

DOCUMENT RESUME

ED 237 694

CE 037 648

TITLE Information Regarding the Effect of Applying the Representative Tax System to the General Revenue Sharing, Medicaid, and Vocational Education Programs.

INSTITUTION General Accounting Office, Washington, D.C.

REPORT NO GAO/GGD-83-106

PUB DATE 9 Sep 83

NOTE 18p.

AVAILABLE FROM U.S. General Accounting Office, Document Handling and Information Services Facility, P. O. Box 6015, Gaithersburg, MD 20760 (First five copies--free; additional copies--\$3.25 bound, \$1.00 unbound; checks should be made payable to the "Superintendent of Documents.")

PUB TYPE Reports - Research/Technical (143)

EDRS PRICE MF01/PC01 Plus Postage.

DESCRIPTORS *Federal Aid; Public Agencies; *Revenue Sharing; *State Aid; *Tax Allocation; Taxes; *Vocational Education

IDENTIFIERS *Funding Formulas; Medicaid; Public Service; *Representative Tax System; Revenue Sharing Program; Vocational Education Act 1963

ABSTRACT

The General Accounting Office assessed the likely impact of replacing personal income with the Representative Tax System (RTS) on the distribution of federal aid among the states in three formula-based programs. These programs were the General Fiscal Assistance Act of 1972, known as the Revenue Sharing program; Title XIX of the Social Security Act, known as Medicaid; and the Vocational Education Act of 1963. The analyses indicated that if replacing personal income with the RTS were the only change made in the three formulas, federal funds would be redistributed away from states with high revenue raising potential from nonincome revenue sources. These were primarily states with relatively high energy production and, to a lesser extent, high property values and retail sales. However, the rationale for replacing personal income with the RTS would argue in favor of additional formula changes as well. When additional formula changes were considered, no general distributional pattern emerged. This was because the distributional outcome was sensitive to which program was being considered and to precisely what other formula changes would be likely to be made. Appendixes present data tables with results of the analyses. (YLB)

 * Reproductions supplied by EDRS are the best that can be made *
 * from the original document. *

CE

BY THE U.S. GENERAL ACCOUNTING OFFICE

Report To The Honorable Lloyd Bentsen United States Senate

ED237694

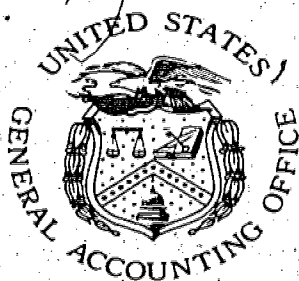
Information Regarding The Effect Of Applying The Representative Tax System To The General Revenue Sharing, Medicaid, And Vocational Education Programs

The Representative Tax System (RTS) is a statistical indicator of States' potential ability to raise tax revenues for the support of public services. This method of measuring States' revenue raising abilities was developed by the Advisory Commission on Intergovernmental Relations. In the past, GAO has concluded that the RTS is a better measure of States' revenue raising potential than personal income (the most commonly used measure).

GAO was asked to determine the likely impact of replacing personal income with the RTS on the distribution of Federal aid among the states in three formula based programs: General Revenue Sharing, Medicaid, and Vocational Education.

GAO found that, if replacing personal income with the RTS were the only change made, Federal funds would be redistributed away from States with relatively large non-income revenue sources such as energy production and retail sales. However, this outcome would likely not occur because the rationale for using the RTS would probably support additional formula changes as well. When additional formula changes were considered, no general pattern of winners and losers emerged. This was because the distributional outcome is sensitive to which program was being considered and to precisely what other formula changes would likely be made in conjunction with substituting the RTS for personal income.

CE037648



U.S. DEPARTMENT OF EDUCATION
NATIONAL INSTITUTE OF EDUCATION
EDUCATIONAL RESOURCES INFORMATION
CENTER (ERIC)

✓ This document has been reproduced as received from the person or organization originating it.
Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official NIE position or policy.

