THE USE OF THE TAX CREDIT ON AN INTERGOVERNMENTAL BASIS: THE MICHIGAN EXPERIENCE

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ABSTRACT

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The need for a more harmonious integration of the taxing activities of the state and local governments has increasingly occupied the attention of tax economists, lawyers, and government administrators in recent years. A substantial body of literature on the subject of intergovernmental fiscal coordination has accumulated during the 1960's when rising governmental budgets and dwindling tax resources combined to intensify the problem. These factors, coupled with the newly enacted Michigan tax credit, were instrumental in promoting an analysis of the use of the tax credit on an intergovernmental basis.

Since tax credits are only one of a number of devices to aid local units of government, the variety of techniques available to state government was briefly presented. The history of the use of tax credits was summarized at both the federal and state levels. The analysis

of this summary indicated that tax credits can be a powerful force in encouraging a lower level of government to impose a certain type of tax legislation.

The Michigan property tax and city income tax credits were presented with respect to administrative and revenue implications, effect on income distribution, and the impact on local governments. It was found that enactment of the sliding-scale credits would result in an increase in the realized progressivity of the tax structure.

This study assumes that the local income tax is an equitable and dependable revenue source for financing local government. Based on this assumption the question is whether or not the Michigan tax credits will aid local units in incorporating an income tax into their local revenue structure. The answer is in the affirmative. As long as the change in locally-levied taxes results in an income tax liability which is lower than the property tax liability for an individual taxpayer, it will be monetarily advantageous for that taxpayer to prefer an increase in the city income tax over an increase in the local property tax.

The credits will also exert an important influence in correcting the basic imbalance between the fiscal resources at the state and local levels of government essentially caused by the preponderant reliance of most local governments on the property tax for revenue.

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The extension of the sliding-scale property tax and city income tax credits to other states is recommended as one method of improving intergovernmental fiscal relations.

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CHAPTER I

INTRODUCTION

This study of the use of tax credits on an intergovernmental basis attempts to achieve three objectives: (1) to examine the use of the tax credits on an intergovernmental basis which has been made to date and to evaluate the results of their use; (2) to analyze in depth the allocative and redistributive aspects of the newly enacted Michigan tax credits and; (3) to present a basis for the evaluation of future proposals for extending the use of the tax credit in improving intergovernmental financial coordination.

In recent years the opinion has been expressed by several informed observers that state, and especially local governments, will experience serious difficulties in financing their expenditures in the years ahead.[1] In the post-war

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[1] See, for example, G. Break, Intergovernmental Fiscal Relations in the United States (Brookings Institution, 1966), Chap. VI, pp. 5, 7; L. L. Ecker-Racz, "Whether State and Local Finance?" Journal of Finance (May, 1964), p. 370; G. Fisher, Financing Illinois Government (University of Illinois, 1960), p. 139; W. Heller, "Comment," Proceedings of the American Economic Association (May, 1958), p. 332; W. Heller, New Dimensions of Political Economy (Harvard University Press, 1966), pp. 133-35; J. Maxwell, Tax Credits

years state and local government expenditures have grown rapidly and demands for services seem likely to increase in the future.

Demands upon state and local governments arise out of rapid population growth and continued movement to the suburbs. The rate of population increase has been greatest among the younger and the older population groups, both heavy consumers of state-local services. For example, over the 20-year period from 1960 to 1980, the total population of the United States is estimated to increase by 44 per cent, while the school-age segment (5 to 17 years) is expected to rise by 51 per cent, and the group from 65 years and over by 55 per cent.[2] The shift of population to the suburbs generates needs for new schools, roads, parks, water systems, and sewer systems. It also creates problems of urban renewal and metropolitan transportation in the central cities.

Another source of increasing demand on state and local governments is the rise in the standard of living of the American population. This will probably be accompanied

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and Intergovernmental Fiscal Relations (Brookings Institution, 1962), p. 9; footnote 5 (actually, Maxwell overstates the published views he cites); and D. Netzer, "State-Local Finance in the Next Decade," unpublished manuscript for CED, 1965, pp. 24-26.

[2]See U.S. Bureau of the Census, Current Population Reports (Series P-25, No. 187, Nov. 10, 1958); Illustrative Projections of the Population of the U.S. by Age and Sex: 1960 to 1980, prepared by Meyer Zitter and Jacob S. Siegel, pp. 16-17. This projection assumes continuation of 1955-57 fertility rates.

by increasing demands for improved standards of public services. In the American system, most of the collective wants are associated with increasing real income: better public education, improved care for the mentally ill and the aged, expanded recreation facilities, and more effective sanitation and water pollution control. Most of these services also fall in the sphere traditionally assigned to state and local governments. Moreover, American opinion seems to be moving toward acceptance of a more generous governmental support for cultural activities and for programs to beautify the cities and countryside. In short, new programs are likely to emerge which will place additional expenditures upon state and local governments. This is especially true as the federal government makes more and more matching programs[3] available to state and local governments.

Are state and local revenue systems financially equipped to finance these new and growing demands? Revenues from present taxes will increase as national income rises, but they probably will lag behind the increase in demands for services traditionally provided by state and local governments. Table 1 indicates that state and local revenues depend heavily on sales and property taxes. The yields of these taxes are

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[3]A matching program is one in which the federal government offers financial resources to a state or local unit of government, with the stipulation that the state or local unit match a certain percentage of the federal dollars with their own dollars.

TABLE 1

TAX REVENUE BY SOURCE AND LEVEL OF GOVERNMENT, 1968

Item	Amount (Millions of Dollars)				Percentage of Total			
	All Governments	Federal Governments	State Governments	Local Governments	All Governments	Federal Governments	State Governments	Local Governments
Total Taxes	185,126	117,555	36,400	31,171	100.0	100.0	100.0	100.0
Income	107,217	97,391	8,749	1,077	57.9	82.9	24.0	3.4
Individual	76,034	68,726	6,231	1,077	41.1	58.5	17.1	3.4
Corporation	31,183	28,665	2,518	--	16.8	24.4	6.9	--
Property	27,747	--	912	26,835	15.0	--	2.5	86.1
Sales, gross receipts, and customs	39,186	16,275	20,979	1,932	21.2	13.8	57.7	6.2
Customs duties	2,038	2,038	--	--	1.1	1.7	--	--
General sales and gross receipts	11,645	--	10,441	1,204	6.3	--	28.7	3.9
Selective sales and gross receipts	25,502	14,237	10,538	728	13.8	12.1	29.0	2.3
All other	10,976	3,889	5,760	1,327	5.9	3.3	15.8	4.3

Source: Department of Commerce, Bureau of the Census, annual report, Government Finances in 1967-68, GF68-No. 5, U.S. Department of Commerce, Bureau of the Census.

Less responsive to economic growth than income tax yields, on which the federal government relies. (See Table 2.) Sales taxes and property taxes are also regressive in their impact. Efforts to obtain more revenue and to lessen tax regressivity have been forestalled in many state and local governments by archaic constitutional provisions, political conflict, and by the fear of driving out business. Voters sometimes express their discontent with high federal taxes by opposing state and local tax increases. In some cases state and local units of government award special exemptions or other concessions to attract business. Small differences in state taxes, which often seem to serve no important public purpose, impose additional costs and inconvenience on taxpayers whose activities extend across state lines.

Among the remedies for fiscal conflict, the separation of federal, state, and local sources of revenue and functions has the longest history. Separation of sources of revenue existed, in fact, into the twentieth century. Federal tax revenues were derived from customs and excises, while state and local revenues were derived from a miscellany of levies, none of which was used by the federal government. The federal government on occasion made outright donations of federal land to the states, and at one time, in 1836, it made an outright grant of money.[4]

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[4]Its revenues were then embarrassingly in excess of its expenditures, and there was no federal debt. Many of

TABLE 2

INCOME ELASTICITIES OF THE MAJOR CATEGORIES OF STATE TAX REVENUE

Tax		Elasticity Estimates		
		Low	Medium	High
Income Taxes:	Individual	1.5	1.65	1.8
	Corporate	1.1	1.2	1.3
Sales Taxes:	General	0.9	1.00	1.05
	Motor fuel	0.4	0.5	0.6
	Alcoholic beverages	0.4	0.5	0.6
	Tobacco	0.3	0.35	0.4
	Public utilities	0.9	0.95	1.0
	Other	0.9	1.0	1.1

Sources: David George Davies, "The Sensitivity of Consumption Taxes to Fluctuations in Income," National Tax Journal, Vol. 15 (September 1962), pp. 281-90; James S. Duesenberry, Otto Eckstein, and Gary Fromm, "A Simulation of the United States Economy in Recession," Econometrica, Vol. 28 (October 1960), pp. 749-809; Harold M. Groves and C. Harry Kahn, "The Stability of State and Local Tax Yields," American Economic Review, Vol. 42 (March 1952), pp. 87-102; Robert Harris and Selma Mushkin, "The Revenue Outlook in 1970: A Further Report on Project '70'," unpublished paper prepared for the National Association of Tax Administrators' 1964 Conference on Revenue Estimating, October 1964, p. 16; Dick Netzer, "Financial Needs and Resources Over the Next Decade: State and Local Governments," in Public Finances: Needs, Sources and Utilization, a Report of the National Bureau of Economic Research (Princeton University Press, Princeton: 1961), pp. 23-65; Robert W. Rafuse, Jr., "The Cyclical Behavior of State-Local Finances," in Richard A. Musgrave, Essays in Multi-Level Finance (Studies of Government Finance, The Brookings Institute, Washington, D.C., 1965); Lee Soltow, "The Historic Rise in the Number of Taxpayers in a State with a Constant Tax Law," National Tax Journal, Vol. 8 (December 1955), pp. 379-81.

Sources of revenue have always enjoyed more separation among levels of government than have governmental functions. Some overlap of functions has always been present in this country, although the effort was made to draw and maintain broad lines of separation. The theory of separation was gradually adulterated by practical exceptions and, in any case, lost its popular appeal. It would have remained unchanged if, somehow, a flexible reallocation of governmental functions could have been arranged.

Nothing of this sort happened and, as a result, separation of sources of revenues and reallocations of functions remains on a theoretical level--outside the realm of actual practice. In practice functions and revenues often overlap, and intergovernmental transfers of funds are extensive and sometimes move in opposite directions, so that state governments both provide funds for and receive funds from local governments. This occurs in spite of the fact that overlapping taxes mean duplication of effort by both administration and taxpayers. The

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the states, on the other hand, were in financial need. A deposit of the surplus federal revenues--$37.5 million--with the states according to their representation in Congress was enacted, to be distributed in four installments. This deposit was, in fact, an unconditional federal grant. Three installments were distributed; the fourth was postponed because of a depression, and finally withheld. Some states, notably Virginia, attempted for years to secure the withheld quarter. See James A. Maxwell, The Fiscal Impact of Federalism in the United States (Harvard University Press, 1946), pp. 14-15.

duplication of effort brings the additional costs of tax conflict, discrimination, and complexity. These are tolerated because no scheme of separation offers different levels of government equal opportunity to meet their revenue needs. One need not be driven by a passion for uniformity to believe that intergovernmental relations would be improved and taxpayers' morale increased by some reasonable rearrangement of the present techniques of tax collection.

Attention should, therefore, be given to devices for intergovernmental financial coordination in an effort to ease the strains. Might tax credits serve this purpose? The use of the tax credit device to aid in improving intergovernmental financial coordination has been generally overlooked.

Chapter II appraises briefly the techniques available for solving intergovernmental fiscal problems--separation of revenue sources, tax sharing, grants (conditional and unconditional), tax deductions, tax supplements, and, finally, tax credits. The two instances at the federal level--the death tax and unemployment insurance tax--in which the device of the tax credit has been employed are examined in Chapter III. Chapter IV discusses state and local experience with tax credits, with specific emphasis on the Wisconsin and Minnesota laws. Chapter V describes the newly enacted Michigan tax credits, which serve as a basis for the chapters which follow. The administrative

issues relating to the Michigan tax credits are examined in Chapter VI. In Chapter VII the advantages of tax credits in aiding local units to increase revenue are explored with reference to the Michigan law. Chapter VIII examines the effects of the Michigan tax credits on income redistribution. The conclusions of the study are presented in Chapter IX.

CHAPTER II

TECHNIQUES FOR SOLVING INTERGOVERNMENTAL FISCAL PROBLEMS

The purpose of this chapter is to present a summary of the techniques available for solving intergovernmental fiscal problems. This summary is presented to put in perspective that tax credits are only one of a number of techniques that can be used for solving intergovernmental fiscal problems.

Separation of Revenue Sources

Several alternate approaches may be directed towards the solution of intergovernmental budgetary problems.[5] The most comprehensive of these alternatives involves the separation of revenue sources between the various levels of government.[6] To an extent, the Constitution provides a basis for separation of revenues. Custom duties (tariffs), for example, may be collected only by the federal government.

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[5]See Carl S. Shoup, Public Finance (Chicago: Aldine Publishing Company, 1969), pp. 615-40.

[6]Bernard P. Herber, Modern Public Finance (Homewood, Illinois: Richard D. Irwin, Inc., 1967), Chapter 9.

Furthermore, the Constitution, in effect, prohibits the imposition of a federal property tax since it would have to be apportioned in accordance with the population of each state.

In practice, the revenue structure of the United States public sector bears considerable resemblance to a separated revenue system. The vast majority of revenues which are collected from individual and corporate income taxes, and from inheritance, estate and gift taxes are collected by the federal government. The vast majority of general sales tax receipts and motor vehicle and operator license revenues are collected by state governments. The local governments absorb an extremely high proportion of property tax receipts.

Complete separation of revenue sources between the federal, state, and local components of the public sector may appear on the surface to be an utopian arrangement. Closer analysis, however, indicates that such is not the case. Admittedly, the complete separation technique would eliminate multiple taxation, on an interlevel basis, with its attendant problems. In addition, it would preserve state-local autonomy as compared to the tax sharing, tax deduction, tax supplement, and tax credit techniques (to be discussed later in this chapter). Nevertheless, several important qualifications offer opposition to the technique of completely separating tax revenues.

First, there are not enough potentially good tax sources to adequately serve the three levels and 90,000 government units which comprise the American public sector. An overriding constraint of revenue scarcity is thus imposed. This constraint cannot be alleviated merely by separating tax revenue sources between the three levels of government. In addition, considerable economic differentiation exists within the state and local levels of government. Fiscal problems would result if two highly differentiated states or communities had identical tax structures.

Another defect in using the separation of revenue sources approach to solving intergovernmental fiscal problems concerns its lack of symmetry in considering only the tax side of the aggregate public sector budget. The spending side of the budget, which can influence allocation, distribution, stabilization, and growth with force equal to that of the revenue side, is ignored by the separations approach. In addition, the separations technique does not provide the complete intergovernmental uniformity in tax rates and exemptions which would be necessary to eliminate intergovernmental competition for industrial location--a practice with significant implications for efficient resource use.

Furthermore, the separations technique would likely distort any distribution objective based upon the desirability of a progressive tax system for the public sector

as a whole. For example, complete tax separation in the United States would undoubtedly consist of the exclusive use of income taxes by the federal government, the general sales tax by state governments, and the property tax by local governments. Complete revenue separation along these lines would thus result in a public sector revenue structure containing significant regressive elements in the form of general sales and property taxes. Under such conditions, the distribution goal in question might not be attained.

A final qualification regarding use of the tax separation device concerns the stabilization and growth functions of public finance. Considerable budgetary rigidity would necessarily accompany complete tax separation. Yet, changing conditions of the business cycle and changing growth rates will affect the revenue yields of the separated taxes as well as the functional spending needs of the various levels and units of government. The inflexibility of a revenue separation system, however, would restrict the appropriate budgetary adjustments required for anticyclical and growth policies, as well as for the maintenance of allocation and distribution goals.

Tax Sharing--Conditional and Unconditional

This solution to intergovernmental fiscal problems has received much discussion in the United States and is in moderate use at the present time. Certain phases of this

approach, moreover, are now being considered for significant future expansion.[7] Tax sharing, broadly defined, involves a government unit at a higher level collecting tax revenues prior to the disbursement of some part of these revenues to government units at a lower level or levels. These disbursements fall into two categories--conditional (strings attached) and unconditional (bloc) grants.[8] There is strong evidence that a higher level of government tends to be the most efficient for revenue collections, while a lower level of government tends to be the most efficient for expenditure decisions.[9]

In the United States, conditional tax sharing plans are used more extensively than are unconditional plans. The federal government is involved in many conditional grant-in-aid programs to state and local governments. State governments, in addition, conduct certain conditional grant-in-aid programs for which local units of government are the recipients. Regarding unconditional grants-in-aid, virtually no use is made of this bloc-grant, no-strings

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[7]The recent proposal for revenue sharing presented by president Nixon is an excellent example.

[8]The author is using a comprehensive definition of tax sharing due to the fact that even such intergovernmental assistance as conditional grants-in-aid still must be derived ultimately from the revenue collections of the higher level of government. Thus, why should they not be considered as tax sharing?

[9]See Herber, op. cit., Chapter 8.

attached, device between the federal government and lower levels of government in the United States. Moderate usage of unconditional bloc grants is undertaken by state governments, however, in their fiscal relationships with local governments.

Conditional grants-in-aid of the federal government ordinarily follow formulas for allocation which have been provided by the controlling statutes. Specifically, the formulas are based on such criteria as income per capita, geographical area, and population. In addition, the sharing formulas are usually guided by either the actual amount of revenue collected in each state, or for the purpose of returning relatively greater amounts of revenue to the poorer states. The latter approach recognizes need and the desirability of supplementing the revenue-gathering ability at the state and local levels of government. Obviously, the recognition of different needs for different state or local governments can yield substantial effects on the distribution of income and wealth in the society.

State governments often provide shared taxes to local units of government. Certain revenues are provided on a strings-attached basis and others on an unconditional basis. The general sales, gasoline, and excise taxes are the most commonly shared state taxes, though in a few states income and death taxes are shared with local governments. State action, by way of an unconditional grant, transfers

state revenues directly to the local units of government. In this respect the unconditional grant is similar to state revenue sharing, but it is different in that neither is the total amount dependent upon the receipts from a particular tax; nor is its allocation to each local unit dependent upon collections originating within the boundaries of the local unit.

An unconditional grant, unlimited to any specific state source of revenue, can be made as "equalizing" as the state desires. It may provide inter-regional equalization, since the amount provided for each local unit does not depend upon the amount collected in state taxes. The money disbursed as grants may be raised by a progressive system of state taxes; the allocation of the grants to the local units may be inversely progressive; that is, the share of a poor local unit may be larger than that of a rich unit, in terms of per capita income or population.

In providing an unconditional grant, the state government does not indicate an interest in specific local functions; rather, it provides revenue which the local governments may use as they choose. But the logic of the grant is that the state government has an interest in enabling standard local functions to be performed at certain levels, assuming the revenue effort of local government to be acceptable.

Tax Supplements

The tax supplement technique of intergovernmental fiscal coordination involves the application of separate tax rates to the same tax base by different levels of government. The higher level of government usually imposes the basic tax. This technique is used on a limited basis between the federal and state levels of government, but is used extensively between the state and local levels of government. An example of its present use between federal and state governments is the income tax of the State of Alaska. This tax adopts the federal income tax base and collects a fixed percentage of an individual's federal income tax liability. State and local governments using a combined tax supplement approach ordinarily add the local tax rate to the state tax rate. The general sales tax provides an example of the tax supplement device being used by the state and local levels of government. The receipts of both the state and local sales taxes are collected by the state government. They are then allocated to the local government on some basis, usually population or geographical origin of the tax revenues. The tax supplement device appears to have little direct influence upon the distribution, stabilization, and economic growth functions of public finance. In terms of allocative efficiency, however, enforcement savings in the form of reduced tax collection costs accrue to both the public sector and to the taxpayer

who prepares tax returns. Allocative irrationality could be reduced if all states used the same tax supplement arrangement for a federal tax, because interstate competition for industrial location would be reduced.

Tax Deductions

The tax deduction approach to intergovernmental fiscal coordination is used between all levels of the public sector. The most significant use of tax deductions involves the various deductions from the federal personal income tax for such taxes as income, general sales, use, personal property, and gasoline taxes paid to other jurisdictions. These deductions are subtracted from adjusted gross income. Many state income tax structures, moreover, allow deductions for the federal income tax. In addition, some state income taxes also allow deductions for certain excise taxes.

The tax deduction approach exerts no direct influence upon the stabilization and growth functions of public finance, though it may exert indirect effects through its influence upon consumption, work, and investment incentives. Certain direct effects, however, flow from the tax deduction technique in terms of allocative efficiency. For example, consumption patterns would be distorted if excise taxes on some economic goods are deductible while other specific excise taxes are not deductible. In addition,

allocation will be influenced as the revenue source pattern between units and levels of government is altered. The higher level of government is able to influence the tax structure adopted by the lower level through this device. Yet, the influence is less severe than it is with the tax credit approach.

Tax Credits

Under the tax credit technique of intergovernmental revenue coordination, one level of government allows an offset for taxes paid to other governmental jurisdictions. In its operation, the tax credit closely resembles the allowance of taxes paid to another level of government as a deduction from the tax base. The credit, however, allows this deduction from the tax itself as otherwise computed (i.e., without regard to the crediting provision), rather than from the base, and its effect in reducing the taxpayers' total tax bill, therefore, is much greater than that of the deduction when the tax rate is low. However, the effect of a deduction in reducing the total of the two tax bills approaches the effect of a credit as the rate of the tax against which the credit is allowed increases, until in the case of a highly progressive tax levied at high rates it becomes almost immaterial to the high-bracket taxpayer whether relief from taxation takes the form of a credit or a deduction. This is illustrated by Table 3, which shows

TABLE 3

EXAMPLE OF THE DISTINCTION BETWEEN DEDUCTION AND CREDIT

	Taxpayer A		Taxpayer B		Taxpayer C	
	Deduction	Credit	Deduction	Credit	Deduction	Credit
AGI	$5,000	$5,000	$20,000	$20,000	$100,000	$100,000
Personal Exemptions[a]	2,400	2,400	2,400	2,400	2,400	2,400
Personal Deductions	700	600	2,100	2,000	5,100	5,000
Taxable Income	$1,900	$2,000	$15,500	$15,600	$ 92,500	$ 92,600
Tax Liability Before Credit[b]	275	290	3,135	3,160	40,680	40,740
Credit	0	100	0	100	0	100
Tax Liability After Credit	$ 275	$ 190	$ 3,135	$ 3,060	$ 40,680	$ 40,640
Effective Rate	5.5	3.8	15.7	15.3	40.68	40.64

[a]Family of four.

[b]Rates taken from the 1968 Form 1040 Instructions for Preparing Your Federal Income Tax Return, U.S. Treasury Department, Internal Revenue Service, Schedule II, Married Taxpayers Filing Joint Return.

that for Taxpayer A with an Adjusted Gross Income of $5,000, the effective rates for a $100.00 deduction and a $100.00 credit are 5.5 and 3.8 per cent, respectively. However, for Taxpayer C with an Adjusted Gross Income of $100,000 the respective effective rates are 40.68 and 40.64.

