that it is inappropriate or invalid.

Comprehensiveness. Broadly, the State's economy is composed of three major sectors: government, households, and business firms. The business sector is in turn subdivided into a number of familiar and easily recognizable sectors such as tourism, banking, public utilities, and agriculture (which can be further divided into such industries as pineapple and sugar), etc. Detailed statistical data are available on many of these individual sectors. However, it would not be appropriate to estimate growth of the State's economy on the performance of just one sector or just a few selected sectors. All sectors comprise the State's economy, and measures or indicators which are more comprehensive (by virtue of including more sectors) are in general preferable to narrower or more restrictive indicators.

Accuracy. Data upon which an indicator is based should be accurate and free from possible bias. Other things being equal accurate data are to be desired when calculating the expenditure ceiling. However, there is frequently a trade-off between accuracy and timeliness. Timely data must frequently be based on sample surveys, estimates or incomplete reporting, with some sacrifice of accuracy. Data which pertain to earlier time periods, on the other hand, are generally more accurate and less subject to revision.

Timeliness. The indicator must be reported at a frequency which enables the expenditure ceiling to be calculated annually. Although Hawaii has a system of biennial budgets and biennial appropriations, the expenditure ceiling needs to be updated annually because the experience has been that a supplemental budget

is always submitted in the even-numbered year. For this reason, it would be desirable to base the expenditure ceiling on some indicator or measure that is compiled in a timely and recurring manner so as to facilitate calculation of the expenditure ceiling on an annual basis.

Cost. Major compilations of economic and demographic data tend to be costly, as well as time consuming. The more comprehensive is the measure of the State's economy, the more individual economic sectors need to be included. This means that more individual data series must be compiled, cross-checked and reconciled, all of which increases the necessary effort and cost. Similarly, broad based census-type data gathering efforts are more accurate than sample surveys, but they are more costly and time consuming. Statistical data which meet the other criteria and which are available to the State without cost are preferred to data which may be expensive to produce.

In the following sections of this chapter, the criteria which have been described are used to evaluate various alternatives that might be considered to measure growth of the economy.

Population

Appropriateness. Population is not generally considered to be an appropriate or valid measure of economic activity. By way of illustration, when population is viewed in an international perspective, it is clearly seen to be a defective measure of economic capability or performance. Countries such as China or Bangladesh have very large—and growing—populations, but they have weak economies with erratic growth patterns. Other countries, such as Japan, exhibit very low (almost nonexistent) population growth, but have an economy which is dynamic and growing rapidly.

Changes in population do not, *per se*, reflect changes in the State's economy. Hawaii's population can grow from: (1) an increase in

the birth rate; (2) a decrease in the death rate; or (3) net immigration. These three factors have somewhat different effects on economic activity.

The immediate effect of an increase in the birth rate is more infants, not more taxpayers or a larger labor force. Fifteen to twenty years would be required before a "baby boom" would be reflected in the labor force. In view of the large percentage of women who now work, a sharp increase in the birth rate might actually lead to a slight temporary decline in labor force participation. It seems clear that a substantial increase in the birth rate and a concomitant rise in the number of young children would not by itself be an indication of increased economic activity.

The immediate economic effects from a decrease in the death rate would differ somewhat from an increase in the birth rate. In the age brackets where labor force participation is high (20–65), a decrease in the death rate would immediately increase the size of the labor force over what it would otherwise be. This could help stimulate real economic growth. At the same time, a decrease in the death rate among those over 65 could be expected to have opposite economic effects, since the vast majority of people over 65 are either semi-retired or fully retired. An increase in the number of people over 65 is clearly not a good indicator of the general ability of the population to pay higher taxes. Net economic effects from a decline in the death rate would thus depend on how different age brackets are affected. Prediction is made difficult by the fact that advances in medicine or other factors which reduce mortality (e.g., improvements in occupational health and safety) do not necessarily affect all age brackets equally.

Major population movements between the states—i.e., changes in net immigration—have historically been led by movements of younger adults (people in the 20–40 age bracket). Assuming that working-age immigrants are successful in finding jobs, such people do add

to the employed labor force, and their presence does increase the ability to pay taxes. To this extent, an increase in population arising from net immigration could be an indication of increased ability to pay taxes. It should be noted, though, that an increase in the number of employed people will also be reflected in aggregate economic measures such as gross state product and total state personal income.

Data on population and labor force participation rates also fail to reflect the amount of unemployment that may prevail at any particular time. A sharp increase in unemployment, which would indicate worsening of the economy, could be accompanied by an increase in population. In conclusion, neither population nor changes in population represent the most appropriate indices for measuring changes in the State's economy.

Comprehensiveness and accuracy. The decennial census is one of the most comprehensive data gathering efforts of the federal government. Demographic data on births and deaths are also reported on a comprehensive basis. However, comprehensiveness applies only to the measurement of population, not to the measurement of economic activity or growth.

No data series is 100 percent accurate. When preliminary tabulations of data from the 1980 census were released, a number of major cities challenged the accuracy of the population count, alleging that a significant undercount had occurred in poorer urban areas. Despite such challenges, population data are generally considered to be at least as accurate as aggregate economic measures such as total state personal income.

Timeliness and cost. The federal government takes a population census only once every ten years. Hence, there is a considerable lag in obtaining an up-to-date accurate census count. However, during interim years, fairly accurate estimates are available from the Bureau of the Census, because changes in statewide population occur only gradually. As to cost, population data are available at no additional cost.

Conclusion. Neither population nor changes in population represent the most appropriate indicators for measuring changes in the State's economy. Population growth may or may not represent economic growth. To the extent that the labor force and the number of people employed in Hawaii increases, such facts will be reflected just as well, or perhaps even better, in personal income data rather than in statistics dealing with population.

Cost of Living Index

Appropriateness and comprehensiveness. A number of price indices are published on a regular basis by the federal government. No statistical series carries the official title "cost of living index," but the Consumer Price Index (CPI) published by the U. S. Bureau of Labor Statistics is often referred to by that name. The CPI measures changes in the average level of prices paid by consumers. It is a broad based index covering a wide range of goods and services bought by consumers, including food, apparel and its upkeep, housing, professional services, transportation and entertainment.

The U. S. Bureau of Labor Statistics compiles and publishes on a recurring basis a CPI for Honolulu. Although prices on the neighbor islands may vary slightly from Honolulu, the Honolulu CPI is a reasonable proxy for the statewide price level.

During periods of price rise, the CPI is an index of inflation. As such, one of its major uses is to escalate income payments. Millions of workers in the United States are covered by collective bargaining contracts which provide for increases in wage rates based on increases in the CPI. In addition to workers, there are also millions of retirees and Social Security beneficiaries whose benefits are affected by changes in the CPI.¹

By itself, the CPI is not a measure of economic activity, even though it is a reasonably comprehensive measure of inflation experienced

at the consumer level. A change in the CPI merely indicates a change in consumer prices, and changes in the price level do not measure changes in real economic activity. In recent years, moreover, changes in prices have not been correlated with changes in economic activity. The term "inflationary recession" has been used to describe periods when prices increase even though economic activity slows down. Consequently, it would be inappropriate to use the CPI alone as a measure of economic growth.