GAO/GGD-83-106
SEPTEMBER 9, 1983

Request for copies of GAO reports should be sent to:

U.S. General Accounting Office
Document Handling and Information
Services Facility
P.O. Box 6015
Gaithersburg, Md. 20760

Telephone (202) 275-6241

The first five copies of individual reports are free of charge. Additional copies of bound audit reports are \$3.25 each. Additional copies of unbound report (i.e., letter reports) and most other publications are \$1.00 each. There will be a 25% discount on all orders for 100 or more copies mailed to a single address. Sales orders must be prepaid on a cash, check, or money order basis. Check should be made out to the "Superintendent of Documents".



UNITED STATES GENERAL ACCOUNTING OFFICE
WASHINGTON, D.C. 20548

GENERAL GOVERNMENT
DIVISION

B-212913

The Honorable Lloyd Bentsen
United States Senate

Dear Senator Bentsen:

This letter is in response to your July 25, 1983, request and subsequent discussion with your staff asking us to provide information on the effect the Representative Tax System (RTS) would probably have on Federal aid to States if it were used in three formula-based programs: (1) the General Fiscal Assistance Act of 1972, known as the Revenue Sharing program; (2) Title XIX of the Social Security Act, known as Medicaid; and (3) the Vocational Education Act of 1963. This review was performed in accordance with generally accepted government audit standards.

Currently, personal income is used in these three programs to reflect States' revenue raising abilities. However, in the past GAO has concluded that the RTS is a better approach for this purpose because it includes a measure of nearly all the major revenue sources States can tap using a variety of taxes. It measures the amount of revenue each State would raise if an identical set of tax rates were applied to a comprehensive set of tax bases such as income, property, retail sales, and energy production. Because an identical set of tax rates are used, States only differ in the size of their tax bases and therefore the RTS compares States' revenue raising potential.

Our analysis indicates that if replacing personal income with the RTS were the only change made in the three formulas we considered, Federal funds would be redistributed away from States with high revenue raising potential from non-income revenue source. These are primarily States with relatively high energy production, and to a lesser extent high property values and retail sales. However, the rationale for replacing personal income with the RTS would argue in favor of additional formula changes as well: When we considered additional changes likely to be made in conjunction with using the RTS, no general

(018990)

distributional pattern emerged. Energy producing States were as likely to have their Federal funding increased as decreased under these formula changes. This is because the distributional outcome was sensitive to which program was being considered and precisely what additional formula changes are likely to be made.

IMPACT OF USING THE RTS IN
THE REVENUE SHARING PROGRAM

With respect to the distribution of Revenue Sharing funds, you requested GAO to make three analyses comparing: (1) the effect of replacing personal income with the RTS in the current three-factor and five-factor formulas; (2) the effect of the two-factor formula contained in Senate bill S. 700 using population and the RTS; and (3) the effect of the two-factor formula contained in Senate bill S. 700 except using personal income in place of the RTS.

The current program distributes \$4.6 billion annually among States using two different formulas, a three-factor and a five-factor formula. Each State receives its allocation under the formula which provides the largest allocation. Then each State's allocation is proportionately reduced to ensure that the resulting State allocations sum to \$4.6 billion. The three-factor formula is based on population, the inverse of States' relative per capita income¹ and each State's tax collections as a percentage of its personal income (referred to as tax effort). The three factors are multiplied together and States are allocated funds on the basis of their respective shares of the total.

The five-factor formula is based on the above three factors (population, inverse relative per capita income and tax effort), and two additional factors, urbanized population, and State income tax collections. However, in this formula each of the five factors are added instead of being multiplied together. Consequently, 22 percent of the \$4.6 billion is distributed on the basis of each State's share of population, 22 percent on the basis of each State's share of the urbanized population, 22 percent on the basis of each State's share of population weighted by its inverse relative per capita income, 17 percent on the basis of each State's share of all State tax collections weighted by its tax effort (i.e., the ratio of State tax collections to State personal income) and 17 percent on the basis of each State's share of State income tax collections.²

¹The inverse of a State's relative per capita income is defined as the ratio of the U.S. per capita income to State per capita income.