Tax credits can have moderate influence upon the distribution, stabilization, and economic growth branches of public finance. It should be pointed out, though, that tax credits are more redistributive than deductions. The applications of this intergovernmental coordination device can also have significant indirect influence on stabilization and growth. This would result if the federal government used the tax credit device to encourage the states to adopt revenue structures, primarily based on income taxes,[10] which would be countercyclical in nature and thus serve as automatic stabilizers. Tax credits can directly influence allocation by affecting the intrapublic sector division of allocative effort between levels of government. They do not, however, eliminate duplication in enforcement efforts.

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[10]During 1966 the Advisory Commission on Intergovernmental Relations, a special commission created by Congress in 1959, recommended extensive federal government use of the tax credit device to encourage state government usage of the personal income tax. Twelve states, for example, do not use the personal income tax though all states are under considerable pressure to find adequate revenue sources.

In the chapters which follow, the tax credit, as one of the devices to improve intergovernmental fiscal relations, will be explored in detail. It should be kept in mind that the actual device to be used should be appraised in the light of the objectives which the governmental unit has in mind. Since objectives in assisting state and local governments are manifold, there is no inconsistency in the use of several devices.

CHAPTER III

FEDERAL EXPERIENCE WITH THE USE OF TAX CREDITS

The Death Tax Credit

The credit against the federal estate tax for state death tax payments is the oldest use of this device for coordinating federal-state taxes in the United States. Some state governments, by virtue of prior occupancy, long regarded death taxation as a tax for state use. They were, therefore, irritated when a federal estate tax was enacted in 1916.[11] In the years after World War I state officials campaigned vigorously for complete federal withdrawal. In addition, the federal administration and Congress both favored this step. In 1924, as a preliminary to withdrawal, a 25 per cent tax credit was enacted; that is, an estate subject to federal tax could subtract amounts paid as state death taxes up to 25 per cent of the federal tax.[12]

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[11] 39 Stat. 777.

[12] In 1918 taxpayers were allowed to offset against federal income tax and the war profits and excess profits tax the amounts of similar taxes paid to a foreign country. The objective was to reduce international double taxation.

However, a few voices expressed doubt that the states could successfully utilize a system of death taxes. They could document their argument by pointing to the states' record of performance by the small amount of state collections, the diversity of rates, exemptions and definitions, and the unhealthy growth of discriminatory practices, particularly in the taxation of non-resident decedents. Another threat to the states' system of death taxes arose within their own ranks. In 1924, Florida passed a constitutional amendment forbidding enactment of death taxes by its legislature in order to supplement the attractions of its climate with that of a taxing haven. Florida hoped, thereby, to attract high-income residents. Nevada took the same step, with similar hopes, in 1925.

Against this background, the credit device took on new significance. It might be used to counter the Florida and Nevada legislation, and to encourage all states to reform their taxes. It might also be used to add to state revenues and reduce federal revenues. In 1926 the 25 per cent credit was increased by Congress to 80 per cent, and the tax

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According to Andrew M. Tully, "there was apparently no direct connection" between this offset and the death tax offset of 1924. See The Tax Credit, Special Report of the New York State Tax Commission, No. 15 (1948), p. 1. Tully's chapters on the death tax and unemployment insurance tax credits contain an extensive bibliography of prior writings on these subjects. For the legislation on the 1924 credit, see 43 Stat. 303.

advantages sought by Florida and Nevada were thus largely cancelled out; the estate of a decedent in those states would pay the full federal tax.[13]

This represented the turning point of the movement for the repeal of the federal tax. Many state officials were, on the one hand, pacified by the 80 per cent credit and, on the other hand, skeptical about the prospect of complete federal withdrawal. For a few years progress towards reform was made through state action--notably the adoption of reciprocity, and through decisions of the Supreme Court--especially concerning the situs of intangibles.[14] In 1931, credits for state taxes offset were, on the average, 75.6 per cent of federal tax liabilities; the number of states using an estate tax only had risen from two in 1925 to seven in 1932, and the number using estate and inheritance taxes jointly had risen from three to twenty-seven.[15] In 1931-32, however, all such progress

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[13]See 44 Stat. 126. Chairman Green was prepared to use the credit as a lever to expedite reform. See Revenue Revisions, Hearings Before the House Committee on Ways and Means, 69th Congress, 1st Session (1925), pp. 812-14.

[14]The Supreme Court held that intangibles should have a situs only in the state in which the decedent was domiciled. The Court also denied the contention of Florida that the credit was unconstitutional; see Florida v. Mellon, 273 U.S. 12 (1927).

[15]See E. E. Oakes, "The Federal Offset and the American Death Tax System," Quarterly Journal of Economics, Vol. 54 (August, 1940), p. 576. Also, see Advisory Commission on Intergovernmental Relations, Coordination of State and Federal Inheritance, Estate, and Gift Taxes (January, 1961), p. 39.

stopped because of the depression. Congress further arrested progress when it enacted a supplementary estate tax in 1936, with an exemption of $50,000, for purposes of increasing federal revenues. The 80 per cent credit against the 1926 tax was retained, but the idea of repeal was no longer contemplated. On several later occasions Congress increased the federal rates and altered the exemptions, in order to increase federal collections, while excluding the states from participation.[16] The result, as indicated in Table 4, was that the state death tax credit declined in relation to federal estate tax liability, reaching 10.2 per cent in 1965.

Consequently, the federal objective of 1929--providing the states with a larger slice of death tax revenue --had been effectively averted and so also had been the original objective of federal withdrawal.

What did the death tax credit accomplish with respect to the objective of tax coordination? One accomplishment was that the threat of disintegration of state death taxation through interstate competition was averted. As of 1969, only Nevada had no death tax. The unruly behavior, in 1924-25, of two states (Florida and Nevada) with one per cent of the population of the nation, was stifled by

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[16]The specific exemption, which was $100,000 under the 1926 Act, was reduced to $50,000 in 1932 and to $40,000 in 1935. Further changes were made in 1942 and 1948.

the 80 per cent credit, which put a floor under state death tax liability; the credit, which gave a federal tax reduction to estates of decedents for state death taxes, discriminated against the estates of decedents in Florida and Nevada in order to halt the spread of interstate competition which was detrimental to the tax.

TABLE 4

FEDERAL ESTATE TAX LIABILITY BEFORE STATE DEATH TAX CREDIT, AND STATE DEATH TAX CREDIT, SELECTED YEARS 1929 - 1965[a]

Year	Federal Estate Tax Liability Before State Death Tax Credit	State Death Tax Credit	
		Amount	Per Cent of Federal Tax Liability Before Credit
1929	$ 165.4 Million	$122.1	73.8
1939	330.2 "	53.1	16.1
1949	634.9 "	65.8	10.4
1959	1,346.3 "	131.5	9.8
1965	2,755.3 "	280.4	10.2

[a]Advisory Commission on Intergovernmental Relations, Coordination of State and Federal Inheritance, Estate, and Gift Taxes (January, 1961), p. 41; and U.S. Treasury Department, Internal Revenue Service, Fiduciary, Gift and Estate Tax Returns, 1967.

The death tax credit could have accomplished more than it did. The action of Congress in 1926 was misdirected because of a conflict of objectives. Tax coordination through the 80 per cent credit was hindered by the increase in the federal exemption from $50,000 to $100,000. This

meant that numerous small estates from which state revenue was, and is, derived were excluded from the credit. Moreover, the credit was a uniform percentage of federal tax liability from a scale of progressive rates (moving from one per cent on the first $50,000 of the net estate to a top rate of 20 per cent on the excess above $10,000,000). This meant that larger aggregate credits resulted for larger than for smaller estates and for richer than for poorer states.

> One $25 million estate, for example, produces a larger tax credit for state taxes than nearly 3,000 separate $200,000 estates. Indeed, the tax credit on one $25 million estate exceeds the sum of all tax credits claimed on federal estate tax returns filed in 1959 from 17 low wealth states.[17]

The modest contribution of the credit toward tax coordination ceased in the 1930's. Since then, increasing complexity, structural disorder, and complicated jurisdictional problems have become characteristic of state death taxation. State governments, under no pressure to move toward uniformity in type of tax, definitions, rates, exemptions, deductions, exclusions, and administrative practices, but under considerable pressure to secure additional revenue, have enacted complicated tax structures. At the outset, in 1926, the states were left free to adjust to the credits as they wished--the credit was unconditional. Legislatures and state administrators were not motivated to

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[17] Advisory Commission on Intergovernmental Relations, op. cit., p. 43.

undertake the difficult job of altering existing law in the direction of coordination, and the freeze of the credit which came with the depression of the 1930's encouraged loosely constructed legislation. E. E. Oakes has suggested that the credit was "at least a partial explanation" of state lethargy, "since any shortcomings reducing the yield of this tax could in the important cases be offset by the increased revenues from the supplementary levy on estates."[18]

Are there some lessons that can be drawn from the experience with the death tax credit that are of assistance in examining the usefulness of credits at the state and local level? The first major lesson and probably the most important is that state governments, and hence local governments, will respond to the inducements of a credit enacted at a higher level of government. Another lesson to be learned from the death tax credit is that credits may have inherent inflexibilities. Over a period of time the inflexibilities, unless remedied, can deter improvements in the tax system and thus engender state discontent.

The Unemployment Tax Credit

In the 1930's, after the depression and the New Deal had weakened resistance to federal social legislation in the United States, there were advocates for a federal

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[18]Oakes, op. cit., p. 589.

scheme of unemployment insurance, but most opinion favored some method of federal-state cooperation. Opinion crystallized into two plans: a tax offset (credit) plan and a grant plan. In both of these the federal government was to impose a uniform flat tax on employer payrolls, thereby removing the fear of interstate competition, and in both the states were required to pass unemployment insurance laws. The difference between the two plans stemmed chiefly from the degree of centralization thought to be desirable, with supporters of grants desirous of more federal controls and supporters of tax offsets desirous of fewer.

Under the grant approach the proceeds of the uniform payroll tax were to be collected federally and returned to each state if, and when, a state passed a law which met prescribed federal standards concerning waiting period, rate and duration of benefits, etc. Proponents of this plan argued that it would not be very susceptible to constitutional attack and, looking to the future, that it would offer opportunity for liberalization of unemployment compensation, since the payroll tax was to be wholly a federal tax, as well as an opportunity for the federal government to require new conditions in the state laws.[19]

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[19]Arguments in favor of the grant plan are summarized in Eveline M. Burns, Toward Social Security (McGraw-Hill, 1936), pp. 209-13. "The grant-in-aid method of returning the money collected by the federal government to the states is much more effective than the tax offset method

The tax offset (credit) plan had two tactical advantages. For one, it was utilized in the Wagner-Lewis Bill which was before Congress in 1934, and which had gained wide endorsement. For another, the credit plan seemed to hold a better promise of survival if federal legislation on unemployment compensation were struck down by the Supreme Court--a relevant concern at that time. Unconstitutionality of a plan financed by federal grants would deprive the states of support for their laws, since the payroll tax was to be a federal tax. A similar fate for a plan financed by state payroll taxes credited against a federal tax would leave the taxes in operation even if the federal tax disappeared, and the unemployment insurance might be salvaged. Beyond these tactical advantages, the credit plan also appealed to those who wanted a minimum of federal controls at the outset.

The Committee on Economic Security, which had been created by President Franklin D. Roosevelt in 1934 to work out a general plan for social security, endorsed the credit approach with one major modification.[20] Instead of an

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as a means of raising the standard of the state plans. Apart from the fact that the federal government could probably lay down more conditions under the grant-in-aid plan without running foul of the Supreme Court, it could also secure more effectively the fulfillment of those conditions. It would easily refuse to make any grant to a state whose plan does not meet the federal requirements." (p. 211.)

[20]For the Committee's Report, see Message of the President Recommending Legislation on Economic Security, House Document No. 81, 74th Congress, 1st Session (1935), pp. 1-46.

offset of 100 per cent, the committee recommended an offset of 90 per cent, with payment of the remaining 10 per cent of the federal tax into the federal Treasury. The remaining ten per cent of revenue was to be the source of federal grants to the states to cover the cost of administrating their insurance laws, and this new feature reflected the desire for some additional federal controls over the states.[21] The committee reasoned that if the federal government gave grants (100 per cent grants) for the administration of unemployment insurance, not only might state favor for the bill be generated, but reasonable uniformity of state administration might also be secured.

The desire of the Committee on Economic Security to establish a federal-state system that would impose a minimum of federal standards met a ready response among members of Congress who, as it turned out, were even more sensitive to states' rights than was the Committee.[22] By Title IX of

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[21]The grants for administration were in Title III of the bill, while provision for the tax was in Title IX. The separation was supposed to improve the constitutionality of the measure.

[22]The House Ways and Means Committee report on the bill (H.R. 7260) declared: "The bill permits the states wide discretion with respect to the unemployment compensation laws they may wish to enact. The standards prescribed in this bill . . . are designed merely to insure that employers will receive credit against the federal pay-roll tax only for payments made under genuine unemployment compensation laws." (The Social Security Bill, House Report No. 615, 74th Congress, 1st Session, 1935, pp. 8-9.)

the Social Security Act,[23] a federal unemployment tax, beginning at one per cent in 1936, rising to two per cent in 1937, and to three per cent for subsequent years, was imposed on the payrolls of employers of eight or more workers, with specific exemption of agricultural workers, domestic workers, employees of non-profit institutions, and governmental employees. If a state enacted a satisfactory unemployment insurance law, its employers were to receive credit for their payments under the state law of up to 90 per cent of the federal tax. The federal rate of 3 per cent would, therefore, be reduced to 0.3 per cent by a state rate of 2.7 per cent. This 2.7 per cent was to be the standard rate of state tax; estimates of cost made for the Committee on Economic Security indicated that such a rate would impose a reasonable burden and would finance the proposed benefit. The credit served the purpose of limiting the net federal rate to 0.3 per cent. State unemployment insurance laws had to be approved by the Social Security Board before employers were entitled to receive credit against the federal tax.[24]

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[23] 49 Stat. 639.

[24] See 49 Stat. 640. To secure approval, the laws had to meet six conditions, five of which are still relevant in 1968 (1) Payments of unemployment benefits were to be through public employment offices, or such other public agencies as the Social Security Board might approve; (2) All payments to the state unemployment fund were to be transferred immediately to the Secretary of the Treasury,

The federal act contained another set of conditions connected with the tax credit. The states were not required to impose a 2.7 per cent rate on all covered employers. Those firms with favorable employment experience or adequate reserves could have their payments reduced below 2.7 per cent under the state law and would still receive the maximum credit of 2.7 per cent under the federal law. This system was called merit or experience rating, and the federal law stated certain conditions relating particularly to reserves which had to be met in order to warrant additional credit over 90 per cent.

This summary statement of the tax credit conditions imposed by Congress will perhaps be better appreciated by recollecting that the areas of unemployment insurance left by Congress for state decision included the amount and duration of benefits, the length of the waiting period,

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who would credit them to each state; (3) Money withdrawn by the states from their unemployment trust funds was to be used only for payments of benefits; (4) Benefits were not to be denied to an unemployed eligible worker who refused new work, which arose because of a labor dispute, had hours, wages, or other conditions substantially below those prevailing for similar work in the community, or required the worker to sign a "yellow-dog" contract or to join a company union. This was the so-called "labor standard" condition. (5) All rights conferred by the state law were to exist subject to the power of the legislature to alter the law at any time. In short, no vested interest could be claimed.

The other condition of the original six, not now relevant, stipulated that no benefits were to be paid for unemployment occurring within two years after the beginning of contributions, thus ensuring solvency of the state funds by enabling reserves to be built up.

eligibility requirements, and disqualification provisions. With respect to coverage, although the federal law did specify what types of employers would be subject to the federal tax, it did not limit state coverage to those so specified. State laws, for example, could and did cover employers with less than eight employees. With respect to contributions, although the federal tax did indicate a standard rate of state tax, a rate expected to be widely used, it also provided that states could allow a lower rate than 2.7 per cent with no diminution of credit. This latter provision has allowed the states substantial freedom in the determination of employer contributions.

Grants to the states for the administration of unemployment insurance were also subject to certain federal conditions.[25] The 2.7 per cent credit against a 3 per cent federal tax left a remainder of 0.3 per cent, or 10 per cent of the gross tax for federal collection. This was deposited into the General Fund of the Treasury, but it was regarded as the source of the grants for administration. The grants were unusual in that they were 100 per cent grants. If a state was to receive the grants, its compensation laws had to meet a set of conditions similar to, indeed sometimes identical with, those specified for the tax credit. The Social Security Board had to approve the state laws, and

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[25]See 49 Stat. 626.

furthermore, had to certify to the Secretary of the Treasury that they met the federal conditions for the receipt of the grants.

The Board had considerable freedom in deciding the appropriate amount of a state grant. Its determination could be based on population, number of persons covered by the state law, the cost of proper and efficient administration, and such other factors as it found relevant. It could also suspend a grant after giving reasonable notice and an opportunity for a fair hearing to the state agency, if proper administration was not observed. Clearly, the strings attached here were more extensive than those attached to the tax credit. In deciding upon the appropriate amount of the grants to each state, the Social Security Board (since 1949 the Secretary of Labor) was not bound by the amount collected in the state through the federal tax.

The above discussion points out the unusual features of the federal unemployment insurance tax credit. Its amount was reduced 90 per cent (from 3 per cent to 0.3 per cent) by enactment of state taxes, even though actual collections under the state taxes were much less than what would be produced by a 2.7 per cent rate. The proceeds of the net federal tax of 0.3 per cent were mostly committed to provide grants to the states for administration. The federal tax was a device not to raise federal revenue, but to secure the other federal objectives of establishing a

federal-state system of unemployment insurance and securing uniformity in state legislation.

The Social Security Act was signed into law on August 14, 1935. In the next two years the federal-state system of unemployment insurance began operation more rapidly and smoothly than most people had dared to hope. The tax credit proved to be a powerful, short-run device for getting states to implement unemployment insurance laws. At the urgent request of many states, the Social Security Board prepared a number of draft bills which met the minimum requirements of federal law, and these were widely copied. As a result, substantial uniformity was secured on matters for which no federal standards had been specified. Little objection to federal conditions was raised. The state acts were submitted for approval to the Board, and approval was duly given. By the middle of 1937, all states had enacted laws, and the efficacy of the 90 per cent credit as a stimulus was beyond dispute.

The issue of constitutionality was surmounted on May 24, 1937 by the narrow margin of a 5-4 decision of the Supreme Court. Justice Benjamin N. Cardozo spoke for the majority. He stated that unemployment was a national problem, and the action taken by the federal government through the law in question was designed, not to coerce the states, but to give them a greater freedom in joining together to aid the unemployed. He added that the conditions imposed were not arbitrary:

> ". . . a wide range of judgement is given to the several states as to the particular type of statute to be spread upon their books. . . . In determining essentials Congress must have the benefit of a fair margin of discretion. One cannot say with reason that this margin has been exceeded or that the basic standards have been determined in any arbitrary fashion."[26]

Justice James C. McReynolds, on the other hand, believed that the majority decision was harmful to state freedom. And Justices George Sutherland and Willis Van Devanter felt that, by the provisions of the act:

> ". . . the federal agencies are authorized to supervise and hamper the administrative powers of the state to a degree which not only does not comport with the dignity of a quasi-sovereign state--a matter with which we are not judically concerned--but which denies to it that supremacy and freedom from external interference in respect of its affairs which the Constitution contemplates--a matter of very definite judical concern."[27]

No one can say what the Court would have decided had a more centralized plan of unemployment insurance been submitted. But it does seem that the range and extent of federal conditions weighed heavily with the Court and that, for this reason, the caution of the framers of the plan was wise. A federal-state scheme was put into operation, and it was not struck down by judicial veto.

The most unexpected developments in the program of unemployment insurance of the past quarter century have grown out of experience rating. No one in 1935 foresaw, even dimly, the consequences of experience rating, because

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[26] Steward Machine Co. v. Davis, 301 U.S. 593-594.

[27] Ibid., pp. 613-14.

no one foresaw the favorable employment record that was to follow the 1930's. Gradually it became clear that the standard rate of 2.7 per cent was too high. Had Congress then permitted a flat reduction of the standard rate, development of the program would have been different. This was not permitted, however, and soon many states found their reserves to be excessive. Experience rating, whatever its other merits or demerits, did offer a way by which states could reduce the average level of rates, and gradually the states moved in this direction.

The early financial practices of the states reflected strongly the impact of the depression. State tax rates in 1938 averaged 2.75 per cent of taxable wages, and in 48 states the maximum weekly benefit was only $15. This cautious attitude endured into the years of World War II, when 12 states levied about $200 million in additional war-risk contributions on firms with greatly expanded payrolls, in the expectation that such firms would, in the postwar period, be a drain on the system. Congress manifested a similar concern in 1944 by establishing a federal unemployment account out of the .3 per cent, from which, in the event of postwar need, advances might be made to the states. In this year (1944) trust fund interest was more than sufficient to finance the year's benefit payments in all but three states.[28] From the beginning of the program to

[28] Issues in Social Security, a Report to the House Committee on Ways and Means, by the Committee's Social Security Technical Staff, 79th Congress, 1st Session (1946), p. 445.

September 30, 1945, state contributions and interest totaled $9.3 billion, while benefit payments were only $2.3 billion. At this time 67.2 per cent of eligible workers could have been paid benefits of maximum duration from the funds then available.[29] The states were, in this respect, not in a uniform situation, but even the state with the lowest balance (Illinois) was in a strong financial situation. When, therefore, unemployment during reconversion was handled with ease, and when thereafter employment continued high, the states turned to a more extensive use of experience rating as a way to lower their tax rates. Figure 1, which relates annual benefit-cost rates to annual contributions, for the period from 1946 to 1952, shows that average contributions exceeded average benefits in most of the states, as indicated by the concentration of dots above the diagonal line.[30]

This favorable financial experience was, however, soon to be reversed. Costs came to outstrip contributions, and the protective devices against weak financing contained in many state laws often failed to work, either because their indicators were geared to statistics which were out of date or because the indicators were not responsive to

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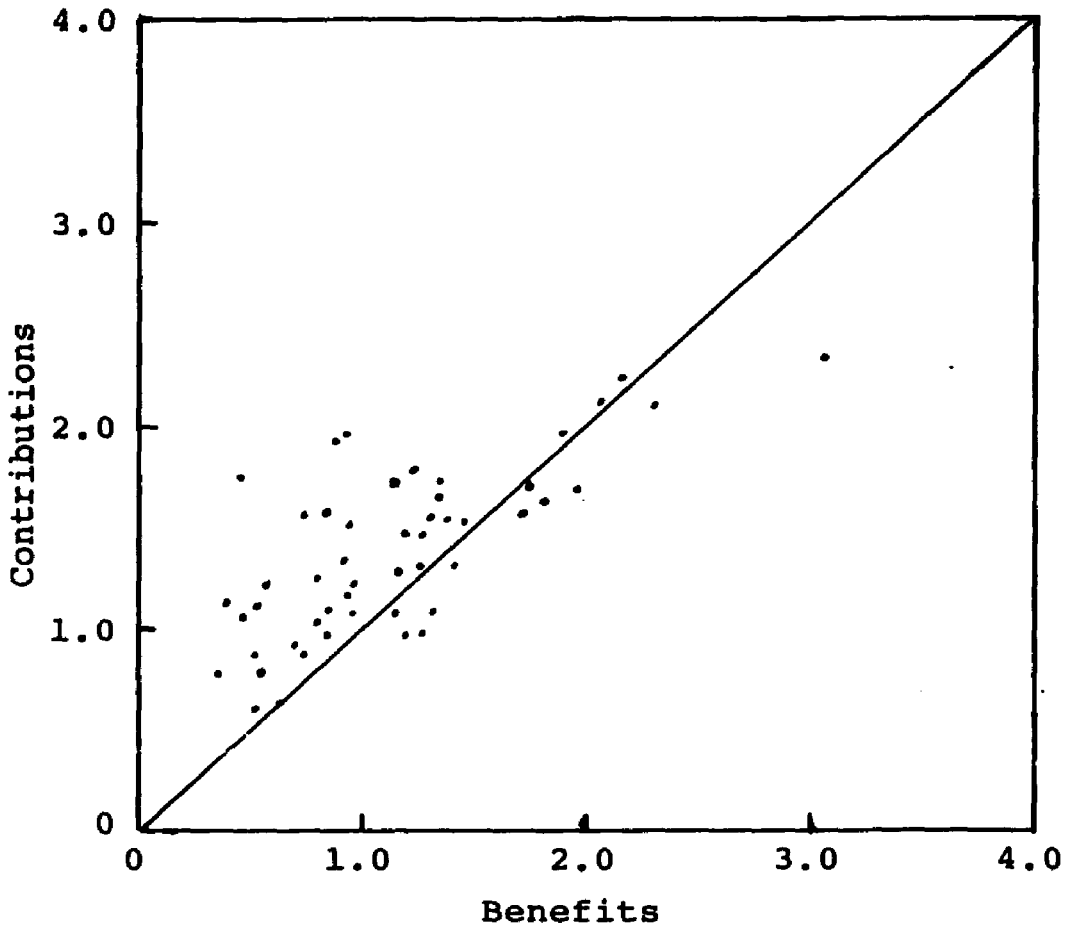
[29] Ibid., pp. 446, 599.

