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0215 Colorado Tax Profile Study

COLORADO TAX PROFILE STUDY, 1975

**Reuben A. Zubrow
Harry I. Zeid
Dean C. Coddington**

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COLORADO TAX PROFILE STUDY, 1975

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Prepared for

Joint Committee on State and Local Finance
Colorado Legislature
State Capitol Building
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SUMMARY OF FINDINGS

The major findings of the Colorado Tax Profile Study, 1975, may be summarized as follows:

- Colorado income and combined state-local taxes both have increased about 40 percent since fiscal year 1972, the year on which the original tax profile study was based. Of the three major taxes on the state-local level, the income tax showed the greatest growth, more than 60 percent, followed by the sales tax with a 45 percent increase. In comparison, the local property tax rose by only 25 percent during this period.
- The total state-local tax bill on a collection basis for fiscal year 1975 amounted to \$1.6 billion. When added to the direct federal taxes paid by Coloradans, the combined tax burden was about \$3.6 billion, or more than one-fourth of the total personal income.
- On a liability basis, resident state taxes alone amounted to almost \$750 million or almost one-half of the total state-local tax burden. Of these state taxes, 70 percent were levied directly on households and 30 percent on business. Quantitatively, the largest single state tax paid by individuals was the personal income tax, which accounted for almost 50 percent of the direct state levies. The corporation income tax represented less than 22 percent of the state business taxes.
- Local taxes for the same fiscal year amounted to \$791 million. More than one-half of the local taxes were imposed directly on households, mainly in the form of residential property taxes estimated to have been \$300 million. The most important single business tax on the local level was the non-residential property tax which amounted to \$314 million. Overall the property tax represented 77 percent of the local tax burden.

- Colorado's combined state-local tax structure was regressive whether measured on the basis of adjusted gross or adjusted broad income. The latter concept takes cognizance of nontaxable money income not included in adjusted gross income -- mainly money transfers for the lowest income class and nontaxable capital gains for the highest. On the adjusted gross income basis, the total state-local tax burden for households with incomes of less than \$5,000 was 2.25 times as great as that for those in the highest category with incomes of \$25,000 or more. However, the regressivity was significantly reduced when the burdens were expressed as percentages of adjusted broad income -- on this basis the CTPS progressivity index was 1.25.
- In contrast, the state tax structure considered by itself was regressive or progressive, depending upon the income measure used. On the adjusted gross income basis the state tax burden was regressive -- decreasing by income class from 10.5 percent to 7.0 percent. However, when based on adjusted broad income the total state tax burden (direct and indirect) actually proved to be progressive -- successively increasing from 5.3 percent for taxpayers in the lowest income category to 6.3 percent for those in the highest. On this basis, the CTPS progressivity index was .84 for fiscal year 1975 compared to .90 for fiscal year 1972.
- The general proportionality achieved in the distribution of the overall state tax burden essentially reflects a balancing of the state's major taxes since similar patterns were not evident for any of the specific taxes. The state individual income tax was progressive throughout the entire range of income categories. On the adjusted gross income basis, the relative income tax burden for households with incomes under \$5,000 averaged about one-fourth that of taxpayers with incomes of \$25,000 or more; and on the adjusted broad income basis, it was less than one-sixth. Moreover, in terms of

either income measure, the Colorado state income tax was approximately three-fourths as progressive as the federal income tax on Colorado residents.

- On the other hand, and notwithstanding the \$7 per person food tax credit, the state retail sales tax proved to be highly regressive. On the adjusted gross income basis the relative sales tax burden was more than three times as heavy for the lowest income group as for the highest; and when measured against adjusted broad income it was almost twice as great. The other major tax categories on the state level -- highway user, cigarette, alcoholic beverages and business taxes -- also proved to be highly regressive. In brief, the magnitude and progressivity of the state income tax was large enough to offset the regressivity of all the other state taxes combined resulting in an overall progressive state tax structure.
- The local tax structure, accounting for more than one-half of the combined state-local tax burden, was highly regressive, primarily because of the overwhelming importance of the property tax. As a percentage of adjusted gross income, the local tax burden for the lowest income class was more than three times larger than that for the highest. In the case of the residential property tax, the disparity was even greater -- 6.1 percent compared with 1.8 percent. On the adjusted broad income basis, the regressivity of both the total local tax and the property tax burdens were somewhat smaller -- approximately twice as heavy for the poor as for the rich.

INTRODUCTION

The unprecedented price inflation of the past few years coupled with the rise in nominal income has significantly effected the distribution of household income as well as the consumption patterns and tax burdens of Colorado resident taxpayers. The Colorado Tax Profile Study, 1975, is the second of two reports which provide primary data and analysis of the magnitude, composition and burden effects of the overall Colorado state and local tax structure for fiscal year 1975.^{1/} It is mainly concerned with the distribution of state and local taxes among the major income classes comprising Colorado's resident taxpayers. In other words, it attempts to answer the following basic questions. Who ultimately pays the Colorado tax bill? How much of the state and local tax is borne by resident households? How much by the business community? What are the relative burdens of the poor, the middle class, the rich? What taxes are most regressive, most progressive? Is the tax structure as a whole regressive or progressive? Such basic questions cannot be answered objectively without developing a set of current empirical data that provide a reasonably accurate description of the distribution of taxes under the present system. Thus, the economic impact of any proposed major tax change cannot be fully evaluated without detailed knowledge of the present distribution of state and local taxes. In brief, the principal objective of this study is to update the 1972 CTPS report^{2/} with 1975 data and develop a comprehensive "current tax profile" which can be used by Colorado's interested citizens, legislators and public administrators as the basis for assessing the revenue and distributional effects of the present tax structure as well as of any new tax proposals.

^{1/}The initial report was limited to an analysis of the state individual income tax returns filed in fiscal year 1975. See Colorado Statistics of Income, 1975, Colorado Legislative Council, Research Publication No. 211, November 1975.

^{2/}Colorado Tax Profile Study, 1972, Colorado Legislative Council, Research Publication No. 202, October 1973.

I. THE STATE-LOCAL TAX BURDEN

It is generally recognized that although there has been no change in the statutory provisions of any of the major taxes, state and local revenues in recent years have increased significantly as a result of the rise in the nominal incomes and consumption expenditures of Colorado resident households. Combined state and local taxes, whether measured in terms of reported net collections or on an adjusted liability basis, rose by about 39 percent between fiscal years 1972 and 1975, an amount somewhat smaller than the corresponding growth of about 43 percent in the state's personal income and adjusted gross income.^{3/} However, the state tax component alone increased by more than 42 percent during this period, while local revenues rose only by 35 percent. Nor were the increases uniform for the three major revenue sources -- income, sales and property taxes. On the state level the combined individual and corporate income tax showed the greatest growth, increasing by 62 percent, followed by the sales and use tax which rose 45 percent. On the local level the property tax during this period rose by only 25 percent.

The total net tax collections officially reported by Colorado state agencies for fiscal year 1975 amounted to \$1,602.8 million as shown in Table 1. State taxes on a collection basis as reported by the Department of Revenue and the Controller's Office were \$806.2 million or 50 percent of the total.^{4/} Local property taxes reported by the Division of Property Taxation amounted to \$614.4 million or 38 percent, and all other local taxes totaled \$187.6 or 12 percent. In contrast, on the CTPS adjusted liability basis which more closely corresponds to the actual tax borne by Colorado residents, the total of combined state-local taxes amounted to \$1,539.5 million in fiscal year 1975, or four percent less than the reported collections. The difference of \$68.7 million between these two

^{3/} Colorado Statistics of Income, 1975, Colorado Legislative Council, Research Publication No. 211, November 1975, p. 2.

^{4/} Exclusive of state inheritance and gift taxes, hunting and fishing license fees and parimutuel betting taxes which totaled \$36.2 million in fiscal year 1975.

TABLE I. SUMMARY OF COLORADO STATE AND LOCAL TAXES
FISCAL YEARS 1972 AND 1975

	Net Tax Collections Reported by State Agencies		Resident Tax Liabilities Adjusted For CTPS Report	
	1972	1975	1972	1975
(Dollar amounts in millions)				
<u>State Taxes</u>				
Income ^{a/}	\$ 210.0	\$ 330.0	\$ 189.5	\$ 306.7
Sales and Use	187.8	275.0	176.9	255.9
Highway User	114.6	128.9	109.1	121.6
Insurance	16.2	21.0	16.2	21.0
Cigarette	14.4	16.1	13.6	15.6
Alcoholic Beverage	13.4	15.7	11.8	13.8
Severance	.6	2.4	.6	2.4
Regulatory & Other Business	11.4	17.1	8.0	11.8
Total State Taxes	\$ 568.4	\$ 806.2	\$ 525.7	\$ 748.8
<u>Local Taxes</u>				
Property	\$ 492.0	\$ 614.4	\$ 492.0	\$ 614.4
Sales and Use	72.0	131.5	68.3	126.8
Cigarette	3.0	15.4	2.9	14.8
Denver Occupation	9.2	10.7	4.1	4.7
Regulatory & Other Business	17.9	30.0	17.9	30.0
Total Local Taxes	\$ 594.1	\$ 802.0	\$ 585.2	\$ 790.7
<u>State and Local Taxes</u>				
Property	\$ 492.0	\$ 614.4	\$ 492.0	\$ 614.4
Sales and Use	259.8	406.5	245.2	382.7
Income ^{a/}	210.0	330.0	189.5	306.7
Highway User	114.6	128.9	109.1	121.6
Regulatory & Other Business ^{b/}	55.3	81.2	46.8	69.9
Other Excise ^{c/}	30.8	47.2	28.3	44.2
Total State-Local Taxes	\$1,162.5	\$1,608.2	\$1,110.9	\$1,539.5

^{a/} Includes surtax and corporate income tax, excludes oil and gas tax.

^{b/} Includes insurance, severance, corporate franchise, occupation, miscellaneous regulatory business taxes.

^{c/} Cigarette and alcoholic beverage taxes.

bases represents adjustments for nontax revenues and nonallocable levies such as penalties, interest and audit deficiencies; non-resident income, sales and excise tax collections; the excess of income tax collections over liabilities; and vendor discounts on retail sales, motor fuel and cigarette tax collections.^{5/}

The relative importance of each of the major tax categories on this adjusted basis is shown in the tabulation below:

	<u>Percent Distribution</u>		
	<u>Total</u> <u>Taxes</u>	<u>State</u> <u>Taxes</u>	<u>Local</u> <u>Taxes</u>
Property Tax	39.9	--	77.7
Sales and Use Tax	24.9	34.2	16.0
Income Tax	19.9	41.0	--
Highway User Tax	7.9	16.2	--
Regulatory & Other			
Business Taxes	4.5	4.7	4.4
Cigarette Tax	2.0	2.1	1.9
Alcoholic Beverage Taxes	.9	1.8	--
Total	100.0	100.0	100.0

The local property tax of \$614.4 million continues to be quantitatively the largest single levy in the state-local tax structure, but relatively not as large as it was in fiscal year 1972. In 1975, it accounted for slightly less than 40 percent of the combined state-local tax liability and 78 percent of the total local revenues whereas three years earlier the respective ratios were 45 percent and 86 percent.

