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# FEDERAL AID TO EDUCATION: SOME ECONOMIC ASPECTS OF MAJOR LEGISLATIVE PROPOSALS FOR SUPPORT OF PRIMARY AND SECONDARY SCHOOLS IN THE UNITED STATES, 1946-1958

Ray O. Werner

*University of Nebraska-Lincoln*

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FEDERAL AID TO EDUCATION: SOME ECONOMIC ASPECTS OF MAJOR  
LEGISLATIVE PROPOSALS FOR SUPPORT OF PRIMARY AND SECONDARY  
SCHOOLS IN THE UNITED STATES, 1946-1958

by

Ray O. Werner

A THESIS

Presented to the Faculty of  
The Graduate College in the University of Nebraska  
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Under the Supervision of Edward B. Schmidt

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September, 1959

## TITLE

Federal Aid to Education: Some Economic Aspects of Major Legislative  
Proposals for Support of Primary and Secondary Schools in the  
United States, 1946-1958

BY

Ray O. Werner

APPROVED

DATE

<u>Edward B. Schmidt</u>	<u>December 17, 1959</u>
<u>Charles J. Kennedy</u>	<u>December 17, 1959</u>
<u>Lane W. Lancaster</u>	<u>December 17, 1959</u>
<u>Alan P. Bates</u>	<u>December 17, 1959</u>
<u>R. M. Bourne</u>	<u>December 17, 1959</u>
<u>A. Stuart Hall</u>	<u>December 17, 1959</u>

SUPERVISORY COMMITTEE

GRADUATE COLLEGE

UNIVERSITY OF NEBRASKA

## PREFACE

Economists have sometimes been accused of rushing into print with analyses of subjects about which they know too little. Therefore, it was with a great deal of amazement that prior to undertaking this limited study, a singular reticence of economists in undertaking published analysis of the economic problems of educational finance was discovered. Neither a lack of professional interest in education nor a lack of a valid analytic viewpoint seemed a logically adequate explanation of the failure of economists generally to concern themselves with educational finance.

The genesis of this study lies in the too-general failure of more able economists to bring their stock of tools to bear on the questions of political economy arising from various proposals to finance education. Throughout an attempt was made to avoid completely those topics which in published works of both professional economists and professional educators seem to have been discussed adequately. The extent and nature of the need for financial support for education, for example, is consciously excluded from the analysis undertaken here. However, this is, in no way intended to deprecate the importance of this issue. Moreover the importance of a second area which research has already illuminated, that of general theoretical analysis is also recognized. Some of this material has been utilized but these topics have been foreclosed as areas of analysis.



The hope in undertaking this study was to make a comparative evaluation of the myriad of federal legislative proposals introduced to provide some financial support for education. However, education is a tremendously broad area of study; furthermore, the span of time through which it has presented significant public issues is great. The need to render this study manageable, and at the same time to concentrate on issues of current importance and interest, led, therefore, to the exclusion of other topics from consideration. Consequently, the federal legislative proposals examined are only those which would have provided federal financial support for primary and secondary education in the United States. The vitally important subject of federal aid for higher education lies dormant, awaiting study by someone else. Nor have the proposals to create new educational programs (such as those designed to facilitate education of gifted or mentally retarded children) in primary and secondary schools, nor plans to aid education by underwriting loans to school districts or state school agencies, nor the vitally important proposals to aid adult and vocational education been considered. Also omitted from this study is consideration of programs, whether operating or proposed, to provide aid for schools in the so-called federally impacted areas. In short, the federal aid proposals evaluated in this study are limited to those which: (1) involved direct financial support, (2) embraced all primary and secondary schools in all of the states, and (3) did not provide for earmarking of funds.

Federal aid proposals examined here are those which were introduced since the end of World War II. The impact of that war on

education and specifically on the problem of financing education is well known. The problem of financing education in the foreseeable future, too, seems compelling enough to justify limiting this study to the postwar years.

The methods of analysis and the sources of statistical information used are not without limitation. While the limitations are indicated throughout this study, a prefatory statement seems advisable. The results of this study are as reliable as the conscientious use of methods and sources available to me enables them to be. However, it is hoped that subsequent refinement specifically in theories of tax shifting and incidence, in expenditure theory, and in factual information about state distributions of income, expenditures, and other variables, will enable other interested persons to improve both on my techniques of analysis and on the preciseness of my results.

The bibliography, despite its length, is not exhaustive but selective. Many of the entries may appear to be peripheral to the major concern of this study; if so, this reflects the relative lack of published material bearing directly on the specific concern of this study.

My long pursuit of the academic Holy Grail has received impetus and encouragement from many colleagues and friends. To my colleagues in The Colorado College Department of Economics—Kenneth Curran, Paul Jones, Paul Bechtol, Alan Johnson, and Fred Nicklason—who assumed my teaching load for a semester so my income might continue while I completed this study, I owe a special debt. To the administration of

The Colorado College who gave unusual support and approval to this arrangement, I am also indebted. Professorial encouragement and guidance beyond mere line of duty was forthcoming particularly from Edward B. Schmidt and Richard M. Bourne of the University of Nebraska. Finally, I cannot avoid--nor would I wish to do so--giving a special recognition to the completely unrepayable debt to those who labored most to bring this work to fruition. This is the debt to my parents, to my wife who typed the innumerable drafts of this study, and to my sons who patiently and quietly wondered when "Daddy's book" would be finished. I am certain that this work, as a partial payment on the debts incurred, is completely inadequate.

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## CHAPTER I

### FEDERALISM AND THE FINANCING OF EDUCATION:

#### A THEORETICAL FRAMEWORK

A major element in the financing of education in the United States is the federal system within which that financing must occur. A federal polity embracing two independent taxing and spending jurisdictions faces problems unique compared with those faced by a unitary state. Once a unitary polity achieves consensus as to the equity principles that are to govern its fiscal behavior, it can then proceed to a systematic implementation of those principles. Specific revenue and expenditure programs, insofar as administrative inefficiencies do not operate to prevent it, can be coordinated to achieve equity. But as Professor James Buchanan has noted, the federal state's problem is different.

Observed Buchanan:

A distinct group of problems immanently arise when a single political unit possessing financial authority in its own right contains within its geographical limits smaller political units also possessing financial authority. These problems become especially important in a federal polity since the financial authority of the subordinate units is constitutionally independent of that of the central government. In a federalism, two constitutionally independent fiscal systems operate upon the fiscal resources of individual citizens.

The fiscal system of each unit of government is limited in its operation by the geographical boundaries of that unit; it can withdraw resources for the financing of public services only from those available within this area. If the subordinate units are required independently to finance certain traditionally assigned functions, fiscal inequalities among these units will be present unless the fiscal capacities are equivalent. There will be

differences in the number and/or the standard of the public services performed for and/or the burden of taxes levied upon the owners of economic resources within the separate units. The nature and extent of these differences, and the difficulties involved in their elimination, constitute the elements of the over-all fiscal problem of the federal polity.<sup>1</sup>

The crucial question which this problem of fiscal federalism seems to raise, then, is what fiscal theory ought to govern the actions of the federal government.<sup>2</sup>

#### THE FISCAL THEORY OF A FEDERAL STATE

Operations of the federal polity in a federal state, it would seem, should be directed toward the achievement of fiscal fairness.<sup>3</sup> Yet agreement on this fact is of little real significance. The crucial issue on which general agreement does not exist is what constitutes the specific content of fiscal fairness toward which policies of public finance ought to be directed. The content of such concepts as "equity"

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<sup>1</sup>"Federalism and Fiscal Equity," American Economic Review, XL (1950), pp. 583-84.

<sup>2</sup>The proper fiscal actions of the state governments are also of great importance. However, the concern of this study with federal programs to aid education serves to eliminate state programs from direct consideration.

<sup>3</sup>Four of the foremost analysts who have examined the fiscal theory of federalism all agree on this point. See James M. Buchanan, "Federalism and Fiscal Equity," pp. 586-91; James M. Buchanan, "Federal Grants and Resource Allocation," Journal of Political Economy, LX (1952), pp. 208-17; A. D. Scott, "The Evaluation of Federal Grants," Economica, n. s. XIX (1952), pp. 392-93; A. D. Scott, "Federal Grants and Resource Allocation," Journal of Political Economy, LX (1952), pp. 534-38; R. N. Bhargava, "The Theory of Federal Finance," Economic Journal, LXIII (1953), p. 86; Bhalchandra P. Adarkar, The Principles and Problems of Federal Finance (London, P. S. King and Son, 1953), pp. 195-96.

and "fairness" does not seem likely to vanish from the category of moot topics. As Roy Blough has observed:

The measurement of the effects of a tax change on the distribution of the tax load presents an essentially scientific problem, but one of a very difficult character. The question of what is fair, on the other hand, is not something that can be determined scientifically, since every man's conception of fairness is to some extent unique. Yet the problem need not be examined in purely subjective terms. There is such a thing as a public conception of fairness made up of elements that can be more or less clearly delineated.<sup>4</sup>

Blough also indicates another major facet of the problem of fiscal fairness. Generally, the concept of fairness is the obverse of unfairness. In determining the fairness of specific fiscal measures, judgment is rendered on the basis of whether or not specific elements of unfairness are increased or diminished.<sup>5</sup> Three kinds of unfairness are suggested by Blough. Unequal taxation of persons identically or similarly situated represents inequity; comparative taxation believed to be too burdensome in relation to persons dissimilarly situated represents injustice; changes in tax arrangements reasonably relied upon to continue unchanged represents an upset of expectations.<sup>6</sup>

Of these three types of unfairness the most general agreement can probably be secured on the nature of that narrowest of the three kinds--tax inequity. Tax fairness requiring dissimilar fiscal contributions from dissimilarly situated persons raises the somewhat explosive

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<sup>4</sup>The Federal Taxing Process (New York, Prentice-Hall, 1952), p. 383.

<sup>5</sup>Ibid., pp. 385-86.

<sup>6</sup>Ibid., p. 386.

question as to the principle upon which the net fiscal burden should be allocated. Changes in expectations as an element of fairness raises the equally explosive questions, first, of whether and to what extent expectations should be considered in public policy formation and second, of the extent and method of balancing expectations of stable relationships with the attainment of greater tax justice.<sup>7</sup> But the proposition that fiscal equity can be attained most nearly by treating persons in like positions in a like manner probably calls forth most general agreement.

Again, following Blough's analysis further, fiscal equity is divided into three parts: equity in assessment and collection, equity in consistence in application, and equity in the "...accepted theory of tax justice."<sup>8</sup>

On the assumption, then, that the goal of fiscal activity should be directed toward the attainment of equity, the nature of the fiscal activities of the federal polity can be deduced. Both state and federal governments deal not with abstract institutions but with human beings. The fact that human beings make fiscal contributions to several political jurisdictions does not conceal the obvious and total impact of combined governmental actions upon the individual. Therefore, it would seem that equity could occur only if the total government treatment of persons similarly situated is equal.

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<sup>7</sup>Blough discusses each of these topics at length. *Ibid.*, pp. 396-407.

<sup>8</sup>*Ibid.*, p. 388. Blough notes correctly that the third of these types of equity represents a merging of elements of fairness, equity and justice.

If, then, the goal of governmental activity should be oriented toward the attainment of fiscal equity, the question of the specific role of the federal government in such attainment arises. State government finance, it would seem, should be so conducted that the fiscal activities are made consonant with accepted standards of equity. Yet in a federal system such as that of the United States, economic and political heterogeneity are pervasive attributes of the states. Economic resources show wide variation; political structures and operations are also widely dissimilar.<sup>9</sup> Thus, a state may pursue a fiscal policy as assiduously as its neighbor and yet the impact of the state's policy on its citizens may vary from the impact of another state's policy on its citizens. The federal government, however, does not encounter a limitation arising from interstate diversity of as great significance as the limitation imposed upon each state by its limited access to economic resources. A given state cannot reach beyond the political boundary that limits its jurisdiction to tap resources of a richer state but the federal government has access to economic resources no matter where the arbitrary state boundaries may have been

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<sup>9</sup>Marshalling of extensive evidence as to such variation might be undertaken but seemingly this heterogeneity is accepted with little dissent. Some evidence of the extent of economic dissimilarity can be found in two articles by Selma J. Mushkin, "Federal Grants and Federal Expenditures," National Tax Journal, X (1957), pp. 193-213 and "Distribution of Federal Taxes Among States," National Tax Journal, IX (1956), pp. 148-65. Also revealing are the statements of Seymour E. Harris and the McGraw-Hill Department of Economics before a Subcommittee on Low-Income Families of the Joint Committee on the Economic Report, Low-Income Families, Hearings, 84th Cong., 1st Sess. (Washington, 1955), pp. 652-70. Political heterogeneity can be noted in the varying state attitudes toward racial problems, or in the varying degrees of vitality of the two-party system.



drawn. Before extending the analysis, however, it is of some importance to know the goals toward which federal fiscal policies might be directed. Without engaging in an exhaustive review of the literature of the distribution of tax burdens,<sup>10</sup> it would seem to be possible to postulate the general public acceptance of the concept of progressive taxation. The case for progression may indeed be, as Blum and Kalven have characterized it, "...stubborn but uneasy...."<sup>11</sup> But their statement of the general acceptance of progression seems equally accurate. They declare:

Progressive taxation is now regarded as one of the central ideas of modern democratic capitalism and is widely accepted as a secure policy commitment which does not require serious examination....<sup>12</sup>

It is not necessary to inquire whether or not the federal pattern of progression is the most defensible one. If progression is considered to be equitable and if the equity goal of equal treatment of equals is to be realized, the federal government's fiscal activities should be directed toward realizing that goal in each state. The independent fiscal activities of the several states, co-equals of the federal

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<sup>10</sup>Two sources might be cited as valuable review. Hugh Dalton, Principles of Public Finance, (10th ed., rev., London, George Routledge and Sons, 1923), pp. 90-95 and Walter Blum and Harry Kalven, Jr., The Uneasy Case for Progressive Taxation, (Chicago, U. of Chicago P., 1953), pp. 39-70.

<sup>11</sup>Blum and Kalven, p. 103.

<sup>12</sup>Ibid., p. 1. Professor Groves has recently defended progressive taxation on the grounds of economic, political, and social effects of progression. This pragmatic defense is closely related to the "policy commitment" to the theory. Harold M. Groves, "Toward a Social Theory of Progressive Taxation," National Tax Journal, IX (1956), pp. 27-34.

government as sovereign bodies but, among themselves, unequal in political and social attributes, are not sufficient to attain equity among persons on an interstate basis. The federal government, therefore, would seem to be able to aid in attaining greater interstate equity by complementing state activities. Adarkar, following a similar logic, has summarized the general sphere of federal activity thus:

...The states may be regarded as self-sufficient and separate organizations, each within its own borders carrying out real transfers and thus maximising social benefits. The position that the federal government would occupy in the scheme is that of filling in the gaps of unevenness as between one state and another. The general benefits of certain federal activities... may be conceived as being shared by all the states and their peoples alike....both in the field of taxation and in that of expenditures, a federal government can legitimately discriminate between the various states without violating formal or legal uniformity. The tax system may be so devised as to fall more heavily on the richer states than on the poorer ones....it is easier to tap the richer sections or states, if recourse is had to progressive income taxation, than if the necessarily regressive form of indirect taxation (like customs or excise) alone is chosen as the mainstay of the federal tax system. On the other hand, the agency of public expenditure may be so utilized by the federal government as to benefit the poorer states more than others. Special subsidies and subventions may be granted to them so as to encourage and enable them to carry out projects either of the welfare or developmental variety. Of course, this kind of subsidisation must be made subject to supervision and some practical guiding principles must be observed in order that it does not result in either wastefulness or financial lethargy among the recipient states. The richer states, needless to say, will grumble, as they always have done in most federations, about the disparity between what they contribute to the common purse and what they receive as a return therefrom. But clearly in federal finance it is not possible to conceive of such a quid pro quo principle; it is contrary to the very purpose of federalism and if carried to its logical end, is bound to lead to disruption of the federal bond.<sup>13</sup>

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<sup>13</sup>Adarkar, pp. 195-96.

Adarkar's argument, it should be noted, joins the functions of revenue raising and expenditure in a logical way. Not only do taxes impinge upon separate groups differently but expenditures probably fall upon the different groups in quite different ways. Federal finance, therefore, can be directed toward attaining a more equitable fiscal burden among the citizens of the federal polity regardless of the state which exercises jurisdiction over them. But a federal equity concept that failed to recognize the divergent positions of citizens arising solely from the state activities would seem to be most incongruous.

This concept of the utilization of the federal fiscal instruments both for taxing and for spending, to achieve equal treatment of equals, might be extended to the relation between state and local governments. Since the powers of local governments are delegated, state governments in that delegation can exert some control over local fiscal policies. The states, too, logically should adopt the same policy in their intra-state fiscal relations. This extension of the fiscal theory would serve to reduce the issue of the principle of equity suggested to one of the appropriate treatment of individuals. Buchanan, in an exposition of this general point, has noted:

...In a federal polity, the individual has a plurality of political units with which to deal fiscally. Two or more independent fiscal systems act upon his economic resources, subtract from these resources through compulsory taxation, and provide in return certain public services. In this situation, what becomes of the criterion of equality postulated? Each political unit may treat equals equally. If this were done, individuals similarly situated would be subjected to equal fiscal treatment only if they were citizens of the same subordinate unit of government. There would be no guarantee that equals living in different subordinate units would be equally treated at all. Therefore, the principle of equity must be extended to something other than

individual governmental units to be of use in solving the fiscal problem of federalism.<sup>14</sup>

And in a subsequent justification of this general application of the concept of equity, Buchanan has extended the argument logically, thus:

The appropriateness of using the whole political structure as the unit in fiscal equity considerations can be justified in another way. Prior to the impact of the fiscal system, the income distribution arises largely as a result of the payment for resources in accordance with productivity criteria and competitive conditions established on a national basis. The fiscal system is the major means through which this income distribution is redressed toward one which is more ethically acceptable. It follows, then, that the fiscal system, in carrying out this function, should operate in a general manner over the whole area of the economy determining the original distribution. The generality with which the "fisc" can be operated has been held to be one of its important advantages over redistribution methods which entail particularistic or discriminatory interference with the economic mechanism. But unless the fiscal system is considered that of the whole hierarchy this advantage of generality is lost, and the system necessarily operates in a geographically discriminatory fashion.<sup>15</sup>

Objection to the program of the use of superior government fiscal instruments to achieve desired results, on the ground that the net result may be similar to that achieved by fiscal policies designed to equalize the net fiscal contributions of political units, seems invalidated by one significant consideration. Equity, as a meaningful concept, derives its force from its personal nature. To attain equity, the consistent application of the fiscal powers of the various governmental units operating on the individual would appear to be not only requisite, but desirable. Buchanan, developing the similar argument, concluded:

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<sup>14</sup>"Federalism and Fiscal Equity," p. 588.

<sup>15</sup>Ibid., p. 590.

...Although the results of working out of such a proposed system of inter-area transfers would perhaps differ little, if at all, from those forthcoming from a system based upon equalizing the fiscal capacities of the state units, the former carries with it considerable ethical force for its implementation while the latter does not. The idea of "equal treatment for equals" is superior to that of equalization among organic state units.<sup>16</sup>

What then does the appropriate theoretical fiscal model seem to be? A concise formulation would be as follows: Equity, defined as the similar treatment of similarly situated persons, can be accepted as a desirable fiscal policy goal. States have dissimilar fiscal resources and thus equity on an interstate basis cannot be attained by exclusive state action. Within any given state, however, equity can be approximated since the state in delegating fiscal powers to the component jurisdictions can thereby shape the fiscal policies of those jurisdictions. A state may also utilize grants-in-aid to local governments to aid in attaining intrastate equity. So too, the federal government can direct its fiscal policies to adjust interstate fiscal burdens to correspond more nearly to the goal of equal treatment of taxpayers who are similarly situated. To accomplish this adjustment the federal government can utilize taxing powers to reach the greater revenue sources of the wealthier states and can utilize spending powers, particularly by the use of grants-in-aid, to provide support of programs in poorer states. Thus the combined fiscal operations of federal, state and local governments can be directed to the reduction of the disparities that are founded in mere differences in the place of residence of the taxpayers.

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<sup>16</sup>Ibid., p. 591.

# PRACTICAL OPERATION OF PRESENT UNITED STATES FEDERALISM

Once an appropriate theoretical model of federal-state-local fiscal relationships has been formulated, a limited examination of the operation of the present federal system of the United States would seem appropriate. Operationally, the federal system that once reflected the relative self-containment of the states, now is a highly interrelated political economy. National markets for both final products and for raw materials have created a unitary economy even though political decentralization still seems to retain much of its appeal. However, the fiscal significance of the increasing economic interrelationship may be found in the transmission of state fiscal policies throughout the economy. Educational expenditures and resulting levels of literacy, for example, do not confine themselves to the states in which they occur; instead they radiate throughout the entire nation.

Extensive interstate migration, characteristic of contemporary United States, tends to effect an interstate transmission of state policies. Some illustrative indication of this transmutation of state economies by migration can be derived from Census Bureau reports. Thus, between April 1, 1950<sup>17</sup> and July 1, 1956, extensive net civilian migration<sup>18</sup> occurred among the several states. The net interstate

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<sup>17</sup>April 1, 1950 is used because it represents the date of the 1950 United States decennial Census of Population.

<sup>18</sup>As defined by the Census Bureau, "net civilian migration comprises both net immigration from abroad and net interregional, interdivisional or interstate migration of civilians according to the area shown." Movement of persons in the Armed Forces is excluded. U. S. Department of Commerce, Bureau of the Census, "Estimates of the Population of States: July 1, 1950 to 1956," Current Population Reports: Population

migration, based on the 1956 population, indicates that between 1950 and 1956 net civilian in-migration provided approximately 19 per cent of the 1956 population of Arizona, 13 per cent of the 1956 population of California, and 29 per cent of the 1956 population of Nevada. Net out-migration in the same period constituted an amount equal to approximately 5 per cent of the population of South Dakota, 10 per cent of the population of Vermont, 14 per cent of the population of Mississippi, and 21 per cent of the population of Arkansas. State net civilian migration in the period 1950-1956 as a per cent of the total civilian population of the states on July 1, 1956 is presented in Figure 1.<sup>19</sup> Some of this out-migration may reflect students going to a college in another state and then accepting jobs in other states. This out-migration does not lend itself readily to measurement so its relative importance cannot be assessed. Nevertheless, the important conclusion that seems to inhere in these data is that the fiscal actions of a given state are transmitted extensively among the various states through the vehicle of interstate population movement.

It should not be overlooked that this analysis is predicated on net civilian interstate migration. This may lead to significant understatement of the extent to which the several state policies are inter-related. A shift of a family of five from Mississippi to California

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Estimates, Ser. P-25, No. 165, November 4, 1957, p. 8, n. 2 and p. 9, n. 1.

<sup>19</sup>The percentages appearing in Figure 1 are based on computations by the writer from data of U. S. Department of Commerce, Bureau of the Census, "Estimates of the Population of the States: July 1, 1950 to 1956," Current Population Reports: Population Estimates, Ser. P-25, No. 165, November 4, 1957, pp. 8-9.

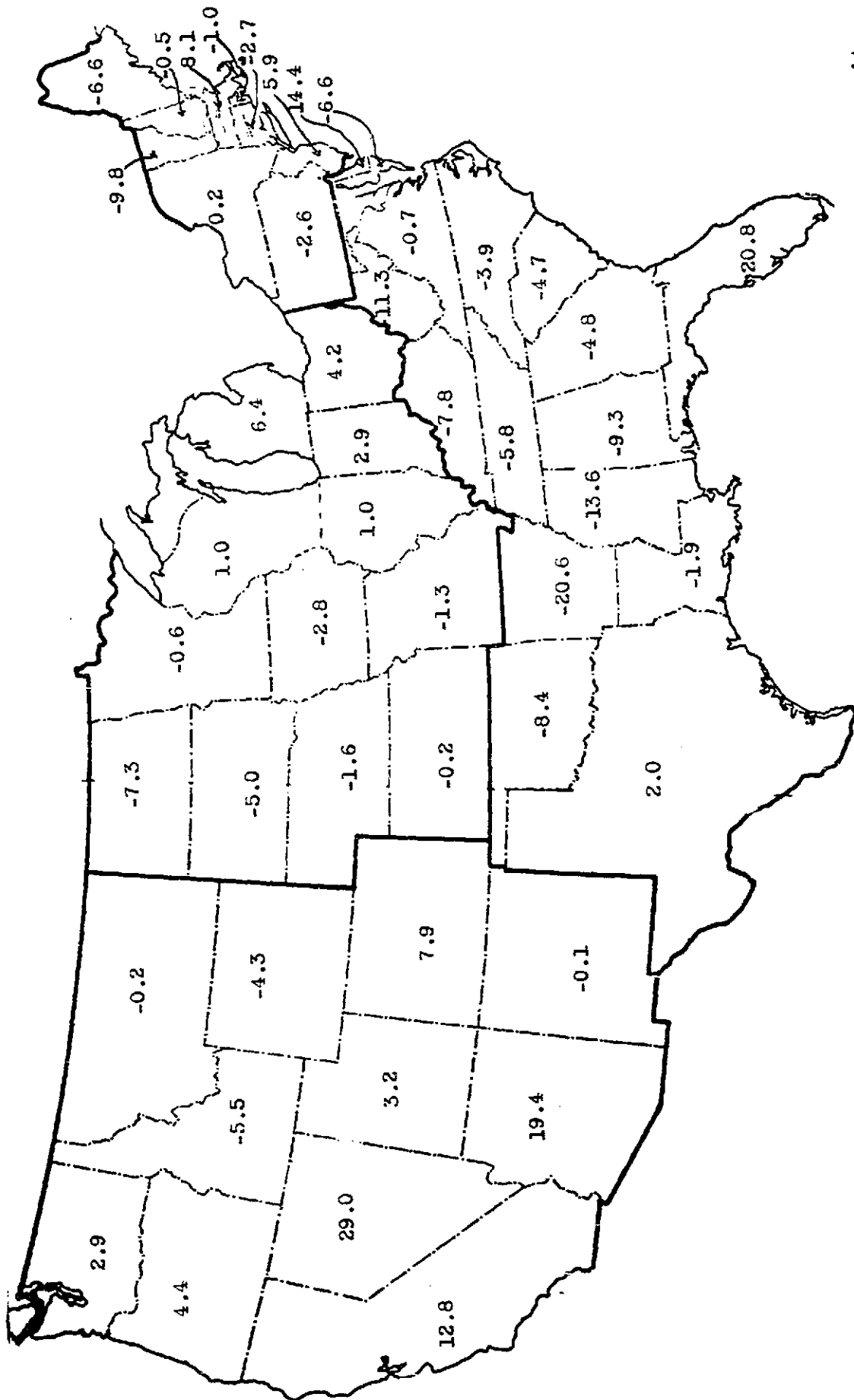


FIGURE 1

NET CIVILIAN MIGRATION, 1950-1956, AS A PERCENTAGE OF TOTAL CIVILIAN POPULATION, JULY 1, 1956



and an opposite movement of a family of five from California to Mississippi would be offsetting and would leave a net civilian migration figure of zero for both states. Yet interstate transmission of state policies and programs would nevertheless occur. Emphasis of the data on net civilian migration, therefore would seem to underestimate the interrelated nature of state fiscal policies.

One somewhat limited indication of the importance of this migration is revealed by an examination of its relation to the total current educational expenditures per pupil in average daily attendance made by the states. Utilizing the expenditures for the 1956-57 academic year<sup>20</sup> and the net civilian migration as a per cent of July 1, 1956 population, it appears that the pattern of interstate migration is from areas of low educational expenditures to areas of higher expenditures. A Spearman coefficient of rank correlation between interstate in-migration and the level of current educational expenditures per pupil in average daily attendance yields a positive correlation of .61.<sup>21</sup> While it is probably only extremely remotely, if at all, that the level of

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<sup>20</sup>Estimated data for total current expense per pupil in average daily attendance for 1956-57 school year computed by the Research Division of the National Education Association and presented by Dr. Earl J. McGrath of Teachers College, Columbia University, as a representative of the National Education Association in Federal Aid to States for School Construction, Hearings on Proposed Legislation for Federal Assistance to States for School-Construction Purposes, Subcommittee of U. S. House Committee on Education and Labor, 85th Cong., 1st Sess. (Washington, 1957), Pt. I, p. 187.

<sup>21</sup>The coefficient is based on computations by the writer. Spearman's coefficient has weaknesses but, for a rough measure of a relationship, it is probably adequate. Weaknesses and strengths of Spearman's formula are discussed in Frederick E. Croxton and Dudley J. Cowden, Applied General Statistics, (2d ed., Englewood Cliffs, N. J., Prentice-Hall, 1955), pp. 478-80.

educational expenditures motivates migration from low educational expenditure to high educational expenditure states, significance nevertheless attaches to the direction of movement. If it can be assumed that there is a direct relation between per pupil expenditure and the level of educational and intellectual attainment,<sup>22</sup> the migration of population from low expenditure to high expenditure areas probably has a double effect. First, the migration probably leads to a dilution of the level of educational attainment of the state of in-migration and second, the attempt to maintain educational standards probably necessitates educational expenditures in the state of in-migration over those otherwise required. One unlikely combination of developments might vitiate this analysis. If the persons leaving low-income states for high-income states were of sufficiently high educational accomplishment then the high-expenditure states might not encounter a lowering of the educational level and the need for extra expenditure. Adequate statistical information is not available for analysis of this possibility which, it would seem, is unlikely to be true.

The conclusion which seems to follow is that the field of education demonstrates the interrelationships that exist in the present-day

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<sup>22</sup>This assumption which implicitly incorporates both quantitative and qualitative dimensions, is adopted frequently by laymen and professional educators although it is probably not amenable to valid statistical verification. One economist who makes this assumption explicit is Jacob O. Kamm, "Investment-in-Self," Review of Economics and Statistics, XXXIV (1952), p. 180. In 1949, Earl J. McGrath, then United States Commissioner of Education, also made this assumption when he declared that "...the quality of education cannot be maintained without Federal support...." U. S. Federal Security Agency, Office of Education, Annual Report: 1949, (Washington, 1950), p. 8. This assumption, probably of limited accuracy, might be characterized as an article of faith.

United States federal system. Although additional evidence might be adduced in support of this general proposition, a statement by one of the foremost of the students of American Constitutional development, Carl Brent Swisher, summarizes the position forcefully. Professor Swisher has observed:

...We do well to remember also that the increase in governmental power in the United States has not been merely the product of the outcome of a struggle between groups who differ abstractly as to what province of government should be. In addition, the force of economic circumstance, the change in our mode of living from that of small-scale production and distribution to that of mass-production industrialism, has called for more sweeping operation of governmental controls.<sup>23</sup>

As federalism operates in the United States currently two specific federal policies should be noted. First is the reliance of the federal government on progressive taxation for the major portion of federal tax revenue. In every year since 1950 the individual income tax has provided over 45 per cent of federal budget receipts.<sup>24</sup> For fiscal year

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<sup>23</sup>The Growth of Constitutional Power in the United States. (Chicago, U. of Chicago P., 1946), p. 234. Stephen Leacock, in 1908, then a Professor at McGill University, noted the economic developments leading to national integration. Leacock, however, concluded by virtually declaring the federal system inadequate to meet incipient problems. Stephen Leacock, "The Limitations of Federal Government," Proceedings of the American Political Science Association, 1908, (Baltimore, The Waverly Press, 1909), p. 42. In 1939 Harold J. Laski, in an often-quoted article, declared the states were anachronistic devices incapable of coping with economic reality. Harold J. Laski, "The Obsolescence of Federalism," New Republic, XCVIII (May 3, 1939), pp. 367-69.

<sup>24</sup>Computed from actual budget expenditures and receipts in Office of the President, Bureau of the Budget, The Federal Budget in Brief, Fiscal Year 1955 (Washington, 1954), p. 9; Office of the President, Bureau of the Budget, The Federal Budget in Brief in 1957 (Washington, 1956), p. 11; Office of the President, Bureau of the Budget, The Federal Budget in Brief for the Fiscal Year 1959 (Washington, 1958), p. 12.

1957 individual income tax receipts yielded 50 per cent of the federal budget receipts and estimates for fiscal years 1958 and 1959 indicate the individual income tax receipts will exceed 50 per cent of total receipts.<sup>25</sup> Since 1948 the corporation income tax, the second major revenue source for the federal government, has yielded over 30 per cent of the federal budget receipts.<sup>26</sup> Thus the combined receipts from the progressive tax sources of the federal government have exceeded 75 per cent of the federal budget receipts for every fiscal year since 1950.<sup>27</sup> Such great reliance on progressive taxation by the federal government indicates the extent to which the wealthier areas contribute to the federal revenue. Some evidence that this reliance does draw from the resources of the wealthier states as well as the wealthier individuals in the nation is shown by a Spearman rank correlation coefficient of .99 between total state personal income and state individual income tax receipts.<sup>28</sup>

The second significant federal policy in the fiscal operations of the United States federal system is the extensive use of federal

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<sup>25</sup>The Federal Budget in Brief for the Fiscal Year 1959, p. 12.

<sup>26</sup>Computed from The Federal Budget in Brief, Fiscal Year 1955, p. 9; The Federal Budget in Brief in 1957, p. 11; The Federal Budget in Brief for the Fiscal Year 1959, p. 12.

<sup>27</sup>Ibid.

<sup>28</sup>Computations based on 1954 data. Personal income data were taken from Charles F. Schwartz and Robert E. Graham, Jr., Personal Income by States Since 1929: A Supplement to the Survey of Current Business, U. S. Department of Commerce, Office of Business Economics (Washington, 1956), p. 141, Table 1; individual income tax data were taken from U. S. Treasury Department, Internal Revenue Service, Statistics of Income: 1954, Individual Income Tax Returns for 1954, I. R. S. Publication No. 79 (Washington, 1957), p. 86, Table 22.

grants-in-aid to help the states in performing certain functions.

Between the 1956 fiscal year and the 1959 fiscal year budget federal grants-in-aid increased from a net \$2.9 billion, exclusive of federal administrative costs in the administration of the programs, to a net \$6.0 billion.<sup>29</sup> Expenditures for such grants have tended to exceed five per cent of total federal expenditures from the budget.<sup>30</sup> However, the expenditures for such grants may be related to the budget expenditures exclusive of the relatively extraordinary major national security expenditures and of the relatively fixed expenditures for interest on the federal debt. Then the federal expenditures for grants-in-aid are found to have risen from 16 per cent of total budget expenditures in 1951 to 31 per cent in the estimated fiscal year 1959 budget.

Federal grants to the states are an important source of state revenue. Examination of state revenue sources reveals that since 1946 intergovernmental revenue derived by all states combined from the federal government has exceeded 10 per cent of the total general revenue of the states.<sup>31</sup> Since 1946 federal aid to states has ranged from a

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<sup>29</sup>The Federal Budget in Brief, Fiscal Year 1955, p. 58; The Federal Budget in Brief for the Fiscal Year 1959, p. 46.

<sup>30</sup>Computed from The Federal Budget in Brief, Fiscal Year 1955, p. 58; The Federal Budget in Brief in 1957, p. 48; The Federal Budget in Brief for the Fiscal Year 1959, p. 46 and p. 54; Office of the President, Bureau of the Budget, The Federal Budget in Brief, Fiscal Year 1956 (Washington, 1955), p. 48; Office of the President, Bureau of the Budget, The Federal Budget in Brief for the Fiscal Year 1958 (Washington, 1957), p. 44. Succeeding computations in this paragraph are also based on data taken from the sources cited here.

<sup>31</sup>Intergovernmental aid by the federal government is more inclusive than grants-in-aid by the federal government. Intergovernmental aid also includes shared receipts and some other minor miscellaneous

low of approximately 13 per cent to a high of 19 per cent in 1951 but since 1951 the federal contribution has deviated only slightly from 17 per cent of the combined general revenue of all the states.<sup>32</sup> For all states combined, this revenue source is second in importance only to sales and gross receipts taxes and in two states, Wyoming and Montana, the intergovernmental revenue from the federal government constitutes the single most important source of state revenue.<sup>33</sup>

Marked variation characterizes the percentage of total state general revenue contributed by the federal government to the several

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payments. Shared receipts, such as sharing of revenue from off-shore oil leases, or the sharing of revenue from leases of federally-owned grazing land, are a relatively insignificant part of total aid. In 1955, for example, shared revenues comprised "...less than two per cent of Federal expenditures for aid to State and local governments." The Federal Budget in Brief, Fiscal Year 1955, p. 59.