Accuracy, timeliness and cost. Sample data on prices are compiled on a recurring basis each month. The CPI suffers from certain problems inherent in all such indices. It has several offsetting virtues, however. One is timeliness. The CPI for Honolulu is updated bi-monthly and is published within a few weeks after the end of February, April, June, August, October and December. A second virtue is the fact that when the CPI is published for a particular month, it is final; on this score, the CPI is "accurate" in the sense that it is not subject to subsequent revisions. Finally, data for the Honolulu CPI are available without cost to state government.

Conclusion. Accuracy, timeliness and cost are outweighed by the CPI's inappropriateness as a measure of economic growth. Growth of the economy has two components: real growth and inflation. The CPI measures only inflation, not real growth. Hence, the CPI by itself should not be used as an indicator of economic growth.

Personal Income

Appropriateness and comprehensiveness. State personal income is a statistical compilation designed to measure total income received by all individuals and households in Hawaii. Included

1. U. S. Department of Labor, Bureau of Labor Statistics, *The Consumer Price Index: Concepts and Content Over the Years*, 1977, p. 1.

are wages and salaries, plus earnings from unincorporated businesses. Dividends, interest, and rental payments which individuals receive from business and government are also included in personal income. Finally, personal income also includes transfer payments that households receive from government or business.

The concept of total personal income starts with items typically includable as income in a personal income tax return, but the concept is broader than just these items. It includes, for example, any tax exempt interest that households may receive from owning state or local government bonds, and it also includes transfer payments such as Social Security, or unemployment compensation, which are typically exempt from federal, state and local income taxes. In brief, total personal income for the State attempts to measure all income which all individuals and households receive from other sectors.

Comprehensiveness of the personal income statistic is perhaps better grasped when the receipts of individuals are viewed as expenses of those that make the payments. Wages, salaries, interest, rent, etc., are an expense to all the business firms or government agencies that make such payments. Collectively, these expenses are a major portion of the value added by business and government. Viewed in this light, personal income is seen to include value added by households *in all sectors of the economy*. That is, it reflects economic activity in all business and industrial sectors such as agriculture, banking, tourism, etc. Personal income is thus a rather broad measure of economic activity. It is less comprehensive than gross state product, which is discussed in an ensuing section. Nevertheless, it is sufficiently comprehensive to be regarded as an appropriate index for estimating growth of the State's economy.

Timeliness. The U. S. Department of Commerce estimates personal income on the basis of information and data received from other federal and state agencies such as the Internal Revenue Service, Social Security

Administration, Unemployment Insurance, etc. The Department of Commerce endeavors to cross-check certain types of payments (e.g., interest or dividends) reported as income by individuals and as expenses by corporations. Preliminary estimates of personal income are prepared each quarter on the basis of various tax returns filed quarterly by corporations. These preliminary estimates are usually published approximately four months after the end of the quarter to which they pertain. Such reports are about as timely as one could ever hope to expect from such a massive data-gathering effort.

Accuracy. Preliminary quarterly estimates are subsequently checked against information from personal income tax returns filed after close of the year (due April 15). Individual tax returns may be filed after April 15 (under an extension, or simply late), and revised tax returns may be filed at any time. After new or better information subsequently becomes available, the Department of Commerce revises its preliminary estimates accordingly. While the data are never 100 percent accurate, they are probably as accurate as other aggregate economic statistics which are available.

Cost. The cost of collecting and reporting personal income data is borne entirely by the federal government.

Conclusion. Assessed against the criteria of appropriateness, comprehensiveness, accuracy, timeliness and cost, total personal income is as good an indicator, and better than most, to measure the growth of the State's economy.

Gross State Product

Appropriateness and comprehensiveness. Conceptually, gross state product (GSP) is perhaps the best measure of a State's economic performance. The reason is that performance of the *total* economy is what gross state product is designed to measure. Gross state product data attempt to capture all economic activity which

represents value added. Whereas personal income reflects only value added by the household sector, GSP also includes value added by the business sector (e.g., corporate retained earnings, indirect business taxes). Hence, GSP is a more comprehensive measure of economic activity, and it is theoretically the most appropriate measure to use to estimate the rate of growth of the State's economy. As the following sections show, however, it also suffers from a number of practical shortcomings.

Timeliness. Preliminary quarterly data on total personal income are available from the U. S. Department of Commerce approximately three to four months after the quarter ends. By contrast, quarterly GSP data, which are compiled by the Department of Planning and Economic Development (DPED), are not available throughout the year. In fact, GSP data may not be available until several years after the end of the year. Thus the time lag in compilation of GSP data is quite significant when compared to the availability of personal income data. The DPED's compilation of GSP data could probably be accelerated, but at some cost.

Accuracy. Gross state product includes most of the items found in personal income. An item by item comparison is shown in Table 2.1. Any inaccuracies in personal income data will also be contained, to exactly the same extent, in gross state product data. In addition, gross state product includes items not part of personal income. Data on these items are collected by DPED, which obtains the additional data from a variety of sources, including state agencies and special surveys. While as with any other aggregate statistical series, 100 percent accuracy cannot be assured, there is no reason to doubt that GSP data is compiled as accurately as possible.

Cost. The DPED bears the cost of compiling gross state product data. Consequently, the State would have to bear the full cost for any improvement in timeliness or accuracy of gross state product data.

Table 2.1
Personal Income and Gross State Product,
by Income Account, 1976
(dollars in millions)

	Personal Income	Gross State Product
Wages and salaries	\$4,289.9	\$4,289.9
Other labor income	279.6	279.6
Proprietors' Income	256.0	256.0
Rental income of persons	97.1	97.1
Personal interest income:		
Net interest paid by business	544.0	544.0
Government interest	40.0	—
Corporate profits:		
Corporate profits tax	—	144.6
Dividends	146.6	146.6
Retained earnings	—	147.6
Transfer payments:		
From business to individuals	29.5	29.5
Employers' contribution to social insurance	324.1	324.1
Net decrease in government social insurance reserve funds	191.5	—
Indirect business taxes	—	636.0
Less: Government subsidies and net current government surplus	—	(88.4)
Capital consumption allowances	—	572.0
Total	\$6,198.3	\$7,378.6

Source: State of Hawaii, Department of Planning and Economic Development, *Hawaii's Income and Expenditure Accounts: 1958-1976, Vol. I*, Gross State Product from Table 1-1, p. 6; Personal Income from Table 2-1, p. 13. The personal income data have since been revised upward by the U.S. Department of Commerce, and adjustments have also been made to gross state product by the State Department of Planning and Economic Development.