²This factor has a maximum and a minimum applied to it.

Senate Bill 700 was introduced in the 98th Congress and would replace the three- and five-factor formulas and replace them with a two-factor formula using population and the RTS. Use of a two-factor formula therefore eliminates three factors currently used to allocate revenue sharing funds: (1) the size of the population; (2) tax effort; and (3) State income tax collections. This formula therefore represents a fundamental change in Federal policy regarding the distribution of Revenue Sharing funds. Specifically, high tax effort States would no longer be rewarded for their high tax effort and, conversely, low tax effort States would no longer be penalized; States with large populations would no longer be given an extra subsidy as an incentive for States to rely more heavily on the income tax as a revenue source would be eliminated; and, finally, for the first time, the RTS would be used to recognize differences in States' revenue raising abilities rather than personal income, the measure currently used.

The two-factor formula was proposed by Senator Durenberger because it is claimed to be more responsive to differences among States in their respective abilities to raise revenues in support of State and local public services. This recognition, it is argued, would be a better way for the Federal aid system to counteract fiscal disparities among States.

Methodology and Analysis

The data used in calculating State allotments by the current formula, using the RTS, is based on entitlement period 14 data (October 1, 1982 to September 30, 1983) and the 1981 "standard" RTS as calculated by the Advisory Commission on Intergovernmental Relations. Calculations of the two-factor formula use 1981 data for population, personal income, and the RTS. Second, substituting the RTS in the existing three-factor and five-factor formulas means that (1) per capita income would be replaced by the RTS measured on a per capita basis, and (2) the tax effort factor would be measured as the ratio of State tax collections to the RTS capacity measure, both measured in total dollars. Finally, the two-factor formula would contain a minimum per capita grant of \$15.00. The smallest per capita grant was \$15.05.

A comparison of the three alternatives [(1) using the RTS in the current formula; (2) using a two-factor formula with population and the RTS; and (3) a two-factor formula with population and personal income] is summarized in table 1 on page 5. Replacing personal income with the RTS in the existing formulas would increase Revenue Sharing allocations for 21 States and reduce them for the remaining 30 States.³ The five States with

³The District of Columbia is treated as a State in the Revenue Sharing program.

the largest increases are high tax effort and/or highly urbanized States. In contrast, the five States with the largest declines all have significant levels of energy resources. The reason the losing States outnumber the gaining States is that the use of the RTS in computing tax effort in the five-factor formula increases New York's allocation dramatically because of its large tax effort. Its allocation increases by \$130 million, which is larger than the total revenue sharing allocation of all but 10 States, thus causing a majority of States to have their allocation reduced.

The two-factor formula, using population and the RTS, produces gains for 27 States and losses for the remaining 24. In this case the five largest gainers are all States with low tax effort, reflecting the elimination of tax effort from the formula. Four of the five losers are States with significant energy resources. The one exception is the District of Columbia, which loses under this alternative because urbanized population is eliminated in the two-factor formula.

The reason there are more gaining States than losing States is that New York and California both lose under this alternative because their high tax effort and highly urbanized populations are no longer reflected in the two factor formula. Together they would lose \$187 million which when redistributed among smaller States produces more gainers than losers.

The two-factor formula based on personal income rather than the RTS produces even more gainers, 33 compared to 18 States that lose. Again, the five States with the largest gains are all low tax effort States. Now, however, the five largest losers are all high tax effort States, only two of which have significant energy resources.

The reason for the large increase in gaining States is that the trend of shifting funds from a few high tax effort and highly urbanized States characteristic of the two-factor formula is even more prevalent when personal income is used instead of the RTS. The 18 losing States would lose a total of \$382 million under this alternative. Five States--New York, California, Alaska, Massachusetts and New Jersey--lose \$323 million or 85 percent of the total, thus enabling a large majority of the remaining States to gain.

Details of the impact of these three alternatives on the 50 States and the District of Columbia are shown in Appendix I, where States are listed alphabetically, and in Appendix II where States are listed according to their percentage gain under alternative (1).

