

**COLORADO
TAX PROFILE STUDY
1982**

**Reuben A. Zubrow
Dean C. Coddington**

Colorado Legislative Council

Research Publication No. 280

September 1983

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1982

Reuben A. Zubrow
University of Colorado
Department of Economics
Boulder, Colorado

and

Dean C. Coddington
Browne, Bortz & Coddington
Denver, Colorado

with the assistance of

John M. Gunyou and Penny E. Mohr
Browne, Bortz & Coddington
Denver, Colorado

Prepared for
Colorado Legislative Council
State Capitol Building
Denver, Colorado

September 1983

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no. 280
Zubrow, Reuben A.

Colorado tax profile study,
1982

ACKNOWLEDGMENTS

This report marks the tenth anniversary of the publication of the first Colorado Tax Profile Study. It is particularly appropriate at this time to express our heartfelt appreciation to Senator Leslie R. Fowler of Boulder, and Mr. Lyle Kyle, Director, Colorado Legislative Council, for their initial encouragement and continuous support of these studies.

We also wish to acknowledge the contributions of the many other individuals and organizations who participated in the preparation of the study. We are grateful for the cooperation of the various state agencies which provided current tax information -- particularly the Colorado Department of Revenue, the Department of Local Affairs, the Division of Accounts and Control and the Division of Property Taxation. We are especially indebted to Stanley B. Schwartz and Thomas A. Dunn of the Research Division, Department of Revenue, for their helpful assistance. Additionally, we wish to thank Susan Velsir and Julie Edwards for preparing the manuscript for publication.

In the 1973 CTPS report, we stated that the principal objective of the study was

"to develop a comprehensive tax profile of the State of Colorado which can be used by interested citizens, legislators and public administrators as the basis for assessing the distribution effects of the present tax structure, as well as of new tax proposals."

We trust the present study will continue to serve this objective for the State of Colorado.

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INTRODUCTION

This report, the fifth in the "tax profile" series originally commissioned by the Colorado Legislature in 1972, examines the size, structure and distribution of the state and local tax burden levied on Colorado households and businesses in fiscal year 1982.

The decade covered by these studies may be characterized as a period during which the Colorado economy experienced an unprecedented growth in income. The U.S. Department of Commerce data show that the total personal income of Colorado residents increased during the decade at an average annual rate of 13.1 percent, as compared with a national rate of 10.8 percent. On this basis, Colorado's rate of economic growth was exceeded by only six other states--Alaska, Arizona, Florida, Nevada, Texas and Wyoming.

During this decade the state tax system was also significantly revised. In the late 1970's and early 1980's, large tax cuts were enacted in the state's two major sources of general fund revenues--the state general sales tax and the state income tax. Food was removed from the sales tax base, income tax credits were granted both "across-the-board" and for a variety of special purposes, and full indexation of the individual income tax was introduced to compensate for inflationary "tax creep." The net budgetary impact of these tax reduction measures was that general fund revenues in fiscal year 1982 were about 20 to 25 percent lower than they would have been in the absence of the tax cuts and the state was confronted with large potential deficits and a continuing fiscal crisis.

It is equally important to recognize that the changes enacted in the state tax structure also have had a variety of distributional effects--an impact on the relative tax burdens borne by low-income, middle-income and high-income households. As in previous "tax profile" studies, this report is primarily concerned with the distribution of state and local taxes among five major income categories of resident taxpayers which in 1982 comprised 1.3 million Colorado households.

In brief, this Colorado Tax Profile Study for fiscal year 1982 attempts to answer the following basic questions:

- How important is each of the major state and local taxes?
- How does the state tax burden compare with the local burden?
- How has the overall Colorado state-local tax structure changed during the past decade?
- How much of the state and local tax is directly levied on resident households? How much on the business community?
- Measured against income, what are the relative tax burdens of the poor, the middle class and high income groups?
- And finally, what changes have occurred in the patterns of tax distribution over the past decade?

SECTION I. THE COLORADO STATE-LOCAL TAX BURDEN

The combined state-local tax burden incurred by Colorado resident taxpayers in fiscal year 1982 reached an all-time high of \$3.2 billion, or 21 percent more than in fiscal year 1980, the year on which the previous "tax-profile" study was based. Thus, despite the major tax reduction measures enacted in recent years, state and local revenues have continued to increase as a result of the marked rise in the nominal income and consumption expenditures of Colorado resident households.

Tax Burden Trends

Whether measured in terms of the net collections reported by government agencies or on a liability basis adjusted to cover only Colorado resident taxpayers,¹ the growth in state and local taxes during the 1972-1982 decade closely paralleled the growth in Colorado's personal income and adjusted gross income. For example, the latter rose at an average annual rate of 12 percent for the decade, whereas the total state-local tax burden increased at a rate of 11 percent during this same period. In contrast, the comparable total federal individual income tax paid by Colorado resident taxpayers increased at an average annual rate of 15 percent.

As a result of the above differences in growth rates, the 1982 total federal income tax liability of Colorado resident households was more than one-fifth larger than their combined state-local tax liability for that fiscal year. In contrast, a decade earlier the reverse relationship prevailed--the combined state-local tax liability actually exceeded the federal income tax by almost one-fifth. Table I summarizes state and local tax liabilities of Colorado resident taxpayers for fiscal years 1972, 1980 and 1982.

On the adjusted liability basis, state taxes rose from \$525.7 million in fiscal year 1972 to \$1,468.7 million in fiscal year 1982, or at an average rate of increase of 10.8 percent per annum. Similarly, the total local tax burden increased from \$596.0 million to \$1,720.0 million, or at an annual rate of 11.2 percent over the same period. Of

TABLE I. SUMMARY OF STATE AND LOCAL TAX LIABILITIES,
FISCAL YEARS 1972, 1980 AND 1982

	Fiscal Year			Average Annual Rate of Increase 1972-1982
	1972	1980	1982	
(Money amounts in millions of dollars)				
<u>State Taxes</u>				
Sales and Use	\$ 176.9	\$ 495.2	\$ 584.4	12.7%
Individual Income	156.2	437.6	483.1	11.9
Highway User	109.1	158.2	184.1	5.4
Corporate Income	33.3	99.7	75.6	8.5
Cigarette and Liquor	25.4	38.1	40.3	4.8
All Other ^a	24.8	72.0	101.2	15.1
Total State Taxes	\$ 525.7	\$1,300.8	\$1,468.7	10.8%
<u>Local Taxes</u>				
Property	\$ 492.0	\$ 961.7	\$1,201.9	9.3%
Sales and Use	68.3	277.5	394.3	19.1
Specific Ownership Tax	10.8	24.5	31.0	11.1
Cigarette Taxes	2.9	16.1	16.9	19.2
All Other ^b	22.0	56.6	75.9	13.2
Total Local Taxes	\$ 596.0	\$1,336.4	\$1,720.0	11.2%
<u>Total State-Local Taxes</u>	\$1,121.7	\$2,637.2	\$3,188.7	11.0%
<u>Addendum</u>				
Federal Individual Income Tax	\$ 944.0	\$2,712.4	\$3,850.9	15.1%

^aIncludes insurance, severance and regulatory business taxes.

^bIncludes franchise, occupation and other regulatory business taxes.

course, the increases were not uniform among the "big three" revenue sources--sales, income and property taxes. The general sales tax showed the largest annual rates of increase for the decade on both the state and local levels--12.7 percent and 19.1 percent, respectively; while the smallest were the 8.5 percent annual rate for the state corporate income tax and the 9.3 percent rate for the local property tax.

Recent Trends

It is also important to note that there were marked differences between the growth rates of the 1970's compared with those of the early 1980's. Table II shows the average annual rates of change for the periods between fiscal years 1972-80 and fiscal years 1980-82. First, it should be noted that the average annual rates of inflation for the two periods remained practically unchanged, while both measures of Colorado income show a marked improvement in the early 1980's over the 1970's. The decline in rates of growth in state-local revenues cannot be attributed primarily to a decline in the rate of income growth but rather it mainly reflects statutory changes in the state-local tax structure.

For example, on the state level the individual income tax liability of resident households during the 1970's rose at an average annual rate of 13.7 percent, but for the early 1980's the average rate dropped to 5.0 percent--significantly less than the almost 14 percent annual rate of increase in the state's personal income for the same period. Parenthetically, it is generally recognized that because of its progressive rate structure, the state's individual income tax has a built-in "income elasticity" coefficient greater than one, i.e., if the statutory base and rate structure of the income tax are not changed, every one percent increase in personal or adjusted gross income should yield an increase in tax revenues in excess of one percent.

Similarly, with regard to the state's most important source of revenues--the general sales tax--the average annual rate of increase dropped from 13.7 percent for the 1970's to 8.7 percent for the early 1980's. This was primarily due to the removal of household food and utilities from the sales tax base. And the most dramatic change occurred in the case of the state's corporate income tax--a 14.7 percent

TABLE II. RATES OF CHANGE IN PRICES, INCOME AND TAXES
BETWEEN FISCAL YEARS 1972, 1980 AND 1982

	Average Annual Rates of Increase for Periods:	
	<u>1972- 1980</u>	<u>1980- 1982</u>
<u>Prices:</u>		
BLS Consumer Price Index	8.8%	8.3%
GNP Implicit Price Deflator	7.5	7.7
<u>Income:</u>		
Colorado Adjusted Gross Income	12.1	13.7
Colorado Total Personal Income	12.9	13.8
<u>Taxes:</u>		
State Individual Income Tax	13.7	5.0
State Sales and Use Tax	13.7	8.7
State Corporate Income Tax	14.7	-11.5
Local Property Tax	8.7	11.8
Local Sales and Use	19.2	19.2
Total State Taxes	12.0	6.2
Total Local Taxes	10.6	13.5
Combined State-Local Taxes	11.3	10.0
Federal Individual Income Tax ^a	14.1	19.1

^aColorado residents' federal tax liability.

average annual rate of increase for the eight year period of the 1970's was followed by an 11.5 percent annual rate of decrease for the two years from 1980 to 1982.

On the local level, the continued expansion of the general sales tax increased at the unprecedented average annual rate of 19.2 percent during both periods, i.e., for 1972-80 and 1980-82. But it is noteworthy that the local property tax had an average annual growth rate of 11.8 percent for the early 1980's, compared to an 8.7 percent growth rate for most of the 1970's.

Overall, the state's fiscal bind in large part is due to the fact that the 12 percent growth rate in state taxes for the 1970's was cut in half to a 6.2 percent rate in the early 1980's. This occurred despite the fact that personal income of Colorado resident taxpayers rose at an annual rate of about 14 percent during these same two years. On the other hand, the "tax savings" affected at the state level were partly absorbed by Colorado's local taxing jurisdictions, as evidenced by the fact that the overall local tax burden increased at a significantly higher annual rate during the latter period--13.5 percent during the past two years, in contrast to a rate of 10.6 percent for the 1970's.

SECTION II. THE COLORADO STATE-LOCAL TAX STRUCTURE

Total net collections for all of Colorado's state and local taxing jurisdictions in fiscal year 1982 amounted to \$3,369.3 million. State taxes on a collection basis were \$1,612.5 million or slightly less than 48 percent of the total.² Local property taxes amounted to \$1,217.4 million or 36 percent, and all other local taxes totaled \$539.4 million or 16 percent.

Tax Liability Adjustments

When measured on the CTPS adjusted basis, which more closely corresponds to the actual tax liability borne by Colorado resident households, the total combined state-local tax burden amounted to \$3,188.7 million, or five percent less than the collections reported by all government jurisdictions. The net difference of \$180.6 million between these two measures represents adjustments for non-resident tax collections; the excess of net cash flow over tax liabilities for the given fiscal year; nonallocable and nontax revenues such as penalties, interest earned and audit deficiencies; and vendors discounts on retail sales and excise taxes. The dollar amounts of these adjustments were as follows:³

	<u>Millions Of Dollars</u>
Exclusion of:	
Non-resident tax collections	\$ 83.7
Excess of tax collections over liabilities	84.8
Nonallocable and nontax revenues and credits	46.4
Inclusion of:	
Vendor discounts on tax collections	<u>-34.3</u>
Total Adjustments	\$180.6

Relative Importance of Major Taxes

The relative importance of each of the major tax categories on this adjusted basis of the net tax burdens for Colorado resident house-

holds for fiscal years 1972, 1980 and 1982 is shown in Table III and the accompanying Charts I, II and III.

On the state level, the general sales and use tax continues to be quantitatively most important, increasing steadily from less than 34 percent of the total state tax burden in 1972 to almost 40 percent in fiscal year 1982. In contrast, the share represented by the state individual income tax has remained relatively stable--about 30 percent of the total state tax burden in 1972; 34 percent in 1980 and 33 percent in 1982. Together these two "broad-based" taxes accounted for almost two-thirds of the state tax burden at the beginning of the period and for almost three-fourths by the end of the decade. Correspondingly, the shares represented by the corporate income, highway user and other consumer excise taxes (cigarette and liquor) were all significantly smaller. Overall they declined from 32 percent in fiscal 1972 to 20 percent in fiscal 1982.

On the local level, the property tax continues to be the major single tax liability, but its relative importance declined significantly during the decade. In 1972, property taxes represented more than 82 percent of the total local tax burden imposed on Colorado resident taxpayers; by 1982 it accounted for less than 70 percent. Conversely, the relative share represented by the local sales and use tax during this same decade almost doubled--expanding from less than 12 percent in fiscal year 1972 to almost 23 percent in fiscal 1982.

Property Tax. Overall, the local property tax amounted to \$1,261.9 million, net of \$15.5 million of state old age property tax credits, in fiscal year 1982. As such, it continued to be the largest single revenue source in the state-local tax structure, but its relative importance steadily declined during the 1970's. The property tax accounted for 44 percent of the combined state-local tax liability in 1972, whereas the respective ratios were 36 and 38 percent in 1980 and 1982.