<sup>32</sup>U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1947 (Washington, 1948), p. 9, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1948 (Washington, 1949), p. 9, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1949 (Washington, 1950), p. 9, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1950 (Washington, 1951), p. 9, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1951 (Washington, 1952), p. 10, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1952 (Washington, 1953), p. 10, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1953 (Washington, 1954), p. 10, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1954 (Washington, 1955), p. 10, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1955 (Washington, 1956), p. 10, Table 4; U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1956 (Washington, 1957), p. 10, Table 4; computed for 1957 from U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1957 (Washington, 1958), p. 10, Table 4 and p. 14, Table 8.

<sup>33</sup>Ibid.

states. The percentage of revenue contributed to the states generally has ranged from a low near 10 per cent to a high approximating 30 per cent.<sup>34</sup> The low percentages of revenue contributed are found generally in the relatively wealthy states (e.g., Connecticut, Delaware, New Jersey and New York); the high percentage contributions are found in the states in which federal ownership of public lands is great and in states with low per capita incomes (e.g., Wyoming, Nevada, Arkansas, and Mississippi).<sup>35</sup>

The combined pattern of distribution of federal intergovernmental aid and of the great federal reliance on progressive tax sources to raise revenue seems to support the conclusion that as federalism operates currently in the United States, fiscal equity, at least among governments, is approached to some extent. If the states have operated on the premise that within their jurisdictions equals should be accorded equal fiscal treatment, then equity may also have been approached in the intrastate treatment of individuals.

Moreover, the areas in which the federal government has provided aid have been conceived to be areas of national concern. The two areas in which intergovernmental revenue from the federal government to the states has predominated are highway development and old-age assistance. In 1957 these two fields accounted for slightly more than 55 per cent of the total federal intergovernmental aid extended to the states.<sup>36</sup>

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<sup>34</sup>Ibid.

<sup>35</sup>Ibid.

<sup>36</sup>Computed from Compendium of State Government Finances in 1957, pp. 14-15, Table 8.

The other important function for which the states derive federal revenue are education, aid to dependent children, and the administration of employment security programs. These added functions account for approximately an additional 31 per cent of the state intergovernmental revenue from the federal government.<sup>37</sup> The aided functions that can be characterized as social welfare functions probably assist primarily low income groups and low income areas since need is often a prerequisite to receipt of aid. When this presumptive distribution is coupled with the emphasis on progressive taxation as the backbone of the federal system and with the extensive use of federal grants varied in relation to relative taxable resources, the essential nature of the fiscal operation of federalism is revealed.

#### CONTEMPORARY UNITED STATES FEDERALISM AND FISCAL THEORY

Numerous solutions for the fiscal dilemma of federalism have been suggested. Extreme dissimilarity characterizes the proposed solutions which range from abandonment of federalism to the less extreme fiscal proposals of separation of tax sources and the use of various types of grants-in-aid. While the suggestions are not equally meritorious, brief consideration of each seems appropriate.

Creation of a unitary government in the United States is probably neither a possible nor a desirable solution. The economic rationale advanced for adoption of a unitary polity derives primarily from the

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<sup>37</sup>Ibid.



increasing integration of the economy. Complex economic problems transcend the artificial geographic boundaries circumscribing state political jurisdictions. National action is requisite. State inadequacies, therefore, are held to dictate the removal of the fiscally inefficient unit. Furthermore, fiscal equity in dealing with individuals is thus supposedly assured. For in a unitary system of government with the intervening and often perverse state jurisdictions eliminated, all revenue-raising and spending policies can be coordinated to achieve equal treatment of persons fiscally dissimilar in no relevant way.<sup>38</sup>

A unitary government, it is true, may not encounter the same limitations in achieving fiscal goals as does a federal government. Constitutional limitations on federal power may block programs not so impeded in a unitary polity. The limited access of subordinate political jurisdictions to resources adequate to carry out functions exclusively empowered to them is not a major political issue in a unitary state.

But other real problems arise in a unitary state which are not unique to that system. In a nation characterized by regional

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<sup>38</sup>Lack of political responsibility is sometimes cited as an inherent failure of the American federal system. It may be granted that the division of political power between Congress and the President may lead to unfortunate results. This argument, however, is directed against a democratic conception integral in the American tradition--the separation of powers. It is not federalism, per se, that is causative, but the peculiar manifestation of it. And it may not be amiss to raise, if not to answer, the question whether unitary government in France yields superior government to that provided by federalism in the United States. For a discussion of the historical origin of the United States federalism see Andrew C. McLaughlin, "The Background of American Federalism," American Political Science Review, XII (1918), p. 240. Carl Becker discusses the defects arising from division of political responsibility in the United States in Freedom and Responsibility in the United States, (New York, Vintage Books, 1955), pp. 95-98.

heterogeneity, inter-area fiscal transfers are requisite to the attainment of fiscal equity. This, as has been indicated earlier, is also a crucial problem of a federal government. Even within a unitary system, extensive heterogeneity between regions--or areas, or social groups--may operate to block attainment of policies in the national interest. Homogeneity, on the other hand, would insure performance of national programs considered desirable no matter whether the governmental forms were unitary or federal.<sup>39</sup>

In a nation characterized by important elements of heterogeneity, such as ours, federalism probably is an essential to the very existence of effective national government. Recognition of this fact prompted Professor Swisher, in designating federalism as an "...essential characteristic of our constitutional system..."<sup>40</sup> to declare:

...Government on American soil has been federal ever since England established or won control over the American colonies. The colonies always had a measure of local jurisdiction over local problems and a measure of responsibility to the government in London in matters which were not essentially local. Federalism was as much a part of our governmental folkways as was administration of justice in terms of common-law principles and practices. There is little evidence that the American revolutionaries, or the more levelheaded among them, at any rate, ever seriously contemplated giving up the essentials of federalism. When they declared themselves free and independent states, they had in mind freedom from the mother country. But to some extent from the very beginning they expected the breaking of transoceanic ties to be compensated for by union among themselves. If perchance they talked about the

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<sup>39</sup> Desired change can be introduced in the federal system of the United States since the United States Constitution provides adequate amendatory techniques. Attempts to amend it which have failed probably can attribute failure to economic and social heterogeneity rather than to government structure.

<sup>40</sup>Swisher, p. 17.

reservation of full sovereignty in each state, they accompanied such talk by actions which belied their words. Government under the Articles of Confederation, and even that which preceded the formal adoption of the Articles, provided for more of central control over American affairs than had been exercised from London but it followed a long familiar pattern. The Constitution as adopted in 1789 provided for a further increase of central power but again without fundamental modification of the pattern....

Although later years brought much talk of secession from the Union and the actual attempt at secession which brought on the Civil War, the talk and that attempt did not imply an abandonment of federalism in the sense of atomistic dissolution. All that was seriously contemplated was the separation into smaller federal unions, with the lodgment of varying amounts of power in central governments....<sup>41</sup>

Not only does this lengthy statement indicate the deep-seated American attachment to federalism but it also supports the view that a fundamental change such as the actual renunciation of federalism is extremely implausible.

Federalism, moreover, has practical virtues to commend its continuance regardless of its traditional invulnerability. In a nation with such extensive disparateness as the United States, those virtues acquire added force. Salient among the virtues are the provision of a buffer against tyranny and assistance in the cultivation of the individual political responsibility upon which vitality of democratic government is predicated. The antiquated shibboleths of "states rights" and "local autonomy" have been thundered so often that the real merits of federalism tend to be obscured. But merits do exist and to rely again on the insight of Professor Swisher in their indication seems appropriate. He argues that federalism provides a means, not of preventing, but of lessening the potential danger of tyranny:

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<sup>41</sup>Ibid., pp. 17-18.

...The characteristics of human nature which led Hamilton's contemporaries to write prohibitions and checks into the Constitution are just as much the characteristics of men today. Tyrants are not merely relics of antiquity. They are not merely German, Italian, Spanish, and--if it can be said without creating a diplomatic incident--Russian. They are of the ranks of men wherever power is given without restraint and without limit. A major purpose of our federal system is to divide power so as to diminish the intoxication which goes with it, so as to reduce the prospect of tyranny when power is given, as inevitably it must be. With the tremendous increase in power now flowing through government and certain to continue to flow, the need for checks and for division becomes greater than ever before.<sup>42</sup>

Professor Swisher continues in defense of the positive capability of federalism in promoting responsible personal citizenship:

...Local government has its own peculiar values. It is the ideal forum for the practice of democracy. Democracy justifies itself not so much by efficiency of administration as by development of character in a participating citizenship. Something vital to the good life of a community is lost when the people abandon control to rulers at a distance, however wise and beneficent the rulers may be.... Only at distant intervals do a citizen's obligations to the nation reveal themselves so clearly as to call for hard thought and concrete personal effort. His local obligations are more obvious. If he grows as a participating citizen, the growth is likely to be in connection with his local responsibilities. The states and their subordinate organizations are needed because of the school for living which they are.<sup>43</sup>

Since the abandonment of federalism seems neither likely nor desirable, consideration of other proposals designed to remedy the fiscal defects of federalism seems necessary. Two of these proposals, tax sharing and the separation of tax sources, may be considered together. Tax separation, which Blough considers the "...most common proposal for

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<sup>42</sup>Ibid., pp. 47-48.

<sup>43</sup>Ibid., p. 48.

reforming the overall tax structure..., "<sup>44</sup> advocates the exclusive granting of sources of tax revenue to the federal government and the exclusive granting of other sources to the state and local governments. Such a proposal, even assuming the unlikely administrative implementation were to occur, would fail to solve the key problem of fiscal equity. Granting exclusive tax jurisdiction over specific revenue sources to the states does virtually nothing to alleviate the interstate disparity of economic resources from which the dissimilar treatment of persons otherwise similarly situated arises. In addition to the failure to attain equity, the arbitrary imposition of inflexibility in revenue-raising power would seem dubious unless rigidity of circumstances could be predicated. Furthermore, the battle over which taxes logically should be given to each political jurisdiction would be certain to occur no matter what the administrative rationale for division might be.

Tax sharing proposes that the collection of taxes be centralized and that the proceeds be redistributed, partially or wholly, to the states. This device, deceptively simple and logical, has serious weaknesses. Not only does the proposal imply transferring decisions relative to the imposition of taxes to a political level more removed from immediate taxpayer control, but it also presents the almost insoluble difficulty of finding an adequate basis for sharing.<sup>45</sup> Furthermore,

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<sup>44</sup>Blough, p. 454.

<sup>45</sup>One student of centralized collection of federal and state income taxes explicitly recognizes the extent of this difficulty. Edward W. Reed, "Coordination of Federal and State Income Taxes," Southern Economic Journal, XV (1949), p. 469.

the sharing on the basis most often suggested, such as population or origin of payments, would tend to aggravate the fiscal inequities arising from disparate interstate financial resources. It is probably worth noting, too, as Professor Groves has done, that the "...fiscal independence of the local units under sharing is about the same as that of a minor son placed upon a revocable allowance by a generous father...."<sup>46</sup> In short, neither tax sharing nor separation of tax sources seems to provide a workable solution to the fiscal dilemma of federalism.<sup>47</sup>

The remaining fiscal technique for practical attainment of fiscal equity in an operational federalism is the grant-in-aid. The grant-in-aid is an appropriation from one political jurisdiction to another. Superficially it resembles the income derived by jurisdictions which share in the proceeds of centrally collected tax revenues. The difference, however, which renders the similarity superficial is the dissimilarity in distributional technique. Shared taxes are distributed on the basis of a fixed percentage of the yield of a given tax or taxes;

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<sup>46</sup>Financing Government, (5th ed., New York, Henry Holt, 1958), p. 417.

<sup>47</sup>No mention of the administrative economies that tax sharing and separation of tax sources are alleged to provide has been made. The issue, only peripherally relevant, centers upon the savings that supposedly would accrue from elimination of dual administration, conflicts in jurisdiction, and therefore, excessive administrative costs. This argument is developed by Reed, "Coordination of Federal and State Income Taxes," p. 468-69. Blough's reply is pointed. If the loss of a tax source by a political unit necessitates adoption of a new revenue raising device, compliance costs may be increased. Blough, p. 452. And evidence that compliance costs will be reduced or that no new revenue sources will need to be tapped has not been forthcoming in impressive dimensions.

grants-in-aid are distributed in amounts dependent not upon the yield of a specific tax, but upon varying bases for appropriations.

Broadly classified, grants-in-aid are of two kinds, unconditional or straight grants, and conditional or stimulation grants.<sup>48</sup> Conditional grants are appropriations contingent upon either the raising of a specific sum of money or upon the adoption of specific administrative practices by the recipient jurisdiction. These conditions which may be categorized as fiscal conditions or administrative conditions are both absent in unconditional grants. It would seem apparent that the unconditional grants, as defined here, imposing neither matching requirements nor budgetary or other administrative controls, are unlikely to be adopted. As a practical matter, grants-in-aid are almost certain to be conditioned upon some minimum financial participation in terms of use of fiscal capacity defined in sundry manners, upon the provision of a minimum expenditure program, or more likely, upon matching of the proposed grant in some ratio.

Ideally, inter-area fiscal transfers to achieve fiscal equity in a federal state would be unconditional grants. The grants, apportioned on the basis of the need, would be made to states which would exercise complete autonomy in their disposition. If the concept of fiscal equity were uniformly held in all receiving jurisdictions, then

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<sup>48</sup>Terminology is that of Francis G. Cornell, "Grant-in-Aid Apportionment Formulas," Journal of the American Statistical Association, XLII (1947), p. 93. The conditional grant is also known as the "block" grant. Byron L. Johnson, The Principle of Equalization Applied to the Allocation of Grants In Aid, Federal Security Agency, Social Security Administration, Bureau of Research and Statistics Memorandum No. 66 (Washington, 1955), p. 26.

expenditure of the grants would be made in a manner to lead to a closer approximation of equity on an interstate basis. Complete achievement of equity even on this assumption, however, would be contingent upon grants to the poorer states adequate to offset their relative paucity of economic resources.

Political realism compels the conclusion that the unconditional grant is not likely to be adopted regardless of its theoretical merits. Buchanan, in his argument for the abandonment of the conditional grant, agrees that "...traditional barriers against the unconditional inter-governmental transfer of funds, especially in the United States are likely to loom large...."<sup>49</sup> Imposition of conditions, however, will tend to channel expenditures of states into those activities for which grants are provided. There seems to be little doubt that this has occurred in the past. Motivation for the imposition of conditions probably arises, in a large part, from a political compulsion in the granting jurisdiction to exert some control over the funds dispensed and thereby to attempt to develop and maintain responsibility in the expenditure of the grant.<sup>50</sup> Also militating against adoption of the unconditional grant approach to closer approximation of fiscal equity is the dogma of financial responsibility. However, this dogma, holding

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<sup>49</sup>Buchanan, "Federalism and Fiscal Equity," p. 597.

<sup>50</sup>In 1937, a study group of the Twentieth Century Fund noted these tendencies. Facing the Tax Problem, (New York, Twentieth Century Fund, 1937), pp. 380-81. Expressing a similar view are A. D. Scott, "The Evaluation of Federal Grants," p. 392 and Roger Wells in "General Analysis," A Survey Report on the Impact of Federal Grants-in-Aid on the Structure of States and Local Governments, Survey Report Submitted by the Governmental Affairs Institute to the Commission on Intergovernmental Relations (Washington, 1955), p. 12.



that expenditures by a political unit can be allowed safely only if the political unit is required to raise the necessary revenue, is a seriously defective guide in achieving equity in a federal structure. It presupposes unlike standards of equity in grant-receiving jurisdictions coupled with political irresponsibility of those who spend granted funds. To concede that active participation of an enlightened citizen will not be forthcoming to prevent extensive governmental irresponsibility is also to forecast the demise of representative government.<sup>51</sup>

Unconditional grants, however, while vital in attaining a fully equitable fiscal system, do not solve two problems. Minimum use of fiscal capacity by states would seem to be a prerequisite for the receipt of grants; maintenance of certain minimum service standards in areas of activity vital to the national welfare would also seem to be necessary.<sup>52</sup> Diversity of state fiscal capacity and fiscal needs which seem to indicate the use of unconditional grants thus gives way to conditional grants designed to accomplish specific fiscal goals. Maxwell has noted the rationale for the conditional grant:

The conditional grant...serves to bridge the gap between disparate state functions and revenues, but the more immediate motive

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<sup>51</sup>In passing it may be observed that irresponsibility in the use of revenue-raising ability in wealthy states may indicate a reason for supervision by the federal government. Such supervision would be predicated on the same general need to attain fiscal responsibility as that upon which conditional grants are predicated.

<sup>52</sup>Both of these problems are recognized in Canadian and Australian grant-in-aid programs. James Maxwell has discussed them in The Fiscal Impact of Federalism in the United States, (Cambridge, Harvard U. P., 1946), pp. 385-89 and in "Commonwealth Grants to the States in Australia," American Economic Review, XXVIII (1938), pp. 267-74.

behind most of the federal-aid measures has been the desire to stimulate state action about matters in which there was a national interest....<sup>53</sup>

Decisions of the federal government to aid a specific activity involve a determination of areas of national need requiring support. Not only must this determination be made but it is also necessary to determine the basis upon which aid will be extended. Moreover, the development of grant-in-aid programs in the United States testifies eloquently to the haphazard development of the programs that have answered these questions.<sup>54</sup> Maxwell, noting this piecemeal development, has argued that conditional grants should be integrated to avoid what he refers to as "...the divisive elements which are present in federalism."<sup>55</sup> He concludes his recognition of the appropriate use of the conditional grant in these terms:

It is, therefore, possible to reconcile the fiscal dilemma of a federalism. Admitting that a diversity of standards exists among the states, the federal government can provide conditional grants which aim at bringing state performance of important functions--especially welfare functions--to a minimum level. Admitting further that inter-area transfers call for imposition of conditions, these conditions can be made both effective and palatable by grouping together a series of related grants, placing them under one or a few agencies, and giving the agency or agencies a broad discretion to apply the standards with

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<sup>53</sup>The Fiscal Impact of Federalism in the United States, p. 388.

<sup>54</sup>Patterns of grants-in-aid, as they have developed in the United States are traced in Maxwell, The Fiscal Impact of Federalism in the United States, Chapters III-XI; in Henry J. Bitterman, State and Federal Grants-in-Aid, (New York, Mentzer, Bush and Company, 1938); and in V. O. Key, Jr., The Administration of Federal Grants to the States, (Chicago, Public Administration Service, 1937).

<sup>55</sup>The Fiscal Impact of Federalism in the United States, p. 391.

flexibility....<sup>56</sup>

Recognition of the piecemeal development of the existing grant programs, however, would seem to call for an additional practical observation. It may well be noted that Maxwell's plea for integration probably is farther from realization today than in 1946 when he made the plea. What is needed is a theoretically less desirable but more practical answer to the question of the appropriate integration of singly-added grant-in-aid program to the existing structure of federal subventions.

An appropriate logic for the addition of a new program of federal aid would thus seem to be predicated on certain facts. Fiscal equity remains a desirable goal to be approximated to the greatest extent by any conditional grant-in-aid program created to provide an acceptable national minimum in a given service area. Since alternative techniques may be utilized in conditioning the distribution of a given grant to the several states, the preferable technique would appear to be that one which accomplished the greatest equity. It should also be recognized that the addition of programs involving grants-in-aid is likely to involve an increased need for federal revenue to pay the costs of the new programs. Admittedly the federal constitutional fiction which precludes the direct transfer of receipts from one group to a different benefiting group must be maintained. This fiction requires that federal tax revenues must be increased, not to provide directly a specific and given governmental program of benefit, but to increase the

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<sup>56</sup>Ibid.

general revenues of the government. Appropriations from general revenues then may cover new and constitutionally permissible expenditures.<sup>57</sup> But added expenditures in fact do require revenues greater than they would have been had the expenditure not been made. Analysis of fiscal equity, therefore, requires an examination of the impact both of expenditures and taxes upon individuals in the society. A combined program which most nearly moves persons similarly situated, regardless of the state of residence, toward more similar positions while also providing the minimum program held to be in the national interest, is logically to be preferred. Added programs of conditional grants to attain adequate national service levels in the states thus can be reconciled in a practical manner with the problem of federal finance.

The use of conditional federal grants to aid states in providing an acceptable minimum service program in a given area of national concern does not preclude individual states from choosing to support the aided function at a level greater than that of the foundation program. Complete state autonomy in developing programs more comprehensive than the minimum foundation program should not only be allowed but

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<sup>57</sup> Relevant decisions of the Supreme Court indicate the essential Constitutional requisites. U. S. v. Butler, 297 U. S. 1 (1936) precludes the earmarking of a specific tax for a specific expenditure for the benefit of a special group. Grants-in-aid to states from general revenues contingent upon state acceptance of the conditional grants have been supported, first by denying individual taxpayers an interest adequate to present a justifiable controversy, and second by providing a divorce of the source of tax revenue and the specific expenditure in question. Massachusetts v. Mellon, 262 U. S. 447 (1923); Stewart Machine Co. v. Davis, 301 U. S. 548 (1937); Helvering v. Davis, 301 U. S. 619 (1937). Professor Benjamin U. Ratchford has discussed the relevant constitutional issues in "Some Constitutional Aspects of Federal Expenditures," Journal of Finance, X (1955), pp. 459-82.

encouraged. This encouragement is essential to the full realization of the values of federalism. However, from the point of view of the fiscal operations of the federal government two considerations predominate: First, a minimum service level must be maintained in the activity in all states and second, the support of the minimum service level should be provided in such a way as to achieve a maximum of fiscal equity.

#### EDUCATIONAL EXPENDITURES AND ECONOMIC THEORY

...In a nation like our own, ...which from the beginning has depended upon the general enlightenment of the people for wise decisions on social and political matters, a broad education in all the major branches of knowledge is indispensable to the health of the Nation. Moreover, the enrichment of life for the individual depends no less upon his acquaintance with the literary, artistic, and philosophic heritage of western and other civilizations. Though it may be necessary in the present emergency to attract more students into scientific fields and to spend an excessive proportion of our resources for scholarships, teachers, buildings, and equipment related to science, the ongoing educational program must maintain a proper balance of learning for all enlightened citizens.<sup>58</sup>

Initially it should be recognized, as Dr. Earl McGrath has done in the foregoing quotation, that important cultural values are provided by education. Emphasis upon economic values too often tends to obscure this fact. No matter what economic values flow from education, a nation interested in providing more than a maximum of goods and services for its citizens might well support education as an end product. Important as the recognition of this fact may be, however, the cultural values of education are not a paramount issue in this analysis.

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<sup>58</sup>Earl J. McGrath, "Sputnik and American Education," an article inserted by Senator Wayne Morse in Congressional Record, 85th Cong., 2d Sess., 91:3 (February 13, 1958), p. 1779.

Economic growth is closely allied to the quantity and quality of education provided within a nation. This fact is recognized by most writers on economic growth; some are explicit, others implicit, in their recognition. The review of theories of economic growth is beyond the scope of this study but even a partial examination of the literature indicates the tendency to consider education as a "precondition"<sup>59</sup> of economic development. But as Professor Hunter has argued, such a treatment of factors as preconditions of economic growth "...leaves the resultant economic theory extremely sterile because of the overwhelming importance in the real live world of these non-economic factors...."<sup>60</sup> Continuing his analysis, the full economic significance of education as an integral factor in economic growth is presented by Hunter thus:

A higher level of education is frequently referred to as a precondition or noneconomic factor. But, current levels of education are surely a function of levels of national income directly. The familiarity with things mechanical--so much taken for granted in our economy and so important for industrialization--is also a function of the level of living and a part of the level of informal education. More obvious, paying for education is a problem in public finance to be considered along with all other developmental expenditures. Further, the level of education is a determinant of product and factor market structures as it affects the dissemination of market information through mass communications media. Finally, types of education (e.g., classical versus technical) are very much of concern to the economists interested in economic development....<sup>61</sup>

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<sup>59</sup>The term is used by Professor John M. Hunter in a discussion of papers presented at the 1956 American Economic Association meeting. "Economic Growth and Development--Discussion," American Economic Review (Supplement), XLVII (1957), p. 57.

<sup>60</sup>Ibid.

<sup>61</sup>Ibid., p. 59.

Despite the appearance that recognition of the economic aspect of growth and development has not been extensive, it should be noted that recent interest in this subject has grown. Perhaps there are two areas in which conclusions about economics and education are most likely to evoke agreement. First is the general agreement that the economic results flowing from education are imperfectly measurable, at best. Professor Burkhead summarizes this problem admirably:

...Education has characteristics that make any attempted measurement of its economic consequences particularly difficult. It is both a consumer good and a producer good--wanted for itself and also as a means to increased income and output. Education is a major factor in national integration in the sense that Myrdal uses the term as equivalent to mobility and motility in the labor force. Education, therefore, will contribute to greater equality in the distribution of income over time. These characteristics make permanently elusive any attempt to measure its economic consequences with precision.<sup>62</sup>

The second area of agreement is that education, no matter what the conceptual difficulties of measurement of economic results may be, probably does lead to positive and significant accomplishments. Mutual causation in the relation of economic growth and educational expenditures may be granted while the importance of the factors is also granted. Professor C. Lowell Harriss summarizes the broad areas of agreement in his declaration:

Education stands out as a strategic factor for aiding economic accomplishment and also for enlarging the potentials for richer human experience--perhaps the main objective of economic growth. Future productivity will depend upon the education of the broadest, and broadening, type as well as vocational training for specific

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<sup>62</sup>Jesse V. Burkhead, "Financing Education," American Economic Review (Supplement), XLVII (1957), p. 199.

types of work--surgery or stenography. Spending on education multiplies values many fold in developing human capacity.<sup>63</sup>

The full economic effects of educational expenditures may raise difficult problems of measurement but immediate economic effects do not seem equally impossible of measurement. Ultimate economic effects of education expenditures may remain moot<sup>64</sup> but the impact of educational expenditures is ascertainable. Likewise, the taxes utilized to raise the funds from which such educational expenditures are made may be ascertained and, utilizing recently-developed techniques, the incidence determined. Techniques for tracing the incidence of government expenditures are not yet developed with significant scientific precision and so the initial impact of government expenditures and the incidence of

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<sup>63</sup>C. Lowell Harriss, "Government Spending and Long-Run Economic Growth," American Economic Review (Supplement), XLVI (1956), p. 161. Others who support this position are Charles Wolf, Jr., "Institutions and Economic Development," American Economic Review, XLV (1955), p. 869; George Garvey, "Income Distribution--Discussion," American Economic Review (Supplement), XLVII (1957), p. 533; Jan Tinbergen, "Welfare Economics and Income Distribution," American Economic Review (Supplement), XLVII (1957), p. 496; Howard R. Bowen, Low-Income Families, Hearings, Subcommittee on Low-Income Families of the Joint Committee on the Economic Report, 84th Cong., 1st Sess. (Washington, 1955), p. 76; Facing the Tax Problem, (New York, Twentieth Century Fund, 1937), p. 206; George W. Mitchell, Oscar F. Litterer, and Evsey D. Domar, "State and Local Finance," Public Finance and Full Employment, Postwar Economic Study No. 3, (Washington, Board of Governors of the Federal Reserve System, 1945), pp. 121-22.

<sup>64</sup>The effect of grants-in-aid for education on resources allocation led to a journal controversy between James M. Buchanan and A. D. Scott. Scott argued that grants for "social amenities" are "resource-distorting;" Buchanan that they are "resource-correcting." The level of abstraction in the controversy is relatively high and some definitional disagreement seems to exist. See A. D. Scott, "Federal Grants and Resource Allocation," Journal of Political Economy, LX (1952), pp. 534-33 and "A Note on Grants in Federal Countries," Economica, n. s. XVII (1950), pp. 418-19; James M. Buchanan, "Federal Grants and Resource Allocation," Journal of Political Economy, LX (1952), p. 210.



the requisite taxes may be compared to ascertain the initial change in income distribution resulting.

Embodied in any attempt to measure the impact of public expenditures is a basis for imputation of benefits. Rendering the basis explicit is certainly necessary and desirable but is by no means probative of the basis chosen.<sup>65</sup> And the choice of assumptions upon which determination of incidence of the taxes rests is also a subject requiring explicitness and considered judgment. The entire process of determining the net change in income position resulting from the fiscal activity of government involves arbitrary decision supported only by the best deductive logic of the leading authorities in the field of public finance. Admitting all these limitations, however, does not refute even superficially one salient argument for such an undertaking. Simply stated, the argument is that the balancing of expenditures and taxes is undertaken by practical politicians whenever they are faced with deciding the merits of taxing and spending proposals. It is probably desirable that the scientific analysis of economists augment the analysis of politicians. Thus, a maximum of light may be shed in the shadowy corners in the house of governmental financial activity.

Educational expenditures, as the earlier recognition of broad cultural and societal values of education implied, to a certain undetermined extent yield social benefits and to that extent the resulting

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<sup>65</sup>James M. Buchanan, in discussing the concept of a "fiscal residuum," indicated the importance of making benefit-imputation bases clear. "The Pure Theory of Government Finance: A Suggested Approach," Journal of Political Economy, LVII (1949), pp. 502-505.

benefits are indivisible.<sup>66</sup> But it also seems probable that the initial benefits accrue to the persons for whom the expenditures are made. It is this basis which Tibor Barna adopted in his study of the impact of British public finance on income distribution. Barna explained the rationale, often embraced implicitly by practical politicians, which led him to allocate educational expenditures on a per student basis. Said Barna:

Expenditures on all services which are, or can be, provided by private enterprise should be allocated on the cost principle. It is also evident that private enterprise is unable to provide services which, for technical reasons, are available to all, whether one contributes to them or not. The two criteria, that is, possibility of provision of a service by private enterprise and possibility of exclusion, seem to overlap in almost all cases. The expenditure on such services will be allocated on the cost principle.

The most difficult question is to decide whether two services--one provided by the government, the other by private enterprise--are the same or not. The most conspicuous case is that of compulsory education. In certain aspects schools run by public authorities and private schools are exactly alike. But it can be argued that a different service has been created by making education compulsory, since it is no longer possible to apply the criterion of exclusion.

In such cases recourse might be taken to a different approach. It can be said that the marginal cost of the education is almost exactly equal to the average cost. It will, therefore, be assumed that all children receiving the same education benefit equally.<sup>67</sup>

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<sup>66</sup>Professor Groves has so argued: "...I find myself quite unable to agree, for instance, that the exclusive benefit of educational outlay may be allocated to the spending units according to their number of school children. The schools are simply one of the amenities of civilization that we enjoy in our corporate capacity as the public...." Harold M. Groves, "Government Burdens and Benefits--Discussion," American Economic Review (Supplement), XLIII (1953), p. 536.

<sup>67</sup>Redistribution of Incomes Through Public Finances in 1937, (Oxford, Clarendon Press, 1945), p. 198. John H. Adler, "The Fiscal System, the Distribution of Income and Public Welfare," in Fiscal Policies and the American Economy, ed. Kenyon E. Poole (New York, Prentice-Hall, 1951), p. 386 adopts a similar allocative basis.

On this basis, then, the impact of educational expenditures may be determined and may be compared with the burden of taxation. On the assumption that the contemporary educational proposals are predicated upon the superimposing of additional taxes and expenditures upon the existing fiscal structure, the analysis becomes one of ascertaining the combined marginal tax and expenditure incidence. It is on this theoretical basis that this study proposes to examine educational finance.<sup>68</sup>

What then can be concluded from the foregoing examination of the problem of financing education in the present United States federal system? It has been argued that fiscal operations of the federal government should be directed toward maximizing equity. Equity, considered to be the similar fiscal treatment of persons similarly situated, can be furthered by federal fiscal operations as they draw upon the taxable resources of the entire nation. On the other hand, states are unable to assure a significant degree of equity among the taxpayers of all the states since their fiscal operations are circumscribed by the limited, disparate fiscal resources found within their borders. Within each state the activities of the state and local governments may be directed toward attaining intrastate equity but coordinated federal taxing and spending actions are necessary to approximate interstate

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<sup>68</sup>A. R. Prest, who criticizes statistical calculations of overall tax burdens because they tend to ignore overall levels of demand, supports analysis of the incidence of marginal change of taxes. "Statistical Calculations of Tax Burdens," Economica, n. s. XXII (1955), p. 243. See also Professor R. A. Musgrave, "General Equilibrium Aspects of Incidence Theory," American Economic Review (Supplement), XLIII (1953), p. 503 and Ursula K. Hicks, "The Terminology of Tax Analysis," Economic Journal, LVI (1946), pp. 49-50.

equity.

The extensive interrelationships of sectors of the American economy have raised and continue to raise difficult problems in the fiscal operation of present United States federalism. Some nationally important governmental functions, if undertaken exclusively by the states, may be inadequately performed in the poorer states. The dissimilar service levels, transmitted throughout the entire nation by the mobile American population, thus are widely diffused. In the fields in which a national interest exists, the federal government has utilized progressive taxation and grants-in-aid to support state programs. Federal grants have thus become an important fiscal element in the operation of federalism today. Further use of subventions to support such governmental functions as education will probably utilize conditional grants-in-aid although unconditional grants probably are theoretically more adapted to the attainment of interstate equity. Such use of grants is predicated not only on the present extensive use of this financial device but also upon the relative unacceptability of alternative programs to solve the fiscal problems of United States federalism.

Currently education is a function for which programs of federal support are suggested. Education usually is conceded to provide cultural values but the intimate connection between education and economic growth is also recognized. The result is that national gains are assumed to flow from expenditures which raise national educational levels. Measurement of the ultimate gains which are assumed to result from educational expenditures supported by federal grants is a dubious undertaking. However, some measurement of the immediate impact of

educational expenditures and of the incidence of the taxes needed to provide revenue for such expenditures can be undertaken utilizing existing techniques. Subsequently these techniques for measurement will be applied to alternative programs for federal support of education. The preferable program then, assuming education is supported at adequate levels and without offsetting adverse administrative or financial conditions, would be the one which as far as possible contributed to equity in the fiscal system. Such analysis, it is hoped, may aid in clarifying the bases upon which the practical evaluation of alternative public policies for educational expenditures ultimately rest.

## CHAPTER II

### FEDERAL LEGISLATIVE PROPOSALS TO PROVIDE FINANCIAL AID TO SUPPORT PRIMARY AND SECONDARY EDUCATION

Realistic federal programs to provide financial aid for primary and secondary education must take cognizance simultaneously of the uniqueness of federal government in the United States and the logically possible methods of implementing programs of support. The maintenance of dynamic federal and state government is desirable and specific financial aid programs should contribute to such maintenance. Financial programs both in their general structure and in specific implementation should also contribute to the realization of that goal.

One preliminary observation seems required before consideration of the general types of aid proposals and their proposed legislative implementations. Excluded from consideration here is a crucial question implicit in any proposal to provide support for education. That exclusion is the question of the need for such support. The importance of that issue aside, analysis of effects of proposals presupposes that the need will have been demonstrated prior to the actual adoption of a program. If the need does not seem apparent, the proposal remains only a proposal with latent effects; if the need leads to the adoption of the program then effects will be realized. It is the study of those latent effects that is of concern here for in the future they may be realized.

To know with even some minor degree of precision what may be realized later may contribute to the decision about the specific form programs finally adopted will assume.<sup>1</sup>

#### GENERAL TYPES OF AID PROPOSALS

Proposals for meeting the financial problems of education are of three types. Of the three types of programs--tax sharing and tax separation, grants-in-aid, and miscellaneous--grants-in-aid receive much more serious practical consideration than the other types. Yet, since the other two classifications are represented by specific legislative proposals, some consideration of them would seem necessary.

Tax sharing and separation of tax sources have been discussed in the previous chapter as relatively ineffective techniques for meeting the fiscal problems of a federal polity. Briefly reiterated, separation of tax sources, which lacks political realism, probably could not be implemented on a workable basis. But even assuming that a basis for dividing tax sources among competing jurisdictions could be found and implemented, the interstate disparity of fiscal resources which contributes to the disparity of service standards would not be modified in

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<sup>1</sup>Probably no topic in the general area of aid to education receives as much attention as the relative need for such aid. All of the Congressional Committee hearings on the general subject of federal assistance cited in the Bibliography contain discussions of the topic. Especially good is a discussion in Chapters IV, V, VI, and VII of Charles A. Quattlebaum of the Legislative Reference Service of the Library of Congress, Federal Aid for School Construction, Committee Print of Committee on Labor and Public Welfare of the United States Senate, 84th Cong., 1st Sess. (Washington, 1955). More recently the issue has been summarized in School Construction Assistance Act of 1957, 85th Cong., 1st Sess., House Report 489 (Washington, 1957), pp. 20-22, pp. 30-41.

any significant way. The wealthier state would have access to the comparatively greater, though separated, tax sources; the poorer states probably would not secure access to sources of revenue adequate to enable them to raise service standards appreciably. And the process of surrendering existing partial jurisdiction over one revenue source to secure exclusive jurisdiction over another might lead to a net reduction in revenue.