Conclusion. While gross state product is the most appropriate, comprehensive, and accurate indicator of the State's economy, its chief shortcoming is the time lag before the data are available. Efforts could be expended to accelerate availability of the data, but it is questionable whether the added costs of such efforts are necessary, especially when the readily available data of personal income is a reasonable proxy or substitute for gross state product.

Personal Income as a Proxy for Gross State Product

Table 2.1 has been structured to facilitate a comparison of the major items included in both gross state product and personal income (the data shown are for 1976). By comparing entries contained in the two columns, it can be readily observed that most items which constitute personal income are included in an identical amount when measuring gross state product. In 1976, for instance, personal income amounted to \$6,198.3 million. Of this total, only \$40.0 million of government interest and \$191.5 million of government transfer payments from reserve funds were not included in gross state product. Hence, for 1976, 96.2 percent of personal income was also included in gross state product. These same items also accounted for 80.8 percent of gross state product. As this comparison shows, it is not coincidental that gross state product is highly correlated with personal income.

Table 2.2 also demonstrates the correlation. It shows personal income as a percent of gross state product for the period 1969–1980. For the 12 years shown in this table, personal income has ranged narrowly between 80.4 percent and 85.2 percent of gross state product. It has averaged 82.8 percent of gross state product.

Conclusion. Because of the consistency by which total personal income is correlated to gross state product, total personal income is a good proxy—or substitute measure—for gross state product.

Table 2.2

Gross State Product and Personal Income
in the State of Hawaii, 1969–1980
(dollars in millions)

Year	Gross State Product ¹	Personal Income ²	Personal Income As a Percent of Gross State Product
1969	3,728	3,114	83.5
1970	4,190	3,566	85.1
1971	4,529	3,823	84.4
1972	5,038	4,178	82.9
1973	5,783	4,650	80.4
1974	6,401	5,298	82.7
1975	7,023	5,802	82.6
1976	7,557	6,264	82.8
1977	8,410	7,023	83.5
1978	9,380	7,727	82.3
1979	10,706	8,673	81.0
1980	11,467	9,775	85.2

1. State of Hawaii, DPED, Charges Against Gross State Product: 1958 to 1980, preliminary unpublished results, March 1982.

2. U.S. Department of Commerce, *Survey of Current Business*, July 1981, p. 30.

Recommendation

Because total personal income is an appropriate, comprehensive, timely, and accurate measure of the growth of the State's economy and because the data can be obtained at no cost to the State, we recommend that it be retained as the basis for calculating the general fund expenditure ceiling.

Chapter 3

FACTORS AFFECTING THE CALCULATION OF THE GENERAL FUND EXPENDITURE CEILING

If personal income is retained as the indicator to estimate the rate of growth of the State's economy for the purpose of calculating the general fund expenditure ceiling, several factors and issues need to be considered. These include, and in this chapter, we consider: (1) whether a year-to-year growth rate should be used in calculating the general fund expenditure ceiling or whether the growth rate should be averaged over some longer period of time; (2) whether the general fund expenditure ceiling should be recalculated whenever revised personal income data are published by the U. S. Department of Commerce; and (3) what the consequences and the alternatives might be should the Legislature find it necessary to exceed the general fund expenditure ceiling.

Summary of Findings

Generally, our review of the factors and issues affecting the general fund expenditure ceiling indicate the following:

1. The present three-year moving average of the rate of change of personal income represents a reasonable compromise between short-term changes in personal income versus some longer-term average, and there is no persuasive reason to change the present procedure.

2. Revisions in personal income data need to be taken into account in calculating and recalculating the general fund expenditure ceiling from time to time.

3. Changes which have been made and which may be forthcoming in the federal-state revenue and expenditure pattern are likely to place great strain on State finances and the general fund expenditure ceiling. Should the Legislature find it necessary to exceed the general fund expenditure ceiling to cope with this problem, it may be faced with the dilemma of having to exceed the ceiling every year thereafter.

In the remainder of this chapter, we discuss the preceding points.

Short Term vs. Longer Term Change in the Growth Rate

It is entirely within the Legislature's discretion to select the period of time in which the rate of change of the growth of the State's economy is to be calculated. The law currently defines the rate of growth to be the average percentage change in total state personal income for the *three* calendar years immediately preceding a legislative session in which general fund appropriations are made. Thus, for the 1982 legislative session, the rate of growth, and consequently the percentage by which the expenditure ceiling for fiscal year 1982-83 can be increased over the ceiling for fiscal year 1981-82, is derived by averaging the rate of change of personal income for calendar years 1979, 1980 and 1981.

The Legislature could, if it wished, choose a shorter period of time to calculate the rate of

change or it could choose a longer period of time. Table 3.1 shows what the rate of change of personal income would have been for fiscal years 1970-71 to 1981-82, and hence, what the percentage increase of the expenditure ceiling would have been, if calculated over the prior one year, three years, and five years. Figure 3.1 is a complementary display which illustrates graphically the year-to-year fluctuations.

Table 3.1

Rate of Growth in Hawaii's Expenditure Ceiling,
1970-1981, Using 1, 3, and 5 Year
Moving Average of the Growth in Personal Income

Growth Rate of the Expenditure Ceiling in Fiscal Year	Average Rate of Growth in Personal Income Over the Prior		
	One Year	Three Years*	Five Years
1970-71	14.61%	11.68%	10.91%
1971-72	14.52	13.48	11.92
1972-73	7.21	12.11	11.35
1973-74	9.29	10.34	10.99
1974-75	11.30	9.27	11.39
1975-76	13.94	11.51	11.25
1976-77	9.51	11.58	10.25
1977-78	7.96	10.47	10.40
1978-79	12.12	9.86	10.97
1979-80	10.02	10.03	10.71
1980-81	12.24	11.46	10.36
1981-82	12.71	11.66	11.01

*Percentages in this column are computed by the formula prescribed in Act 277 to determine growth of the expenditure ceiling.

Together, Table 3.1 and Figure 3.1 show that the fluctuations are sharpest when the rate of change is based on only the prior year's rate of change. Using a three-year average, the more extreme year-to-year fluctuations are smoothed out somewhat, and the smoothing effect is even more evident using a five-year average.

The benefits from smoothing sharp year-to-year fluctuations are fairly obvious. Subjecting general fund programs to stop-and-go or up-and-down changes in response to short-term economic fluctuations may not be desirable. A longer-term moving average permits the expenditure ceiling to grow in a manner which is both steadier and more predictable. Such

benefits are offset and must be weighed against the fact that longer-term moving averages necessarily incorporate several years which might be somewhat distant history in their relationship to the current expenditure ceiling. For example, the use of a five-year average to calculate the expenditure ceiling for fiscal year 1982-83 requires going back to calendar year 1976 as the base year.

Thus, while longer-term averages are smoother, they risk giving undue weight to prior events. As between a short-term rate of change and a longer-term average, the three-year average currently in use represents a reasonable compromise, and there appears to be no advantage in changing it.