[30] Both costs and benefits are expressed as percentages of total wages in covered employment, because benefits are generally based on a worker's total wages and not on taxable wages.



Source: Derived from Committee on Benefit Financing, Interstate Conference of Employment Security Agencies, Your Financial Responsibility (September, 1960).

Figure 1. Average annual state contributions and benefits as percentages of total wages, 1946-52.

legislative or executive action. Figure 2 shows that in 1953-59, benefits exceeded contributions in most of the states, as indicated by the concentration of dots below the diagonal.

In a 1959 report, the Committee on Benefit Financing of the Interstate Conference singled out six jurisdictions as especially out of line--Alaska, Delaware, Michigan, Oregon, Pennsylvania, and West Virginia (see Table 5), and mentioned five others as possibly in need of loans. Except for Alaska and Rhode Island, tax rates in these states were not high. Table 5 shows the sharp increase in tax rates by 1960.[31]

Other financial features of the system also needed attention. During the recession of 1957-58, the number of persons exhausting benefits grew at an alarming rate, and Congress enacted the Temporary Unemployment Compensation Act of 1958.[32] At this time, loan funds provided under the Reed Act of 1954[33] were almost depleted, and administrative expenditures exceeded collections from the federal tax of

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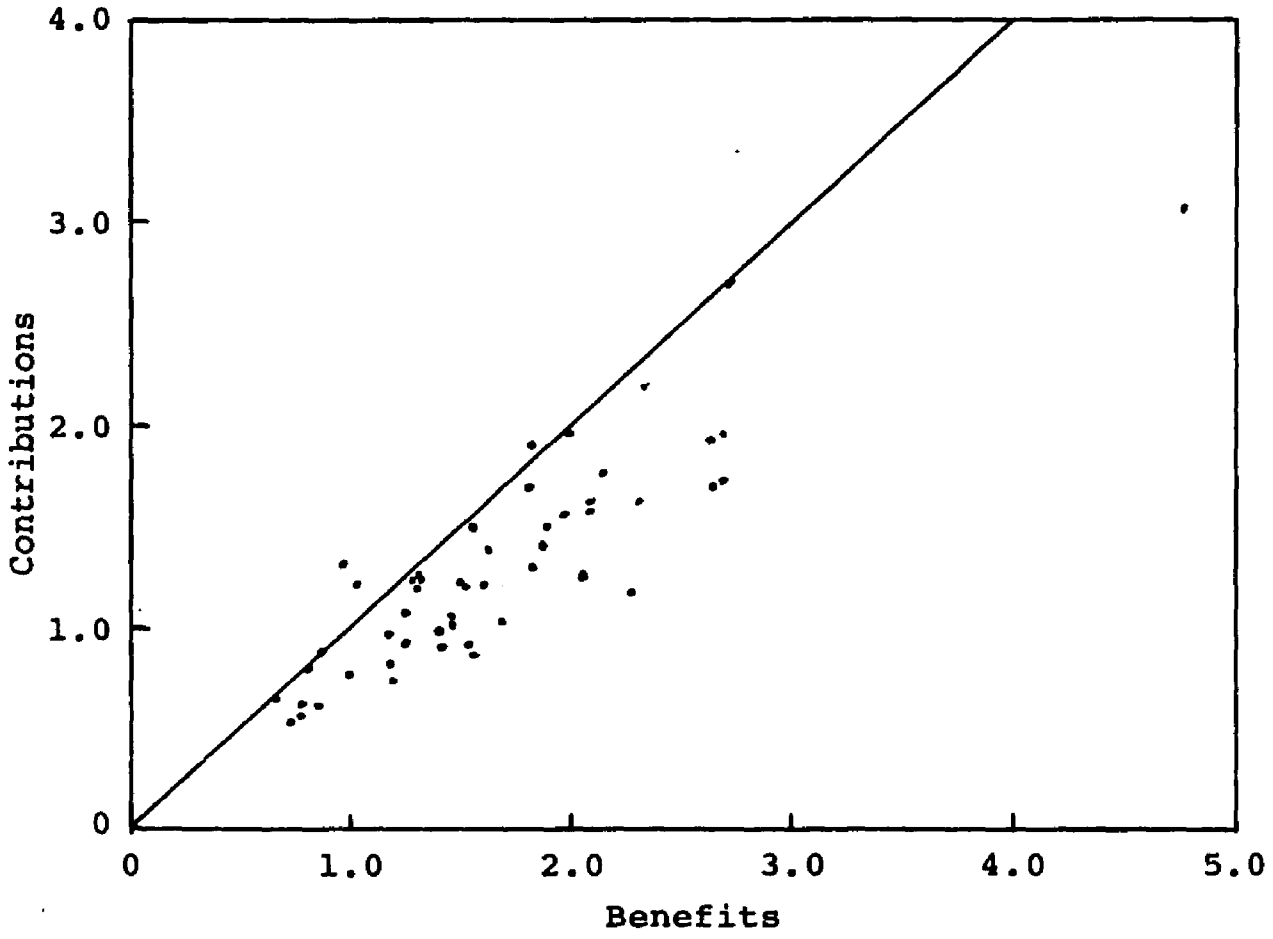
[31]This inattentiveness to sound financing was not general among the states. Thirty-four had provided for suspension of rates below the standard rate when reserves fell below a certain level; twenty-six had provided for an automatic increase in their wage base if Congress increased the base of the federal tax beyond $3,000; and six had actually provided a higher base for the state tax.

[32]73 Stat. 14; 47.

[33]68 Stat. 668.



Source: Derived from Committee on Benefit Financing, Interstate Conference of Employment Security Agencies, Your Financial Responsibility (September, 1960).

Figure 2. Average annual state contributions and benefits as percentages of total wages, 1953-59.

TABLE 5

AVERAGE COST (BENEFIT) RATES AND TAX RATES, 1954-58 AND 1960, AS PERCENTAGES OF TAXABLE WAGES, FOR SELECTED STATES[a]

State	Average 1954-58		Average 1960	
	Benefit Rates	Tax Rates	Benefit Rates	Tax Rates
United States	1.9%	1.3%	2.3%	1.9%
Alaska	4.4	2.7	3.3	2.9
Delaware	1.2	0.6	1.6	2.5
Michigan	3.1	1.6	2.6	2.9
Oregon	2.5	1.6	2.1	2.7
Pennsylvania	2.9	1.7	3.1	3.1
West Virginia	2.3	1.1	2.5	2.7
Illinois	1.5	0.8	1.7	2.1
Maryland	1.7	0.9	2.7	2.8
Ohio	1.7	0.7	2.8	1.5
Rhode Island	2.9	2.7	2.3	2.7
Tennessee	2.4	1.7	1.9	1.7

[a]Report of the Committee on Benefit Financing, Interstate Conference of Employment Security Agencies (September, 1959), pp. 3, 15; U.S. Bureau of Employment Security, The Labor Market and Employment Security (May, 1961), p. 14.

0.3 per cent. Alaska had already borrowed $8.3 million and Michigan $113 million from the fund; Pennsylvania had requested an advance of $112 million and Delaware, West Virginia, and Oregon were eligible for loans, since their reserves were less than the amounts paid out in benefits in the preceding 12 months. The fear expressed in 1955, that the loan fund might invite "irresponsible action by the states," seemed to be justified.[34]

After two decades the federal-state system of unemployment insurance fell into serious financial trouble. The tax credit device, in this its most ambitious use, proved inflexible in adapting to a changing environment. Original overestimates of costs and underestimates of revenue built norms into the system which were unrealistic: a standard state tax rate of 2.7 per cent, and a taxable wage base of $3,000. Additional credits against the federal tax, which pushed tax rates down too far, and brought on differentials among the states. By the mid-1950's some states thought that they had gone too far in lowering rates and liberalizing benefits. But a shift in methods of finance was not easy; many states procrastinated, fearful that change would be an acknowledgment of weakness.

The uniform tax rate, which in 1935 was thought to be an important technique to avoid and prevent interstate

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[34]Commission on Intergovernmental Relations, Report (June, 1955), pp. 201-02, footnote 4.

competition in the financing of unemployment insurance, has disappeared. A multiplicity of rates now prevails, and the average level differs significantly from state to state. The technique used to bring this about was experience rating. With or without this feature, however, the cost of unemployment insurance differs widely from state to state. The primary reason for this is the different incidence of unemployment, although the state differentials have been widened also by state action designed "to minimize the tax on the employer both from the contributions side and the benefit side."[35]

This, then, is the major problem, and it is one which cannot be solved by a uniform increase in the taxable wage base, or an increase in the standard rate of 2.7 per cent. Some states seemed to have indicated a preference for one or the other of these alternatives. As of January, 1968, six states had a tax base in excess of $3,000, and twenty-six had automatic provisions in their laws to raise their base to correspond with an increase in the federal base. The Executive Committee of the Interstate Conference of Employment Security Agencies, at a meeting in September-October, 1960, considered a resolution favoring federal

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[35]See Temporary Unemployment Compensation and Aid to Dependent Children of Unemployed Parents, Hearings Before the House Committee on Ways and Means, 87th Congress, 1st Session (1961), pp. 21-22.

legislation to raise the taxable wage base to $3,600 and the rate of the federal tax to 4 per cent. With a 90 per cent credit, the standard rate of the state tax would then become 3.6 per cent.

The Social Security Board hoped to achieve a federal system of unemployment insurance. The sanguine expectation of 1935 was that a federal-state program would provide valuable experiments and would be flexible enough to adapt to different conditions. Something of this sort has happened, but the impact of the experiments has been erratic and some of the variation which has developed among states impairs the efficient operation of unemployment insurance.

What lessons can be learned for intergovernmental fiscal relations from the unemployment insurance tax credit? While the death tax credit was devoid of federal conditions, the unemployment insurance tax credit carried a substantial set of federal requirements. Beyond doubt the credit with its conditions secured prompt creation of a system of unemployment insurance over the nation. This system, at the outset, had considerable uniformity in its major provisions. However, in the years since 1935 unforeseen developments have impaired the equity and efficiency of the system. Instead of a uniform rate of payroll tax, a variety of rates prevails, and the average rate differs greatly from state to state.

The experience presented in this chapter indicates that in the case of the death tax the federal government failed to impose sufficient conditions to secure national objectives, while in the case of the unemployment insurance tax it imposed conditions which erred in the opposite direction. To achieve the right combination, the essential characteristics of a credit should be simplicity and flexibility. Simplicity is necessary to avoid detailed and extensive federal supervision. Flexibility is needed so that as federal objectives alter over time the conditions may be modified.

CHAPTER IV

STATE EXPERIENCE WITH THE USE OF TAX CREDITS

The purpose of this chapter is to survey the experience of state governments in using tax credits for intergovernmental fiscal coordination. Inasmuch as the extent of the experience has been limited, the chapter is of necessity brief.

The first tax credit for intergovernmental fiscal coordination in this country was enacted by the state of Wisconsin. The 1911 Wisconsin income tax allowed a credit, against the income tax otherwise payable, for any personal property taxes paid.[36] The advocates of the income tax in Wisconsin had based their campaign largely on a plea for the substitution of an income tax for the personal property tax. The adoption of the tax was thus accompanied by the complete exemption of large classes of personal property as well as the privilege of applying the taxes paid on other classes of personal property against any income taxes that

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[36]See Nils P. Haugen, "The Wisconsin Income Tax," Proceedings of the National Tax Association, 6th Conference (1912), p. 331.

might be due. This offset or credit privilege was discontinued in Wisconsin in 1925.

Various forms of property tax offset--personal property, tangible property, personal and real property taxes--have also been proposed but not enacted in state income tax legislation in North Dakota, Missouri, Mississippi, Oregon, Washington, and California. In Illinois, real estate groups and farmers' organizations, in particular, have urged the provision of a property tax credit in all of the recent movements for the adoption of a state income tax.[37] The farmers' organizations have been particularly insistent in this demand, arguing that the farmer at least ought to have whatever relief can be afforded by allowing him to credit his heavy general property tax against any income tax levied.[38]

The only states besides Michigan in which the state or local government presently employ the credit device for intergovernmental fiscal coordination are Wisconsin and Minnesota. The Wisconsin law, enacted in 1963,[39] allows

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[37]The recently enacted Illinois income tax did not include a property tax credit.

[38]See Herbert D. Simpson, "The Effect of a Property Tax Offset under an Income Tax," Proceedings of the National Tax Association, 23d Conf. (1930), p. 220.

[39]See Wisconsin Statutes Annotated, Chap. 71, Sec. 7109 (7) added by Chap. 566 (A.B. 301) eff. 6/10/64. Ch. 580 (A.B. 907) repealed and recreated Sec. 71.09 (7) effective Dec. 19, 1964.

senior citizens a credit against the personal income tax for local property taxes paid or rental payments. The credit varies depending on the level of income and the amount of property tax or rental payments.[40]

The relief program was designed to relieve part of the residential property tax burdens of homeowners and renters who are sixty-five years of age or older, and have less than $3,500 in household income. The program was revised (liberalized) in 1966, and in 1968 it provided tax relief of over $6.5 million to 70,000 low-income elderly families owning or renting their homes.

The law provides relief to those who have relatively high property taxes (or rent in lieu of property tax) in relation to their household incomes. Household income includes all money receipts of the household head and his (or her) spouse. The method by which the law measures the part of the tax to be credited is through a system of income constraints. Property taxes become potential credits if they exceed a certain percentage of household income. The percentages are increased as household income increases. The actual tax credit is 75 per cent of the amount calculated with the aid of the income-constraint percentages when the income is less than $1000, and 60 per cent when the income is over $1,000. The percentages are as follows:

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[40]Rent constituting property taxes accrued is 25 per cent of gross rent paid.

Household Income	Income Constraints
First $500 of income	0
Second $500 of income	.03 (Y - 500)
Third $500 of income	.06 (Y - 1,000)
Fourth $500 of income	.09 (Y - 1,500)
Fifth $500 of income	.12 (Y - 2,000)
$2,500 to $3,500	.15 (Y - 2,500)

Two simple examples demonstrate how the Wisconsin law operates for incomes under $1,000.

	Taxpayer A		Taxpayer B
Income	$900		$900
Property Tax	10		300
Step #1, 0% of $500 = $ 0 3% of $400 = $12		0% of $500 = $ 0 3% of $400 = $12	
	$ 12		$ 12
Step #2	10		300
	- 12		- 12
	$ 0		$288
Step #3, 75% of $0 = $ 0 which is the allowable credit	$ 0	75% of $288 = $216 which is the allowable credit	

As can be seen from the preceding examples, the amount of credit the taxpayer receives is a direct function of the combination of his property taxes and income. Taxpayer A receives no credit because his property tax ($10) is less than the income constraint of $12. On the other hand, Taxpayer B will receive a credit of $216. He pays $300 in property taxes, which is $288 greater than the income constraint of $12. This credit is then calculated by taking 75 per cent of $288. This calculation yields $216.

The following examples demonstrate how the credit operates for incomes over $1,000.

	Taxpayer C		Taxpayer D	
Income		$1,500		$3,000
Property Tax		200		300
Step #1,	0% of $500 =	$ 0	0% of $500 =	$ 0
	3% of $500 =	15	3% of $500 =	15
	6% of $500 =	30	6% of $500 =	30
			9% of $500 =	45
			12% of $500 =	60
			15% of $500 =	75
		$ 45		$ 225
Step #2		200		300
		- 45		- 225
		$ 155		$ 75
Step #3,	60% of $155 =	$ 93	60% of $75 =	$ 45
which is the allowable credit			which is the allowable credit	

Taxpayer C, with an income of $1,500 and property taxes of $200, will receive a credit of $93. This amount is calculated as follows: The first step is to take 0 per cent of $500, plus 3 per cent of $500, plus 6 per cent of $500, which yields $45. The amount of $45 is then subtracted from the amount of the property tax ($200), and yields $155. The final step is to take 60 per cent of $155, which yields the allowable credit of $93. Taxpayer D demonstrates how the credit operates for an income over $2,000. This taxpayer has an income of $3,000 and pays property taxes of $300. The first step for this calculation is to take 0 per cent of $500, plus 3 per cent of $500, plus 6 per cent of $500, plus 9 per cent of $500, plus 12 per cent of $500, and plus 15 per cent of $500. The sum of these six calculations yields $225. At this stage, the

calculation is the same as before--subtract $225 from $300 and then take 60 per cent of the remaining $75. This yields the allowable credit of $45.

The original homestead relief law in 1963 was rather restricted, for in 1964 and 1965, it assisted less than 35,000 aged households out of a possible 100,000 aged households who might have been eligible if no income or tax constraints applied. As a result, the law was liberalized effective in calendar year 1966. Certain changes were implemented in the amendment passed in late 1965. Two minor changes affected the definition of income for relief purposes. Directly affecting the income concept was the removal of the prior year's homestead relief from inclusion in the concept of income. Income was indirectly affected by a redefinition of household to include only the claimant and spouse (when present), thus removing the income of other household members which was included in 1964 and 1965. Both changes appear to have reduced rather insignificantly total income for computational purposes, but are probably important in individual cases.

More significant was the change involving the formula for computing the relief. In simple terms the change involved reducing the percentages of income used as a measure of high taxes. The effect of this change can be demonstrated by computing a taxpayer's relief (with

an assumed household income of $1,600 and a tax of $200) under the two formulas as follows:

	Relief under the Previous Law		Relief under the Present Law
Income	$1,600		$1,600
Property Tax	200		200
Step #1, 5% of $1,600 = $80		0% of $500 = $ 0	
		3% of $500 = 15	
		6% of $500 = 30	
		9% of $100 = 9	
	$ 80		$ 54
Step #2	200		200
	- 80		- 54
	$ 120		$ 146
Step #3, 50% of $120 = which is the allowable credit	$ 60	60% of $146 = which is the allowable credit	$ 87.60

Closely related to the formula change was an increase of the percentage applied against the income constraint, from 50 per cent to 60 per cent, when income exceeds $1,000. The only other change of consequence removed the necessity of prorating taxes between residential and rental, farm, or business use, provided that the tax on the homestead is covered by a single real estate tax bill and does not include more than 40 acres of land (previously one acre).[41]

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[41]For a more detailed analysis of the original law and program see: Billy Cook, Kenneth Quindry, and Harold Groves, "Old Aged Homestead Relief--The Wisconsin Experience," National Tax Journal, XIX, September 1966, pp. 319-24.

The combined fiscal effect of the revision was to increase the amount of the total tax credit from slightly less than $2 million to over $5 million, and to double the number of recipients from about $35,000 to $70,000 in 1968. Tax credits allowed were relatively stable in 1964 and 1965, but increased greatly in 1966 and thereafter because of the liberalization provisions in the 1965 revision. Gross credit had actually dropped from $1,973,804 in 1964 to $1,920,603 in 1965. This was due largely to family income increasing at a faster rate than taxes, rent, or qualifying numbers of aged.

The 1966 amendment resulted in increasing the average credit in 1966 by 45 per cent, while increasing recipients of relief by 90 per cent over 1965. The average credit in 1966 was $87.23, ranging from $157.12 at zero income to $21.13 at the $3,000 to $3,500 income range.

The Wisconsin tax credit program has accomplished not only its original objective (to wit: relieving tax burdens for a selected citizen group), but has also had important side effects. These include: (a) transforming the property tax from a regressive into a proportional tax for aged recipients having average household incomes above $790, and substantially reducing the degree of regressivity of the residential property tax for those having average household incomes below $790; (b) influencing income distribution toward greater interpersonal and

interjurisdictional equality; and (c) having an income redistribution effect favoring renters. In addition, the relief program could easily be extended to include all low-income families without regard to age at a cost of $7.8 million and with results on regressivity and income distribution supplementing those already achieved under the program.[42] This change would substantially increase the anti-poverty impact of the program.

There are two significant differences between the Wisconsin credits and the newly enacted credits in Michigan. The first is that in Wisconsin the credit is only allowed for state residents of sixty-five years of age and over, whereas the Michigan law applies to all state income taxpayers. The second significant difference is that the credit in Wisconsin is not dependent on the amount of the taxpayer's income tax liability. A taxpayer in Wisconsin

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[42]For a more detailed discussion of the impact of the Wisconsin tax credit program see: Kenneth Quindry and Billy Cook, "Humanization of the Property Tax for Low Income Households," National Tax Journal, XXII, September 1969, pp. 357-69. Quindry and Cook suggest that the credit program could be expanded to include 100 per cent of unused exemptions and deductions. This negative income tax plan would cost Wisconsin taxpayers $110 million. The author also reviewed Wisconsin's tax study of 1959. The study did not focus on the use of the tax credits as a device for improving intergovernmental financial coordination. See University of Wisconsin Tax Study Committee, Wisconsin's State and Local Tax Burden: Impact, Incidence and Tax Revision Alternatives, University of Wisconsin, 1959.

would receive the credit even though he had no income tax liability. For example, Taxpayer B noted above would have no income tax liability, but would still receive the credit of $216. This taxpayer, would have received a refund of $216. In Michigan the credit is only allowable if the taxpayer has an income tax liability against which to apply the credit.

One specific technical fault of the Wisconsin law that should be mentioned is the "notch" problem that exists for taxpayers with an income of around $1,000.[43] This problem can be illustrated by the following example.