Tax sharing, based on central collection of a tax and distribution of part of the proceeds to component jurisdictions on a predetermined basis also probably is not desirable. The Gordian knot of an appropriate basis of sharing admits of no cutting. The usual bases suggested for sharing do not provide effective reduction of the fiscal dissimilarity of the states; other bases for such sharing (e.g., on some objective basis of need) encounter critical resistance from states failing to profit from such a basis for sharing. Concluding this summary of the earlier argument, it seems that neither tax sharing nor separation of tax sources is an effective technique for solving fiscal problems in a federal system of government. Abundant weaknesses, however, do not preclude proposals to use these techniques to meet educational financial problems.

Grants-in-aid are the most frequently suggested and seemingly the most appropriate device for providing federal aid to education. Unconditional grants, despite their apparent theoretical merit in more nearly approximating equity on an interstate basis, seem so politically unrealistic as to merit no further consideration. Conditional grants, the realistic compromise with theoretical merit, are the apparent form



that any federal aid to education will assume.

Conditional grants are of two general types: uniform or flat grants and variable grants. The flat grant provides a uniform sum to each recipient jurisdiction without regard for the objective dissimilarities of those jurisdictions. Thus need for funds to support a program is not a predominant consideration in the use of the flat grant. This method has been used in some past federal educational grant programs<sup>2</sup> but has been accorded only limited consideration as a singular technique for aiding primary and secondary education.

Variable grants are unlike flat grants in that the amount of funds provided by the granting authority are contingent upon dissimilarity of needs and resources of the recipient jurisdictions. Receipt of both flat and variable grants may be contingent upon some required financial contribution by the grantee. Such grants may require either equal matching or variable matching. Bases for matching are varied and are dependent upon the purposes for which grants are made. Byron Johnson, in his intensive analysis of grants-in-aid has indicated seven purposes for which grants might be adopted. The purposes, often interrelated and overlapping in actual use are (1) the encouragement or stimulation of local services in recipient jurisdictions, (2) the assistance of recipient jurisdictions in maintenance of a minimum program deemed

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<sup>2</sup>The flat grant method has been used to allocate the appropriations for state land-grant colleges, agricultural extension services, and agricultural experiment stations. Details of these grants are discussed in Clayton D. Hutchins, Albert R. Munse, and Edna D. Booher, Federal Funds for Education, 1954-55 and 1955-56, Department of Health, Education, and Welfare Bulletin No. 5 (Washington, 1956), pp. 28-30, pp. 67-73.

nationally important, (3) the procurement of leadership by the granting jurisdiction over programs in recipient jurisdictions that are not directly subject to control by the grantor but which are considered of national importance, (4) the utilization of the superior fiscal powers of the granting jurisdiction and the superior administrative capabilities of the recipient jurisdictions, (5) the reduction of disparities in service levels between recipient jurisdictions while tending toward greater interstate and interpersonal fiscal equity, (6) the improvement of the total tax system by rendering it more progressive and uniform, and (7) the assistance in development of counter-cyclical fiscal policies designed to aid in the maintenance of full employment.<sup>3</sup> Not all programs of subventions need to attempt to embrace all these purposes; it is conceivable that in the context of a specific program, achievement of some of the purposes might be mutually excluded. Thus a program directed toward utilizing the advantage of administrative efficiency of the recipient jurisdiction might be quite unable to develop also a significant degree of control over the programs of those jurisdictions. Subventions, however, may be directed toward conscious attainment of one or a combination of several of these goals.

In the analysis of the relation of educational grants-in-aid to the fiscal problems of federalism it was indicated that the probable purpose of such grants was the establishment of a minimum educational level in a field of national concern. It was also indicated that the fiscally preferable program designed to accomplish this end was that

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<sup>3</sup>The Principle of Equalization Applied to the Allocation of Grants In Aid, pp. 20-22.

program which would accomplish the maximum possible reduction of interstate inequalities. And if such a program of subventions could attain these goals while retaining maximum adherence to the generally acceptable public principle of progressivity in the overall tax system, this would provide a further argument for such a program.

Educational subventions might be directed toward full equalization in service levels among the states. If such full equalization were undertaken it would require allocations to the states in amounts sufficient to assure service levels that were substantially uniform in the recipient jurisdictions. It would also require that such uniformity in operational levels would be accompanied by substantial uniformity in fiscal burden designed to support the program. The similarity both of service levels and of utilization of fiscal capacities is an essential attribute of full equalization grants.<sup>4</sup>

Full equalization, however, probably will not be undertaken. Rather than attempting to support uniform service levels, educational grants-in-aid may attempt to support minimum service levels. Minimum level support seems grounded first in the difficulty in determining the exact allocation to each state that would be needed to achieve full equalization and second in the recognition that the provision of uniform service levels when some states choose to exert greater effort and thereby support an exceptionally high level of services would weaken

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<sup>4</sup>Johnson follows substantially the same line of analysis. *Ibid.*, pp. 30-33. Another well known analysis adhering rather closely to this general argument and also indicating that such a program is adopted frequently in state grants to localities for educational purposes is Daniel S. Gerig, Jr., "Formulas for Variable Federal Grants-in-Aid," Social Security Bulletin, III (June, 1940), p. 11.

local autonomy. The determination of the allocation needed to provide sufficient funds for equalization is rendered difficult not only by the large number of educational units for which existing levels of services must be determined but also by the extreme disparateness of the units. Indicative of this general problem is the fact that in the United States on January 1, 1957 there were 52,913 school systems which included 50,446 independent school systems.<sup>5</sup> While the exact number of the total school systems that are rural is not presented, "municipal" systems totaled 4,109<sup>6</sup> and most of the remainder are rural districts.<sup>7</sup> To attempt to reduce to comparable terms the needs of those divergent systems operating in vastly dissimilar rural and urban areas would be an overwhelming task. Rough approximations of needs and existing service levels probably can be secured but overall evaluations seem less amenable to determination.<sup>8</sup>

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<sup>5</sup>U. S. Department of Commerce, Bureau of the Census, U. S. Census of Government, 1957: Governments in the United States, Vol. I, No. 1 (Washington, 1957), pp. 3-4. "Dependent" school systems, in contrast to independent school systems, are those administered by other governmental units such as towns, counties, cities, or states.

<sup>6</sup>Municipal systems are defined as those school systems "...serving a local area (other than an area of countrywide nature) which includes one or more incorporated places of at least 2,500 inhabitants..." Ibid., p. 5.

<sup>7</sup>Ibid., p. 6.

<sup>8</sup>Most of the analyses of service levels and needs that have been undertaken deal with these attributes in terms of expenditures per classroom unit, expenditures per pupil, or in terms of capital facilities and their inadequacies. See Clayton D. Hutchins and Albert R. Munse, Expenditures for Education at the Midcentury, U. S. Office of Education Miscellaneous Publication No. 18 (Washington, 1953), p. 11 and Clayton D. Hutchins and Albert R. Munse, Expenditures for Education at the Midcentury: Supplement, U. S. Office of Education Miscellaneous Publication No. 19 (Washington, 1954); William O. Wilson and James Woofert, Report of the Status Phase of the School Facilities Survey,

Equalization sufficient to insure provision of minimum educational levels in all states seems likely to be adopted if federal aid is extended. The minimum service level to be supported, frequently a major controversial topic by virtue of its identification either explicitly or implicitly with "need," thus becomes an essential datum in determining the formula to be employed in allocating aid to the states. Furthermore, although matching need not be an element in such formulas, matching on some basis seems likely to be required as a precondition to receipt of aid. If the grant is designed to encourage the recipient jurisdiction to increase its activity in a given program such as education, the amount of aid extended may be conditioned upon the amount of financial support provided by the grantee.

Stimulation grants are of five general types.<sup>9</sup> The matched flat

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U. S. Office of Education (Washington, 1953), p. 25. A dissent from the conclusion of this analysis seems embodied in Edgar L. Morphet and Erik L. Lindman, Public School Finance Programs of the Forty-Eight States, U. S. Office of Education Circular No. 274 (Washington, 1953). They declare flatly that "It is possible in every State to plan a series of related cooperative studies which will describe services and facilities needed for a satisfactory educational program in all parts of the State...." (p. 65). Morphet and Lindman's determination of needed services rests upon such apparently subjective judgments as "...junior college facilities should be provided in all districts..." (p. 52), and that adult education should be provided in every district (p. 52). Such judgments are at least somewhat controversial. Furthermore, determining when school consolidation is blocked by "...faulty organization, false pride, lack of leadership, tradition..." (p. 51) is by no means an exercise in the impartial application of objective criteria. In fairness, it should be noted that Morphet and Lindman are seeking to establish bases for a foundation program (p. 64) rather than for full equalization of educational programs.

<sup>9</sup>In the following development of stimulation grants, analysis by Francis G. Cornell is relied upon heavily and the terminology of the five types of stimulation grants is accepted: "Grant-In-Aid Apportionment Formulas," pp. 98-104. In the discussion of the matched equalization grant the work of Daniel S. Gerig, Jr. has been valuable. "Formulas for Variable Grants-in-Aid," pp. 7-8.

grant allocates funds to the recipient jurisdictions on the basis of some predetermined basis of need but actual payment of the allocation is contingent upon equal matching of the allocated funds by the grantee. The recipient jurisdiction is thus encouraged to provide sufficient funds to receive the amount of aid allocated. Because part of the funds for the support of the aided service are provided by the granting government, the grantee can purchase a dollar's worth of the service for less than one dollar of its own revenue. But a latent difficulty may inhere in such a matched flat grant program. States with limited financial resources may be faced with the loss of revenue because of insufficient funds to match the grant on the prescribed basis. To preclude this loss, the state may divert revenue needed for equally or more important programs to the aided function. Thus Hansen and Perloff, resting their analysis of matching (or other uniform-ratio) grants on their study of past experiences conclude that "...those governmental units which are most dependent on outside aid, if they are to maintain their services, receive the least assistance under the present grant-in-aid system."<sup>10</sup>

The second type of matched grant is the percentage grant. This type of grant provides a fixed ratio at which the granting jurisdiction will match the efforts of the grantee. However, it does not provide a maximum dollar limitation on the grant to any recipient jurisdiction. The ability of the recipient jurisdictions to raise revenue from local resources thus provides the effective limitation on the size of the

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<sup>10</sup>Alvin H. Hansen and Harvey S. Perloff, State and Local Finance in the National Economy (New York, W. W. Norton, 1944), p. 69.

grant. The poorer jurisdictions with their limited fiscal capacities are thus less able to support the aided service than are the relatively wealthy and financially capable jurisdictions. It is possible that such grants may stimulate the service even in the poorer states but the potential distortion contained in the matched flat grant is also found in the percentage grant.

The flat grant with equalized matching is the third type of matched grant. The allocation of funds is made to the recipient jurisdictions on a predetermined basis and then the proportionate share of the several jurisdictions is varied on some basis related to need. This type of grant is probably more immune to valid criticism than either the matched flat grant or the percentage grant since the advantage of the wealthier jurisdictions and the extent of distortion induced by the flat grant with equalized matching are probably not so great. Nevertheless, it seems that this type of grant, to the extent that it incorporates the matched flat grant technique, also incorporates the defects of that system.

Fourth of the types of matching grants is the matched equalization grant. The amount of aid to be extended to any jurisdiction is varied in relation to some measure of need but final payment of the allocated funds is contingent upon matching by the recipient government. The amount of contribution required of the recipients is varied and is a function of some prescribed rate of effort and of some measure of fiscal capacity. The amount of the grant actually paid may be reduced in the proportion by which any grantee fails to meet the required matching

percentage.<sup>11</sup>

The bases upon which variations in fiscal capacity can be converted into contributions required of recipient jurisdictions have been delineated by Gerig. Utilizing state per capita incomes as the illustrative measure of fiscal capacity, Gerig explains these bases as follows:

While formulas for translating State per capita income differentials into a schedule of variable Federal percentages can be developed in several ways, four main types have been selected.... These are designated as (a) "linear interpolation" formula, (b) "bracket type" formula, (c) "ratio to midpoint" formula, and (d) "ratio to national average" formula.

The "linear interpolation" formula requires, as the first step, a decision as to what the most favorable and least favorable Federal percentages shall be. These percentages are assigned to the two States with the lowest and highest per capita incomes, respectively. The percentages for the remaining states are then calculated by distributing linearly the difference between the maximum and minimum Federal percentage over the range of States....

The "bracket type" of formula involves establishing a limited number of brackets, with perhaps 5 or 10 States in each bracket. The assignment of States to the different brackets might be based either on the relative ranking of the per capita income of each State in an array--for example, by deciles or quartiles,--or on the income bracket within which the per capita income of each State falls, such as \$200-\$300, \$300-\$400, and so forth....

The "ratio to midpoint" formula assumes that the figure representing the national per capita income is equated to 50 percent or to whatever midpoint is selected. Specifically, it would require the percentage of total expenditures derived from State funds in

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<sup>11</sup>Cornell, who has reduced all major types of grants to mathematical formulae, considers this form of grant as identical with the equalization model with the added provision that the recipient jurisdiction is required to make its contribution or lose a part of the grant. Cornell's "equalization model" is  $A_i = uN_i - rC_i$  where  $A_i$  is the amount of the central grant in the  $i$ th jurisdiction,  $u$  is the standard cost of the given service,  $N_i$  is the number of program units in the  $i$ th recipient jurisdiction,  $C_i$  is the measure of fiscal capacity in the  $i$ th recipient jurisdiction, and  $r$  is a "...rate necessary to yield all of the standard program in the first local subdivision, the one with highest fiscal capacity per unit of need..." or  $r = uN_1/C_1$ .



each State to bear the same ratio to 50 percent (or other mid-point) as the per capita income of each State bears to the national per capita income....

The fourth type or "ratio to national average" formula also uses the ratio between national and State per capita incomes to determine the ratios between the Federal and State percentages of participation for each State, but equates the total to 100. In more precise terms, the percentage of Federal participation for each State would bear the same ratio to the percentage of State participation as the national per capita income bears to the per capita income of the State....<sup>12</sup>

These bases, as will be seen subsequently, are found in various forms in the specific legislative proposals which have been introduced in Congress to provide financial aid to support primary and secondary education.

The fifth type of matching grant is similar to the matched equalization grant. It is the equalized percentage grant and it differs from the matched equalization grant in providing no fixed dollar limitation on the grant to any jurisdiction. The proportion required of any grantee is dependent upon the rate of utilization of its fiscal resources; the actual grant is contingent upon the willingness of the recipients to raise funds.<sup>13</sup> If the policy proposition that the ability of a government to raise revenue increases more than in proportion to increases in the usual tax bases is accepted (as it is generally accepted in the United States), then under the equalized percentage grant the wealthier units will receive proportionally greater aid with

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<sup>12</sup>Gerig, p. 8.

<sup>13</sup>Erik L. Lindman in "Equalization of School Support Among States by Federal Matching," Journal of Educational Research, XXXVII (1945), pp. 580-95 suggests this type of grant as ideally suited to provide financial aid to education.

less burden than will the poorer recipients. This might present no serious difficulty if the poorer states were able to attain a minimum service level although the danger of irresponsible spending by the wealthier recipient units might become a possibility.<sup>14</sup> Increasing controls by the granting jurisdiction to protect against the danger of irresponsible spending by grantees involves some loss of autonomy by the recipient units. Such a loss of autonomy should be avoided whenever possible. By avoiding loss of autonomy, the erosion of the values which inhere in a federal political system may be partially prevented.

The goals of financing a minimum service level of education in the United States, and of encouraging the States to expand their own programs of education consistent with the fiscal goals of interstate equity may be met by reliance on federal grants-in-aid or perhaps by some strange miscellaneous proposal. Therefore, the issue must now be faced: which of the various programs for educational aid will operate most effectively to accomplish these goals?

#### MAJOR FEDERAL LEGISLATIVE PROPOSALS

Proposals for the provision of federal support for primary and secondary education have increased greatly since the end of World War II. Nevertheless, despite the number of major legislative proposals introduced into the United States Congresses since 1946, for the

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<sup>14</sup>Ursula K. Hicks has noted this potential danger in Public Finance, (New York, Pitman, 1947), pp. 278-79. Although no discussion has been found on the general suggestion, it may be mentioned in passing that increasing controls might give way to a declining ratio at which the federal government would provide funds to a state which exceeds the minimum foundation program at more than some predetermined percentage.

purpose of analysis most of the proposals can be classified into a few manageable types. Determination of which proposals are major is necessarily an arbitrary process but what seems a common-sense basis for such determination has been adopted. Major legislative proposals are considered to be those on which legislative hearings have been held or which have been given other serious legislative consideration. Other proposals presenting unique features and which differ significantly from those proposals on which hearings have been held are also examined. But as a general principle, dissimilarity of types of proposals is the crucial consideration in the following analysis. When legislative proposals in the earlier years of the period under consideration have a recent counterpart, the discussion will be centered on the more recent proposal.

Tax sharing proposals, the first specific type of legislative proposal to be examined here designed to provide general financial aid to primary and secondary education has been given legislative consideration although such consideration appears to have been neither extensive nor serious. The most frequently suggested form of this proposal, popularly known as the Scrivner plan, provides for the transfer of a percentage of federal corporation and individual income taxes to the states to be used for educational purposes. In the proposal as introduced by Representative Scrivner in the Eighty-Fifth Congress, the bill<sup>15</sup> provides:

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<sup>15</sup>H. R. 2889 (1957). Representative Ralph Gwinn introduced the identical proposal in H. R. 4201 (1957).

...there is hereby authorized to be appropriated for the fiscal year beginning July 1, 1957, and for each of the three succeeding fiscal years, an amount equal to 1 per centum of the total of all income taxes collected on corporate and individual incomes, under the Internal Revenue Code of 1954, from all the States and Territories during the previous calendar year, to the respective States and Territories, in amounts equal to 1 per centum of the amount of such revenue collected in each such State or Territory, to be used for public schoolroom construction as prescribed by the law of each State or Territory, without any Federal direction, control, or interference.

A modified form of this proposal authorizes the use of the income tax revenue so appropriated for "...education purposes only..."<sup>16</sup> rather than for the more specific purpose of public schoolroom construction. Representative Teague introduced a somewhat similar version of this same plan which differed from H. R. 3256 primarily in not specifically limiting the authorization of appropriations to four fiscal years.<sup>17</sup>

Numerous antecedents of this general proposal can be found. In 1949 Representative Scrivner had presented his plan in H. R. 1582 providing for revenue use for educational purposes; Representatives Long and McVey have introduced similar proposals.<sup>18</sup> Representative Poff has attempted to reach the same legislative goal by the device of a joint resolution<sup>19</sup> embellished by vigorous prefatory statements obliquely attacking Federal governmental taxing programs and educational grants-in-aid plans.

Two recent modifications of this general tax sharing device merit

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<sup>16</sup>H. R. 3256 (1957) introduced by Representative Olin E. Teague.

<sup>17</sup>H. R. 3255 (1957).

<sup>18</sup>H. R. 6093 (1957); H. R. 6327 (1957).

<sup>19</sup>H. J. Res. 76 (1957) and H. J. Res. 673 (1956).

mention. One is Representative Hilling's variable sharing formula which would divert one per cent of the annual Federal income tax collections in states in which collections exceed ten billion dollars; two per cent in states in which collections are over five billion dollars but do not exceed ten billion dollars; three per cent in states in which collections are over one billion dollars but not in excess of five billion dollars; and five per cent in states in which collections do not exceed one billion dollars.<sup>20</sup>

The other modification appears in two closely related proposals. One, introduced by Senator Proxmire<sup>21</sup> authorizes appropriations varying the amount of funds payable to each state from one and one-half per cent of federal corporation and individual income tax collections in the fiscal year 1957 to three per cent for fiscal year 1958 and then to five per cent in succeeding fiscal years. Unlike other plans for sharing of tax revenues the rationale of this proposal is made explicit. After a somewhat florid declaration that "...Education has traditionally been, and should remain in the hands of the State and local governments. This is a cardinal tenet of the American creed,"<sup>22</sup> the bill, in Sections Two and Three, declares:

The Congress further finds that rapidly increasing costs of education, coupled with dynamic expansion of the school-age population, have placed financial burdens upon the State and local governments beyond the capacity of their traditional tax resources to bear.

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<sup>20</sup>H. R. 11828 (1958).

<sup>21</sup>S. 3606 (1958).

<sup>22</sup>Ibid. This statement is also reproduced verbatim in S. 3687 introduced jointly by Senators Proxmire, Morse, and Murray.

It is the purpose of the Congress, in enacting this Act, to make use of the internal revenue machinery of the Federal Government to collect and return to the States, for educational purposes, a part of the Federal individual and corporate income taxes paid by their residents. It is further declared to be the purpose of the Congress that no vestige of Federal control shall attach to funds so returned, except the requirements that they be used for educational purposes.<sup>23</sup>

S. 3687 provides similar declarations of rationale and similar bases for authorizing appropriations. The basis for distributing the revenue, however, is not a conventional state-of-origin plan. Instead the allotment to each state is to be an amount which bears the same relation to one and one-half per cent of the income tax collections in all the states as the school-age population<sup>24</sup> in each state bears to the nation's school-age population. After the first fiscal year of operation the authorized allotment increases from one and one-half to three per cent in the second fiscal year of the act's operation and to five per cent in the third and succeeding fiscal years. This proposal seems to resemble a grant-in-aid using a ratio-to-national-average basis for allocation and deriving the needed revenue from earmarked income taxes. However, because of the uniqueness of the tie to income tax collections, the proposal is classified here as an unusual form of tax sharing.

Since the end of World War II no conventional program of separation of tax sources to provide financial support for education has been considered seriously. Two proposals showing similarity to tax source

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<sup>23</sup>Ibid.

<sup>24</sup>School-age population is defined conventionally as that part of the population in the age group 5 through 17.

separation were H. R. 5313 introduced in the Eighty-Third Congress by Representative Osmer and Senator Hill's amendment to Senate Joint Resolution 20 introduced in the Eighty-Second Congress.<sup>25</sup> Osmer proposed that the Federal government return the entire proceeds, after paying the administrative costs, from the tax on tobacco and tobacco products. The payments to each state were to be made in the same ratio as the amount derived from tobacco consumption in each state bears to the total tobacco tax revenue. This suggestion, given practically no attention, seems much like a tax sharing proposal in which the sharing arrangements between state and federal jurisdictions are unilaterally beneficial to the states; in essence it is federal collection of a tax conceded to the state but without administrative expense to it. Senator Hill's plan provided that revenue from any lease granted the federal government on the outer Continental Shelf should be used as grants-in-aid for elementary, secondary, and higher education. However, the plan lacked clarity because the factual information on which it rested was inadequate and because its discretionary provisions were not definite. Indicative of the indefiniteness of the proposal was the provision that the grant-in-aid allocative pattern was to be recommended by an Advisory Council to be created by the law. However, Senator Hill's plan and Representative Osmer's plan are alike

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<sup>25</sup>Proposals almost identical with that of Senator Hill are H. R. 8372, 82d Cong., 2d Sess. (1954) introduced by Representative Angell; H. R. 7904, 84th Cong., 2d Sess. (1956) introduced by Representative Green of Oregon; H. R. 9689, 85th Cong., 2d Sess. (1958) introduced by Representative MacDonald; and H. R. 10290, 85th Cong., 2d Sess. (1958) introduced by Representative Udall. No legislative counterpart of Representative Osmer's proposal has been found.

since both seem to grant the states exclusive jurisdiction over the tax receipts after federal administration and collection of the tax. Perhaps even more accurately the plan might be characterized as the earmarking for educational purposes of the proceeds from a specific federal revenue source. Obscurity is found in both proposals. Outer Continental Shelf revenues are uncertain in amount<sup>26</sup> and their distributional basis undetermined. Furthermore, as will be seen subsequently,<sup>27</sup> adequate state-by-state tobacco consumption statistics upon which the Osmer's plan rests are not currently available on a basis that can be accepted without serious question. These facts, along with the somewhat dubious nature of the proposals, probably explain in large measure why they were never given significant consideration.

Most of the legislative measures which have been considered seriously have provided for financial aid by federal subventions. Even before World War II some consideration had been accorded suggestions to aid education. The most famous of the precursors of the postwar proposals was the Thomas-Hill-Taft bill<sup>28</sup> which was pushed so vigorously in the Seventy-Ninth Congress by the late Senator Robert A. Taft. An even earlier proposal, the Thomas-Hill Educational Finance Act of 1943<sup>29</sup>

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<sup>26</sup>Senator Hill, in introducing the proposal, indicated that total lease revenue might exceed forty billion dollars in the aggregate but uncertainty about rates of returns made prediction of the yearly revenue very tenuous if not impossible. Congressional Record, 82d Cong., 1st Sess. Vol. 97 (1951), p. 6237.

<sup>27</sup>Chapter III, p. 97.

<sup>28</sup>S. 181, (1945).

<sup>29</sup>S. 637, (1943).



suggested the development of the extensive legislative concern now manifest.

Fundamental similarities in the numerous major legislative proposals provide a basis for examination of them. Following the classification of general types of grants-in-aid, the fiscal plans contained in legislation to provide financial support for elementary and secondary education can be categorized as (1) unmatched flat grants, (2) matched flat grants, (3) flat grants with equalized matching, and (4) matched equalization grants. A consolidation of the major legislative proposals introduced which indicates the significant financial provisions as well as the related bills introduced is presented in Appendix A. In the choice of the specific act to which detailed consideration is given, the decision rests primarily on the time sequence of the bills but in some instances, ease of consolidation or political prominence of a suggested enactment has dictated its choice as the key bill. Such choices are reflected in the organization of the Appendix. Omitted from the digest of the laws are details concerning the administration of the various plans. This issue, to which some attention is devoted subsequently, sometimes seems to be the decisive factor in the final legislative action. Thus Senator Taft's proposal in 1947<sup>30</sup> seems to have been defeated as much because of the emotion aroused by the provision authorizing non-public schools to share in the appropriations as because of intrinsic fiscal defects. And the 1947 defeat of the bill to aid

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<sup>30</sup>S. 472, 80th Cong., 1st Sess.

education<sup>31</sup> was due as much to the violent Southern opposition springing from the United States Supreme Court decisions requiring eventual racial integration in public schools<sup>32</sup> as to the lack of merit in the bill. Important as these psycho-social factors may be, they are beyond the scope of this study.

Analysis of legislative proposals contained in the Appendix, like the discussions of the enactments, is based on copies of bills, the legislative hearings held on the various bills, and on digests of bills.<sup>33</sup> Furthermore, a detailed study of the Appendix will show that the classification of specific bills presents major problems in that while some bills seem to be unique they display a kinship to other suggested legislation that makes them appear also as a subtype of such an earlier proposal. Some proposals might have been placed in a different category than the one actually used. In every case, however, the classification finally adopted seemed as defensible as any other possible classification.

#### UNMATCHED FLAT GRANT-IN-AID PROPOSALS

Unmatched equalization grants do not seem to have been accorded as

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<sup>31</sup>H. R. 1, 85th Cong., 1st Sess. introduced by Representative Kelley of Pennsylvania.

<sup>32</sup>Brown v. Board of Education of Topeka, 347 U. S. 483 (1954) foreshadowed in Sweatt v. Painter, 339 U. S. 629 (1950).

<sup>33</sup>A complete list of the relevant hearings is found in the Bibliography. Digest of Public Bills with Selected Resolutions (Washington, Legislative Reference Service of the Library of Congress) has been published yearly since 1946 and is a valuable source of consolidated information about legislative proposals. The digested bills, however, apparently are not accorded equality of treatment since the detail provided is much greater for some bills than for others.

extensive legislative support as matched grants have received. The late Senator Taft is most closely connected with the unmatched equalization proposals introduced. In 1947 the first of the postwar Taft proposals<sup>34</sup> was designed to allocate funds to the states on the basis of educational load as measured by school-age populations and by the level of annual income payments. No state matching was required but the eligibility of the states to receive allotted funds was contingent upon the utilization of state resources at a level considered to represent an acceptable minimum. In the early years of the act, failure to utilize resources at a level deemed adequate would have led to reduced allotments to deficient states; in later years failure to utilize resources adequately would have led to complete denial of allotments to such states. This attempt to promote equalization grants encountered the frequently recurring argument that it was not just to extend aid to only some of the states since all states paid taxes from which the aid funds were derived.<sup>35</sup> As a result of this argument the Taft bill was approved by the Senate only after a provision allotting a minimum grant per school-age child for every state was approved. Thus the Taft proposal, which in the beginning was an equalization grant, lost its essential equalizing character.<sup>36</sup> The Taft bill as approved by the Senate in 1948 was

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<sup>34</sup>S. 472, 80th Cong., 1st Sess.

<sup>35</sup>Illustrative of this position is the statement of Senator Ives of New York during Senate debate on the bill. Congressional Record, 80th Cong., 2d Sess., Vol. 94 (March 24, 1948), p. 3351.

<sup>36</sup>Senator Millikin in a colloquy with Senator Taft indicated that the abandonment of the equalization principle by the provision of a minimum flat grant per pupil for each state was a "...very dangerous precedent...." Senator Taft did no more than imply agreement with

resubmitted the following year.<sup>37</sup> It was again passed by the Senate but the House of Representatives took no action on the proposal. Thereafter, unmatched equalization grants for education have received no serious attention from Congress.

Unmatched grants have been proposed regularly since 1947. Some of the early introductions reflected the immediate postwar concern for the effect of inflationary pressures on the relatively fixed incomes of teachers. These legislative proposals were designed to augment teachers' salaries. The Green-McGrath bill<sup>38</sup> would have provided funds directly to school districts and would have conditioned the allotment on the number of pupils in average daily attendance. On the other hand, the McCarran proposal<sup>39</sup> would have made allotments to the states on the basis of a variable scale related to the specific salary paid to each teacher. In 1947 Representative Landis also introduced legislation specifically to raise teachers' salaries;<sup>40</sup> in 1949 Representative Kearns presented a similar bill.<sup>41</sup> It should be noted that these proposals not only would have limited the recipient states in their determination of the area of their greatest educational need but also would

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Senator Millikin although it may be inferred that Senator Taft considered the provision a necessary political compromise without which passage of the bill was unlikely. Congressional Record, 80th Cong., 2d Sess., Vol. 94 (March 24, 1948), pp. 3346-51.

<sup>37</sup>S. 246, 81st Cong., 1st Sess. (1949).

<sup>38</sup>S. 81, 80th Cong., 1st Sess. (1947).

<sup>39</sup>S. 170, 80th Cong., 1st Sess. (1947).

<sup>40</sup>H. R. 1942, 80th Cong., 1st Sess.

<sup>41</sup>H. R. 2584, 81st Cong., 1st Sess.

have provided a direct salary subsidy to a single occupational group in the economy. Consequently, proposals specifically designed to augment teachers' salaries received little consideration between 1947 and 1958.

In 1958 the provision of funds for a teachers' salary supplement again was suggested.<sup>42</sup> The proposal of Representative Metcalf would authorize the designation of a part of each state's allotment to be made under the act as a teachers' salary component. However, there is no requirement that any part of the allotment actually be used for the augmentation of teachers' salaries. If all the funds allotted to a state are needed to remedy the shortage of school facilities in that state, then all funds may be so used. The teachers' salary component which is defined in the bill as a residual would not exist for that state.

Metcalf's bill was reported favorably to the full House Committee on Education and Labor by the Subcommittee which held hearings on it. A proposal by Senator Murray<sup>43</sup> is a counterpart of the Metcalf bill. Hearings were also held on the Murray bill. Both these bills would utilize detailed techniques to determine whether state effort to support education was adequate. Inadequate state effort, defined both in terms of utilization of annual state income and in terms of the dollar level of current public school expenditures per pupil, would be a basis for reducing state allotments for either salary assistance for teachers or for school facilities construction. Generally, however, most proposals not only for unmatched flat grants but also for grants of other types

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<sup>42</sup>H. R. 10763, 85th Cong., 2d Sess.

<sup>43</sup>S. 3311, 85th Cong., 2d Sess. (1958).

have been directed toward the provision of school facilities; they have not included provisions for teachers' salary supplements.

Unmatched flat grant proposals to provide support for elementary and secondary educational facilities have been numerous. The earliest of significant postwar proposals was that of Senator Aiken introduced in 1947.<sup>44</sup> Funds were to be provided for both public and non-public school aid. Allocations to states were to be based on the ratio between state and national totals of pupils in average daily attendance. Variation in the yearly appropriations authorized was provided; authorized appropriations after 1952 were to total not less than \$1,200 million. Both state and local school administrative units were required to provide a prescribed minimum support for education before allotments could be received.

Modification of the Aiken proposal has occurred frequently since 1947. None of the proposals specifically authorized appropriations as great as those provided in the Aiken bill although a number of them authorized such funds as Congress deemed necessary to carry out the purposes of the proposals. Variation in the basis for determining each state's allotment also is found. Representative Byrnes proposed that aid be extended on the basis of the state educational budget as it was related to the state income payments.<sup>45</sup> Each state was to receive an allotment if a given percentage of its income failed to yield at least 60 per cent of its current public school expenditures per child in average daily attendance. The percentage was to be increased gradually

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<sup>44</sup>S. 199, 80th Cong., 1st Sess.

<sup>45</sup>H. R. 4711, 81st Cong., 1st Sess. (1949).

until it reached a specified maximum.

In 1954 Representative Bailey partially adopted the allocative formula of the Aiken proposal but with the added proviso that allotments were to be varied inversely with income payments made to each state.<sup>46</sup> The allocative formula of the Bailey bill has reappeared in at least five major legislative proposals which would extend aid by the unmatched flat grant technique (See Appendix A).

The 1954 proposal of Senator Clements<sup>47</sup> incorporated the Aiken allotment formula completely. The major modification of the Clements' bill was the inclusion of minimum and maximum limitations on the allotments to the states. A specific dollar minimum was prescribed for each state; each state's maximum was defined as a percentage of state and local expenditures for public school construction.

One of the more elaborate of the unmatched flat grant proposals also was introduced in 1954 by Representative Holt.<sup>48</sup> Holt's plan was unique in the unusual allotment formula it embodied. Seemingly the formula was the outgrowth of the analysis of Dr. Erick L. Lindman.<sup>49</sup> The bill provided that for those states in which a small fraction (0.4 of 1 per cent) of the state income would not yield a minimum amount (\$20) per school-age child an equalizing allotment would be made. The

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<sup>46</sup>H. R. 7467, 83d Cong., 2d Sess.

<sup>47</sup>S. 259, 83d Cong., 2d Sess.

<sup>48</sup>H. R. 8868, 83d Cong., 2d Sess.

<sup>49</sup>Dr. Lindman, Professor of School Administration at George Peabody College for Teachers, presented his position in Federal Aid for School Construction, Hearings, Subcommittee of U. S. House Committee on Education and Labor, 83d Cong., 2d Sess. (Washington, 1954), pp. 38-47.

equalizing allotment would be the amount needed to provide the prescribed minimum sum. After the equalizing allotments had been ascertained any additional appropriations would be distributed on the basis of the formula originally proposed in the Aiken bill. States were encouraged to spend a prescribed minimum of their income on education by a provision that would have reduced allotments to states failing to spend at such a level.

The Aiken formula provided the allocative basis for one-half of the appropriations authorized in the 1957 Morse-Clark bill.<sup>50</sup> The other one-half was to be allocated on the basis of the ratio of the weighted state school-age population to national weighted school-age population. To determine the weighted school-age population, actual school-age populations would be adjusted in such a manner that actual and weighted populations would be equal in the state with the highest income per school-age child. As state income per school-age child decreased relative to that of the wealthiest state, the weighted school-age population would be increased correspondingly.

Unmatched flat grants, then, display wide variance not only in the appropriations authorized but also in the allocative bases proposed. Some of the proposals contain partially equalizing provisions; some provide penalties for failure to make certain prescribed minimum effort toward educational support. Either directly or indirectly all of the major proposals utilize some measure of school-age population (either total or in average daily attendance) as a basis for determining the allotment of authorized appropriations. Nevertheless, although the use

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<sup>50</sup>S. 1134, 85th Cong., 1st Sess.



of the unmatched flat grant technique is a common characteristic of these proposals, diversity of the proposals remains a predominant fact about them.

#### MATCHED FLAT GRANT-IN-AID PROPOSALS

Except for the legislative introduction of Senator Robertson<sup>51</sup> in 1949, no major legislative consideration was extended to matched flat grant proposals until 1954. In 1954 Representative Kearns offered a unique legislative program.<sup>52</sup> The funds to be authorized by his bill were to be distributed among states on the basis of the ratio of the cost of constructing needed classrooms in each state to the total national cost of such construction. The somewhat odious administrative task of determining the correct size of the state needs was to be delegated to the United States Commissioner of Education. Equal federal and state matching of allocated funds was to be required.