Sales and Use Tax. The state-local general sales and use tax ranked next in importance. In fiscal 1982 it amounted to \$978.7 million. Despite the fact that household food and utilities were excluded from the base, the state sales tax for fiscal 1982 was still substantially larger than in 1972 or 1980, whether measured in relative or

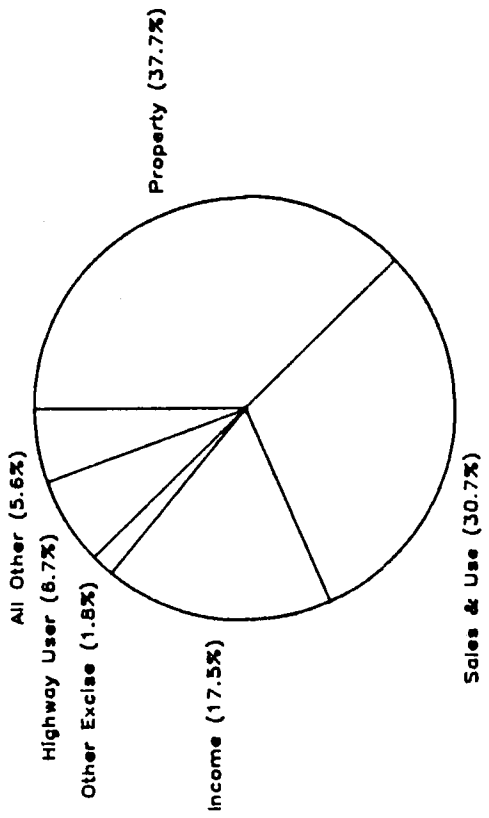
TABLE III. CHANGING STRUCTURE OF STATE AND LOCAL TAXES
BETWEEN FISCAL YEARS 1972, 1980 AND 1982

	Percent Distribution		
	1972	1980	1982
<u>State Taxes</u>			
Sales and Use	33.7%	38.1%	39.8%
Individual Income	29.7	33.6	32.9
Highway User	20.8	12.2	12.5
Corporate Income	6.3	7.7	5.2
Cigarette and Liquor	4.8	2.9	2.7
All Other	4.7	5.5	6.9
Total State Taxes	100.0%	100.0%	100.0%
<u>Local Taxes</u>			
Property	82.5%	72.0%	69.9%
Sales and Use	11.5	20.8	22.9
Specific Ownership	1.8	1.8	1.8
Cigarette and Liquor	.5	1.2	1.0
All Other	3.7	4.2	4.4
Total Local Taxes	100.0%	100.0%	100.0%
<u>Total State-Local Taxes</u>			
Property	43.9%	36.4%	37.7%
Sales and Use	21.8	29.3	30.7
Individual Income	13.9	16.6	15.1
Highway User ^a	10.7	6.9	6.7
Corporate Income	3.0	3.8	2.4
Cigarette and Liquor	2.5	2.1	1.8
All Other	4.2	4.9	5.6
Total State-Local	100.0%	100.0%	100.0%

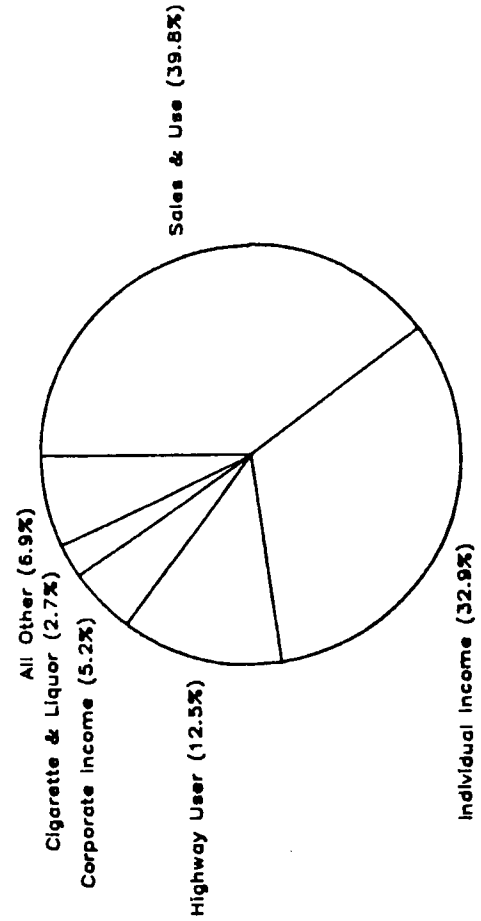
^aIncludes specific ownership tax.

CHART I. THE COLORADO TAX STRUCTURE,
FISCAL YEAR 1982

Combined State and Local Tax Structure



State Tax Structure



Local Tax Structure

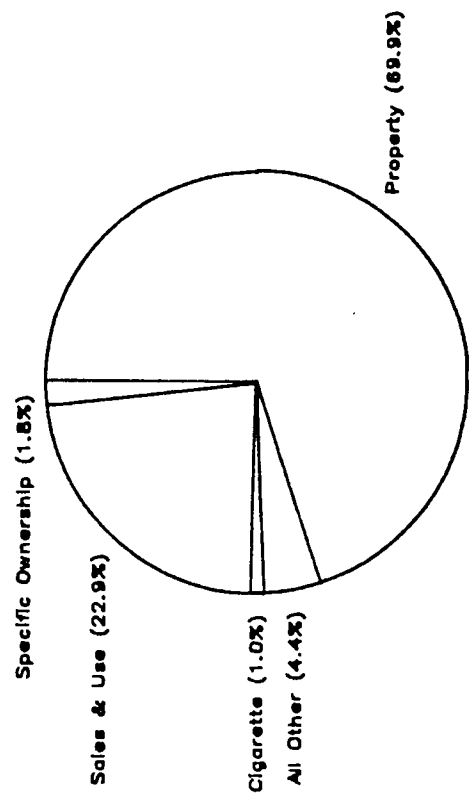


CHART II. THE CHANGING COMBINED STATE-LOCAL TAX STRUCTURE, FISCAL YEARS 1972, 1980 AND 1982

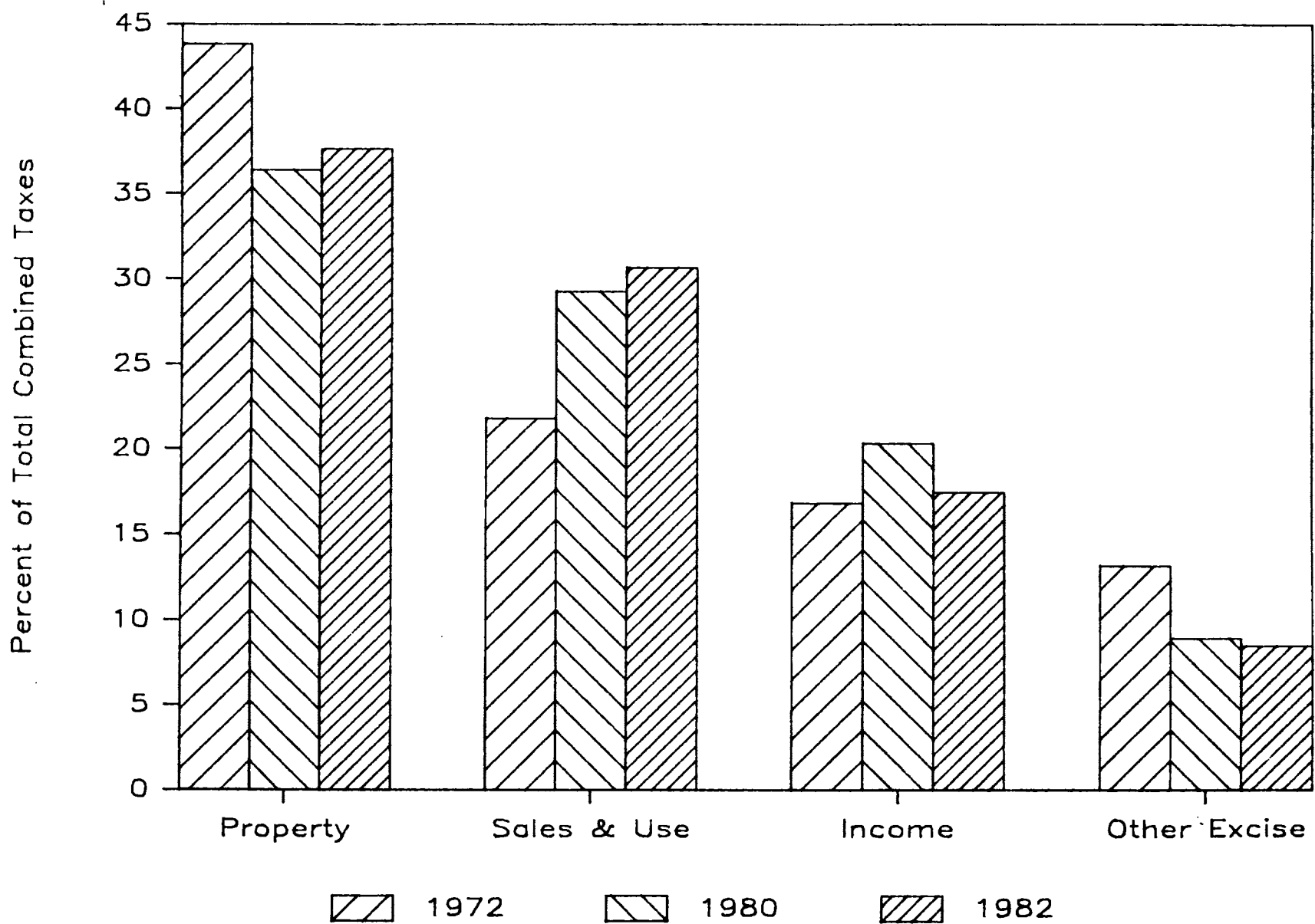
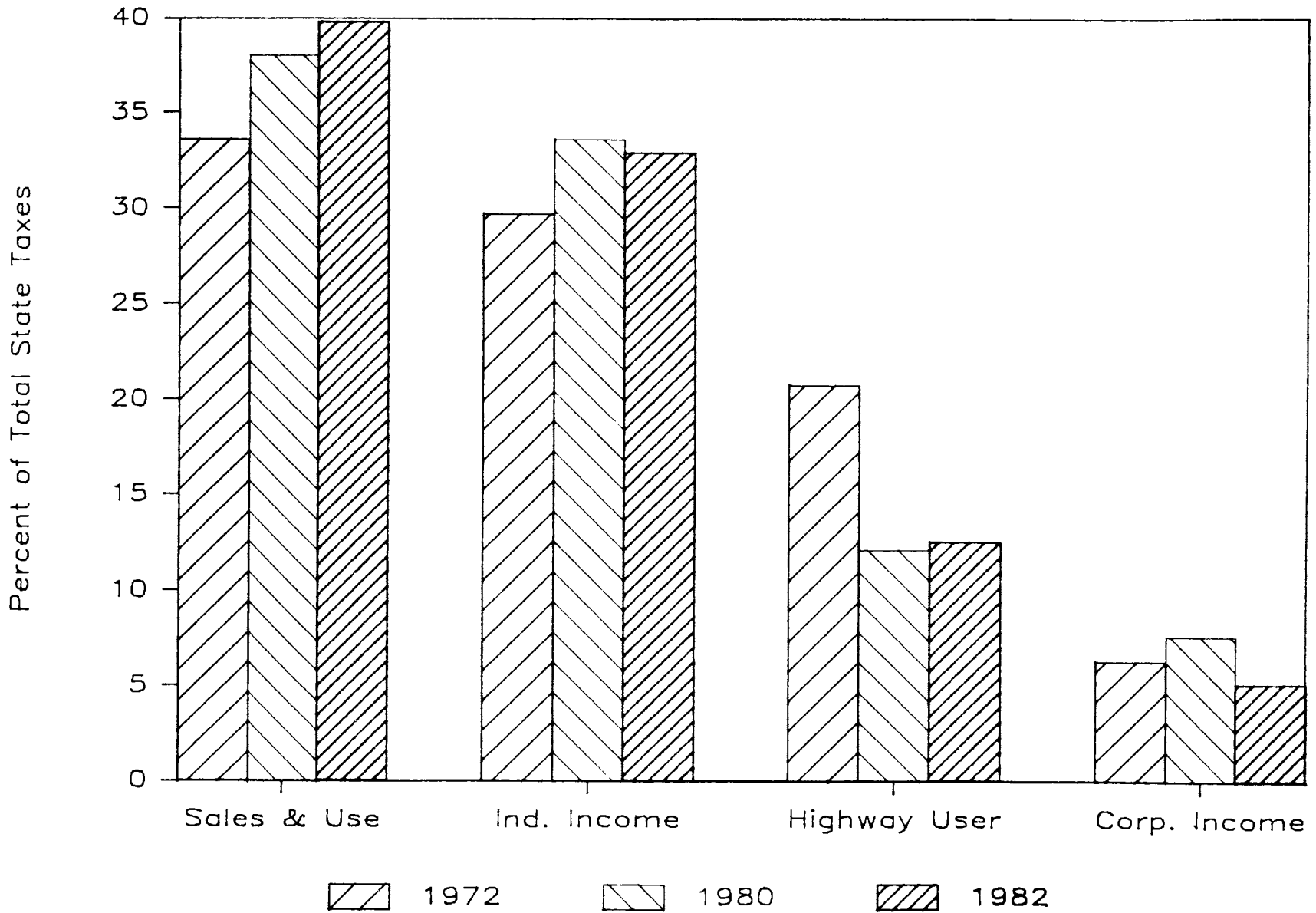


CHART III. THE CHANGING STATE TAX STRUCTURE
FISCAL YEARS 1972, 1980 AND 1982



absolute terms. As a percentage of the total state-local resident tax liability, the general sales and use tax in fiscal 1982 accounted for almost 31 percent, while the comparable ratios for 1972 and 1980 were 22 percent and 29 percent, respectively.

Income Tax. The state income tax ranked third among the "big three" tax sources which combined accounted for 83 percent of the total state-local tax burden. In fiscal year 1982 income taxes amounted to \$558.7 million on a liability basis, of which the corporate income tax represented \$75.6 million and the resident individual income tax accounted for \$483.1 million.

The non-resident portion of the income tax continued to be comparatively small--only \$4.8 million or less than one percent of the total. As a share of the total state-local tax burden, the income tax on resident households accounted for 15 percent in fiscal 1982 or only one percentage point more than in 1972 and actually two percentage points less than in fiscal 1980. Correspondingly, as a share of the state tax burden, it increased from 30 to 34 percent in the 1970's and then dropped to 33 percent in fiscal 1982.

A similar, but more marked pattern occurs in the case of the corporate income tax. Its share in the overall state-local tax picture has been relatively insignificant throughout the period, never accounting for as much as four percent of the total. In fiscal 1972 it amounted to 3.0 percent, rose to 3.8 percent in 1980 and then fell to 2.4 percent in 1982--the low point for the decade. The comparable percentages for the corporate income tax as a share of the total state tax burden were 6.3 percent for fiscal 1972, then up to 7.7 percent in fiscal 1980, and finally down to 5.2 percent for fiscal 1982.

Highway User Tax. The highway user tax category includes state motor fuel and ton-mile taxes, as well as motor vehicle and operators license fees and the specific ownership tax levied by local government. These levies in fiscal 1982 amounted to \$215.1 million, or less than seven percent of the total state-local tax burden. At the state level, highway user taxes accounted for less than 13 percent in fiscal 1982, compared with 12 and 21 percent of the total state tax burdens in 1980 and 1972, respectively. The dramatic decrease in the relative importance of these levies for the decade in large part reflects the motoring public's response to the energy crises of the 1970's.

Consumer Excise Taxes. Cigarette and alcoholic beverage taxes continue to be quantitatively least important in the state-local tax structure. On the combined basis they amounted to \$57.2 million, and as a relative share of the total these excises have steadily declined since the early 1970's--from 2.5 percent in 1972 to 1.8 percent in 1982. As a percentage of the total state burden they have dropped from slightly less than five percent to slightly more than two and a half percent during the decade.