^{5/}The dollar amounts of these adjustments were as follows:

	<u>In Millions</u>
Exclusion of:	
Nontax and nonallocable revenues	\$22.3
Non-resident tax collections	40.6
Excess of collections over liabilities	21.1
Inclusion of:	
Vendor discounts on tax collections	<u>-15.3</u>
Total Adjustments	\$68.7

See Appendix A for the reconciliation of the reported tax collections with the adjusted tax liabilities used as the basis for the resident tax burden analysis.

The combined state-local retail sales and use tax ranked next in importance. In fiscal year 1975, it amounted to \$382.7 million, net of \$17.0 million of state food tax credits. As such, the sales tax accounted for 25 percent of the total resident tax liability, 34 percent of total state taxes, but only 16 percent of the local tax burden. The comparable ratios for fiscal year 1972 were 22 percent, 34 percent and 12 percent, respectively.

The state income tax represented the third of the "big three" levies imposed by Colorado state and local governments. On the state level, it ranked first and actually exceeded the sales and use tax. In fiscal year 1975, the total income tax on a liability basis amounted to \$306.7 million, of which the corporate income tax was \$49.5 million and the resident individual income tax was \$257.2 million. The non-resident portion of the state income tax continued to be comparatively small, amounting to \$2.2 million or about two-thirds of one percent of the total. The combined corporate and individual income tax accounted for almost 20 percent of the state-local tax total and 41 percent of the state tax burden, whereas in fiscal year 1972 the respective ratios were only 17 percent and 36 percent.

The state highway user tax category which includes motor fuel and ton-mile taxes, as well as motor vehicle and operator license fees, amounted to \$121.6 million in fiscal year 1975. These levies accounted for slightly less than eight percent of the total state-local tax burden and slightly more than 16 percent of the state tax liability. The ratios for fiscal year 1975 were markedly lower than those for 1972 which were 10 and 21 percent respectively. In part, this reflects the motoring public's response to the recent energy crisis.

The remaining state and local taxes -- cigarettes, alcoholic beverages, insurance, franchise, severance and all other business taxes -- amounted to \$114.1 million or slightly more than seven percent of the total state-local tax burden. On the state level, they amounted to about \$64.6 million or almost nine percent of the total state taxes; and on the local level, about \$50 million or six percent of the local tax burden. The comparable ratios for fiscal year 1972 were six percent, 10 percent and three percent, respectively.

II. THE DIRECT AND INDIRECT TAX ALLOCATION

As indicated in the 1972 Colorado Tax Profile Study, a distinction is often made between the "impact" and "incidence" of a tax -- the former is where the tax is legally imposed, the latter where the tax finally comes to rest. Theoretically, the incidence of all taxes are borne by individuals but it is useful to initially classify taxes into the two general categories of household or direct taxes and business or indirect taxes since the distribution of taxes requires specific shifting assumptions with regard to their final incidence.

Household taxes are defined for purposes of this study 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 the individual income tax, retail sales tax, consumer excises and the residential property tax. As a direct tax, the householder cannot shift the tax to others through the pricing system. In contrast, it is assumed that indirect taxes, those imposed on business firms, are either shifted forward to individuals as consumers or borne by the owners of resources since such taxes represent business costs that ultimately are reflected in market prices or reduced after-tax profits, dividends or undistributed corporate earnings. The corporation income tax, highway user taxes, sales taxes paid by business firms on their purchases, severance taxes and all other franchise and regulatory business taxes fall into the indirect category.^{6/}

It should be further noted that in deriving resident tax burdens for a particular state, it is practically impossible on an empirical basis to determine the amount of business taxes exported or imported by firms engaged in interstate commerce. As in the 1972 study it has been assumed that the export of Colorado state and local business taxes has been approximately balanced by the import of taxes from state and local jurisdiction outside Colorado. A similar offsetting assumption is not required

^{6/} See Appendix A for the methodology and assumptions used for the allocations of specific taxes between households and business.

with regard to 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 by Colorado residents as out-of-state tourists elsewhere are not considered part of the Colorado tax burden since they are not imposed by Colorado jurisdictions.

Based on the above assumptions, the allocation of Colorado state and local taxes between those levied on resident households and those on business is shown in Table II and Chart I. On the adjusted basis, the combined state-local tax on resident households and business totaled \$1,539.5 million. Of this amount, \$920.5 million or three-fifths was classified as direct household taxes, and \$619.0 million or two-fifths as indirect business taxes.

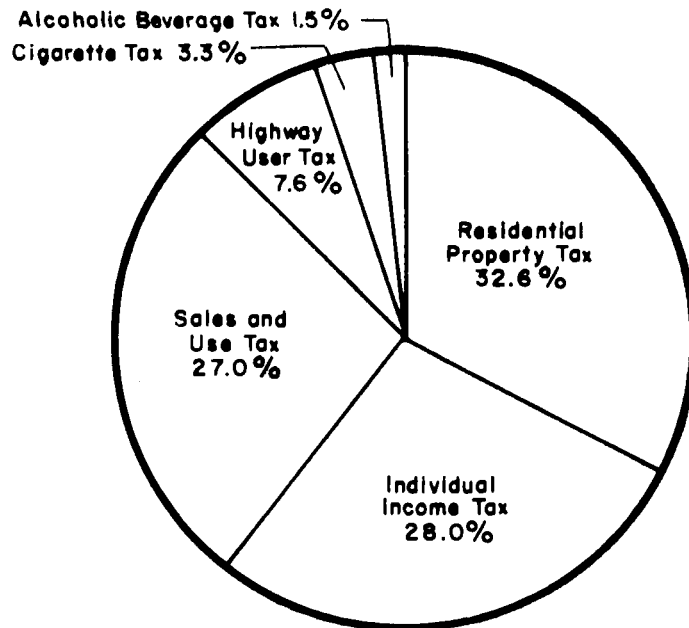
The property tax continued to represent the largest single levy in both categories. The residential property tax was estimated to be \$300.1 million or 33 percent of total direct taxes, but relatively smaller than the 39 percent ratio estimated for fiscal year 1972. On the other hand, the non-residential property tax amounted to \$314.2 million or almost 51 percent of the total taxes on business. This was only slightly less than the 53 percent ratio estimated for 1972. The state individual income tax was quantitatively the next most important tax levied directly on Colorado resident taxpayers. It amounted to \$257.2 million or 28 percent of the total direct burden compared to 24 percent in 1972. The state corporate income tax amounted to \$49.5 million and accounted for only eight percent of the combined state-local taxes imposed on business -- the same ratio as for 1972. Finally, state and local sales and use taxes levied on resident households were estimated to be \$248.8 million or 27 percent of the total direct tax burden compared with a 23 percent ratio for 1972. On this basis, the "big three" -- the residential property, individual income and retail sales taxes -- represented almost 88 percent of the combined state-local tax burden imposed directly on Colorado resident taxpayers in fiscal year 1975.

On the state level, taxes amounting to \$521.3 million or 70 percent of the adjusted state total were classified as direct household taxes. Of this amount, the individual income tax alone (inclusive of surtax)

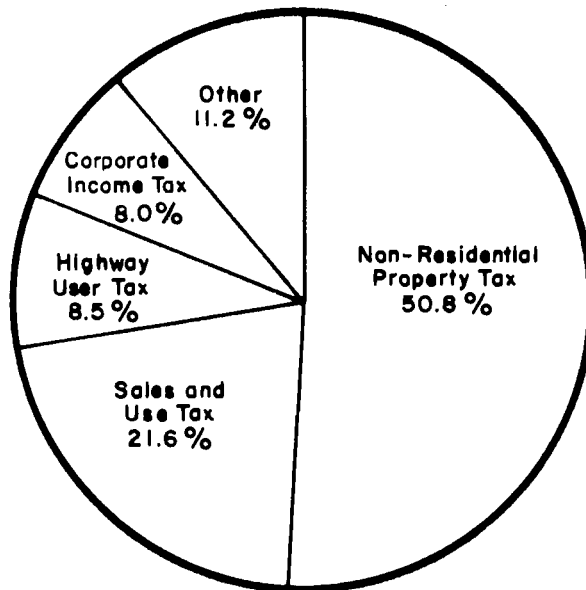
TABLE II. SUMMARY OF MAJOR TAXES ON
 COLORADO HOUSEHOLDS AND BUSINESS,
 FISCAL YEAR 1975

	State Taxes	Local Taxes	Total Taxes
A. Dollar amounts in thousands:			
<u>Total Resident Taxes</u>	\$748,771	\$790,720	\$1,539,491
<u>Taxes on Households (Direct)</u>			
Residential Property	\$ --	\$300,146	\$300,146
Individual Income	257,225	--	257,225
Sales and Use	164,664	84,145	248,809
Highway User	70,023	--	70,023
Cigarette	15,596	14,846	30,442
Liquor	13,821	--	13,821
Total Direct Taxes	\$521,329	\$399,137	\$920,466
<u>Taxes on Business (Indirect)</u>			
Non-residential Property	\$ --	\$314,214	\$314,214
Sales and Use	91,245	42,615	133,860
Highway User	51,560	--	51,560
Corporate Income	49,455	--	49,455
Regulatory & Other Business	35,182	34,754	69,936
Total Indirect Taxes	\$227,442	\$391,583	\$619,025
B. Percentage distribution:			
<u>Taxes on Households (Direct)</u>			
Residential Property	--	75.2	32.6
Individual Income	49.3	--	28.0
Sales and Use	31.6	21.1	27.0
Highway User	13.4	--	7.6
Cigarette	3.0	3.7	3.3
Liquor	2.7	--	1.5
Total Direct Taxes	100.0	100.0	100.0
<u>Taxes on Business (Indirect)</u>			
Non-residential Property	--	80.2	50.8
Sales and Use	40.1	10.9	21.6
Highway User	22.7	--	8.3
Corporate Income	21.7	--	8.0
Regulatory & Other Business	15.5	8.9	11.3
Total Indirect Taxes	100.0	100.0	100.0

CHART I. MAJOR TAXES LEVIED ON COLORADO HOUSEHOLDS
AND BUSINESS, FISCAL YEAR 1975



MAJOR STATE AND LOCAL TAXES
ON HOUSEHOLDS (DIRECT TAXES)



MAJOR STATE AND LOCAL TAXES
ON BUSINESS (INDIRECT TAXES)

represented almost 50 percent, while retail sales and highway user taxes accounted for 32 and 13 percent respectively. And as noted above, because of the energy crisis the 1975 highway user tax ratio of 13 percent was significantly below the 1972 ratio of 20 percent. The only other state excise taxes levied directly on resident households were the cigarette and alcoholic beverage taxes which together amounted to about \$29 million or less than six percent of the total. State taxes on business were estimated to be \$227.4 million or 30 percent of the total state tax burden. Quantitatively the most important state tax levied on business was the allocated portion of the sales and use tax which accounted for 40 percent of the total. Business highway user taxes and the corporate income tax ranked next in importance, representing 23 and 22 percent, respectively. All other state business taxes, such as insurance, corporate franchise, severance and other regulatory taxes, together accounted for less than 16 percent of the total.

On the local level, taxes were divided almost equally between households and business -- direct household taxes were estimated to be \$399.1 million, while the indirect business portion was estimated to be \$391.6 million. Because of the overwhelming significance of the property tax, 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 accounted for slightly more than 75 percent of the total local taxes levied on resident households. And in the case of the non-residential property tax, the ratio was even larger -- 80 percent of the total local tax levied on the business community.