Introductions of matched flat grant proposals in 1955 were numerous (see Appendix A); they were also quite unlike the Kearns' proposal of the previous year. Typical of the 1955 bills is the Humphrey-Ives plan.<sup>53</sup> Under the provisions of this bill funds were authorized as Congress found necessary to implement the act and state allocations were to be based on the often-suggested state-to-national school-age population ratios. States were required to match federal funds equally.

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<sup>51</sup>S. 137, 81st Cong., 1st Sess.

<sup>52</sup>H. R. 10052, 83d Cong., 2d Sess.

<sup>53</sup>S. 480, 84th Cong., 1st Sess.

In both the allocational basis and the matching requirement the Humphrey-Ives bill was like the Robertson proposal of 1949. However, the Robertson bill was essentially a public-works program with administration vested in the Reconstruction Finance Corporation; the Humphrey-Ives bill was a more conventional educational aid program with administration delegated to existing federal and state educational agencies.<sup>54</sup>

In 1957 the extensive introduction of matched flat grant proposals continued. The usual pattern of great variation in the appropriations authorized also continued but other alterations of significance also were made. Most famous of the 1957 proposals was the bill introduced by Representative Kelley.<sup>55</sup> Initially it provided that state allotments were to be made on the state-to-nation school-age population ratios and that equal federal-state matching of funds was to be required. The House Committee on Education and Labor, in its version of the Kelley bill, retained the original bill's formula for distribution of one-half of the reduced appropriations that were authorized. Equal matching was prescribed for allotments both from this portion of the funds and also for the other one-half to which a different and more complicated formula

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<sup>54</sup>The rash of matched flat grant proposals in 1955 may owe its appearance in no small part to the 1954 testimony of Dr. Edgar Fuller, Executive Secretary of the Council of Chief State School Officers. Dr. Fuller argued that the flat grant system was becoming a more popular technique for distributing school aid with "...the equalization that is inherent in the Federal tax system itself..." as the appropriate device for redressing the fiscal inferiority of the relatively poor states. Federal Aid for School Construction, Hearings, Subcommittee of the U. S. House Committee on Education and Labor, 83d Cong., 2d Sess., p. 65.

<sup>55</sup>H. R. 1, 85th Cong., 1st Sess. This bill had a counterpart in the 1956 Kelley bill, H. R. 7535, 84th Cong., 2d Sess., which was defeated by the House of Representatives.

was based on state allotments computed by subtracting the product of .55 and the state's ratio of income per child of school age to the corresponding national income datum from 1.00. This allotment ratio was then used as a weight for adjusting the school-age population of the state; the state adjusted school-age population to national adjusted school-age population ratio was to be the basis for allocating the second half of the total appropriations authorized. Many bills were introduced in 1957 which differed from the original Kelley proposal in no major substantive way except for the appropriations authorized; reintroductions in 1958 also followed the pattern of that bill (see Appendix A).

The characteristics of the matched flat grant proposals can be delineated. The proposals enjoyed a vogue in the early years of the period under survey, disappeared quickly from the group of seriously considered legislative proposals, and then resurged in recent years. No clearly discernible reason for the resurgence can be determined though the willingness of representatives of professional educational organizations<sup>56</sup> to accept the equalizing effects of the federal tax system as adequate to redress state fiscal disparities may have been an important contributing factor.<sup>57</sup> The proposals for matched flat

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<sup>56</sup>This characterization of groups such as teachers' college faculty and administration and members of educational organizations such as the National Education Association and the several state associations is not a happy one. Other professions in other academic disciplines (such as the American Economic Association, the American Philosophical Association, or the American Mathematical Society) are equally professional and no less interested in the quality and quantity of education in America. But rather than coin a new term "professional educational organization" will be given its popular, although only somewhat inaccurate meaning here.

<sup>57</sup>Professional economists have seldom appeared to testify on federal educational grant proposals. For example an examination of the 1955

grants, as for most kinds of grants, displayed marked variability in the appropriations authorized. However, only two of the proposals did not utilize the state-to-national school-age population ratio as the basis for allocating appropriated funds. Of the two other allocative programs, one involved a difficult administrative plan for distributing funds on the basis of classroom needs; the other adopted a complicated variant of the more common school-age population allocative formula. It should be noted that the most comprehensive legislative consideration was reserved for the most complicated of the matched flat grant proposals, a plan which still commands legislative attention.

#### LEGISLATIVE PROPOSALS FOR FLAT GRANTS-IN-AID WITH EQUALIZED MATCHING

Until very recently in the postwar period, legislative proposals to provide federal financial support for elementary and secondary education by the use of flat grants-in-aid and equalized matching continually have been present. The first of the major legislative suggestions to utilize such an aid plan was a bill introduced by Senator Neeley and

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hearings on federal aid proposals which totaled over 1300 pages reveals that only one economist, Frank L. Fernbach, testified in the capacity of a professional economist. The testimony of Mr. Fernbach, of the American Federation of Labor-Congress of Industrial Organizations research department was introduced obliquely during the presentation of the director of the AFL-CIO department of legislation. Other persons who testified may have been trained economists but their testimony was given in other official capacities. However, the hearings are replete with testimony of representatives of professional educational organizations including such diverse groups as the National Education Association, the Pontiac, Michigan Board of Education, and the Derby, Kansas public school administration. Federal Aid for School Construction, Hearings, Subcommittee of the U. S. House of Representatives, Committee on Education and Labor, 83d Cong., 2d Sess. (Washington, 1955), Pt. I, pp. iii-ix; Pt. II, pp. iii-viii; Pt. III, pp. iii-xii.

ten other senators.<sup>58</sup> The allotments were to be based on the recurrent formula of state-to-nation school-age population ratios. But equal federal-state matching suggested earlier gave way to variable federal matching percentages falling between 40 per cent and 60 per cent of the authorized state school construction cost. The federal percentage was to be determined by utilizing the linear interpolation formula. The most favorable percentage was to be assigned to the state with the lowest three-year average per capita income; the least favorable to the state with the highest of such state incomes. The federal percentages for other states were to be based on linear interpolation which would be varied inversely with the prescribed state income data. This proposal, as an examination of Appendix A reveals, has been reintroduced in Congress frequently.

A second major legislative introduction in 1949 was the Humphrey bill to provide aid in meeting the need for school facilities.<sup>59</sup> It followed the allocative formula of the Neeley bill but proposed that federal matching percentages be determined by the ratio-to-midpoint formula. Like the Neeley bill the Humphrey proposal would have utilized the three-year average annual per capita income. The federal matching percentages were to bear the same ratio to 50 per cent as the state income bore to that of the United States but federal percentages were not to exceed 75 per cent nor to fall below  $33 \frac{1}{3}$  per cent. As it frequently happens, modifications of some of the features of this bill led

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<sup>58</sup>S. 287, 81st Cong., 1st Sess.

<sup>59</sup>S. 1670, 81st Cong., 1st Sess.

to closely related legislative introductions.

The Humphrey bill, though it was not reported favorably by the Senate Committee on Labor and Public Welfare which held hearings on it, did provide the basis for a legislative introduction on behalf of the Committee.<sup>60</sup> The Committee proposal changed the specific dollar authorization of appropriations contained in the Humphrey bill and provided authorization of appropriations as Congress found necessary. It also provided that federal matching percentages were to be determined by the linear interpolation formula of the Neeley bill rather than the ratio-to-midpoint formula of the original Humphrey bill. The committee bill was passed by the Senate but received no further favorable legislative action. Once again modifications of the Humphrey bill, both as it was introduced and as it had been altered by the Committee, were subsequently introduced into both the House of Representatives and the Senate.

In 1955 Senator Smith of New Jersey and a group of co-sponsors introduced a bill<sup>61</sup> which embodied substantially the recommendations President Eisenhower had made to the Congress.<sup>62</sup> The plan for the state allotments of the appropriations authorized was to be the state-to-national school-age population ratios. Federal matching percentages

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<sup>60</sup>S. 2317, 81st Cong., 1st Sess. (1949).

<sup>61</sup>S. 968, 84th Cong., 1st Sess. Title III of the bill contained the provisions providing subventions to aid elementary and secondary education.

<sup>62</sup>President Eisenhower's recommendations to Congress were made in a special message on February 7, 1955. The text of the message is found in Congressional Record, 84th Cong., 1st Sess., Vol. 101 (February 7, 1955), pp. 1243-44. The recommendations were not limited to a program of financial grants for aid for elementary and secondary education.

were to be determined by a ratio-to-midpoint formula; federal percentages were not to exceed 60 per cent nor be less than 40 per cent of the cost of any approved project. Between these percentages the federal percentages were to be varied inversely with state three-year annual average per capita income.

The proposals for the use of federal educational subventions utilizing the flat grant and equalizing matching technique have displayed less diversity than has been shown in the general types of grants thus far examined. However, the usual diversity in authorized appropriations is encountered in a survey of the proposals. In the choice of an allotment basis the recurring school-age population ratio formula is prevalent; no significant variant of this arrangement appeared in the major legislative introductions of this type. Of Gerig's four methods for determining matching percentages three are utilized; only the bracket method has no legislative representative. A moderate preference for the ratio-to-national average formula seemed to exist but the ratio-to-midpoint technique also commanded important legislative support. Moreover it may be noted in conclusion that although since 1955 major legislative introductions proposing flat grants with equalized matching have not appeared, the past support for this technique for educational aid has been provided by influential Congressmen; among them Senators Neeley, Bricker, H. Alexander Smith, Humphrey, Hill, and Murray, and Representatives Bailey, Perkins, and Elliott.

#### LEGISLATIVE PROPOSALS FOR MATCHED EQUALIZING GRANTS

The first major legislative proposal for matched equalization grants

to aid elementary and secondary education appeared in 1953 in Representative Frelinghuysen's proposal<sup>63</sup> but it was in 1955 that the number of such proposals increased sharply. The Frelinghuysen bill of 1953 would have determined the state allotments from the appropriations authorized by first determining the "federal percentages" for each state and then by reducing the products of the state school-age populations and the federal percentages to the ratios they bore to the sum of such products of all the states. Federal percentages, not to exceed 75 per cent nor fall below 33 1/3 per cent, were to be determined by the use of the ratio-to-midpoint technique. The percentages were to be 100 per cent less the percentages which bore the same ratio to 50 per cent as the state per capita income bore to the national per capita income. A minimum dollar state allotment was to be provided. In the use of the funds, the federal share was not to exceed either 40 per cent of the total construction cost of any approved project or a flat dollar amount per school child to be accommodated, with the lesser sum to prevail. Other similar bills were introduced in subsequent Congresses.

However, Senator Cooper's bills of 1953<sup>64</sup> were both better known and more seriously considered than the Frelinghuysen proposal. The allotment plan of the first Cooper bill was almost identical with the Frelinghuysen plan but in the partial incorporation of a modification of the Hill-Burton principle of distribution,<sup>65</sup> the second Cooper bill

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<sup>63</sup>H. R. 9841, 83d Cong., 1st Sess.

<sup>64</sup>S. 2294 and S. 2601, 83d Cong., 1st Sess.

<sup>65</sup>The "Hill-Burton principle" is generally applied to the grant-in-aid allotment technique embodied in the Hospital Survey and Construction Act, 60 Stat. 1040 (1946). The principle is analyzed in Johnson, pp. 173-75.



was a pioneer in major legislative introductions. The second Cooper bill would have adopted completely the Hill-Burton principle for distributing one-half of the appropriations; the other one-half would have been distributed on a modified ratio-to-midpoint basis.

As the Hill-Burton principle would have operated in the second Cooper proposal federal percentages were to be computed for each state. These percentages were to be derived by using the ratio-to-midpoint technique; however, in computation 45 per cent rather than 50 per cent was to be used as the midpoint. Then for each state a percentage was to be determined which bore the same relation to the midpoint of 45 as the state per capita income bore to the national per capita income; the federal percentage was to be 100 per cent less the state figure. A maximum federal percentage of 75 and a minimum of  $33 \frac{1}{3}$  were established. Next, the state school-age populations were to be multiplied by the squared federal percentages and the resulting state products reduced to the ratio they bore to the sum of such products. The resulting ratios were to be the state allotment shares. The squaring of the percentages, the characteristic feature of the Hill-Burton principle, has the effect of increasing the relative share of total funds accruing to the poorer states with the larger federal percentages.<sup>66</sup> The second Cooper bill

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<sup>66</sup>There seems to have been no evidence submitted to establish the allocations by the use of squared percentages as more defensible than they would be without squaring. A simple illustration may suffice to indicate the unanswered question the application of the Hill-Burton principle would have raised. Two states, A and B, with per capita incomes of one thousand and two thousand dollars respectively and with identical school-age populations would have federal percentages of 70 per cent and 40 per cent if the specific provisions of the Hill-Burton principle in the second Cooper act were applied. If appropriated funds were distributed on the basis of these unsquared percentages state A

reduced this effect somewhat by providing that the half of the funds not allocated on the Hill-Burton principle were to be allotted by multiplying the state school-age populations by the unsquared federal percentages and then reducing these products to the ratios they bore to their sum. The total state allotment for any state was not to exceed a specific percentage of total funds appropriated nor was any state to receive less than a prescribed dollar minimum. The Frelinghuysen proviso on matching was adopted in both the Cooper bills. The Education Subcommittee of the Senate Committee on Labor and Public Welfare reported the second Cooper bill favorably on July 9, 1953 but no further Congressional action was taken on it.

Subsequent Congressional introductions varying only slightly from the second Cooper bill have continued to appear. Representative Frelinghuysen whose initial proposal had pioneered the matched equalization plans accepted the allotment formula of the second Cooper bill. His second bill, introduced in 1954,<sup>67</sup> was reported favorably by a special subcommittee of the House Committee on Education and Labor. Like its Cooper counterpart however, no further action was taken on the

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would receive \$1.75 for each one dollar received by State B. If the percentages are squared State A would receive approximately three dollars for each one dollar received by State B. The important unanswered question is whether State A should receive aid funds of one and three-fourths times, twice, or three times as great as State B. If, as it is so often assumed, the per capita income is an accurate measure of relative state needs, then it would seem that the appropriate ratio for aid to State A and State B would be two to one. As a matter of fact, Studenski in his detailed study of the measurement of relative state need, did conclude that state fiscal capacity and state needs were best measured simply by per capita income payments to individuals. Studenski, p. 1.

<sup>67</sup>H. R. 10149, 83d Cong., 2d Sess.

new Frelinghuysen bill.

In 1955 Senator Hill and twenty-nine other Senators introduced an aid proposal<sup>68</sup> which in allotment technique followed the Hill-Burton principle as it had been embodied in the second Cooper bill. The full appropriations were to be allotted on this principle with minor modifications. Maximum and minimum federal percentages of 70 and 40 were to replace those of 75 and  $33\frac{1}{3}$  contained in the Cooper bill. The dollar level of the minimum state allotment was to be doubled. A ratio-to-midpoint formula was established for the formulation of federal matching percentages which were to fall between  $33\frac{1}{3}$  and  $66\frac{2}{3}$  per cent. The midpoint adopted was to be 50 per cent and state percentages were to bear the same relation to this midpoint as the state per capita income bore to the national per capita income. The federal percentage for each state was to be 100 per cent minus the state percentage.<sup>69</sup> The use of the squared federal percentages would provide the same relatively increased aid for the poorer states that has been indicated previously as a characteristic effect of the application of the Hill-Burton principle. However, the feature of variable matching percentages would have produced the added effect of more nearly equalizing the efforts required of the poor and the wealthy states to provide the funds for taking up the full state allotment.<sup>70</sup>

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<sup>68</sup>S. 5, 84th Cong., 1st Sess.

<sup>69</sup>Under the Hill-Burton Act a federal matching percentage of  $33\frac{1}{3}$  per cent of the cost of approved projects was provided for all states.

<sup>70</sup>This is in sharp contrast to the requirement in the Hill-Burton Act that all states match federal grants on the same basis. This Hill-Burton Act provision necessitates a greater effort from poorer states

Senator Clements also presented a matched equalization grant program to aid education. His 1955 legislative entry<sup>71</sup> authorized the same appropriations as the 1955 Hill bill but the allotment formula was more complicated. In the Clements bill the total appropriation was separated into two equal parts. Different allotment formulas were to be applied to each half. One-half was to be allocated among the states on the basis of state-to-national "effort" ratios; the other one-half on the basis of state-to-national "need" ratios. State effort indices, which were to be computed as a preliminary step in determining the effort ratios, were defined as the products of the state school-age populations and the quotients secured when the averages of total state and local school expenditures for the previous three years were divided by state income payments received in the most recent year. The national effort index was the total of the state effort indices. State need indices, also to be computed as a preliminary step, were defined as the products of the state school-age populations and the quotients secured when the United States average annual per capita income was divided by the state averages of annual per capita income; the national need index was the total of the state need indices. The state allotments from the equally divided appropriations were then determined to be the amounts which bore the same relation to appropriated sums as the state effort and need indices bore to the national effort and need indices. The matching limits

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to raise the funds to secure the full amount of the allotment than it necessitates from richer states. This problem of the Hill-Burton Act is analyzed in some detail in Johnson, pp. 174-75.

<sup>71</sup>S. 4, 84th Cong., 1st Sess.

established provided that on no approved project was the federal share to exceed  $66 \frac{2}{3}$  per cent nor to be less than  $33 \frac{1}{3}$  per cent of the total. It should be noted that the effect of the effort allotments would have been to extend relatively more aid to those states which when compared with other states are using the greater relative share of their income for educational support.<sup>72</sup> On the other hand, the effect of the need allotments was to extend greater aid to the poorer states.

Modifications of the Clements' proposal also were presented. Allotment of all appropriated funds on the basis of the need ratios of the Clements' proposal was suggested in a bill introduced by Representative Watts.<sup>73</sup> Senator Smith of New Jersey introduced a proposal<sup>74</sup> allocating all funds on the basis of the effort ratios, modified to provide that any state whose average state and local expenditures per public school child equalled the national average of such expenditures would be assumed to have a state effort index corresponding to the national effort index. Between  $33 \frac{1}{3}$  and  $66 \frac{2}{3}$ , the federal matching

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<sup>72</sup>The long-run incentive effect of such a proposal might have become very great had it become more than an emergency program. Wealthy states, spending a relatively small portion of their income on education, might have been encouraged to increase educational expenditures sharply and thus to increase their share of federal funds; less wealthy states might have found such an increase very difficult. But the existing state pattern of state income then being spent on education would have favored the poor states in the 1953-1954 school year. Details on state and local public educational expenditures as a percentage of income payments is found in a research report of the National Education Association incorporated in the testimony of Earl J. McGrath, Federal Aid to States for School Construction, 85th Cong., 1st Sess. (Washington, 1957), Pt. I, p. 188.

<sup>73</sup>H. R. 1633, 84th Cong., 1st Sess. (1955).

<sup>74</sup>S. 2905, 84th Cong., 2d Sess. (1956).

percentages were to be varied inversely with the state income per school-age child and within the prescribed limits, specifically were defined to be the state allotment percentages.

The President's 1955 call for action to remedy the shortage he found to exist in school facilities led to a number of legislative proposals for matched equalization grant-in-aid programs. Mr. Frelinghuysen submitted a proposal<sup>75</sup> in response to this call which introduced a new element into the formula for determining state allotments. Basic allotments were to be determined by adjusting state school-age populations by allotment ratios. The state allotment ratios were simply the need ratios as formulated in the Clements' bill of 1955 and expressed as decimal fractions rather than as percentages. State allotments were to be reduced to any state which failed to spend as great a percentage of its income per school-age child on school expenditures as was spent on an average nationally. However, if the state average dollar expenditure per school-age child equalled the national average dollar expenditure per school-age child, no reduced allotment penalty was to be imposed. The state allotment ratios were also to be the federal matching percentages within 33 1/3 per cent and 66 2/3 per cent limits. Extensive legislative modifications and duplications of this proposal have recurred since 1955 (see Appendix A) varying the appropriations authorized, altering the decimal fractions used in computing the allotment ratios, and changing the matching percentages. Some of these rather complicated proposals are now before the Congress; they will

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<sup>75</sup>H. R. 3976, 85th Cong., 1st Sess.

probably continue to appear as long as the question of federal aid to education remains a public policy issue of importance.

An attempt to synthesize proposals for matched equalization grants to provide federal support for elementary and secondary education is very difficult. Other types of proposals have seemed to display a veiled, but nonetheless discernible, pattern of development. Such a pattern in the evolution of matched equalization grants, if a pattern exists at all, is more obscure. The usual disparity in the appropriations authorized again appears but the allotment bases display great diversity which legislative consideration did little to reduce. Through time complications in proposals were developing. Motivating the proposals seems to have been an attempt to provide aid to the more needy states that were willing to make significant efforts to meet their needs by extensive use of their own fiscal resources. However, no consensus as to the preferable techniques for either determining the extent of need or for determining the effort that can be expected in meeting the need seems to exist.

A survey of the major types of aid proposals that the federal government might utilize in providing fiscal support for elementary and secondary education seems to indicate that grants-in-aid are the most practicable technique. Miscellaneous suggestions of separation of tax sources, tax sharing and even the creation of advisory commissions have been made but the preponderance of support seems to have been received by grants-in-aid proposals.

Grants-in-aid may be undertaken to accomplish many goals and the grants may take many forms in attempting to reach the chosen goals. In

education, however, the most prominent legislative ends apparently are the achievement of a minimum level of educational facilities in all states and a stimulation of improvements in the quantity and quality of education provided by the states. Stimulation grants of various types rather than full equalization grants seem to be more likely to receive favorable Congressional action if favorable action does occur.

Stimulation grants may take one of five major forms although in the field of education the two types (the matched percentage grant and the equalized percentage grant) which provide no fixed dollar limitation on the grant to any state, have not received legislative consideration. The other three major types of grants (matched and unmatched flat grants, matched equalization grants, and flat grants with equalized matching) have been represented by legislative proposals to aid elementary and secondary education financially.

The examination of specific legislative enactments comprising the types of grants represented indicates that wide variation is characteristic both of the types of grants and of the proposals comprising each class of grant. The matched flat grant proposals which in the early years of the period under consideration seemed to be in a legislative ascendancy apparently have lost legislative favor. In recent years the unmatched flat grant technique for aid, currently represented by Representative Metcalf's proposal, seems to have acquired significant legislative support. On the other hand, the more complicated types of grants represented by the bills incorporating the Hill-Burton aid formula, modifications of this formula, and even more complicated formulae, seem to have lost popularity. Matched flat grants have continued to



reappear constantly and to be given serious consideration as indicated by the strong, if not sufficient support, for the Kelley bills in 1955, 1956 and 1957. Flat grants with equalized matching have been accorded serious legislative study although both the number of introductions and the degree of support have been less than found for the various forms of flat grants.

If the numerous legislative proposals are considered in the aggregate, diversity is the foremost characteristic encountered. Appropriations authorized range from relatively small amounts to the potentially limitless amounts that authorizations "as Congress deems necessary" may imply. Allocative bases run from the relatively simple, but often-proposed, state-to-national school-age population ratios to the complicated modifications of the Hill-Burton principle. Matching formulae are also widely varied. No simple synthesis of these divergent elements seems to be defensible. In the final analysis the economic similarities probably can be ascertained only as the economic and administrative effects are determined and compared.

### CHAPTER III

#### DEVELOPMENT OF A STATISTICAL FRAMEWORK FOR THE MEASUREMENT OF THE ECONOMIC EFFECT OF LEGISLATIVE PROPOSALS

Intelligent choice among the various legislative proposals for federal financial support of primary and secondary education seems to rest, in no small part, on the relative consonance of the proposals with the maximization of fiscal equity. Analysis of this issue must proceed, therefore, to an examination of the impact of the fiscal system upon which the specific proposals would be grafted. This raises the questions of the incidence of taxes upon various income groups in the several states.

In passing it should be granted that equity analysis can never be more than partial. The earlier premise that in the last analysis equity is personal retains its validity. But the physical impossibility of calculating the net fiscal burden of each person in a nation of more than 165 million persons is apparent. An approximation of this net fiscal burden of various income groups is probably the best that can be secured. No denial of the disparities among members of income groups is even remotely implied. Rendering the problem manageable requires a compromise with reality.

Likewise, it would be a mistake to fail to recognize the differential impact of local fiscal policies as they impinge upon members of

income groups within a state. Abstracting from this differential impact, however, seems defensible on two bases. First, the problem can be kept relatively manageable only by this abstraction and second, if states recognize the equity consideration presupposed hereafter to be valid, then state policies do (or will) operate to reduce intrastate inequities.

Change, as a pervasive attribute of modern economic life, will also cause shifts within states through time. Perhaps most economic change in times of relative peace is evolutionary and, therefore, not rapid. Consequently, it should be remembered that while a static analysis may be pursued with profit, it remains true that time-produced alterations destroy some of the apparent validity of conclusions predicated on those static assumptions.

Once the preliminary but general qualifications have been made explicit, the rationale underlying the measurement of the economic effects of the proposals under consideration may be detailed. The rationale is a two-part one. First, the burden of taxation within the several states is determined by income brackets and second, changes in net tax and expenditures burden resulting from alternative proposals are related to the prevailing fiscal structure. Presumably, and in the absence of other offsetting disadvantages embodied in the proposal, the economically most desirable proposal would be that which moves closest to the concept of fiscal equity presented earlier.

#### ALLOCATION OF FEDERAL TAXES TO THE STATES

The initial step is to determine a defensible basis upon which the total tax burdens falling upon the several states may be determined.

Of paramount importance is the determination of the state-by-state incidence of federal taxes. For reasons to be discussed subsequently it was decided that an attempt would be undertaken to confine the analysis to the year 1954.

Fortunately allocation of federal taxes among the states can be undertaken on the basis of a methodology already presented and modified by Professor Mabel Newcomer<sup>1</sup> and Selma J. Mushkin and Beatrice Crowther.<sup>2</sup> In some relatively minor cases the allocative procedures of these two studies were not identical so a choice of procedures was required. As will be explained subsequently in each case, choice finally was grounded in what seemed the preferable deductive or methodological reasoning. Generally, insofar as it had been possible in the later Mushkin-Crowther study, the techniques utilized in the Newcomer study were approximated and common bases for allocation of federal taxes to the states adopted.<sup>3</sup>

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<sup>1</sup>Mabel Newcomer in Federal, State, and Local Fiscal Relations, U. S. Treasury Department Committee on Intergovernmental Relations, 78th Cong., 1st Sess. S. Doc. 69 (1943), pp. 185-225.

<sup>2</sup>Selma J. Mushkin and Beatrice Crowther, Federal Taxes and the Measurement of State Capacity, U. S. Department of Health, Education, and Welfare, Public Health Service, Division of Public Health Methods (Washington, 1954), pp. 5-15. This work also discusses several lesser known states studies of federal tax burdens. These studies seem considerably less precise than either the Newcomer, or the Mushkin and Crowther study. A study by Paul Studenski in 1943 deals in a more general way with the question of fiscal capacity of the states. Measurement of Variations in State Economic and Fiscal Capacity, Federal Security Agency, Social Security Administration, Bureau of Research and Statistics Memorandum No. 50 (Washington, 1943).

<sup>3</sup>Mushkin and Crowther, p. 14, Table 2, indicates the bases of allocation used in both the Newcomer study and in the Mushkin-Crowther study.

The data for the federal tax collections for 1954 were taken from the official releases of the Internal Revenue Service. These taxes were then allocated among the several states yielding the results shown in Table I. Individual income tax payments were allocated among the states on the basis of collections in those states. Seemingly this allocation is subject to no serious difficulty but a possibility of some imprecision should be noted. Internal revenue individual income tax collections are classified on the basis of the "...location of the internal revenue district in which the return was filed...."<sup>4</sup> In one case, the classificatory procedure may lead to an error of some size since residents of New Jersey and Connecticut may file returns in the New York internal revenue district. Earlier studies encountered a similar problem in the case of Virginia and Maryland residents who filed returns in the District of Columbia internal revenue district.<sup>5</sup> This latter problem, however, has been eliminated almost entirely by the classification of returns filed in the District of Columbia in the state indicated by the taxpayer's address.<sup>6</sup> Nevertheless, probably the best allocative technique, imperfect though it may be, is to assign the individual income tax to the states on the basis of collections. Likewise, estate and gift taxes are probably best allocated among the states on the basis of collections.

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<sup>4</sup>U. S. Treasury Department, Internal Revenue Service, Statistics of Income: 1954, Individual Income Tax Returns for 1954, I.R.S. Publication No. 79 (Washington, 1957), p. 24.

<sup>5</sup>Newcomer, p. 207.

<sup>6</sup>Statistics of Income: 1954, Individual Income Tax Returns for 1954, p. 24.

TABLE I

ESTIMATED INCIDENCE OF FEDERAL TAXES, BY MAJOR CATEGORIES, BY STATES, 1954  
(Thousands of Dollars)

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State	Personal Income Tax <sup>a</sup>	Corporation Income Tax <sup>b</sup>	Excise Taxes <sup>c</sup>	Social Insurance Contributions <sup>d</sup>	Gift and Estate Taxes <sup>e</sup>
Alabama	223,474	129,072	125,458	53,332	3,673
Arizona	122,154	92,502	48,145	23,885	2,594
Arkansas	112,351	62,385	76,156	25,947	2,443
California	2,712,535	2,239,400	982,174	491,174	95,098
Colorado	242,683	176,398	109,539	44,901	7,633
Connecticut	579,527	735,711	176,372	119,078	32,816
Delaware	122,882	281,808	32,490	28,652	30,440
Florida	441,261	582,975	219,946	105,372	20,363
Georgia	310,837	240,935	238,834	75,229	7,167
Idaho	68,057	25,814	37,669	12,940	1,074
Illinois	2,131,725	1,409,037	621,662	407,427	59,137
Indiana	684,031	268,900	220,486	131,164	11,989
Iowa	324,799	167,794	146,330	63,188	8,600
Kansas	285,953	126,921	126,410	60,712	11,291
Kentucky	279,260	228,027	135,682	64,787	7,624
Louisiana	301,572	161,340	118,651	58,016	8,622
Maine	94,161	131,223	55,300	27,202	4,139
Maryland	511,408	415,182	170,230	105,570	24,119
Massachusetts	861,447	1,103,566	371,851	201,558	41,005
Michigan	1,523,997	761,525	387,222	271,157	41,536
Minnesota	428,629	311,924	198,011	103,607	11,620
Mississippi	93,956	58,082	64,887	25,113	2,056
Missouri	636,757	546,405	307,757	149,227	21,615
Montana	89,707	27,966	46,583	14,455	1,427
Nebraska	176,026	107,560	108,908	44,911	5,927
Nevada	55,585	47,326	21,268	9,144	7,411
New Hampshire	74,769	98,955	41,409	18,384	3,171
New Jersey	1,166,222	909,958	372,976	210,646	32,856
New Mexico	82,691	32,268	40,178	14,799	1,287
New York	3,643,412	4,224,959	1,161,055	761,614	185,666
North Carolina	304,673	260,295	181,417	86,197	14,508
North Dakota	45,446	15,058	29,198	9,974	853
Ohio	1,670,881	1,120,776	585,347	339,485	47,146
Oklahoma	257,366	163,491	95,028	50,492	6,681
Oregon	270,500	131,223	105,126	47,905	4,653
Pennsylvania	1,871,750	1,794,102	664,110	430,942	64,447
Rhode Island	133,240	159,189	51,579	30,520	10,655
South Carolina	140,929	83,897	91,779	39,150	3,788
South Dakota	55,392	27,966	42,149	11,355	1,035
Tennessee	297,279	172,096	155,303	68,681	7,452
Texas	1,208,671	669,024	511,943	230,399	34,855
Utah	83,989	45,175	40,972	17,643	893
Vermont	33,979	81,746	23,160	12,760	1,323
Virginia	415,799	363,553	225,386	91,883	9,929
Washington	500,075	221,574	167,674	73,113	12,081
West Virginia	184,974	114,014	103,884	43,241	4,803
Wisconsin	531,899	359,251	184,521	111,033	12,536
Wyoming	45,083	23,663	19,261	7,976	1,359
Total	26,433,794	21,512,011	10,041,476	5,425,940	933,396

<sup>a</sup>Allocated to states on the basis of collections.<sup>b</sup>Allocated to states on basis of income payments from dividends.

<sup>c</sup>Excise tax allocation to states based on a consolidation of specific tax allocation based on the following specific allocative patterns: Retailers' excises; telephone, telegraph, radio and leased wire excises; narcotics and marihuana taxes; amusement taxes; and selected miscellaneous excises allocated on the basis of collections; alcohol taxes allocated on the basis of liquor store sales; gasoline, oil and diesel fuel taxes allocated on the basis of private commercial highway use of motor fuels; manufacturers' excises on automobiles and parts allocated on total motor vehicle registrations; taxes on sugar, coconut and other vegetable oils allocated on basis of food store retail sales; selected manufacturers' excises and the tax on transportation of property allocated on the basis of total retail sales; tobacco taxes allocated on the basis of tobacco consumption; tax on transportation of persons allocated on the basis of population, and stamp taxes (excluding playing card taxes) allocated on the basis of income payments from dividends.

<sup>d</sup>Unemployment tax portion of social insurance contributions allocated on the basis of retail sales; the Federal Insurance Contributions Act tax based on an allocation of the employees' contribution of one-half allocated on basis of taxable payrolls; the employers' remaining one-half allocated equally on the basis of total retail sales and on income payments from dividends; the railroad retirement tax is allocated one-half on the basis of collections to represent the employees' contribution and the remaining one-half allocated as the employers' share of the Federal Insurance Contributions Act tax.

<sup>e</sup>Allocated to the states on the basis of collections.

Sources: Computed from federal tax data taken from U. S. Treasury Department Office of Commissioner of Internal Revenue, Annual Report of the Commissioner of Internal Revenue for the Fiscal Year Ended June 30, 1954, I.R.S. Publication No. 55 (Washington, 1955), pp. 44-69. Customs receipts, included with excises, taken from U. S. Treasury Department, Combined Statement of Receipts Expenditures and Balances of the United States Government for the Fiscal Year Ended June 30, 1954, U. S. Treasury Document No. 3192 (Washington, 1955), p. 6. Social insurance contributions data taken from U. S. President, The Budget of the United States Government for the Fiscal Year Ending June 30, 1956 (Washington, 1955), p. 1147.

The corporation income tax was allocated among the states on the basis of the proportion of total income from dividends accruing to each. The proportions accruing to the states were computed from the pattern of dividends (after exclusions) reported on 1954 individual income tax returns with adjusted gross income.<sup>7</sup> This represents a departure from the Newcomer study in which the distribution was made on the basis of combined income from dividend and interest payments received. However, the Newcomer analysis actually lends its support to the procedure adopted here. Professor Newcomer expressed her reason for the allocative rationale chosen, declaring that corporation taxes were distributed "...on the assumption that these taxes reduced dividend payments by the amount of the tax collected...."<sup>8</sup> And then she observed parenthetically that "...Interest was included with dividends because of the unavailability of separate data...."<sup>9</sup> Lending support to this decision is the fact that the Mushkin-Crowther study also adopted the use of income payments from dividends as an alternative basis of allocation; the other basis was the income from dividends and interest combined.<sup>10</sup> The decision to use the combined interest and dividend income payments allocator probably reflects more an interest in comparing the 1940 Newcomer data with the situation prevailing in 1951 than a conviction of conceptual correctness. For it seems that payments made to dividend

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<sup>7</sup> Ibid., p. 71, Table 3.

<sup>8</sup> Newcomer, p. 208.

<sup>9</sup> Ibid.

<sup>10</sup> Mushkin and Crowther, p. 14.

receivers from corporate earnings will reflect more accurately the basis upon which corporate tax payments reduce income in states than does the alternative basis. Stamp taxes, excluding playing card taxes, are also allocated on the basis of income payments from dividends.

The allocation of social insurance contributions involves arbitrary decisions that are by no means indisputable. Federal insurance contributions are assumed to have been borne by states in a pattern similar to that of the Newcomer study.<sup>11</sup> One-half of the total representing the employees' contribution, assumed to be unshiftable, is allocated among the states in proportion to the distribution of taxable payrolls.<sup>12</sup> The remaining one-half, representing the employers' share of the tax, is assumed to be only partially shiftable. The one-half of the employers' share which is assumed to be non-shiftable is allocated on the basis of income payments from dividends; the remainder is shifted forward to the consumer and allocated among the states in proportion to the state shares of total retail sales.<sup>13</sup> The extent of departure from the Newcomer technique is not a major one. The employees' share which the Newcomer study allocated on the basis of collections has been altered here to utilize more recently available data on the wages

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<sup>11</sup>Newcomer, p. 209.

<sup>12</sup>Computed from U. S. Department of Commerce, Bureau of the Census and U. S. Federal Security Agency, Bureau of Old-Age and Survivors Insurance, Cooperative Report, County Business Patterns, First Quarter, 1953, Pt. I, U. S. Summary (Washington, 1955), p. 7, Table 1-B. This data, which exclude self-employed and railroad employees, are based on January-March, 1953 reports.