	Taxpayer E	Taxpayer F
Income	$1,000	$1,010
Property Tax	200	200
Step #1, 0% of $500 =	$ 0	0% of $500 = $ 0
3% of $500 =	15	3% of $500 = 15
6% of $ 10 =		.60
	$ 15	$ 15.60
Step #2	200	200.00
	- 15	- 15.60
	$ 185	184.40
Step $3, 75% of $185 = which is the allowable credit	$ 138.75	60% of $184.40=$ 110.64 which is the allowable credit

As the above example illustrates, Taxpayer F, whose income is only $10 higher than Taxpayer E's, is receiving $28.11 less in credit. Thus, it would be monetarily advantageous for Taxpayer F to reduce his income by $10.

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[43]This "notch" problem can be avoided through the sliding-scale credit approach used in Michigan.

Minnesota also allows senior citizens a credit against the personal income tax for local property taxes paid or for rental payments.[44] As is the case in Wisconsin, the credit provided by the Minnesota law enacted in 1967[45] varies depending on the level of income and the amount of property tax or rental payment. As in Wisconsin, the amount of the credit cannot exceed $300. The amount of the claim is determined in accordance with the following schedule:

Income Range	Percentage of Property Tax Allowed as Credit
$ 0 - 499	75 per cent
500 - 999	70 per cent
1,000 - 1,499	50 per cent
1,500 - 1,999	40 per cent
2,000 - 2,499	30 per cent
2,500 - 2,999	20 per cent
3,000 - 3,499	10 per cent
3,500 & over	0 per cent

The following example illustrates the operation of the Minnesota credit:

	Taxpayer G
Income	$2,100
Property Tax	300
30 per cent of $300 = which is the allowable credit	90

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[44] In Minnesota the rent constituting property taxes accrued is twenty per cent of the gross rent paid.

[45] Chap. 32 (H.B. 27) Article VI.

As may be seen from the above description and example, the Minnesota law is more convenient for the taxpayer than the Wisconsin law. The taxpayer is only required to determine his income level, and then take a given percentage of his property tax as a credit. Taxpayer G has an income of $2,100. Therefore, he receives as a credit 30 per cent of his property tax, or $90.

As is the case in Wisconsin, the Minnesota taxpayer's credit is not dependent on his income tax liability. If no tax liability exists, then a refund is given for the amount of the credit.

However, a "notch" problem also exists in the operation of the Minnesota credit. This may be seen from the following examples:

Taxpayer H		Taxpayer I	
Income	$999		$1,000
Property Tax	300		300
70% of $300 =	210	50% of $300 =	150
which is the allowable credit		which is the allowable credit	

The above example shows that a "notch" problem exists, for by increasing income $1 from $999 to $1,000, a $60 reduction in credit occurs.

Beyond the citations noted in this chapter, apparently no other research has been undertaken in Wisconsin and Minnesota on tax credits. The Department of Economics at the University of Minnesota informed the author that no specific analysis of the Minnesota credit program had been

or was currently being undertaken.[46] The author also examined the Minnesota tax study of 1956.[47] This examination failed to reveal any discussion or analysis of the use of the credit for improving intergovernmental fiscal coordination.

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[46]Because of the similarities in approach between the Wisconsin and the Minnesota credits it can be assumed that if analysis of the Minnesota law was done similar to that done by Quindry and Cook on the Wisconsin program, the results would be generally similar. See footnote 42.

[47]Report of the Governor's Minnesota Tax Study Commission, 1956, Colwell Press, 1956. The study does discuss tax credits but not for use in improving intergovernmental financial coordination.

CHAPTER V

THE MICHIGAN TAX CREDITS

Prior to the passage of the 1967 income tax,[48] there were recurring problems of fiscal crisis in Michigan state government.[49] In the period from 1950 to 1968 the General Fund Budget of the State of Michigan was in approximate balance[50] in only two years. In each of the other seventeen years there were substantial surpluses or deficits.[51]

As can be seen from Table 6, at the end of fiscal year 1965-66, the General Fund's accumulated surplus amounted to $167.4 million. However, when Governor George Romney presented his fiscal year 1967-68 budget in January of 1967, he projected that the accumulated surplus would be

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[48]Act No. 281, Public Acts of 1967, State of Michigan, approved by the Governor July 20, 1967.

[49]See Harvey E. Brazer, "Michigan's Fiscal Outlook," Wayne Law Review, Vol. II, No. 2 (1967), pp. 430-50.

[50]Deficit or surplus less than $10 million.

[51]A number of readers may feel that a surplus is hardly a problem within state government; however, due to the fiscal irregularities that a surplus creates in terms of planning, a surplus is a serious fiscal planning problem.

TABLE 6

STATE OF MICHIGAN, GENERAL FUND-GENERAL PURPOSE REVENUE AND EXPENDITURES, 1950 TO 1968

Fiscal Year Ending June 30	Expenditures	Revenue	Annual Surplus (+) or Deficit (-)	Accumulated[f] Surplus (+) or Deficit (-) (End of Year)
	(Millions of Dollars)			
1950	200.4[a]	156.8[a]	- 43.6	- 21.4
1951	206.0[a]	179.7[a]	- 26.3	- 40.9
1952	223.7[a]	194.1[a]	- 29.6	- 65.3
1953	225.3[a]	240.8[a,b]	+ 15.5	- 31.3
1954	223.1[a]	261.1[a]	+ 38.0	+ 5.8
1955	252.8[a]	264.6[a]	+ 11.8	+ 17.0
1956	277.7	286.3	+ 8.6	+ 25.6
1957	330.9	312.1	- 18.8	+ 6.7
1958	367.0	328.7[c]	- 38.3	- 21.2
1959	376.3	298.8	- 77.5	- 95.5
1960	386.2	418.1[d]	+ 31.9	- 64.0
1961	429.9	430.6	+ 0.7	- 71.7
1962	476.4	458.8	- 17.6	- 85.6
1963	492.3	564.0	+ 71.7	- 22.8
1964	523.5	596.0[e]	+ 72.5	+ 57.1
1965	650.2	746.3	+ 96.1	+135.9
1966	793.0	841.9	+ 48.9	+167.4
1967	1,049.0	893.3	-155.7	+ 11.0
1968	1,141.0	1,186.8	+ 44.8	+ 55.9

[a]Excludes estimate of sales tax receipts distributed under the terms of the 1946 sales tax diversion amendment.

[b]Includes corporate franchise tax paid twice in one fiscal year by most corporations, representing a one-time gain of approximately $36 million.

[c]Includes approximately $10 million of balances in bond redemption funds transferred to the General Fund and cash transfers to the General Fund from the Liquor Revolving Fund of more than $18 million, made possible by the extension of the 30-day basis of payment for liquor purchases to a 72- to 90-day basis.

[d]Includes approximately $12 million in unclaimed refunds under the 4 per cent use tax of 1959 and $40.7 million from liquidation of the Veterans' Trust Fund.

[e]After deduction of an estimated $18 million representing the increase in that amount of the Liquor Control Commission's equity in its inventories obtained as a consequence of the Commission's return to a 30-day payment basis.

[f]Because of various accounting adjustments that do not affect reported annual revenue or expenditures, successive differences in accumulated deficits or surpluses do not always correspond to annual surpluses or deficits.

Source: State of Michigan, Budgets, various years, and data supplied by the Michigan Department of Administration.

reduced to $38.0 million by June 30, 1967.[52] In the same Executive Budget Governor Romney recommended a tax program which would prevent the state from going into a deficit position at the end of fiscal year 1967-68.

The severity of the state's financial position at that time is easily seen by the following figures. For the fiscal year 1966-67, total General Fund - General Purpose expenditures were $1,049.0 million, and revenues were $893.3 million. This resulted in an annual operating deficit of $155.7 million. However, as a result of the accumulated surplus of $167.4 million at the beginning of fiscal year 1966-67, there was a surplus of $11.0 million at the end of the fiscal year.

If we assume that there would have been no increase in expenditures (an unrealistic assumption), the state would still have been in a deficit position at the end of fiscal year 1967-68. This would have occurred because General Fund - General Purpose revenue was estimated to be $932.9 million.[53] The actual figure was $930.3 million. Therefore, without new revenue sources there would have been a current year deficit of $119 million and an accumulated deficit of $108 million. Moreover, the Constitution of the

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[52]State of Michigan, The Executive Budget, for the fiscal year July 1, 1967 - June 30, 1968, issued February 2, 1967. pp. iv-v.

[53]Ibid.

State of Michigan specifically prohibited the state from having an accumulated deficit.[54]

The Governor recommended the following tax program to overcome this financial difficulty: a 2.5 per cent personal income tax with an exemption of $600 for each person or dependency exemption, a 5.0 per cent corporate income tax, an 8.0 per cent tax on financial institutions, and an increase of 3¢ per package for the cigarette tax. In addition to these proposed new revenue sources, reductions in revenue were proposed as follows: a repeal of the business activities tax, a $10 sales tax credit for each personal or dependency exemption, and a 10 per cent reduction on both real and personal property taxes. Finally, the Governor recommended that the credit on the intangibles tax be raised from $20 per person to $100 per person and that the intangibles tax on bank shares be repealed. With this proposed revenue program the Governor estimated that there would be an accumulated surplus of $72.7 million at the end of fiscal year 1967-68.[55]

Fundamentally, the proposed tax proposal was a bipartisan program developed between Republican and Democratic legislators, who held twelve meetings in the spring and summer of 1965 in an effort to agree upon a suitable tax

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[54] The Constitution of the State of Michigan, 1963, Article V, Sec. 18.

[55] The Executive Budget, op. cit.

proposal. They reached the following conclusions:

1. The plan should do more than raise new revenue; it should reduce or eliminate the major inequities in the present tax system, particularly the regressivity of the sales tax.
2. The plan should include some relief from local property taxes.
3. The intangibles tax should be continued because it would give additional progressivity to the flat-rate income tax.
4. The business activities tax should be abolished and a corporate income tax should be enacted.
5. A personal income tax should be enacted.
6. Local option for cities to impose a city income tax should be continued, but with the opportunity for the local tax to be "piggybacked" on the state tax, with the state assuming responsibility for collecting and rebating the amount collected to the city.
7. The plan should include an increase in the cigarette tax.
8. The income taxes should be flat-rate because of the constitutional provision that no income tax graduated as to rate or base could be imposed by the state or any of its subdivisions.[56]

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[56]The Governor's Message on Tax Reform, presented to the Michigan Legislature on February 2, 1967, p. 2.

Governor Romney submitted the tax reform program on February 2, 1967, urging the legislature to take immediate action so that the program could take effect on July 1, 1967. Such action was not forthcoming; the legislature was unwilling to move quickly because it was reluctant to increase taxes. The part of the program which was the most controversial was property tax relief. It became very clear to both the executive and legislative branches that this would be the pivotal issue on which the passage of the tax program depended.

It was decided early in June, 1967, by both the Senate and House Taxation Committees, that some type of credit approach was preferable to the across-the-board relief recommended by the Governor. This decision was based on two factors: (1) The recommendation made by Governor Romney was to grant ten per cent property tax relief on real and personal property to all property taxpayers within the state, regardless of whether the property taxpayer was a resident of the State of Michigan or had income tax liability to the state. This approach was rejected because the legislature did not want to grant tax relief to non-Michigan residents on property owned in Michigan. (2) The Governor's approach would have required each local treasurer to bill the state for the ten per cent reduction. On the other hand, the credit approach would not burden the local treasurer with billing the state.

The principal issue thus became one of what type of credit approach to use and how much local property tax relief the State of Michigan wanted to grant. The cost of the Governor's recommendation on property tax relief was estimated at $120 million.[57] The initial reaction of the House Taxation Committee was to give a ten per cent credit to all Michigan taxpayers with a rebate if the property tax credit exceeded the amount of the income tax liability. There was no estimate made of the cost of this alternative, but it would have been less than $120 million.[58] This alternative quickly ran into opposition from those who wanted a more progressive tax structure. There was also sharp opposition within the legislature to a rebate if the value of the credit exceeded the taxpayer's liability. As a result of the opposition to a flat ten per cent credit, and the desire to have a more progressive tax structure, a number of proposals for a sliding-scale credit were presented. The bill which finally passed allowed a sliding-scale credit against the income tax liability of individuals, corporations, and financial institutions for general property taxes paid within Michigan, excluding special assessments. A similar credit was allowed for state-assessed public

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[57] Ibid.

[58] This approach would have provided less than ten per cent relief for all property taxpayers, because it would not have given relief to non-Michigan residents who owned property in Michigan.

utilities paying the utility property tax. The credit was also allowed for a person who was renting or leasing a homestead, with twenty per cent of the "gross" rent paid ("gross" was defined as the rent paid for occupancy alone, and excluded that portion paid for utilities and furnishings) considered to be general property taxes. The landlord could not claim a credit on the same property for which the renter claimed a credit.

The sliding-scale credit for local property taxes paid or rental payments was computed as follows:

Amount of Property Taxes	Amount of Credit
$ 0 - $ 100	20 per cent of the property taxes
$100 - $ 150	$20.00 plus 15 per cent of the excess over $100
$150 - $ 200	$27.50 plus 10 per cent of the excess over $150
$200 - $10,000	$32.50 plus 5 per cent of the excess over $200
Over $10,000	4 per cent of the property tax

The property tax credit was a credit against (deduction from) the income tax liability, but it was limited to the amount of the income tax liability. The estimated cost of this sliding-scale credit was $95 million.[59]

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[59]Estimated by the Bureau of the Budget, Executive Office, State of Michigan.

Another factor which delayed the passage of the tax program, was the desire of legislators from cities, whose constituents paid a city income tax, to provide some type of tax relief for city income taxes paid in Michigan. There were a number of proposals, such as a credit for one-half of city income tax paid by either residents or non-residents or both, a flat ten per cent credit, and a number of sliding-scale credit proposals. The final credit passed was very similar to the property tax sliding-scale credit. It provided for a sliding-scale credit against state income tax liability for city income taxes paid by resident and non-resident individuals and corporations. The city income tax credit, together with the property tax credit, was not to exceed the amount of state income tax liability.

The city income tax credit was computed as follows:

Amount of City Income Taxes	Amount of Credit
$ 0 - $100	20 per cent of the city income tax
$100 - $150	$20.00 plus 15 per cent of the excess over $100
$150 - $200	$27.50 plus 10 per cent of the excess over $150
$200 and over	$32.50 plus 5 per cent of the excess over $200, but the total credit cannot exceed $10,000

Both the property tax credit and the city income tax credit were effective for the tax year beginning

January 1, 1968. It was stipulated that the credits would not be allowed unless they were claimed on a tax return filed within six months after the end of the taxable year for which the credit was claimed.

The Michigan law is the first use in any state of a sliding-scale credit for either property taxes or city income taxes paid. In addition, the sliding-scale city income tax credit is the first instance of the use of a city income tax credit.

CHAPTER VI

ADMINISTRATIVE ASPECTS OF THE MICHIGAN CREDITS

The adoption of any new provision to an income tax law, whether at the federal, state, or local level, has been historically accompanied by predictions that the new tax will shortly be choked with unforeseen administrative difficulties. Moreover, if the administrative and compliance costs of a tax provision turn out to be excessive, then it scarcely matters how attractive other aspects of a tax program may be. The Michigan property and city income tax credits are no exception. This chapter will present the major administrative issues relating to the credits. The chapter will consider: (1) collection and compliance costs, (2) collection procedures, (3) fiscal planning considerations, and (4) recommendations for improved administration of the credits.

Collection and Compliance Costs

There are two major costs associated with the new credits: (1) the direct collection costs, and (2) the compliance costs of the taxpayer.

Accurate collection cost data for the Michigan income tax are not presently available. However, interviews with tax officials at the Revenue Division of the Department of Treasury provided some indication of the magnitude of the collection costs related to the credits. The treasury officials indicated that the present costs of administering the income tax laws were approximately $5 million per annum. They also estimated that of this $5 million, approximately one-third, or $1.7 million, was expended to administer the credit provisions. This may seem to be an extremely large percentage for administering only one provision of the income tax laws. However, it is important not to be misled by cost/revenue ratios. It is clear that attaining the lowest possible cost/revenue ratio is an ambiguous administrative goal. Low-cost figures could imply lax enforcement efforts rather than administrative efficiency.

Compliance costs of the credits for the individual taxpayer consist of the expenses incurred in filing the annual return. In examining the compliance costs, it is necessary to examine property owners and renters separately. The compliance costs for property owners are minimal. All that is necessary is for the owners to take the amount of the property taxes and calculate the credit from the table in the tax forms. As an example, if the property-owning taxpayer has $500 in property taxes, he would calculate his credit

($47.50)[60] from the table, and then subtract the $47.50 from his income tax liability before credits. For the renter it is an entirely different procedure. No claim for the credit may be made by a renter unless the claimant furnishes certification from the landlord showing the amount of gross rent paid. This certification is shown on the following page. The renter takes this amount of gross rent, and calculates the allowable credit in the same manner as a property owner. Therefore, there is a cost to the renter-taxpayer in having to obtain from the landlord a completed certificate, and even a greater cost to the landlord in having to fill out the certification and calculate the "gross rent." In addition, the credit that the renter-taxpayer can take is dependent on what his landlord decides the "gross rent" to be.

Collection Procedures

Since there is a wide variance in property taxes paid by taxable income, it is impracticable to reflect the amount of the tax credits allowed in the withholding tables. As a result, any taxpayer receiving primarily wages and salaries will obtain a refund when filing the annual return. However, for the taxpayer filing an estimated quarterly

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[60] See Chapter 5, page 69, which shows that if the property taxes exceed $200.00 the credit is calculated by taking $32.50 plus 5 per cent of the amount of property taxes over $200.00. Thus, the credit amount would be $32.50 plus 5 per cent of $300.00 ($15.00) which equals the $47.50.

MICHIGAN
THE GREAT LAKE STATE

MI-1040 G
ATTACH TO FORM
MI-1040

CERTIFICATE OF RENT PAID FOR HOMESTEAD

MICHIGAN
DEPARTMENT
OF TREASURY

Name of tenant

TO BE COMPLETED BY TAXPAYER
Your Social Security Number:

Address of homestead rented

Monthly rental charge . $.....

City, town or post office | State | Zip code

Number of months of rental .....

1. Total rent paid:	2. Rent paid for furnishings:	3. Rent paid for utilities:	4. Rent paid for other furnished items:	5. Rent paid for occupancy only:	6. 20% of gross rent shown in item 5:
$.....	$.....	$.....	$.....	$..... (item 1 less 2, 3 and 4)	$.....

ENTER THE AMOUNT SHOWN IN ITEM 6 on MI-1040, Page 1, Line 11 (B)

I, the undersigned, do hereby certify that the above information concerning rent paid to me by the above named tenant is for the rental of a homestead for and during the year 19..... is true, correct and complete to the best of my knowledge and belief.

Date

Signature of landlord or authorized agent

Landlord's Social Security Number or Federal Employer's Number

Address of Landlord

SEE INSTRUCTIONS ON REVERSE SIDE

INSTRUCTIONS

CERTIFICATION OF RENT PAID—To be completed by the landlord.

In order to claim a tax credit for a portion of the rent paid for a homestead, your tenant must submit this Certification of Rent Paid.

The Michigan Income Tax Act limits the basis for this credit to the amount paid for occupancy only, which means that the portion of rent which covers furnishings, utilities, and services must be excluded.

Enter the name of your tenant and the address of the homestead rented at the top of this certificate.

Enter the monthly rental charge and the total number of months of rental to the tenant during the current calendar year in the upper right hand corner of this certificate.

BOX 1. Enter here the total rent received for the homestead.

BOX 2. Enter here the portion of rent which applies to furnishings. (Stoves, refrigerator, drapes and other furniture.)

BOX 3. Enter here the portion of rent which covers heat and utilities if these are included in the monthly rent.

BOX 4. Enter here the portion of rent which covers services provided to the tenant and included in the monthly rent.

BOX 5. Enter here the amount of rent paid for occupancy only which is the amount in Box (1) less the sum of Boxes (2), (3) and (4).

BOX 6. Enter here 20% of the amount in Box (5). This is the portion of the total rent that is used as property tax paid in computing the tenant's property tax credit. This amount is carried forward by the tenant to his Michigan income tax return (MI-1040) page 1, line 11(b).

This form may be reproduced

All information requested on this form must be made a part of any alternate form

return, the credits are used in calculating the amount of quarterly payments. The Estimated Michigan Income Tax Computation Schedule is shown on the next page. As can be seen from the schedule (line 5 of the top part of the form), the taxpayer must estimate his tax credits to arrive at his estimated tax liability.

Effective auditing of tax returns requires imaginative use of the many sources of information available to a revenue department.[61] The most obvious source is the information supplied on federal returns. This information could be used to audit the amount of property tax and city income tax claimed as a credit by the taxpayer. The certification submitted by the renter can be used to audit the amount of renter credit claimed.

Conscientious auditing increases revenue in two ways--by exacting additional payment from taxpayers who either underreport or fail to file a return, and by increasing the level of compliance by nonaudited taxpayers who might otherwise be less exacting in their calculations. Equitable taxation requires as much imagination and diligence in enforcement--to insure that all taxpayers comply with their legal responsibilities--as does the determination of the basic tax structure.

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[61]For a thorough discussion of tax auditing for state income taxes, see Clara Penniman and Walter W. Heller, State Income Tax Administration (Chicago: Public Administration Service, 1959), Chapters V, VI, and VII.

ESTIMATED MICHIGAN INCOME TAX COMPUTATION SCHEDULE

1. Total income expected in 1969 . . . . . _____
2. Exemptions (Number of allowable exemptions times $1,200) . . . . . _____
3. Subtract line 2 from line 1. (This is your estimated taxable income) . . . . . _____
4. Estimated tax (Line 3 times .026 or 2.6%) . . . . . _____
5. LESS: Total estimated tax credit for City (in Michigan) Income Taxes, Property taxes (in Michigan) and taxes in gross rent and Contributions to Michigan Colleges and Universities . . . . . _____
6. Subtract line 5 from line 4-1969 Estimated tax. Enter here and on line 1 below . . . . . _____

MICHIGAN
THE GREAT LAKE STATE

MICHIGAN DECLARATION OF ESTIMATED INCOME TAX FOR INDIVIDUALS—1969

For calendar year 1969 or fiscal year ending _____, 19____

STATE OF MICHIGAN
Department of Treasury

FORM
MI-1040-ES

	First name and initial (If joint declaration, use names and initials of both)	Last name	Your social security number
Please print or type	Address (Number and street)		Spouse's social security number
	City, State, and ZIP code		

1. Your estimate of 1969 Income Tax . . . . . _____
2. Estimated income tax withheld and to be withheld during entire year of 1969 . . . . . _____
3. ESTIMATED TAX (line 1 less line 2) (If less than $100, no declaration is required) . . . . . _____
4. COMPUTATION OF INSTALLMENT. Check proper box below and enter amount indicated.
   If this declaration is due to be filed on: ☐ April 15, 1969, enter ¼ of line 3; ☐ September 15, 1969, enter ½ of line 3; ☐ June 15, 1969, enter ¾ of line 3; ☐ Jan. 15, 1970, enter amount on line 3 . . . . . _____
5. If you had an overpayment on your 1968 income tax return which you elected to have applied as a credit against your 1969 estimated tax, enter the amount here . . . . . ☐
6. To apply entire overpayment credit to this installment and any excess to the next, enter here the amount on line 5. To spread credit evenly to each installment, divide it by number of installments and enter results here . . . . . _____
7. Amount to be paid with this declaration at time of filing (line 4 less line 6) . . . . . _____
8. Note: The payment of the estimated tax (line 3 less any 1968 overpayment credit) with this return eliminates the filing of quarterly estimates. Enter lump sum payment here . . . . . _____

I have examined this declaration and to the best of my knowledge it is correct.