Use of Personal Income Revisions in Calculating the Expenditure Ceiling

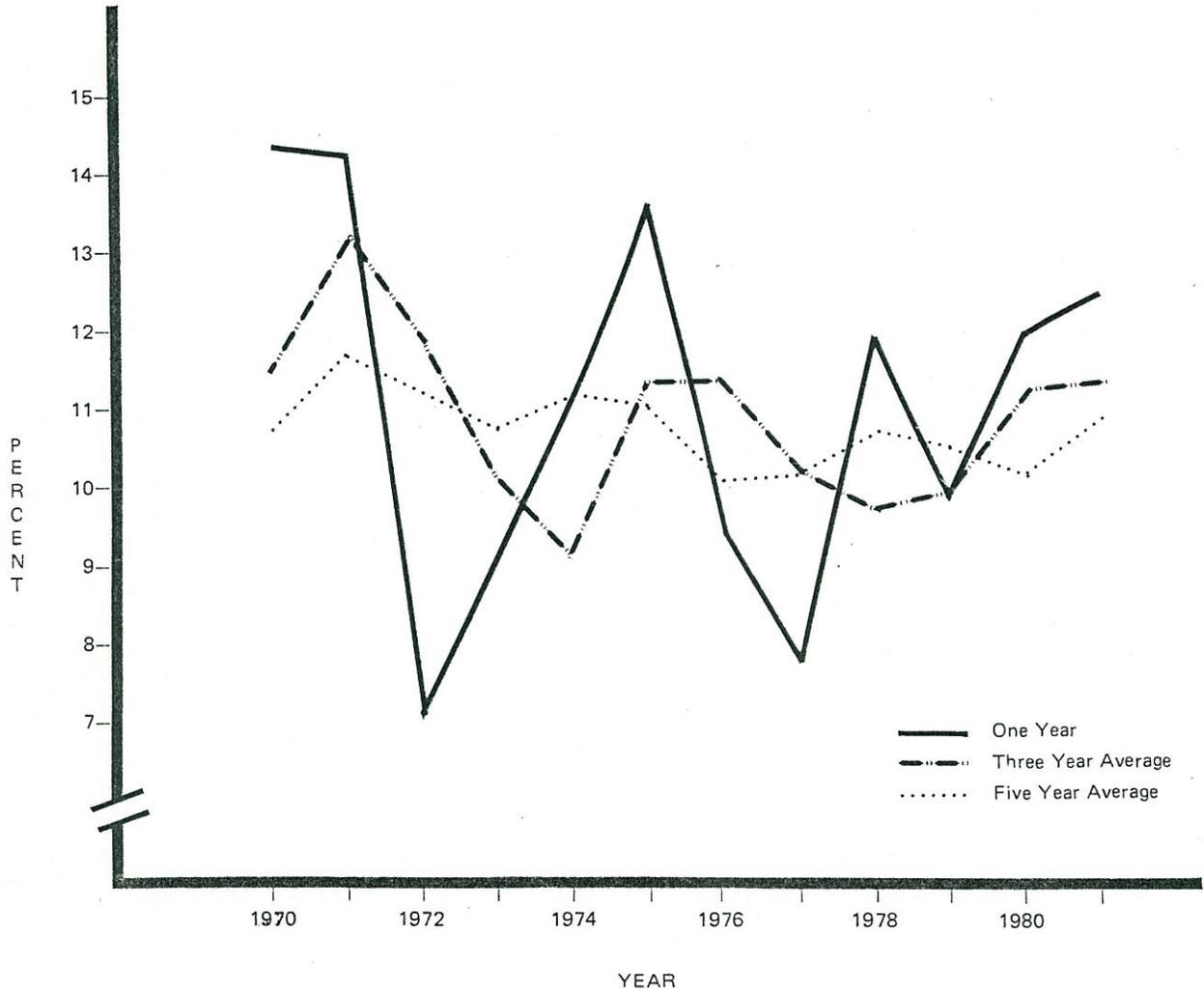
By October 15 of each year, the rate of growth in personal income for the three years preceding the next legislative session needs to be determined. While personal income data for the first two years will have been published by the Department of Commerce, an estimate needs to be made of personal income for the third year. By law, the Council on Revenues is responsible for making the estimate.

To illustrate this process, in October 1982, the Council on Revenues will need to estimate personal income for 1982. This estimate will enable the expenditure ceiling to be calculated for the 1983-85 budget and for the legislative session which convenes in January 1983. In October 1982, only preliminary data for the two quarters ending March 31 and June 30 will be available. Preliminary data for the quarter ending September 30 will not be available until the following January and complete preliminary data for all of 1982 will not be available until sometime later.

Thus, the calculation of the expenditure ceiling for any particular legislative session is always based on an estimate of the third year's

Figure 3.1

Fluctuations in Personal Income
One-Year Rate of Change vs. Three-Year and Five-Year Averages
1970-81



personal income. A commentary of this provision by a public employee organization concludes that: "This provision can lend a certain degree of flexibility — but may also politicize the process of determining the rates of growth in future spending."¹

Since the formal implementation of the expenditure ceiling, 1980 and 1981 are the only two years for which the Council of Revenues has estimated personal income, and only that of 1980 is verifiable from published Department of Commerce data. The 1980 estimate of personal income made originally by the Council on Revenues was \$9,317 million. Preliminary data for the four quarters published by the Department of Commerce indicated that 1980 personal income was \$9,371 million, which was only 0.6 percent greater than the estimate by the Council on Revenues. The first annual estimate was published in the July 1981 issue of Survey of Current Business, and personal income was revised upwards to \$9,775 million, which is 4.9 percent greater than the Council's original estimate.

In addition to the Council on Revenues' specific estimates being subject to revision, the Department of Commerce also makes recurring revisions. The July 1981 publication of personal income data made revisions to personal income for each year all the way back to 1969. The changes for those years which have an effect on the expenditure ceiling are shown in Table 3.2. The effects of the changes in personal income on the expenditure ceiling are shown in Table 3.3.

The approach taken by the Department of Budget and Finance has been to recalculate the expenditure ceiling on the basis of the latest available data published by the Department of Commerce, going back to the 1978-79 base year. In doing so, it has, in effect, also substituted published personal income data for the 1980 estimate made by the Council on Revenues. This practice effectively corrects any overestimates or underestimates. While the law is not altogether clear that the ceiling should

be recalculated each time new data are available, the approach taken by the Department of Budget and Finance is sound and reasonable. To ignore new data would be to allow the compounding of any overestimates or underestimates which might have been made with a resultant cumulative impact on the expenditure ceiling.

With respect to either the Council on Revenues' estimates or preliminary data published by the Department of Commerce, it is logical for the expenditure ceiling to be as closely related to the "real world" as might be revealed by the latest (and presumably, most accurate) data available. Therefore, the ceiling should be recalculated whenever there are revisions of personal income data. While this is being done in practice, a provision in the law which would explicitly permit such recalculation may be appropriate, lest the practice be challenged.