<sup>13</sup>Computed from U. S. Department of Commerce, Bureau of the Census, U. S. Census of Business: 1954, Vol. II, Retail Trade--Area Statistics, Pt. I, U. S. Summary and Alabama-Mississippi (Washington, 1956), pp. 1-39, Table 1-H.



subject to social security taxation. The collection data on social security taxes by states for 1954 unfortunately were unavailable except in a consolidated report of Federal Insurance Contributions Act taxes and income taxes. The segregated totals, available in the federal budget,<sup>14</sup> could however be reduced to an allocative pattern similar but not identical to that utilized by Professor Newcomer.

Railroad employment taxes are allocated on the basis of a pattern as nearly identical to that of the Federal Insurance Contributions Act tax as has been possible. The employees' share of the total has been allocated on the basis of collections;<sup>15</sup> the remaining one-half has been allocated on the same basis as the employers' share of the Federal Insurance Contributions Act. The controversial nature of the bases of allocation of these taxes can probably be repeated with wisdom; indeed Miss Newcomer's concluding caution is echoed here: "...No brief is held, however, for the exact proportions of the tax that have been distributed here to these three groups."<sup>16</sup>

Allocation of unemployment taxes poses even more knotty problems than the social insurance allocations just examined. A simplified assumption of the Mushkin-Crowther study was adopted<sup>17</sup> and the entire

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<sup>14</sup>Office of the President, The Budget of the United States Government for the Fiscal Year Ending June 30, 1956 (Washington, 1955), p. 1147.

<sup>15</sup>U. S. Treasury Department, Office of the Commissioner of Internal Revenue, Annual Report of the Commissioner of Internal Revenue for the Fiscal Year Ended June 30, 1954, I.R.S. Publication No. 55 (Washington, 1955), pp. 44-45, Table I.

<sup>16</sup>Newcomer, p. 209.

<sup>17</sup>Mushkin and Crowther, p. 15.

amount allocated on the basis of retail sales. This allocation on the exclusive basis of retail sales rather than in part on income payments from dividends has the effect of increasing the proportion assigned to low-income states.<sup>18</sup> Nevertheless, the relatively small portion of the total federal tax revenue derived from this source<sup>19</sup> and the unresolved controversy surrounding the incidence of this tax would seem to justify the adoption of this arbitrary approach of limited validity.

The allocation of the various excises involved use of various bases. After the excises were allocated they were consolidated into a single total for each state. Alcohol taxes were allocated among the states on the basis of liquor store retail sales.<sup>20</sup> Taxes on sugar, coconut and other vegetable oils were allocated in proportion to food store retail sales.<sup>21</sup> The excises on gasoline, oil and diesel fuel were apportioned on the basis of the state pattern of private commercial highway use of motor fuels;<sup>22</sup> manufacturers' excises on automobiles and parts were apportioned on the basis of motor vehicle registrations.<sup>23</sup> Selected manufacturers' excises (including, among others,

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<sup>18</sup>Ibid., p. 44.

<sup>19</sup>Slightly less than one-half of one per cent.

<sup>20</sup>Computed from U. S. Department of Commerce, Bureau of the Census, U. S. Census of Business: 1954, Vol. II, Retail Trade--Area Statistics, Pt. I, U. S. Summary and Alabama-Mississippi (Washington, 1956), pp. 1-46, Table 1-J.

<sup>21</sup>Ibid.

<sup>22</sup>Computed from U. S. Department of Commerce, Bureau of Public Roads, Highway Statistics Summary to 1955, (Washington, 1957), pp. 7-8, Table G-223A.

<sup>23</sup>Computed from U. S. Department of Commerce, Bureau of Public Roads,

such miscellaneous taxes as those on electric, gas, and oil appliances, mechanical refrigerators, quick-freeze units, air-conditioners, radio and television sets, phonographs and their components, mechanical pens and pencils, cameras, business and store machines, and sporting goods) and the tax on transportation of property were treated as they had been in the Newcomer and the Mushkin-Crowther analyses.<sup>24</sup> Retail sales were used for allocation of these taxes and also for the allocation of customs. The tax levied on the transportation of persons was distributed on a population basis.<sup>25</sup> Retailers' excise (including taxes on furs, jewelry, luggage, and toilet goods), taxes on telephone, telegraph, cable, radio, and leased wire service, narcotic and marihuana taxes, and amusement taxes were allocated on the basis of collections.<sup>26</sup>

Tobacco taxes which theoretically are borne in proportion to consumption of tobacco products (a theory both the Newcomer and the Mushkin-Crowther studies accept) presented difficulty. Conceptually the issue of allocation is clear but unfortunately not readily

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Highway Statistics, 1955 (Washington, 1957), p. 42, Table MV-1. Motor vehicle registrations, adjusted by the Bureau of Public Roads to maximize comparability among figures reported by state registration agencies, include registrations of all publicly and privately owned automobiles, buses, and trucks except military vehicles and some farm trucks in Connecticut, New Hampshire, New Jersey, New York, and Rhode Island. Motorcycles are also excluded.

<sup>24</sup>Newcomer, p. 207; Mushkin-Crowther, p. 14.

<sup>25</sup>Computed from U. S. Department of Commerce, Bureau of the Census, "Estimates of the Population of States: July 1, 1950 to 1956," Current Population Reports: Population Estimates, Ser. P-25, No. 165, November 4, 1957, p. 6, Table 2.

<sup>26</sup>Annual Report of the Commissioner of Internal Revenue for the Fiscal Year Ended June 30, 1954, pp. 54-68, Table 1.

available, adequate allocative series could be found. Extensive published research on tobacco consumption is available but despite detailed regional information, state-by-state consumption data are not included.<sup>27</sup> Miss Newcomer's consumption pattern, based on pre-1940 Social Security Board estimates of consumption, seems relatively outmoded and therefore the data utilized in the Mushkin-Crowther study were adopted as an allocative basis. Those data had been developed by correcting trade association (the National Tobacco Tax Research Council) data for 1951 to provide coverage for states for which the trade association presented no data.<sup>28</sup> The general unavailability of any other specifically relevant series, coupled with the likelihood that computation of a new series would not prove superior, seemed to justify the use of this series.<sup>29</sup> It is on the basis of this tobacco consumption pattern by states that tobacco taxes have been allocated.

The estimated incidence of the various taxes by states were then consolidated into the five major categories of the personal income tax, the corporation income tax, excise taxes, social insurance contributions, and gift and estate taxes. The resulting interstate tax

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<sup>27</sup>The study was undertaken by the U. S. Department of Commerce Bureau of the Census as a supplement to the February 1955 Current Population Survey. The results are contained in William Haenszel, Michael B. Shimkin, and Herman P. Miller, Tobacco Smoking Pattern in the United States, U. S. Department of Health, Education, and Welfare, Public Health Service Monograph, No. 45 (Washington, 1956).

<sup>28</sup>Mushkin and Crowther, p. 52. The states for which the association presented no data were those states which did not levy a cigarette tax. The adjustment of these data was based on estimates by Mushkin and Crowther.

<sup>29</sup>Ibid., p. 45, Table A-2.

incidence, by categories, is presented in Table I.

#### STATE TAX BURDENS BY STATES

To the federal tax burden falling on each state must be added the state tax burdens. Data on the 1954 state tax burdens are readily available.<sup>30</sup> There are, however, difficulties which inhere in the available information. Thus, while the tax receipts from the individual income tax and from the corporation net income tax are generally segregated, the corporation income tax is consolidated in the income tax receipts for three states--Alabama, Louisiana, and Missouri.<sup>31</sup> Alabama's tax revenue indicated as derived from the corporation net income tax represents a tax collected from financial institutions only.<sup>32</sup> No attempt has been made to isolate the portion of the individual income tax receipts which corporate net income tax revenue represents; no adequate basis for such segregation seems to exist. The Michigan tax on adjusted business receipts, classified by the Census Bureau as a miscellaneous tax has been classified here as net corporation income tax. This decision is based partly on the fact that to treat this tax as a miscellaneous revenue source and thereby to include it in the excise and miscellaneous tax category seemed to introduce a significant error in classification. Also providing partial support

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<sup>30</sup>U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1954 (Washington, 1955), pp. 11, 19-20, Table 5 and Table 11.

<sup>31</sup>Ibid., p. 11, n. 1.

<sup>32</sup>Ibid.

for the classification undertaken here is the professional opinion that the Michigan tax, in fact, does represent partially a business tax on net income.<sup>33</sup>

Social insurance contributions have been adjusted to eliminate from the totals those payments made by local governments to state retirement, unemployment compensation, and workmens' compensation systems. This adjustment reflects the apparent fact that it is local taxation which must provide the covering revenue and thus does not, and will not, on the present tax basis, necessitate recourse to state taxation. Earnings on social insurance trust investments are also excluded since, as earnings, they do not require recourse to state taxation.

The property tax is now relegated primarily to local government use in most states,<sup>34</sup> although it does yield some state revenue in

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<sup>33</sup>Carl S. Shoup has discussed the peculiar nature of value-added taxes of which the Michigan tax seems a variant. "Theory and Background of the Value-Added Tax," Proceedings of the National Tax Association, 1955, (Sacramento, National Tax Association, 1956), pp. 6-19. Clarence W. Lock, Deputy Commissioner of the Michigan Department of Revenue has declared that the Michigan tax "...must be resolved to be a form of income tax. It is not a gross income tax and neither is it a pure net income tax..." "Administrative History of Michigan's Business Activities Tax," Proceedings of the National Tax Association, 1955, (Sacramento, National Tax Association, 1956), p. 21. It should be noted also that this peculiar tax is not confined to corporations but falls on all types of business activity although the exemption from taxation of the first \$10,000 of adjusted business receipts may eliminate many small enterprises from coverage.

<sup>34</sup>Only five states--Arizona, Montana, Nebraska, Nevada, and Wyoming--secured more than ten per cent of their total tax revenue from the property tax in 1954. Only Nebraska secured more than 20 per cent of its revenue from the property tax. Computed from Compendium of State Government Finances in 1954, p. 11. The extreme variability in the existing state property taxes was indicated in a review of such 1953 taxes in Harold L. Henderson, "An Analysis of the Forty-Eight Tax Systems in 1953," Proceedings of the National Tax Association, 1954, (Sacramento, National Tax Association, 1955), pp. 164-66.

forty-five of the states. All of the forty-eight states, however, utilize sales and gross receipts taxes of some type (either general or selective). The tax revenue derived from this source is consolidated with revenue derived from severance taxes, document and stock transfer taxes, licenses, poll taxes, and other miscellaneous receipts. This consolidation may introduce error subsequently when it is undertaken to allocate tax receipts to the several income groups within the states but this procedure is utilized to retain comparability with the underlying technique on which income-bracket allocation will be based.<sup>35</sup>

Thus the total state tax burden by states can be reduced to six major categories of individual income taxes, corporation net income taxes, death and gift taxes, property taxes, excise and miscellaneous taxes, and social insurance contributions. State tax revenue by these major sources for 1954 is presented in Table II.

One difficulty in attributing the burden of state taxes exclusively to the persons residing in the state<sup>o</sup> of levy should be noted. Corporation income taxes need not impinge exclusively upon the persons residing in the state levying that tax. If any portion of the state corporation net income tax can be shifted, then that portion of the tax may fall upon consumers of the product of the corporation located in other states. And even if the corporate net income tax cannot be

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<sup>35</sup>Richard A. Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," National Tax Journal, IV (1951), p. 20 and p. 52. Professor Musgrave seems to have retained this classification when, in 1955, he testified before a Congressional committee. Richard A. Musgrave, "The Incidence of the Tax Structure and Its Effect on Consumption," Federal Tax Policy for Economic Growth and Stability, Subcommittee on Tax Policy, Joint Committee on Tax Policy, Joint Committee on the Economic Report, 84th Cong., 1st Sess. (Washington, 1955), p. 110.

TABLE II  
STATE TAX REVENUES, BY MAJOR SOURCES, 1954  
(Thousands of Dollars)

State	Individual Income Tax <sup>a</sup>	Corporation Net Income Tax <sup>b</sup>	Death and Gift Taxes	Property Taxes	Excise and Miscellaneous <sup>c</sup>	Social Insurance Contributions <sup>d</sup>
Alabama	15,207	1,036	718	9,161	133,738	18,203
Arizona	5,098	5,032	100	10,976	56,620	17,465
Arkansas	3,933	8,114	174	286	93,230	8,089
California	96,264	125,841	25,532	79,585	215,129	227,305
Colorado	17,707	6,153	2,725	7,827	83,471	9,943
Connecticut	.....	25,337	9,517	204	130,244	31,083
Delaware	10,945	.....	7,265	1,325	22,450	1,588
Florida	.....	.....	2,090	6,196	259,480	21,320
Georgia	13,053	13,121	612	1,114	199,766	23,093
Idaho	5,218	2,908	280	2,316	26,871	6,792
Illinois	.....	.....	12,191	335	533,318	80,117
Indiana	.....	.....	8,775	14,446	267,707	28,172
Iowa	20,881	2,258	5,157	130	159,436	12,229
Kansas	11,537	3,550	2,271	8,429	114,263	11,301
Kentucky	20,493	8,343	2,798	12,024	94,470	20,935
Louisiana	17,028	.....	2,153	10,660	264,869	23,933
Maine	.....	.....	1,898	883	53,622	9,636
Maryland	28,654	13,961	3,713	6,266	128,710	16,283
Massachusetts	71,539	26,066	14,383	227	216,231	103,859
Michigan	.....	23,423	10,630	32,622	519,690	99,800
Minnesota	50,917	14,505	4,073	12,669	164,303	23,795
Mississippi	5,297	10,640	340	1,025	101,770	7,007
Missouri	20,125	.....	4,574	7,820	186,700	17,300
Montana	4,283	1,812	1,441	4,237	27,238	8,532
Nebraska	.....	.....	105	19,667	45,418	3,936
Nevada	.....	.....	.....	2,735	15,113	7,513
New Hampshire	1,291	.....	1,215	1,501	25,127	7,575
New Jersey	.....	.....	11,909	3,747	180,207	109,782
New Mexico	2,237	1,052	226	4,319	66,245	4,880
New York	311,067	204,449	29,250	2,341	507,200	414,848
North Carolina	38,832	37,207	4,568	5,862	207,612	32,829
North Dakota	2,612	940	136	3,207	46,642	4,979
Ohio	.....	.....	6,550	27,340	511,543	147,528
Oklahoma	2,411	7,864	3,342	.....	183,067	12,064
Oregon	41,523	14,811	3,404	20	66,976	23,634
Pennsylvania	.....	121,797	35,816	1,480	457,043	122,110
Rhode Island	.....	7,095	2,201	.....	47,740	24,362
South Carolina	12,504	14,305	738	1,859	127,512	19,248
South Dakota	.....	148	517	111	37,996	1,030
Tennessee	3,446	16,266	3,190	.....	171,750	25,422
Texas	.....	.....	6,394	26,720	437,690	36,759
Utah	5,658	1,982	494	3,090	42,717	6,706
Vermont	5,412	2,342	606	340	11,000	2,798
Virginia	39,282	21,950	2,006	10,954	121,030	10,874
Washington	.....	.....	6,410	16,534	248,026	62,996
West Virginia	.....	.....	1,854	262	129,066	23,547
Wisconsin	71,203	47,854	7,529	19,869	144,816	27,089
Wyoming	.....	.....	261	4,071	46,733	3,633

<sup>a</sup>For three states--Alabama, Louisiana, and Missouri--the corporation income tax receipts are tabulated with the individual income tax receipts. No arbitrary separation was undertaken here.

<sup>b</sup>The Michigan tax on adjusted business receipts has been incorporated in the corporation net income tax receipts. Michigan does not have a separate corporation net income tax.

<sup>c</sup>Included in this category are sales and gross receipts taxes, severance taxes, dividend and stock transfer taxes, licenses, poll taxes and other miscellaneous receipts.

<sup>d</sup>Excluded are local government contributions to state employee, retirement, unemployment compensation, and workmen's compensation systems. Also excluded are state social insurance trust earnings on investments.

Source: Adapted from U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1954 (Washington, 1955), p. 11 and pp. 19-20.



shifted in any part (as traditional theory has contended), there is still no necessary correspondence of residence between owners of the corporation whose income is reduced by the tax and the residents of the taxing state. Nevertheless, in the apparent absence of any satisfactory basis for distributing state corporation net income taxes among the several states, the assumption is adopted here that corporation net income taxes fall upon the residents of the state levying the tax. Some other state taxes may be subject to interstate shifting but the difficulty in such cases is probably of little importance compared to the difficulty which inheres in the assumption adopted about corporation net income taxes.

#### DETERMINATION OF TAX AND EXPENDITURE ALLOCATORS BY SPENDING UNIT INCOME BRACKETS

Fiscal equity, however, is concerned not with equalization of the fiscal burdens among the states but among individuals. As a practical matter, this means the equalization of fiscal burdens among income groups in the several states (abstracting from consideration the local fiscal burdens which are of no little importance). This, in turn, necessitates an attempt to find satisfactory bases for the apportionment of tax burdens within the states.

The year chosen as the basis for this tax incidence analysis was 1954. This decision was grounded in two considerations. First, allocators for states shares of federal taxes could be rendered more precise by using the relatively accurate and up-to-date information contained in the 1954 Census of Business and second, and more important,

utilization of Professor Musgrave's tax allocation techniques for 1954 could be adapted to this study.<sup>36</sup>

Musgrave was interested in answering the question of which income groups in the United States bear the burdens of combined federal, state, and local taxes. To secure an answer, he modified slightly and applied the techniques of the 1948 tax incidence study he had directed.<sup>37</sup> Both of these studies were attempts to measure the tax burden falling upon the spending units<sup>38</sup> as they were distributed among income brackets. In the 1948 study the income brackets used ranged from "Under \$1,000" upward to \$5,000 in increments of \$1,000; two additional brackets of "\$5,000-\$7,500" and "Over \$7,500" were utilized.<sup>39</sup> In the 1954 study these brackets were altered, ranging from "0-\$2,000" upward in \$1,000 increments to \$5,000 and then utilizing brackets of "\$5,000-\$7,500," "\$7,500-\$10,000," and "Over \$10,000."<sup>40</sup> The income brackets utilized

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<sup>36</sup>Musgrave, "The Incidence of the Tax Structure and Its Effect on Consumption," pp. 96-113.

<sup>37</sup>Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948."

<sup>38</sup>"...A spending unit is defined as all persons living in the same dwelling and related by blood, marriage, or adoption, who pool their income to meet their major expenses. A husband and wife living together are always included in the same spending unit even though they do not pool their separate incomes. All children under 18 years of age, irrespective of their incomes, are included in the spending unit of their closest relative...." "1955 Survey of Consumer Finances: Purchases of Durable Goods in 1954--Technical Appendix." Federal Reserve Bulletin, XLI (1955), p. 471. The use of the spending unit seems preferable to the use of the individual taxpayer or the family in the analysis of the groups upon which the burden of taxes falls.

<sup>39</sup>Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," p. 11.

<sup>40</sup>Musgrave, "The Incidence of the Tax Structure and Its Effect on Consumption," p. 97.

in the 1954 study seem to be preferable to those used in 1948 because of the added detail provided in the upper income brackets and so, if it were possible, the use of the 1954 brackets would seem to be the preferable basis in projecting tax burden studies. Unfortunately neither the 1948 nor the 1954 study income brackets can be adapted to the present study without modification. The reason different income groupings must be used arises from the fact that the income tax information which must be used to adjust Musgrave's national data to corresponding state values does not utilize income brackets for 1954 identical with either of the Musgrave groupings.<sup>41</sup> Therefore, in allocating tax burdens among the income groups in the states, the income brackets that were necessitated were 0-\$2,000, \$2,000-\$3,000, \$3,000-\$4,000, \$4,000-\$5,000, \$5,000-\$10,000, and Over \$10,000. These brackets were the only ones which could be adopted and which would provide a direct and necessary relation between data presented in the Internal Revenue Service reports and in Musgrave's study. The loss of detail occasioned by a reduced number of income classes is both regrettable and unavoidable.

Professor Musgrave, in allocating the specific taxes among the income classes chosen, placed heavy reliance upon data of the University of Michigan Survey Research Center which undertakes an annual survey of consumer finances for the Federal Reserve System. From the data available, percentage distributions of certain variables over the spending unit income brackets were determined by Musgrave. Thus, spending unit money income, spending units, consumer expenditures, dividend receipts,

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<sup>41</sup>Statistics of Income, 1954: Individual Income Tax Returns, pp. 72-74, Table 14.

and other similar variables were allocated among the income brackets.

The allocative process will yield results that, at best, are imprecise. This Professor Musgrave has expressed with honest clarity when he cautioned in 1954 that such tax incidence studies as he presented were subject to "...All sorts of theoretical and methodological qualifications...."<sup>42</sup> To build upon the conceptual and methodological qualifications and assumptions of the Musgrave analyses will necessitate incorporating those same qualifications and assumptions with their strengths and weaknesses in this analysis.

Determinations of the percentage of money income received by the spending units in each income bracket in each state was undertaken by analysis of the relation between national and state adjusted gross income as reported in federal income taxes and the spending unit income distribution of the Musgrave study. First, the percentage of adjusted gross income falling in each income class in the nation was determined for 1954. Thus, seven per cent of adjusted gross income (as reported on both taxable and non-taxable returns) fell in the 0-\$2,000 income class. For the following adjusted gross income brackets the percentage of the total adjusted gross income contained was as follows: \$2,000-\$3,000, 9.6 per cent; \$3,000-\$4,000, 13.9 per cent; \$4,000-\$5,000, 15.4 per cent; \$5,000-\$10,000, 35.5 per cent; over \$10,000, 18.3 per cent.<sup>43</sup>

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<sup>42</sup>"The Incidence of the Tax Structure and Its Effect on Consumption," p. 102. The extensive discussion of qualifications in 1948 is found in Musgrave, *et al.*, "Distribution of Tax Payments by Income Groups: A Case Study for 1948," pp. 8-12.

<sup>43</sup>These figures were computed from Statistics of Income, 1954: Individual Income Tax Returns, p. 33, Table 1.

Next, Professor Musgrave's information showing the per cent of money income falling into spending unit income brackets (identical with the adjusted gross income brackets derived from the income tax reports) was rendered comparable with the adjusted gross income percentages. It was determined that for the spending unit income classes, the prevailing distribution of money income was 0-\$2,000, 6.0 per cent; \$2,000-\$3,000, 8.0 per cent; \$3,000-\$4,000, 13.0 per cent; \$4,000-\$5,000, 14.0 per cent; \$5,000-\$10,000, 39.0 per cent; over \$10,000, 20.0 per cent.<sup>44</sup> It should be noted that a similarity in distributional pattern in both series seems to exist.

Proceeding on the assumption that the relations which exist at the national level between the percentages of adjusted gross income and spending unit income falling in identical classes could be expected to hold at state levels, the percentages of adjusted gross income falling in those income classes in each state were computed.<sup>45</sup> Then on the assumption that the distribution of money income by spending units in each state bore the same relationship to the distribution of adjusted gross income on tax returns by states as evidenced in the relationship of those variables at the national level, the percentage of money income by spending unit income brackets in each state was determined.<sup>46</sup> These

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<sup>44</sup>Computed from Musgrave, "The Incidence of the Tax Structure and Its Effects on Consumption," p. 106, Table A-1. This data is taken by Professor Musgrave from "1955 Survey of Consumer Finances: The Financial Position of Consumers," Federal Reserve Bulletin, XLI (1955), p. 609, Table 1.

<sup>45</sup>Computed from Statistics of Income, 1954: Individual Income Tax Returns, pp. 72-74, Table 14.

<sup>46</sup>Processes of derivation utilized by Professor Musgrave seem to have been somewhat similar to that utilized here. In 1954, dividend

resulting distributions for the states classified by United States' economic regions as defined by the Office of Business Economics of the Department of the Commerce are presented in Tables III, IV, V, VI, VII, VIII, IX and X.

After state percentage distributions of money income by spending unit income brackets were computed, additional distributions essential for the allocation of tax burdens within states were developed. Adherence to the assumption of a linear relationship between state and national variables, already utilized in the determination of state distributions of money income by spending units, was continued. It was assumed that the state distributional pattern of a given economic variable (e.g., expenditures on consumption) among spending unit income brackets displays the same relation to the money income distribution among spending unit income brackets in the state as was shown between those variables at the national level. Wisdom would seem to indicate an explicit recognition that this assumption is probably of limited accuracy. But as a preliminary analytic assumption it would also seem to have the merit of not departing so far from what probably prevails as to render any other workable assumption preferable.

The basic percentage distribution for the allocation of educational expenditures was developed completely independent of the Musgrave allocations. Spending units with children are not distributed over spending

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distributions by spending unit income brackets were developed by Musgrave by use of interpolative techniques based on Federal tax return data. Musgrave, "The Incidence of the Tax Structure and Its Effect on Consumption," p. 107. In 1948 a similar technique seems to have been utilized. Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," pp. 50-51.

TABLE III  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, NEW ENGLAND STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered by Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
<b>Maine</b>									
Under 2	11.9	34.7	15.3	2.5	9.2	11.7	20.8	4.0	17.6
2 to 3	13.2	17.7	13.1	4.5	18.8	17.9	14.9	6.1	13.1
3 to 4	19.7	19.2	20.5	4.9	19.8	24.8	15.9	13.9	25.5
4 to 5	14.6	11.1	14.5	4.2	19.3	21.8	11.9	11.9	15.7
5 to 10	28.0	14.8	26.0	13.9	20.9	21.4	20.9	38.2	24.1
Over 10	12.5	2.4	8.4	70.0	7.5	2.4	15.5	25.9	3.9
<b>New Hampshire</b>									
Under 2	8.1	26.8	10.7	1.6	6.2	8.2	14.8	2.8	12.5
2 to 3	11.8	17.8	13.9	3.7	12.6	16.6	14.0	7.5	12.3
3 to 4	16.4	16.5	17.5	3.8	16.2	21.4	13.7	10.9	22.2
4 to 5	15.4	13.3	15.7	4.1	20.1	23.7	13.1	12.1	17.3
5 to 10	34.7	20.7	33.0	16.1	36.8	27.5	26.9	40.7	31.3
Over 10	13.6	2.9	9.3	70.6	8.0	2.6	17.5	26.1	4.4
<b>Vermont</b>									
Under 2	11.8	34.5	15.2	2.3	9.3	11.8	20.3	3.9	17.7
2 to 3	14.9	19.8	17.2	4.5	16.3	20.5	16.6	6.2	15.1
3 to 4	19.2	19.0	20.1	4.3	19.4	24.5	15.2	14.9	25.2
4 to 5	13.4	10.2	13.3	3.5	18.0	20.3	10.8	10.5	14.6
5 to 10	26.0	13.7	24.2	11.5	28.1	20.2	19.1	33.4	22.8
Over 10	14.8	2.8	10.0	73.9	8.9	2.8	18.0	31.2	4.6
<b>Massachusetts</b>									
Under 2	6.4	23.1	8.6	1.0	4.9	6.8	11.7	2.5	10.3
2 to 3	10.1	16.7	12.2	2.7	11.0	15.0	12.0	6.1	11.0
3 to 4	14.6	18.0	16.0	2.8	14.6	20.0	12.3	9.8	20.6
4 to 5	14.9	14.1	15.5	3.2	19.7	24.2	14.6	11.4	17.5
5 to 10	31.9	14.5	35.5	14.1	39.2	30.5	28.7	39.4	34.6
Over 10	17.6	4.2	12.4	76.2	10.5	3.6	22.8	30.7	6.0
<b>Rhode Island</b>									
Under 2	7.7	26.8	10.4	1.2	6.1	8.2	13.9	2.6	12.4
2 to 3	10.0	18.9	12.0	2.5	10.9	14.7	11.6	5.8	10.8
3 to 4	15.8	18.4	16.8	3.6	15.6	21.0	12.9	10.0	21.7
4 to 5	15.8	14.3	16.4	3.4	21.1	25.3	13.3	12.2	18.4
5 to 10	32.8	20.6	31.8	12.4	35.4	27.1	25.2	36.1	30.7
Over 10	16.1	4.1	12.7	77.4	10.9	3.7	23.1	33.3	6.1
<b>Connecticut</b>									
Under 2	3.8	16.6	5.3	.5	3.1	4.6	7.2	1.2	6.7
2 to 3	6.4	12.6	8.0	1.3	7.1	10.5	7.7	3.4	7.5
3 to 4	11.6	17.0	13.2	1.9	11.9	17.6	10.0	7.3	17.7
4 to 5	12.3	13.8	13.3	2.2	16.7	22.1	10.7	8.7	15.7
5 to 10	43.2	31.6	41.6	11.6	47.3	39.9	34.3	43.3	44.1
Over 10	22.7	6.4	16.6	80.5	11.9	5.2	30.0	36.2	8.3

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.

TABLE IV  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, MIDDLEWESTERN STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquida Asset Holdings	Federal Income Tax Liability	Public School Population
<b>New York</b>									
Under 2	4.0	19.1	6.4	.6	3.7	5.4	8.2	1.2	8.1
2 to 3	7.4	14.2	9.3	1.5	8.4	12.3	8.7	3.4	8.8
3 to 4	11.8	17.0	13.4	1.7	12.3	18.0	9.9	7.2	18.3
4 to 5	13.1	14.3	14.2	2.1	18.0	23.7	11.1	8.9	16.8
5 to 10	37.0	28.2	37.5	10.5	41.3	34.5	28.6	36.6	38.3
Over 10	50.1	7.2	19.2	83.7	16.3	6.1	33.6	42.6	9.7
<b>New Jersey</b>									
Under 2	4.2	17.8	5.9	.6	3.4	4.9	8.0	1.3	7.3
2 to 3	6.5	12.5	8.1	1.5	7.2	10.5	7.9	3.4	7.5
3 to 4	11.8	16.9	13.3	2.0	12.0	17.6	10.3	7.8	17.7
4 to 5	12.9	14.1	13.8	2.5	17.3	22.8	11.3	9.6	16.1
5 to 10	43.7	33.0	43.8	14.7	47.5	39.6	35.0	45.8	43.9
Over 10	20.8	5.7	15.1	78.8	12.6	4.6	27.6	32.2	7.5
<b>Pennsylvania</b>									
Under 2	6.4	23.3	8.6	1.0	4.9	6.7	11.8	2.0	10.2
2 to 3	8.3	13.9	10.0	2.1	9.0	12.2	9.8	4.1	8.9
3 to 4	15.7	19.4	17.1	3.1	15.7	21.3	13.3	10.1	22.1
4 to 5	16.3	15.2	16.9	3.6	21.2	26.2	14.0	12.4	19.1
5 to 10	36.1	23.8	35.1	14.0	38.6	29.9	28.3	39.5	33.9
Over 10	17.4	4.1	12.3	76.2	10.4	3.6	22.7	31.6	5.8
<b>Delaware</b>									
Under 2	6.8	29.2	9.7	.6	5.8	8.3	11.6	1.3	12.9
2 to 3	4.7	19.3	6.1	.7	5.7	8.9	5.2	1.6	6.1
3 to 4	10.2	15.1	12.0	1.1	11.4	17.9	8.0	3.0	17.1
4 to 5	9.8	11.1	11.0	1.2	11.5	20.3	7.8	4.9	13.6
5 to 10	32.0	25.0	33.5	7.0	38.2	34.0	23.2	24.0	35.7
Over 10	36.5	10.	27.7	89.4	24.3	9.6	44.1	64.4	11.6
<b>Maryland</b>									
Under 2	5.6	21.8	7.7	.8	4.4	6.3	10.3	1.9	9.3
2 to 3	7.3	13.0	8.9	1.7	8.0	11.3	8.7	3.5	8.2
3 to 4	13.2	17.6	14.7	2.4	13.4	19.1	11.3	8.2	19.3
4 to 5	13.4	13.7	14.3	2.7	18.0	23.0	11.6	13.4	16.4
5 to 10	41.1	29.0	40.7	14.6	44.5	36.0	32.4	45.6	40.1
Over 10	19.4	5.0	13.9	77.6	11.7	4.2	25.5	27.7	6.8

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.



TABLE V  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, GREAT LAKES STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
Michigan									
Under 2	4.2	18.1	5.9	.6	3.1	4.9	8.0	1.2	7.3
2 to 3	5.1	10.0	6.6	1.2	5.5	8.3	6.3	2.3	5.9
3 to 4	9.8	14.3	11.0	1.8	9.9	14.7	8.6	6.1	14.7
4 to 5	13.2	14.8	14.2	2.1	17.6	23.6	13.8	9.5	16.6
5 to 10	48.4	37.5	48.5	17.1	52.1	44.1	39.2	49.6	48.6
Over 10	17.3	5.4	14.0	76.7	11.6	4.3	26.0	31.3	7.0
Ohio									
Under 2	4.7	19.1	6.4	.7	3.6	5.3	8.7	1.5	7.8
2 to 3	6.4	12.0	8.0	1.5	7.1	10.2	7.8	3.4	7.3
3 to 4	12.4	17.2	13.3	2.2	12.5	18.1	10.8	8.0	18.3
4 to 5	13.8	14.6	14.7	2.8	18.4	23.4	12.1	11.3	16.9
5 to 10	43.5	32.0	43.3	15.5	46.8	36.7	34.8	46.2	42.8
Over 10	19.3	5.2	13.9	77.2	11.6	4.3	25.8	29.8	6.8
Indiana									
Under 2	5.9	22.0	8.0	1.1	4.4	6.3	11.2	1.7	9.4
2 to 3	7.7	13.1	9.3	2.3	8.3	11.4	9.4	4.1	8.3
3 to 4	14.3	10.2	15.6	3.1	14.1	19.6	12.5	9.7	20.1
4 to 5	15.3	14.9	14.0	3.9	20.0	24.8	13.5	11.9	17.9
5 to 10	42.1	24.3	47.9	18.3	44.5	34.9	33.9	47.7	39.4
Over 10	14.5	3.5	10.3	71.3	8.6	3.0	19.4	25.0	4.9
Illinois									
Under 2	4.4	18.7	6.2	.6	3.5	5.2	8.2	1.2	7.7
2 to 3	5.9	11.4	7.4	1.3	6.6	9.7	7.1	2.9	6.9
3 to 4	11.8	17.0	13.3	1.9	12.1	17.9	10.2	7.5	17.9
4 to 5	13.0	14.3	14.0	2.4	17.6	21.2	11.3	9.7	16.3
5 to 10	42.7	32.5	42.8	13.7	46.7	39.1	31.0	43.4	43.1
Over 10	22.2	6.1	16.1	80.1	13.5	5.0	29.2	35.3	8.1
Wisconsin									
Under 2	7.3	26.1	9.7	1.3	5.5	7.7	13.4	2.3	11.6
2 to 3	7.9	12.9	9.5	2.3	8.5	11.6	9.5	4.1	8.5
3 to 4	13.1	16.1	14.3	2.8	13.0	17.9	11.2	8.7	10.4
4 to 5	16.1	15.1	16.7	3.9	21.2	26.1	13.9	12.5	16.7
5 to 10	40.3	26.2	39.1	17.0	42.8	33.4	31.8	46.5	37.7
Over 10	15.3	3.6	10.8	72.7	9.1	3.2	20.1	25.9	5.1

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.