Signature(s)_____ Date_____, 19____

If joint estimate, both husband and wife must sign

Fiscal Planning Considerations

One additional administrative aspect of the Michigan credits deals with fiscal planning considerations. The credits will produce uncertainty for state government with respect to fiscal planning. More specifically, the Michigan state government will find it difficult to estimate accurately the net yield of the income taxes,[62] because this yield will be affected if the local levels of government increase the property tax yields or enact a city income tax. The difficulty arises from the fact that part of the increased burden stemming from the increase in the property tax or city income tax will be shifted forward (or upward) to state government. A simple example illustrates the point. If one considers a taxpayer (family of four) with income from wages and salaries of $10,000 and with $500 in property taxes, the following results are obtained:

Income	$10,000.00
Less Exemptions	4,800.00
Taxable Income	$ 5,200.00
Times the 2.6 Per Cent Rate	$ 135.20
Less Property Tax Credit	47.50
State Net Tax Liability	$ 87.70

[62]Net yield is defined as collections after allowance for the credits.

Now, if the city in which this taxpayer is a resident enacts an income tax of one per cent, he will pay $76.00 to his municipal government. However, this is not the effective liability of the city income tax. Considering his state income tax liability, we see:

Income	$10,000.00
Less Exemptions	4,800.00
Taxable Income	$ 5,200.00
Times the 2.6 Per Cent Rate	$ 135.20
Less Property Tax Credit	47.50
Less City Income Tax Credit	15.20
State Net Tax Liability	$ 72.50

As a result of the sliding-scale city income tax credit, $15.20 of the taxpayer's liability is shifted upward to the state and, consequently, state revenue is reduced (producing uncertainty) by $15.20. As more cities enact an income tax or increase their property tax, this problem is exacerbated.[63]

Recommendations

The difficulty in interpreting the implications of both the level and variation in collection costs has been

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[63]This problem was definitely overlooked at the time of enactment of the credits. The amount of uncertainty in net state revenues can be seen by the fact that a five per cent error in estimating the credit would exceed $8 million.

pointed out. However, it is clear that a large amount of the costs of administering the credit provisions relates to the certification required by renters. Even though certification reduces taxpayer evasion, it cannot be justified in terms of horizontal and vertical equity. Since a property owner is not required to submit certification of the amount of property taxes paid, a renter should not be required to submit certification.[64] The removal of certification for renters would reduce the collection costs for the collection agency as well as the compliance costs for the taxpayer.

In addition to the above suggestion, it is recommended that the present definition of "gross rent" should be changed to the total rent contracted to be paid by the renter or leaseholder. This change would eliminate the compliance costs for taxpayers in having to calculate rent paid solely for the right of occupancy. To maintain an equal revenue yield assumption on the credit, the amount of rent considered as taxes should be reduced from 20 per cent to 16 per cent.

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[64] It could be argued that the State of Michigan should require both property owners and renters to file a certification of their amount of property taxes or rent. This argument is rejected by the author in that it would sharply increase compliance costs for the taxpayer and collection costs for the collection agency.

The administration of the city income tax credit also would be improved by state collection of city income taxes. With state collection, the auditing of the city income tax credit would be simplified. Since state-level administration of the city income tax is not presently feasible due to technical faults in the statute, amendments should be introduced to the City Income Tax Act.[65]

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[65]An excellent and definitive reference to this issue is Milton C. Taylor, Michigan City Income Tax Reform (Institute for Community Development and Services, Continuing Education Service, Michigan State University, 1969).

CHAPTER VII

THE ALLOCATIVE EFFECTS OF THE MICHIGAN TAX CREDITS

One of the advantages of the tax credits is that they will act as an incentive for local governments to enact local income taxes rather than increase the rate of the property tax. To better understand this impact of the Michigan tax credits on local units of government, a brief discussion of the fiscal status of these units in the United States and Michigan is desirable. The past thirty years have witnessed a number of major changes in the pattern of local government revenue sources in the United States and Michigan. From 1936 to 1968 locally-levied taxes in the United States decreased from 60 to 44 per cent of local general revenues, and the share represented by intergovernmental revenue (largely state aid) rose from 24 per cent to 32 per cent (see Table 7).

While the long-term trend shows a decline in the relative dependence on locally-levied taxes, the dollar amounts of these tax revenues increased more than six times, from $4.1 billion in 1936 to $31.2 billion in 1968 in the United States, and from $147 million to $1.3 billion in

TABLE 7

UNITED STATES LOCAL REVENUES
(Millions)

	Amount	Percentages
1936[a]		
Revenue from all Sources	$ 6,793	100.00
Intergovernmental Revenue	1,646	24.23
Revenue from own Source	5,147	75.77
Taxes	4,083	60.11
1958[b]		
Revenue from all Sources	$31,202	100.00
Intergovernmental Revenue	8,232	26.38
Revenue from own Source	22,970	73.62
Taxes	15,461	49.55
1968[c]		
Revenue from all Sources	$70,171	100.00
Intergovernmental Revenue	22,295	31.77
Revenue from own Source	47,875	68.23
Taxes	31,171	44.42

[a]Historical Statistics of the U.S., Colonial Times to 1957, U.S. Department of Commerce, Bureau of the Census.

[b]Governmental Finances in 1958, G-GF58-No. 2, U.S. Department of Commerce, Bureau of the Census.

[c]Governmental Finances in 1967-68, GF68-No. 5, U.S. Department of Commerce, Bureau of the Census.

Michigan for the same span of years. Even more significant is the fact that approximately half of these increases in tax receipts occurred after 1958 (see Tables 8 and 9).

Analysis of the percentage breakdown of the tax revenue of all local units in the United States, from 1936 to 1968, points to the increasing diversification of the local tax base. Sales and gross receipts and other non-property taxes produced 5 per cent of all local taxes in 1936, but this figure rose to 14 per cent in 1968. The property tax accounted for the remainder of local tax receipts in each of the two years; it constituted 75 per cent of all locally-raised revenue, excluding intergovernmental revenue, in 1936, 58 per cent in 1958, and 56 per cent in 1968.

It is important to recognize that the preceding has dealt with the aggregate revenue of all local units in the United States and Michigan. One would expect considerable variation among types of units (counties, cities, townships, and school districts) and also among the states in which they are located. Table 10 presents data on tax revenue sources, for selected years, for local units in Michigan. As can be seen from Table 10, city income taxes as a percentage of total local taxes are approximately 5 per cent. This percentage has been relatively constant over the last five years.

TABLE 8

STATE AND LOCAL TAX REVENUES U.S.

	State Government Total U.S.[a]		Local Government Total U.S.[a]	
	Amount (Millions)	Percentage of Total	Amount (Millions)	Percentage of Total
1936[b]				
Total Tax Revenue	$ 2,618	100.00	$ 4,083	100.00
Property	228	8.71	3,865	94.66
Individual and Corp. Inc	266	10.16	--	--
Sales and Gross Receipts	1,394	53.25	90	2.20
Other	730	27.88	128	3.14
1958[c]				
Total Tax Revenue	$14,919	100.00	$15,461	100.00
Property	533	3.57	13,514	87.41
Individual and Corp. Inc	2,562	17.17	215	1.39
Sales and Gross Receipts	8,750	58.65	1,079	6.98
Other	3,074	20.61	653	4.22
1968[d]				
Total Tax Revenue	$36,400	100.00	$31,171	100.00
Property	912	2.51	26,835	86.09
Individual and Corp. Inc	8,749	24.04	1,077	3.45
Sales and Gross Receipts	20,979	57.63	1,932	6.20
Other	5,760	15.82	1,327	4.26

[a]1936 and 1958 contain 48 states only.

[b]Historical Statistics of the U.S. Colonial Times to 1957, U.S. Department of Commerce, Bureau of the Census.

[c]Governmental Finances in 1958, G-GF58-No. 2, U.S. Department of Commerce, Bureau of the Census.

[d]Governmental Finances in 1967-68, GF68-No. 5, U.S. Department of Commerce, Bureau of the Census.

TABLE 9

MICHIGAN STATE AND LOCAL TAX REVENUES

	State Government		Local Government	
	Amount (Millions)	Percentage of Total	Amount (Millions)	Percentage of Total
1936				
Total Tax Revenue	$117,005[a]	100.00	$ 147[b]	100.00
Property	2,688	2.30	147	100.00
Individual and Corp. Inc.	--	--	--	--
Sales and Gross Receipts	86,903	74.27	--	--
Other	27,414	23.43	--	--
1958				
Total Tax Revenue	794[c]	100.00	728[b]	100.00
Property	45	5.67	710[b]	97.53
Individual and Corp. Inc.	--	--	--	--
Sales and Gross Receipts	598	75.31	--	--
Other	151	19.02	18	2.47
1968				
Total Tax Revenue	1,886[d]	100.00	1,372[e]	100.00
Property	85	4.51	1,289[e]	93.95
Individual and Corp. Inc.	303	16.06	70[e]	5.10
Sales and Gross Receipts	1,137	60.29	--	--
Other	361	19.14	13[f]	.95

[a] Financial Report of the State of Michigan, Auditor General, 1943.

[b] Thirty-Fourth Report of the Michigan State Tax Commission, 1965.

[c] State Government Finances in 1958, U.S. Department of Commerce, Bureau of the Census.

[d] State Government Finances in 1968, U.S. Department of Commerce, Bureau of the Census.

[e] Michigan Department of Treasury Annual Report, 1968.

[f] Calculated by using total "Other Taxes" shown in Governmental Finances in 1967-68, U.S. Department of Commerce, Bureau of the Census and deducting the local income tax figure from it.

TABLE 10

BREAKDOWN OF MICHIGAN LOCAL TAXES

	1962		1965		1968	
	Taxes Levied (Thousands)	Percentage of Total	Taxes Levied (Thousands)	Percentage of Total	Taxes Levied (Thousands)	Percentage of Total
Total Local Taxes	$884,875	100.00	1,051,434	100.00	1,371,853	100.00
Property[a]	874,775	98.86	991,234	94.28	1,288,682	93.94
School District	451,447		534,370		750,348	
Regular	221,285		232,576		267,572	
Extra Voted	227,965		298,007		361,759	
Debt Service and Building	2,197		3,787		121,018	
Cities	253,717		265,714		314,664	
Counties	148,593		166,548		189,037	
Townships	13,911		16,978		26,793	
Villages	7,107		7,624		7,838	
Income[a]	--	--	47,862	4.55	69,571	5.07
Other[b]	10,100	1.14	12,338	1.17	13,600	.99

[a]Annual Reports Michigan Department of Revenue, 1962 and 1965, and Michigan Department of Treasury, 1968.

[b]Calculated by using total other taxes shown in Governmental Finances in 1962, 1965, and 1968, U.S. Department of Commerce, Bureau of the Census, and deducting the local income tax figure.

An important point which is often lost sight of in popular, and occasionally also in professional discussions, is that the effects of an increase in a specific tax can be properly assessed only by comparison with a stipulated alternative policy. Whether, and to what extent, a local area's economy can be said to experience a loss or gain as a result of imposing a certain tax depends on how the economy would fare under alternative tax policies that would prevail in the absence of the given tax.

The alternatives to a given tax are other types of taxes, additional federal or state aid, lowered expenditures, or increased borrowing. Conclusions about the given tax will depend, therefore, on which of these alternatives is used for comparison. For example, no local tax can fail to suffer by comparison with the local politician's happy solution of more federal or state aid, or by comparison with the naive citizen's hope of avoiding additional taxation by eliminating waste and corruption. But the realistic and relevant alternatives to the city income tax are other local tax sources, particularly the property tax.

Accordingly, an analysis will be made of the impact of the Michigan tax credits on a local unit when there is going to be an enactment of the city income tax or the property tax is to be increased. An examination will be presented of (1) an individual's preference between an income and a property tax, (2) a local governing body's

preference between an income and a property tax, and (3) a state's preference between an income and a property tax.

If there is going to be an increase in taxes of a given amount, an individual would prefer to have the tax increase on the tax on which he is presently paying the lower amount in absolute dollar terms. The reason for this is easy to see. Since the sliding-scale brackets for the credits are identical under both taxes[66] (see Chapter V), the marginal tax credit rate will be higher for the lower amount.

Table 11 shows eight hypothetical families with different combinations of property and gross income. These different combinations are shown in Row (1). Row (2) shows the present tax liability of these families. The present statewide property tax average on state equalized value is approximately 40 mills, and the city income tax on residents is one percentage point.[67] The procedure used is to examine the effect on these families of first raising the

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[66] This is true except for the highest brackets, where under the city income tax credit the allowable credit is $32.50 plus 5 per cent of the excess over $200.00, and the total credit cannot exceed $10,000. Under the property tax credit, the allowable credit for taxes paid over $200.00 but not over $10,000 is $32.50 plus 5 per cent of the excess over $200.00. For property taxes over $10,000 the allowable credit is 4 per cent of the property taxes paid.

[67] Public Act 307 of the 1968 Michigan legislature raised the ceiling to 2 per cent for cities of more than 1,000,000 population.

TABLE 11

IMPACT OF PROPERTY AND CITY INCOME TAX CHANGES
ON THEORETICAL FAMILIES[a]

	I		II		III		IV	
(1)								
Property (Market Value)	$ -0-[b]		$10,000		$10,000		$15,000	
Gross Income	20,000		-0-		5,000		7,500	
(2)								
Property Tax, 40 Mills	$ -0-	(-0-)	$200.00	(167.50)	$200.00	(167.50)	$300.00	(262.50)
1 per cent City Income Tax	176.00	(145.90)	-0-	(-0-)	26.00	(20.80)	51.00	(40.80)
Total Prop. and Income Tax	$176.00	(145.90)	$200.00	(167.50)	$226.00	(188.30)	$351.00	(303.30)
(3)								
Property Tax, 41 Mills	$ -0-	(-0-)	$205.00	(172.25)	$205.00	(172.25)	$307.50	(269.62)
1 per cent City Income Tax	176.00	(145.90)	-0-	(-0-)	26.00	(20.80)	51.00	(40.80)
Total Prop. and Income Tax	$176.00	(145.90)	$205.00	(172.25)	$231.00	(193.05)	$358.50	(310.42)
(4)								
Property Tax, 40 Mills	$ -0-	(-0-)	$200.00	(167.50)	$200.00	(167.50)	$300.00	(262.50)
1.1 per cent City Income Tax	193.60	(161.74)	-0-	(-0-)	28.60	(22.88)	56.10	(44.88)
Total Prop. and Income Tax	$193.60	(161.74)	$200.00	(167.50)	$228.60	(190.38)	$356.10	(307.38)

TABLE 11--(Continued)

	V		VI		VII		VIII	
(1)								
Property (Market Value)	$20,000		$30,000		$35,000		$ 50,000	
Gross Income	10,000		15,000		20,000		100,000	
(2)								
Property Tax, 40 Mills	$400.00	(357.50)	$600.00	(547.50)	$700.00	(642.50)	$1,000.00	(927.50)
1 per cent City Income Tax	76.00	(60.80)	126.00	(102.10)	176.00	(145.90)	976.00	(904.70)
Total Prop. and Income Tax	$476.00	(418.30)	$726.00	(649.60)	$876.00	(788.40)	$1,976.00	(1,832.20)
(3)								
Property Tax, 41 Mills	$410.00	(367.00	$615.00	(561.75)	$712.50	(654.37)	$1,025.00	(951.25)
1 per cent City Income Tax	76.00	(60.80)	126.00	(102.10)	176.00	(145.90)	976.00	(904.70)
Total Prop. and Income Tax	$486.00	(427.80)	$741.00	(663.85)	$888.50	(800.27)	$2,001.00	(1,855.95)
(4)								
Property Tax, 40 Mills	$400.00	(357.50)	$600.00	(547.50)	$700.00	(642.50)	$1,000.00	(927.50)
1.1 per cent City Income Tax	83.60	(66.88)	138.60	(112.81)	193.60	(161.74)	1,073.60	(997.42)
Total Prop. and Income Tax	$483.60	(424.38)	$738.60	(660.31)	$893.60	(804.24)	$2,073.60	(1,924.92)

[a]Four members.

[b]Even though Family I does not pay property tax, it will receive a credit for the amount of rent paid. The analysis assumes that the increase in property taxes would not be reflected in rental cost in the short run.

property tax one mill and holding the city income tax rate constant, and second, raising the city income tax .1 percentage point and holding the property tax rate constant. The one mill increase in the property tax rate and the .1 percentage point increase in the city income tax rate are used because their yields on a statewide basis are approximately equal.[68] Row (3) illustrates the impact of raising the property tax one mill and holding the income tax constant. Row (4) illustrates the impact of raising the income tax .1 percentage point and holding the property tax constant. The figures in parentheses show the effective tax liability after deduction of the allowable state credits. Family I, which paid no property tax,[69] would prefer an increase in the property tax rate since it would not increase its actual or effective tax liability. The .1 percentage point increase in the income tax would increase its actual tax liability to $193.60 and its effective tax liability to $161.74. Family II's preference would be just the opposite of Family I's, since Family II has no income. If the property tax rate were increased by one mill, Family II's actual tax liability would be increased to $205 and its effective tax liability to $172.25. Families III

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[68]By an equal yield assumption is meant that a one mill increase in the property tax would result in the identical yield as a .1 percentage point increase in the city income tax.

[69]See Footnote b, Table 11, pp. 90-91.

through VI, which are more typical families with respect to income and property, would prefer the income tax increase, since both the actual and effective rates would be lower. All of these families would pay $2.40 less with an increase in the income tax rate, rather than in the property tax rate. Family VII would prefer the property tax increase because both the actual and effective rates would be lower.

The latest data available on property and income characteristics indicate that over 50 per cent of families have income between $5,000 and $15,000, and also have property valued at between $10,000 and $30,000.[70] For the majority of taxpayers, then, it would be financially advantageous to enact an income tax rather than increase the property tax rate.

Our attention will now turn to whether or not an income tax is a desirable revenue source from the point of view of a municipality. To answer this question an examination of the Michigan city income tax is necessary. The Michigan city income tax is a broad-based income tax which encompasses federal adjusted gross income (AGI) and capital gains in the taxable base. It allows for a modest per capita exemption ($600) and imposes a low, flat tax rate.

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[70] United States Census of Housing, 1960, Metropolitan Housing, U.S. Department of Commerce, Bureau of the Census. Furthermore, according to Statistics of Income 1966 Individual Income Tax Returns, U.S. Treasury Department, an annual publication of tax return information the statistics of which are based on a stratified sample of about 500,000 returns, 75 per cent of U.S. families have income between $5,000 and $15,000.

The revenue from the city income tax is elastic with respect to income, and therefore would increase with the income of its citizens. If the demand for local government services rises at least proportionately with income, then the incidence and elasticity of the Michigan city income tax would reflect the desires of the citizenry. Under this tax residents finance the services which they receive, and one important non-resident group--commuters--also contributes to the services it receives from the city.

The jurisdictional problems usually associated with a local income tax have been resolved in Michigan by state enabling legislation which defines taxable income, resolves the problem of double taxation, and provides for state collection and auditing.[71] Local autonomy is maintained, since the city possesses the initial option to adopt the tax. However, it cannot determine the level of the tax rate. There seems to be no inherent difficulty in allowing local governments to use fractional rates such as those currently used for the property tax.[72]

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[71]Although there is state enabling legislation to provide for state collection of the Michigan city income tax, there are several technical faults in the City Income Tax Act which should be corrected. For a thorough discussion of the revisions desirable, see Taylor, Michigan City Income Tax, op. cit., pp. 10-19.

[72]This would require a change in the City Income Tax Act.

It is proposed that not only is the city income tax desirable from the standpoint of the preference of the taxpayers, but that it is also the most suitable, broad-based tax in terms of incidence, revenue productivity, and income elasticity for financing local governmental services.[73]

Finally, the preference of the state government for either the income or the property tax depends on its primary objectives. If the desire of the state government is to maximize its own revenue, then it would prefer that local units increase the property tax rather than the income tax. The rationale for this preference is just the opposite of that of the individual taxpayer. With an increase in property taxes, a smaller portion of the taxpayer's tax burden would be shifted forward to the state. If local income taxes were enacted, and the state government wanted to maintain equal revenue yield, it would have to increase revenue by raising existing tax rates or enacting new revenue sources.

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[73]See William Neenan, "Local Income Tax," in Missouri Tax Study, (Kansas City, Missouri, January, 1968); and Milton C. Taylor, Local Income Taxes as a Source of Revenue for Michigan Communities, (Institute for Community Development, Michigan State University, East Lansing, 1961).

Where possible, specific excise, license fees, or user charges should be used to finance services which can be attributable to the user. However, there are many generalized local services which should be financed by a general tax. In practice, in Michigan this means that either the income tax, the property tax, or some mixture of these must be used to finance local government. Of the two, the income tax has positive advantages not shared by the property tax, and it is not marred by some of the problems associated with the local property tax.

If, on the other hand, the primary objective of the state government is to shift part of the service demand pressure from the state government to local governments, it would want to encourage local units to increase taxes. In such a case the state government might prefer enactment of local income taxes, rather than increases in the property tax.

From the above discussion the following conclusions can be drawn: (1) the income tax is the local tax best suited to finance local government services, and (2) the sliding-scale credits enacted in Michigan will exert a positive influence on local units of government to enact city income taxes.

Given these conclusions that the income tax is a desirable source of revenue to finance local government and that the credits should aid local units in enacting the income tax, the allocative effects of the credits on total state and local revenue will be examined. Table 9, page 86, indicates that state tax revenue in 1968 was $1.886 billion and local tax revenue was $1.372 billion. Total state and local tax revenue was $3.258 billion. Assuming that the tax credits had been effective for this year, state revenues would have been decreased by $122 million to $1.764 billion. Table 12 shows the allocative effects of the credit, given various changes in local revenue sources. Column (1) indicates that before enactment of the credits total state and local tax revenue was $3.258 billion with 58 per cent

TABLE 12

ALLOCATIVE EFFECTS OF MICHIGAN TAX CREDITS[a]
(In Millions)

Source	Present System[b] (1)		With Credits as Enacted, Present Prop. Taxes and Present Cities Levying an Income Tax (2)		With a 5% Increase in Property Taxes (3)		With a 10% Increase in Property Taxes (4)	
	Total	%	Total	%	Total	%	Total	%
State Tax Revenue	$1,886	58	$1,764	56	$1,760	55	$1,757	54
Local Tax Revenue	1,372	42	1,372	44	1,436	45	1,501	46
Total State and Local Tax Revenue	3,258	100	3,136	100	3,196	100	3,258	100

Source	With All Additional Local Units Levying a 1% Income Tax[d] (5)		With All Local Units Levying a 2% Income Tax (6)		With All Local Units Levying a 3% Income Tax (7)		With All Local Units Levying a 4% Income Tax (8)		With a 10% Increase in Prop. Taxes and All Units Levying a 4% Income Tax (9)	
	Total	%	Total	%	Total	%	Total	%	Total	%
State Tax Revenue	$1,736	53	$1,712	49	$1,695	45	$1,682	42	$1,675	41
Local Tax Revenue	1,547	47	1,792	51	2,037	55	2,282	58	2,411	59
Total State and Local Tax Revenue	3,283	100	3,504	100	3,732	100	3,964	100	4,086	100

[a]The following effective rates were used for the credits:

Column	Property Tax Credit	City Income Tax Credit
2	8.5	17.1
3	6.3	-
4	4.6	-
5	-	16.0
6	-	9.8
7	-	6.9
8	-	5.3
9	5.4	9.0

[b]The present system includes the enacted income tax without the credits. Column 2 shows the impact on state tax revenue with the credits included.