Pressures on the Expenditure Ceiling

In this section, we consider the pressures which may be exerted against the expenditure ceiling, particularly in view of the cutbacks in federal funds, the additional loss of federal revenues which may be forthcoming in the 1983 federal budget awaiting Congressional action, and the President's proposals for a federal-state swap of major programs and state assumption of responsibility for other programs.

The full impact of changes in federal funding and any realignment of federal-state responsibilities is not known. Neither is it known to what extent the Legislature may wish to use the State's general fund resources in response to changes in federal funding. It is clear, however, that those organizations and segments of the public which are affected by changes in federal funding view the State's

1. American Federation of State, County and Municipal Employees, Hawaii: Expenditure Limitation (S.B. No. 2795-80), June 5, 1980, p. 4.

Table 3.2

Revisions in Personal Income for Hawaii
1981 Data vs. 1982 Data
(dollars in millions)

Calendar Year	1981	1982	Change, 1981-82	
			Amount	Percent
1976	\$ 6,211	\$ 6,264	\$ 53	.9%
1977	6,784	7,023	239	3.5%
1978	7,510	7,727	217	2.9%
1979	8,356	8,673	317	3.8%
1980	9,317 est	9,775	458	4.9%
1981	—	10,811 est	—	—

Sources: 1981 and 1982 amounts from Testimony submitted by Jensen S. L. Hee, Director, Department of Budget and Finance, State of Hawaii, to the Senate Committee on Ways and Means, February 6, 1981 and January 5, 1982, respectively.

Table 3.3

State of Hawaii General Fund Expenditure
Ceilings as Presented in 1981 and 1982
(dollars in millions)

Fiscal Year	1981	1982	Change, 1981-82	
			Amount	Percent
1978-79	\$ 919	\$ 919	\$ —	—%
1979-80	1,005	1,010	5	.5%
1980-81	1,109	1,126	17	1.7%
1981-82	1,234	1,256	22	1.8%
1982-83	1,372	1,404	32	2.3%

Sources: 1981 and 1982 amounts from Testimony submitted by Jensen S. L. Hee, Director, Department of Budget and Finance, State of Hawaii, to the Senate Committee on Ways and Means, February 6, 1981 and January 5, 1982, respectively.

expenditure ceiling as one which constrains the Legislature's ability to respond effectively to federal action. Some have called for repeal of the constitutional expenditure ceiling provision.

The 1978 constitutional amendment specifically excludes federal funds received by the State general fund from being counted against the expenditure ceiling. One organization observed in June 1980, at a time when there was no inkling that vast changes would be forthcoming in federal funding: "This provision is fine as long as federal funds increase. The state

may have difficulty with it if it faces federal aid reductions."²

The difficulty is partly in the manner by which the general fund expenditure ceiling is calculated. Except for the 1978-79 base year, when the general fund appropriations made for that year were used as the basis for calculating what would have been the expenditure ceiling for fiscal year 1980-81, each succeeding year's ceiling is based not on the prior year's general fund appropriations but on the prior year's

2. *Ibid.*, p. 4.

ceiling. There is some logic and consistency to this approach. Thus, if the Legislature does not appropriate up to the ceiling for a particular year, it would not, in a sense, be penalized, since the next year's ceiling would reflect a growth factor over the present ceiling, not the appropriations. On the other hand, if the Legislature makes appropriations in excess of the ceiling, it suffers the penalty of having to confine appropriations to the ceiling-to-ceiling growth unless it is willing to again exceed the ceiling.

It is possible that the Legislature could bring down appropriations to the level of the next year's ceiling, depending on the type and magnitude of the appropriations which caused the prior year's ceiling to be exceeded. For example, appropriations may be manageable within the next year's ceiling if the excess appropriations were in the amount of a few million dollars for one-time expenditures like capital improvements. However, those general fund programs for which there has been federal support are, for the most part, operating programs requiring recurring expenditures, and the federal cutbacks made or contemplated are not likely to be for just a few million dollars. Thus, if the Legislature exceeds the ceiling by any substantial amount for recurring expenditures, it may be faced with the problem of mustering the two-thirds vote to exceed the ceiling year after year or make drastic cuts in order to stay within the ceiling.

Table 3.4 illustrates the problem. Suppose that in the 1983 legislative session, as the full impact of federal changes unfolds, the Legislature decides to use general fund resources to make some restoration of recurring program service levels, and that in doing so, the expenditure ceiling, estimated to be \$1,544 million for fiscal year 1983-84, is exceeded by \$50 million. Suppose also that the three-year average growth of personal income, and therefore the expenditure ceiling, increases by 10 percent each year, and appropriations likewise increase by 10 percent in each succeeding year.

Table 3.4
Hypothetical Example of the Consequences
of Exceeding the Expenditure Ceiling
(dollars in millions)

<i>Fiscal Year</i>	<i>Ceiling</i>	<i>Appropriations</i>	<i>Amount Exceeding Ceiling</i>
1983-84	\$1544	\$1594	\$50
1984-85	1698	1753	55
1985-86	1868	1928	60
1986-87	2055	2121	66
1987-88	2261	2333	72

What Table 3.4 shows is that once the expenditure ceiling is exceeded for recurring expenditures in any particular year, and if all other factors are constant, the ceiling will be exceeded in every year thereafter. The cycle can be prevented only by holding appropriations to the ceiling in the year immediately following the year in which the ceiling is exceeded, or in the hypothetical example, holding appropriations to \$1,698 million in fiscal year 1984-85, which would be 6.5 percent over 1983-84 appropriations. Whether this can be done or is realistic may be open to question.

The legislative alternatives to deal with the problem are very limited. While there are a few, each can be criticized on various grounds, as with the following:

If the Legislature finds that it has to make general fund appropriations which substantially exceed the ceiling, it might then be appropriate to amend the law to adopt that year's appropriations as the base for calculating the ensuing years' expenditure ceilings. The expenditure ceiling would thereafter grow in the same manner as now. The criticism would be that this would be tantamount to changing the rules after the game has started, but then again, no one could foresee that the *federal*

rules of the game would have changed so drastically.

As suggested by one public employee organization, there could be a provision in the law which would "allow the ceiling to be increased by the amount of loss of federal funds."³ The criticism would be the same as with the preceding alternative.

The Legislature could set aside funds in some type of reserve fund, from which appropriations would be made in response to changes in federal funding or realignment of federal-state programs. The criticism would be that special fund appropriations are being used to circumvent the general fund appropriations ceiling.

Nevertheless, with the federal changes on an apparent collision course with the State's expenditure ceiling, the Legislature may need to

consider and assess alternatives like the foregoing.