TABLE VI  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, PLAIN STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
Minnesota									
Under 2	8.0	27.9	10.7	1.4	6.2	8.5	14.6	2.5	12.7
2 to 3	8.5	13.5	10.2	2.3	9.2	12.5	10.0	4.7	9.1
3 to 4	15.2	18.0	16.5	3.2	15.2	20.8	12.8	10.5	21.1
4 to 5	15.4	24.0	16.0	3.5	20.5	24.5	23.1	13.9	17.9
5 to 10	36.3	22.8	35.0	14.6	30.9	30.0	28.1	40.6	33.7
Over 10	16.6	3.9	11.6	75.0	9.9	3.4	21.4	29.8	5.5
Iowa									
Under 2	8.7	28.8	11.5	1.6	6.8	9.1	15.6	2.3	13.7
2 to 3	11.8	17.8	13.9	3.3	12.7	17.0	13.7	5.8	12.4
3 to 4	14.8	15.8	15.2	3.2	14.8	19.8	12.3	10.5	20.4
4 to 5	14.6	12.6	14.9	3.6	19.4	23.1	12.3	13.3	16.7
5 to 10	24.5	20.6	32.9	14.5	36.9	28.0	26.3	42.7	31.6
Over 10	15.6	3.4	10.8	73.0	9.4	3.1	19.9	27.3	5.2
Missouri									
Under 2	7.2	26.4	9.8	1.1	5.7	8.0	12.7	1.8	11.9
2 to 3	8.9	14.7	10.8	2.1	9.8	13.6	9.6	3.8	9.8
3 to 4	13.9	17.7	15.3	2.5	14.1	19.7	17.5	8.8	20.0
4 to 5	13.7	13.0	14.4	2.8	18.5	23.0	10.8	10.3	16.3
5 to 10	35.6	28.1	35.8	13.0	39.9	31.6	26.3	40.4	35.1
Over 10	19.7	4.7	14.0	78.5	12.0	4.2	23.5	34.9	6.8
North Dakota									
Under 2	14.5	40.1	18.5	3.1	11.3	14.3	24.4	4.9	21.3
2 to 3	13.1	16.6	15.1	4.5	14.3	17.9	11.5	6.3	19.9
3 to 4	17.3	16.3	17.4	4.5	17.3	21.8	14.6	11.6	22.2
4 to 5	15.5	11.2	15.3	4.5	20.6	23.0	12.3	15.3	16.5
5 to 10	27.1	13.6	25.0	13.7	29.1	20.7	19.8	37.5	23.2
Over 10	12.4	2.2	6.3	69.9	7.4	2.3	15.0	24.5	3.8
South Dakota									
Under 2	13.0	36.1	16.5	2.8	9.9	12.3	22.3	4.3	18.9
2 to 3	15.7	19.3	17.3	5.3	16.3	20.1	16.0	7.4	14.9
3 to 4	19.1	18.1	19.7	5.0	19.0	23.3	15.1	13.2	24.4
4 to 5	17.0	12.3	16.7	5.0	22.3	24.6	13.4	14.0	18.0
5 to 10	23.6	11.9	21.7	17.1	25.1	17.5	17.3	36.0	24.1
Over 10	12.1	2.2	4.1	69.9	7.2	2.2	14.8	24.7	3.7
Nebraska									
Under 2	10.2	33.0	13.6	1.8	8.0	10.9	14.1	2.6	16.0
2 to 3	10.3	15.3	12.3	2.9	11.4	15.3	11.8	5.1	11.0
3 to 4	15.5	17.2	16.6	3.2	15.8	21.1	12.7	10.0	21.3
4 to 5	12.4	10.8	13.1	3.0	17.2	20.6	10.6	11.0	14.6
5 to 10	34.7	20.3	33.1	14.0	37.7	28.7	26.2	44.2	34.7
Over 10	16.5	3.5	11.4	75.1	9.9	3.4	20.6	30.0	5.4
Kansas									
Under 2	7.8	27.3	10.4	1.4	6.0	8.3	14.7	2.0	12.4
2 to 3	8.7	13.9	10.4	2.4	9.5	12.8	10.3	3.6	9.4
3 to 4	14.5	17.3	15.7	2.9	14.5	19.7	12.2	9.5	20.2
4 to 5	16.4	15.0	17.0	3.8	21.8	26.2	14.0	12.3	19.0
5 to 10	36.3	22.8	34.9	14.6	38.5	29.7	28.0	42.6	33.5
Over 10	16.4	3.7	11.5	74.0	9.8	3.4	21.3	30.0	5.5

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Sources: Computed by the author.

TABLE VII  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, SOUTHEASTERN STATES, 1950<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
Virginia									
Under 2	7.9	27.4	10.6	1.4	6.2	8.5	14.2	2.2	12.7
2 to 3	11.0	17.3	13.1	2.9	12.1	16.4	12.7	5.1	11.9
3 to 4	14.7	17.4	16.0	2.9	14.9	20.3	12.3	9.2	20.7
4 to 5	12.7	11.4	13.1	2.8	17.0	20.8	10.7	9.5	14.8
5 to 10	36.2	22.6	35.0	14.0	39.2	30.5	27.8	41.8	21.0
Over 10	17.5	3.9	12.2	76.0	16.5	3.6	22.3	30.1	5.9
West Virginia									
Under 2	9.8	11.1	12.8	2.0	7.4	9.7	17.6	2.7	14.8
2 to 3	10.1	14.7	11.8	3.2	10.8	13.9	11.7	5.3	10.3
3 to 4	15.7	17.0	16.6	3.8	15.4	19.9	13.0	9.8	20.8
4 to 5	19.7	16.1	19.9	5.3	25.5	29.6	16.6	16.5	21.8
5 to 10	31.6	18.2	29.9	15.0	33.2	24.4	24.2	39.9	28.0
Over 10	13.2	2.7	9.1	70.6	7.7	2.6	16.9	24.8	4.2
Kentucky									
Under 2	9.5	11.3	12.5	1.6	7.4	10.1	16.7	2.1	15.0
2 to 3	11.4	17.2	13.5	3.1	12.5	13.5	13.1	4.7	12.2
3 to 4	13.4	15.2	14.4	2.6	13.6	18.4	11.0	9.0	18.7
4 to 5	13.5	11.7	13.9	3.1	18.2	21.9	11.2	9.9	15.7
5 to 10	35.0	20.9	33.6	13.7	37.9	29.1	26.4	41.0	12.5
Over 10	17.3	3.7	12.0	75.9	10.5	3.6	11.7	11.2	5.8
Tennessee									
Under 2	9.5	20.7	12.5	1.7	7.4	10.0	16.9	2.0	14.9
2 to 3	12.2	18.0	14.4	3.5	13.3	17.7	14.0	5.0	12.8
3 to 4	15.4	16.9	16.4	3.4	15.9	20.6	12.6	9.0	21.0
4 to 5	12.8	10.4	13.0	3.1	17.1	20.3	10.6	10.4	14.6
5 to 10	34.7	20.3	33.0	14.7	37.4	28.3	26.3	47.9	11.6
Over 10	15.5	3.3	10.7	73.6	9.3	3.1	19.5	10.7	5.1
North Carolina									
Under 2	10.3	33.0	14.0	2.0	8.4	11.1	18.7	2.6	16.6
2 to 3	14.2	19.9	16.6	4.1	15.6	20.2	16.0	6.0	14.7
3 to 4	16.4	17.1	17.1	3.5	16.6	21.6	13.1	9.2	22.1
4 to 5	12.7	10.2	22.9	3.1	17.1	19.8	10.3	10.0	14.3
5 to 10	30.1	26.4	26.4	17.4	32.7	24.1	22.4	38.7	27.2
Over 10	15.8	3.1	20.8	70.7	9.6	3.1	19.5	31.5	5.2
South Carolina									
Under 2	9.3	29.1	12.1	2.0	7.1	9.3	16.5	2.7	14.2
2 to 3	15.2	21.7	17.7	4.9	16.4	21.2	17.4	6.9	15.7
3 to 4	15.7	16.8	15.5	3.8	15.6	20.2	12.9	9.7	21.1
4 to 5	13.0	11.4	13.9	3.1	18.2	21.1	11.5	11.7	15.5
5 to 10	32.7	18.5	30.7	15.5	34.9	25.7	24.0	43.2	29.3
Over 10	13.2	2.7	9.0	70.1	7.8	2.6	16.7	26.3	4.3
Georgia									
Under 2	9.2	30.6	12.3	1.5	7.2	9.9	16.1	2.1	14.8
2 to 3	12.6	19.2	15.1	3.1	14.0	16.9	14.2	4.3	13.6
3 to 4	14.0	15.9	15.1	2.6	14.4	19.4	11.5	7.9	19.7
4 to 5	12.3	10.6	12.6	2.4	16.6	20.1	10.0	9.3	14.4
5 to 10	32.8	19.7	31.6	13.9	36.0	27.7	24.5	38.7	30.9
Over 10	19.2	4.2	13.3	78.4	11.8	4.0	23.8	37.6	6.5
Florida									
Under 2	8.3	29.2	11.3	1.1	6.7	9.1	14.5	1.9	13.8
2 to 3	10.1	16.3	12.3	2.3	11.4	15.8	12.5	3.7	11.3
3 to 4	14.6	17.5	16.1	2.3	15.2	20.9	11.8	7.9	21.1
4 to 5	12.4	11.4	13.0	2.3	17.0	21.0	10.7	8.7	14.9
5 to 10	32.1	20.4	31.5	10.4	35.0	28.0	24.0	35.9	13.1
Over 10	22.5	5.2	16.0	61.6	13.9	4.9	20.0	62.3	7.8
Alabama									
Under 2	9.7	29.4	12.1	1.6	7.1	9.4	16.2	2.3	14.2
2 to 3	13.2	19.3	15.5	1.7	14.1	18.7	15.1	4.0	13.8
3 to 4	16.0	17.6	17.1	1.5	16.1	21.1	13.1	8.2	21.9
4 to 5	14.6	12.2	14.8	1.5	19.4	22.7	12.1	11.3	16.5
5 to 10	31.4	18.2	29.7	13.2	31.7	25.0	23.6	40.1	26.5
Over 10	15.6	3.3	10.8	74.6	9.4	3.1	19.7	32.2	5.1
Mississippi									
Under 2	12.2	36.8	15.9	2.2	9.4	12.7	21.0	2.5	18.9
2 to 3	13.4	18.6	15.7	3.6	14.8	14.9	14.9	5.1	14.0
3 to 4	13.7	13.5	13.2	2.7	13.3	17.5	10.7	7.1	17.8
4 to 5	11.8	10.9	14.0	3.1	18.6	21.8	11.2	11.5	15.6
5 to 10	31.5	17.2	29.7	13.1	34.2	25.5	23.2	44.7	28.5
Over 10	15.9	3.1	10.8	74.8	9.6	3.2	19.4	32.1	5.2
Louisiana									
Under 2	7.4	26.5	10.0	1.1	5.8	8.1	13.3	1.4	12.0
2 to 3	8.6	14.1	10.4	2.0	9.5	13.1	10.0	3.2	9.5
3 to 4	15.3	16.9	16.8	2.8	15.6	21.5	12.8	8.3	21.9
4 to 5	13.9	13.1	14.6	2.9	18.8	23.2	11.7	10.9	16.6
5 to 10	35.0	22.7	36.2	12.4	38.2	29.9	26.9	38.4	33.3
Over 10	19.9	4.6	14.1	78.9	17.1	4.2	25.4	37.6	6.8
Arkansas									
Under 2	12.5	37.1	15.1	2.2	9.8	12.8	21.2	2.7	19.3
2 to 3	14.6	19.8	17.0	4.0	16.0	20.7	16.0	5.2	15.3
3 to 4	12.7	17.9	13.4	2.7	17.9	16.7	9.9	7.2	17.2
4 to 5	15.7	12.2	15.9	3.6	21.1	24.5	12.5	12.1	17.7
5 to 10	27.6	14.8	26.0	11.3	29.9	22.0	20.0	35.4	25.0
Over 10	16.9	3.2	11.5	76.5	10.7	3.1	20.4	37.4	5.5

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Sources: Computed by the author.

TABLE VIII  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, SOUTHWESTERN STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
Oklahoma									
Under 2	8.2	25.8	11.1	1.3	6.4	8.8	14.7	2.0	13.2
2 to 3	8.6	17.8	10.4	2.2	9.5	13.0	10.0	3.1	9.4
3 to 4	14.3	17.1	15.6	2.7	14.5	19.2	11.8	7.7	20.2
4 to 5	15.1	17.8	15.8	3.2	20.3	24.8	15.7	10.9	17.7
5 to 10	35.2	27.3	34.2	13.1	44.1	29.7	27.0	40.4	33.1
Over 10	10.6	4.3	13.1	77.5	11.2	3.8	23.7	35.8	6.3
Texas									
Under 2	6.5	24.8	9.0	.9	5.2	7.5	11.7	1.3	11.0
2 to 3	8.2	14.3	10.1	1.8	9.2	13.0	9.4	2.7	5.3
3 to 4	12.7	16.5	14.2	2.0	13.1	18.6	10.5	6.4	13.9
4 to 5	13.4	13.3	14.3	2.5	18.3	23.2	11.3	9.1	16.5
5 to 10	36.9	25.4	36.5	11.9	40.6	32.8	22.8	30.7	30.4
Over 10	22.2	5.6	16.0	80.9	11.6	4.9	28.5	41.7	7.9
New Mexico									
Under 2	7.4	27.1	10.0	1.2	5.8	8.3	13.4	1.6	12.2
2 to 3	9.2	15.2	13.0	2.4	9.9	14.1	10.8	2.8	10.1
3 to 4	10.5	13.3	11.5	2.1	10.6	15.0	8.9	6.2	14.1
4 to 5	13.1	12.5	13.7	2.9	17.5	22.2	11.2	8.7	15.7
5 to 10	42.5	28.1	41.6	10.4	45.8	36.8	33.3	49.5	40.9
Over 10	17.3	4.1	12.3	75.0	10.4	3.7	22.5	31.2	6.0
Arizona									
Under 2	6.6	25.1	9.0	1.0	5.2	7.4	12.1	1.3	11.0
2 to 3	7.0	12.1	8.6	1.7	7.6	10.8	8.1	2.9	7.9
3 to 4	11.4	14.0	12.6	2.0	11.5	15.1	9.6	7.0	16.6
4 to 5	15.8	15.7	16.7	3.3	21.1	26.7	17.5	10.7	15.3
5 to 10	39.8	27.6	39.3	14.2	42.9	34.6	31.1	43.2	38.6
Over 10	19.4	4.9	11.0	77.8	11.7	4.2	24.3	35.9	6.4

<sup>a</sup>Initial does not necessarily add to total due to rounding.

Source: Computed by the author.

TABLE II  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, ROCKY MOUNTAIN STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
Montana									
Under 2	6.5	23.7	8.7	1.7	4.9	6.8	12.0	2.1	10.4
2 to 3	8.0	13.3	9.7	2.2	8.5	11.7	9.6	3.8	8.6
3 to 4	12.2	16.5	14.4	2.7	13.1	17.9	11.3	8.7	18.6
4 to 5	18.1	17.5	19.0	4.1	23.9	29.2	15.8	15.0	21.4
5 to 10	37.9	25.1	36.9	15.5	40.1	31.2	30.0	44.9	35.6
Over 10	16.1	1.9	11.3	70.1	9.5	3.2	21.2	25.6	5.4
Idaho									
Under 2	6.7	23.3	8.9	1.4	5.1	6.9	12.5	2.2	10.3
2 to 3	8.9	14.2	10.7	2.9	9.5	12.6	10.8	3.6	9.3
3 to 4	18.5	22.0	19.9	4.4	18.2	24.1	16.0	12.5	25.0
4 to 5	16.0	14.5	16.4	4.7	20.8	24.7	14.0	13.6	18.0
5 to 10	36.7	23.1	35.1	17.3	38.6	29.1	29.2	53.6	33.1
Over 10	13.2	3.0	9.2	70.0	7.8	2.6	17.5	24.3	4.3
Wyoming									
Under 2	7.6	27.6	10.3	1.3	5.9	8.3	14.0	2.0	12.4
2 to 3	7.8	12.9	9.5	2.3	8.5	11.5	9.4	4.7	8.6
3 to 4	11.8	14.6	12.9	2.5	11.9	16.6	10.1	6.3	16.7
4 to 5	14.7	13.4	14.7	3.3	18.7	23.5	12.2	11.4	16.6
5 to 10	42.8	27.9	41.6	17.7	45.7	36.3	31.6	47.6	40.4
Over 10	15.8	3.7	11.1	73.0	9.4	3.3	20.6	20.5	5.4
Colorado									
Under 2	6.2	23.7	8.3	.9	4.9	6.9	11.4	1.9	10.3
2 to 3	7.3	17.8	8.9	1.7	8.0	11.3	5.7	3.6	8.2
3 to 4	13.0	16.9	14.4	2.3	13.7	18.6	11.0	8.5	18.9
4 to 5	14.8	14.8	15.6	3.0	19.9	25.1	12.7	10.3	17.9
5 to 10	38.8	26.8	38.6	13.5	40.0	33.7	34.3	41.1	37.7
Over 10	20.0	5.0	14.3	78.6	12.1	4.3	28.0	34.5	7.0
Utah									
Under 2	6.5	23.3	8.7	1.3	4.9	6.6	12.1	2.5	10.3
2 to 3	8.2	13.5	9.9	2.4	8.7	11.8	9.9	4.7	8.8
3 to 4	14.3	17.5	15.5	3.2	14.0	18.8	12.3	9.7	19.8
4 to 5	20.0	18.8	20.7	4.9	26.0	31.3	17.4	12.9	23.0
5 to 10	36.1	23.4	36.9	15.7	37.7	28.8	28.7	43.0	33.3
Over 10	14.8	3.4	10.4	72.5	8.6	2.9	19.6	27.2	4.9

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Sources: Computed by the author.

TABLE I  
PERCENTAGE DISTRIBUTION OF TAX AND EXPENDITURE ALLOCATIONS BY SPENDING UNIT INCOME BRACKETS, FAR WESTERN STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Spending Unit Money Income	Distribution of Spending Units	Consumer Expenditures	Dividends	Wages and Salaries Inclusive	Wages Covered By Payroll Taxes	Liquid Asset Holdings	Federal Income Tax Liability	Public School Population
Washington									
Under 2	4.7	19.0	6.4	.7	3.6	5.2	8.8	1.3	7.8
2 to 3	6.5	12.7	4.1	1.7	7.1	10.7	8.0	3.0	7.4
3 to 4	11.7	15.6	15.5	2.1	11.7	16.3	9.8	7.9	16.5
4 to 5	14.4	15.3	15.3	3.0	10.0	25.6	12.7	10.1	17.6
5 to 10	45.0	33.1	44.7	16.5	48.0	39.7	36.3	49.1	44.2
Over 10	18.3	4.8	12.2	75.9	10.9	4.0	24.5	28.7	6.5
Oregon									
Under 2	3.9	16.1	5.1	.6	3.0	4.4	7.4	1.3	6.5
2 to 3	6.7	12.6	8.3	1.6	7.3	10.4	8.3	3.6	7.6
3 to 4	12.1	17.9	13.5	2.2	12.1	17.4	10.5	7.9	17.9
4 to 5	16.0	17.1	17.0	3.3	21.1	27.1	14.1	11.7	18.7
5 to 10	42.2	31.5	42.0	15.1	45.0	36.6	34.0	45.5	41.5
Over 10	19.1	5.2	13.8	77.2	11.4	4.1	25.7	30.0	6.0
Nevada									
Under 2	4.4	19.0	6.3	.6	3.5	5.2	8.1	1.7	7.8
2 to 3	5.4	10.6	6.8	1.1	6.0	8.9	6.4	2.6	6.5
3 to 4	11.2	16.4	12.7	1.7	11.6	17.0	9.5	6.0	17.7
4 to 5	15.1	16.9	16.4	2.6	20.6	27.7	13.0	9.4	19.4
5 to 10	39.0	30.7	39.6	11.6	43.0	36.0	30.6	41.3	40.1
Over 10	24.8	7.0	18.2	82.5	15.3	5.7	32.3	39.5	9.7
California									
Under 2	4.2	18.7	5.9	.5	3.4	5.0	7.9	1.1	7.4
2 to 3	5.6	11.0	7.0	1.3	6.7	9.2	6.8	2.6	6.6
3 to 4	10.7	15.7	12.1	1.7	11.0	16.3	9.2	6.5	16.3
4 to 5	13.7	14.9	14.3	2.4	17.9	23.9	11.6	9.4	16.8
5 to 10	43.9	34.0	44.2	14.0	47.9	40.6	35.0	44.4	44.7
Over 10	22.4	6.3	16.3	80.1	13.6	5.1	29.6	36.0	8.2

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.

unit income brackets in the same proportion as are the spending units themselves. Therefore the Survey Research Center data on family status of the spending units in the nation were used to determine by spending unit brackets the percentage distribution of spending units with children under 18.<sup>47</sup> The Survey Research Center data show the distributions of spending units with children under 18 not only by spending unit income brackets but by age of the head of the spending unit. For spending units with children under 18 and headed by a person 18 to 44 years of age, a sample of 991 cases was used by the Survey Research Center; for spending units with children under 18 and headed by a person age 45 and over, the sample contained only 320 cases. Thus, it was necessary to compute, by spending unit income brackets, an average of the spending units containing children under 18. This was done by weighting the distribution within the two classes by the sample sizes. This computation reveals that for the nation as a whole, for all spending unit income brackets, the spending units with children under 18 are distributed thus: 0-\$2,000, 10.0 per cent; \$2,000-\$3,000, 9.0 per cent; \$3,000-\$4,000, 19.0 per cent; \$4,000-\$5,000, 17.0 per cent; \$5,000-\$7,500, 30.0 per cent; over \$7,500, 15.0 per cent. These computations were then adjusted to render them comparable with other income bracket distributions. Five-elevenths of all 1954 spending units that received \$7,500 and over received \$10,000 or more.<sup>48</sup> Therefore, on the assumption that the same

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<sup>47</sup>Basic data for computations taken from "1955 Survey of Consumer Finances: The Financial Position of Consumers," p. 614. Supplementary Table 1.

<sup>48</sup>Ibid., p. 609.

proportion of spending units with children under 18 and of spending units themselves are found in the over \$10,000 spending unit income bracket, it is possible to determine the percentage of spending units with children found in this upper income bracket. Since 15 per cent of all spending units with children over 18 are found in the \$7,500 and over income bracket, five-elevenths of this percentage or approximately seven per cent of the total of all spending units with children under 18 are determined to fall in the Over \$10,000 income bracket. The remaining eight per cent of the total spending units with children under 18 found to fall in the \$7,500-\$10,000 income bracket are then added to the 30 per cent of the spending units with children under 18 found in the \$5,000-\$7,500 bracket to determine that 38 per cent of all spending units with children under 18 fall in the \$5,000-\$10,000 income bracket. Having thus determined the percentage distribution of spending units with children under 18 among the spending unit brackets for the nation, state distributions were then computed utilizing the same technique used to determine the other state distributions. It was assumed that the percentage distributions of the variable within the state displayed the same relation to state income distribution as existed for the nation. However, it must be recognized that as in other cases of imputation already undertaken, this is a debatable assumption. Nevertheless this assumption seems defensible on the ground that the technique used is consistent with the techniques used in developing other allocators. It should be recognized that it has also been assumed that the percentage of spending units with children under 18 are similar, and that these percentages will also represent the percentage of public school age



population falling in each income group. Some error is probably introduced into the analysis from adoption of these assumptions although in case of these latter assumptions the extent of error is probably not great. The basic percentage distributions for tax and expenditure allocations by spending units for all states for 1954 are presented in Tables III-X.

#### ALLOCATION OF FEDERAL AND STATE TAX BURDENS TO SPENDING UNIT INCOME BRACKETS

Allocation of specific federal and state taxes to the various spending unit income brackets within the states was undertaken. Basic series for allocations are applied, insofar as possible, on the bases used by Professor Musgrave.<sup>49</sup> It cannot be overstressed that the results of embracing this technique may involve acceptance of assumptions about tax shifting that are debatable. Reconciliation of conflicting theories is not an implied goal of this study, important as such reconciliation may be for the development of consistent economic theory. Instead it is hoped that by using existing techniques with their embodied theoretical concepts, a basis for the measurement of proposals for educational expenditures may be developed.

Allocation of federal income taxes was carried out on the basis of the federal income tax liability of spending units. State income taxes were distributed on a common pattern despite dissimilarities of

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<sup>49</sup>"The Incidence of the Tax Structure and Its Effects on Consumption," pp. 111-13. Cross reference is made in this Musgrave analysis to the techniques developed in the earlier study. Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," pp. 13-26.

the state income tax structures. This allocation was based on the distribution of state income tax payments by spending unit income brackets for Wisconsin. Musgrave utilized this distribution to allocate a total of income taxes for all states among the nation's spending unit income brackets but he also observed that this Wisconsin distribution "...is taken as representative of the 35-State income tax schedules...."<sup>50</sup>

The Wisconsin data show that among spending unit brackets the state personal income tax liability falls thus: 0-\$2,000, 0.2 per cent; \$2,000-\$3,000, 2.3 per cent; \$3,000-\$4,000, 6.0 per cent; \$4,000-\$5,000, 7.2 per cent; \$5,000-\$10,000, 34.7 per cent; over \$10,000, 49.5 per cent.<sup>51</sup>

Both federal and state excise taxes were allocated on the basis of the pattern of consumer expenditures. It is true that such a general allocation seems to ignore the apparently different consumption patterns that might exist for the different items covered by excise taxes. However, in 1948, after undertaking extensive allocation of items subject to excises on separate distributional patterns, it was found that "...the overall result of this crude approach does not differ significantly from that obtained by allocation according to a more detailed pattern."<sup>52</sup>

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<sup>50</sup>"The Incidence of the Tax Structure and Its Effects on Consumption," p. 112.

<sup>51</sup>Ibid., p. 97, Table 1.

<sup>52</sup>Ibid. The 1948 study discussed the alternatives of allocation by general consumption expenditures and by allocation "...wherever possible....in accordance with expenditures on specific consumption categories...." and concluded that "...the over-all distribution of excise payments is very similar for the two cases...." Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," p. 43.

Inheritance and gift taxes were assigned entirely to the over \$10,000 spending unit income bracket. In 1954 Musgrave adopted this allocative pattern without discussion;<sup>53</sup> in 1948 he noted that a lack of data for developing an allocative pattern coupled with the high exemptions of federal and state gift and inheritance taxes alike rendered it "...reasonable to assume that all but a negligible part of the yield should be imputed to income recipients in the top bracket."<sup>54</sup>

Identity of treatment also governed the allocation of both federal and state corporation net income taxes. Musgrave's analysis, based on what he considered the "standard case," was discussed at length in 1948<sup>55</sup> and was again utilized in the 1954 analysis without further defense.<sup>56</sup> In this allocation one-third of the corporation income tax

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<sup>53</sup>"The Incidence of the Tax Structure and Its Effect on Consumption," p. 112.

<sup>54</sup>Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," p. 25.

<sup>55</sup>Ibid., pp. 14-16. Musgrave, et al., explained divergence from the traditional academic view that the corporation net income tax was completely unshiftable thus: "...Some reconciliation is provided by certain obvious exceptions to the academic rule. First, the tax base may not be pure profit in the economist's sense but may include wages of management, return for risk taking, interest on equity capital, and other nonrent incomes. To the extent that this is the case, the tax is a cost item and will be reflected in price. Second, imperfections in the tax law inevitably lead to differential burdens among various enterprises and industries. And where this is the case (i.e. the tax is not truly general), price adjustments must follow. Third, corporation management may not charge the highest price which the market will bear. This restraint must reflect an effort to maintain consumer good will or a notion that profits should not exceed a "fair" level (the modern concept of just price); or prices may be held down merely to appease antitrust authorities." Ibid., pp. 40-43.

<sup>56</sup>"The Incidence of the Tax Structure and Its Effects on Consumption," p. 112.

was assumed to be borne by the consumers and was allocated on the basis of consumer expenditures; two-thirds was allocated on the basis of the distribution of dividend income. However, conceptual consistence has led to the adoption here of the traditional academic view that the corporate income tax falls on a surplus rather than cost and so cannot be shifted. The allocation of the federal corporation income tax among the several states has been based on the view of the non-shiftability of the tax and this assumption is again adopted here. Table XIII, page 122, however, indicates that the results that follow from adopting Musgrave's assumptions do lead to burdens on the various income groups markedly different from those that follow from the conventional assumptions.

Treatment of social insurance contributions was somewhat involved and was similar but not identical for both state and federal contributions. Federal social insurance contributions were allocated by shifting two-thirds of the employers' share (arbitrarily one-half of the total contribution)<sup>57</sup> forward to consumers by consumer expenditure allocation and shifting the remaining one-third so that it is allocated on the same basis as the contribution of employees. This portion was allocated to the employees on the basis of wages covered by the payroll taxes. State social insurance contributions were assumed to be borne entirely by wage earners and were allocated on the basis of inclusive wage and salary payments.<sup>58</sup>

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<sup>57</sup>This approximation is nearly correct; the deviation from fact arises from the employer contribution to unemployment insurance which is almost completely unmatched by employee contribution.

<sup>58</sup>Ibid., pp. 112-13.

TABLE XIII

ALLOCATION OF FEDERAL CORPORATION INCOME TAXES ON THE BASIS OF MUSGRAVE'S ALTERNATIVE  
INCIDENCE ASSUMPTIONS, BY SPENDING UNITS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	6,582.7	9,852.5	10,368.8	9,379.3	24,136.4	68,666.3
Arizona	3,391.8	3,700.1	4,118.5	7,184.3	20,874.7	52,263.6
Arkansas	4,304.6	5,198.8	3,909.4	4,803.7	10,023.2	34,208.1
California	51,500.3	71,653.9	115,690.3	142,560.8	538,904.8	1,317,497.4
Colorado	5,938.7	7,232.3	11,171.9	12,700.7	38,454.7	100,840.9
Connecticut	15,450.0	25,995.2	41,690.2	33,406.9	173,627.8	435,540.9
Delaware	10,239.0	7,045.2	13,338.9	12,587.5	44,619.6	193,977.9
Florida	26,255.9	32,887.7	40,271.3	34,247.2	101,840.0	349,862.4
Georgia	12,287.6	17,106.4	16,303.3	14,295.5	44,492.7	136,610.2
Idaho	1,006.7	1,419.8	2,469.5	2,134.0	5,997.4	12,838.1
Illinois	34,756.2	46,967.2	80,315.1	88,299.7	329,714.6	828,044.1
Indiana	9,142.6	12,459.0	19,540.1	21,332.7	69,465.8	137,049.4
Iowa	8,221.9	11,466.0	12,472.7	12,360.9	34,621.5	88,595.2
Kansas	5,584.5	6,430.6	9,096.0	10,407.5	27,118.7	68,241.2
Kentucky	11,933.4	14,973.8	14,897.8	15,277.9	46,305.5	124,502.8
Louisiana	6,561.2	8,744.3	12,046.7	10,971.1	31,730.2	92,447.8
Maine	8,879.4	10,541.0	13,253.5	10,016.6	23,532.7	64,911.6
Maryland	12,807.6	17,022.5	26,986.8	27,263.6	96,737.4	234,024.3
Massachusetts	38,992.7	64,742.5	79,456.7	80,560.3	244,323.8	606,225.6
Michigan	18,022.8	22,338.1	37,000.9	49,752.9	209,927.0	424,930.9
Minnesota	14,036.6	15,388.2	23,810.2	23,914.2	66,751.7	168,023.1
Mississippi	3,903.3	4,511.0	3,736.6	3,988.3	10,822.6	31,054.5
Missouri	21,856.2	27,320.3	36,973.5	36,427.0	112,559.4	311,450.9
Montana	1,034.7	1,314.4	1,845.8	2,572.8	6,329.6	14,868.6
Nebraska	6,166.7	6,489.5	8,246.2	6,848.0	21,906.3	57,939.0
Nevada	1,183.1	1,419.8	2,539.9	3,407.4	9,900.9	28,900.4
New Hampshire	4,584.9	7,025.8	8,279.3	7,681.4	21,500.2	49,642.4
New Jersey	21,535.6	33,668.5	52,474.3	57,024.1	222,029.8	523,832.5
New Mexico	1,333.7	1,699.5	1,688.7	2,077.4	8,092.5	17,457.0
New York	107,032.3	173,223.3	236,597.7	259,130.8	823,847.0	2,627,924.5
North Carolina	15,617.7	21,517.7	21,083.6	16,572.1	40,500.1	138,997.5
North Dakota	1,239.8	1,209.6	1,345.1	1,219.7	2,630.1	7,433.7
Ohio	29,140.2	41,095.2	67,993.7	75,839.2	277,578.8	628,755.3
Oklahoma	7,466.1	8,065.6	11,444.3	12,098.3	32,916.2	91,609.5
Oregon	2,843.2	5,030.2	7,829.6	10,322.9	31,541.0	73,572.4
Pennsylvania	63,391.6	84,920.8	139,341.9	144,126.1	377,359.4	984,962.0
Rhode Island	6,792.1	9,020.8	12,098.4	12,310.6	30,031.6	88,840.5
South Carolina	4,502.4	7,690.5	6,739.7	6,012.6	17,254.9	41,724.7
South Dakota	2,060.1	2,600.8	2,768.6	2,449.0	4,278.8	13,787.3
Tennessee	9,121.1	12,276.2	13,308.7	11,014.2	35,795.9	90,579.9
Texas	24,084.8	30,552.1	40,587.4	43,040.5	134,473.8	396,508.2
Utah	1,701.6	2,213.6	3,297.7	4,502.8	9,983.7	23,400.7
Vermont	5,395.2	7,139.2	7,820.4	5,531.5	12,461.4	42,998.3
Virginia	16,238.7	22,903.8	26,418.2	22,661.4	76,346.1	190,984.7
Washington	5,760.9	8,493.7	12,334.2	15,731.8	57,387.6	121,865.7
West Virginia	6,384.8	6,916.9	9,197.2	11,591.4	22,764.8	57,121.0
Wisconsin	14,729.3	16,684.8	23,830.3	29,338.2	87,537.5	187,090.0
Wyoming	1,017.5	1,112.1	1,411.9	1,660.1	6,073.5	12,391.5

Source: Computed by the author. State totals allocated among spending unit income brackets one-third on the basis of consumption expenditures and two-thirds on the basis of income payments from dividends.

The allocation of state property taxes involved significant departure from the rationale of Musgrave's analysis. Musgrave allocated not only the state property taxes but also local property taxes. Since state reliance on the property tax normally is not great and since state selectivity in application of the property tax is relatively great, the Musgrave analysis did not seem directly applicable. The extensive breakdown of property tax levies by kinds of property upon which levies fall probably would be relatively unproductive here both because of the great variability in state property tax systems and also because of the relative unimportance of this tax in most state revenue systems. However, it is necessary to recognize that property taxes may be shiftable or unshiftable depending on the kind of property upon which they fall. Rather than attempt an extensive and relatively unprofitable breakdown it was assumed that one-half of the state property tax was in the nature of a business expense and hence, as shiftable, assumed to rest upon consumers on the basis of consumer expenditures. The remainder was held to be unshiftable falling on spending unit income brackets in proportion to the liquid asset holdings of those brackets. The arbitrary nature of this assumed allocative pattern should not be forgotten though it may be hazarded intuitively that more elaborate allocative patterns for this relatively unimportant state tax would probably not change materially the results of this analysis.