The distribution of each of the above major taxes by household income and the relative tax burdens expressed as percentages of both adjusted gross and adjusted broad income are presented in the following section of this report. They provide a general "tax profile" of who paid the more than one and one-half billion dollars of state and local taxes imposed directly and indirectly on Colorado resident taxpayers in fiscal year 1975. Also, it

should be noted that when the federal income tax of \$1.5 billion paid by Colorado residents and the federal employment taxes of \$.6 billion are added to the state-local tax liability, the combined federal-state-local tax burden on Colorado residents for fiscal year 1975 amounted to about \$3.6 billion, or more than 26 percent of the total personal income of \$13.8 billion received by Coloradans that year.

III. A PROFILE OF COLORADO TAXES BY INCOME CLASSES

The distribution of the Colorado state and local tax liabilities of resident households, classified by major income categories, is presented in Tables III through VII. The data on the number of resident taxpayers, household income and state individual income tax liabilities were reported in the earlier companion study, Colorado Statistics of Income, 1975. It may be useful, however, to indicate some of the basic concepts and adjustments used in the derivation of these data. Because Colorado does not have a "split-income" provision for married taxpayers, about 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 household income and taxes. Also, all non-resident tax returns and a number of resident single returns filed by persons who had been taken as exemptions on their parent's returns were excluded. The latter primarily represented students and other youngsters living at home who had filed for withholding refunds.^{7/}

On this corrected basis, the adjusted gross income reported on the resident tax returns filed in fiscal year 1975 amounted to \$10,536 million. It represented 76.5 percent of the corresponding 1974 state personal income of \$13,675 million estimated by the U.S. Department of Commerce.^{8/} The difference of \$3 billion between these two measures is partly due to the fact that about five percent of Colorado households do not file state income tax returns. However, it mainly reflects conceptual differences between the economic and statutory definitions of income. The latter (adjusted gross income) excludes various forms of money income which are considered to be nontaxable transfer payments such as public welfare, social security payments, unemployment compensation and portions of private pension

^{7/} These returns accounted for 1.37 of the total adjusted gross income and 0.35 percent of the total normal tax liability. See Colorado Statistics of Income, 1975, Colorado Legislative Council, Research Publication No. 211, November 1975, pp. 4-7.

^{8/} U.S. Department of Commerce, Survey of Current Business, August 1975.

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.

In order to obtain an alternative income measure for tax burden analysis which more closely corresponds to the conventional concept of income, an adjusted broad income measure was developed for the 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 that part of realized capital gains not reported on tax returns. On an overall basis, the total adjusted broad income for Colorado resident taxpayers was estimated to be \$12,216 million, or almost 16 percent more than the corresponding adjusted gross income for fiscal year 1975. The largest relative adjustments required to place the resident households on a broad income basis were for those in the lowest and highest income categories. The former were the major recipients of nontaxable money transfer income and the latter were the principal beneficiaries of the preferential treatment accorded capital gains under the state income tax.^{9/}

Table III presents the total dollar amounts of state and local taxes on a resident liability basis as well as the total dollar amounts of household income in terms of both adjusted gross and adjusted broad income for each of the five major income classes. The relative tax burden comparisons, i.e., the "current tax profiles," are developed on the basis of these tax and income values.

The percentage distributions of the Colorado resident taxpayers, household income and state and local taxes, classified by the five major income categories, are shown in Table IV and Chart II. A comparison of the distribution of the households and income provides an approximate measure of the degree of income inequality in the state. The richest taxpayers

^{9/}See Appendix B for a description of the derivation of the adjusted broad income measure.

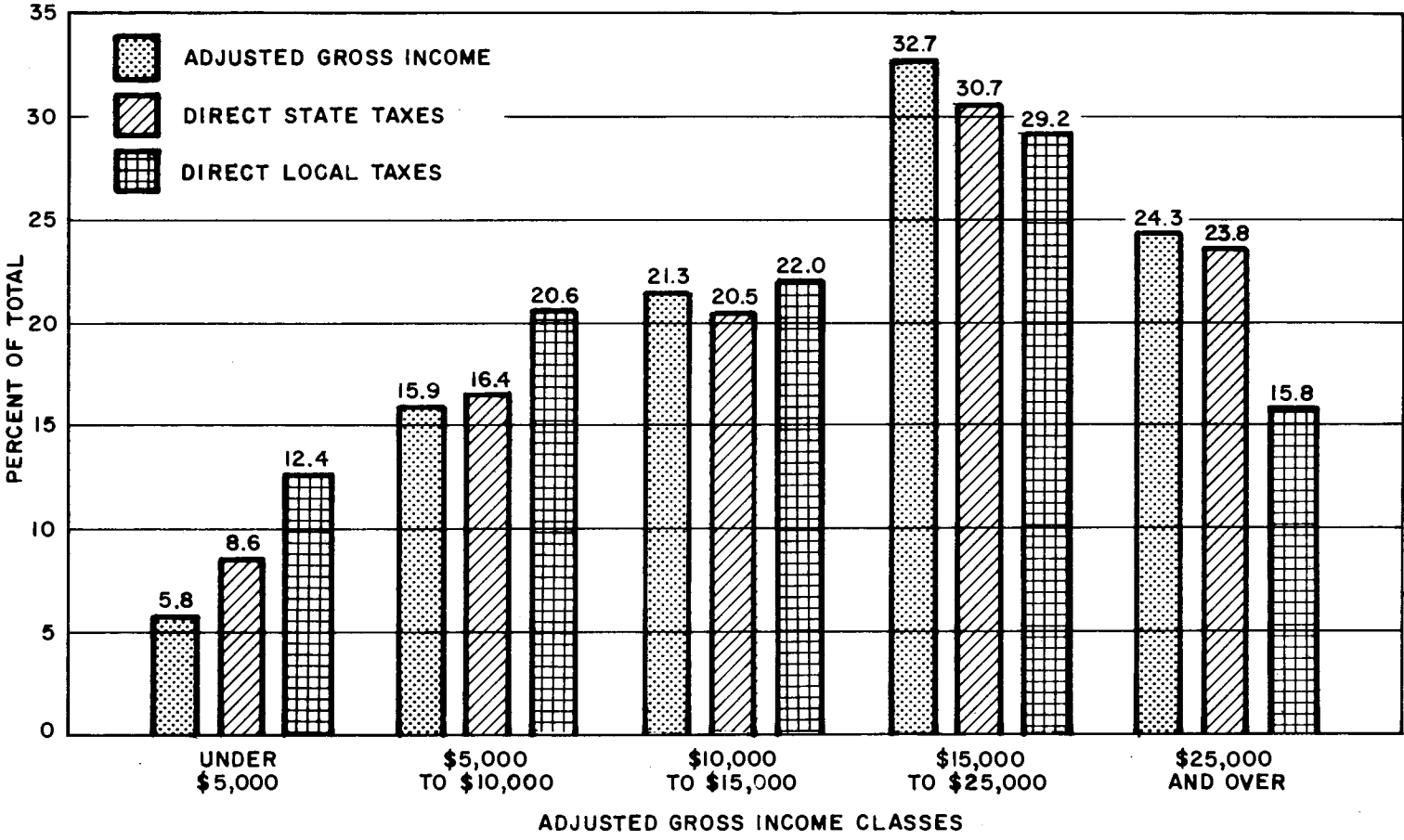
TABLE III. DISTRIBUTION OF COLORADO RESIDENT TAXPAYERS,
INCOME AND MAJOR TAXES, CLASSIFIED BY ADJUSTED GROSS INCOME,
FISCAL YEAR 1975

	Under \$5,000	Adjusted Gross Income Classes				Total Resident Taxpayers
		\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$25,000	\$25,000 and Over	
<u>Number of Resident Taxpayers</u>	233,972	226,208	181,617	181,303	62,139	885,239
<u>Taxpayers Income:</u>						
Adjusted Gross Income	\$ 607,334	\$1,675,766	\$2,247,726	\$3,446,632	\$2,558,415	\$10,535,873
Adjusted Broad Income	1,206,651	2,062,365	2,453,393	3,659,634	2,834,212	12,216,255
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	6,042	27,506	43,960	86,525	93,192	257,225
Sales and Use	19,694	32,060	37,642	49,794	25,474	164,664
Highway User	8,221	15,160	18,158	20,078	8,406	70,023
Cigarette	2,035	3,919	3,899	4,203	1,540	15,596
Alcoholic Beverage	1,171	3,130	3,157	4,522	1,841	13,821
Total	37,163	81,775	106,816	165,122	130,453	521,329
Local Taxes						
Residential Property	37,188	67,863	65,222	83,140	46,733	300,146
Sales and Use	10,064	16,383	19,236	25,445	13,017	84,145
Cigarette	1,937	3,731	3,712	4,001	1,465	14,846
Total	49,189	87,977	88,170	112,586	61,215	399,137
Total Direct Taxes	86,352	169,752	194,986	277,708	191,668	920,466
<u>Indirect Taxes on Households:</u>						
State Business Taxes	26,817	41,283	46,466	64,804	48,072	227,442
Local Business Taxes	48,674	75,341	85,482	118,180	63,906	391,583
Total Indirect Taxes	75,491	116,624	131,948	182,984	111,978	619,025
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indir.)	63,980	123,058	153,282	229,926	178,525	748,771
Local Taxes (Direct & Indir.)	97,863	163,318	173,652	230,766	125,121	790,720
Total State-Local Taxes	\$ 161,843	\$ 286,376	\$ 326,934	\$ 460,692	\$ 303,646	\$ 1,539,491
<u>Addendum:</u>						
Federal Individual Income Taxes	\$27,422	\$157,797	\$239,505	\$453,916	\$570,147	\$1,448,787

TABLE IV. PERCENTAGE DISTRIBUTION OF COLORADO RESIDENT TAXPAYERS,
INCOME AND MAJOR TAXES, CLASSIFIED BY ADJUSTED GROSS INCOME,
FISCAL YEAR 1975

	Adjusted Gross Income Classes					Total Resident Taxpayers
	Under \$5,000	\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$25,000	\$25,000 and Over	
<u>Number of Resident Taxpayers</u>	26.4	25.6	20.5	20.5	7.0	100.0
<u>Taxpayers Income:</u>						
Adjusted Gross Income	5.8	15.9	21.3	32.7	24.3	100.0
Adjusted Broad Income	9.9	16.9	20.1	29.9	23.2	100.0
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	2.3	10.7	17.1	33.7	36.2	100.0
Sales and Use	12.0	19.5	22.8	30.2	15.5	100.0
Highway User	11.7	21.7	25.9	28.7	12.0	100.0
Cigarette	13.0	25.1	25.0	27.0	9.9	100.0
Alcoholic Beverage	<u>8.5</u>	<u>22.7</u>	<u>22.8</u>	<u>32.7</u>	<u>13.3</u>	<u>100.0</u>
Total	7.1	15.7	20.5	31.7	25.0	100.0
Local Taxes						
Residential Property	12.4	22.6	21.7	27.7	15.6	100.0
Sales and Use	12.0	19.5	22.8	30.2	15.5	100.0
Cigarette	<u>13.0</u>	<u>25.1</u>	<u>25.0</u>	<u>27.0</u>	<u>9.9</u>	<u>100.0</u>
Total	12.3	22.1	22.1	28.2	15.3	100.0
Total Direct Taxes	9.4	18.4	21.2	30.2	20.8	100.0
<u>Indirect Taxes on Households:</u>						
State Business Taxes	11.8	18.2	20.4	28.5	21.1	100.0
Local Business Taxes	<u>12.4</u>	<u>19.3</u>	<u>21.8</u>	<u>30.2</u>	<u>16.3</u>	<u>100.0</u>
Total Indirect Taxes	12.2	18.8	21.3	29.6	18.1	100.0
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	8.6	16.4	20.5	30.7	23.8	100.0
Local Taxes (Direct & Indirect)	<u>12.4</u>	<u>20.6</u>	<u>22.0</u>	<u>29.2</u>	<u>15.8</u>	<u>100.0</u>
Total State-Local Taxes	<u>10.5</u>	<u>18.6</u>	<u>21.3</u>	<u>29.9</u>	<u>19.7</u>	<u>100.0</u>
<u>Addendum:</u>						
Federal Individual Income Tax	1.9	10.9	16.5	31.3	39.4	100.0