All Other taxes. This category represents all business taxes, licenses and fees, other than the corporate income tax and the allocated portions of the general sales, property and highway user taxes paid by business firms. It includes oil and gas production taxes, other severance taxes, the employers' share of the Denver occupation tax, insurance, franchise and utility taxes, and miscellaneous regulatory fees. In fiscal 1982, these combined taxes amounted to \$177.1 million, or almost six percent of the total state-local tax bill. As a group, they have steadily increased during this decade--from 4.2 percent in fiscal 1972 to 5.6 percent in fiscal 1982. On the state level these other business taxes as a category appear to have been relatively more important, increasing from 4.7 percent in 1972 to 6.9 percent in fiscal 1982.

SECTION III. THE DIRECT AND INDIRECT TAX ALLOCATION

A distinction is often made between tax "impact" and "incidence"--the former is where the tax is legally imposed, the latter where it finally comes to rest. Theoretically, the incidence of all taxes are on individuals. However, it is useful to initially classify taxes into the two general categories: household (or direct) taxes and business (or indirect) taxes. The allocation of taxes between households requires specific tax shifting assumptions with regard to their final incidence.

Tax Shifting Assumptions

As in previous Colorado Tax Profile studies, household taxes are defined as those directly levied or shifted to individuals comprising the household unit and generally are based on the earning of income, the purchase of consumer goods and services, or the ownership of particular forms of wealth (e.g., real estate). In this sense, direct taxes include individual income, retail sales, consumer excise and residential property taxes. The householder cannot shift such direct taxes to others through the pricing system.

In contrast, it is assumed that business taxes are either shifted forward to individuals as consumers or borne by the owners of resources since such taxes represent business costs which ultimately are reflected in market prices, reduced dividends or undistributed corporate earnings. The corporate income tax, highway user and sales taxes paid by business firms on their purchases, severance taxes and all other franchise and regulatory business taxes fall into the indirect category.⁴

It should also be noted that in deriving the resident tax burden for a particular state, it is not possible to empirically determine the amount of business taxes exported or imported by firms engaged in interstate commerce. As in the 1980 study, it is assumed that the export of Colorado business taxes has been approximately balanced by the import of taxes from jurisdictions outside Colorado.⁵

Taxes on Households and Business

Based on the above assumptions, the allocation of Colorado state and local taxes between those levied on resident households and those on businesses for fiscal year 1982 is shown in Table IV and Chart IV. On the adjusted liability basis, direct household taxes amounted to \$1,879 million, accounting for almost three-fifths of the total Colorado tax burden. Correspondingly, the indirect portion levied on business was \$1,310 million, or two-fifths of the total. The major direct and indirect taxes for fiscal year 1982 and their quantitative importance follows:

- The residential property tax ranked first and amounted to \$633 million, or 34 percent of the total direct tax burden borne by Colorado resident households. This was higher than the 31 percent for fiscal 1980, but still markedly below the 39 percent ratio for fiscal 1972.
- The non-residential property tax amounted to \$569 million or 43 percent of total business taxes. As such, it was lower than the 45 percent estimated for 1980 and significantly below the 53 percent for 1972.
- The sales and use tax on households was the second largest tax directly levied on resident households. It amounted to \$582 million, of which three-fifths represented the state sales tax and two-fifths the local levy. The combined state-local sales tax accounted for 31 percent of the total direct tax burden--the same ratio as in 1980, but significantly larger than the 22 percent for fiscal 1972.
- The sales and use tax on business was also the second largest of the indirect taxes on business. It amounted to almost \$397 million, or 30 percent of the total indirect taxes. In fiscal 1980 it represented 27 percent, and in fiscal 1972 only 22 percent of the total business taxes.

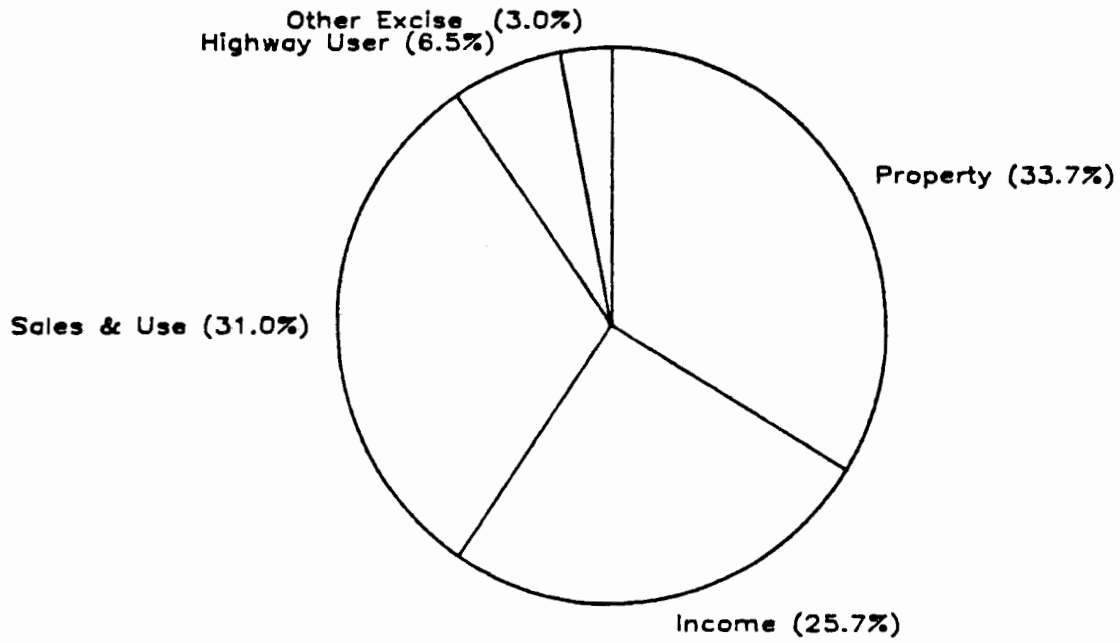
TABLE IV. SUMMARY OF MAJOR TAXES ON COLORADO
RESIDENT HOUSEHOLDS AND BUSINESS,
FISCAL YEAR 1982

	<u>Total Taxes</u>	<u>State Taxes</u>	<u>Local Taxes</u>
(Money amounts in thousands)			
<u>Taxes on Households (Direct)</u>			
Residential Property	\$ 633.4	--	\$ 633.4
Sales and Use	582.2	\$ 348.4	233.8
Individual Income	483.1	483.1	--
Highway User ^a	122.9	101.2	21.7
Cigarette and Liquor	<u>57.2</u>	<u>40.3</u>	<u>16.9</u>
Total Direct Taxes	\$1,878.8	\$ 973.0	\$ 905.8
<u>Taxes on Business (Indirect)</u>			
Non-Residential Property	\$ 568.5	--	\$ 568.5
Sales and Use	396.5	\$ 236.0	160.5
Corporate Income	75.6	75.6	--
Highway User ^a	92.2	82.9	9.3
Other Business Taxes ^b	<u>177.1</u>	<u>101.2</u>	<u>75.9</u>
Total Indirect Taxes	\$1,309.9	\$ 495.7	\$ 814.2
<u>Total Resident Taxes</u>	\$3,188.7	\$1,468.7	\$1,720.0

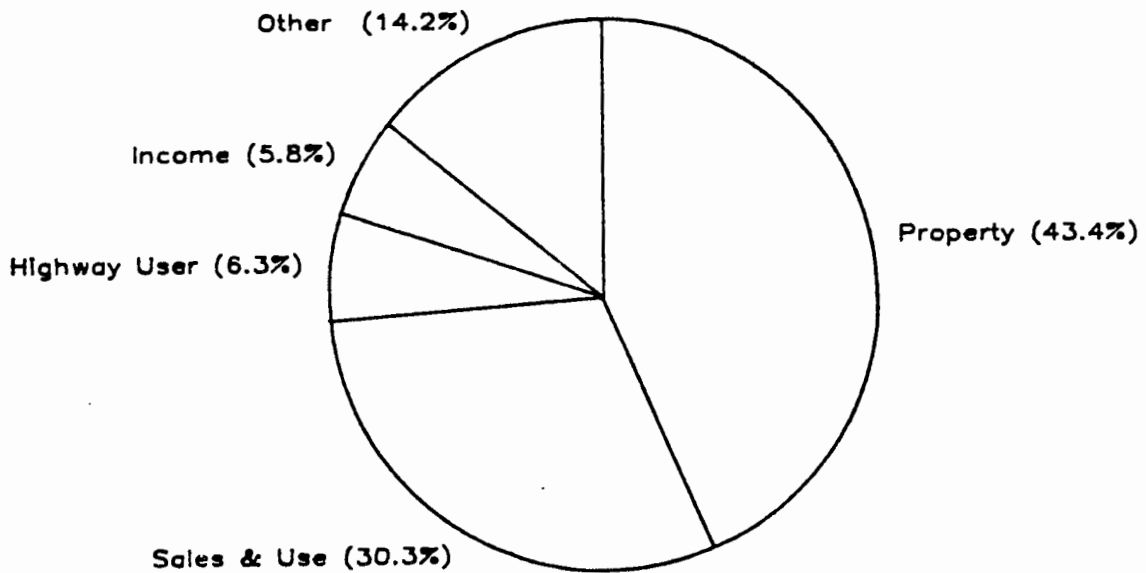
^aIncludes share of specific ownership tax.

^bIncludes insurance, severance, occupation, corporate franchise and miscellaneous regulatory taxes.

CHART IV. DISTRIBUTION OF HOUSEHOLD AND BUSINESS TAXES, FISCAL YEAR 1982



Household Taxes



Business Taxes

- The individual income tax ranked third in the household category and amounted to \$483 million. Its share of the direct tax burden was slightly less than 26 percent--two percentage points below the 1980 ratio, but two points above 1972.
- The corporate income tax amounted to \$76 million and accounted for less than 6 percent of the combined state-local tax bill imposed on business. This was markedly smaller than the 9 percent share for fiscal 1980 and 8 percent share for fiscal 1972.

It is evident that the "big three"--property, sales and income taxes--continue to account for the overwhelming share of the taxes imposed on both of these taxpayer categories. Combined, they represented 90 percent of the direct tax burden imposed on resident households, and almost 80 percent of the total indirect taxes levied on business in fiscal year 1982.

State Taxes

At the state level, taxes amounting to \$973 million, or two-thirds of the total state burden, were classified as direct household taxes. Of this amount, the individual income tax (inclusive of surtax) represented 50 percent, while retail sales and highway user taxes accounted for 36 and 10 percent, respectively. Because of energy conservation, highway user taxes were significantly below the 1972 ratio of 20 percent. The other state excise taxes levied directly on resident households were \$40 million, or four percent of the total.

State taxes on business were estimated to be \$496 million, or one-third of the adjusted state total. Quantitatively, the most important state tax levied on business was the allocated portion of the sales and use tax --it accounted for 48 percent of the total. Business highway user taxes and the corporate income tax ranked next, representing 17 and 15 percent, respectively. All other state business taxes, such as insurance, corporate franchise, severance and other regulatory taxes, accounted for 20 percent of the total.

Local Taxes

On the local level, direct household taxes were estimated to be \$906 million, or 53 percent of the total, while the indirect business portion was estimated to be \$814 million. The allocation of total local taxes between households and business essentially reflects the classification of the property tax into residential and non-residential categories. It was estimated that the actual and imputed property taxes on owner-occupied and renter-occupied residences together amounted to \$633 million or 70 percent of the total local taxes levied directly on resident households. And in the case of the non-residential property tax, it amounted to \$569 million, which also worked out to be 70 percent of the total local tax levied on the business community.

SECTION IV. A PROFILE OF COLORADO TAXES BY MAJOR INCOME CLASSES

The distribution of Colorado state and local tax liabilities of resident households, classified by major income categories, is presented in Tables V through IX. Data on the number of resident taxpayers, household income and state individual income tax liabilities were analyzed in detail in a companion study prepared by the Colorado Department of Revenue.⁶

Income Concepts

This sub-section describes basic concepts and adjustments required for the derivation of the income measures used in the analysis of tax burdens. Because Colorado does not have a "split-income" provision for married taxpayers, approximately one-third of all individual income tax returns filed were "married-separate" returns. For the purposes of this study, the "married-separate" returns of husband and wife were merged and treated as a single return in order to obtain a more accurate picture of the distribution of resident household income and taxes.⁷

Adjusted Gross Income. On the corrected basis, the adjusted gross income reported by resident households on state tax returns filed in fiscal 1982 amounted to \$23,919 million. It represented 71.9 percent of the corresponding 1981 Colorado state personal income of \$33,256 million estimated by the U.S. Department of Commerce.⁸ The difference between these two income measures of \$9.3 billion mainly are due to conceptual differences between the economic and statutory definitions of income. The latter excludes various forms of tax-exempt money income and nontaxable transfer income, such as payments for public welfare, social security, unemployment compensation and portions of private pension and retirement income. On the other hand, the economic concept of household income (the Department of Commerce personal income measure) includes, in addition to the above money transfer payments, sundry forms of imputed income, such as the estimated rental value of owner-occupied residences, imputed interest and employer contributions to pension funds.

Adjusted Broad Income. In order to obtain an alternative income measure which more closely corresponds to the conventional concept of income, an adjusted broad income measure was developed for the original 1972 Colorado Tax Profile Study. This measure is narrower than the personal income concept in that it excludes all forms of imputed income, but broader than adjusted gross income since it includes an estimate of the nontaxable money transfer payments, as well as other forms of tax-exempt income not reported on tax returns.⁹

On an overall basis, total adjusted broad income for Colorado resident taxpayers was estimated to be \$28,611 million, or 20 percent larger than the corresponding adjusted gross income for fiscal year 1982. The difference between these two income measures in fiscal year 1972 was slightly more than 13 percent. The more rapid rate of growth in the adjusted broad income relative to the increase in adjusted gross income reported on tax returns is primarily due to the steady rise in Colorado personal transfer income.

Also it should be noted that the total amount of transfer payments included in the 1982 adjusted broad income measure was approximately three times larger than the amount included to represent tax-exempt forms of non-transfer money income. Thus the largest relative adjustments required to place the resident households on a broad income basis were made for those in the lowest income categories since they were the major recipients of nontaxable money transfer income. Conversely, adjustments for excluded non-transfer money income were largest for taxpayers in the upper income strata since they were the principal beneficiaries of the preferential tax treatment accorded capital gains, interest and dividend income.

In the remainder of this report, the comparative tax burdens of Colorado resident households are presented in terms of both adjusted gross and adjusted broad income. It is evident, however, that the latter is the more appropriate and meaningful basis for evaluating the distributional effects of the Colorado state and local tax structure.