The results of these allocations of the several federal taxes are included in Tables XI, XII, XIII, XIV, and XV. Similarly for the several state taxes, individual state tax allocations are included in Tables XVI, XVII, XVIII, XIX, XX and XXI. Three consolidated tables summarize

TABLE XI  
ALLOCATION OF FEDERAL INCOME TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	5,139.9	13,408.4	18,548.3	24,805.6	89,613.1	71,958.6
Arizona	2,809.5	3,542.5	7,207.1	13,070.5	52,770.5	42,753.9
Arkansas	3,033.5	5,842.3	8,089.3	13,594.5	39,772.3	42,019.3
California	29,837.9	70,525.9	176,314.8	254,978.4	1,204,366.0	976,513.0
Colorado	4,611.0	8,736.6	20,628.1	24,996.3	99,742.7	83,725.6
Connecticut	6,954.3	19,703.1	42,305.5	50,418.8	250,935.2	209,788.8
Delaware	1,597.5	1,966.1	4,669.5	6,021.2	29,491.7	79,136.0
Florida	8,384.0	16,326.7	34,859.6	36,183.4	158,412.7	186,653.4
Georgia	6,527.6	13,366.0	24,556.1	28,907.8	120,294.0	116,874.7
Idaho	1,497.3	2,450.1	8,507.1	9,255.8	29,809.0	16,537.9
Illinois	25,580.7	61,020.0	159,879.4	206,777.3	925,168.6	752,498.9
Indiana	11,628.5	28,045.3	66,351.0	81,399.7	326,282.8	171,007.8
Iowa	7,470.4	18,838.3	34,103.9	36,702.3	138,689.2	88,670.1
Kansas	5,719.1	10,294.3	27,165.5	35,172.2	121,816.0	85,785.9
Kentucky	5,864.5	13,125.2	25,133.4	27,646.7	120,081.8	87,129.1
Louisiana	4,825.2	9,650.3	25,030.5	32,871.3	115,803.6	113,391.1
Maine	3,766.4	5,743.8	13,088.4	11,205.2	35,969.5	24,387.7
Maryland	9,716.8	16,876.5	41,935.5	68,528.7	233,202.0	141,660.0
Massachusetts	21,536.2	52,548.3	84,421.8	98,205.0	339,410.1	264,464.2
Michigan	18,288.0	35,051.9	92,963.8	144,779.7	755,902.5	477,011.1
Minnesota	10,715.7	20,145.6	45,006.0	51,006.9	174,023.4	127,731.4
Mississippi	2,348.9	4,791.8	6,670.9	10,804.9	39,179.7	30,159.9
Missouri	11,461.6	24,196.8	56,034.6	65,586.0	257,249.8	222,228.2
Montana	1,883.8	3,408.9	7,804.5	13,456.0	40,278.4	22,965.0
Nebraska	4,576.7	8,977.3	17,602.6	19,326.9	72,522.7	52,807.8
Nevada	667.0	1,445.2	3,335.1	5,225.0	22,956.6	21,956.1
New Hampshire	2,093.5	5,607.7	8,149.8	9,047.0	30,431.0	19,514.7
New Jersey	15,160.9	39,651.5	90,965.3	111,957.3	534,129.7	375,523.5
New Mexico	1,323.1	2,315.3	5,126.8	7,194.1	40,932.0	25,799.6
New York	43,720.9	123,876.0	262,325.7	324,263.7	1,333,488.8	1,552,093.5
North Carolina	7,921.5	18,280.4	28,029.9	30,467.3	117,908.5	102,065.5
North Dakota	2,226.9	2,863.1	5,271.7	6,953.2	17,042.2	11,134.3
Ohio	25,063.2	56,810.0	133,670.5	188,809.6	771,947.0	497,922.5
Oklahoma	5,147.3	7,978.3	19,817.2	28,052.9	103,975.9	92,137.0
Oregon	3,516.5	9,738.0	21,369.5	31,648.5	123,077.5	81,150.0
Pennsylvania	37,435.0	76,741.8	189,046.8	232,097.0	739,341.2	595,216.5
Rhode Island	3,464.2	7,727.9	13,324.0	16,255.3	48,099.6	44,368.9
South Carolina	3,805.1	9,724.1	13,670.1	15,784.0	60,740.4	37,064.3
South Dakota	2,341.9	4,320.6	7,311.7	7,754.9	19,941.1	13,681.8
Tennessee	5,945.6	14,864.0	26,755.1	30,917.0	127,532.7	91,264.7
Texas	15,712.7	32,634.1	77,354.9	109,989.1	467,755.7	504,015.8
Utah	2,029.7	3,947.5	8,146.9	10,834.6	36,115.3	22,845.0
Vermont	1,325.2	2,106.7	5,062.9	3,567.8	11,349.0	10,601.4
Virginia	9,147.6	21,205.7	38,253.5	39,500.9	182,120.0	125,155.5
Washington	6,501.0	15,022.2	39,505.9	50,507.6	245,536.8	143,521.5
West Virginia	4,994.3	9,803.6	18,127.5	30,520.7	73,804.6	47,723.3
Wisconsin	12,233.7	21,807.9	46,275.2	66,487.4	247,333.0	137,761.8
Wyoming	901.7	1,893.5	2,840.2	5,139.5	21,459.5	12,848.7

Source: Computed by the author. State totals allocated among spending unit income brackets on the basis of adjusted federal income tax liability by spending units.

TABLE III

ALLOCATION OF FEDERAL CORPORATION NET INCOME TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	2,068.1	4,782.5	4,524.0	4,524.0	17,062.1	96,168.0
Arizona	926.4	1,574.8	1,852.7	3,057.0	13,154.2	72,070.0
Arkansas	1,374.4	2,499.0	1,666.8	2,249.1	6,934.7	47,793.4
California	11,213.1	29,154.1	38,124.6	53,823.0	113,967.6	1,796,343.4
Colorado	1,589.9	3,003.1	4,063.0	5,299.6	23,848.2	138,849.3
Connecticut	3,683.9	9,578.0	13,998.6	16,209.0	100,200.9	593,100.7
Delaware	1,693.3	1,975.5	3,104.3	3,386.6	19,754.9	252,298.4
Florida	6,422.0	13,427.7	13,427.7	13,427.7	60,716.8	476,393.0
Georgia	3,619.2	7,479.7	6,273.3	6,273.3	28,712.6	189,165.1
Idaho	361.9	749.7	1,137.5	1,085.8	4,472.4	18,096.4
Illinois	8,466.4	18,343.9	26,810.3	33,855.6	193,316.2	1,130,264.7
Indiana	2,962.2	6,193.6	8,347.9	10,502.2	49,279.7	192,002.3
Iowa	2,688.6	5,545.2	5,377.1	6,049.3	24,365.1	124,009.8
Kansas	1,779.5	3,050.5	3,686.0	4,830.0	18,557.2	95,200.9
Kentucky	3,653.7	7,079.0	5,937.3	7,079.0	31,284.8	173,322.2
Louisiana	1,777.3	3,231.5	4,524.0	4,685.6	20,035.1	127,481.1
Maine	3,285.3	5,913.5	6,439.2	5,519.3	18,266.3	91,988.4
Maryland	3,326.2	7,068.3	9,978.7	11,226.1	60,703.9	322,645.3
Massachusetts	11,051.6	29,839.2	30,944.4	35,365.0	155,827.0	842,128.9
Michigan	4,575.7	9,151.5	13,727.2	20,590.8	130,408.4	584,931.1
Minnesota	4,373.2	7,184.6	9,996.0	10,933.1	45,606.6	234,280.5
Mississippi	1,279.7	2,210.3	1,570.5	1,919.5	7,619.7	43,508.2
Missouri	6,019.1	11,491.0	13,679.8	15,321.4	71,135.0	429,545.7
Montana	336.1	616.1	756.2	1,204.3	4,340.9	20,752.4
Nebraska	1,930.9	3,123.7	3,446.9	3,231.4	15,080.1	80,894.0
Nevada	284.4	521.3	805.7	1,232.3	5,497.8	39,100.9
New Hampshire	1,585.6	3,666.7	3,765.8	4,063.1	15,954.9	69,963.9
New Jersey	5,467.6	13,669.0	18,225.4	22,781.7	133,956.5	718,080.0
New Mexico	387.8	775.6	678.6	937.1	5,299.7	24,236.2
New York	25,386.2	63,465.7	71,927.8	88,851.9	444,259.7	3,541,324.7
North Carolina	5,213.4	10,687.5	9,123.4	8,080.8	32,844.4	194,720.5
North Dakota	467.5	678.6	678.6	678.6	2,066.0	10,540.9
Ohio	7,856.7	16,835.8	24,692.6	31,426.9	173,970.4	866,485.1
Oklahoma	2,128.5	3,602.0	4,420.0	5,239.3	21,448.2	126,888.4
Oregon	788.5	2,102.6	2,891.1	4,336.6	19,843.2	101,450.1
Pennsylvania	17,966.9	37,730.4	55,697.3	64,680.7	251,536.0	1,369,074.7
Rhode Island	1,913.0	3,985.4	4,782.5	5,420.2	19,767.8	123,389.5
South Carolina	1,680.4	4,116.9	3,192.7	3,192.7	13,022.8	58,896.6
South Dakota	784.2	1,484.3	1,400.3	1,400.3	3,388.7	19,576.2
Tennessee	2,929.8	6,032.0	5,859.7	5,342.7	25,334.7	126,845.2
Texas	6,029.9	12,059.8	13,399.7	16,749.7	79,728.5	542,019.5
Utah	588.1	1,085.8	1,447.7	2,216.8	7,102.7	32,799.0
Vermont	1,882.8	3,683.8	3,520.1	2,865.2	9,411.2	60,496.8
Virginia	5,097.1	10,558.2	10,558.2	10,194.2	50,970.8	276,698.5
Washington	1,553.3	3,772.2	4,659.8	6,656.8	36,612.3	168,415.8
West Virginia	2,283.6	3,653.7	4,338.8	6,051.4	17,126.7	80,609.7
Wisconsin	4,677.0	8,274.7	10,073.5	14,041.0	61,460.6	261,551.3
Wyoming	308.1	545.0	592.4	782.0	4,194.4	17,298.8

Source: Computed by the author. State totals allocated among spending unit brackets on the basis of income payments from dividends.



TABLE XIV

ALLOCATION OF FEDERAL SOCIAL INSURANCE CONTRIBUTIONS BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	5,493.9	9,405.5	10,543.3	10,703.4	14,170.4	3,022.5
Arizona	1,895.3	2,444.9	3,599.5	5,582.3	8,640.2	1,775.8
Arkansas	3,624.7	5,052.0	4,048.5	5,614.3	6,055.5	1,565.7
California	26,035.3	41,591.0	73,193.5	101,685.0	205,334.9	43,392.2
Colorado	3,308.1	4,715.2	9,724.0	9,849.6	15,837.2	3,427.9
Connecticut	5,756.0	11,511.9	19,213.0	22,825.4	49,144.1	11,154.6
Delaware	2,703.1	2,282.7	4,565.6	4,928.4	9,694.6	4,479.6
Florida	10,503.6	15,421.7	20,339.7	19,321.0	30,737.8	9,063.2
Georgia	8,050.6	13,267.1	13,517.9	13,242.0	21,819.3	5,342.0
Idaho	979.2	1,548.7	2,937.8	2,838.6	4,024.9	621.2
Illinois	22,546.6	36,400.5	66,688.9	82,036.9	164,345.4	35,449.8
Indiana	9,007.8	14,036.4	23,962.6	28,685.2	48,406.2	7,127.5
Iowa	6,256.6	10,090.6	11,691.6	12,871.3	18,727.7	3,581.2
Kansas	5,464.9	7,206.5	11,152.4	14,087.3	19,086.7	3,703.9
Kentucky	7,062.7	10,216.1	11,058.5	12,462.4	19,827.6	4,146.9
Louisiana	5,067.6	7,079.2	11,566.6	11,798.6	18,181.5	4,351.9
Maine	4,509.4	4,615.8	6,356.9	5,268.7	6,239.1	1,197.0
Maryland	7,144.3	11,086.0	18,617.5	21,221.8	39,663.2	7,848.2
Massachusetts	14,917.1	28,355.9	37,628.6	42,937.0	64,842.2	13,170.1
Michigan	14,192.1	20,791.0	36,519.8	50,136.7	124,113.3	21,333.4
Minnesota	9,567.7	12,158.2	20,067.9	22,658.4	32,813.3	6,355.4
Mississippi	3,457.8	4,563.0	4,094.0	4,822.4	6,756.5	1,440.0
Missouri	12,834.8	18,904.0	27,221.8	30,057.4	49,259.8	11,153.4
Montana	1,074.7	1,595.2	2,419.3	3,730.2	4,785.6	853.0
Nebraska	5,300.2	6,423.1	8,803.7	8,130.0	13,549.9	2,724.9
Nevada	509.0	749.9	1,423.5	2,158.2	3,401.9	902.3
New Hampshire	1,660.9	2,886.6	3,695.6	3,867.2	5,393.3	888.7
New Jersey	11,025.1	20,434.9	34,058.3	44,712.5	86,374.3	17,064.2
New Mexico	1,312.4	1,934.1	2,047.6	2,866.7	5,683.9	972.0
New York	43,669.6	86,070.3	125,424.0	150,399.1	270,397.8	79,722.9
North Carolina	10,402.6	16,379.7	17,385.5	15,086.6	22,012.0	4,805.2
North Dakota	1,566.3	1,692.6	2,041.8	2,038.5	2,208.0	429.0
Ohio	19,239.5	32,144.4	50,587.0	69,602.0	136,601.0	25,464.2
Oklahoma	4,830.8	6,126.8	9,324.9	11,008.2	15,754.7	3,484.2
Oregon	2,251.6	4,647.5	7,713.8	11,371.1	18,398.2	3,513.6
Pennsylvania	31,605.5	49,419.5	85,765.8	99,557.3	136,334.6	28,013.9
Rhode Island	2,726.7	4,212.2	5,982.5	6,816.8	8,749.9	2,045.0
South Carolina	4,007.2	7,844.6	7,427.0	7,322.5	10,716.3	1,853.4
South Dakota	1,555.9	2,176.7	2,509.9	2,494.7	2,446.5	473.2
Tennessee	7,441.4	11,402.5	13,188.5	12,272.6	20,515.4	3,869.5
Texas	18,434.6	27,728.7	39,480.7	46,624.0	78,423.7	19,817.1
Utah	1,288.1	1,970.5	3,173.3	4,876.2	5,440.8	952.9
Vermont	1,650.5	2,475.6	2,939.3	2,292.7	2,747.9	663.6
Virginia	8,454.4	14,060.0	17,337.5	16,755.6	29,406.4	5,942.6
Washington	4,094.9	6,946.7	10,992.8	15,721.5	30,248.5	5,167.3
West Virginia	4,641.8	5,708.7	8,130.4	11,402.8	11,345.1	2,061.4
Wisconsin	9,291.1	12,104.3	18,545.2	25,544.2	39,800.3	6,356.8
Wyoming	715.3	885.4	1,225.8	1,440.5	3,036.5	470.6

Sources: Computed by the author. State total allocated among spending unit income brackets two-thirds on the basis of wages covered by the payroll tax and one-third on the basis of consumption expenditures.

TABLE XV  
ALLOCATION OF FEDERAL EXCISE TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	15,180.4	19,446.0	21,453.3	18,567.8	37,261.0	13,549.5
Arizona	4,333.0	4,140.5	6,066.3	8,040.2	18,921.0	6,692.2
Arkansas	12,413.4	12,946.5	10,204.9	12,108.8	19,800.6	8,757.9
California	57,948.3	68,752.2	116,843.1	140,450.9	434,120.9	160,094.4
Colorado	9,091.7	9,749.0	15,773.6	17,088.1	42,063.0	15,664.1
Connecticut	9,347.7	14,109.8	23,281.1	23,457.5	76,898.2	29,277.8
Delaware	3,151.5	1,981.9	3,898.8	3,573.9	10,884.2	8,999.7
Florida	24,853.9	27,053.4	35,411.3	28,593.0	69,283.0	35,191.4
Georgia	29,376.6	36,063.9	36,063.9	30,093.1	75,471.5	31,784.9
Idaho	3,352.5	4,030.6	7,496.1	6,177.7	13,221.8	3,465.5
Illinois	38,543.0	46,003.0	82,681.0	87,032.7	266,071.3	100,087.6
Indiana	17,638.9	20,505.2	34,395.8	35,277.8	90,178.8	22,710.1
Iowa	16,828.0	20,339.9	23,266.5	21,803.2	48,142.6	15,803.6
Kansas	13,446.6	13,446.6	19,846.4	21,489.7	44,117.1	14,537.2
Kentucky	16,960.2	18,317.1	19,538.2	18,859.8	45,589.2	16,281.8
Louisiana	11,865.1	12,339.7	19,933.4	17,323.0	40,578.6	16,729.8
Maine	8,460.9	8,350.3	11,336.5	8,018.5	14,378.0	4,645.2
Maryland	13,107.7	15,150.5	25,023.8	24,342.9	69,283.6	23,662.0
Massachusetts	31,979.2	45,365.8	59,496.2	57,635.9	132,007.1	46,109.5
Michigan	22,846.1	24,782.2	42,594.4	54,985.5	187,802.7	54,211.1
Minnesota	21,187.2	20,197.1	32,671.8	31,681.8	69,303.8	22,969.3
Mississippi	10,317.0	10,187.3	9,019.3	9,084.2	19,271.4	7,007.8
Missouri	30,160.2	33,237.8	47,086.8	44,317.0	110,177.0	43,086.0
Montana	4,052.7	4,518.6	6,708.0	8,850.8	17,189.1	5,263.0
Nebraska	14,811.5	13,305.7	18,078.7	14,266.9	36,048.5	12,415.5
Nevada	1,339.9	1,446.2	2,701.0	3,488.0	8,422.1	3,870.8
New Hampshire	4,430.8	5,755.9	7,246.6	6,501.2	13,665.0	3,851.0
New Jersey	22,005.6	30,211.1	49,605.8	51,470.7	163,363.5	56,319.4
New Mexico	4,017.8	4,419.6	4,620.5	5,504.4	16,714.0	4,941.9
New York	74,307.5	107,978.1	155,581.4	164,869.8	435,395.6	222,922.6
North Carolina	25,398.4	30,115.2	31,385.1	23,402.8	51,522.4	19,593.0
North Dakota	5,401.6	4,408.9	5,197.2	4,467.3	7,299.5	2,423.4
Ohio	37,462.2	46,827.8	80,777.9	86,046.0	253,455.3	81,363.2
Oklahoma	10,548.1	9,882.9	14,824.4	15,014.4	32,499.6	12,448.7
Oregon	5,571.7	8,725.5	14,192.0	17,871.4	44,152.9	14,507.4
Pennsylvania	57,413.5	66,411.0	113,562.8	112,234.6	233,102.6	81,685.5
Rhode Island	5,364.2	6,189.5	8,665.3	8,459.0	16,402.1	6,550.5
South Carolina	11,105.3	16,244.9	15,443.5	12,757.3	28,176.2	8,260.1
South Dakota	6,954.6	7,291.8	8,303.4	7,038.9	9,146.3	3,444.1
Tennessee	19,412.9	22,363.6	25,469.7	20,189.4	51,250.0	16,617.4
Texas	46,074.9	51,706.2	72,695.9	73,207.8	186,859.2	81,910.9
Utah	3,564.6	4,056.2	6,350.7	8,481.2	14,299.2	4,261.1
Vermont	3,520.3	3,983.5	4,655.2	3,080.3	5,604.7	2,316.0
Virginia	23,890.9	29,525.6	36,061.8	29,525.6	78,885.1	27,497.1
Washington	10,731.1	13,581.6	20,959.2	25,654.1	74,950.3	22,133.0
West Virginia	13,297.2	12,258.3	17,244.7	20,672.9	31,061.3	9,453.4
Wisconsin	17,898.5	17,529.5	26,386.5	30,815.0	72,147.7	10,928.3
Wyoming	1,983.9	1,829.8	2,484.7	2,831.4	8,012.6	2,138.0

Source: Computed by the author. State totals allocated among spending unit income brackets on the basis of consumption expenditures.

TABLE XVI  
ALLOCATION OF STATE INCOME TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	30.4	349.8	912.4	1,094.9	5,276.8	7,527.5
Arizona	10.2	117.3	305.9	367.1	1,769.0	2,523.5
Arkansas	7.9	90.5	236.0	283.2	1,364.8	1,946.8
California	192.5	2,213.8	5,775.2	6,930.3	33,400.1	47,645.7
Colorado	25.7	295.9	772.0	926.4	4,454.8	6,369.2
Connecticut	.....	.....	.....	.....	.....	.....
Delaware	21.9	251.7	656.7	788.0	3,797.9	5,417.8
Florida	.....	.....	.....	.....	.....	.....
Georgia	26.1	300.2	783.2	939.8	4,529.4	6,461.2
Idaho	10.4	120.0	313.1	375.7	1,810.6	2,582.9
Illinois	.....	.....	.....	.....	.....	.....
Indiana	.....	.....	.....	.....	.....	.....
Iowa	41.8	480.3	1,252.9	1,503.4	7,245.7	10,336.1
Kansas	23.1	265.4	692.2	830.7	4,003.3	5,710.8
Kentucky	41.0	471.3	1,229.6	1,475.5	7,111.1	10,144.0
Louisiana	34.1	391.6	1,021.7	1,226.0	5,908.7	8,428.9
Maine	.....	.....	.....	.....	.....	.....
Maryland	57.3	659.0	1,719.2	2,063.1	9,942.9	14,183.7
Massachusetts	143.1	1,645.4	4,292.3	5,150.8	24,824.0	35,411.8
Michigan	.....	.....	.....	.....	.....	.....
Minnesota	101.8	1,171.1	3,055.0	3,666.0	17,668.2	25,203.9
Mississippi	10.6	121.8	317.8	381.4	1,838.1	2,622.0
Missouri	52.3	600.9	1,567.6	1,881.1	9,065.7	12,932.4
Montana	9.8	113.2	295.4	354.5	1,708.3	2,436.9
Nebraska	.....	.....	.....	.....	.....	.....
Nevada	.....	.....	.....	.....	.....	.....
New Hampshire	2.6	29.7	77.5	93.0	448.0	639.0
New Jersey	.....	.....	.....	.....	.....	.....
New Mexico	4.5	51.5	134.2	161.1	776.2	1,107.3
New York	702.1	8,074.5	21,064.0	25,276.8	121,820.2	173,778.2
North Carolina	77.7	891.1	2,329.9	2,795.9	13,474.7	19,221.8
North Dakota	5.2	60.1	156.7	188.1	906.4	1,292.9
Ohio	.....	.....	.....	.....	.....	.....
Oklahoma	18.8	216.5	564.7	677.6	3,265.6	4,658.4
Oregon	83.0	955.0	2,491.4	2,989.7	14,408.5	20,553.9
Pennsylvania	.....	.....	.....	.....	.....	.....
Rhode Island	.....	.....	.....	.....	.....	.....
South Carolina	25.0	287.6	750.2	900.3	4,338.9	6,189.5
South Dakota	.....	.....	.....	.....	.....	.....
Tennessee	6.9	79.3	206.8	248.1	1,195.8	1,705.8
Texas	.....	.....	.....	.....	.....	.....
Utah	11.3	130.1	339.5	407.4	1,963.3	2,800.7
Vermont	10.8	124.5	324.7	389.7	1,878.0	2,678.9
Virginia	78.6	903.5	2,356.9	2,828.3	13,630.9	19,444.6
Washington	.....	.....	.....	.....	.....	.....
West Virginia	.....	.....	.....	.....	.....	.....
Wisconsin	142.4	1,637.7	4,272.2	5,126.6	24,707.4	35,245.5
Wyoming	.....	.....	.....	.....	.....	.....

Source: Computed by the author. State income taxes allocated among spending units on the basis of tax liability on the mean bracket income under the Wisconsin tax which Professor Musgrave considers "...representative of the 35-State income-tax schedules...." Richard A. Musgrave, "The Incidence of the Tax Structure and Its Effects on Consumption," in U. S. Congress, Joint Committee on the Economic Report, Federal Tax Policy for Economic Growth and Stability, Subcommittee on Tax Policy, Joint Committee on the Economic Report, 84th Cong., 1st Sess. (Washington, 1955), p. 112.

TABLE XVII  
 ALLOCATION OF STATE EXCISE TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
 (Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	15,182.3	20,729.4	22,869.2	19,793.2	39,720.2	14,443.7
Arizona	5,095.8	4,869.3	7,134.1	9,455.5	22,251.7	7,870.2
Arkansas	15,196.5	15,849.1	12,492.8	14,823.6	24,239.8	10,721.4
California	53,996.2	64,063.2	110,737.9	130,872.0	104,513.5	149,175.8
Colorado	6,928.1	7,428.9	12,019.8	13,021.5	32,052.9	11,936.4
Connecticut	6,902.9	10,419.5	17,192.2	17,322.5	56,786.4	21,620.5
Delaware	2,177.6	1,369.4	2,694.0	2,469.5	7,520.8	6,218.6
Florida	29,321.2	31,916.0	41,776.3	33,732.4	81,736.2	41,516.8
Georgia	24,202.2	29,711.7	29,711.7	24,792.5	62,178.1	26,169.9
Idaho	2,391.5	2,875.2	5,347.3	4,406.8	9,331.7	2,472.1
Illinois	33,065.7	39,465.5	70,931.3	74,664.5	228,260.1	85,864.2
Indiana	21,416.6	24,896.8	41,762.3	42,833.1	109,492.2	27,573.6
Iowa	18,347.8	22,176.9	25,367.8	23,772.4	52,490.6	17,231.0
Kansas	11,883.4	11,883.4	17,939.3	19,424.7	39,877.8	13,140.2
Kentucky	11,808.8	12,753.4	13,603.7	13,131.3	31,744.9	11,336.4
Louisiana	26,486.9	27,546.4	44,498.0	38,670.9	90,585.2	37,346.5
Maine	8,204.2	8,096.9	10,992.5	7,775.2	13,944.7	4,504.2
Maryland	9,910.7	11,455.2	18,920.4	18,405.5	52,385.0	17,890.7
Massachusetts	18,595.9	26,380.2	34,597.0	33,515.8	76,762.0	26,812.6
Michigan	32,431.7	35,180.2	60,465.9	78,056.0	266,599.7	70,956.6
Minnesota	17,580.4	16,758.9	27,110.0	26,288.5	57,506.0	19,059.1
Mississippi	16,182.9	15,979.3	14,447.3	14,249.1	30,228.4	10,992.1
Missouri	18,206.4	20,064.2	28,424.3	26,752.3	66,509.2	26,009.2
Montana	2,309.7	2,642.1	3,922.3	5,175.2	10,050.8	3,077.9
Nebraska	6,176.8	5,586.4	7,539.4	5,949.8	15,033.4	5,177.7
Nevada	1,412.1	1,659.0	3,094.5	4,428.3	10,173.5	4,590.7
New Hampshire	3,352.1	4,646.2	5,936.0	5,776.6	11,977.1	4,997.9
New Jersey	15,054.2	23,313.9	38,420.5	45,054.1	135,070.4	54,733.8
New Mexico	7,431.3	8,314.1	8,728.8	10,654.9	32,342.3	11,525.7
New York	52,449.9	97,088.7	149,163.4	182,241.3	520,593.2	547,452.6
North Carolina	33,615.9	42,986.1	45,912.6	37,045.6	89,434.3	78,566.6
North Dakota	8,083.0	6,830.9	8,095.7	7,313.1	12,376.4	5,876.3
Ohio	40,114.0	53,557.7	92,396.8	106,005.6	301,217.5	100,294.7
Oklahoma	21,262.3	20,644.1	31,197.1	32,461.4	71,796.5	39,499.5
Oregon	4,607.3	8,903.0	15,434.2	21,102.7	50,074.2	47,002.2
Pennsylvania	46,727.2	63,173.3	101,463.9	108,243.3	225,359.8	197,899.0
Rhode Island	6,532.8	8,557.9	12,028.2	13,205.7	24,675.0	16,406.9
South Carolina	17,194.5	26,620.4	25,207.8	22,433.6	52,031.5	29,971.7
South Dakota	6,390.7	6,762.0	7,701.2	6,594.4	8,536.5	3,812.0
Tennessee	23,633.4	28,761.7	32,876.2	27,427.0	69,772.2	37,617.0
Texas	44,022.1	50,175.4	70,210.5	72,678.6	183,203.4	87,269.5
Utah	4,509.1	5,419.9	8,562.7	11,923.1	21,251.1	11,779.4
Vermont	3,228.5	3,968.3	4,799.2	3,520.5	7,544.1	7,043.7
Virginia	15,333.4	20,230.1	25,658.1	22,566.1	67,050.8	50,033.5
Washington	19,609.6	26,130.1	40,241.6	52,654.1	149,027.2	49,632.3
West Virginia	17,922.4	17,453.4	24,597.1	31,146.4	45,592.1	15,175.9
Wisconsin	15,790.4	18,006.0	28,345.7	35,374.1	97,229.4	95,681.3
Wyoming	3,351.6	3,116.8	4,180.5	4,967.3	13,772.4	4,117.6

Source: Computed by the author. State total allocated among spending unit income brackets on the basis of consumption expenditures.

TABLE XVIII

ALLOCATION OF STATE CORPORATION NET INCOME TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	16.6	38.1	36.3	36.3	136.8	770.8
Arizona	50.3	85.5	100.6	166.1	714.5	3,914.9
Arkansas	178.5	324.6	219.1	292.1	900.7	6,207.2
California	629.2	1,635.9	2,139.3	3,020.2	17,617.7	100,798.6
Colorado	55.4	104.6	141.5	184.6	830.7	4,836.3
Connecticut	126.7	329.4	481.4	557.4	3,445.8	20,396.3
Delaware	.....	.....	.....	.....	.....	.....
Florida	.....	.....	.....	.....	.....	.....
Georgia	196.8	406.8	341.1	341.1	1,561.4	10,286.9
Idaho	40.7	84.3	128.0	122.1	503.1	2,035.6
Illinois	.....	.....	.....	.....	.....	.....
Indiana	.....	.....	.....	.....	.....	.....
Iowa	36.1	74.5	72.3	81.3	327.4	1,666.4
Kansas	49.7	85.2	103.0	134.9	518.3	2,659.0
Kentucky	133.5	258.6	216.9	258.6	1,143.0	6,332.3
Louisiana	.....	.....	.....	.....	.....	.....
Maine	.....	.....	.....	.....	.....	.....
Maryland	111.7	237.3	335.1	376.9	2,038.3	10,833.7
Massachusetts	260.7	703.8	729.8	834.1	3,675.3	19,862.3
Michigan	140.5	281.1	421.6	632.4	4,005.3	17,965.4
Minnesota	203.1	333.6	464.2	507.7	2,117.7	10,878.8
Mississippi	240.7	415.7	295.4	361.0	1,433.1	8,183.1
Missouri	.....	.....	.....	.....	.....	.....
Montana	21.7	39.9	48.9	77.9	280.9	1,342.7
Nebraska	.....	.....	.....	.....	.....	.....
Nevada	.....	.....	.....	.....	.....	.....
New Hampshire	.....	.....	.....	.....	.....	.....
New Jersey	.....	.....	.....	.....	.....	.....
New Mexico	12.6	25.2	22.1	30.5	172.5	789.0
New York	1,226.7	3,066.7	3,475.6	4,293.4	21,467.1	171,123.8
North Carolina	758.1	1,554.2	1,326.7	1,175.1	4,776.3	28,316.5
North Dakota	29.1	42.3	42.3	42.3	138.2	657.1
Ohio	.....	.....	.....	.....	.....	.....
Oklahoma	102.0	172.6	211.8	251.0	1,027.6	6,079.1
Oregon	88.9	237.0	325.8	488.3	2,236.5	11,434.1
Pennsylvania	1,218.0	2,557.7	3,775.7	4,384.7	17,051.6	92,809.3
Rhode Island	85.1	177.4	212.8	241.2	879.8	5,491.5
South Carolina	286.1	700.9	543.6	543.6	2,217.3	10,027.8
South Dakota	4.1	7.8	7.4	7.4	17.9	103.5
Tennessee	276.5	569.3	553.0	504.2	2,391.1	11,971.8
Texas	.....	.....	.....	.....	.....	.....
Utah	51.8	95.6	127.4	195.1	625.2	2,887.0
Vermont	49.3	96.4	92.1	75.0	246.3	1,582.9
Virginia	307.4	636.8	636.8	614.8	3,074.1	16,688.1
Washington	.....	.....	.....	.....	.....	.....
West Virginia	.....	.....	.....	.....	.....	.....
Wisconsin	622.1	1,100.6	1,339.9	1,866.3	8,135.2	34,789.9
Wyoming	.....	.....	.....	.....	.....	.....

Sources: Computed by the author. State totals allocated among spending unit brackets on the basis of income payments from dividends.

TABLE XIX  
ALLOCATION OF STATE CORPORATION NET INCOME TAXES ON THE BASIS OF MUSGRAVE'S ALTERNATIVE  
INCIDENCE ASSUMPTIONS, BY SPENDING UNITS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	52.9	79.1	83.2	73.3	193.8	551.2
Arizona	184.5	201.2	278.4	390.8	1,135.6	2,843.0
Arkansas	559.9	676.2	508.5	624.7	1,303.6	4,449.1
California	2,894.4	4,126.9	6,501.8	8,011.9	30,285.8	74,036.5
Colorado	207.1	252.2	389.7	443.1	1,341.4	3,517.5
Connecticut	532.1	895.3	1,435.7	1,494.9	5,979.5	14,999.5
Delaware	.....	.....	.....	.....	.....	.....
Florida	.....	.....	.....	.....	.....	.....
Georgia	669.2	931.6	887.8	778.5	2,423.0	7,439.6
Idaho	113.4	159.9	278.2	240.4	675.6	1,446.3
Illinois	.....	.....	.....	.....	.....	.....
Indiana	.....	.....	.....	.....	.....	.....
Iowa	110.7	154.3	167.9	166.4	465.9	1,192.2
Kansas	156.2	179.9	254.4	291.1	758.5	1,908.8
Kentucky	436.6	547.8	545.1	559.0	1,696.4	4,555.3
Louisiana	.....	.....	.....	.....	.....	.....
Maine	.....	.....	.....	.....	.....	.....
Maryland	432.8	572.4	907.5	916.8	3,253.0	7,869.4
Massachusetts	921.0	1,529.2	1,876.8	1,902.8	5,534.7	14,318.9
Michigan	554.4	687.1	1,139.9	1,530.3	6,450.9	13,070.0
Minnesota	652.7	715.6	1,107.2	1,112.0	3,104.0	7,813.4
Mississippi	740.3	849.6	703.8	751.2	2,038.5	5,849.2
Missouri	.....	.....	.....	.....	.....	.....
Montana	76.0	85.2	119.6	166.7	410.1	963.4
Nebraska	.....	.....	.....	.....	.....	.....
Nevada	.....	.....	.....	.....	.....	.....
New Hampshire	.....	.....	.....	.....	.....	.....
New Jersey	.....	.....	.....	.....	.....	.....
New Mexico	43.5	55.4	55.0	68.7	260.9	569.1
New York	5,179.4	8,382.4	11,449.2	12,539.6	39,667.5	121,167.2
North Carolina	2,274.4	3,133.6	3,070.5	2,413.4	6,772.7	20,242.4
North Dakota	77.4	75.5	84.0	76.1	164.2	464.1
Ohio	.....	.....	.....	.....	.....	.....
Oklahoma	358.2	386.9	549.1	580.4	1,579.2	4,395.2
Oregon	320.9	567.8	883.7	1,195.1	3,564.5	8,304.0
Pennsylvania	4,303.5	5,675.1	9,459.5	9,784.3	25,617.9	66,866.6
Rhode Island	302.8	402.0	539.2	548.7	1,338.6	3,961.4
South Carolina	767.7	1,311.3	1,149.7	1,025.2	2,942.1	7,114.3
South Dakota	10.9	13.7	14.6	13.1	22.6	73.0
Tennessee	862.1	1,160.3	1,257.9	1,041.1	1,383.4	8,561.4
Texas	.....	.....	.....	.....	.....	.....
Utah	150.0	195.1	290.7	404.9	839.0	2,062.7
Vermont	441.3	187.1	204.9	145.0	337.0	1,126.7
Virginia	980.7	1,383.3	1,545.6	1,364.7	4,011.2	12,018.4
Washington	.....	.....	.....	.....	.....	.....
West Virginia	.....	.....	.....	.....	.....	.....
Wisconsin	1,962.0	2,249.2	3,174.3	3,798.1	11,490.5	24,916.0
Wyoming	.....	.....	.....	.....	.....	.....

Source: Computed by the author. State totals allocated among spending unit income brackets one-third on the basis of consumption expenditures and two-thirds on the basis of income payments from dividends.

TABLE XX

ALLOCATION OF STATE SOCIAL INSURANCE CONTRIBUTIONS BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	1,292.4	2,603.0	2,930.7	3,531.4	6,134.4	1,711.1
Arizona	908.2	1,327.3	2,008.5	3,685.1	7,492.5	2,043.4
Arkansas	792.7	1,294.2	1,043.5	1,706.8	2,418.6	825.1
California	9,428.4	17,192.9	30,503.6	49,637.6	132,829.1	37,713.5
Colorado	487.2	795.4	1,312.5	1,978.7	4,176.1	1,203.1
Connecticut	963.6	2,206.9	3,698.9	5,190.9	14,702.3	4,320.5
Delaware	92.1	90.5	181.0	230.3	606.6	385.9
Florida	1,428.4	2,430.5	3,240.6	3,624.4	7,632.6	2,063.5
Georgia	1,662.7	3,233.0	3,325.4	3,833.4	8,313.5	2,725.0
Idaho	346.4	645.2	1,236.1	1,442.7	2,621.7	529.8
Illinois	2,804.1	5,287.7	9,694.2	14,100.6	37,444.6	10,815.8
Indiana	1,267.7	2,338.3	3,972.3	5,624.4	12,535.5	2,422.8
Iowa	831.6	1,553.1	1,809.9	2,372.4	4,512.5	1,149.5
Kansas	678.1	1,073.6	1,638.6	2,463.6	4,350.9	1,107.5
Kentucky	1,544.2	2,616.9	2,847.2	3,810.2	7,934.4	2,198.2
Louisiana	1,388.1	2,273.6	3,733.5	4,499.4	9,142.4	2,895.9
Maine	886.5	1,377.9	1,907.9	1,859.7	2,881.2	722.7
Maryland	804.5	1,462.6	2,449.9	3,290.9	8,135.9	2,139.1
Massachusetts	5,089.1	11,424.5	15,153.4	20,460.2	40,712.7	10,905.2
Michigan	3,293.4	5,489.0	9,440.2	17,564.8	51,995.8	11,576.8
Minnesota	1,475.3	2,189.1	3,616.2	4,878.0	9,256.3	2,355.7
Mississippi	667.6	1,040.0	934.6	1,307.0	2,403.2	674.6
Missouri	966.1	1,695.4	2,439.3	3,200.5	6,902.7	2,076.0
Montana	418.1	725.2	1,117.7	2,039.1	3,421.3	810.5
Nebraska	344.9	448.7	621.9	677.0	1,483.9	389.7
Nevada	263.0	450.8	871.5	1,547.7	3,230.6	1,149.5
New Hampshire	469.5	644.4	1,227.2	1,522.6	2,787.6	606.0
New Jersey	3,630.6	7,688.3	12,813.8	18,173.3	50,721.4	13,454.5
New Mexico	283.0	483.1	517.3	854.0	2,235.0	507.5
New York	15,349.4	34,847.2	51,026.3	74,672.6	171,332.2	67,620.2
North Carolina	2,757.6	5,121.3	5,449.6	5,613.8	10,735.1	3,151.6
North Dakota	562.6	712.0	861.4	1,025.7	1,448.9	354.4
Ohio	5,311.0	10,474.5	18,441.0	27,445.2	69,043.1	17,113.2
Oklahoma	823.3	1,222.1	1,865.3	2,611.4	4,901.2	1,440.8
Oregon	889.0	2,163.3	3,585.7	6,252.8	13,324.3	3,378.3
Pennsylvania	5,983.4	10,989.9	19,171.3	26,253.6	47,134.5	12,699.4
Rhode Island	1,486.1	2,655.5	3,800.5	5,440.4	8,624.1	2,655.5
South Carolina	1,176.3	2,717.2	2,504.6	3,015.4	5,732.2	1,292.3
South Dakota	102.8	169.1	197.2	231.5	240.5	74.7
Tennessee	1,802.2	3,381.1	3,740.4	4,347.2	9,507.8	2,364.2
Texas	1,912.0	3,382.7	4,414.7	6,728.7	14,928.2	5,000.6
Utah	324.6	583.4	938.8	1,743.6	2,528.2	576.7
Vermont	278.8	488.7	591.5	539.6	442.4	266.8
Virginia	674.2	1,315.4	1,620.2	1,848.6	4,252.6	1,411.8
Washington	2,267.9	4,472.7	7,055.6	11,909.2	30,238.1	6,866.6
West Virginia	1,743.2	2,544.2	3,627.8	6,007.0	7,820.9	1,813.9
Wisconsin	1,599.9	2,472.6	3,781.6	5,166.9	12,450.1	2,647.1
Wyoming	214.3	308.8	432.8	679.4	1,660.3	341.5

Source: Computed by the author. State totals allocated among spending unit income brackets on the basis of inclusive wages and salaries.