CHART II. DISTRIBUTION OF ADJUSTED GROSS INCOME AND STATE AND LOCAL TAXES ON COLORADO RESIDENT TAXPAYERS, FISCAL YEAR 1975



in the state, those comprising the top stratum with adjusted gross incomes of \$25,000 or more, represented only seven percent of the households but accounted for about 24 percent of the total reported income; whereas the poorest households, those in the lowest stratum with adjusted gross incomes of \$5,000 or less, represented 26 percent of all households but accounted for only about six percent of the adjusted gross income and slightly less than 10 percent of the adjusted broad income.

With regard to the allocation of the overall state tax burden (combined direct and indirect taxes), it appears that for all major income classes except the lowest the respective shares of the state tax paralleled the distribution of adjusted gross income. In rounded percentages, the highest income category (\$25,000 and over) accounted for 24 percent of both the total income and total state taxes; the next highest stratum (\$15,000 to \$25,000) accounted for 33 percent of the adjusted gross income and 31 percent of the tax; the middle-income group (\$10,000 to \$15,000) accounted for 21 percent of both the total income and tax; and the fourth category (\$5,000 to \$10,000) accounted for 16 percent of both the adjusted gross income and total state tax. Only the lowest income category (under \$5,000) had a tax share markedly larger than its adjusted gross income -- nine percent compared with six percent.

The adjusted gross income measure, as noted, significantly understates the total money income actually received by households. When the comparisons are made on the basis of adjusted broad income, the share of the total state tax burden borne by the poorest households actually was slightly less than their respective income share -- nine percent of the tax compared with 10 percent of the income; whereas for the households in the highest stratum their state tax was slightly more than their income share -- 24 percent of the tax and 23 percent of the broad income. On this basis, the distribution of the total state tax burden proved to be practically the same as the distribution of income among the five major income categories for fiscal year 1975. The original CTPS report showed a similar pattern of proportionality for fiscal year 1972. It appears that despite the marked shift of taxpayers into higher income brackets and the increased consumption expenditures of the past three 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 relative distributions do not hold for any of the specific taxes. As noted in the 1975 Colorado Statistics of Income report, the state individual income tax continues to be highly progressive. Taxpayers in the two lowest income categories, those with incomes of less than \$10,000 and representing more than one-half of the households, accounted for about 27 percent of the adjusted broad income and only 13 percent of the income tax liability. At the other end of the income spectrum, taxpayers in the two top categories, with incomes of \$15,000 or more and comprising about one-fourth of the households, accounted for 53 percent of the broad income but almost 70 percent of the total state income tax liability.^{10/} And the distribution of the federal income tax paid by Colorado taxpayers, classified on the same income basis, turns out to be similar to the state income tax distribution -- for those with incomes of less than \$10,000 their federal tax share also was 13 percent, whereas for those with incomes of \$15,000 or more their share of the federal tax was 71 percent. Stated more generally, about one-fourth of the households, those with the highest incomes (two upper strata), accounted for about one-half of the income (regardless of which income measure is used) but more than two-thirds of the total income tax (state and federal).

The distribution patterns of all the 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 the state retail sales tax (net of the \$7 food tax credit) was approximately twice as great as its share of adjusted gross income. And a similar relationship holds in the case of the consumer excise and indirect state business taxes. Thus, the magnitude and progressivity of the Colorado state income tax offsets the regressivity of all the other state taxes resulting in an overall state tax structure which is essentially proportional.

^{10/} A detailed analysis of the 1974 Colorado individual income tax returns filed in fiscal year 1975, classified on the basis of nine adjusted gross income categories ranging from "under \$3,000" to "\$100,000 and over", is presented in the Colorado Statistics of Income, 1975, Colorado Legislative Council, Research Publication No. 211, November 1975.

With regard to the allocation of the local tax burden, the data indicate that all of the major local taxes (direct and indirect) work out to be highly regressive. For taxpayers in the "under \$5,000" income stratum, their share of the residential property tax, expenditure taxes and indirect business taxes in every instance was more than twice as large as their share of adjusted gross income. In contrast, the share of the local tax burden borne by households in the highest income stratum in every instance was significantly below their respective income share. This overall regressivity of the local tax structure must be attributed primarily to the magnitude and regressivity of the local property tax.

Table V shows the average dollar income and taxes of Colorado resident taxpayers classified by the five major income categories. In fiscal year 1975 the average resident taxpayer with an income of \$11,902 (or \$13,800 on a broad income basis) had a combined state-local tax liability of \$1,739. This was only about six percent more than the average federal income tax paid by Colorado residents for the same year. All state taxes (direct and indirect) averaged \$846 per resident household and as such was five percent less than the average local tax burden of \$893. Average total state taxes ranged from \$273 for taxpayers in the lowest income stratum to \$2,874 for those at the other end of the scale. On the other hand, the average local tax bill was relatively higher for the poor and relatively lower for the rich, ranging from \$418 for those in the lowest income category to \$2,013 for those in the highest.

The average dollar tax per resident household in every instance rose directly, but not proportionately, with the increases in income. Among the specific direct taxes the residential property tax ranked first with an average of \$339, and a range from \$159 for the lowest to \$752 for the highest. The individual income tax ranked next with an average of \$290, but with a much wider range -- from \$26 to \$1,500. The state sales tax on resident households averaged only \$186, and the low and high averages by income groups were \$84 and \$410.

The variances in these relationships can be readily compared by expressing as ratios the average income or tax of households in the highest income group to that of those in the lowest. On this basis, the average adjusted gross income of the top stratum was \$41,172 or almost 16 times

TABLE V. AVERAGE INCOME AND TAXES FOR COLORADO RESIDENT TAXPAYERS,
CLASSIFIED BY ADJUSTED GROSS INCOME,
FISCAL YEAR 1975

	Adjusted Gross Income Classes					Total Resident Taxpayers
	Under \$5,000	\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$25,000	\$25,000 and Over	
Taxpayers Income:						
Adjusted Gross Income	\$2,596	\$7,408	\$12,374	\$19,013	\$41,172	\$11,902
Adjusted Broad Income	5,157	9,117	13,509	20,185	45,611	13,800
Direct Taxes on Households:						
State Taxes						
Individual Income	26	122	242	477	1,500	290
Sales and Use	84	142	207	275	410	186
Highway User	35	67	100	111	135	79
Cigarette	9	17	22	23	25	18
Alcoholic Beverage	5	14	17	25	30	16
Total	159	362	588	911	2,100	589
Local Taxes						
Residential Property	159	300	359	459	752	339
Sales and Use	43	72	106	140	209	95
Cigarette	8	17	20	22	24	17
Total	210	389	485	621	985	451
Total Direct Taxes	369	751	1,073	1,532	3,085	1,040
Indirect Taxes on Households:						
State Business Taxes	114	182	256	357	774	257
Local Business Taxes	208	333	471	652	1,028	442
Total Indirect Taxes	322	515	727	1,009	1,802	699
Total State and Local Taxes:						
State Taxes (Direct & Indirect)	273	544	844	1,268	2,874	846
Local Taxes (Direct & Indirect)	418	722	956	1,273	2,013	893
Total State-Local Taxes	\$691	\$1,266	\$1,800	\$2,541	\$4,887	\$1,739
Addendum:						
Federal Individual Income Taxes	\$117	\$698	\$1,319	\$2,504	\$9,175	\$1,637

larger than the \$2,596 average for the lowest. On an average adjusted broad income basis it was only about nine times larger. The slight progressivity of the overall state tax structure is revealed by the fact that in comparison to the income ratio the average total state tax (direct and indirect) for the top income class was almost 11 times larger than that of households in the lowest category, and for all direct state taxes the ratio was even greater -- about 13 to 1. More strikingly, the average state income tax liability of \$1,500 for taxpayers with incomes of \$25,000 and over was 58 times larger than the \$26 average income tax for those with incomes of less than \$5,000.^{11/} The regressivity of the local tax structure is revealed by a ratio of less than 5 to 1 for both the average total and average direct local tax burdens.

As indicated by the preceding analysis, 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 as a measure of the taxpayer's "ability-to-pay." Table VI shows the relative tax burdens when the state and local levies are expressed as percentages of adjusted gross income. Table VII presents the same tax data in terms of adjusted broad income. Again, it should be noted that on either basis the Colorado combined state-local tax structure proved to be regressive.