[c]The following cities were levying an income tax in 1968: Detroit, Flint, Grand Rapids, Saginaw, Highland Park, Hamtramck, Battle Creek, Pontiac, and Lapeer.

[d]See footnote 74, page 98. The yield for each percentage point in the city income tax is $245 million.

flowing to the state government. Enactment of the credits reduces state tax revenue by $122 million and increases the local share of total state and local taxes to 44 per cent. Columns 3 through 9 show various increases in local revenue sources and the allocative effects of these increases.

To illustrate clearly these allocative effects a detailed explanation of Column 6 will be presented. This column shows the allocative implications if all cities, villages, and townships[74] in Michigan levied a 2 per cent corporate and personal income tax.[75] This gain would increase local tax revenue by $420 million (31 per cent) and increase the percentage share going to local units from 42 to 51 per cent. Although revenue flowing to the local units of government would increase by $420 million, total state and local revenue would increase by only $368 million. This would be a modest 11 per cent increase in total state and local revenue. The explanation of this is that of the $420 million increase in local taxes $52 million is shifted upward to state government, reducing net yield of the income taxes by $52 million. The credits have reduced the effective liability of the increase in local taxes by 12.4 per cent

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[74] All cities, villages, and townships were used because data was not available on the amount of income earned by residents of cities or employees working in cities.

[75] It is recognized that this would require a statutory change. However, the analysis is presented to demonstrate the potential beneficial allocative effects of the credits.

and shifted a substantial share of total state and local revenue to the local units of government.

This analysis points out that the credits can have significant allocative effects between state and local government units, while at the same time reducing the increase in tax burden that would have occurred without the credits. This conclusion can have far reaching implications for intergovernmental fiscal relations. If the point is accepted that the continually growing demand pressures on the public sector are in problem areas concentrated at local levels and that these demand pressures should be met by local revenue sources, the credits can make an important contribution.

CHAPTER VIII

THE DISTRIBUTIVE EFFECTS OF THE MICHIGAN TAX CREDITS

This chapter deals with the principal equity and distributional impacts of the Michigan tax credits. The chapter will measure empirically the effects of the property tax and city income tax credits on the distribution of after-tax income in Michigan. An empirical analysis of the after-tax inter-regional distributional impact of the credits will also be presented.

While most people would agree that taxes should be levied in such a manner that the total burden is equitably distributed, securing agreement as to what constitutes tax equity and how it may be practicably attained is much more difficult. For many years economists have discussed this question in terms of "horizontal equity" and "vertical equity."

Horizontal equity refers to the equal treatment of equals in terms of the chosen basis of taxation. Thus, if persons are equitably taxed according to the amount of income they receive, the sources from which that income is received should not influence their tax liability.

Similarly, deductions from income for tax purposes should be limited to certain unplanned, nondiscretionary expenditures which can be viewed as significantly reducing "tax-paying ability." Horizontal equity among taxpayers is thus achieved when all persons receiving the same income pay the same amount of tax, after adjustment is made for different family size and other allowable deductions.

Vertical equity, on the other hand, refers to the dissimilar treatment of unequals. Here there are no a priori guides to the achievement of equity. It can be said that two individuals who are not equally circumstanced should pay different amounts of tax, but the concept of vertical equity cannot guide us in determining what the tax liabilities should be at different income levels. The decision as to the distribution of total tax collections among people at different income levels will be affected by society's collective notion as to what is the proper after-tax distribution of income. If we want to decrease the amount of inequality present, vertical equity calls for progressive taxation with average tax rates rising more than in proportion to income; if the before-tax income distribution is satisfactory, vertical equity calls for proportional taxation; and if we want to increase the amount of inequality present, vertical equity calls for regressive taxation. Economists, of course, cannot

determine what the degree of vertical equity should be; rather, society's collective decision must be implemented by means of the political process.

While progressivity is usually measured in terms of effective tax rates at various income levels, or rates of change in these effective rates, such measurement is acceptable only with reference to hypothetical tax structures.[76] Progressivity of a tax (i.e., a real tax as opposed to a hypothetical one) is most meaningfully measured in terms of what the tax does to the distribution of income within a society.[77] It cannot be assumed that progressivity has been realized just because there is a graduated-rate schedule, because redistribution depends upon what happens to the legally defined tax base at different income levels as well. If, as is true in the United States, the base decreases considerably relative to income at the highest

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[76]See Richard A. Musgrave and Tun Thin, "Income Tax Progression, 1929-48," Journal of Political Economy, LVI, No. 6 (December, 1948), pp. 498-514; and Richard E. Slitor, "The Measurement of Progressivity and Built-In Flexibility," Quarterly Journal of Economics, LXII, No. 1 (February, 1948), pp. 309-13.

[77]Musgrave and Tun Thin, while concentrating on other measures, briefly consider progressivity as measured in this way under the heading of "effective progression" (op. cit., pp. 510-11). In his more recent work, Musgrave relies exclusively upon the distributional effects to define and measure progressivity. See his The Theory of Public Finance (New York: McGraw Hill, 1959), pp. 223-25.

income levels, we find that the effective tax rate declines despite a marginal rate schedule which ascends to high levels.[78]

On the other hand, regardless of what gives rise to the differing tax liabilities, the fact remains that taxes do subtract from income which is otherwise disposable--a subtraction which changes the after-tax distribution of income. This change constitutes the realized progressivity of a tax.

The following analysis of the impact of the Michigan tax credits on the distribution of after-tax income is constructed on several assumptions: (1) the total level and composition of government expenditures remain unchanged throughout the analysis in order to prevent the introduction of distributional changes from this source; and (2) as various features of the tax law are manipulated, the total level of state government revenue remains unchanged through appropriate changes in the rate structure. Without these suppositions, we would be altering the total "tax take" considerably and would, therefore, be introducing "stabilization-branch" changes.[79] One final assumption is that the

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[78]This is shown graphically in Richard Goode, The Individual Income Tax (Washington: The Brookings Institution, 1964), p. 236.

[79]In Musgrave's three-branch framework, he envisions government policy as being implemented through the "allocation," "distribution," or "stabilization" branches of the

various structural changes introduced do not change the sources or uses of income by individuals. Specifically, on the sources' side, this means that the before-tax distribution of income does not change because of changing amounts of work effort or changing patterns of saving and investment.[80]

Source of Data

The data used in the following analysis are from the United States Census of Housing 1960, Metropolitan Housing[81] for the ten Standard Metropolitan Statistical Areas (SMSA's) in Michigan.[82] The data used were incomes in 1959 of primary families and individuals and incomes of families and individuals in renter-occupied housing units. The metropolitan area income of the ten SMSA's accounts for

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budget (see The Theory of Public Finance, op. cit., Chapters 1 and 2). Since we are concerned here solely with distributional changes resulting from the tax law, it is important not to introduce any changes in the level of employment through the "stabilization-branch" budget which would affect the before-tax distribution of income.

[80]The literature here is voluminous. An excellent reference is Goode, op. cit., pp. 38-57. Also, see Musgrave, The Theory of Public Finance, op. cit., Chapter 11.

[81]United States Census of Housing 1960, Metropolitan Housing, op. cit.

[82]The ten SMSA's in Michigan are: Ann Arbor, Bay City, Detroit, Flint, Grand Rapids, Jackson, Kalamazoo, Lansing, Muskegon-Muskegon Heights, and Saginaw.

over eighty-two per cent of total Michigan personal income.[83] These data are shown in Tables 13 and 14.

Overview of the Procedure

The analysis requires extensive manipulation of the basic data to determine the impact of each of the structural features to be studied. The features examined are the federal income tax, local property taxes, a 1.9 per cent state income tax, the enacted state income tax programs, and the enacted state income tax with a rebate if the credits exceed the taxpayer's tax liability. Briefly, the analysis involves the following steps: first, a before-tax distribution of income is generated from Tables 13 and 14; next, each of the above structural features is examined to determine its impact upon the after-tax distribution of income in Michigan. Each is examined marginally, i.e., as if only that feature of the law were changed.

In each case a given tax structure is always defined as more or less progressive on the basis of the overall Gini coefficient.[84] In terms of realized progressivity, it is more progressive if the Gini coefficient for the new

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[83]United States Department of Commerce, Office of Business Economics, Survey of Current Business, Vol. XLVIII, No. 8 (August 1968), p. 32.

[84]See the Appendix for a complete discussion and derivation of the Gini coefficient.

TABLE 13

INCOME IN 1959 OF PRIMARY MICHIGAN FAMILIES AND INDIVIDUALS IN OWNER-OCCUPIED HOUSING UNITS FOR THE TEN MICHIGAN STANDARD METROPOLITAN STATISTICAL AREAS: 1960

Total Market Value of Housing	Income in 1959										
	Total	Less than $2,000	$2,000 to $2,999	$3,000 to $3,999	$4,000 to $4,999	$5,000 to $5,999	$6,000 to $6,999	$7,000 to $7,999	$8,000 to $9,999	$10,000 to $14,999	$15,000 or More
Total Value	1,059,800	90,298	44,867	48,240	81,029	132,281	130,325	115,749	174,485	173,224	69,302
Less than $5,000	34,323	10,249	3,320	3,185	4,636	4,966	2,937	1,732	1,876	1,162	260
$5,000 to $7,400	97,467	17,777	7,833	7,789	12,514	16,390	11,269	7,701	9,125	6,053	1,016
$7,500 to $9,900	168,414	20,824	10,829	11,099	18,830	28,399	22,733	16,829	21,333	15,015	2,523
$10,000 to $12,400	213,635	16,537	9,304	10,517	19,101	33,510	31,926	26,071	34,774	27,016	4,879
$12,500 to $14,900	185,881	10,098	6,085	6,815	12,337	24,265	27,776	25,298	36,411	30,524	6,232
$15,000 to $19,900	219,436	9,273	5,066	6,052	9,855	18,917	25,681	28,526	49,568	52,314	14,184
$20,000 to $24,900	69,008	2,673	1,186	1,583	2,203	3,686	5,056	6,378	13,633	21,584	11,026
$25,000 or More	71,636	2,867	1,244	1,200	1,513	2,148	2,947	3,214	7,765	19,556	29,182

Source: United States Census of Housing 1960, Metropolitan Housing, for the Ten Standard Metropolitan Statistical Areas in Michigan, U.S. Department of Commerce, Bureau of the Census.

TABLE 14

GROSS RENT OF RENTER-OCCUPIED HOUSING UNITS FOR THE TEN MICHIGAN STANDARD METROPOLITAN STATISTICAL AREAS: 1960

Total Rent	Total	Income in 1959									
		Less than $2,000	$2,000 to $2,999	$3,000 to $3,999	$4,000 to $4,999	$5,000 to $5,999	$6,000 to $6,999	$7,000 to $7,999	$8,000 to $9,999	$10,000 to $14,999	$15,000 or More
Total	441,146	99,968	44,523	47,415	60,548	58,979	39,562	27,240	32,608	23,561	6,742
Less than $30	5,541	3,114	642	398	507	383	196	89	132	59	21
$30 to $39	13,724	7,724	1,646	1,150	1,169	884	491	238	261	131	30
$40 to $49	24,166	10,800	3,510	2,520	2,404	2,095	1,126	618	651	342	100
$50 to $59	39,845	13,309	5,525	5,115	5,574	4,421	2,254	1,452	1,293	789	113
$60 to $69	66,333	18,104	8,184	8,692	10,241	8,643	4,635	2,927	3,055	1,600	252
$70 to $79	68,629	13,958	7,763	8,279	11,274	10,193	6,405	3,905	4,293	2,202	357
$80 to $99	106,148	16,198	9,495	11,518	16,303	17,053	11,610	8,089	8,953	5,892	1,037
$100 to $119	56,400	6,101	3,970	5,180	7,258	8,696	7,045	5,141	6,790	5,103	1,116
$120 or More	38,948	3,738	1,772	2,428	3,233	4,318	4,150	3,689	5,800	6,390	3,430
No Cash Rent	21,412	6,922	2,016	2,135	2,585	2,293	1,650	1,092	1,380	1,053	286

Source: United States Census of Housing 1960, Metropolitan Housing, for the Ten Standard Metropolitan Statistical Areas in Michigan, U.S. Department of Commerce, Bureau of the Census.

income distribution is smaller than that for the old distribution; it is less progressive if the Gini coefficient is greater.

In considering the Lorenz curves[85] and Gini coefficients presented, the reader should not be misled by the small numerical differences indicated. These two measures are quite sensitive and even small changes are meaningful.[86]

Summary of Findings

Applying the assumptions given previously, we first calculate the before-tax distribution of income for Michigan. The income classes used are shown in Table 15. Also shown in Table 15 are the Michigan mean household incomes used for each income class and the average number of exemptions per household. The distribution and derivation of the before-tax Lorenz curve for Michigan income is shown in Table 16. Table 16 shows that Family A (less than $2,000 in income) constitutes 12.68 per cent of all families. This figure was derived from Tables 13 and 14. Table 13 shows that 90,298 families (in owner-occupied units) had income of less than $2,000 and Table 14 shows that 99,968

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[85]See the Appendix for a discussion and derivation of the Lorenz curve.

[86]For an excellent reference on this point see Benjamin A. Okner, Income Redistribution and the Federal Income Tax, Institute of Public Administration, University of Michigan, Ann Arbor, 1966.

TABLE 15

MICHIGAN INCOME CLASSES USED FOR ANALYSIS

Adjusted Gross Income Classes[a]	Family Code[b]	Mean Household Income[c]	Average Number of Exemptions Per Household[d]
Less than $2,000	A	$ 1,304	1.1
$2,000 to $2,999	B	2,517	1.6
$3,000 to $3,999	C	3,517	2.2
$4,000 to $4,999	D	4,547	2.7
$5,000 to $5,999	E	5,503	3.1
$6,000 to $6,999	F	6,478	3.6
$7,000 to $7,999	G	7,470	3.7
$8,000 to $9,999	H	8,936	3.8
$10,000 to $14,999	I	11,702	3.6
$15,000 or More	J	27,488	3.7

[a]The income classes are the same as those in the Census of Housing: 1960, U.S. Department of Commerce, Bureau of the Census.

[b]This code will be used in all the analyses which follow.

[c]Mean Household Income calculated from U.S. Treasury Department, Statistics of Income, 1960, Individual Income Tax Returns.

[d]Average Number of Exemptions calculated from U.S. Treasury Department, Statistics of Income, 1960, Individual Tax Returns.

TABLE 16

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 248,106,864	2.27	2.27
B	5.95	18.63	224,994,630	2.06	4.33
C	6.37	25.00	336,418,635	3.08	7.41
D	9.43	34.43	643,750,619	5.89	13.30
E	12.74	47.17	1,052,503,780	9.64	22.94
F	11.32	58.49	1,100,527,986	10.08	33.02
G	9.53	68.02	1,070,987,610	9.81	42.83
H	13.80	81.82	1,850,583,048	16.94	59.77
I	13.11	94.93	2,302,778,070	21.09	80.86
J	5.07	100.00	2,090,297,472	19.14	100.00

families (in renter-occupied units) had the same characteristics. Tables 13 and 14 also show that there was a total of 1,500,946 families. Taking the 190,266 families (90,298 + 99,968) with income less than $2,000 as a percentage of the total families, the figure of 12.68 per cent is derived. Multiplying the 190,266 families by the mean household income presented in Table 15 of $1,304, one obtains the total income figure of $248,106,864 shown in Table 16. The same procedure is used for all cells in tha table. The Lorenz curve for this distritution, in Table 16, is shown in Figure 3. The Gini coefficient for this income distribution is .3667.

To this before-tax distribution we apply the federal income tax. The federal income tax rates in 1967 are used in making the calculations. The data used in calculating the federal income tax liability is shown in Table 17. The resulting distribution is shown in Table 18. The Gini coefficient corresponding to the new income distribution is .3467, which may be compared with the before-tax value of .3667. The federal income tax effects a 5.5 per cent decrease in the before-tax area of inequality.[87]

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[87]See the Appendix for an explanation of the calculations used in measuring the reduction in the area of inequality.

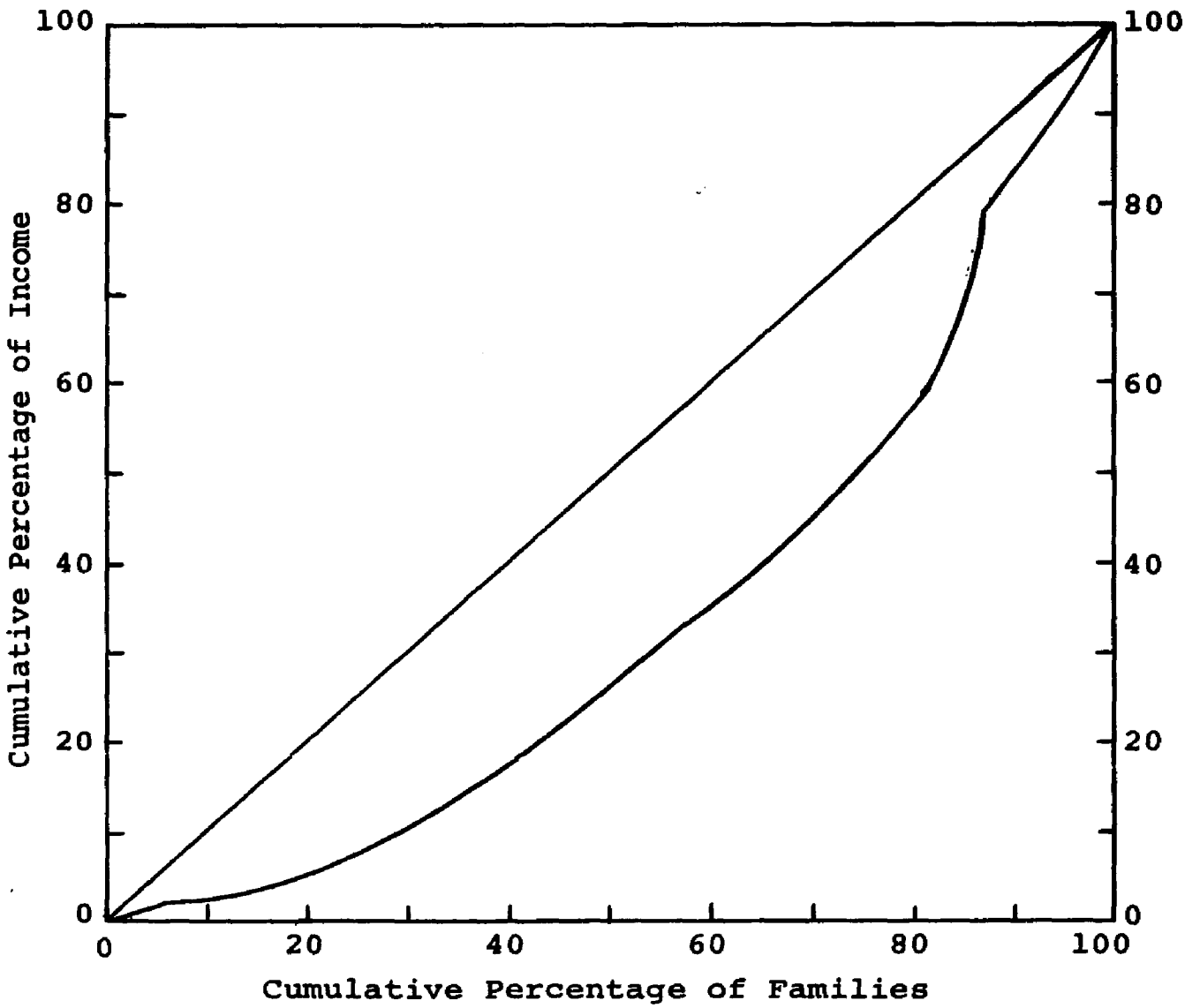

Figure 3. Lorenz curve for Michigan economy.

TABLE 17

COMPONENTS USED IN CALCULATING FEDERAL INCOME TAX LIABILITY

Family	Adjusted Gross Income	Personal Exemptions[a]	Amount of Standard Deductions or Itemized Deductions[b]	Tax Liability
A	$ 1,304	$ 660	$ 330	$ 46.76
B	2,517	960	360	169.55
C	3,517	1,320	420	256.55
D	4,547	1,620	470	363.12
E	5,503	1,860	550	465.81
F	6,478	2,160	648	563.90
G	7,490	2,220	750	718.99
H	8,936	2,280	894	954.78
I	11,702	2,160	1,170	1,461.84
J	27,488	2,220	2,749	5,186.08

[a]Average Number of Exemptions per Household are shown on Table 15, page 109, multiplied by $600.

[b]For Families A through H the standard deduction of 10 per cent of adjusted gross income with a minimum of $200 plus $100 for each exemption, and a maximum of $1,000 was used. For example, 10 per cent of Family B's adjusted gross income would be $252, but using $200 plus $100 for each exemption would yield the figure of $360 ($200 + 1.6 average number of exemptions x $100 = $360). For Families I and J the author assumed that itemized deductions would amount to 10 per cent of the family's adjusted gross income.

TABLE 18

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME TAX

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 239,210,026	2.48	2.48
B	5.95	18.63	209,838,556	2.17	4.65
C	6.37	25.00	311,878,345	3.23	7.88
D	9.43	34.43	592,341,179	6.14	14.02
E	12.74	47.17	963,412,959	9.98	24.00
F	11.32	58.49	1,004,728,707	10.41	34.41
G	9.53	68.02	968,179,949	10.03	44.44
H	13.80	81.82	1,652,854,793	17.12	61.56
I	13.11	94.93	2,015,109,886	20.87	82.43
J	5.07	100.00	1,695,927,204	17.57	100.00

If we now apply the approximate average for property taxes[88] of 40 mills to the previous distribution, the following results are obtained. The results are shown in Table 19. The Gini coefficient corresponding to this new income distribution is .3555. The addition to the tax structure (with a federal income tax only) of a property tax effects a 2.5 per cent increase in the area of inequality.[89] Although the content of the available data limits the validity of the results, this is some empirical evidence of the regressive nature of the property tax. Although the calculation was not made, it is obvious that the Gini coefficient for the income distribution with property tax would be greater than the before-tax value of .3667.