Table 1

Impact of Three Alternative Formulas
for Distributing Revenue Sharing Aid
(note a)

	Formula alternatives		
	(1)	(2)	(3)
Number of gaining States	21	27	33
Number of losing States	30	24	18
Five largest gainers (percent)	RI (34.5) NY (27.8) PA (11.3) WIS (10.3) MI (8.2)	IN (37.9) NH (36.7) MO (33.3) OH (29.6) TN (28.2)	NH (38.4) IND (36.8) MO (35.0) TEN (28.0) FL (27.4)
Five largest losers (percent)	ALK (54.5) NM (50.4) WYO (49.3) ND (41.3) MT (36.8)	ALK (83.3) DC (39.9) NM (38.6) WYO (36.6) ND (28.9)	ALK (83.3) DC (48.5) NY (31.5) WYO (25.8) MASS (21.2)

a/(1) Current formulas using the RTS; (2) the S. 700 two-factor formula based on the RTS; and (3) the S. 700 two-factor formula based on personal income.

IMPACT OF USING THE RTS
IN THE MEDICAID PROGRAM

The Medicaid program is an open-ended entitlement program whereby the Federal government reimburses States for a certain percentage of eligible program expenditures. Federal reimbursement for fiscal year 1982 are currently estimated at \$16.4 billion. The Federal match varies based on the square of State per capita income.

In our report on the Medicaid matching formula⁴ we suggested five options designed to make the formula more equitable from the standpoint of achieving two policy objectives, (1) reducing disparities in program benefits provided to recipients living in different States and (2) equalizing States' tax burdens associated with financing their share of program costs. Two of the five options we presented substitute the RTS for personal income because we concluded that the RTS was a better measure of a State's ability to finance program costs. However,

⁴"Changing Medicaid Formula Can Improve Distribution of Funds to States" (GAO/GGD-83-27, Mar. 9., 1983).

it should be pointed out that if replacing personal income with the RTS were the only change made it would reduce tax burden disparities at the expense of producing greater program benefit disparities. Consequently, if the RTS is used in the Medicaid formula, other changes discussed in our report should also be made to insure that both policy objectives are better realized.

Our analysis here demonstrates only the impact of using the RTS to improve tax burden equity, by comparing two alternative formulas:

- (1) Replacing per capita income squared, which appears in the current formula, with a per capita RTS squared, and keeping the minimum Federal share at 50 percent.
- (2) Replacing per capita income squared with the RTS measured on a per person in poverty basis rather than on a per capita basis, and reducing the minimum Federal share from 50 to 40 percent.

Methodology and Analysis

Under current law, matching rates are calculated on the basis of a 3-year average of per capita income. Fiscal year 1984 matching rates are based on income data from calendar years 1979, 1980, and 1981. Therefore, we have used a 3-year average of the RTS for the same three year period.

A comparison of the two alternatives is summarized in Table 2 on page 7. Replacing per capita income with a per capita RTS would benefit States where income overestimates the State's revenue raising capacity and would reduce Federal support in States where income understates their capacity. For example, the five States with the largest decline in their Federal matching rate all have significant energy resources, whose revenue raising potential is not reflected in personal income.

This pattern changes rather substantially if other changes, also designed to improve the tax burden equity, are also made. Alternative #2 includes the number of people below the poverty line and reduces the minimum Federal match from 50 to 40 percent, in addition to using the RTS. This option was presented in our Medicaid report and provides the greatest degree of tax burden equity of the options we considered.

Table 2

Impact of Two Alternative Formulas
for Calculating Medicaid Matching Rates
(note a)

	<u>Formula Alternatives</u>	
	(1)	(2)
Five largest gainers (percent)	NY (30)	DC (34)
	MASS (20)	NY (29)
	RI (10)	MISS (7)
	MD (10)	GA (6)
	MI (10)	MI (6)
Five largest losers (percent)	NM (20)	NH (33)
	LA (20)	WIS (29)
	MT (20)	MT (28)
	ND (10)	IOWA (28)
	WVA (10)	IND (26)

a/The two alternatives are described on page 6.