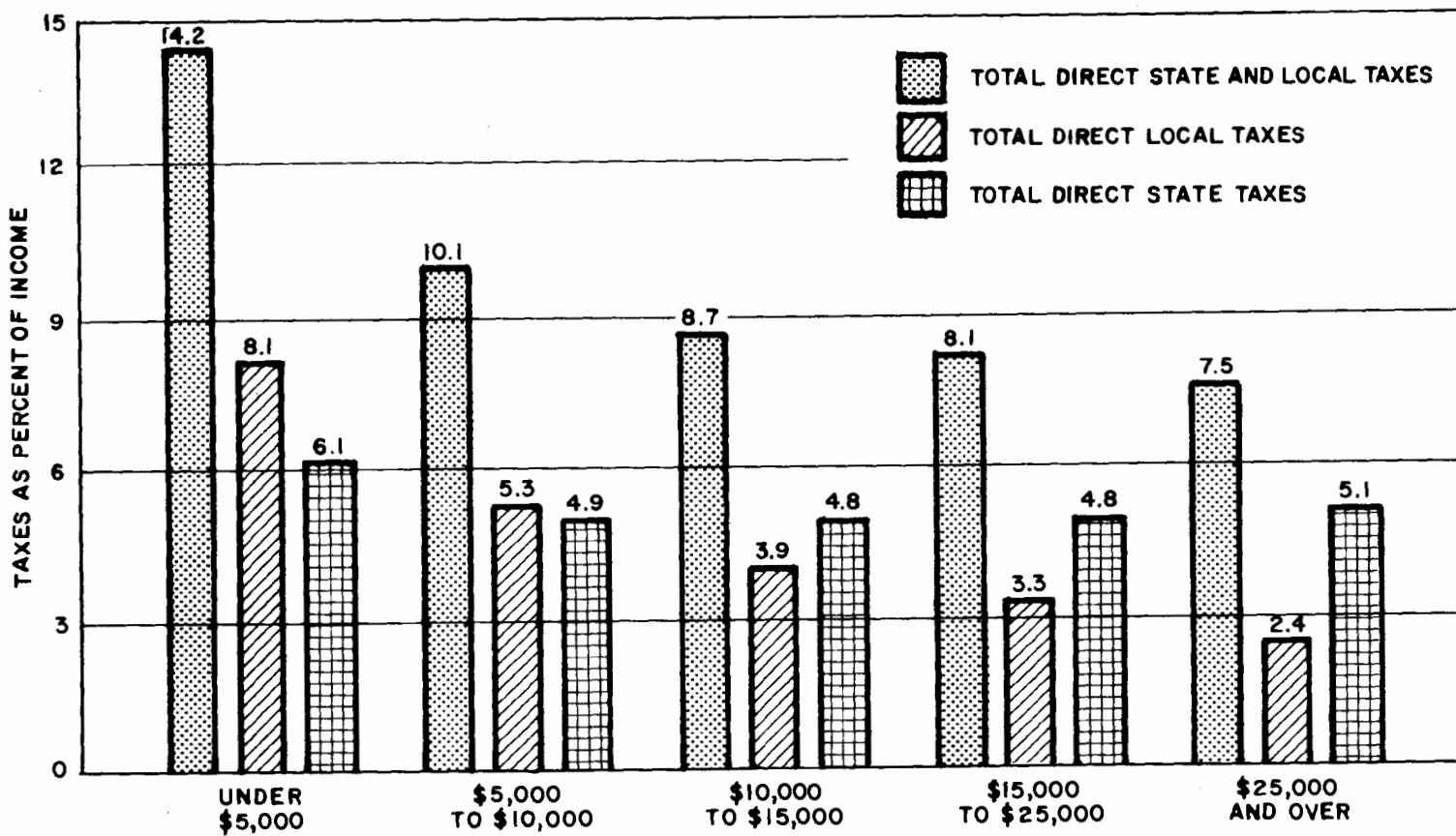
More specifically, as shown in Table VI and Chart III, the overall state-local burden when based on adjusted gross income was 26.7 percent for taxpayers reporting incomes of less than \$5,000 compared with 11.9 percent for those with incomes of \$25,000 or more. In other words, the combined tax burden on the poor was more than twice as heavy as on the rich. However, this overall regressivity must be attributed primarily to the local tax portion, and particularly to the residential property tax. The local tax burden for the lowest income stratum was three times larger than that for the highest -- 16.1 percent compared with 4.9 percent. And in the case of the residential property tax the disparity between the relative burdens of the lowest and the highest income classes was even greater, since the corresponding percentages were 6.1 percent and 1.8 percent respectively.

^{11/}The relatively small average income tax for this category partly reflects the fact that about one-third of the tax returns in this stratum were nontaxable.

TABLE VI. RELATIVE BURDEN OF MAJOR TAXES ON COLORADO RESIDENT TAXPAYERS,
TAXES EXPRESSED AS PERCENT OF ADJUSTED GROSS INCOME
FISCAL YEAR 1975

	Adjusted Gross Income Classes					Total Resident Taxpayers
	Under / \$5,000	\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$25,000	\$25,000 and Over	
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	1.00	1.64	1.96	2.51	3.64	2.44
Sales and Use	3.24	1.91	1.67	1.45	1.00	1.56
Highway User	1.35	.91	.81	.58	.33	.67
Cigarette	.34	.23	.17	.12	.06	.15
Alcoholic Beverage	.19	.19	.14	.13	.07	.13
Total	6.12	4.88	4.75	4.79	5.10	4.95
Local Taxes						
Residential Property	6.12	4.05	2.90	2.41	1.82	2.85
Sales and Use	1.66	.98	.86	.74	.51	.80
Cigarette	.32	.22	.17	.12	.06	.14
Total	8.10	5.25	3.93	3.27	2.39	3.79
Total Direct Taxes	14.22	10.13	8.68	8.06	7.49	8.74
<u>Indirect Taxes on Households:</u>						
State Business Taxes	4.42	2.46	2.07	1.88	1.88	2.16
Local Business Taxes	8.01	4.50	3.80	3.43	2.50	3.72
Total Indirect Taxes	12.43	6.96	5.87	5.31	4.38	5.88
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	10.54	7.34	6.82	6.67	6.98	7.11
Local Taxes (Direct & Indirect)	16.11	9.75	7.73	6.70	4.89	7.51
Total State-Local Taxes	26.65	17.09	14.55	13.37	11.87	14.62
Addendum:						
Federal Individual Income Taxes	4.52	9.42	10.66	13.17	22.29	13.75

CHART III. RELATIVE BURDEN OF DIRECT STATE AND LOCAL TAXES ON COLORADO TAXPAYERS EXPRESSED AS PERCENT OF ADJUSTED GROSS INCOME, FISCAL YEAR 1975



On the state level, as noted, the marked regressivity of all of the direct consumer expenditure taxes -- retail sales, highway user, cigarette and alcoholic beverages levies -- was offset by the progressivity of the state individual income tax. The combined consumer expenditure taxes fell successively through the income classes from 5.1 percent for the lowest income group to 1.5 percent for the highest. However, the state income tax rose successively from 1.0 percent for households with less than \$5,000 of adjusted gross income to 3.6 percent for those with incomes of \$25,000 or more. The net effect was that the total direct state tax burden on the adjusted gross income basis was slightly regressive, falling from 6.1 to 4.8 percent through the first three income classes and then rising to 5.1 percent for the top stratum. But the adjusted gross income measure significantly understates the money income received by households in the lowest class and therefore an analysis on this basis overstates their tax burden relative to that of other taxpayers.

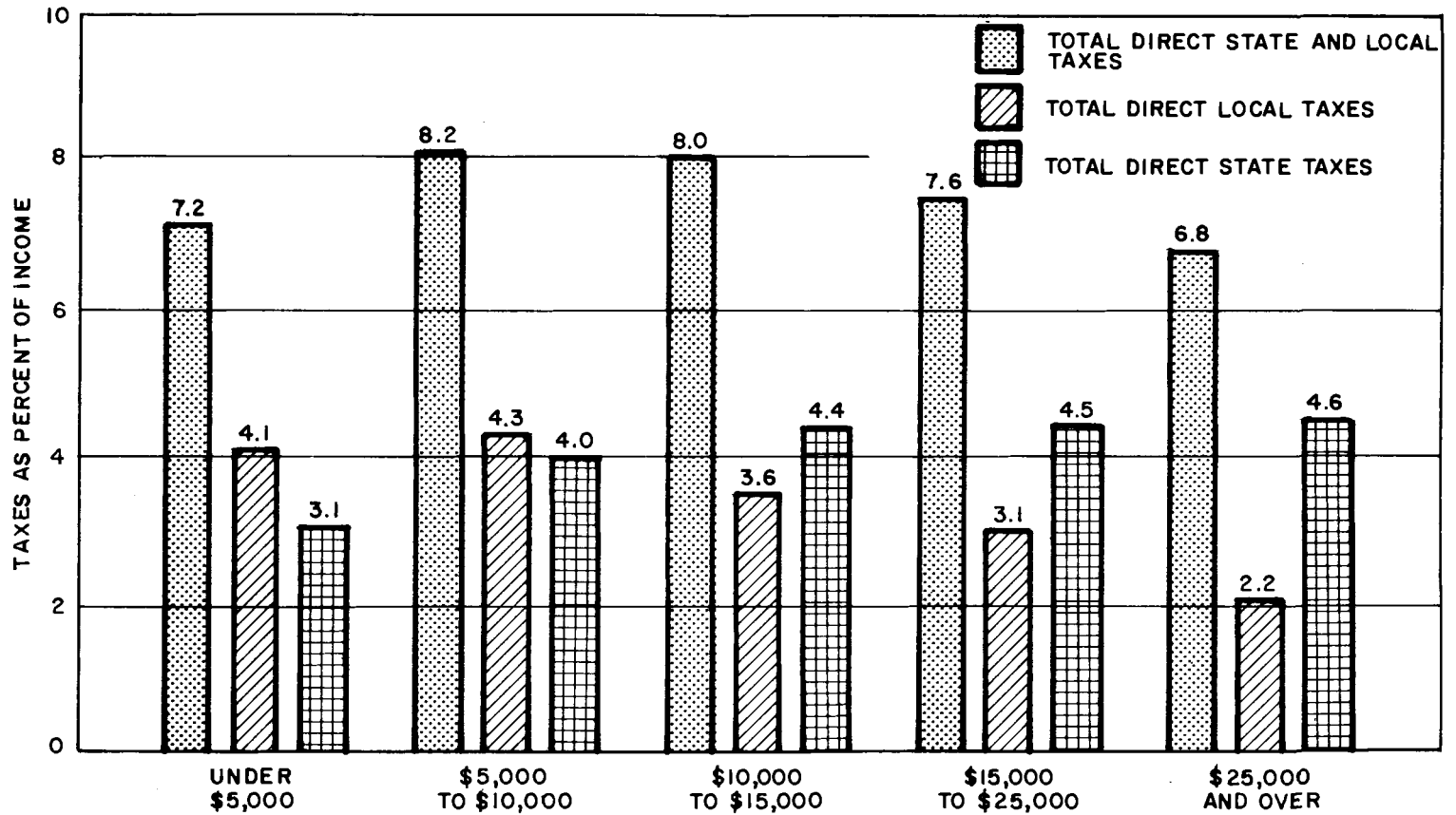
In contrast, when the tax burdens are expressed in terms of adjusted broad income, as shown in Table VII and Chart IV, the overall state tax structure actually works out to be progressive and the regressivity of the local tax structure is significantly reduced. On this basis the relative burden of local taxes (direct and indirect) ranged from 8.1 percent for the lowest income group to 4.4 percent for the highest, whereas when the adjusted gross income measure was used, the local tax burden on the poor was more than three times larger than the burden on the rich.