Distribution of Households and Income

Almost one and a third million Colorado resident households filed state income tax returns in fiscal year 1982. Of these, four out

of every five were taxable returns, i.e., they had a positive net normal income tax liability. The income measures and overall tax analysis for this study are based on all resident returns, taxable and nontaxable. Households filing nontaxable returns, of course, were also subject to sales, excise and property taxes and were recipients of transfer and other forms of money income excluded from adjusted gross income. But first it is important to note that because of the marked rise in both the nominal and real incomes of Colorado households since 1972, the distribution of number of households by adjusted gross income categories has shifted significantly upwards during the past decade as shown below:

CTPS Fiscal Year	Percentage Distribution of Households by Reported Adjusted Gross Income:			
	Below \$15,000	\$15,000 to \$25,000	\$25,000 and Over	Total
1972	84.1	12.3	3.6	100.0
1980	61.2	20.5	18.3	100.0
1982	55.2	19.3	25.5	100.0

Distribution of Taxes

Table V presents the total dollar amounts of state and local taxes on a resident liability basis, as well as the number of households and the total dollar amounts of household income in terms of both adjusted gross and broad income, for each of the five major income classes. The relative tax burden comparisons -- the "current tax profiles" -- are developed on the basis of these data for fiscal year 1982.

TABLE V. DISTRIBUTION OF COLORADO RESIDENT TAXPAYERS,
HOUSEHOLD INCOME AND MAJOR STATE AND LOCAL TAXES,
FISCAL YEAR 1982

	Major Income Classes ^a					Total
	Under \$5,000	\$5,000 to \$15,000	\$15,000 to \$25,000	\$25,000 to \$50,000	\$50,000 and Over	
	(Money amounts in thousands of dollars)					
<u>Number of Resident Households</u>	335,428	397,714	256,802	281,475	57,618	1,329,037
<u>Household Income:</u>						
Adjusted Gross Income	\$ 703,568	\$3,839,217	\$5,062,814	\$9,621,198	\$4,692,543	\$ 23,919,340
Adjusted Broad Income	1,617,432	5,093,873	5,810,592	10,713,204	5,376,247	28,611,348
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	4,395	52,128	94,742	208,270	123,574	483,109
Sales and Use	28,984	74,968	82,633	120,465	41,316	348,366
Highway User	8,758	26,405	26,395	29,533	10,155	101,246
Alcoholic Beverage	2,233	5,661	5,995	6,265	2,142	22,246
Cigarette	2,691	5,435	4,548	4,016	1,385	18,075
Total	47,061	164,547	214,313	368,549	178,572	973,042
Local Taxes						
Residential Property	76,498	147,099	127,566	206,791	75,463	633,417
Sales and Use	19,453	50,314	55,458	80,849	27,729	233,803
Specific Ownership	1,877	5,661	5,659	6,332	2,177	21,706
Cigarette	2,519	5,087	4,257	3,759	1,296	16,918
Total	100,347	208,161	192,940	297,731	106,665	905,844
Total Direct Taxes	147,408	372,708	407,253	666,280	285,237	1,878,866
<u>Indirect Taxes on Households:</u>						
State Business Taxes	46,535	105,485	110,691	169,377	63,569	495,657
Local Business Taxes	81,338	179,042	185,881	273,977	93,958	814,196
Total Indirect Taxes	127,873	284,527	296,572	443,354	157,527	1,309,853
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	93,596	270,032	325,004	537,926	242,141	1,468,699
Local Taxes (Direct & Indirect)	181,685	387,203	378,821	571,708	200,623	200,623
Total State-Local Taxes	\$ 275,281	\$ 657,235	\$ 703,825	\$1,109,634	\$ 442,764	\$ 3,188,739
<u>Addendum:</u>						
Federal Individual Income Tax	\$ 17,716	\$ 343,103	\$ 653,736	\$1,526,066	\$1,310,247	\$ 3,850,868

The percentage distributions of the direct state and local tax burden among Colorado's relatively low, middle and high income taxpayers are summarized in the following tabulation:

	<u>Percent Distribution of Direct Taxes for Households with Adjusted Gross Incomes:</u>		
	<u>Below \$15,000</u>	<u>\$15,000 to \$25,000</u>	<u>\$25,000 and Over</u>
<u>State Taxes:</u>			
Individual Income	26.7	44.2	60.6
Sales and Use	49.1	38.6	29.6
Consumer Excises	<u>24.2</u>	<u>17.2</u>	<u>9.8</u>
Total	100.0	100.0	100.0
<u>Local Taxes:</u>			
Residential Property	72.5	66.1	69.8
Sales and Use	22.6	28.8	26.8
Consumer Excises	<u>4.9</u>	<u>5.1</u>	<u>3.4</u>
Total	100.0	100.0	100.0

The largest single state tax levied on the two lowest income classes (under \$15,000), which together comprised more than one-half of Colorado's resident households, continued to be the state's retail sales tax, which amounted to \$104.0 million. When combined with the excise taxes on motor fuels, alcoholic beverages and cigarettes, consumer expenditure taxes on the state level for these relatively low income taxpayers accounted for more than three-fourths of their total direct state tax burden in fiscal year 1982. For the one-fifth of the households comprising the middle income group (\$15,000 to \$25,000), consumption expenditure taxes on the state level amounted to \$119.6 million and accounted for more than one-half of their direct state tax burden. In contrast, for the two highest income strata (\$25,000 or more), representing the top quartile of households, the state personal income tax was quantitatively the largest. It amounted to \$331.8 million and accounted for more than three-fifths of their total direct state tax burden; while their consumer expenditure taxes, particularly the excises, were relatively small.

On the local level, as expected, the residential property tax of \$633.4 million accounted for two-thirds or more of the direct local tax burden for all income categories.

Tax Equity

Table VI shows the percentage distributions of the Colorado resident taxpayers, adjusted gross and broad income, and each of the major state and local taxes, classified by the five household income categories, based on data presented in Table V. A comparison of the tax distribution with the distribution of household income provides an approximate measure of the degree of tax equity in the state. The taxpayers comprising the two top income groups, with adjusted gross incomes of \$25,000 or more, represented the top quartile of households but accounted for three-fifths of total income; while the poorest households, those in the lowest quartile (incomes of \$5,000 or less), accounted for only three percent of the adjusted gross income and less than six percent of the broad income.

State Taxes. With regard to the allocation of the overall state tax burden (combined direct and indirect taxes), it appears that for all major income classes, the respective shares of the state tax generally parallel the distribution of adjusted broad income, as shown by the following tabulation:

<u>Income Classes</u>	<u>Percent Distribution</u>		
	<u>Adjusted Broad Income</u>	<u>Direct State Taxes</u>	<u>Total State Taxes</u>
Under \$5,000	5.7	4.8	6.4
\$5,000 to \$15,00	17.8	16.9	18.4
\$15,000 to \$25,000	20.3	22.0	22.1
\$25,000 to \$50,000	37.4	37.9	36.6
\$50,000 and over	<u>18.8</u>	<u>18.4</u>	<u>16.5</u>
Total	100.0	100.0	100.0

The share of the direct state tax burden borne by the poorer households (reported incomes of less than \$15,000) was slightly lower than their respective income share, but their share of the total state tax was slightly higher. Correspondingly, for households in the two upper income strata (top quartile) the direct state tax share was practically the same as their income share, and their total state tax share was only slightly lower. On this adjusted broad income basis, the direct state tax structure proved to be slightly progressive, while the total state tax structure worked out to be slightly regressive in fiscal

HOUSEHOLD INCOME AND MAJOR STATE AND LOCAL TAXES,
FISCAL YEAR 1982

	Major Income Classes: ^a					Total
	Under \$5,000	\$5,000 to \$15,000	\$15,000 to \$25,000	\$25,000 to \$50,000	\$50,000 and Over	
<u>Number of Resident Households</u>	25.3	29.9	19.3	21.2	4.3	100.0
<u>Household Income:</u>						
Adjusted Gross Income	2.9	16.1	21.2	40.2	19.6	100.0
Adjusted Broad Income	5.7	17.8	20.3	37.4	18.8	100.0
<u>Direct Taxes on Households:</u>						
<u>State Taxes</u>						
Individual Income	.9	10.8	19.6	43.1	25.6	100.0
Sales and Use	8.3	21.5	23.7	34.6	11.9	100.0
Highway User	8.6	26.1	26.1	29.2	10.0	100.0
Alcoholic Beverage	10.0	25.2	27.0	28.2	9.6	100.0
Cigarette	14.9	30.1	25.1	22.2	7.7	100.0
Total	4.8	16.9	22.0	37.9	18.4	100.0
<u>Local Taxes</u>						
Residential Property	12.1	23.2	20.1	32.7	11.9	100.0
Sales and Use	8.3	21.5	23.7	34.6	11.9	100.0
Specific Ownership	8.6	26.1	26.1	29.2	10.0	100.0
Cigarette	14.9	30.1	25.1	22.2	7.7	100.0
Total	11.1	23.0	21.3	32.8	11.8	100.0
Total Direct Taxes	7.8	19.8	21.6	35.6	15.2	100.0
<u>Indirect Taxes on Households:</u>						
State Business Taxes	9.4	21.3	22.3	34.2	12.8	100.0
Local Business Taxes	10.0	22.0	22.8	33.7	11.5	100.0
Total Indirect Taxes	9.8	21.7	22.6	33.9	12.0	100.0
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	6.4	18.4	22.1	36.6	16.5	100.0
Local Taxes (Direct & Indirect)	10.6	22.5	22.0	33.2	11.7	100.0
Total State-Local Taxes	8.6	20.6	22.1	34.8	13.9	100.0
<u>Addendum:</u>						
Federal Individual Income Tax	.5	8.9	17.0	39.6	34.0	100.0

^aBased on adjusted gross income.

year 1982. Previous CTPS reports show a similar pattern of proportionality. It appears that despite the marked shift of taxpayers into higher income brackets, increased consumption expenditures, and the statutory tax reductions enacted during the past five years, the overall state tax structure has not become significantly more progressive or regressive.

The proportionality achieved in the distribution of the overall state tax burden reflects a balancing of the state's major taxes, since similar distributions do not hold for any of the specific taxes. The state individual income tax continues to be highly progressive. Households in the two lowest income categories (incomes under \$15,000) accounted for 24 percent of the broad income but only 12 percent of the income tax liability. At the other end of the income spectrum, taxpayers in the two top categories (incomes of \$25,000 or more) accounted for 56 percent of the broad income but almost 69 percent of the total state income tax liability. Stated more generally, the top one-fourth of Colorado's resident households accounted for more than one-half of the income (regardless of which income measure is used) but almost three-fourths of the total state income tax.

Conversely, the distribution patterns of all other state taxes proved to be essentially regressive -- that is, the tax share relative to income was greatest for the lowest income group and smallest for those with the highest incomes. For example, the lowest income group's share of direct consumer expenditure taxes (retail sales and excises) was approximately one and a half times as large as its share of adjusted broad income; whereas for the highest stratum it was only three-fifths as large as its income share. And a similar relationship holds for the indirect state business taxes. In short, the magnitude and progressivity of the Colorado state income tax offsets the regressivity of all the other state taxes, resulting in a state tax structure which is essentially proportional.

Local Taxes. With regard to the allocation of the local tax burden, the data indicate that all of the major local taxes (direct and indirect) worked out to be highly regressive. For households in the two lowest income strata, their share of the residential property tax, expenditure taxes and indirect business taxes in every instance was sig-

nificantly larger than their share of adjusted broad income; while for taxpayers in the highest income strata, the tax shares were below their respective income shares. This overall regressivity of the local tax structure must be attributed primarily to the magnitude and regressivity of the local property and sales tax.

Average Household Income and Taxes

The average income and taxes of Colorado households for fiscal year 1982, classified by the five major income categories, are presented in Table VII. Resident taxpayers had an average income of \$21,528 (on a broad income basis) and an average combined state-local tax burden of \$2,399. This was almost one-fifth less than the average federal income tax of \$2,897 paid by Colorado residents that year. Total state taxes (direct and indirect) averaged \$1,105 per resident household and as such were 15 percent less than the average local tax burden of \$1,294.

When the taxes are expressed as averages for each of the major income categories, the average dollar of tax per resident household increased directly, but not proportionately, with the rise in income. The average total state tax (combined direct and indirect) ranged from \$279 for taxpayers in the lowest quartile (incomes less than \$5,000) to \$2,300 for those at the other end of the scale (incomes of \$25,000 or over). On the other hand, the average local tax burden was significantly higher than the state burden for the poor, and lower for the top quartile -- ranging from \$542 for taxpayers in the bottom group to \$2,278 for the highest.

TABLE VII. AVERAGE INCOME AND TAXES FOR COLORADO RESIDENT TAXPAYERS,
CLASSIFIED BY MAJOR INCOME CATEGORIES,
FISCAL YEAR 1982

	Major Income Classes: ^a					Total
	Under \$5,000	\$5,000 to \$15,000	\$15,000 to \$25,000	\$25,000 to \$50,000	\$50,000 and Over	
<u>Taxpayers Income:</u>						
Adjusted Gross Income	\$2,098	\$ 9,653	\$19,715	\$34,181	\$81,442	\$17,998
Adjusted Broad Income	4,822	12,808	22,627	38,061	93,308	21,528
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	13	131	369	740	2,145	363
Sales and Use	86	189	322	428	717	262
Highway User	26	66	103	105	176	76
Alcoholic Beverage	7	14	23	22	37	17
Cigarette	8	14	18	14	24	14
Total	140	414	835	1,309	3,099	732
Local Taxes						
Residential Property	229	371	496	735	1,309	477
Sales and Use	58	126	216	287	481	176
Specific Ownership	6	14	22	23	38	16
Cigarette	7	13	17	13	23	13
Total	300	524	751	1,058	1,851	682
Total Direct Taxes	440	938	1,586	2,367	4,950	1,414
<u>Indirect Taxes on Households:</u>						
State Business Taxes	139	265	431	602	1,103	373
Local Business Taxes	242	450	724	973	1,631	612
Total Indirect Taxes	381	715	1,155	1,575	2,734	985
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	279	679	1,266	1,911	4,203	1,105
Local Taxes (Direct & Indirect)	542	974	1,475	2,031	3,482	1,294
Total State-Local Taxes	<u>\$ 821</u>	<u>\$ 1,653</u>	<u>\$ 2,741</u>	<u>\$ 3,942</u>	<u>\$ 7,685</u>	<u>\$ 2,399</u>
<u>Addendum:</u>						
Federal Individual Income Taxes	\$ 53	\$ 863	\$ 2,546	\$ 5,422	\$22,740	\$ 2,897

^aBased on adjusted gross income.

The variance in these relationships can be readily compared by expressing the average taxes of households in the lowest quartile as percentages of those in the top quartile as shown below:

	<u>Average Income and Taxes for Households with AGI</u>		
	<u>Lowest Quartile (Under \$5,000)</u>	<u>Highest Quartile (\$25,000 and Over)</u>	<u>Lowest Quartile as Percent of Highest</u>
<u>Adjusted Broad Income</u>	\$4,822	\$47,448	10.2
<u>State Taxes:</u>			
Individual Income	13	979	1.3
Sales Tax on Households	86	477	18.0
Excise Taxes on Households	<u>41</u>	<u>157</u>	<u>26.1</u>
Direct State Taxes	140	1,613	8.7
Business Taxes	<u>139</u>	<u>687</u>	<u>20.2</u>
Total State Taxes	\$ 219	\$ 2,300	12.1
<u>Local Taxes:</u>			
Residential Property	229	833	27.5
Sales Tax on Households	58	320	18.1
Excise Taxes on Households	<u>13</u>	<u>40</u>	<u>32.5</u>
Direct Local Taxes	300	1,193	25.1
Business Taxes	<u>242</u>	<u>1,085</u>	<u>22.3</u>
Total Local Taxes	542	2,278	23.8
<u>Total State and Local Taxes</u>	<u>\$ 821</u>	<u>\$ 4,578</u>	<u>17.9</u>

State Taxes. The average broad income of households in the lowest income category was slightly more than 10 percent of the average income of households in the highest quartile. The marked progressivity of the state income tax is revealed when the income tax ratio is compared with the broad income ratio. For example, the average state income tax for all households in the "under \$5,000" class was only 1.3 percent of the average income tax for taxpayers in the highest quartile.¹⁰ In contrast, the comparative tax ratios of all the other direct state taxes were generally twice as large as the income ratio.