Concluding Observation

The present procedures for calculating the general fund expenditure ceiling, including the use of a three-year moving average to measure the rate of growth of personal income and recalculation of the expenditure ceiling on the basis of the latest data available, are logical and straightforward procedures. The problem that the Legislature faces is not with the foregoing procedures. It is that if and when the State becomes saddled with major new responsibilities, the Legislature may not have the means to deal effectively with the problem. Some of the alternatives that might need to be considered may be less straightforward than the present procedures, but arguably, the vast changes in federal-state programs were not foreseen, either in 1978 when the constitutional requirement for an expenditure ceiling was drafted or in 1980 when the implementing legislation was enacted.

3. *Ibid.*, p. 4.

APPENDIX

EXPERIENCE OF OTHER STATES

In this appendix, we summarize, for informational purposes, the provisions and experience of other states with expenditure or revenue limitations.

At the beginning of 1981, a total of 18 states, including Hawaii, were known to have adopted a general limitation on either expenditures or revenues. As between the two, more states have limited expenditures (14 states, including Hawaii) than revenues (4 states). The limitation has been incorporated in the constitution of eight states, including Hawaii; in the other 10 states the limitation has been established by statute.

States Surveyed

Of the 17 other states which have adopted an expenditure or tax limitation, the ceiling in 11 states is based, in one way or another, on the state's total personal income. As part of this study, a survey was conducted among these 11 other states that use personal income to determine their ceiling.¹ This survey had several purposes. First and most important was to learn the precise way in which other states use personal income, and whether they have encountered any problems in using U. S. Department of Commerce data on personal income. Other purposes were to determine the extent to which spending or revenues have been limited by the ceiling, and whether the ceiling had caused any serious problems such as inability to meet pressing needs or new responsibilities. The 11 states included in the survey are shown in Table A.1. This table also shows the year when each limitation was adopted, whether the ceiling applies to expenditures or revenues, the legislative basis for the ceiling, and a brief description of the nature of the ceiling.

General Observations of the Survey

The survey had one particularly revealing but unexpected outcome. Namely, the stated limitation has not restricted revenues or spending in any of the 11 states surveyed. It would appear that Hawaii is the only state where the ceiling has actually restricted state expenditures below what they might otherwise have been. By way of explanation, only in Hawaii have revenues from the existing general fund revenue structure exceeded the expenditure ceiling.

1. Of the six states not surveyed, Colorado and Rhode Island simply limit the rate of growth of expenditures to a fixed percentage; in California and Nevada the spending limit is determined by the cost of living and population; Delaware limits growth in general fund appropriations to growth of revenues; and New Jersey limits expenditures to increases in state per capita income. See *Tax and Expenditure Limitation: A Policy Perspective*. The Council of State Governments, Lexington, Kentucky, February, 1981, pp. 36-39.

Table A.1
General Provisions Limiting Expenditures
and Revenues in Eleven Other States

<i>State/Year</i>	<i>Limit on</i>	<i>Basis</i>	<i>Description of Ceiling</i>
Arizona 1978	Expenditures	General constitutional provision plus implementing statute	Limits state expenditures to 7 percent of the personal income of residents. A committee estimates the level of personal income to be used in calculating the ceiling.
Idaho 1980	Expenditures	Statute	Limits General Fund expenditures to 5-1/3 percent of total state personal income, as determined by an economics estimates commission.
Louisiana 1979	Revenues	Statute	Limits state revenues to a percentage applied to current state personal income. The percentage is derived by dividing FY 78-79 revenues by 1977 state personal income.
Michigan 1978	Revenues	Detailed constitutional provisions	Limits state revenues to a ratio (derived by dividing state revenue received in the prior fiscal year by state personal income the year before that) applied to state personal income reported during the prior year. (Note: In deriving the ratio, a three-year average of personal income may be substituted for the prior year if it will result in a higher percentage.)
Missouri 1980	Revenues	Detailed constitutional provisions	Limits state revenues to a ratio (derived by dividing state revenues in FY 81 by state personal income in calendar year 1979) applied to personal income in the calendar year prior to the year of appropriations. (Note: In determining personal income, a three-year average may be substituted if it results in a greater amount than the one-year level.)
Oregon 1979	Expenditures	Statute	Limits expenditures to the rate of growth of state personal income for the preceding two years. Responsibility for estimating personal income not specified.
South Carolina 1980	Expenditures	Statute	Limits increases in state expenditures to the growth of personal income averaged over the preceding three years. The budget and control board determines the ceiling.
Tennessee 1978	Expenditures	General constitutional provisions plus implementing statute	Limits the growth of appropriations financed by tax revenues to the growth in the state's economy. In practice, the increase in personal income is used as the index. The state funding board determines the ceiling.
Texas 1978	Expenditures	General constitutional provision plus implementing statute	Limits growth in state appropriations to the growth of the state's economy. In practice, growth in state personal income is used as the index. The legislative budget board determines the ceiling.
Utah 1979	Expenditures	Statute	Limits increases in appropriations to 85 percent of the increase in state personal income.
Washington 1979	Revenues	Statute	Limits tax revenues to the rate of increase in state personal income as averaged over the preceding three years. Responsibility for estimating personal income not specified.

The explanation why other ceilings have not been a restraint appears to rest on a combination of several events:

- *First*, the rate of inflation experienced in 1979 and 1980 was high by historical standards.
- *Second*, in many states the tax structure is somewhat inelastic with respect to inflation; e.g., when the annual rate of inflation is 10 percent, state revenues may increase by somewhat less than 10 percent (the shortfall depends on each state's tax structure). In states where this situation occurs, taxes would need to be increased in order for expenditures or revenues to reach the ceiling.
- *Third*, during 1980–81, legislatures have been reluctant to raise taxes to the extent necessary to reach the constitutional or statutory ceiling. The fact that the expenditure or revenue ceiling had recently been adopted may have also played an implicit role in the decision not to increase taxes and/or expenditures up to the ceiling.
- *Fourth*, in some states, the economy has also been suffering from recession and higher than usual unemployment. This was particularly true of Michigan and Missouri (where the automobile industry is suffering from poor sales) and Oregon (where the lumber industry is suffering from the decline in residential construction). Poor economic conditions and an uncertain economic outlook were accorded an important role in the decision not to raise taxes.

Because the ceiling has not limited expenditures or revenues in other states, the ceilings there have been more academic than forceful in their effect.

No attempts have been made to adopt gross state product—or any other such measure—in lieu of personal income. The method of calculating the ceiling has also not been the subject of much discussion or study. Potential problems or issues that might arise from using personal income data are discussed in Chapter 3. Such issues have yet to be raised in other states. To sum up, since all expenditure or revenue ceilings are fairly recent, cumulative experience to date is still fairly meager.