The progressivity of the overall state tax structure (combined direct and indirect) on an adjusted broad income basis is revealed by the fact that the relative burdens successively increased from 5.3 percent for taxpayers in the lowest income stratum to 6.1 percent for those in the highest. With regard to the direct tax portion -- the state income and consumer expenditure taxes -- the progressivity was even greater. The relative burdens ranged from 3.1 percent for the poorest households to 4.6 percent for those in the top income class. As already indicated, this pattern is essentially due to the fact that the regressivity of the state sales tax and consumer excises is more than offset by the magnitude and progressivity of the state income tax. The relative burden of the income tax rose from a

TABLE VII. RELATIVE BURDEN OF MAJOR TAXES ON COLORADO RESIDENT TAXPAYERS,
TAXES EXPRESSED AS PERCENT OF ADJUSTED BROAD INCOME,
FISCAL YEAR 1975

	Adjusted Gross Income Classes					Total Resident Taxpayers
	Under \$5,000	\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$25,000	\$25,000 and Over	
<u>Direct Taxes on Households:</u>						
State Taxes						
Individual Income	.50	1.33	1.79	2.36	3.29	2.11
Sales and Use	1.63	1.56	1.54	1.36	.90	1.35
Highway User	.68	.74	.74	.55	.30	.57
Cigarette	.17	.19	.16	.12	.05	.13
Alcoholic Beverage	.10	.15	.13	.12	.06	.11
Total	3.08	3.97	4.36	4.51	4.60	4.27
Local Taxes						
Residential Property	3.08	3.29	2.66	2.27	1.65	2.45
Sales and Use	.84	.80	.78	.70	.46	.69
Cigarette	.16	.18	.15	.11	.05	.12
Total	4.08	4.27	3.59	3.08	2.16	3.26
Total Direct Taxes	7.16	8.24	7.95	7.59	6.76	7.53
<u>Indirect Taxes on Households:</u>						
State Business Taxes	2.22	2.00	1.89	1.77	1.70	1.86
Local Business Taxes	4.03	3.65	3.49	3.23	2.25	3.21
Total Indirect Taxes	6.25	5.65	5.38	5.00	3.95	5.07
<u>Total State and Local Taxes:</u>						
State Taxes (Direct & Indirect)	5.30	5.97	6.25	6.28	6.30	6.13
Local Taxes (Direct & Indirect)	8.11	7.92	7.08	6.31	4.41	6.47
Total State-Local Taxes	13.41	13.89	13.33	12.59	10.71	12.60
Addendum:						
Federal Individual Income Taxes	2.27	7.65	9.76	12.40	20.12	11.86

CHART IV. RELATIVE BURDEN OF DIRECT STATE AND LOCAL TAXES ON COLORADO TAXPAYERS EXPRESSED AS PERCENT OF ADJUSTED BROAD INCOME, FISCAL YEAR 1975



low of 0.5 percent for households with reported incomes of less than \$5,000 to a high of 3.3 percent for those with reported incomes of \$25,000 or more.

In order to summarize the degree of progressivity or regressivity of each of the taxes, the relative tax burden imposed on the lowest income group can be expressed as a ratio of the relative burden on the highest, calculated in terms of both the adjusted gross and adjusted broad income measures. This 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. The index values for each of Colorado's major state and local taxes, as well as for the federal income tax paid by Colorado taxpayers, for the fiscal years 1972 and 1975 are compared in the following tabulation:

	CTPS Progressivity Index Tax Burden Ratios of Lowest to Highest Income Class			
	Adjusted Gross Income		Adjusted Broad Income	
	1972	1975	1972	1975
<u>Federal Income Tax</u>	.19	.20	.13	.11
<u>State Taxes:</u>				
Individual Income	.23	.27	.16	.15
Sales and Use (Direct)	2.71	3.24	1.85	1.81
Highway User (Direct)	3.30	4.09	2.29	2.27
Cigarette	4.56	5.67	3.13	3.40
Alcoholic Beverages	<u>1.91</u>	<u>2.71</u>	<u>1.44</u>	<u>1.67</u>
Total Direct	1.06	1.20	.72	.67
Total Indirect	<u>1.94</u>	<u>2.35</u>	<u>1.33</u>	<u>1.31</u>
Total State Taxes	1.32	1.51	.90	.84
<u>Local Taxes:</u>				
Residential Property	3.10	3.36	2.13	1.87
Sales and Use (Direct)	2.94	3.25	2.00	1.83
Cigarette	<u>4.50</u>	<u>5.33</u>	<u>2.50</u>	<u>3.20</u>
Total Direct	3.09	3.39	2.11	1.89
Total Indirect	<u>2.83</u>	<u>3.20</u>	<u>1.93</u>	<u>1.79</u>
Total Local Taxes	2.95	3.29	2.02	1.84
<u>Total State-Local Taxes</u>	1.98	2.25	1.35	1.25

For example, the 1975 CTPS progressivity index for the state income tax when measured in terms of broad income was .15 compared to an index number of only .11 for the federal income tax paid by Colorado resident taxpayers. Stated differently, Colorado taxpayers in the highest income stratum had a relative state income tax burden which on the average was 6.6 times larger than the corresponding burden on households in the lowest stratum. On a comparable basis, the relative tax burden of the highly progressive federal income tax for Colorado taxpayers in the top income class was 8.9 times larger than that of those in the lowest income class. By this standard the Colorado individual income tax was about three-fourths as progressive as the federal income tax.

Finally, it is interesting to note that when the CTPS progressivity index is based on adjusted broad income the overall state tax structure works out to be more progressive in fiscal year 1975 than in 1972, and correspondingly the local tax structure proves to be less regressive. Paradoxically, the opposite results are obtained when the index is calculated in terms of adjusted gross income -- the current state tax structure then appears to be less progressive, and the local tax structure more regressive. In neither case can these shifts be attributed to any major change or revision in state or local tax provisions. Rather it simply reflects the fact that during the three year period between fiscal years 1972 and 1975 the growth in Colorado transfer payments (which are included in the adjusted broad income measure) has been almost 30 percent greater than the comparable growth in the adjusted gross income reported on state tax returns.^{12/}

^{12/} See Colorado Statistics of Income, 1975, pp. 6-7.

APPENDICES

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

The state and local tax liabilities of Colorado resident taxpayers for fiscal year 1975 used as the basis for the present Colorado Tax Profile 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 about 17,700 state tax returns filed during the first six months of 1975. A detailed description of the sampling methodology and statistical reliability of the income tax data are provided in Appendix B of the Colorado Statistics of Income, 1975, the companion report of this study.^{1/} State and local revenue data on a collection basis were obtained from the Colorado State Department of Revenue, Division of Accounts and Control, Division of Property Taxation, Department of Local Affairs and the City of Denver's Finance Office. These data are summarized for fiscal years 1972 through 1975 and presented in Table A-1. In order to put the data on a resident liability basis, the officially reported collections and revenues were adjusted for the inclusion of sundry nontax revenues, nonallocable taxes, and Colorado state and local taxes paid by non-resident taxpayers, as well as for the exclusion of vendor discounts paid on retail sales, cigarette and motor fuel tax collections. The income tax data also were adjusted for the variance between tax collections and tax 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 for fiscal years 1972-1975 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"

^{1/} Colorado Statistics of Income, 1975, Colorado Legislative Council, Research Publication No. 211, November 1975.

TABLE A-1. SUMMARY OF COLORADO STATE AND LOCAL TAXES
AS REPORTED BY STATE AGENCIES,
FISCAL YEARS 1972-1975

	1972	1973	1974	1975
	(Dollar amounts in millions)			
<u>State Taxes</u> ^{a/}				
Income Taxes	\$ 210.0	\$ 255.9	\$ 300.1	\$ 330.0
Sales and Use Taxes	187.8	219.7	212.8	275.0
Highway User Taxes	114.6	125.2	127.9	128.9
Insurance Taxes	16.2	18.7	19.5	21.0
Cigarette Taxes	14.4	15.3	18.8	16.1
Alcoholic Beverage Taxes	13.4	14.6	14.9	15.7
Severance Taxes	.6	.7	1.0	2.4
Other Reg. and Business Taxes	11.4	13.4	17.4	17.1
Total State Taxes	\$ 568.4	\$ 663.5	\$ 712.4	\$ 806.2
<u>Local Taxes</u> ^{b/}				
Property Taxes	\$ 492.0	\$ 532.0	\$ 515.4	\$ 614.4
Sales and Use Taxes	72.0	94.2	114.0	131.5
Cigarette Taxes	3.0	3.2	12.3	15.4
Denver Occupation Tax	9.2	10.2	10.4	10.7
Other Reg. and Business Taxes	17.9	22.0	28.5	30.0
Total Local Taxes	\$ 594.1	\$ 661.6	\$ 680.6	\$ 802.0
<u>Total State and Local Taxes</u>				
Property Taxes	\$ 492.0	\$ 532.0	\$ 515.4	\$ 614.4
Sales and Use Taxes	259.8	313.9	326.8	406.5
Income Taxes	210.0	255.9	300.1	330.0
Highway User Taxes	114.6	125.2	127.9	128.9
Other Excise Taxes	30.8	33.1	46.0	47.2
Regulatory and Business Taxes	55.3	65.0	76.8	81.2
Total State and Local Taxes	\$1,162.5	\$1,325.1	\$1,393.0	\$1,608.2

^{a/} As reported by Colorado Department of Revenue and the Division of Accounts and Control.

^{b/} As reported by the State Division of Property Taxation, Department of Local Affairs, and City of Denver Finance Office.

TABLE A-2. SUMMARY OF COLORADO STATE AND LOCAL TAXES
AS ADJUSTED FOR COLORADO TAX PROFILE STUDY,
FISCAL YEARS 1972-1975

	1972	1973	1974	1975
	(Dollar amounts in millions)			
<u>State Taxes</u>				
Income Taxes ^{a/}	\$ 189.5	\$ 226.9	\$ 267.2	\$ 306.7
Sales and Use Taxes	176.9	208.8	198.2	255.9
Highway User Taxes	109.1	117.0	120.6	121.6
Insurance Taxes	16.2	18.7	19.4	21.0
Cigarette Taxes	13.6	14.7	18.2	15.6
Alcoholic Beverage Taxes	11.8	12.8	13.1	13.8
Severance Taxes	.6	.7	1.2	2.4
Other Reg. and Business Taxes	8.0	10.2	11.1	11.8
Total State Taxes	\$ 525.7	\$ 609.8	\$ 649.0	\$ 748.8
<u>Local Taxes</u>				
Property Taxes	\$ 492.0	\$ 532.0	\$ 515.4	\$ 614.4
Sales and Use Taxes	68.3	90.4	109.9	126.8
Cigarette Tax	2.9	3.2	11.9	14.8
Denver Occupation Tax ^{b/}	4.1	4.5	4.6	4.7
Other Reg. and Business Taxes	17.9	22.0	28.4	30.0
Total Local Taxes	\$ 585.2	\$ 652.1	\$ 670.2	\$ 790.7
<u>Total State and Local Taxes</u>				
Property Taxes	\$ 492.0	\$ 532.0	\$ 515.4	\$ 614.4
Sales and Use Taxes	245.2	299.2	308.1	382.7
Income Taxes	189.5	226.9	267.2	306.7
Highway User Taxes	109.1	117.0	120.6	121.6
Other Excise Taxes	28.3	30.7	43.2	44.2
Regulatory and Business Taxes	46.8	56.1	64.7	69.9
Total State and Local Taxes	\$1,110.9	\$1,261.9	\$1,319.2	\$1,539.5

^{a/} Includes surtax.

^{b/} Portion of Denver Occupation Tax paid by business.