However, the regressivity of the state sales and excise taxes was offset by the progressivity of the income tax so that the overall direct state tax structure remained slightly progressive--the average tax ratio was only 8.7 percent compared to the income ratio of 10.2

percent. On the other hand, the total state tax structure (direct and indirect) proved to be slightly regressive with an average state tax ratio of 12.1 percent.

Local Taxes. The greater regressivity of the local tax structure also is revealed by these data. The average local tax for households in the lowest quartile was almost 24 percent of the average paid by those in the top quartile. Moreover, when state and local tax liabilities are combined, the overall Colorado tax structure for fiscal year 1982 worked out to be clearly regressive--the average combined tax ratio of the poor to the rich was 17.9 percent compared to the corresponding broad income ratio of 10.2 percent.

SECTION V. A PROFILE OF EFFECTIVE TAX RATES AND BURDENS

A more conventional and simpler method of comparing relative tax burdens is to express the absolute dollar amount of tax liability as a percentage of household income before taxes. Since all taxes ultimately are paid out of available income, such a measure of the tax burden actually represents an "effective tax rate" on household income. However, the degree of regressivity or progressivity of the tax structure as a whole or of any particular tax is dependent upon the income concept used. For purposes of this study, the relative state and local tax burdens are expressed as percentages of both adjusted gross income and adjusted broad income.

Effective Tax Rates Based on Adjusted Gross Income

The relative burdens or effective tax rates for fiscal year 1982, based on adjusted gross income, are shown in Table VIII. On this adjusted gross income basis, the combined state-local tax burden on the poor was four times as heavy as that on the upper income group -- a 39.1 percent effective tax rate for households reporting incomes of less than \$5,000 compared with an 9.4 percent rate for those with incomes of \$50,000 or more.

This overall regressivity, however, must be mainly attributed to the local tax portion for which the relative burden on the lowest income group was actually six times larger than that on the highest -- 25.8 percent compared with 4.3 percent. All taxes on the local level, when based on adjusted gross income, show a high degree of regressivity and in the case of the residential property tax, the effective rates ranged from 10.9 percent for the lowest income group to 1.6 percent for the highest.

The state tax structure as a whole was only about one-half as regressive as the local tax structure, since the regressivity of the consumer expenditure and business taxes was partially offset by the progressivity of the state's individual income tax. With regard to the state income tax, the effective rate for households in the under \$5,000

TABLE VIII. RELATIVE BURDEN OF MAJOR TAXES ON COLORADO RESIDENT TAXPAYERS,
TAXES EXPRESSED AS PERCENT OF ADJUSTED GROSS INCOME,
FISCAL YEAR 1982

	Major Income Classes: ^a					Total
	Under \$5,000	\$5,000 to \$15,000	\$15,000 to \$25,000	\$25,000 to \$50,000	\$50,000 and Over	
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	.62	1.36	1.87	2.16	2.63	2.02
Sales and Use	4.12	1.95	1.63	1.25	.88	1.46
Highway User	1.25	.69	.52	.31	.22	.42
Alcoholic Beverage	.32	.15	.12	.07	.05	.09
Cigarette	<u>.38</u>	<u>.14</u>	<u>.09</u>	<u>.04</u>	<u>.03</u>	<u>.08</u>
Total	6.69	4.29	4.23	3.83	3.81	4.07
Local Taxes						
Residential Property	10.87	3.83	2.52	2.15	1.61	2.65
Sales and Use	2.76	1.31	1.10	.84	.59	.98
Specific Ownership	.27	.15	.11	.06	.04	.09
Cigarette	<u>.36</u>	<u>.13</u>	<u>.08</u>	<u>.04</u>	<u>.03</u>	<u>.07</u>
Total	14.26	5.42	3.81	3.09	2.27	3.79
Total Direct Taxes	20.95	9.71	8.04	6.92	6.08	7.86
<u>Indirect Taxes on Households:</u>						
State Business Taxes	6.61	2.75	2.19	1.76	1.35	2.07
Local Business Taxes	<u>11.56</u>	<u>4.66</u>	<u>3.67</u>	<u>2.85</u>	<u>2.00</u>	<u>3.40</u>
Total Indirect Taxes	18.17	7.41	5.86	4.61	3.35	5.47
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	13.30	7.04	6.42	5.59	5.16	6.14
Local Taxes (Direct & Indirect)	<u>25.82</u>	<u>10.08</u>	<u>7.48</u>	<u>5.94</u>	<u>4.27</u>	<u>7.19</u>
Total State-Local Taxes	<u>39.12</u>	<u>17.12</u>	<u>13.90</u>	<u>11.53</u>	<u>9.43</u>	<u>13.33</u>
<u>Addendum:</u>						
Federal Individual Income Taxes	2.52	8.94	12.91	15.86	27.92	16.10

^aBased on adjusted gross income.

category was less than one percent, or slightly less than one-fourth the rate for taxpayers with incomes of \$25,000 or more. For the overall state tax structure, the effective tax rates based on adjusted gross income ranged from 13.3 percent for the lowest stratum to 5.2 percent for the highest.

But, as already noted, the above disparities in the relative tax burdens between the low and high income categories are misleading because the adjusted gross income measure on which they are based understates the money income of households in the lowest income stratum, and therefore overstates their tax burden relative to that of other taxpayers.

Effective Tax Rates Based on Adjusted Broad Income

When the effective tax rates are expressed more appropriately in terms of adjusted broad income, the relative tax burdens and the measured regressivity of both the state and local tax structures are significantly reduced, as shown by the data in Table IX.

On this broad income basis, the measured regressivity -- the ratio of the effective rate for the lowest income class (under \$5,000) to that of the highest (\$50,000 and over) -- in all instances is reduced to less than one-half of that calculated in terms of adjusted gross income. For example, on broad income the relative burden of local taxes (direct and indirect) varied from 11.2 percent for the lowest income group to 3.7 percent for the highest, whereas when the adjusted gross income measure was used, the local burden on the poor was more than six times greater than that on the highest income group.

The regressivity of the state tax structure also was significantly smaller when measured against adjusted broad income. The effective state tax rate for households in the lowest income category was reduced from 13.3 percent to 5.8 percent and as such, was less than a third (rather than one and a half times) larger than the effective rate for those in the top income stratum.

Moreover, as already noted when the tax liabilities are compared against broad income, the total direct state tax structure--individual income and consumer expenditure taxes--actually proved to be progressive. The effective burden of the direct state taxes was 2.9,

TABLE IX. RELATIVE BURDEN OF MAJOR TAXES ON COLORADO RESIDENT TAXPAYERS,
TAXES EXPRESSED AS PERCENT OF ADJUSTED BROAD INCOME,
FISCAL YEAR 1982

	Major Income Classes: ^a					Total
	Under \$5,000	\$5,000 to \$15,000	\$15,000 to \$25,000	\$25,000 to \$50,000	\$50,000 and Over	
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	.27	1.02	1.63	1.94	2.30	1.69
Sales and Use	1.79	1.47	1.42	1.12	.77	1.22
Highway User	.54	.52	.46	.28	.19	.35
Alcoholic Beverage	.14	.11	.10	.06	.04	.08
Cigarette	.17	.11	.08	.04	.02	.06
Total	2.91	3.23	3.69	3.44	3.32	3.40
Local Taxes						
Residential Property	4.73	2.89	2.20	1.93	1.40	2.21
Sales and Use	1.20	.99	.95	.75	.52	.82
Specific Ownership	.12	.11	.10	.06	.04	.08
Cigarette	.15	.10	.07	.04	.02	.06
Total	6.20	4.09	3.32	2.78	1.98	3.17
Total Direct Taxes	9.11	7.32	7.01	6.22	5.30	6.57
<u>Indirect Taxes on Households:</u>						
State Business Taxes	2.88	2.07	1.90	1.58	1.18	1.73
Local Business Taxes	5.03	3.51	3.20	2.56	1.75	2.85
Total Indirect Taxes	7.91	5.58	5.10	4.14	2.93	4.58
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	5.79	5.30	5.59	5.02	4.50	5.13
Local Taxes (Direct & Indirect)	11.23	7.60	6.52	5.34	3.73	6.02
Total State-Local Taxes	17.02	12.90	12.11	10.36	8.23	11.15
<u>Addendum:</u>						
Federal Individual Income Taxes	1.10	6.74	11.25	14.24	24.37	13.46

^aBased on adjusted gross income.

percent for households in the "under \$5,000" income category compared to a burden of 3.3 percent for those in the "\$50,000 and over" category.

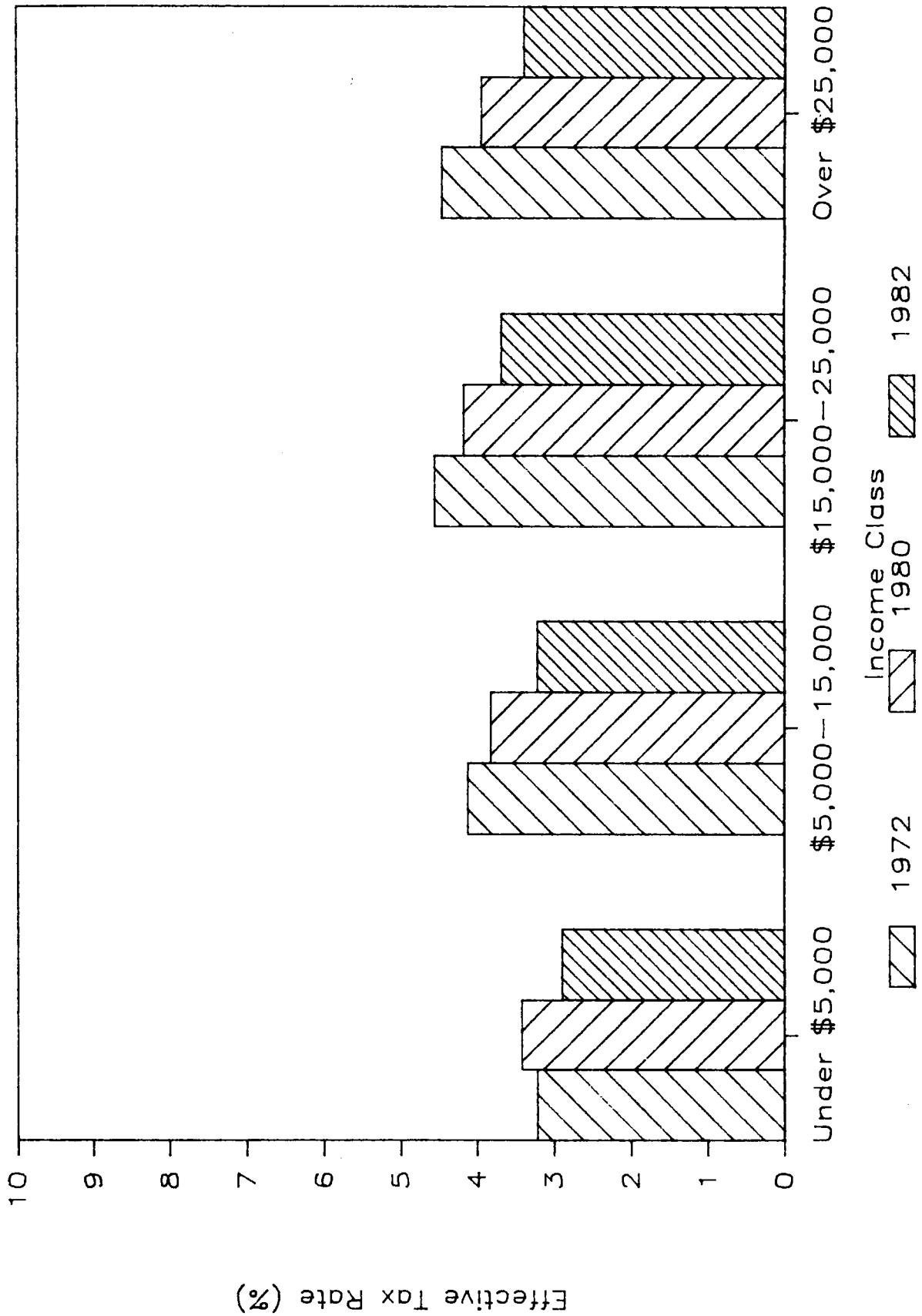
With regard to the individual income tax, the average effective rates of tax for the income classes successively increased from a low of less than 0.3 percent for taxpayers in the lowest income stratum to a high of 2.3 percent for those in the highest stratum. In other words, the relative state income tax burden of the rich was about eight times as large as that levied on households with reported adjusted gross incomes under \$5,000.