Other Generalizations About Ceilings

As between individual states, the specific language establishing expenditure or revenue ceilings varies widely. This makes generalizations somewhat difficult, but a few observations are nevertheless possible. One concerns waiver of the ceiling. Every one of the eight states that

have constitutional ceilings also have provisions that enable the ceiling to be waived under certain conditions. Some waiver provisions are more restrictive than others. The most restrictive provisions require gubernatorial initiative plus two-thirds vote of each house. Of the 10 states which have established a statutory ceiling, some also provide specific waiver provisions. Other states with a statutory ceiling do not have a specific waiver provision because the legislature can amend the statute at any time.

Every state exempts federal funds from the scope of expenditures or revenues included within the ceiling. Most limitations also contain a number of other exclusions or special definitions. For instance, many states exempt levies that can be considered as user fees, even though they might nominally be called taxes. Thus gasoline taxes designated for highway purposes are usually exempt. Also, many or all student fees at state colleges and universities are often excluded from the spending or revenue ceilings. The pattern of exemptions is generally consistent with the fact that a fundamental purpose underlying most ceilings was to limit *taxes* levied on residents of the state. Louisiana, for instance, has a ceiling on "state revenues," but severance taxes and royalties on oil production (most of which are passed on to residents of other states) are explicitly exempted from the ceiling. Revenues from these non-state sources are permitted to grow without limit.

Summaries of Individual States

Experience of each state is summarized individually and the summaries are organized alphabetically.

Arizona

By April 1 of each year, the Economic Estimates Commission submits an "official" estimate of total personal income in Arizona for the next fiscal year, which begins the following July 1. This estimate of personal income is then multiplied by 7 percent. The result is the expenditure ceiling for the next fiscal year.

The Economic Estimates Commission consists of the director of the Department of Revenue, one person appointed by the President of the Senate, and one person appointed by the Speaker of the House of Representatives. After the Economic Estimates Commission submits its estimate of personal income, the figure is not subject to further revision or change based on additional data or information which may subsequently become available. Under Arizona law, the Economic Estimates Commission thus has the final word in determining the spending ceiling.

Under the procedure used in Arizona, the ceiling in any given year is not based on the ceiling in any prior year. Although personal income may be over- or under-estimated in one year, in the following year the Economic Estimates Commission may err in the opposite direction. Over- or under-estimating personal income in any given year does not have a cumulative long-term effect on the expenditure ceiling.

During the few years in which Arizona's expenditure ceiling has been enacted, it has not been an actual constraint on state expenditures. The reason is that total personal income has grown faster than state revenues, while the Legislature has been unwilling to increase taxes. As a result, there has been about a five to six percent slack between actual expenditures and the ceiling. The ceiling has thus been of academic interest only.

Idaho

The Idaho Legislature enacted a statutory ceiling on expenditures in 1980. Idaho's procedure for determining the ceiling is generally similar to that used in Arizona. Namely, total personal income for the state is estimated and then multiplied by a fraction (5-1/3 percent) specified in the law. In Idaho a newly established Economic Estimates Commission has responsibility for estimating state personal income.

In 1981, the first year when the ceiling was in effect, state revenues were substantially less than the ceiling and the Legislature was unwilling to raise taxes. Under these circumstances, the ceiling had no practical effect constraining the executive budget or legislative appropriations.

Louisiana

Louisiana limits "state revenues" to a percentage of current state personal income. In applying a fixed percentage, Louisiana's procedure is similar to that in Arizona and Idaho. Instead of simply specifying a fixed percentage in the statute, however, Louisiana's statute provides that the percentage is to be derived by dividing FY 1978-79 state revenues by 1977 state personal income.

In Louisiana the legislative fiscal office uses an economic-based revenue estimating model to estimate both state revenues and state personal income. The administration also makes its own estimate of state personal income, with any difference between the two then reconciled so that the administration and legislature use the same agreed-upon revenue ceiling. This procedure could potentially contain seeds for built-in controversy between the legislature and the administration. To date, though, the ceiling has not had any effect whatsoever.

Significantly, for purposes of determining the ceiling, Louisiana's statute excludes from "state revenues" both severance taxes and royalties from oil production. In Louisiana these are two of the most important sources of revenues. They are described as having had "spectacular growth" in recent years, and they are expected to continue their rapid growth until gas prices are fully decontrolled, which is expected to occur not later than 1985. Until that time the statutory limit on "state revenues" is essentially meaningless. Louisiana's total personal income has been growing at a rate of approximately 12-13 percent per year, while state revenues covered by the statutory ceiling have been growing at 7-8 percent per year. Because of the large influx of revenues from severance taxes and royalties, however, Louisiana has had no need to increase taxes.

Michigan

Calculation of Michigan's revenue ceiling follows generally the procedure employed in Arizona and Idaho. In order to determine the ceiling, estimated personal income is multiplied by a fixed percentage (10.08 percent). In Michigan, personal income is estimated jointly by the administration and the legislature, instead of by a commission. The fixed percentage, 10.08 percent, is not explicitly specified in the state constitution. Rather, the constitution specifies that the ratio of applicable state revenues in fiscal year 1979 divided by Michigan personal income in 1977 shall always be used to determine the revenue ceiling. Since 10.08 percent is now a historical figure, however, it is rather like the fixed amounts specified by statute in Arizona and Idaho.

Michigan's limitation on revenues, adopted in 1978, has been applicable to fiscal years 1980 and 1981. To date the revenue ceiling has had no practical effect. In fiscal year 1981, the limit exceeded available revenues by almost 10 percent.

In January 1980 the governor of Michigan submitted his fiscal 1981 budget to the legislature. Calculation of the revenue limit for fiscal 1981 is based on personal income in calendar year 1979. In January 1980, however, the U. S. Department of Commerce had not even published preliminary data on 1979 personal income. Consequently, the Michigan budget cycle requires that personal income be estimated.

Responsibility for estimating personal income is not specified in Michigan's laws. In practice, the governor and the legislature have to date agreed upon the estimate to be used for calculating the revenue limit. Because of the shortfall in actual revenues, the limit has been of only academic interest. Should the revenue limit become a real constraint, however, differences over the estimate could become a source of contention.

Missouri

In November 1980, Missouri adopted a citizen-sponsored constitutional amendment which imposes a limit on taxes and expenditures. The amendment became effective in December 1980. Experience under this new amendment has to date been limited.

The ceiling on taxes is patterned after Michigan's ceiling. The constitution specifies a way of determining what will become a fixed percentage. This fixed percentage is "the ratio of total state revenues in fiscal year 1980-81 divided by the personal income of Missouri in calendar year 1979." The percentage is then multiplied by the personal income of Missouri in the calendar year prior to the fiscal year for which appropriations are being made. Thus, when appropriations are made for fiscal year 1982-83, the ceiling will be personal income in 1981 multiplied by the fixed percentage.

While the new constitutional amendments have caused some consternation, and are also the subject of certain court challenges, the ceiling itself was not a factor in limiting appropriations during 1981. Rather, depressed economic conditions in Missouri—Missouri's dependence on the automobile industry is second only to Michigan—led the legislature to appropriate less than the ceiling permitted.