TABLE A-3. SUMMARY OF COLORADO STATE TAXES
 ALLOCATED BETWEEN HOUSEHOLDS AND BUSINESS
 FISCAL YEARS 1972-1975

	1972	1973	1974	1975
	(Dollar amounts in millions)			
Reported Net Tax Collections	\$568.4	\$663.5	\$712.4	\$806.2
<u>Adjustments</u>				
Nontax revenues	- 5.6	- 6.4	- 13.4	- 16.3
Excess of income tax collections over liabilities	- 19.5	- 27.6	- 31.1	- 21.1
Non-resident tax collections	- 27.2	- 29.4	- 29.2	- 31.2
Vendors discounts on sales and excise taxes	+ 9.6	+ 9.7	+ 10.3	+ 11.2
Total Adjustments	- 42.7	- 53.7	- 63.4	- 57.4
Total State Taxes	\$525.7	\$609.8	\$649.0	\$748.8
<u>Taxes on Resident Households</u>				
Individual Income ^{a/}	\$156.2	\$187.3	\$222.3	\$257.2
Sales and Use	104.3	134.7	116.5	164.7
Highway User ^{b/}	68.7	72.4	69.3	70.0
Cigarette	13.6	14.7	18.2	15.6
Alcoholic Beverage	11.7	12.8	13.1	13.8
Total Household	\$354.5	\$421.9	\$439.4	\$521.3
<u>Taxes on Business</u>				
Corporate Income ^{c/}	\$ 33.3	\$ 39.6	\$ 44.9	\$ 49.5
Sales and Use	72.6	74.1	81.7	91.2
Highway User ^{d/}	40.5	44.6	51.3	51.6
Insurance	16.2	18.7	19.4	21.0
Severance	.6	.7	1.2	2.4
Other Reg. and Business Taxes ^{e/}	8.0	10.2	11.1	11.8
Total Business	\$171.2	\$187.9	\$209.6	\$227.5

^{a/} Includes surtax.

^{b/} Includes allocated portion of fuel taxes, motor vehicle licenses and operator's fees, and safety inspections and other motor vehicle fees.

^{c/} Includes fiduciaries.

^{d/} In addition to allocated portion of highway user taxes listed above, includes special fuel and gross ton mile taxes.

^{e/} Includes insurance, franchise, severance, and all other regulatory business taxes.

are exclusive of nonallocable state inheritance and gift taxes, hunting and fishing license fees and parimutuel betting taxes. The amounts excluded were as follows:

	<u>Dollar Amounts in Millions</u>			
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Inheritance and gift taxes	\$16.3	\$17.7	\$22.6	\$18.7
Hunting and fishing license fees	8.0	8.1	11.2	11.1
Parimutuel betting taxes	<u>5.1</u>	<u>5.3</u>	<u>6.0</u>	<u>6.4</u>
Total Exclusions	\$29.4	\$31.1	\$39.8	\$36.2

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. The foregoing adjustments in fiscal year 1975 amounted to \$16.3 million, or about two percent of total of state net collections.

In an expanding economy, income tax collections for any given fiscal year will exceed the actual income tax liability incurred on the previous year's income because of tax withholding and declaration of estimated taxes based on current year income. For example, for fiscal year 1975 the Revenue Department reported net income tax collections (individual, corporate and fiduciary) of \$329.9 million and net income tax liabilities of \$311.2 million, an excess of collections over liabilities of \$18.7 million. During this period, the reported individual income tax liability, inclusive of surtax, amounted to \$259.6 million. On a comparable basis, the CTPS independent estimate of the individual income tax liability was \$257.2 million or \$2.4 million less than the Revenue Department estimate. Combined these adjustments amounted to \$21.1 million or almost three percent of the reported state collections.

Non-resident state taxes were estimated to have increased from \$27.2 million in 1972 to \$31.2 million in 1975. However, as a percentage of reported total state tax collections they show a gradual decline from five to four percent for the three year period. The estimates, by major tax source, for each of these years were as follows:

<u>Non-Resident Taxes</u>	<u>Dollar Amounts in Millions</u>			
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Individual income	\$ 1.0	\$ 1.3	\$ 1.7	\$ 2.2
Retail sales	15.0	14.5	15.0	16.5
Motor fuel taxes	7.9	10.4	9.4	9.4
Cigarette taxes	1.7	1.5	1.4	1.2
Alcoholic beverage taxes	1.6	1.7	1.8	1.9
Totals	\$27.2	\$29.4	\$29.3	\$31.2

The non-resident individual income tax was derived from the CTPS income tax analysis. The non-resident sales tax estimate was based on tourist and recreational spending 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 net sales tax collections directly allocated to households was used as the basis for estimating excise taxes on motor fuel, cigarettes and alcoholic beverages purchased by non-residents in Colorado.

The final adjustment made for purposes of resident tax burden analysis was the inclusion of vendor discounts on sales, motor fuel and cigarette taxes retained by merchants as compensation for their costs of tax collection. Although not included in either the gross or net taxes reported by the Department of Revenue, these discounts constitute part of the overall Colorado state tax burden. The discounts in effect were: 3 1/3 percent on gross sales tax collections; about 2 1/2 percent on gross motor fuel tax collections; and four percent on gross cigarette tax collections. The cost of state vendor discounts was estimated to have increased from \$9.6 million in 1972 to about \$11.2 million in 1975. The specific discounts were as follows:

<u>Vendor Discounts on Resident Taxpayers</u>	<u>Dollar Amounts in Millions</u>			
	<u>1972</u>	<u>1973</u>	<u>1974</u>	<u>1975</u>
Retail sales taxes	\$6.4	\$6.7	\$ 7.5	\$ 8.4
Motor fuel taxes	2.3	2.1	2.1	2.2
Cigarette taxes	.9	.9	.7	.6
Totals	\$9.6	\$9.7	\$10.3	\$11.2

On the basis of all of the above adjustments, the estimated state total tax liability averaged 92 percent of the reported net tax collections during the 1972-1975 period.

Table A-3 also shows the apportionment of the adjusted state taxes between resident households and business. For example, \$521.3 million, or almost 70 percent of the estimated CTPS state taxes, were classified as household or direct taxes and \$227.5 million as business or indirect taxes. The latter, of course, are ultimately borne by individuals since such taxes either represent business costs that are reflected in market prices or decreases in after-tax profits, dividends or undistributed corporate earnings. For the purposes of this study, the individual income tax and the excises on cigarettes and alcoholic beverages (after adjustment for non-resident taxes) were treated as direct levies on Colorado resident households. The corporation income tax and insurance, gas and oil, severance and all other franchise and regulatory business taxes were classified as indirect or business taxes. The remaining major state taxes -- the sales and use tax and the highway user taxes -- were apportioned between these two broad categories of tax revenues on the basis of information provided by the Research and Statistics Section of the Colorado Department of Revenue. The specific ratios used and the apportionment of state sales and use tax and highway user taxes between households and business firms for fiscal year 1975 are shown in Table A-4.

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 1974 which overlaps fiscal year 1975 by six months. In consideration of the relative importance of the property tax component in the total local tax picture and the fact that such taxes were paid in 1975, the reported data were used as the base for local taxes for fiscal year 1975. A summary of the adjustments made to these levies and their apportionment between households and business are shown in Table A-5.

The total of reported local taxes for fiscal year 1972 amounted to \$802.0 million, of which \$614.4 million or almost 77 percent represented local property taxes, and only \$187.6 million represented all other local levies (sales, cigarette, utility, franchise and other regulatory business

TABLE A-4. APPORTIONMENT OF COLORADO STATE SALES AND HIGHWAY USER TAXES BETWEEN HOUSEHOLDS AND BUSINESS, FISCAL YEAR 1975

	Ratio of Households to Business	Dollar Amounts (000)		
		Total	Households	Business
A. Sales and Use Taxes:				
Food and apparel	100/0	\$ 52,117	\$ 52,117	\$ --
Personal services and miscellaneous retail trade	95/5	35,337	33,570	1,767
General mdse., furniture, appliances, autos, auto parts and accessories, hotels and lodgings	90/10	68,318	61,487	6,831
Eating and drinking places	85/15	21,183	18,006	3,177
Electric, gas, communications, transportation, utilities	55/45	18,549	10,202	8,347
Bldg. materials, hardware and farm equipment	25/75	16,359	4,090	12,269
Agr., mining, construction, manuf., whsle. trade, finance, business services, NCE	0/100	42,777	--	42,777
Net Sales Tax	70/30	\$254,640	\$179,472	\$75,168
Less: Food tax credit	100/0	- 16,998	- 16,998	--
Non-resident sales tax	100/0	- 16,500	- 16,500	--
Plus: Net use tax	49/51	26,403	12,964	13,439
Vendor discounts	68/32	8,364	5,726	2,638
Total Resident Sales & Use Tax	64/36	<u>\$255,909</u>	<u>\$164,664</u>	<u>\$91,245</u>
B. Highway User Taxes				
Motor fuel taxes	75/25	\$ 84,038	\$ 63,029	\$21,009
Motor vehicle and operators licenses and other fees	70/30	21,454	15,018	6,436
Special fuel and ton-mile taxes	0/100	23,368	--	23,368
Reported Highway User Taxes	61/39	\$128,860	\$ 78,047	\$50,813
Less: Non-resident motor fuel taxes	100/0	- 9,454	- 9,454	--
Plus: Vendor discounts on motor fuel	72/28 ^{a/}	1,990	1,430	560
Vendor discounts on spec. fuel	0/100	187	--	187
Total Resident Highway User Taxes	58/42	<u>\$121,583</u>	<u>\$ 70,023</u>	<u>\$51,560</u>

^{a/} Inclusive of non-residents, the ratio was 75/25.

TABLE A-5. SUMMARY OF COLORADO LOCAL TAXES
 ALLOCATED BETWEEN HOUSEHOLDS AND BUSINESS
 FISCAL YEARS 1972-1975

	1972	1973	1974	1975
	(Dollar amounts in millions)			
Reported Net Tax Collections	\$594.1	\$661.6	\$680.6	\$802.0
<u>Adjustments</u>				
Nonallocable taxes ^{a/}	- 5.1	- 5.6	- 5.8	- 6.0
Non-resident tax collections	- 6.0	- 6.6	- 8.1	- 9.4
Vendors discounts on sales and excise taxes	+ 2.2	+ 2.7	+ 3.5	+ 4.1
Total Adjustments	- 8.9	- 9.5	- 10.4	- 11.3
Total Local Taxes	\$585.2	\$652.1	\$670.2	\$790.7
<u>Taxes on Resident Households</u>				
Residential Property	\$254.2	\$262.3	\$254.1	\$300.2
Sales and Use	42.2	60.3	72.9	84.1
Cigarette	2.9	3.2	11.9	14.8
Total Household Taxes	\$299.3	\$325.8	\$338.9	\$399.1
<u>Taxes on Business</u>				
Non-Residential Property	\$237.8	\$269.7	\$261.3	\$314.2
Sales and Use	26.1	30.1	36.9	42.6
Other Reg. and Business Taxes ^{b/}	22.0	26.5	33.1	34.8
Total Business Taxes	\$285.9	\$326.3	\$331.3	\$391.6

^{a/} Represents employee's share of Denver Occupation Tax.

^{b/} For fiscal 1972 revised data includes Denver Occupation Tax on business.

taxes). The adjustments made for nonallocable taxes, non-resident tax collections and vendor discounts amounted to \$11.3 million. Thus, on an adjusted basis, the total local tax on Colorado residents amounted to \$790.7 million.

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 among taxpayers by income classes; the exclusion of estimated non-resident sales and cigarette taxes based on the method used for computing non-resident state taxes; and the addition of vendor discounts on local sales and cigarette taxes. The specific discounts used for local taxes were: two percent on Denver sales tax collections; an average of 3 1/3 percent on the total of all other municipal and county gross sales tax collections; and four percent on gross cigarette collections.

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. However, the two major sources of local tax revenues -- property and sales taxes -- had to be 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 use taxes.

Table A-6 shows the derivation by income class of the residential portion of the total property tax. It was estimated that Colorado residential property taxes for fiscal year 1975 amounted to \$300.2 million, or 49 percent of the total property tax reported for that year. The property tax apportionments for fiscal years 1973 and 1974 were based on the ratio derived for the original 1972 CTPS study.