To meaningfully analyze the distributional impact of the Michigan tax credits, it is first necessary to analyze the impact of a state income tax (without property

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[88]The property (or rent equivalent) taxes used are as follows:

Total Value	Property Taxes	Gross Rent	Equivalent Taxes
Less than $ 5,000	$ 80.00	Less than $30	$ 48.00
$ 5,000 to $ 7,400	125.00	$ 30 to $ 39	84.00
$ 7,500 to $ 9,900	175.00	$ 40 to $ 49	108.00
$10,000 to $12,400	230.40	$ 50 to $ 59	132.00
$12,500 to $14,900	275.00	$ 60 to $ 69	156.00
$15,000 to $19,900	350.00	$ 70 to $ 79	180.00
$20,000 to $24,900	450.00	$ 80 to $ 99	216.00
$25,000 or More	800.00	$100 to $119	264.00
		$120 or More	360.00
		No Cash Rent	-0-

[89]See Footnote 87, page 111.

TABLE 19

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME AND LOCAL PROPERTY TAXES

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 203,681,454	2.20	2.20
B	5.95	18.63	191,891,315	2.07	4.27
C	6.37	25.00	291,981,099	3.15	7.42
D	9.43	34.43	562,308,965	6.07	13.49
E	12.74	47.17	919,986,283	9.94	23.43
F	11.32	58.49	962,284,158	10.39	33.82
G	9.53	68.02	929,869,908	10.04	43.86
H	13.80	81.82	1,592,777,237	17.20	61.06
I	13.11	94.93	1,947,625,445	21.04	82.10
J	5.07	100.00	1,657,342,026	17.90	100.00

and city income tax credits) under an equal-yield revenue assumption. The equal-yield revenue assumption is what the rate of the state income tax, without credits, would have to be to produce the same yield as with the credits. The estimated yield of a tax of 2.6 percentage points is $320 million, with the credits estimated at $86 million.[90] The question is, what the income tax rate would have to be to yield $234 million, with a $1,200 exemption per taxpayer and dependent, the same as the enacted law. A 1.9 percentage rate would yield $234 million. Applying the flat-rate 1.9 per cent state income tax to the previous distribution yields the results shown in Table 20. The Gini coefficient corresponding to the new income distribution is .3525. This flat-rate income tax effects an 0.8 per cent decrease in the area of inequality. This is some weak empirical evidence that a degree of progressivity can be introduced into a tax structure even with a flat-rate tax as a result of the use of personal exemptions.

Turning now to the enacted tax law, the primary question we are concerned with is the impact of the enacted credits on the after-tax distribution of income. According to the Michigan law, the credits cannot exceed the tax liability of the taxpayer. This means that if the taxpayer

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[90]Estimated by the Executive Office, Bureau of the Budget, State of Michigan, 1967-68 Executive Budget.

TABLE 20

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME, LOCAL PROPERTY, AND STATE INCOME (1.9%) TAXES

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 203,681,454	2.23	2.48
B	5.95	18.63	190,877,632	2.09	4.32
C	6.37	25.00	290,387,487	3.17	7.49
D	9.43	34.43	558,793,608	6.10	13.59
E	12.74	47.17	913,506,395	9.98	23.57
F	11.32	58.49	955,488,678	10.44	34.01
G	9.53	68.02	921,583,696	10.07	44.08
H	13.80	81.82	1,575,559,525	17.21	61.29
I	13.11	94.93	1,920,024,381	20.97	82.26
J	5.07	100.00	1,624,041,598	17.74	100.00

has no income tax liability, he will not receive a credit even if he has paid property or city income taxes. Although there is no negative income tax provision included in the Michigan law, an analysis including the negative income tax provision, will also be performed.

The analysis presented will first examine the after-tax distributional effects of only the property tax credit. As a result of the potential beneficial allocative effects of an expanded city income tax, the distributional effects with all local units levying a 1 per cent, 2 per cent, 3 per cent, and finally a 4 per cent city income tax, will then be presented.

Examining the impact of the enacted tax package (with the property tax credit only), we see a further reduction in the area of inequality. The procedure used was to calculate the state income tax liability for every income class for both homeowners and renters. An example will be used to illustrate these calculations for the cell with income of $6,000 to $6,999 and property valued at between $10,000 and $12,400. The $22.09 was then used as the state

Adjusted Gross Income	$6,478.00
- $1,200 x 3.6 Exemptions	4,320.00
	$2,158.00
x 2.6 = Tax Liability before Credit	$ 56.11
- Property Tax Credit	34.02
= Tax Liability	$ 22.09

tax liability and multiplied by the number of families (31,926) in this cell. This procedure was used for all cells and the resulting income distribution was calculated. It should again be pointed out that if the credit exceeded the state income tax liability before credits, then the figure used would have been zero. The Gini coefficient corresponding to the new income distribution is .3516. The derivation of the Lorenz curve is shown in Table 21. The sliding-scale property tax credit approach effects a .3 percentage point decrease in the area of inequality from an equal-yield 1.9 percentage point flat-rate income tax.

If a negative income tax provision had been included in the 1967 tax law, an estimated revenue loss of $20 million would have been realized. This, of course, is contrary to the assumption that government revenue does not change as various tax changes are examined. In order to correct for the revenue decrease, it is necessary to increase the tax rate accordingly. The rate necessary to maintain the equal-yield assumption is approximately 2.7 per cent.[91] Calculating the new income distribution with the 2.7 per cent flat rate and the negative income tax provision,[92]

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[91]The .1 increase in the rate would be what was needed to offset the $20 million lost in yield as a result of the negative income tax provision.

[92]The calculation for this negative income tax provision is exactly identical to the calculations without the negative income tax provision except that, if the credits exceed the tax liability before credits for any cell, the resulting negative figure is used for that cell for the state income tax liability.

TABLE 21

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME AND LOCAL PROPERTY TAXES AND MINUS THE ENACTED STATE INCOME TAX

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 203,681,454	2.22	2.22
B	5.95	18.63	191,856,226	2.09	4.31
C	6.37	25.00	291,894,577	3.19	7.50
D	9.43	34.43	561,709,937	6.13	13.63
E	12.74	47.17	917,261,435	10.02	23.65
F	11.32	58.49	958,483,230	10.47	34.12
G	9.53	68.02	923,519,185	10.08	44.20
H	13.80	81.82	1,576,728,877	17.22	61.42
I	13.11	94.93	1,917,559,852	20.94	82.36
J	5.07	100.00	1,615,392,823	17.64	100.00

one obtains a Gini coefficient of .3504. This provision would have effected a .6 per cent decrease in the area of inequality from the equal-yield 1.9 per cent flat-rate income tax distribution.

Finally, the after-tax distributional effects of allowing all cities, villages, and townships within the ten Michigan Standard Metropolitan Statistical Areas to levy income taxes is presented. The first analysis allows all cities, villages, and townships to levy a one per cent income tax. The Gini coefficient corresponding to this new income distribution is .3509. The derivation of the Lorenz curve is shown in Table 22. Because of the complexities of the calculation of the derivation of the Lorenz curve with a local income tax included, the procedure used is detailed below. For the cell with income $7,000 to $7,999 and property valued between $12,500 and $14,900 the calculation would be as follows:

Adjusted Gross Income	$7,490.00
- $1,200 x 3.7 Exemption	4,440.00
= Taxable Income	$3,050.00
x 2.6 - Tax Liability before Credit	$ 79.30
- Property Tax Credit	36.25
- City Income Tax Credit	10.54[93]
+ Tax Liability	$ 32.51

[93]The city income tax and city income tax credit for each cell are calculated as follows:

Mean Income	$7,490.00
- 3.7 Average Number of Exemptions x 600	2,220.00
= Taxable Income	$5,270.00
x the Rate of 1 Per Cent =	$ 52.70

which is the city income tax liability. To arrive at the city income tax credit the $52.70 in liability is applied

TABLE 22

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME, LOCAL PROPERTY AND ONE PER CENT LOCAL INCOME TAXES, AND MINUS THE ENACTED STATE INCOME TAX

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 202,456,141	2.23	2.23
B	5.95	18.63	191,368,370	2.10	4.33
C	6.37	25.00	289,820,189	3.19	7.52
D	9.43	34.43	557,923,077	6.14	13.66
E	12.74	47.17	911,626,834	10.03	23.69
F	11.32	58.49	952,589,870	10.48	34.17
G	9.53	68.02	917,508,475	10.09	44.26
H	13.80	81.82	1,565,701,385	17.22	61.48
I	13.11	94.93	1,902,537,285	20.93	82.41
J	5.07	100.00	1,598,849,450	17.59	100.00

The amount of $32.51 is the state tax liability. To arrive at the after-tax liability for this cell the calculation would be:

Mean Income	$7,490.00
- Federal Income Tax	718.99
- Property Tax	275.00
- City Income Tax	52.70[94]
- State Income Tax after Credits	32.51
	$6,410.80

The amount of $6,410.80 was then multiplied by the number of families (25,298) in this cell to arrive at the total income in the cell. This same procedure was then used for all cells and the resulting distribution was calculated.

Tables 23, 24, and 25 show the derivation of the Lorenz curves with a 2 per cent, 3 per cent, and 4 per cent local income tax. The Gini coefficients corresponding to these income distributions are .3503, .3496, and .3491 respectively. In addition to the positive allocative effects of the city income tax credits presented in Chapter VII, the above analysis indicates that the city income tax credit also decreases (although modestly) the area of

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to the city income tax credit schedule (See Chapter V, p. 70). For city income tax of under $100 the credit is 20 per cent. Therefore, 20 per cent of $52.70 equals $10.54. For the distribution with a 2 per cent, 3 per cent, and 4 per cent local income tax the identical procedure was used to calculate the city income tax liability and the city income tax credit.

[94] Ibid.

TABLE 23

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME, LOCAL PROPERTY AND TWO PER CENT LOCAL INCOME TAXES, AND MINUS THE ENACTED STATE INCOME TAX

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 201,230,828	2.23	2.23
B	5.95	18.63	189,089,002	2.10	4.33
C	6.37	25.00	287,746,352	3.19	7.52
D	9.43	34.43	553,779,705	6.14	13.66
E	12.74	47.17	905,597,282	10.04	23.70
F	11.32	58.49	946,627,018	10.50	34.20
G	9.53	68.02	911,428,564	10.11	44.31
H	13.80	81.82	1,554,331,979	17.24	61.55
I	13.11	94.93	1,886,219,872	20.92	82.47
J	5.07	100.00	1,580,637,530	17.53	100.00

TABLE 24

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME, LOCAL PROPERTY AND THREE PER CENT LOCAL INCOME TAXES, AND MINUS THE ENACTED STATE INCOME TAX

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 200,005,515	2.24	2.24
B	5.95	18.63	187,703,449	2.10	4.34
C	6.37	25.00	285,655,931	3.19	7.53
D	9.43	34.43	549,829,238	6.15	13.68
E	12.74	47.17	898,939,922	10.06	23.74
F	11.32	58.49	940,340,275	10.52	34.26
G	9.53	68.02	904,942,463	10.12	44.38
H	13.80	81.82	1,542,101,067	17.25	61.63
I	13.11	94.93	1,867,266,341	20.89	82.52
J	5.07	100.00	1,562,341,487	17.48	100.00

TABLE 25

DERIVATION OF LORENZ CURVE FOR MICHIGAN INCOME MINUS FEDERAL INCOME, LOCAL PROPERTY AND FOUR PER CENT LOCAL INCOME TAXES, AND MINUS THE ENACTED STATE INCOME TAX

Family	Percentage of Families	Cumulative Percentage of Families	Total Income	Percentage of Income	Cumulative Percentage of Income
A	12.68	12.68	$ 199,829,238	2.24	2.24
B	5.95	18.63	186,832,901	2.09	4.33
C	6.37	25.00	284,311,287	3.18	7.51
D	9.43	34.43	548,023,193	6.14	13.65
E	12.74	47.17	898,136,903	10.06	23.71
F	11.32	58.49	939,621,275	10.52	34.23
G	9.53	68.02	904,321,465	10.12	44.35
H	13.80	81.82	1,541,891,211	17.26	61.61
I	13.11	94.93	1,866,981,773	20.90	82.51
J	5.07	100.00	1,561,922,486	17.49	100.00

inequality from the income distribution without the city income tax.

A comparison of the Gini coefficients for all the different provisions analyzed in this chapter is shown in Table 26. The provisions are presented in logical groupings to facilitate meaningful comparisons.

Group I in the table shows the Gini coefficients for Michigan income without any taxes, with a federal income tax, and the federal income and state property tax. The resulting Gini coefficients give some empirical evidence to two important economic questions: (1) the progressive federal income tax rate structure does improve the after-tax distribution of income and (2) the property tax is regressive in its incidence. The comparison in Group II indicates that a degree of progressivity can be introduced into a tax structure even with a flat-rate tax, as a result of the use of personal exemptions. Groups III and IV reveal the impact of the enacted state income tax. The Gini coefficients in Group III show that the enacted state income tax with the property tax credits will reduce the area of inequality and Group IV demonstrates that with inclusion of the city income tax and the city income tax credit a further reduction in the area of inequality occurs. The results shown in Group V point out the importance of allowing a negative feature for the credits. An improvement in the realized progressivity of the tax structure occurs with such a provision. Finally,

TABLE 26

COMPARISON OF GINI COEFFICIENTS

GROUP I	Impact of Federal Income and Local Property Taxes	
	With income only	.3667
	With income minus federal income tax	.3467
	With income minus federal income and local property taxes	.3555
GROUP II	Impact of Equal-Yield without Credits State Income Tax	
	With income minus federal income and local property taxes	.3555
	With income minus federal income, local property and state income (1.9 per cent) taxes	.3525
GROUP III	Impact of Enacted State Income Tax without City Income Tax	
	With income minus federal income, local property and state income (1.9 per cent) taxes	.3525
	With income minus federal income, local property and the enacted state income taxes	.3516
GROUP IV	Impact of Enacted State Income Tax	
	With income minus federal income, local property and state income (1.9 per cent) taxes	.3525
	With income minus federal income, local property, one per cent local income and the enacted state income taxes	.3509
GROUP V	Impact of Negative Income Tax Feature for the Credits	
	With income minus federal income, local property and the enacted state income taxes	.3516
	With income minus federal income, local property and 2.7 per cent state income tax with a negative income tax feature for the credits	.3504
GROUP VI	Impact of Various City Income Tax Rates	
	With income minus federal income, local property and the enacted state income taxes	.3516
	With income minus federal income, local property, one per cent local income and the enacted state income taxes	.3509
	With income minus federal income, local property, two per cent local income and the enacted state income taxes	.3503
	With income minus federal income, local property, three per cent local income and the enacted state income taxes	.3496
	With income minus federal income, local property, four per cent local income and the enacted state income taxes	.3491

Group VI indicates the decrease in the after-tax area of inequality that results from different levels of the city income tax with the city income tax credit included.

The concluding section of this chapter deals with the question of the inter-regional distributional impact of the Michigan tax credits. The source of data for the analysis is the United States Census of Housing 1960, Metropolitan Housing[95] for the ten SMSA's in Michigan. The data used are income in 1959 of primary families and individuals and income of families and individuals in renter-occupied housing units.

The procedure used to analyze the inter-regional distributional impacts was as follows: The SMSA's were first ranked according to per capita income. This ranking is shown in Table 27 along with the populations and total personal income of the SMSA's. This ranking was done to indicate the lower income areas of the state. Income after federal income tax and property tax was then calculated for each of the ten SMSA's. The percentage that each SMSA is of the total was also calculated. For example, the income in Ann Arbor is 2.809 of the total income of all the SMSA's in the state. These calculations are shown in Table 28, Column (1). The enacted state income tax and the two tax credits were applied to the income in each of the SMSA's

[95] United States Census of Housing 1960, Metropolitan Housing, op. cit.

TABLE 27

MICHIGAN STANDARD METROPOLITAN STATISTICAL AREAS

SMSA	1959 Per Capita Income[a]	1960 SMSA Populations[b]		1959 Total Income[a]	
		Number	Percentage of Total	Millions of Dollars	Percentage of Total
Ann Arbor	$2,497	172,440	2.942	$ 441.0	3.108
Bay City	2,006	107,042	1.826	194.2	1.369
Detroit	2,530	3,762,360	64.190	9,452.3	66.613
Flint	2,331	416,239	7.102	981.0	6.913
Grand Rapids	2,249	461,906	7.881	1,045.9	7.371
Jackson	2,224	131,994	2.252	292.3	2.060
Kalamazoo	2,257	169,712	2.895	391.8	2.761
Lansing	2,180	298,949	5.100	651.8	4.593
Muskegon-Muskegon Heights	2,092	149,943	2.558	318.6	2.245
Saginaw	2,212	190,752	3.254	421.0	2.967
Total SMSA		5,861,337	100.000	14,189.9	100.000

[a]U.S. Department of Commerce, Office of Business Economics, unpublished data.

[b]1969 Economic Report of the Governor, Bureau of the Budget, Executive Office.

TABLE 28

1959 INCOME DISTRIBUTION IN MICHIGAN
STANDARD METROPOLITAN STATISTICAL AREAS

SMSA	Income Minus Federal Tax Minus Property Tax (1)		Income Minus Federal Tax Minus Property Tax Minus (State Income Tax 2.6% Minus Property Tax Credits) (2)		Income Minus Federal Tax Minus Property Tax Minus State Income Tax 1.9% (3)	
	Amount	Percentage of Total	Amount	Percentage of Total	Amount	Percentage of Total
Ann Arbor	$ 260,076,427	2.809	$ 256,538,054	2.801	$ 256,961,133	2.807
Bay City	136,202,270	1.471	134,986,481	1.474	134,833,650	1.473
Detroit	6,447,339,944	69.627	6,374,370,212	69.604	6,371,820,914	69.607
Flint	556,216,053	6.007	550,932,930	6.016	550,365,206	6.012
Grand Rapids	547,155,798	5.909	541,628,372	5.914	541,169,678	5.912
Jackson	184,405,316	1.991	182,532,977	1.993	182,419,444	1.993
Kalamazoo	248,965,030	2.689	246,380,702	2.690	246,227,518	2.690
Lansing	416,977,824	4.503	412,430,490	4.504	412,433,966	4.506
Muskegon-Muskegon Hts.	205,743,104	2.222	203,968,356	2.227	203,718,637	2.225
Saginaw	256,666,125	2.772	254,266,930	2.777	254,002,058	2.775
Total SMSA	$9,259,747,891	100.000	$9,158,035,504	100.000	$9,153,952,204	100.000

Source: United States Census of Housing, 1960, U.S. Department of Commerce, Bureau of the Census.

in Column (2) of Table 28.[96] Finally, a calculation of the income in each SMSA, based on the equal-yield revenue assumption of a 1.9 percentage point state income tax, was performed. These results are presented in Column (3) of Table 28.[97]

Examining the results shown in Table 28, the conclusion may be drawn that the inclusion of the credits in the tax package results in moderate inter-regional redistribution. Examining Columns (1) and (2), we see that the percentage of income of the eight lowest per capita income SMSA's increases when the income tax with tax credits is included. For example, Flint's percentage of income before the tax package is 6.007; following the enactment of the tax package it becomes 6.016. For the two highest per capita income SMSA's, Ann Arbor and Detroit, just the opposite occurs; their percentage of income falls. The Detroit percentage declines from 69.627 to 69.604. Table 28 also shows that for seven of the eight lowest per capita SMSA's (all but the Lansing SMSA), the percentage of income either increases or holds constant when the equal-yield state income tax of 1.9 per cent is applied to the enacted program.

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[96] The procedure used here was identical to the calculations made for the state as a whole. The enacted state income tax program was applied to each income class by homeowners and renters for each SMSA.

[97] Ibid.

The reader can verify this point by comparing Columns (2) and (3) in Table 28.

To summarize, the major findings of this chapter are: (1) there is some empirical proof of the regressive nature of the property tax; (2) inclusion of the sliding-scale property tax and city income tax credits, in the 1967 tax, effects moderate influence in redistributing interpersonal income in Michigan; (3) the inclusion of the sliding-scale credits also effects moderate influence in interregional redistributions of after-tax income in Michigan; and (4) performance of the current Michigan income tax law is somewhat disappointing when compared with what might be achieved under a law which allows a negative income tax provision. In terms of the tax equity which might be realized, the inclusion of a rebate, if the credit exceeds the taxpayer's before-credit liability, would be an improvement.

CHAPTER IX

CONCLUSION AND POLICY RECOMMENDATIONS

The preceding chapters have dealt with a specific use of tax credits--the crediting of a tax levied at a lower level of government against a similar or dissimilar tax levied at a higher level of government (a locally-levied property or city income tax credited against a state income tax). Chapter II analyzed the variety of techniques for solving intergovernmental fiscal problems. Chapters III and IV presented the history of the use of such credits at both the federal and state levels. The federal experience brought out two important points. First, tax credits can be a powerful force in encouraging a lower level of government to impose a certain type of legislation. Second, a tax credit can be inflexible, resulting in the need for continuing efforts to assure adjustments in the initial tax program. The state experience in Wisconsin revealed that a property tax credit can reduce the degree of regressivity of the residential property tax and can also influence income distribution towards greater equality both interpersonally and interjurisdictionally.

The succeeding chapters examined the Michigan property tax and city income tax credits with respect to revenue implications, effects on income distribution, and the impact on local governments. It was found that the enactment of the sliding-scale tax credits would result in an increase in the realized progressivity of the tax structure, as indicated by the shift in the after-tax Lorenz curve closer to the line of equality. The Gini coefficient for the income distribution with credits enacted was .3516. This can be compared with the before-enacted coefficient of .3555. Under the assumptions used, the enacted credits would result in a 1.1 per cent reduction in the after-tax area of inequality. The results and comparisons presented in this study demonstrate that it is possible to introduce a moderate element of progressivity into a state's tax structure, even with a prohibition of a graduated income tax, through the use of a sliding-scale tax credit approach. It would be easy to demonstrate that the sliding-scale tax credit approach would also reduce the after-tax area of inequality if they were introduced with a graduated state income tax. Along with increases in the realized progressivity of the tax structure, the sliding-scale credits also produce moderate inter-regional redistributive effects.

Of more importance than the improvements in the distribution of income made by the credits is their impact

on local governmental finance. Since the hypothesis in this study is that the local income tax, as levied in Michigan, is an equitable and dependable revenue source for financing local government, the relevant question is whether or not the Michigan tax credits will encourage the cities to adopt an income tax. The answer is in the affirmative. As long as the change in locally-levied taxes results in an income tax liability which is lower than the property tax liability for an individual taxpayer, that taxpayer should prefer a city income tax over an equivalent increase in the property tax rate. As was demonstrated in Chapter VII, the majority of taxpayers should share this preference. Therefore, a municipal government should find it easier to enact an income tax than to increase the property tax rate.