Oregon

Oregon has adopted a different expenditure ceiling. Oregon limits expenditures in a biennium to the level of *appropriations* during the immediately preceding biennium increased by the rate of growth of personal income during the two preceding calendar years. Under the Oregon statute, the ceiling in any future biennium depends on the actual level of appropriations in the immediately preceding biennium.

Failure to appropriate the full amount of the current ceiling does not create "slack" or leave room for some additional growth of appropriations in subsequent years. Tightening the budget in one biennium simply reduces the ceiling in the subsequent biennium. Assuming that state revenues fluctuate in response to economic recessions, and assuming that the legislature bases appropriations on the availability of state revenues, the expenditure ceiling in Oregon will lead to a gradual but continual ratcheting down of state expenditures.

Oregon adopted its expenditure limitation in 1979. It has been in effect for two biennial budgets: 1979-81 and 1981-83. Growth in personal income is based on U. S. Department of Commerce data for those quarters in which published data are available. Where published data are not available, an econometric model is used to project personal income. To date the

accuracy of preliminary data or projections of personal income have not become an issue or a matter of contention. This is because appropriations have fallen far short of the ceiling. In the 1979–81 biennium, appropriations were 11 percent less than the amount allowable by law. In the 1981–83 biennium, the governor’s recommended appropriations were 14 percent less than the amount allowable by law.

South Carolina

South Carolina currently has a statutory limitation on expenditures. Under this law, “state expenditures in any fiscal year . . . shall be an amount equal to the total of state expenditures for the previous fiscal year increased by the average percentage rate of growth in state personal income for the previous three years.” The law was adopted in 1980 and first applied to the 1981–82 fiscal year. For this first year the spending limit grew by approximately 7 percent, while actual expenditures grew by only 4 percent. Thus, there was considerable slack between actual expenditures and the ceiling.

South Carolina’s spending limit is similar to Oregon’s in that reduced spending during one fiscal year also has the effect of reducing the ceiling in the following fiscal year.

Tennessee

Tennessee was the first state to adopt a constitutional expenditure limitation. It did so in 1978, and the proceedings of the Taxation and Finance Committee of Hawaii’s 1978 Constitutional Convention reveal that Hawaii’s provision was patterned after Tennessee’s. Section 24 of the Tennessee constitution provides that:

“In no year shall the rate of growth of appropriations from state tax revenues exceed the estimated rate of growth of the state’s economy as determined by law.”

It should be noted that Tennessee explicitly limits appropriations made from *tax* revenues. Non-tax revenues, such as tuition and fees at state colleges and universities, are thus excluded from the limitation.

Implementing legislation was adopted in 1979. The rate of growth of personal income is used to determine the rate of growth of the state’s economy. When personal income data are not available from the U. S. Department of Commerce, they are projected by the Tennessee Econometric Model (which has been developed by the University of Tennessee).

Fiscal year 1979–80 was the first year in which the ceiling was applicable; hence experience to date has been limited to three fiscal years: 1979–80, 1980–81, and 1981–82.

In each of these years, revenues have fallen far short of the ceiling. Under these circumstances the ceiling itself has not imposed any restraint on appropriations.

Tennessee's implementing statute stipulates that the ceiling be calculated in a somewhat complex manner. When appropriations do not come up to the ceiling, the net effect is to allow some of the slack, but not necessarily all, to carry forward to the next fiscal year. By way of summary, the slack or excess between the ceiling and actual appropriations cannot exceed 5 percent. Should the slack exceed 5 percent, in any year, the law requires that the ceiling be reduced arbitrarily to the point where the ceiling for that year—which becomes the base for the next year—is exactly 5 percent greater than appropriations. The actual experience under this provision is that in each of the three fiscal years since the law has been in operation, the ceiling has had to be arbitrarily reduced. For 1981–82, this arbitrary reduction brought the ceiling down by almost 14 percent below what it would have been, had the ceiling been based solely on growth in personal income.

Texas

The Texas Constitution limits the growth of certain appropriations to the estimated rate of growth of the state's economy. The provision, adopted by the voters in November 1978, states that:

“In no biennium shall the rate of growth of appropriations from state tax revenues not dedicated by this constitution exceed the estimated rate of growth of the state's economy. The legislature shall provide by general law procedures to implement this subsection.”

In practice, the rate of growth of appropriations made from revenues not earmarked by the constitution is determined by the projected rate of growth of personal income in Texas for the next biennium. This procedure places heavy, almost total reliance on economic projections. At the time when the next biennium is projected, preliminary quarterly data for only half the current biennium are available. Thus the remainder of the current biennium must be projected, along with all of the next biennium.

The implementing statute recognizes that economic forecasting is imperfect, and alternative reputable forecasts are available. The law requires several major steps to decide rate of growth that will be used to determine the ceiling on appropriations during the next biennium. *First*, the Legislative Budget Board reviews the various forecasts that may be available (it reviewed five different forecasts when preparing its recommendation for the 1981–83 biennium). The Legislative Budget Board also holds public hearings. Then, using its own

judgment and discretion, it decides whether to recommend one particular forecast, or an average of some or all of the forecasts, or yet some other consensus figure.

The recommendation goes to a committee composed of the governor, the lieutenant governor, the speaker of the house of representatives, and the comptroller of Public Accounts. This committee may amend or adopt as submitted the recommendation of the Legislative Budget Board. Recommendations of the Legislative Budget Board with respect to proposed appropriations of state tax revenues not dedicated by the constitution may not exceed the limit adopted by the committee unless authorized by a majority vote of house and senate members of the Board separately. *Finally*, the proposed limit is binding on the legislature unless the legislature adopts a resolution raising the limit.

It should be noted that appropriations in one biennium become the base for determining the ceiling on appropriations in the next biennium. This situation is similar to that in Oregon and South Carolina. Holding down appropriations in one biennium will reduce the ceiling in the following biennium. Conversely, a higher ceiling and higher appropriations in one biennium establish a higher base for the next biennium.

Utah

Utah's statutory expenditure limitation, which limits increases in appropriations to 85 percent of the increase in state personal income, reportedly requires further implementing legislation in order to become effective. At the time of our survey in August 1981, such legislation had not been enacted.

Washington

Washington limits the rate at which state tax revenues can grow. Under the Washington statute, growth in tax revenues is limited to the average rate at which state personal income has grown over the three immediately preceding years. In any given year the ceiling is a function of the immediately preceding ceiling. The formula for determining the ceiling on tax revenues is thus virtually identical to the formula used to determine Hawaii's expenditure ceiling.² Any excess revenues are to be used for tax reductions.

Washington's revenue limitation became effective in 1980. For the fiscal biennium 1981-83 it is estimated that revenues will fall short of the ceiling by approximately 5 percent; i.e., the legislature could have raised total tax revenues by as much as 5 percent without exceeding the ceiling. The legislature did not elect to raise taxes. Consequently, the ceiling itself has not created any problems.

2. Act 277. SLH 1980.