This property tax allocation was based on an imputation method which assumed that property taxes on renter-occupied housing units are shifted forward and that such average taxes approximate, but are smaller than, those on owner-occupied units of families of comparable income and household size. The 1975 CTPS individual income tax analysis provided average household real estate tax deductions 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

TABLE A-6. DERIVATION OF COLORADO RESIDENTIAL PROPERTY TAXES
FISCAL YEAR 1975

	Adjusted Gross Income Classes				Total
	Under \$5,000	\$5,000 to \$10,000	\$10,000 to \$15,000	\$15,000 to \$25,000 and Over	
Total number of taxpayer returns	249,522	227,940	182,295	181,655	903,965
Percent of total with real estate tax deductions on itemized returns	5.0	24.6	51.9	75.4	85.5
Average property tax on itemized returns with real estate tax deductions ^{a/}	--	\$ 367	\$ 396	\$ 475	\$ 758
Average property tax imputed to non-itemized returns ^{b/}	\$ 149	\$ 275	\$ 317	\$ 404	\$ 682
Total property taxes (thousands of dollars): ^{c/}	\$ --	\$20,584	\$37,414	\$65,096	\$163,643
On itemized returns	37,179	47,272	27,824	18,042	136,503
On non-itemized returns					
Total Residential Tax	\$37,179	\$67,856	\$65,238	\$83,139	\$300,146

^{a/}All returns in the first income stratum were treated as non-itemized returns because of the relatively small number and low sampling reliability of the itemized returns with property tax deductions.

^{b/}The imputed average tax for the first income stratum was based on consumer housing expenditure ratios developed for the 1972 Colorado Tax Profile Study adjusted to 1975 basis.

^{c/}Product of the number of returns and average taxes may not equal respective totals because of rounding average taxes to even dollars.

significantly with the level of income -- from five percent for those with an adjusted gross income of less than \$5,000 to 86 percent for those with incomes of \$25,000 or more. For the four highest income strata (adjusted gross incomes of \$5,000 or more), the average real estate tax deductions reported on the itemized returns, adjusted for a consumer preference factor, were then imputed as the residential property tax burden for taxpayers of comparable incomes who filed non-itemized income tax returns. However, for households in the lowest income stratum, the above method of estimating residential property taxes could not be used because of the relatively small number and low sampling reliability of itemized returns with real estate tax deductions. Instead, residential property taxes for this income category were estimated on the basis of a computed ratio of real estate taxes to nontaxable housing expenditures (i.e., not subject to sales tax) developed for the 1972 CTPS study and adjusted to a 1975 basis for this study.

APPENDIX B

METHODOLOGY USED FOR 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 allocations 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 important differences between the economic and legal or 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, unemployment compensation, and portions of private pensions and retirement income. 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 rental income on owner-occupied residences, imputed interest on insurance and savings, and employer contributions to pension funds. The magnitude of the difference between these income concepts on a national basis, for example, is shown by the fact that the total adjusted gross income reported on federal income tax returns represents only about 80 percent of the total personal income computed on a national income accounts basis.^{2/}

Intermediate measures of income also have been developed in the form of money income, either before or after tax, as reported by respondents in sample surveys conducted by the Bureau of the Census and other governmental agencies. Such money income measures basically are in accord with the popular concept of income since they generally exclude imputed income but include the major types of nontaxable money transfers.

^{2/} J.A. Pechman, Federal Tax Policy, W.W. Norton and Company, New York, 1971, pp. 272-274.

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 for the original 1972 CTPS report. It was based on a study by Projector and Bretz which provided a detailed analysis of household money transfer income contained in the Bureau of the Census report on 1970 family income.^{3/} The present study incorporating the Projector and Bretz estimates of under reporting of transfer income is based on the Census Bureau survey of 1973 family income.^{4/} In both instances, the household transfer income was classified by Census money income levels. Ratios of transfer income to adjusted gross income were derived from these data by first converting the Census money income into corresponding adjusted gross income classes, and then computing a money transfer income ratio on this basis. In turn, by relating these ratios to the absolute levels of adjusted gross income, it was possible to derive ratios which conformed to the appropriate levels of CTPS adjusted gross income. Because the ratio of transfer income to non-transfer income for Colorado residents between 1973 and 1974 increased by 9.35 percent,^{5/} the estimate of Colorado transfer income derived from the Census Bureau data for 1973 was adjusted accordingly. Based on the above methodology, the estimate of total money transfers received in 1974 by Colorado households (families and unrelated individuals) was \$1,386 million or only 3.9 percent less than the \$1,442 million (inclusive of non-money transfers) estimated by the U.S. Department of Commerce as the total transfer income for Colorado residents for that year.

In addition to the above money transfer income adjustment, the CTPS adjusted broad income measure includes an estimate of the capital gains

^{3/} D.S. Projector and J.S. Bretz, "Measurement of Transfer Income in the Current Population Survey," in The Personal Distribution of Income and Wealth, National Bureau of Economic Research, New York, 1975, Chapter 12.

^{4/} U.S. Bureau of the Census, "Money Income in 1973 of Families and Persons in the United States," Current Population Reports, Series P-60, No. 97, Washington, D.C., 1975. Unpublished data on the components of money income received by unrelated individuals in 1973 were provided by the Census Bureau.

^{5/} U.S. Department of Commerce, Survey of Current Business, August 1975.

income statutorily excluded from reported adjusted gross income. An estimate of such income was obtained by computing the ratios of excluded capital gains to adjusted gross income by income classes as reported in the Internal Revenue Service, Statistics of Income, 1972.^{6/} These ratios were then applied to the CTPS averages of adjusted gross income reported on Colorado individual income tax returns for fiscal year 1975. A summary of the final adjustments made to the CTPS adjusted gross income in order to derive the corresponding adjusted broad income used as the alternative base for the tax burden analyses is shown in the table below:

TABLE B-1. DERIVATION OF ADJUSTED BROAD INCOME FOR THE COLORADO TAX PROFILE STUDY, FISCAL YEAR 1975

	<u>A</u>	<u>B</u>	<u>C</u>	<u>D</u>	<u>E</u>
<u>Adjusted Gross Income Classes</u>	<u>Average CTPS Adjusted Gross Income</u>	<u>Ratio of Excluded Capital Gains to AGI</u>	<u>Ratio of Transfer Income to AGI</u>	<u>Income Expansion Factor (1+B+C)</u>	<u>Average Adjusted Broad Income (AxD)</u>
Under \$ 5,000	\$ 2,596	.0185	.9683	1.9868	\$ 5,157
\$5,000 to \$10,000	7,408	.0091	.2216	1.2307	9,117
\$10,000 to \$15,000	12,376	.0084	.0831	1.0915	13,509
\$15,000 to \$25,000	19,010	.0126	.0492	1.0618	20,185
\$25,000 and over	<u>41,172</u>	<u>.0805</u>	<u>.0273</u>	<u>1.1078</u>	<u>45,611</u>
Totals (weighted)	\$11,902	.0275	.1315	1.1590	\$13,799

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. As noted in the 1972 CTPS report, the

^{6/} Internal Revenue Service, Statistics of Income--1972, Individual Income Tax Returns, Washington, D.C., 1974

most recent and comprehensive empirical study of actual spending patterns of households was the Survey of Consumer Expenditures published by the U.S. Bureau of Labor Statistics in the early 1960's.^{7/} The detailed household expenditure and income data for the western states contained in that study were used as the basis for the 1972 CTPS tax burden analysis after the income measures were made comparable and the expenditure outlays adjusted for inflation. Currently, the BLS is conducting a new study of consumer expenditures based on sample survey information for the fiscal year 1973. However, the only results from this study published to date have been national averages on food expenditures at home and away from home, gasoline and a few other selected non-food expenditures.^{8/} Comparable unpublished 1973 "diary survey" data on these items for all urban and rural families in the western states were obtained directly from the Bureau.

For the purposes of this study, the Colorado consumer expenditure profile developed for the 1972 CTPS report^{9/} was revised to incorporate the new BLS-SCE food and gasoline expenditure data and updated for the price inflation and change in aggregate consumer expenditures between fiscal years 1972 and 1975. On the basis of the definitions of taxable commodities under Colorado's present sales and excise tax laws, the estimated 1975 average consumer expenditures were classified into taxable and nontaxable categories. These data were used to derive ratios of taxable consumer expenditures and total consumer expenditures to adjusted gross and adjusted broad income. In turn, these ratios were applied to the 1975 average incomes of Colorado taxpayers, classified by income level, in order to obtain the current pattern of consumer expenditures of

^{7/} U.S. Department of Labor, Bureau of Labor Statistics, Survey of Consumer Expenditures: 1960-61 (Detail of Expenditures and Income in the Western Region), Washington, D.C., 1964.

^{8/} "Partial Results from 2-Year Survey of Consumer Expenditures," News Release, April 16, 1975; and "Additional Results from Latest Survey of Consumer Expenditures," News Release, May 15, 1975, U.S. Department of Labor, Bureau of Labor Statistics, Washington, D.C.

^{9/} See Colorado Tax Profile Study, Appendix A, Table 7, p. 96.

Colorado households. The specific 1975 consumer expenditure-income ratios developed for the CTPS analysis are shown in Table B-2, below:

TABLE B-2. RATIOS OF CONSUMER EXPENDITURES TO ADJUSTED GROSS AND BROAD INCOMES USED IN THE COLORADO TAX PROFILE STUDY, FISCAL YEAR 1975

Households in Adjusted Gross Income Classes	Colorado Consumer Expenditures as Ratios of:			
	Adjusted Gross Income		Adjusted Broad Income	
	Taxable Expendi- tures	Total Expendi- tures	Taxable Expendi- tures	Total Expendi- tures
Under \$ 5,000	1.200	1.910	.603	.961
\$5,000 to \$10,000	.708	1.071	.575	.870
\$10,000 to \$15,000	.602	.906	.568	.830
\$15,000 to \$25,000	.535	.817	.503	.769
\$25,000 and over	<u>.368</u>	<u>.595</u>	<u>.333</u>	<u>.537</u>
All Households	.578	.885	.499	.764

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 computer analysis of a stratified, random sample of 1974 Colorado individual income tax returns filed in 1975 prepared for the companion report, Colorado Statistics of Income, 1975. 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 and use taxes were allocated on the basis of ratios of

taxable consumer expenditures to adjusted gross income developed from U.S. Bureau of Labor Statistics, Survey of Consumer Expenditures, adjusted to a 1975 basis for purposes of the CTPS analysis. The indirect portions of these taxes were allocated by use of total consumer expenditure ratios since such taxes represent business costs assumed to have been shifted to the consumer through market price.

- Excise taxes -- the cigarette, alcoholic beverage 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 independent 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.
- Corporation 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 corporate dividends by adjusted gross income classes as reported by the Internal Revenue Service in the Statistics of Income, Individual Income Tax Returns, 1972.

- Other business taxes -- this category includes insurance, severance, oil and gas, utility, franchise and all other regulatory and miscellaneous business taxes. These levies, as in the case of all other business costs, were assumed to be indirectly borne by households and accordingly were allocated on the basis of the ratios of total consumption expenditures to income.