The principal alternative to the local income tax is the current mainstay of local government, the property tax. Attempts to increase this levy have met considerable opposition recently from individual taxpayers. Two other deficiencies of the local property tax are also apparent: (1) property tax liabilities bear scant relation to the demand for local government services, and (2) an equitable application of the property tax is difficult. It can be argued that a citizen's tax liability should reflect his demand for local services. However, there is little

relationship between one's demand for services and his property holdings. As Netzer states,". . . most local public services financed from property tax revenues are designed to yield their benefits to residents primarily in some other capacity than as users of real property . . ."[98]

Of even more significance is the potential allocative effects of the credits on state and local governmental finance. As was demonstrated in Chapter VII, the credits should have important allocative effects as the local income tax is expanded. The credits should play an important role in shifting resources to local units while at the same time reducing the increase in state and local tax liability that would have occurred without the credits.

Even though the newly enacted credits in Michigan will have a favorable impact on the distribution of income and will encourage Michigan municipalities to incorporate an income tax into their revenue structures, certain difficulties will arise. Chapter VI explored the uncertainty that will result for the Michigan state government with respect to fiscal planning. More specifically, the Michigan state government will find it difficult to estimate accurately the net yield of the income taxes[99] because this yield will

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[98]Dick Netzer, Economics of the Property Tax (Washington: The Brookings Institution, 1966), p. 214.

[99]Net yield is defined as collections after allowance for the credits.

be affected by action at the local levels of government on increasing the property tax yields or enacting a city income tax. The difficulty arises from the fact that part of the increased burden stemming from the increase in the property tax or city income tax will be shifted forward (or upward) to the state government (producing uncertainly).

Another related problem concerning the tax credits was also presented in Chapter VI. This problem is concerned with administrative costs. The Revenue Division of the Department of Treasury estimates that approximately one-half of the administrative costs of the state income taxes results from the two credits.[100] An additional administrative concern deals specifically with taxpayer convenience. For taxpayers in the state who are renters, a claim for the property tax credit connot be made without certification from the landlord which shows the amount of gross rent paid. The law further states that the landlord cannot claim a tax credit on the same property. However, there is no provision in the law requiring the landlord to furnish a certification showing the amount of gross rent paid. Thus, if the landlord does not wish to grant the certification to the tenant, the landlord can claim the credit for himself. One additional point with respect to taxpayer

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[100]Interview with Clarence Lock, Commissioner of Revenue, Shate of Michigan, April 24, 1969.

convenience is that the average taxpayer will experience some difficulty in calculating his allowable credit because of the sliding-scale provisions.

Policy Recommendations

Philosophers have observed that life is richer than logic, and, by obvious parallel, the number of devices to aid local units of government presented in this study defy simple and categorical appraisal. Intergovernmental financial cooperation can be developed by several devices, and these devices should be appraised in the light of the objectives which the governing body has in mind. Tax credits, for instance, can be utilized to advance tax coordination, to provide financial resources to local governments, and to increase the realized progressivity of a tax structure. If equalization is to be emphasized, the more appropriate device is the unconditional grant; if stimulus to specific governmental functions, the conditional grant. Since state objectives in assisting local governments are manifold, there is no logical inconsistency in the use of several devices.

Sliding-scale credits against the state income tax for both city income taxes paid and property taxes paid are a useful addition to the Michigan tax structure. The sliding-scale credit approach can be used to increase the realized progressivity of a tax structure and also to

encourage municipalities to enact a city income tax. The inclusion of renters in the property tax credit provision is also a desirable provision. Any subsidy in the form of property tax relief should avoid discrimination between owners and renters. Such discrimination cannot be justified in terms of the relative need of homeowners versus renters. Neither is such discrimination consistent with the economist's expectation that rents paid by tenants necessarily reflect the landlord's property tax liability. The credits also can exert an important influence in correcting the basic imbalance between the fiscal resources at the state and local levels of government essentially caused by the reliance of most local governments on the property tax for revenue.

The extension of the Michigan sliding-scale property tax and city income tax credits is, therefore, recommended for other states. This recommendation is made with the following suggested improvements. First, certification by the tenant should be sufficient proof of the gross rend paid. This would eliminate the problem of having the tenant obtain certification of the amount of gross rent paid from the landlord. Secondly, and of greater importance, is that the tax credits should be allowed in excess of the income tax liability of the taxpayer. The allowance of a rebate (negative feature),

if the credits exceed the tax liability of the taxpayer, has merit on two counts. First, it would improve horizontal equity, and, secondly, it would further increase the progressivity of the tax structure.

Two important goals of state and local finance have been suggested throughout this study and deserve reiteration: (1) Integration of state and local tax systems is timely and desirable. This need grows out of the increasingly dominant role of the state government in state-local fiscal matters, the growing economic unity and interdependence of state and local governments, and the increasing revenue needs of the local units of government. (2) Relief of the low-income taxpayers is also needed. This need arises out of the trend of state-local governments to increase their dependence on regressive taxes along with the increasing burden of social security contributions.

The sliding-scale credit approach now used in the Michigan state income tax structure for local property and city income taxes appears to be a feasible method of attaining the two goals mentioned above. It would be unwise to minimize the difficulties and shortcomings of the Michigan tax credits, but the potential they offer for integrating and equalizing the total state and local tax system is impressive.

APPENDIX

APPENDIX

THE LORENZ CURVE AND THE GINI COEFFICIENT: DERIVATION AND USE IN THIS STUDY

The Lorenz Curve

The Lorenz curve is one of the various ways in which a quantitative distribution can be depicted graphically. Named for its innovator,[101] the curve has become a standard tool in economic analysis for showing a given distribution (usually, but not necessarily, income or wealth) and its departure from a perfectly equal distribution. Because it is a well known and a widely understood measure, the Lorenz curve is one of the basic analytical tools used in this study.

The Lorenz graph is derived by plotting the cumulative fractions of aggregate income against the cumulative proportion of units receiving the income, with the receiving units ranked in ascending order by income class. For illustrative purposes, we will construct an economy consisting

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[101] M. O. Lorenz, "Methods of Measuring the Concentration of Wealth," Quarterly Publications of the American Statistical Association, New Series, IX, No. 70 (June, 1905), pp. 209-19.

of five families and plot the corresponding Lorenz diagram. This distribution is shown in Table A-1. The Lorenz curve is based on this hypothetical income distribution, and is drawn by plotting Column (6) (cumulative percentage of income) against Column (3) (cumulative percentage of families). See Figure A-1.

If the distribution within this hypothetical economy is equal, that is, all units have the same income--the Lorenz curve will coincide with the 45 degree line labeled "line of equality." If the distribution is unequal--that is, only one unit has an income and it receives the total amount--the Lorenz curve will coincide with the lower and right sides of the box shown in Figure A-1. In practice, the income distribution will fall somewhere between these two extremes and the Lorenz curve will bend downward. The greater the degree of inequality present, the farther the curve will depart from the line of equality. As the number of points increases, the curve will become smoother.

The Effect of Taxes on the Distribution of Income

To continue with the illustration, let us now consider the figures in Table A-1 as income before tax and examine the effects of a graduated income tax and a proportional income tax.

TABLE A-1

HYPOTHETICAL DISTRIBUTION OF INCOME IN A SOCIETY
COMPOSED OF FIVE FAMILIES

Family (1)	Percentage of Families (2)	Cumulative Percentage of Families (3)	Total Income (4)	Percentage of Income (5)	Cumulative Percentage of Income (6)
A	20.0	20.0	$ 5,000	10.0	10.0
B	20.0	40.0	8,000	16.0	26.0
C	20.0	60.0	10,000	20.0	46.0
D	20.0	80.0	12,000	24.0	70.0
E	20.0	100.0	15,000	30.0	100.0
	100.0		$50,000	100.0	

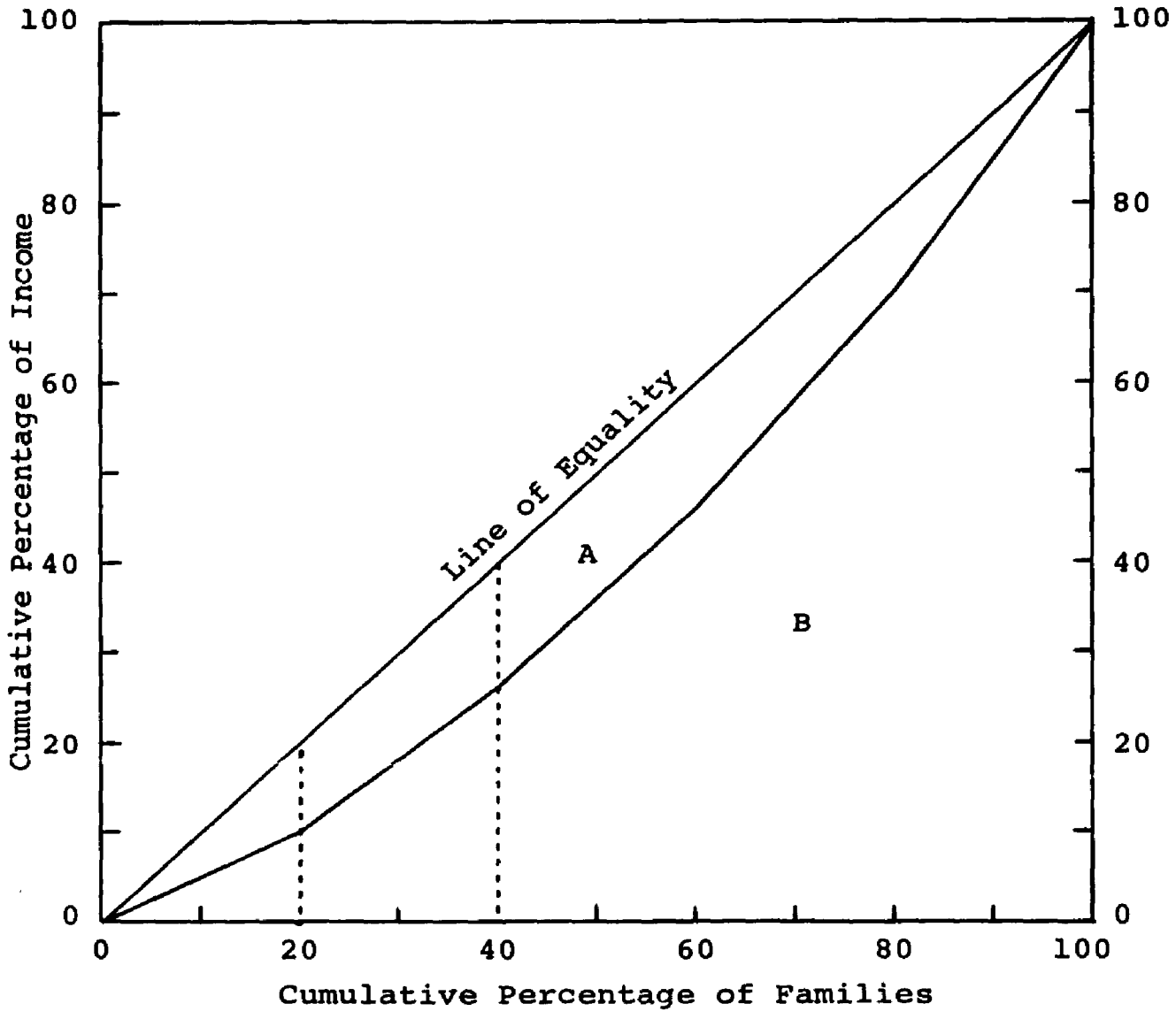

Figure A-1. Lorenz curve for hypothetical economy.

Graduated Income Tax

We will use a simple two-step rate schedule which exempts the first $5,000 of income and which taxes all income above $5,000 at the rate of 50 per cent.[102] Under this scheme, Family A is exempt from tax, having an after-tax income of $5,000. Family B is taxed $1,500 (50 per cent of the $3,000 income in excess of $5,000), having an after-tax income of $6,500. The figures for the remaining families are shown in part A of Table A-2.

Comparing Column 7 of Table A-2 with the comparable values in Table A-1, we can see that the Lorenz curve plotted from the data in Table A-2 will be closer to the line of equality than the before-tax Lorenz curve derived from Table A-1. This will always be true in the case of a progressive tax. These data have not been plotted together because the two curves are quite close together and difficult to distinguish.

Proportional Income Tax

To illustrate the effect of a proportional income tax, we have used a rate of 25 per cent of total income so as to derive the same total revenue as under the progressive

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[102] In addition to its simplicity for expository purposes, this schedule illustrates the progressive impact of personal exemptions. Even though there is only a single "proportional" rate for incomes above $5,000, the effective rate of the tax rises from zero per cent for Family A, to 18.8 per cent for Family B, to 25 per cent for Family C . . . , to 33.3 per cent for Family E.

TABLE A-2

DERIVATION OF LORENZ CURVE DATA FOR A HYPOTHETICAL SOCIETY UNDER VARIOUS TAX SYSTEM ASSUMPTIONS

Family (1)	Cumulative Percentage of Families (2)	Total Income (3)	Tax Liability (4)	After-tax Income (5)	Percentage of After-tax Income (6)	Cumulative Percentage After-tax Income (7)
		A. Graduated rate tax on total income				
A	20.0	$ 5,000	$ 0	$ 5,000	13.3	13.3
B	40.0	8,000	1,500	6,500	17.4	30.7
C	60.0	10,000	2,500	7,500	20.0	50.7
D	80.0	12,000	3,500	8,500	22.6	73.3
E	100.0	15,000	5,000	10,000	26.7	100.0
		$50,000	$12,500	$37,500	100.0	
		B. Proportional tax rate on total income				
A	20.0	$ 5,000	$ 1,250	$ 3,750	10.0	10.0
B	40.0	8,000	2,000	6,000	16.0	26.0
C	60.0	10,000	2,500	7,500	20.0	46.0
D	80.0	12,000	3,000	9,000	24.0	70.0
E	100.0	15,000	3,750	11,250	30.0	100.0
		$50,000	$12,500	$37,500	100.0	
		C. Graduated rate tax on taxable income (without reranking)				
A	20.0	$ 5,000	$ 0	$ 5,000	11.9	11.9
B	40.0	8,000	0	8,000	19.0	30.9
C	60.0	10,000	2,500	7,500	17.9	48.8
D	80.0	12,000	500	11,500	27.4	76.2
E	100.0	15,000	5,000	10,000	23.8	100.0
		$50,000	$ 8,000	$42,000	100.0	
		D. Graduated rate tax on taxable income (with reranking)				
A	20.0	$ 5,000	$ 0	$ 5,000	11.9	11.9
C	40.0	10,000	2,500	7,500	17.9	29.8
B	60.0	8,000	0	8,000	19.0	48.8
E	80.0	15,000	5,000	10,000	23.8	72.6
D	100.0	12,000	500	11,500	27.4	100.0
		$50,000	$ 8,000	$42,000	100.0	

tax. In this case there is no exemption of income and the same tax rate is applied to the total income of the family. For example, Family A is no longer tax exempt; it is subject to a tax of $1,250 (25 per cent of $5,000), having an after-tax income amounting to $3,750. The figures for the other families are shown in part B of Table A-2.

If we now compare the distribution of after-tax income in Table A-2 with that shown in Table A-1, we find that they are exactly alike. The after-tax Lorenz curve will coincide with the before-tax curve. This will always be true in the case of a proportional tax applied to total income.

The case of a regressive rate structure is not illustrated here, but the reader can be assured that such rates, when applied to total income, will always move the after-tax Lorenz curve farther from the line of equality.

Graduated Income Tax on Taxable Income

If a graduated-rate structure is applied to taxable income (rather than to total income), the results in terms of the Lorenz curve are not so clear-cut. To illustrate, we will retain the previous graduated rate structure but assume that (1) Family B's $8,000 income is entirely from tax-exempt interest; and (2) Family D's $12,000 income is from long-term capital gains, only one-half of which is included in the tax base.

The tax liability and after-tax income are calculated using the same method as for the graduated tax on total income, only this time the rates are applied to taxable income. Results are shown in part C of Table A-2. If we compare Column (7) of Table A-2 with Table A-1 data, we find that the after-tax Lorenz curve will still indicate tax progressivity with a shift toward the line of equality. But, looking at Column (5), we see that the families are no longer ranked in ascending order by after-tax income. The correct reranking is shown in part D of Table A-2.

For certain purposes, it might be more interesting to retain the before-tax ranking in order to determine what proportion of after-tax income accrues to the lowest "X" per cent of the before-tax units. For analytical purposes, however, it is correct to rerank the units as is done in part D of Table A-2.[103]

The Gini Coefficient

The Gini coefficient is a numerical index used in conjunction with the Lorenz curve to indicate the degree of inequality present. It is defined as the proportion of the total triangular area under the line of equality that lies

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[103]The reranking is necessary to remain analytically consistent with the original approach and deviation presented by M. O. Lorenz. See Lorenz, op. cit., pp. 209-17 for a complete discussion of this point.

between the Lorenz curve and the diagonal. In Figure A-1, it is the ratio of Area A to Area A + B. If the distribution is equal, A is equal to zero and the Gini coefficient is equal to zero--indicating no inequality. If the distribution is unequal, A is equal to A + B and the Gini coefficient is equal to 1--indicating perfect inequality.

The Gini coefficients in this study were estimated using the trapezoid approximation based on income brackets.[104] In addition to its computational ease, the trapezoid approximation allows us to find any points where two Lorenz curves cross. This method is valuable, since the crossing of Lorenz curves might not be discernible from a diagram and would ordinarily not be found in examining the overall Gini coefficient.

Measuring the Change in the Area of Inequality

Another measure which can be derived from the Lorenz curve and the Gini coefficient is often found useful for

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[104]As indicated by the broken vertical lines in Figure A-1, any vertical slice on the diagram is approximately trapezoidal. The slice indicated has a base of 20, a left side height of 20, and a right side height of 40; its total area is then 20 x 1/2 (20 + 40) = 600. The area below the Lorenz curve is equal to 20 x 1/2 (26 + 10) = 360. See Table A-1. The area between the Lorenz curve and the diagonal is then equal to 240 (600 less 360). These slices are summed to compute the overall Gini coefficient.

describing changes in the distribution of income. This measure, which will be designated as "P," is the percentage change in the area of inequality.

Examining Figure A-2, it can be seen that the total before-tax area of inequality is given by the area (A + B) between the solid Lorenz curve and the diagonal, while the total after-tax area of inequality is given by the area A between the broken-line Lorenz curve and the diagonal. In this illustration the tax reduces the area of inequality by the amount of area B, and P is equal to the ratio $\frac{(B)}{(A + B)}$.

This ratio can be directly derived from the Gini coefficients of the Lorenz curve. If the before-tax Gini coefficient is equal to G, and the after-tax Gini coefficient equals G^1: $P = \frac{(G - G^1)}{(G)}$.[105]

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[105]See Benjamin A. Okner, Income Distribution and the Federal Income Tax (Ann Arbor: Institute of Public Administration, 1966) for a discussion of this formula. The formula for P is derived as follows:

$$P = \frac{B}{A + B} = \frac{G - G^1}{G}$$

$$G = \frac{A + B}{A + B + C}$$

$$G^1 = \frac{A}{A + B + C}$$

$$\frac{G - G^1}{G} = \frac{\frac{A + B}{A + B + C} - \frac{A}{A + B + C}}{\frac{A + B}{A + B + C}} = \frac{B}{A + B}$$

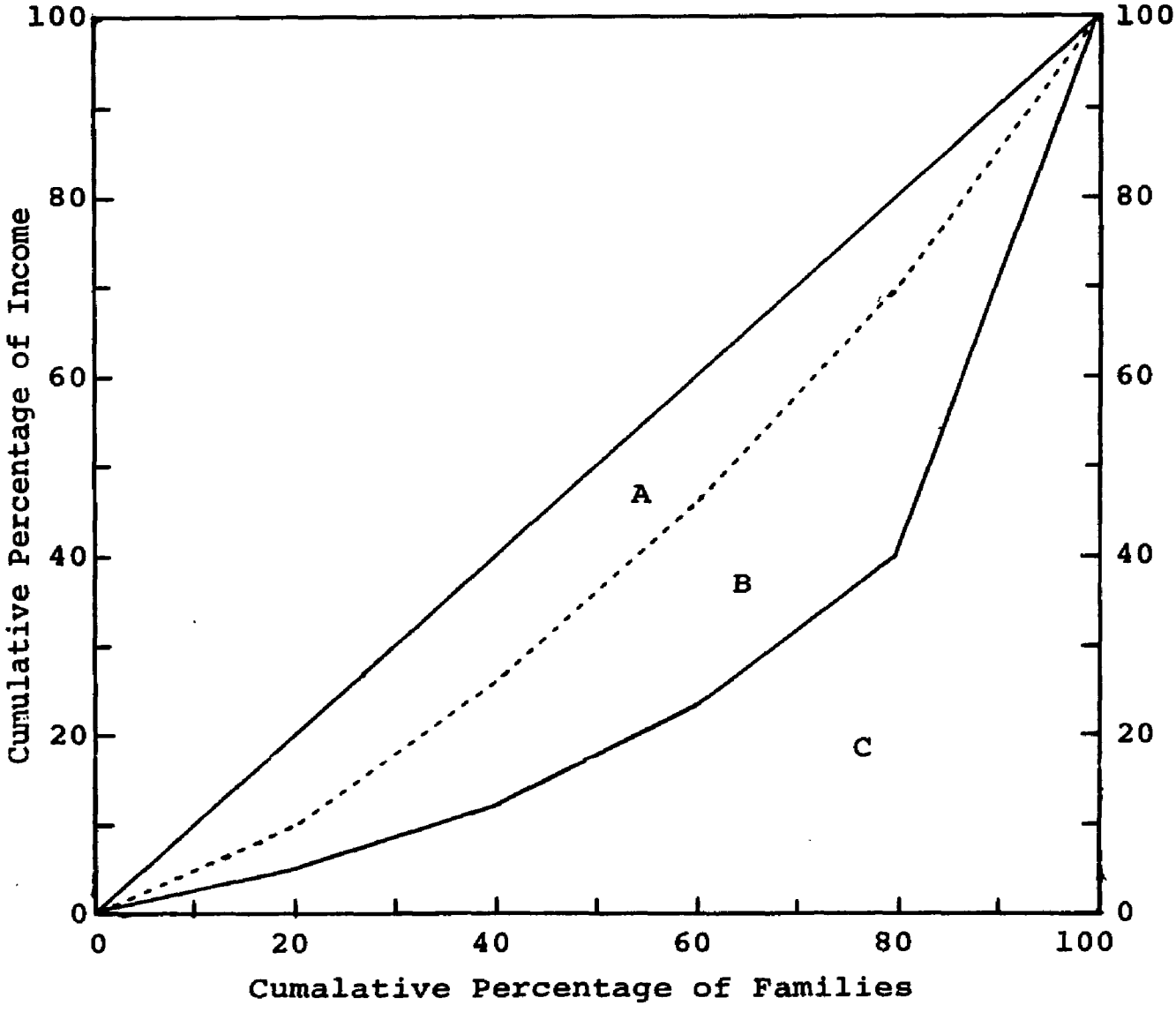

Figure A-2. Illustrative example.

If the after-tax Lorenz curve is farther from the line of equality than the before-tax curve, G^1 will exceed the value of G and the ratio will become negative. The value of P derived will then correctly give the percentage increase in the area of inequality.

The expression can also be used for any vertical slice of the total diagram. In this instance, G and G^1 should be interpreted as the partial Gini coefficients which apply to the particular segment.

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