In order to make the analysis consistent with previous reports, the effective tax rate on broad income for all taxpayers with reported incomes of \$25,000 or more are compared with the other income strata. On this basis, the effective tax rates on broad income for fiscal years 1972, 1980 and 1982 are shown in the following tabulation and Charts V and VI:

Income Class	State Direct Tax	Local Direct Tax	Total Direct Tax
Under \$5,000			
1972	3.23	4.43	7.66
1980	3.43	5.13	8.56
1982	2.91	6.20	9.11
\$5,000 to \$15,000			
1972	4.13	3.98	8.11
1980	3.83	3.80	7.63
1982	3.23	4.09	7.32
\$15,000 to \$25,000			
1972	4.56	3.17	7.73
1980	4.18	3.18	7.36
1982	3.69	3.32	7.01
\$25,000 and over			
1972	4.46	2.10	6.56
1980	3.95	2.44	6.41
1982	3.40	2.51	5.91

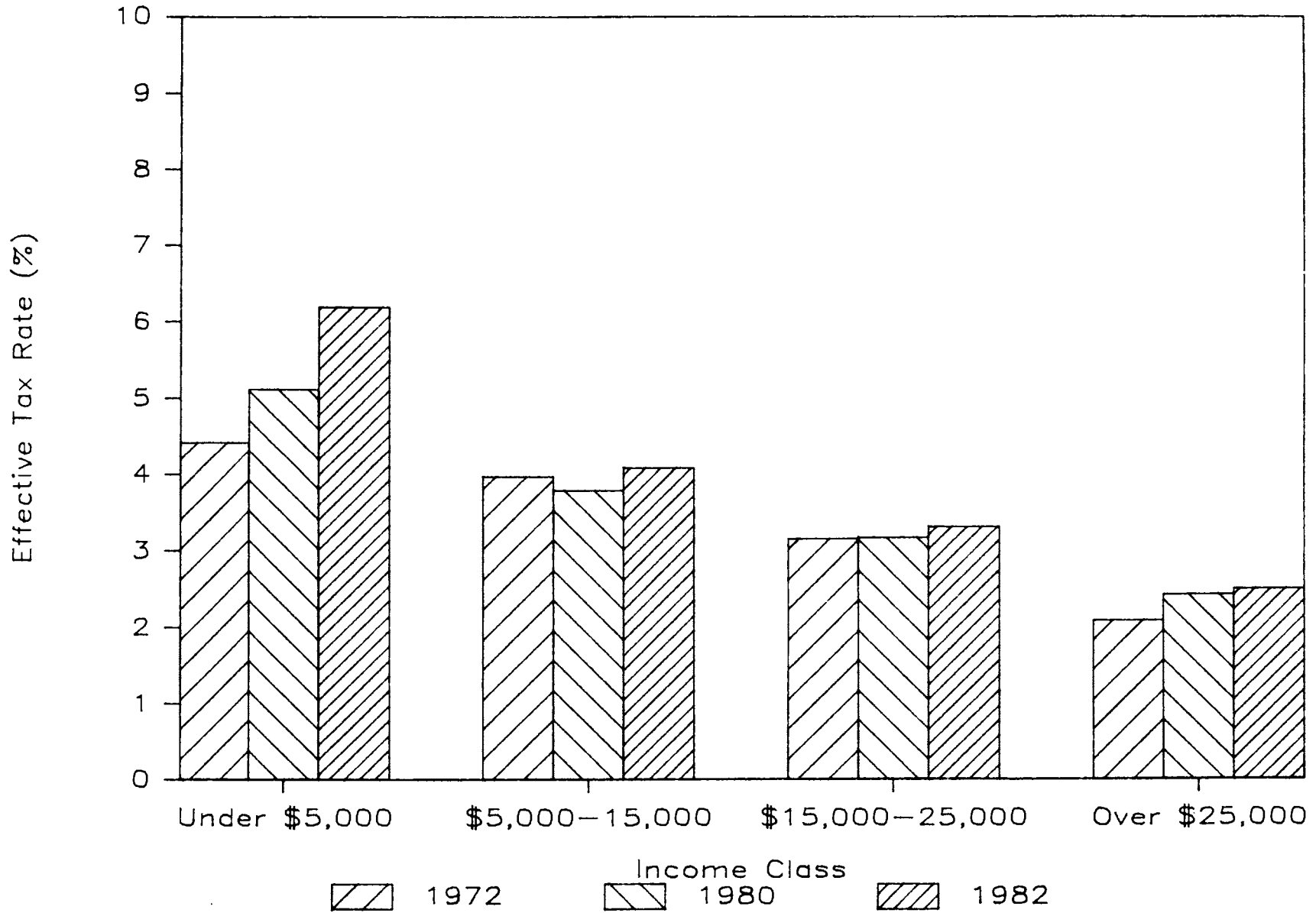
The data show the significant drop which has occurred in effective tax rates for direct state taxes for all income groups from

CHART V. COMPARISON OF EFFECTIVE TAX RATES FOR DIRECT STATE TAXES,
FISCAL YEARS 1972, 1980 AND 1982*



* Based upon Adjusted Broad Income

CHART VI. COMPARISON OF EFFECTIVE TAX RATES FOR DIRECT LOCAL TAXES,
FISCAL YEARS 1972, 1980 AND 1982*



* Based upon Adjusted Broad Income

1972 through 1982. In contrast, the effective rates on the local level, especially for low income households, have increased dramatically over this time period.

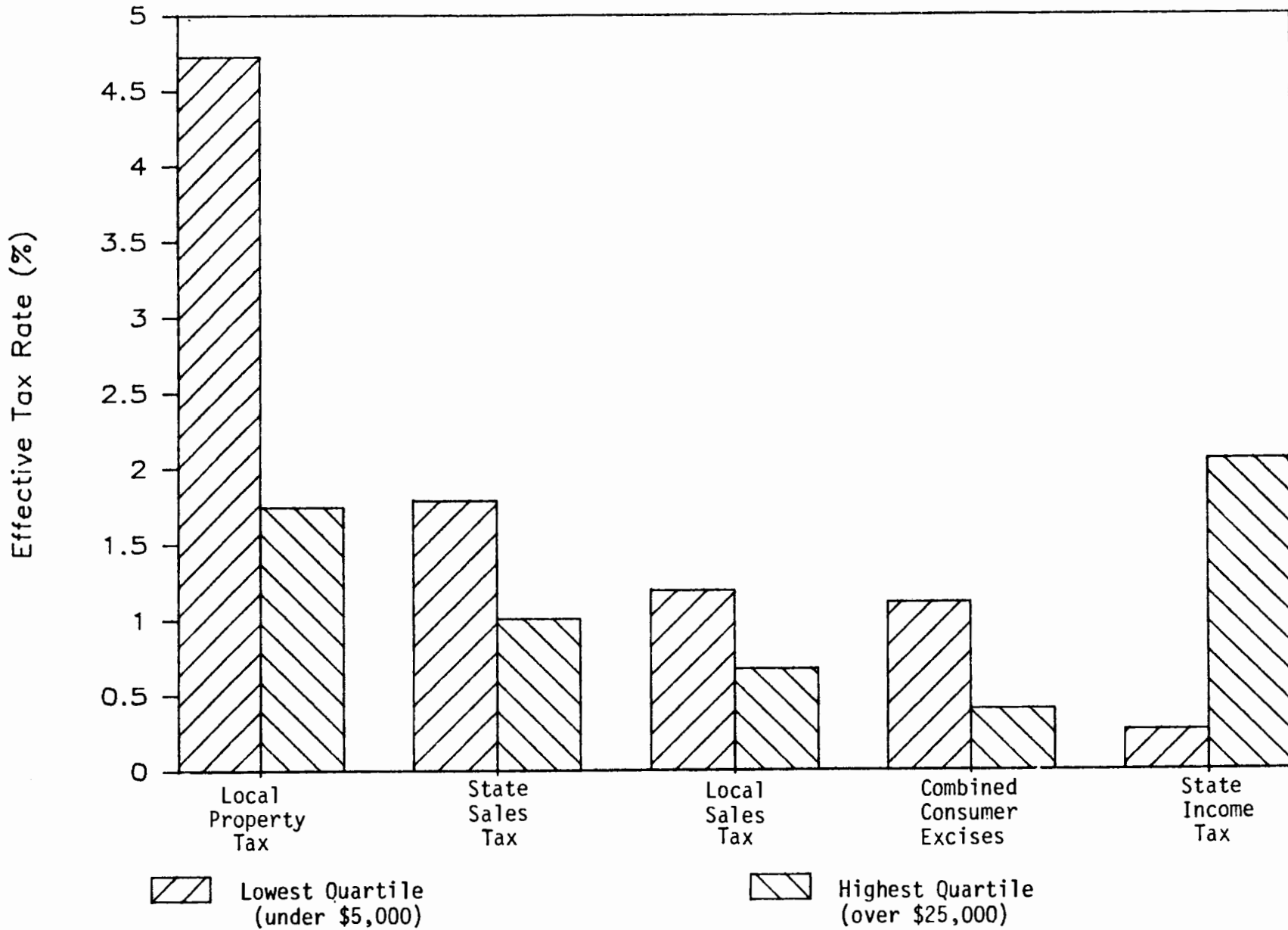
The marked growth in Colorado income during recent years, as noted, has shifted a large number of Colorado households into higher income classes. By fiscal year 1982 one-fourth of all households were in the "\$25,000 and over" category, and about one-fourth remained in the "under \$5,000" category. On the basis of this classification the 1982 effective tax rates for each of the major tax categories for the lowest and highest quartiles are compared as shown below and in Chart VII:

	Effective Tax Rates Expressed as Percentages of Adjusted Broad Income		
	Lowest Quartile (Under \$5,000)	Highest Quartile (\$25,000 and over)	Lowest Quartile as Percent of Highest
<u>State Taxes:</u>			
Individual Income	.27	2.06	.13
Sales Tax on Households	1.79	1.01	1.77
Excise Taxes on Households	<u>.85</u>	<u>.33</u>	<u>2.58</u>
Direct State Taxes	2.91	3.40	.86
Business Taxes	<u>2.88</u>	<u>1.45</u>	<u>1.99</u>
Total State Taxes	5.79	4.85	1.19
<u>Local Taxes:</u>			
Residential Property	4.73	1.75	2.70
Sales Tax on Households	1.20	.68	1.76
Excise Taxes on Households	<u>.27</u>	<u>.08</u>	<u>3.50</u>
Direct Local Taxes	6.20	2.51	2.47
Business Taxes	<u>5.03</u>	<u>2.29</u>	<u>2.20</u>
Total Local Taxes	11.23	4.80	2.34
<u>Total State-Local Taxes</u>	<u>17.02</u>	<u>9.65</u>	<u>1.76</u>

CTPS Progressivity Index

The following analysis has been based on an approximate measure of the regressivity or progressivity of each tax determined by expressing the relative tax burden (effective tax rate) of the lowest income stratum as a ratio to that of the highest. This "broad income"

CHART VII. COMPARISON OF EFFECTIVE TAX RATES FOR HOUSEHOLDS IN THE LOWEST AND HIGHEST QUANTILES, FISCAL YEAR 1982*



* Based upon Adjusted Broad Income

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index of progressivity/regressivity was first developed for the 1972 Colorado Tax Profile Study. If the ratio or index number is equal to 1.0, the tax should be considered proportional; if less than 1.0, the tax is progressive; and if more than 1.0, regressive.

As noted, in order to make the analysis consistent with previous reports, the index measure for fiscal year 1982, in terms of adjusted broad income, is based on the effective rates of the lowest income group (under \$5,000) compared with those of the two highest strata combined, i.e., with the effective rate for all taxpayers with reported adjusted income of \$25,000 or more. On this basis, the index values for each of Colorado's major state and local taxes, for the fiscal years 1972, 1980 and 1982 are summarized below:

	<u>CTPS Progressivity Index Based on Broad Income -- Tax Burden Ratios of Lowest to Highest Income Class</u>		
	<u>1972</u>	<u>1980</u>	<u>1982</u>
<u>State Taxes:</u>			
Individual Income	.16	.16	.13
Sales Tax on Households	1.85	2.04	1.77
Excise Taxes on Households	<u>2.21</u>	<u>2.47</u>	<u>2.58</u>
Direct State Taxes	.72	.87	.86
Business Taxes	<u>1.33</u>	<u>1.85</u>	<u>1.99</u>
Total State Taxes	.90	1.16	1.19
<u>Local Taxes:</u>			
Residential Property	2.13	2.06	2.70
Sales Tax on Households	2.00	2.03	1.76
Excise Taxes on Households	<u>2.52</u>	<u>3.11</u>	<u>3.50</u>
Direct Local Taxes	2.11	2.09	2.47
Business Taxes	<u>1.93</u>	<u>2.05</u>	<u>2.20</u>
Total Local Taxes	2.02	2.17	2.34
<u>Total State-Local Taxes</u>	<u>1.35</u>	<u>1.61</u>	<u>1.76</u>

The data clearly show that the Colorado state-local tax system has become more regressive during the decade since fiscal year 1972. On the broad income basis, the CTPS progressivity index number for the combined state-local structure rose from 1.35 in 1972 to 1.76 in fiscal year 1982. This means that in the latter year the combined state-local relative tax burden for households comprising the lowest quartile

(incomes under \$5,000) was approximately three-fourths larger than that imposed on households in the top quartile (incomes of \$25,000 or more). A decade earlier the relative burden on the poor was only about one-third heavier than that on the rich. This increased regressivity of the overall Colorado tax structure must be attributed primarily to the local tax structure. In 1972 the relative local tax burden of the lowest income stratum was twice that of the highest, by 1982 it had become almost two and a third times larger.

On the state level, the CTPS index for the total state tax burden continued to increase but at a significantly smaller rate in recent years--from 1.16 in fiscal 1980 to 1.19 in fiscal 1982. However, it appears that overall the state tax structure has remained essentially proportional during this decade. The progressivity of the direct state tax component has largely offset the regressivity of the indirect business tax component. For example, although the regressivity of state consumer excise taxes--highway user, cigarette and alcoholic beverages--has increased since 1980, the CTPS index numbers for both the state retail sales and individual income tax have decreased. In short, the state sales tax has become less regressive and the state income tax more progressive over the past two years.

It is also important to note that the state income tax continues to be the only significant progressive tax in the entire battery of state-local taxes levied in Colorado. Over the decade, the CTPS income tax index number has remained remarkably stable and with regard to this aspect, the income tax has shown the least variation of any of the major state-local taxes since 1972 when these studies were first initiated. The CTPS income tax index was .16 in both fiscal years 1972 and 1980, and dropped to .13 in fiscal year 1982. In other words, the increased progressivity of the state income tax for the latter year means that the relative income tax burden for households in the lowest income stratum (under \$5,000) was only about one-eighth that of the relative burdens imposed on taxpayers in the top income category (\$25,000 and over), whereas in the prior years the relative burden of the poor was about one-sixth that of the rich. This increased progressivity of the state income tax must primarily be attributed to the indexation of the base and rate provisions, optional itemization and a variety of other income tax revision measures introduced since 1978.¹¹

In summary, it appears that despite the significant state income tax reductions enacted in recent years, the legislated progressivity of the state income tax has actually been improved and continues to offset to a large degree the regressivity of consumer expenditure taxes and other levies comprising the Colorado state tax structure.

Text Footnotes

1. See Appendix A, Table A-1 for a summary of officially reported state and local net tax collections for fiscal years 1972-1982 and Table A-2 for a summary of these taxes for the same years adjusted to a CTPS resident tax liability basis for purposes of this study.
2. See Appendix A, Table A-1. Net state tax collections are exclusive of state inheritance and gift taxes, hunting and fishing licenses, and pari-mutuel betting taxes which totaled \$45.8 million in fiscal year 1982.
3. Reconciliation of reported net tax collections with adjusted tax liabilities of resident taxpayers on the state level is shown in Appendix A, Table A-3, and on the local level in Table A-4.
4. See Appendix A for the methodology and assumptions used for the allocations of specific taxes between households and businesses.
5. A similar offsetting assumption is not required for the direct taxation of non-residents. As indicated, an estimate of the Colorado taxes paid by non-residents (e.g., tourists in Colorado) has been excluded from the adjusted totals of state and local taxes. Similarly, taxes paid elsewhere by Colorado residents as out-of-state tourists are not considered part of the Colorado tax burden since they are not imposed by Colorado jurisdictions.
6. A companion study to this report presents a detailed analysis of the state individual income tax. See Colorado Department of Revenue, Colorado Statistics of Income, Individual Income Tax Returns Filed in Fiscal Year 1982, Colorado Legislative Council, Research Publication No. 279 (April 1983), Denver, Colorado.
7. For purposes of this study, all non-resident tax returns were excluded. They represented two percent of the returns filed and one percent of the reported income and tax liability.
8. U.S. Department of Commerce, Survey of Current Business, August 1982, p. 52.
9. See Appendix B for a description and derivation of the "adjusted broad income" measure.
10. The relatively small average income tax for households in the lowest quartile is partly due to the fact that three out of every five tax returns in this income category were nontaxable returns.
11. See Analysis of the Colorado Income Tax: Inflation, Indexation, and Credits, Colorado Legislative Council, Research Publication No. 260, (January 1981), Denver, Colorado, pp. 13-22.