Under this alternative only one energy State (Montana) is among the five biggest losers. The four remaining big losers are all States with relatively low poverty levels. Conversely, four of the five biggest gainers have a high incidence of poverty and relatively low revenue raising capacity. The two largest gainers (the District of Columbia and New York) are doubly disadvantaged under the current formula because per capita income significantly overstates their revenue capacity and understates their high incidence of poverty.

IMPACT OF USING THE RTS IN
THE VOCATIONAL EDUCATION PROGRAM

The Vocational Education program distributes \$700 million in Federal funds to States in fiscal year 1983, on the basis of an estimate of the potential number of students and per capita income. The number of students is estimated by the number of people between the ages of 15 and 19 years weighted 67 percent, people between 20 and 24 years weighted 27 percent and people between 25 and 65 weighted 6 percent.⁵

As with revenue sharing and Medicaid, the rationale for using the RTS would be to reduce fiscal disparities by reducing

⁵These weights are implicit in the formulas whereby 50 percent of the funds are distributed by the 15 to 19 year olds, 20 percent by the 20 to 24 year olds, 15 percent by the 25 to 65 year olds and 15 percent by the sum of the three age groups used.

tax burden disparities between States. Consequently, we have analyzed two alternatives for incorporating the RTS into the formulas used to distribute vocational education funds; (1) replace per capita income with a per capita RTS and (2) replace per capita income with the RTS expressed on a per student instead of a per capita basis.⁶

A comparison of the two alternatives reveals only minor differences between them. This is because the number of students is highly correlated with population. The majority of States would lose under both options. The five biggest gainers are, again, States where per capita income overestimates the States' revenue raising capacity and the five biggest losers are all States with significant energy production whose revenue raising potential is not reflected by their per capita income. Appendix III and IV show State allocations for fiscal year 1983 and how these allocations would change under each of the alternatives. Appendix III lists States alphabetically and Appendix IV lists them by the percent change in Federal aid under alternative (1).

Table 3

Impact of Two Alternative Formulas
for Distributing Vocational Education Aid

	Alternative (1) (Per Capita RTS)	Alternative (2) (RTS Per Student)
Number of gaining States	16	21
Number of losing States	32	27
No change	3	3
Five largest gainers (percent)	NY (21) CONN (14) MD (12) NJ (12) RI (12)	NY (18) MD (16) RI (14) MASS (13) CONN (13)
Five largest losers (percent)	NM (23) LA (21) OK (20) TX (19) WVA (14)	OK (20) WVA (18) NM (18) TX (17) LA (15)

⁶This is similar to alternative 2 in the Medicaid formula where the RTS was expressed relative to the number of people in poverty. The only difference is that vocational education provides services to students while Medicaid provides services to people in poverty.

B-212913

We did not obtain agency comments. As arranged with your office we are sending copies of this report to the Secretaries of the Departments of the Treasury, Health and Human Services and Education.

If we can be of further assistance, or if you have any questions please call Mr. Jerry C. Fastrup of my staff at 275-6169.

Sincerely yours,

W. J. Anderson

William J. Anderson
Director

COMPARISON
THEIR
POPULATION

(1) USE

STATE NAMES

ALABAMA
ALASKA
ARIZONA
ARKANSAS
CALIFORNIA
COLORADO
CONNECTICUT

ALABAMA
ALASKA
ARIZONA
ARKANSAS
CALIFORNIA
COLORADO
CONNECTICUT

CO

(1) USE THE E
POPUL

STATE NAMES

APPENDIX II

ALASKA
 NEW MEXICO
 WYOMING
 NORTH DAKOTA
 MONTANA
 LOUISIANA
 DELAWARE

COMPARISON

STATE NAME

REPERIODIX III

ALABAMA
ALASKA
AMERICAN
ARIZONA
ARKANSAS
CALIFORNIA

COMPARISON

STATE RAN

APPENDIX I

NEW MEXICO

LOUISIANA

OKLAHOMA

TEXAS

WEST VIRG

MONTANA

IOWA

SOUTH DAK