Appendices

APPENDIX A

METHODOLOGY USED FOR ADJUSTMENT
AND APPORTIONMENT OF STATE AND LOCAL TAXES
BETWEEN HOUSEHOLDS AND BUSINESS

The state and local tax liabilities of Colorado resident taxpayers for fiscal year 1980 used as the basis for the present study were developed from original data obtained from a variety of sources. The state and federal individual income tax data for Colorado households were derived from a stratified random sample of 23,320 state tax returns. A description of the sampling methodology and statistical reliability of the income tax data are provided in Appendix B of the 1982 Colorado Statistics of Income report on individual income tax returns filed in fiscal year 1982. State and local revenue data on a collection basis were obtained from the Colorado State Department of Revenue, the Division of Accounts and Control, the Division of Property Taxation, the Department of Local Affairs, and the City of Denver Finance Office. These data are summarized and presented in Table A-1. In order to put the data on a resident liability basis, the reported collections were adjusted for nonallocable and nontax revenues, taxes paid by non-resident taxpayers, and vendor discounts on tax collections. The income tax data also were adjusted for the cash flow difference between collections and liabilities. A summary of the state and local taxes as adjusted for this study is presented in Table A-2.

Adjustment and Classification of State Taxes

The adjustments made in state taxes and the allocation of the adjusted taxes between those levied on households (direct taxes) and those levied on business (indirect taxes) are presented in Table A-3.

The base figures for "Reported Net Tax Collections" are exclusive of nonallocable state inheritance and gift taxes, hunting and fishing license fees and pari-mutuel betting taxes. All other nonallocable and/or nontax revenues were treated as adjustments to the reported net collections. These items represented sales tax assessments, penalties

and interest, audit deficiencies, and sales and motor vehicle taxes collected by the Revenue Department for local jurisdictions. These adjustments amounted to \$23.0 million in fiscal 1982.

Income tax collections for any given year in an expanding economy will exceed the actual income tax liability incurred on the previous year's income because of tax withholding and declaration of estimated taxes. In fiscal year 1982 the reported net income tax collections were significantly larger than liabilities. There also was an excess cash flow from the severance tax. Combined, these adjustments amounted to \$84.8 million or five percent of the reported state collections.

The estimates of non-resident taxes by major source were as follows:

<u>Non-Resident Taxes</u>	<u>Dollar Amounts in Millions</u>		
	<u>1977</u>	<u>1980</u>	<u>1982</u>
Individual income taxes	\$ 2.1	\$ 3.8	\$ 4.8
Retail sales taxes	19.9	26.9	32.4
Motor fuel taxes	10.6	11.4	15.7
Cigarette taxes	1.5	1.5	1.9
Alcoholic beverage taxes	<u>2.4</u>	<u>2.6</u>	<u>3.1</u>
Total	\$36.5	\$46.2	\$57.9

The non-resident individual income tax was derived from the CTPS income tax analysis. The non-resident sales tax estimate was based on information provided by the Travel Marketing Section of the Colorado Division of Commerce and Development and the Colorado Visitors Bureau. The ratio of non-resident sales tax collections to total sales tax collections directly allocated to households was used as the basis for estimating non-resident excise taxes on motor fuel, cigarettes and alcoholic beverages.

The final adjustment for purposes of resident tax burden analysis was the addition of vendor discounts on sales, motor fuel and cigarette taxes retained by merchants as compensation for their costs of tax collection. This component of the tax burden is not included in either the gross or net taxes reported by the Department of Revenue. Vendor discounts on state tax collections for fiscal 1982 were as follows:

<u>Vendor Discounts on Resident Taxpayers</u>	<u>Dollar Amounts in Millions</u>		
	<u>1977</u>	<u>1980</u>	<u>1982</u>
Retail sales taxes	\$10.4	\$15.9	\$18.0
Motor fuel taxes	2.4	2.7	3.2
Cigarette taxes	<u>.7</u>	<u>.7</u>	<u>.7</u>
Total	\$13.5	\$19.3	\$21.9

On the basis of all of the above adjustments, the estimated state total tax liability averaged 91 percent of the reported net tax collections.

Table A-3 also shows the apportionment of the adjusted state taxes between resident households and business. For the purposes of this study, the individual income tax and excises on cigarettes and alcoholic beverages were treated as direct levies on Colorado resident households. The corporate income tax, insurance, severance and all other franchise and regulatory business taxes were classified as indirect or business taxes since such taxes ultimately are borne by individuals in the form of increased market prices or decreased dividends or undistributed corporate earnings. The remaining major state taxes -- the sales and use tax and the highway user taxes -- were apportioned between these two broad tax categories on the basis of information provided by the Research and Statistics Section of the Colorado Department of Revenue. The apportionment of state sales and highway user taxes between households and business firms for fiscal year 1982 are shown in Table A-5.

Adjustment and Classification of Local Taxes

Tax collections of local governments were treated in a manner similar to that described above for adjusting and allocating state taxes. Colorado local governments generally operate on a calendar year basis and the most recent data available on a uniform statewide basis were for calendar year 1981 which overlaps fiscal year 1982 by six months. A summary of the adjustments made to these levies and their apportionment between households and business are shown in Table A-4.

The specific adjustments made in local taxes for the CTPS study were as follows: the exclusion of the employee share of the Denver city occupation tax since these levies could not be allocated by

income classes; the exclusion of estimated non-resident sales and cigarette taxes based on the method used for computing non-resident state taxes; the reduction of the residential property tax by the old age property tax credits for the year; and the addition of vendor discounts on local sales and cigarette taxes.

The adjusted local tax totals also were apportioned between households and business firms. Cigarette taxes were classified as direct levies; all utility, franchise and regulatory taxes as indirect. The specific ownership tax was allocated on the basis of motor vehicle licenses. Also, the two major sources of local tax revenues -- property and sales taxes -- were separately apportioned between households and business. The local sales tax was apportioned on the basis of the ratios described above for allocating the state sales and tax. The allocation of the residential portion of the property tax by income class is shown in Table A-6. The allocation assumed that property taxes on renter-occupied housing units were shifted forward and that such average taxes generally were smaller than those on owner-occupied units of families of comparable income and household size. The 1982 Colorado Statistics of Income report on individual income tax returns filed in fiscal year 1982 provided the basic data on household real estate tax deductions taken on itemized returns classified by adjusted gross income. The ratio of taxpayers reporting such deductions to the total number of taxpayers in each income stratum varied directly and significantly with the level of income.

TABLE A-1. SUMMARY OF STATE AND LOCAL TAXES AS REPORTED
BY STATE AGENCIES,^a FISCAL YEARS 1972-1982

	Fiscal Years				
	1972	1977	1980	1981	1982
(Money amounts in millions of dollars)					
<u>State Taxes</u>					
Income Taxes ^b	\$ 210.0	\$ 436.0	\$ 600.5	\$ 543.1	\$ 641.0
Sales and Use Taxes	187.8	342.9	509.4	528.6	612.9
Highway User Taxes	114.6	145.4	167.0	165.0	196.6
Insurance Tax	16.2	27.8	39.9	40.9	46.7
Cigarette Taxes	14.4	17.7	17.9	19.4	19.2
Alcohol Beverage Taxes	13.4	19.9	23.6	24.1	25.3
Severance Taxes	.6	2.2	23.9	32.6	49.2
Other Business Taxes	11.4	17.3	16.0	19.6	21.6
Total State Taxes	\$ 568.4	\$1,009.2	\$1,398.2	\$1,373.2	\$1,612.5
<u>Local Taxes</u>					
Property Taxes	\$ 492.0	\$ 791.1	\$ 977.4	\$1,120.6	\$1,217.4
Sales and Use Taxes	72.0	170.4	285.0	326.3	406.7
Cigarette Taxes	3.0	15.6	16.9	17.7	18.0
Specific Ownership Tax	10.8	16.2	24.5	27.0	31.0
Denver Occupation Tax	9.2	11.5	13.0	13.2	14.1
Other Business Taxes	17.9	29.4	50.9	58.8	69.6
Total Local Taxes	\$ 604.9	\$1,034.2	\$1,367.7	\$1,563.6	\$1,756.8
<u>Total State and Local Taxes</u>					
Property Taxes	\$ 492.0	\$ 791.1	\$ 977.4	\$1,120.6	\$1,217.4
Sales and Use Taxes	259.8	513.3	794.4	854.9	1,019.6
Income Taxes ^b	210.0	436.0	600.5	543.1	641.0
Highway User Taxes ^c	125.4	161.6	191.5	192.0	227.6
Other Business Taxes ^d	55.3	88.2	143.7	165.0	201.2
Other Excise Taxes ^e	30.8	53.2	58.4	61.2	62.5
Total State and Local Taxes	<u>\$1,173.3</u>	<u>\$2,043.4</u>	<u>\$2,765.9</u>	<u>\$2,936.8</u>	<u>\$3,369.3</u>

^aAs reported by the Colorado Department of Revenue, the Division of Accounts and Control, the Division of Property Taxation and the Department of Local Affairs.

^bIncludes surtax and corporate income tax.

^cIncludes local specific ownership tax.

^dIncludes insurance, severance, corporate franchise, occupation, miscellaneous regulatory business taxes.

^eCigarette and alcoholic beverage taxes.

TABLE A-2. SUMMARY OF COLORADO STATE AND LOCAL TAXES
AS ADJUSTED FOR COLORADO TAX PROFILE STUDY,
FISCAL YEARS 1972-1982

	Fiscal Years				
	1972	1977	1980	1981	1982
	(Money amounts in millions of dollars)				
<u>State Taxes</u>					
Income Taxes ^a	\$ 189.5	\$ 390.0	\$ 537.3	\$ 523.0	\$ 558.7
Sales and Use Taxes	176.9	333.1	495.2	504.5	584.4
Highway User Taxes	109.1	137.3	158.2	156.8	184.1
Insurance Tax	16.2	27.8	39.9	40.9	46.7
Cigarette Taxes	13.6	16.8	17.1	18.2	18.1
Alcohol Beverage Taxes	11.8	17.5	21.0	21.0	22.2
Severance Taxes	.6	2.2	21.2	27.7	41.9
Other Business Taxes	8.0	13.8	10.9	11.3	12.7
Total State Taxes	\$ 525.7	\$ 938.6	\$1,300.8	\$1,303.4	\$1,468.7
<u>Local Taxes</u>					
Property Taxes	\$ 492.0	\$ 782.2	\$ 961.7	\$1,102.6	\$1,201.9
Sales and Use Taxes	68.3	165.1	277.5	315.6	394.3
Cigarette Taxes	2.9	14.8	16.1	16.6	16.9
Specific Ownership Tax	10.8	16.2	24.5	27.0	31.0
Denver Occupation Tax	4.1	5.1	5.8	5.8	6.2
Other Business Taxes	17.9	29.4	50.8	58.8	69.6
Total Local Taxes	\$ 596.0	\$1,012.8	\$1,336.4	\$1,526.4	\$1,720.0
<u>Total State and Local Taxes</u>					
Property Taxes	\$ 492.0	\$ 782.2	\$ 961.7	\$1,102.6	\$1,201.9
Sales and Use Taxes	245.2	498.2	772.7	820.1	978.7
Income Taxes ^a	189.5	390.0	537.3	523.0	558.7
Highway User Taxes ^b	119.9	153.5	182.7	183.8	215.1
Other Business Taxes ^c	46.8	78.4	128.6	144.5	177.1
Other Excise Taxes ^d	28.3	49.1	54.2	55.8	57.2
Total State and Local Taxes	<u>\$1,121.7</u>	<u>\$1,951.4</u>	<u>\$2,637.2</u>	<u>\$2,829.8</u>	<u>\$3,188.7</u>

^aIncludes surtax and corporate income tax.

^bIncludes local specific ownership tax.

^cIncludes insurance, severance, corporate franchise, occupation, miscellaneous regulatory business taxes.

^dCigarette and alcoholic beverage taxes.

TABLE A-3. SUMMARY OF COLORADO STATE TAXES
 ALLOCATED BETWEEN HOUSEHOLDS AND BUSINESS,
 FISCAL YEARS 1972-1982

	Fiscal Years				
	1972	1977	1980	1981	1982
	(Money amounts in millions of dollars)				
<u>Reported Net Tax Collections</u>	\$568.4	\$1,009.2	\$1,398.2	\$1,373.2	\$1,612.5
<u>Adjustments</u>					
Non-tax Revenues	-5.6	-7.6	-8.2	-17.2	-23.0
Excess of tax collections over tax liabilities	-19.5	-40.0	-62.3	-20.7	-84.8
Non-resident tax collections	-27.2	-36.5	-46.2	-50.4	-57.9
Vendor's discounts on sales and excise taxes	<u>+9.6</u>	<u>+13.5</u>	<u>+19.3</u>	<u>+18.5</u>	<u>+21.9</u>
Total Adjustments	-42.7	-70.6	-97.4	-69.8	-143.8
<u>Total State Taxes</u>	\$525.7	\$ 938.6	\$1,300.8	\$1,303.4	\$1,468.7
<u>Taxes on Resident Households</u>					
Individual Income ^a	\$156.2	\$ 332.5	\$ 437.6	\$ 424.0	\$ 483.1
Sales and use	104.3	218.7	304.8	300.7	348.4
Highway User ^b	68.7	78.5	87.8	85.0	101.2
Cigarette	13.6	16.8	17.1	18.2	18.1
Alcohol Beverage	<u>11.7</u>	<u>17.5</u>	<u>21.0</u>	<u>21.0</u>	<u>22.2</u>
Total Household Taxes	\$354.5	\$ 664.1	\$ 868.3	\$ 848.9	\$ 973.0
<u>Taxes on Business</u>					
Corporate Income ^c	\$ 33.3	\$ 57.5	\$ 99.7	\$ 99.0	\$ 75.6
Sales and Use	72.6	114.4	190.4	203.8	236.0
Highway User ^d	40.5	58.8	70.4	71.8	82.8
Insurance	16.2	27.8	39.9	40.9	46.7
Severance	.6	2.2	21.2	27.7	41.9
Other Business Taxes ^e	<u>8.0</u>	<u>13.8</u>	<u>10.9</u>	<u>11.3</u>	<u>12.7</u>
Total Business Taxes	<u>\$171.2</u>	<u>\$ 274.5</u>	<u>\$ 432.5</u>	<u>\$ 454.5</u>	<u>\$ 495.7</u>

^aIncludes surtax.

^bIncludes allocated portion of fuel taxes, motor vehicle licenses and operator's fees, and safety inspections and other motor vehicle fees.

^cIncludes fiduciaries.

^dIn addition to allocated portion of highway user taxes listed above, includes special fuel and gross ton mile taxes.

^eIncludes franchise and all other regulatory business taxes.

TABLE A-4. SUMMARY OF COLORADO LOCAL TAXES
ALLOCATED BETWEEN HOUSEHOLDS AND BUSINESS,
FISCAL YEARS 1972-1982

	Fiscal Years				
	1972	1977	1980	1981	1982
	(Money amounts in millions of dollars)				
<u>Reported Net Tax Collections</u>	\$604.9	\$1,034.2	\$1,367.7	\$1,563.7	\$1,756.8
<u>Adjustments</u>					
Nonallocable taxes ^a	-5.1	-6.4	-7.3	-7.4	-7.9
Non-resident Taxes	-6.0	-11.4	-17.1	-22.4	-25.8
Old age property tax credit	--	-8.9	-15.7	-17.9	-15.4
Vendor's discounts on sales and excise taxes	+2.2	+5.3	+8.8	+10.5	+12.4
Total Adjustments	-8.9	-21.4	-31.3	-37.2	-36.8
<u>Total Local Taxes</u>	\$596.0	\$1,012.8	\$1,336.4	\$1,526.4	\$1,720.0
<u>Taxes on Resident Households</u>					
Residential Property	\$254.2	\$ 382.0	\$ 479.8	\$ 589.4	\$ 633.4
Sales and Use	42.2	110.7	176.2	187.5	233.8
Cigarette	2.9	14.8	16.1	16.6	16.9
Specific Ownership Tax	7.6	11.3	17.2	18.9	21.7
Total Household Taxes	\$306.9	\$ 518.9	\$ 689.3	\$ 812.4	\$ 905.8
<u>Taxes on Business</u>					
Non-Residential Property	\$237.8	\$ 400.2	\$ 481.9	\$ 513.2	\$ 568.5
Sales and Use	26.1	54.4	101.3	128.1	160.5
Other Business Taxes ^b	25.2	39.3	63.9	72.7	85.2
Total Business Taxes	\$289.1	\$ 493.9	\$ 647.1	\$ 714.0	\$ 814.2

^aRepresents employee's share of Denver Occupation Tax.

^bIncludes business shares of Specific Ownership Tax and Denver Occupation Tax.

TABLE A-5. APPORTIONMENT OF COLORADO STATE SALES AND
HIGHWAY USER TAXES BETWEEN HOUSEHOLDS AND BUSINESS,
FISCAL YEAR 1982

	Ratio of Households to Business	Dollar Amounts (Thousands)		
		Total	Households	Business
A. Sales and Use Taxes:				
Food and apparel	100/0	\$ 45,444	\$ 45,444	--
Personal services and miscellaneous retail trade	95/5	105,724	100,437	5,287
General mdse., furniture, applicances, autos, auto parts and accessories, hotels and lodgings	90/10	138,791	124,913	13,878
Eating and drinking places	80/20	54,070	43,256	10,814
Hotels and lodging	60/40	13,743	8,246	5,497
Finance, insurance and real estate, NCE	50/50	3,815	1,908	1,907
Electric, gas, communications, trans- portation, utilities	25/75	32,811	8,203	24,608
Bldg. materials, hardware and farm equipment	15/85	36,627	5,494	31,133
Agr., mining, construction, manuf., whsle. trade	0/100	<u>94,647</u>	<u>--</u>	<u>94,647</u>
Net Sales Tax		\$525,672	\$337,901	\$187,771
Less: Non-resident tax	100/0	-32,400	-32,400	--
Plus: Net use tax	43/57	73,127	31,737	41,390
Vendor's Discounts (Res)	62/38	<u>17,962</u>	<u>11,128</u>	<u>6,834</u>
Total Resident Sales and Use Tax	60/40	<u>\$584,361</u>	<u>\$348,366</u>	<u>\$235,995</u>
B. Highway User Taxes				
Motor fuel taxes	75/25	\$122,049	\$ 91,537	\$ 30,512
Motor vehicle operators licenses and other fees	70/30	33,431	23,402	10,029
Special fuel and ton-mile taxes	0/100	<u>41,076</u>	<u>--</u>	<u>41,076</u>
Reported Highway User Taxes		\$196,556	\$114,939	\$ 81,617
Less: Non-resident motor fuel taxes	100/0	-15,731	-15,731	--
Plus: Vendor's discounts on motor fuel	72/28 ^a	2,837	2,038	799
Vendor's discounts on special fuel	0/100	<u>432</u>	<u>--</u>	<u>432</u>
Total Resident Highway User Taxes	55/45	<u>\$184,094</u>	<u>\$101,246</u>	<u>\$ 82,848</u>

^aInclusive of non-residents, the ratio was 75/25.

TABLE A-6. DERIVATION OF COLORADO RESIDENTIAL PROPERTY TAXES,
FISCAL YEAR 1982

	Adjusted Gross Income Classes					Total
	Under \$5,000	\$5,000 to \$15,000	\$15,000 to \$25,000	\$25,000 to \$50,000	\$50,000 and Over	
<u>Number of Resident Returns:</u>						
With real estate tax deductions on itemized returns	13,075	79,711	127,457	235,106	53,616	508,965
All other households	<u>332,353</u>	<u>318,003</u>	<u>129,345</u>	<u>46,369</u>	<u>4,002</u>	<u>820,072</u>
Total number of households	335,428	397,714	256,508	281,475	57,618	1,329,037
Percent of total with real estate tax deductions on itemized returns	3.9%	20.0%	49.6%	83.5%	93.1%	38.3%
<u>Average Property Taxes:</u>						
Average property tax on returns with real estate tax deductions	\$ 642	\$ 552	\$ 578	\$ 745	\$ 1,282	--
Average property tax imputed to all other households	\$ 249	\$ 313	\$ 388	\$ 552	\$ 1,140	--
<u>Total Property Taxes (in Thousands):</u>						
Households with itemized deductions	\$ 8,388	\$ 43,968	\$ 73,699	\$175,263	\$68,747	\$ 370,065
All other households	<u>80,266</u>	<u>99,560</u>	<u>50,186</u>	<u>25,596</u>	<u>4,562</u>	<u>260,170</u>
Total Tax Unadjusted	\$88,654	\$143,528	\$123,885	\$200,859	\$73,309	\$ 630,235
Percent Distribution of Total Tax	14.07%	22.77%	19.66%	31.87%	11.63%	100.0%
Distribution of CTPS Property Tax	\$91,294	\$147,745	\$127,566	\$206,791	\$75,463	\$ 648,859
Less: Old Age Property Tax Credit	<u>-14,796</u>	<u>-646</u>	<u>--</u>	<u>--</u>	<u>--</u>	<u>-15,442</u>
Net Property Tax	<u>\$76,498</u>	<u>\$147,099</u>	<u>\$127,566</u>	<u>\$206,791</u>	<u>\$75,463</u>	<u>\$ 633,417</u>

APPENDIX B

DERIVATION OF HOUSEHOLD INCOME AND ALLOCATION
OF TAXES BY MAJOR INCOME CLASSES

The extent to which a "tax profile" corresponds to the actual burden of state and local taxes borne by the poor, the middle class and the rich depends not only on how accurately the income and tax data are measured, but on the validity of the income concept and the reasonableness of the tax allocators developed for the analysis. This appendix describes both the income measure and tax allocations used for this study.

Income Measures for Tax Burden Analysis

It is generally recognized that the adjusted gross income reported on tax returns is not an adequate measure of income for tax burden analysis because of differences between the economic and statutory definitions of income. The latter excludes various forms of money income which are considered to be primarily transfer payments, such as public and private welfare payments, social security payments, veterans benefits, and unemployment compensation. In contrast, the economic concept of income (e.g., the personal income measure in the national income accounts), in addition to transfer payments, includes sundry forms of imputed income, such as imputed rent on owner-occupied residences and interest on insurance and savings. The magnitude of the difference between these measures for Colorado is indicated by the fact that for fiscal 1982 the total adjusted gross income reported on state income tax returns represented only 72 percent of the total personal income for Colorado as estimated by the U.S. Department of Commerce.¹

Intermediate measures of money income also have been based on sample surveys conducted by government agencies. Such money income measures are generally in accord with the popular concept of income since they exclude imputed income but include nontaxable money transfers as well as tax exempt interest, dividends and capital gains.

In order to obtain an alternative measure which would more closely correspond to the conventional concept of income and provide a broader base than the adjusted gross income reported on Colorado income tax returns, an adjusted broad income measure was developed. A recent study by the Bureau of the Census provides a detailed analysis of household money income for all families and unrelated individuals in the United States for 1981.² In this report the sources of income were classified by Census money income levels. After converting the money income into corresponding adjusted gross income classes, the Census allocation of transfer income was applied to the total money transfers received by Colorado households in 1981, as estimated by the U.S. Department of Commerce.³

In addition to the above money transfer income adjustment, the CTPS adjusted broad income measure includes an estimate of the tax exempt capital gains, dividends, interest and other money income statutorily excluded from adjusted gross income. An estimate of such income for Colorado was derived from the "tax expenditure" data presented in the U.S. Treasury, Special Budget Analysis, Fiscal Year 1981.⁴ Non-transfer money income excluded from adjusted gross income, in turn, was allocated among the income strata on the basis of the distribution of family property income reported by the Bureau of the Census and excluded capital gains income reported by the Internal Revenue Service.⁵

A summary of the final adjustments made to the CTPS 1982 adjusted gross income in order to derive the corresponding adjusted broad income used as the alternative base is shown in the following table:

TABLE B-1. DERIVATION OF ADJUSTED BROAD INCOME FOR THE
COLORADO TAX PROFILE STUDY, FISCAL YEAR 1980

	A	B	C	D	E
Income Classes	Average Adjusted Gross Income	Ratio of Excluded Tax Exempt Income ^a	Ratio of Excluded Transfer Income	Income Expansion Factor (1+B+C)	Average Broad Income (AxD)
Under \$5,000	\$ 2,098	.0331	1.2658	2.2989	\$ 4,822
\$5,000 to \$15,000	9,653	.0367	.2901	1.3268	12,808
\$15,000 to \$25,000	19,715	.0358	.1119	1.1477	22,627
\$25,000 to \$50,000	34,181	.0433	.0702	1.1135	38,061
\$50,000 and over	81,442	.0986	.0471	1.1457	93,308
Totals ^b	\$17,998	.0512	.1450	1.1962	\$21,528

^aCapital gains, dividends and interest on public debt.

^bWeighted totals and ratios based on total dollar amounts.

The Consumer Expenditure Profile

In order to allocate Colorado state and local expenditure taxes on retail sales, cigarettes, liquor and gasoline as well as business taxes shifted forward to consumers, it was necessary to develop an appropriate consumer expenditure profile of Colorado household expenditures, classified by household income level. The most comprehensive data on consumer spending by American households are provided by the U.S. Bureau of Labor Statistics' consumer expenditure surveys for 1972 and 1973.⁶ The household expenditure and income data contained in these reports were used as the basis for allocating the sales, excise and indirect business taxes among households after the income measures were made comparable and the expenditure outlays were updated for price inflation. In accord with the definitions of taxable commodities and services under Colorado's present statutes, the estimated average household expenditures were classified into taxable and nontaxable categories. These average data were then used to derive the total expenditures for each major category of spending, classified by income level, in order to obtain the current patterns of consumption expenditures of Colorado households.

The specific 1982 consumer expenditure-income ratios developed for the CTPS analysis are summarized below:

TABLE B-2. RATIOS OF CONSUMER EXPENDITURES TO ADJUSTED GROSS AND BROAD INCOMES USED IN THE COLORADO TAX PROFILE STUDY, FISCAL YEAR 1982

Income Classes	Colorado Consumer Expenditures as Ratios of:			
	Adjusted Gross Income		Adjusted Broad Income	
	Taxable Expenditures	Total Expenditures	Taxable Expenditures	Total Expenditures
Under \$5,000	1.424	3.403	.619	1.480
\$5,000 to \$15,000	.675	1.372	.509	1.034
\$15,000 to \$25,000	.564	1.080	.492	.941
\$25,000 to \$50,000	.433	.838	.389	.752
\$50,000 and over	.305	.589	.266	.514
Total	.504	1.002	.421	.837

Tax Allocators Used for Burden Analysis

The allocations of individual state and local taxes by income class were made on the following basis:

- Individual income tax -- allocation obtained directly from the CTPS independent analysis of a stratified, random sample of 1981 Colorado individual income tax returns filed in fiscal year 1982 and prepared by the Department of Revenue for the companion report, Colorado Statistics of Income, 1982. A description of the sample and its statistical reliability is presented in Appendix B of that report.
- Sales and use taxes -- the direct portions of state and local sales taxes were allocated on the basis of ratios of taxable consumer expenditures to adjusted gross income developed from U.S. Bureau of Labor Statistics, 1973 Survey of Consumer Expenditures updated for inflation. The indirect portions of these taxes were allocated by total consumer expenditure ratios since such taxes represent business costs assumed to have been shifted forward to consumers.

- Excise taxes -- the cigarette, alcoholic beverage, specific ownership and the direct portions of highway user taxes also were allocated on the basis of updated Survey of Consumer Expenditure data. Ratios of consumer expenditures for these particular items to adjusted gross income were developed and applied to the CTPS tax data. The indirect portion of the highway user taxes was allocated on the basis of total consumer expenditure ratios.
- Property taxes -- the allocations of residential property taxes by income classes were based on the CTPS individual income tax analysis which provided detailed data on the number and amount of real estate tax deductions reported on itemized returns. Non-residential property taxes were allocated on the same basis as other business taxes, i.e., the ratios of total consumer expenditures to adjusted gross income.
- Corporate income tax -- one-half of this tax was assumed to be shifted forward to consumers and allocated on the same basis as the other indirect taxes described above. The remainder was assumed to be borne by equity stockholders and allocated on the basis of the distribution of family property income reported by the Bureau of the Census.
- Other business taxes -- this category includes all taxes levied on business firms other than the corporate income tax. As in the case of all other business costs, these business taxes were assumed to be indirectly borne by households and accordingly were allocated on the basis of the ratios of total consumption expenditures to income.

APPENDIX B Footnotes:

1. U.S. Department of Commerce, Survey of Current Business, August 1980.
2. U.S. Bureau of the Census, Money Income of Households, Families, and Persons in the United States: 1981, Consumer Population Reports, Series P-60, No. 137, Washington, D.C. Unpublished data on the components of money income received by unrelated individuals in 1981 were provided by the Census Bureau.
3. U.S. Department of Commerce, Survey of Current Business, August 1982.
4. U.S. Treasury, Special Analysis: Budget of the U.S. Government, Fiscal Year 1981, Washington, D.C.
5. Internal Revenue Service, Statistics of Income--1980 Individual Income Tax Returns, Washington, D.C., 1982.
6. U.S. Department of Labor, Bureau of Labor Statistics, Consumer Expenditure Survey: Diary Survey, July 1972-June 1973, Bulletin 1959, Washington, D.C., 1977; and Consumer Expenditure Survey Series: Interview Survey, 1972-73, Report 455-4, Washington, D.C., 1977.