TABLE XII  
ALLOCATION OF STATE PROPERTY TAXES BY SPENDING UNIT BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	1,296.2	1,401.7	1,383.3	1,232.1	2,450.6	1,397.1
Arizona	1,157.9	927.5	1,218.3	1,657.4	3,863.6	2,156.8
Arkansas	53.6	47.2	33.4	40.6	65.8	45.6
California	5,491.4	5,491.4	8,475.8	10,306.2	31,515.7	18,264.8
Colorado	770.9	688.8	994.0	1,107.5	2,688.6	1,577.1
Connecticut	12.7	15.1	23.7	24.5	79.5	47.5
Delaware	141.1	74.8	132.5	124.6	375.6	475.7
Florida	739.3	737.4	854.4	718.7	1,719.4	1,363.1
Georgia	158.2	163.2	147.0	125.9	312.5	206.7
Idaho	247.9	249.0	415.7	352.0	744.6	309.1
Illinois	24.1	24.3	39.4	42.3	138.5	75.9
Indiana	1,386.8	1,350.7	2,029.7	2,140.8	5,402.8	2,145.3
Iowa	17.6	17.9	18.3	17.7	38.5	19.9
Kansas	1,036.8	872.4	1,175.9	1,309.5	2,651.0	1,382.1
Kentucky	1,755.5	1,599.2	1,527.0	1,509.0	3,607.2	2,026.6
Louisiana	1,241.9	1,087.3	1,577.6	1,401.8	3,256.7	2,105.3
Maine	159.3	132.5	160.7	116.5	207.1	105.5
Maryland	563.9	551.4	814.6	811.4	2,290.2	1,234.4
Massachusetts	23.1	27.4	32.2	32.0	72.6	40.0
Michigan	2,267.2	2,071.5	3,196.9	4,240.9	14,034.7	6,524.4
Minnesota	1,602.6	1,279.5	1,856.0	1,843.3	3,997.1	2,090.4
Mississippi	281.3	233.3	185.3	192.2	403.4	230.3
Missouri	807.9	804.8	1,294.0	994.2	2,449.6	1,479.4
Montana	438.5	408.9	544.5	737.2	1,417.3	688.5
Nebraska	3,117.3	2,369.9	2,881.3	2,330.6	5,831.3	3,146.7
Nevada	197.0	180.5	303.6	402.1	960.0	690.6
New Hampshire	191.4	209.4	234.1	216.1	449.6	201.1
New Jersey	260.4	299.8	442.2	470.2	1,476.3	800.0
New Mexico	509.7	470.7	440.5	537.8	1,613.2	751.5
New York	170.9	210.7	272.7	296.1	773.7	618.0
North Carolina	946.8	953.9	889.5	678.9	1,486.4	886.6
North Dakota	707.3	683.6	513.0	450.8	731.8	380.6
Ohio	2,064.2	2,159.8	3,362.9	3,663.6	10,676.3	5,427.0
Oklahoma	.....	.....	.....	.....	.....	.....
Oregon	2.0	2.0	3.0	3.0	6.0	3.0
Pennsylvania	140.9	136.5	224.9	228.7	269.1	259.0
Rhode Island	.....	.....	.....	.....	.....	.....
South Carolina	265.9	327.2	273.3	236.1	515.9	238.9
South Dakota	19.6	17.2	17.5	15.3	19.7	11.6
Tennessee	.....	.....	.....	.....	.....	.....
Texas	2,721.6	2,590.1	3,247.5	3,365.9	8,533.0	5,850.9
Utah	401.0	381.8	535.9	734.6	1,226.2	578.4
Vermont	61.9	59.0	61.6	42.0	75.5	48.8
Virginia	1,358.3	1,413.3	1,550.0	1,303.5	3,439.6	1,889.6
Washington	1,403.6	1,492.0	2,066.6	2,594.8	7,506.2	3,493.6
West Virginia	39.9	30.8	38.7	47.9	70.9	34.0
Wisconsin	2,794.8	1,887.6	2,533.3	3,040.0	7,045.6	3,069.7
Wyoming	591.9	460.3	560.2	655.1	1,831.5	772.0

Source: Computed by the author. State totals allocated one-half on the basis of liquid asset holdings and one-half on the basis of consumer expenditures.



these data. Table XXII presents the incidence by spending unit brackets of the federal taxes; Table XXIII presents the comparable incidence of state taxes by spending unit brackets. The combined federal and state incidence by spending unit income brackets is presented in Table XXIV.

#### DETERMINATION OF THE STATE PERSONAL INCOME BY INCOME BRACKETS

An estimate of the relative tax burden of the several income groups in each state requires more than the determination of the dollar amount of taxes paid by each income group. Such tax payments must be related to the income base from which the payments are made. This in turn requires the computation of the amount of income accruing to the members of each income group.

The process of determining an acceptable tax base involves the computation of an adjusted personal income figure for each state and then allocating the state total among the spending unit income brackets. Again a modification of the technique used by Musgrave in 1954 was adopted. However, since the 1956 publication by the Department of Commerce of personal income data for each state,<sup>59</sup> the detailed adjustments such as were made by Musgrave were materially reduced.

State personal income is defined by the Department of Commerce economists as "...the current income received by residents of the States from all sources, inclusive of transfers from government and business but exclusive of transfers among persons...."<sup>60</sup> The concept of personal

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<sup>59</sup>The publication was Charles F. Schwartz and Robert E. Graham, Jr., Personal Income by States Since 1929, U. S. Department of Commerce, Office of Business Economics (Washington, 1956).

<sup>60</sup>Ibid., p. 57.

TABLE XIII  
DISTRIBUTION OF FEDERAL TAX INCIDENCE BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1951  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	27,882.3	47,042.4	55,068.9	58,600.8	158,106.6	188,371.6
Arizona	9,564.2	11,662.7	18,725.6	29,750.0	93,485.9	125,885.9
Arkansas	20,446.0	26,339.8	24,029.5	31,566.7	72,563.1	102,579.3
California	125,034.6	210,023.2	406,476.0	550,937.3	2,157,789.4	3,071,441.0
Colorado	18,600.7	26,503.9	50,188.7	57,233.6	181,491.1	249,299.9
Connecticut	25,741.9	54,902.8	90,514.8	112,910.7	477,178.4	876,137.9
Delaware	9,145.4	8,206.2	16,238.2	17,910.1	69,825.4	375,353.7
Florida	50,163.5	72,229.5	104,038.3	97,525.1	319,150.3	727,664.0
Georgia	47,574.0	70,176.7	80,411.2	78,516.2	246,297.4	350,313.7
Idaho	6,190.9	8,779.1	20,078.5	19,357.9	51,528.1	39,795.0
Illinois	95,136.7	162,567.4	336,059.6	409,712.5	1,548,901.5	2,077,438.0
Indiana	41,237.4	68,780.5	133,057.3	155,864.9	514,147.5	424,836.7
Iowa	33,243.6	54,814.0	74,439.1	77,426.1	229,924.6	240,664.7
Kansas	26,110.1	33,777.9	61,850.3	75,479.2	203,577.0	210,518.9
Kentucky	33,541.1	48,737.4	61,667.4	66,047.9	216,783.4	288,504.0
Louisiana	23,535.2	32,300.7	61,054.5	66,678.5	194,598.8	270,575.9
Maine	20,022.0	24,623.4	37,221.0	30,011.7	74,852.8	129,357.3
Maryland	33,295.0	50,181.3	95,555.5	125,319.5	402,852.7	519,934.5
Massachusetts	79,441.1	156,109.2	212,491.0	234,143.9	692,086.4	1,206,877.7
Michigan	59,901.9	89,776.6	185,805.2	276,492.7	1,198,226.9	1,179,022.7
Minnesota	45,843.8	59,685.5	107,741.7	116,280.2	321,747.1	402,956.6
Mississippi	17,403.4	21,752.4	21,354.7	26,631.0	72,827.3	84,171.9
Missouri	60,476.7	87,829.6	144,023.0	155,381.8	487,821.6	727,628.3
Montana	7,347.3	10,138.8	17,688.0	27,241.3	66,594.0	51,261.3
Nebraska	26,627.3	31,919.8	47,931.9	44,991.2	137,201.2	154,769.2
Nevada	2,800.3	4,162.6	8,265.3	12,103.5	40,278.4	73,241.1
New Hampshire	9,770.8	17,916.9	22,857.8	23,478.5	65,444.2	97,389.3
New Jersey	53,659.2	103,966.5	192,854.8	227,922.2	917,824.0	1,199,843.1
New Mexico	7,041.1	9,444.6	12,473.5	16,502.3	68,629.6	57,236.7
New York	187,084.3	381,390.1	615,258.9	734,384.5	2,483,541.9	4,481,789.7
North Carolina	48,935.9	75,462.8	85,923.9	77,037.5	224,287.3	335,772.2
North Dakota	9,662.3	9,643.2	13,189.3	14,137.6	28,615.7	25,380.6
Ohio	89,621.6	152,615.0	295,728.0	375,884.5	1,335,973.7	1,518,381.0
Oklahoma	22,654.7	27,590.0	48,387.1	59,314.8	173,678.4	241,639.3
Oregon	12,128.5	25,213.6	46,166.4	65,227.6	205,471.8	205,274.1
Pennsylvania	144,120.9	230,302.7	444,072.7	508,469.6	1,360,314.4	2,318,437.6
Rhode Island	13,468.1	22,115.0	32,754.3	36,951.3	93,019.4	187,008.9
South Carolina	20,598.0	37,930.5	39,433.3	39,056.5	112,555.7	109,862.4
South Dakota	11,676.6	15,273.4	19,525.3	14,688.8	34,622.6	38,180.3
Tennessee	35,729.7	54,662.1	71,273.0	68,721.7	224,632.8	246,048.8
Texas	86,252.1	124,128.8	202,931.2	246,570.6	812,767.1	1,182,618.3
Utah	7,540.5	11,000.0	19,068.6	26,408.8	62,958.0	61,751.0
Vermont	8,378.8	12,249.6	16,177.5	11,806.0	29,115.8	75,400.8
Virginia	46,490.0	75,349.5	102,211.0	95,976.3	341,382.3	445,222.7
Washington	22,880.3	30,302.7	76,117.7	98,540.0	387,347.9	351,219.6
West Virginia	25,216.9	31,424.3	47,841.4	68,647.8	133,337.7	144,710.8
Wisconsin	27,317.7	59,716.4	101,280.4	136,837.6	419,841.6	438,144.2
Wyoming	3,909.0	5,153.7	7,443.1	10,393.5	36,703.0	34,115.1

Source: Computed by the author.

TABLE XXIII  
DISTRIBUTION OF STATE TAX INCIDENCE BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954  
(Thousands of Dollars)

State	Spending Unit Income Bracket					
	0- \$2,000	\$2,000- 3,000	\$3,000- 4,000	\$4,000- 5,000	\$5,000- 10,000	Over \$10,000
Alabama	18,817.9	25,122.2	28,131.9	25,687.9	53,718.8	26,598.2
Arizona	7,222.4	7,326.9	10,767.4	15,331.2	36,091.3	18,708.8
Arkansas	16,229.2	17,605.6	14,024.8	17,146.3	28,989.7	19,920.1
California	69,737.7	90,597.2	157,631.8	200,766.3	619,876.1	379,130.4
Colorado	8,267.3	9,313.6	15,239.8	16,292.3	44,213.1	28,647.1
Connecticut	8,005.9	12,971.9	21,396.2	23,095.3	75,014.0	55,901.8
Delaware	2,432.7	1,786.4	3,664.2	3,612.4	8,503.0	14,345.2
Florida	31,548.9	35,083.9	45,881.3	38,075.5	91,088.2	47,933.4
Georgia	26,216.0	33,814.9	34,308.4	30,032.7	76,894.9	46,461.7
Idaho	3,036.9	3,973.7	7,440.2	6,669.3	15,111.7	8,209.5
Illinois	35,893.9	44,777.5	80,664.9	88,807.4	265,803.2	108,946.9
Indiana	24,071.1	28,585.8	47,764.3	50,598.3	127,431.5	35,916.9
Iowa	19,274.9	24,302.7	27,268.3	27,747.2	64,644.7	35,559.9
Kansas	13,671.1	14,180.0	21,549.0	24,160.4	51,401.3	27,270.9
Kentucky	15,288.0	17,699.4	19,424.4	20,184.6	51,537.6	34,834.9
Louisiana	29,151.0	31,298.9	50,830.8	45,796.1	108,893.0	52,929.6
Maine	9,250.0	9,607.3	13,061.1	9,751.4	17,030.0	7,230.4
Maryland	11,448.1	14,365.5	24,239.2	24,947.8	74,792.3	56,444.1
Massachusetts	24,111.9	40,181.3	54,814.7	59,992.9	146,046.6	107,414.9
Michigan	38,132.8	43,021.8	73,964.6	100,494.1	335,905.5	123,653.2
Minnesota	20,963.2	21,732.2	36,102.0	37,183.5	90,545.3	63,660.9
Mississippi	17,383.1	17,790.1	15,880.4	16,490.7	36,306.2	23,042.1
Missouri	20,112.7	23,165.3	33,725.2	32,828.1	84,927.4	47,071.0
Montana	3,257.8	3,929.3	5,928.8	8,383.9	16,878.6	9,497.5
Nebraska	9,609.0	8,405.0	11,042.6	8,957.4	22,348.6	8,819.1
Nevada	4,212.4	5,821.6	11,359.8	16,531.8	50,451.9	77,831.8
New Hampshire	13,122.9	22,603.1	28,793.8	29,255.1	77,421.3	102,387.2
New Jersey	68,713.4	127,280.4	231,275.3	272,976.3	1,052,894.4	1,254,576.9
New Mexico	14,472.4	17,758.7	21,202.3	27,157.2	100,971.9	68,762.4
New York	239,554.2	478,478.8	764,422.3	916,625.8	3,004,135.1	6,129,242.3
North Carolina	82,551.8	113,448.9	131,836.5	114,083.1	313,721.6	414,338.8
North Dakota	17,745.3	16,474.1	21,245.0	21,450.7	40,992.1	31,256.9
Ohio	129,735.6	206,172.7	388,124.8	481,890.1	1,637,191.2	1,618,675.7
Oklahoma	43,917.0	48,238.1	79,584.2	91,776.2	245,474.9	241,138.8
Oregon	16,735.8	34,121.0	61,600.6	86,330.3	263,546.0	252,276.3
Pennsylvania	190,848.1	293,476.0	545,536.6	616,712.9	1,585,674.2	2,336,336.6
Rhode Island	20,000.9	30,672.9	44,782.5	50,157.0	117,694.4	203,415.8
South Carolina	37,792.5	64,550.9	64,641.1	61,490.1	164,687.2	139,834.1
South Dakota	18,067.3	22,035.4	27,226.5	25,283.2	43,159.1	41,992.3
Tennessee	59,363.1	83,423.8	104,140.2	96,148.7	294,405.0	283,665.8
Texas	130,274.2	174,304.2	273,441.7	319,249.2	995,970.5	1,269,887.8
Utah	12,049.6	16,479.9	27,631.3	38,331.9	84,209.1	73,530.4
Vermont	11,607.3	16,217.9	20,976.7	15,325.5	36,659.9	82,444.5
Virginia	61,823.4	95,575.6	127,869.1	118,542.4	408,433.1	501,256.2
Washington	42,489.9	65,432.8	116,359.3	151,194.1	536,375.1	400,951.9
West Virginia	43,139.3	48,877.7	72,438.5	99,794.2	178,929.8	159,886.7
Wisconsin	43,144.1	77,722.4	129,626.1	172,211.7	517,071.0	533,825.5
Wyoming	7,260.6	8,270.5	11,323.6	15,360.8	50,475.4	38,232.7

Source: Computed by the author.

income is a broad one; it is a before-tax measure and it includes imputed non-monetary income. In his 1954 analysis Musgrave did not have such data. Consequently it was necessary for him to utilize existing income data and undertake the adjustment of them. However, not all the adjustments undertaken by Musgrave are incorporated in the state personal income as reported by the Department of Commerce.<sup>61</sup>

The state personal income payment computations do not credit either the amounts of corporate income tax payments or the amounts of retained corporate earnings to individuals as income. However, if it is held that the incidence of the corporation income tax is on the dividend receivers whose income is reduced by the tax, then the income which is so reduced logically should be distributed to the taxpaying recipients. Since the burden of the tax is related to the income received by income groups from dividends, the corporation income taxes and the corporation retained earnings are imputed on the same basis of dividend income receipts. This is the adjustment which was made by Musgrave<sup>62</sup> and it is also the adjustment undertaken here.

Furthermore the state personal income payments do not include personal contributions made for social insurance either by employees and self-employed persons or by the employer for employees. Conceptually it is necessary to increase state personal income payments by the amount of these personal contributions since the burden of the contributions

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<sup>61</sup>The process of computing state personal income is involved. Expansion of its technical components and elaboration of its techniques are found in Schwartz and Graham, pp. 57-70.

<sup>62</sup>"The Incidence of the Tax Structure and Its Effect on Consumption," p. 109.

has been allocated among the income groups. Therefore, the state personal income total has been increased not only by allocating the corporation retained earnings and tax payments to the states but also by adding the personal contributions for social insurance.

After the corporation income tax payments and retained earnings have been allocated to the states on the basis of dividend income receipts, the state totals are allocated to the spending unit income brackets within each state on the same basis of dividend income receipts. The remainder of the personal income payments are allocated among the state spending unit income brackets on the basis of spending unit money income accruing to each income bracket.<sup>63</sup> These separate allocations are then totaled for each income spending unit bracket within each state. The dollar income accruing to each income bracket in each state thus secured is presented in Table XXV.

#### ESTIMATION OF EFFECTIVE TAX RATES BY SPENDING

##### UNIT INCOME BRACKETS

When both the total dollar income and the total tax payments of

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<sup>63</sup>One of the effects of using the Department of Commerce personal income data is to distribute the embodied implicit income receipts among the income spending units in the same pattern as the adjusted money income distributions derived from Survey Research Center analysis. Musgrave's 1948 caution that this is probably at variance with the facts should be recognized. Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," p. 11, n. 1. In 1954 Musgrave carefully developed an adjusted income concept by allocation of non-money income by separate allocators for the components. However, the extent of the departure of the non-money income distributional pattern from the money income pattern seems relatively small. A different problem which Musgrave does not mention is the probability that increasing income totals will change the spending unit income bracket distribution of consumer spending units. Since there is no basis for ascertaining the extent of this probable readjustment, it remains a methodological difficulty not resolved in this study.

each spending unit income bracket are known, it is possible to compute the effective rates of tax. These rates which Musgrave defines as "...the ratio of tax payments to income received for the various income brackets...."<sup>64</sup> were computed for the federal taxes, for the state taxes, and for the combined federal and state taxes. The computed effective tax rates are presented in Tables XXVI, XXVII, and XXVIII.

Several methodological observations seem to be necessary. As in other empirical studies involving tax incidence the extent of the limitations imposed by such methodological considerations is unknown. First, it should be noted that the personal income total for the United States utilized here is substantially larger than that of the Musgrave analysis. After completing all adjustments to determine the broad income total for the United States, Musgrave secured a total of slightly more than \$285 billion.<sup>65</sup> In this analysis the unadjusted income totaled slightly less than \$285 billion. After adjustment the total income allocated to the states totaled slightly less than \$318 billion. The effect of distributing the tax payments over the broader income base is to reduce the effective tax rates. In addition, it is probable that the imputation of income by Musgrave and that undertaken by the Office of Business Economics of the Department of Commerce may not have been based on common procedure; the difference in income totals is suggestive of a dissimilarity in technique. Second, the difference in shifting assumptions utilized in the allocation of the corporation income tax should be

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<sup>64</sup>"The Incidence of Tax Structure and Its Effect on Consumption," p. 99.

<sup>65</sup>Ibid., p. 109, Table A-2.

TABLE XIV  
ADJUSTED PERSONAL INCOME BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954<sup>a</sup>  
(Millions of Dollars)

State	Spending Unit Income Bracket (Thousands of Dollars)					
	0-2	2-3	3-4	4-5	5-10	Over 10
Alabama	306.2	441.9	530.4	487.8	1,058.8	642.6
Arizona	101.0	108.0	174.8	242.9	619.5	392.2
Arkansas	228.0	267.6	232.0	287.2	509.1	375.0
California	1,176.6	1,588.4	2,905.5	3,723.6	12,569.9	8,667.4
Colorado	160.9	191.0	338.3	386.1	1,025.6	700.3
Connecticut	203.7	347.6	625.4	665.0	2,394.4	1,990.5
Delaware	63.5	44.9	96.0	92.8	314.4	662.3
Florida	458.7	565.5	809.6	690.3	1,821.3	1,849.9
Georgia	418.1	576.0	637.2	560.9	1,512.2	1,122.3
Idaho	59.1	79.0	163.5	141.5	327.5	141.4
Illinois	894.5	1,208.7	2,444.4	2,654.6	8,827.9	5,950.3
Indiana	459.9	603.3	1,116.1	1,196.3	3,318.6	1,374.3
Iowa	395.3	538.6	673.5	665.4	1,585.7	667.8
Kansas	272.4	305.1	506.7	573.9	1,274.1	695.9
Kentucky	351.7	425.8	497.1	502.5	1,319.9	866.7
Louisiana	283.5	331.1	587.4	534.4	1,356.5	924.6
Maine	162.1	182.8	269.7	200.9	395.4	287.3
Maryland	401.6	527.1	949.5	965.4	2,996.6	1,812.8
Massachusetts	629.0	1,009.3	1,442.6	1,477.3	3,712.1	2,821.5
Michigan	609.4	745.0	1,426.2	1,923.8	7,128.5	3,563.1
Minnesota	425.7	455.7	811.1	822.8	1,996.7	1,191.2
Mississippi	226.4	249.9	243.4	256.8	591.1	358.3
Missouri	524.1	653.2	1,014.5	1,002.2	2,717.5	1,779.7
Montana	71.3	88.1	145.0	201.4	417.5	204.4
Nebraska	233.8	237.6	350.0	294.5	806.5	481.0
Nevada	23.1	28.5	58.8	79.4	208.1	179.3
New Hampshire	75.7	112.1	154.1	145.4	336.5	216.1
New Jersey	503.0	785.4	1,417.1	1,552.9	5,335.8	3,404.2
New Mexico	81.5	100.6	115.8	144.5	472.7	222.1
New York	1,644.9	2,659.5	4,200.5	4,675.7	13,470.8	13,923.4
North Carolina	551.5	730.6	839.1	651.3	1,563.7	1,081.1
North Dakota	112.2	101.8	134.1	120.3	211.5	110.2
Ohio	832.3	1,141.4	2,201.0	2,454.7	7,836.7	4,512.9
Oklahoma	266.1	281.1	465.0	461.8	1,159.2	770.8
Oregon	116.2	200.8	361.3	478.5	1,274.1	799.2
Pennsylvania	1,302.7	1,709.7	3,212.1	3,344.4	7,557.0	5,375.8
Rhode Island	122.1	160.7	247.7	252.6	536.1	449.4
South Carolina	228.3	375.2	385.9	339.8	813.4	408.3
South Dakota	119.7	140.8	176.2	157.0	220.0	136.5
Tennessee	394.3	509.5	640.6	533.2	1,450.7	816.0
Texas	884.8	1,122.1	1,730.9	1,829.8	5,083.1	3,710.9
Utah	77.0	97.5	169.5	237.3	432.7	219.6
Vermont	66.8	86.2	109.4	76.9	154.4	162.3
Virginia	425.4	597.2	793.1	686.7	1,987.7	1,309.0
Washington	239.2	332.9	571.1	735.1	2,316.2	1,145.6
West Virginia	244.0	253.2	391.8	492.4	799.6	431.1
Wisconsin	466.5	509.5	839.5	1,034.2	2,606.6	1,343.8
Wyoming	41.9	43.3	65.2	74.5	232.2	109.1

<sup>a</sup>Personal income adjusted by adding personal contributions for social insurance, federal and state corporation income tax payments, and retained earnings of corporations.

Source: Computed by the author from the following sources of data: Personal income and personal contributions for social insurance, Charles F. Schwartz and Robert E. Graham, Jr., Personal Income by States Since 1922, U. S. Department of Commerce, Office of Business Economics (Washington, 1955), pp. 148-203, Tables 5-61; federal corporation income tax payments, Table XII, above; state corporation income tax payments, Table XVIII, above; retained earnings of corporations, "National Income and Product of the United States, 1954," Survey of Current Business, XXXV (July, 1955), p. 8, Table 1.

TABLE IXVI  
ESTIMATED EFFECTIVE FEDERAL TAX RATES, BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954<sup>a</sup>

State	Spending Unit Income Bracket (Thousands of Dollars)					
	0-2	2-3	3-4	4-5	5-10	Over 10
Continental United States	10.3	12.6	13.0	14.4	17.0	35.7
New England Region						
Maine	12.4	13.5	13.8	14.9	18.9	44.0
New Hampshire	12.9	16.0	14.8	16.1	19.4	45.1
Vermont	12.5	14.2	14.8	15.4	18.9	46.5
Massachusetts	12.6	15.5	14.7	15.8	18.6	42.8
Rhode Island	11.0	13.8	13.3	14.6	17.4	41.6
Connecticut	12.6	15.8	14.5	17.0	19.9	44.0
Midwestern Region						
New York	11.4	14.3	14.6	15.7	18.4	40.1
New Jersey	10.7	13.2	13.6	14.7	17.2	35.2
Pennsylvania	11.1	13.5	13.8	15.2	18.0	39.8
Delaware	14.4	18.3	16.9	19.3	22.2	56.7
Maryland	8.3	9.5	10.1	13.0	13.6	28.7
Great Lakes Region						
Michigan	9.8	12.1	13.0	14.4	16.8	33.1
Ohio	10.8	13.4	13.4	15.3	17.0	33.6
Indiana	9.0	11.4	11.9	13.0	15.5	29.5
Illinois	10.6	13.4	14.0	15.4	17.5	34.9
Wisconsin	5.9	11.7	12.1	13.2	16.0	32.6
Plains Region						
Minnesota	10.8	11.1	13.3	14.1	16.4	33.8
Iowa	8.4	10.2	11.1	11.6	14.5	27.7
Missouri	11.5	13.4	14.2	15.5	18.0	36.8
North Dakota	8.6	9.5	9.8	11.8	13.5	23.0
South Dakota	9.8	10.8	11.1	11.9	15.7	28.0
Nebraska	11.4	13.4	13.5	15.3	17.0	32.2
Kansas	9.6	11.1	12.2	13.2	16.0	30.3
Southeastern Region						
Virginia	10.9	12.6	12.9	14.0	17.2	34.0
West Virginia	10.3	12.4	12.2	13.9	16.7	33.6
Kentucky	10.1	11.4	12.4	13.1	16.4	33.3
Tennessee	9.1	10.7	11.1	12.9	15.4	30.2
North Carolina	8.9	10.3	10.2	11.8	14.3	21.1
South Carolina	9.0	10.3	10.2	11.5	13.8	26.9
Georgia	11.4	12.2	12.6	14.0	16.3	31.2
Florida	10.9	12.8	12.9	14.1	17.5	39.3
Alabama	9.1	10.6	10.4	12.0	14.9	29.3
Mississippi	7.7	8.7	8.8	10.4	12.3	23.5
Louisiana	8.3	9.8	10.4	12.5	14.3	29.3
Arkansas	9.0	9.8	10.4	11.7	14.1	27.4
Southwestern Region						
Oklahoma	8.5	9.8	10.4	12.1	15.0	31.3
Texas	9.7	11.1	11.7	13.5	16.0	31.9
New Mexico	8.6	9.4	10.8	11.4	14.5	24.8
Arizona	9.9	10.8	10.7	12.2	15.1	32.1
Rocky Mountain Region						
Montana	10.3	11.5	12.2	13.5	15.9	25.1
Idaho	10.5	11.1	12.3	13.7	15.7	28.1
Wyoming	9.3	11.9	11.0	13.2	15.3	31.3
Colorado	11.6	13.9	14.8	14.8	17.7	35.6
Utah	9.8	11.3	11.2	11.1	14.6	28.1
Far Western Region						
Washington	9.6	11.8	13.3	13.4	16.7	30.7
Oregon	10.4	12.6	12.8	13.6	16.1	27.0
Nevada	12.1	14.6	14.1	15.2	19.4	40.8
California	10.6	13.2	13.7	14.8	17.2	35.4

<sup>a</sup>Effective tax rate is defined as the ratio of computed tax allocation to computed adjusted personal income.

Source: Computed by the author.



TABLE XIV  
ESTIMATED EFFECTIVE RATES OF STATE TAXES BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1951<sup>a</sup>

State	Spending Unit Income Bracket (Thousands of Dollars)					
	0-2	2-3	3-4	4-5	5-10	Over 10
Continental United States	5.0	4.7	4.3	4.4	4.1	3.6
New England Region						
Maine	5.7	5.3	4.8	4.9	4.3	2.5
New Hampshire	4.4	4.2	3.9	4.0	3.6	2.3
Vermont	4.8	4.6	4.4	4.6	4.9	4.3
Massachusetts	3.8	4.0	3.8	4.1	3.9	3.8
Rhode Island	5.4	5.3	4.9	5.2	4.6	3.7
Connecticut	3.9	3.7	3.4	3.5	3.1	2.8
Midwestern Region						
New York	3.2	3.7	3.6	3.9	3.9	3.9
New Jersey	3.0	3.0	2.7	2.9	2.5	1.6
Pennsylvania	3.6	3.7	3.2	3.2	3.0	3.7
Delaware	3.8	4.0	3.8	3.9	2.7	2.2
Maryland	2.9	2.7	2.6	2.6	2.5	3.1
Great Lakes Region						
Michigan	6.3	5.8	5.2	5.2	4.7	3.5
Ohio	4.8	4.7	4.2	4.3	3.8	2.2
Indiana	5.2	4.7	4.3	4.2	3.8	2.6
Illinois	4.0	3.7	3.4	3.3	3.0	1.8
Wisconsin	3.4	3.5	3.4	3.4	3.7	7.1
Plains Region						
Minnesota	4.9	4.8	4.5	4.5	4.6	5.3
Iowa	4.9	4.5	4.0	4.2	4.1	4.1
Missouri	3.8	3.5	3.3	3.3	3.1	2.4
North Dakota	7.2	6.7	6.0	6.1	5.9	5.3
South Dakota	5.3	4.8	4.4	4.2	3.9	2.8
Nebraska	4.1	3.5	3.1	3.0	2.8	1.8
Kansas	5.0	4.6	4.3	4.2	4.0	3.9
Southeastern Region						
Virginia	3.6	3.4	3.2	3.3	3.4	4.3
West Virginia	7.3	6.9	6.3	6.3	5.7	3.5
Kentucky	4.3	4.2	3.9	4.1	3.9	4.0
Tennessee	6.0	5.6	5.1	5.1	4.8	4.6
North Carolina	6.1	5.9	5.5	5.7	5.7	7.3
South Carolina	7.5	7.1	6.5	6.6	6.4	7.3
Georgia	6.3	5.9	5.4	5.4	5.1	4.1
Florida	6.9	7.6	5.7	5.5	5.0	2.6
Alabama	6.1	5.7	5.3	5.3	5.1	4.1
Mississippi	7.7	7.1	6.5	6.4	6.1	6.4
Louisiana	10.3	9.5	8.7	8.6	8.0	5.7
Arkansas	7.1	6.6	6.0	6.0	5.7	5.3
Southwestern Region						
Oklahoma	8.0	7.3	6.7	6.6	6.2	5.1
Texas	5.0	4.5	4.1	4.0	3.6	2.4
New Mexico	9.1	8.3	7.5	7.4	6.8	5.2
Arizona	7.2	6.8	6.2	6.3	5.8	4.8
Rocky Mountain Region						
Montana	4.6	4.5	4.1	4.2	4.0	4.6
Idaho	5.1	5.0	4.6	4.7	4.6	5.8
Wyoming	8.0	7.2	6.4	6.1	5.8	3.0
Colorado	5.1	4.9	4.5	4.2	4.3	4.1
Utah	5.9	5.6	5.1	5.0	4.9	5.4
Far Western Region						
Washington	8.2	7.8	7.0	7.2	6.4	4.3
Oregon	4.0	4.4	4.3	4.4	4.6	6.6
Nevada	6.1	5.8	5.3	5.6	4.9	2.6
California	5.9	5.7	5.3	5.4	4.9	4.4

<sup>a</sup>Effective tax rate is defined as the ratio of computed tax allocation to computed adjusted personal income.

Source: Computed by the author.

remembered. The Musgrave technique, shifting a part of the burden to consumers on the basis of consumer expenditures, transfers a greater burden to low income groups than does the alternative allocation entirely on the basis of dividend income receipts utilized here.<sup>66</sup> Third, the caution that the relative rate pattern is of more significance than the absolute tax rate levels cannot be too-often repeated.

However, methodological limitations and differences should not be overemphasized. A comparison of the results contained in the Musgrave analysis with the results of this study reveals a marked similarity of the pattern of the effective federal tax rates. The 1954 Musgrave analysis, using a smaller income base and slightly different income groupings showed effective percentage tax rates for spending unit income brackets as follows: 0-\$2,000, 13.7; \$2,000-\$3,000, 16.1; \$3,000-\$4,000, 17.3; \$4,000-\$5,000, 18.0; \$5,000-\$7,500, 20.5; \$7,500-\$10,000, 22.6; and over \$10,000, 31.8.<sup>67</sup> In the present study the United States federal tax percentages are 0-\$2,000, 10.3; \$2,000-\$3,000, 12.6; \$3,000-\$4,000, 13.0; \$4,000-\$5,000, 14.4; \$5,000-\$10,000, 17.0; and over \$10,000, 35.7. The Musgrave study did not compute separate effective tax rates for state and for local governments so further comparison is precluded. It may be noted, however, that the regressive pattern of

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<sup>66</sup>This difference was noted by Musgrave in comparing the results of his study with the study of John Adler based on 1946-1947 income and tax data. Musgrave, et al., "Distribution of Tax Payments by Income Groups: A Case Study for 1948," pp. 46-47. The Adler study is "The Fiscal System, the Distribution of Income, and Public Welfare," Fiscal Policies and the American Economy (New York, Prentice-Hall, 1951), pp. 359-421.

<sup>67</sup>"The Incidence of the Tax Structure and Its Effect on Consumption," p. 98, Table 3.

state tax rates shown in Table XXVIII is consistent with Musgrave's view that state and local tax structures are regressive.<sup>68</sup>

It seems possible to conclude that the pattern of effective tax rates is consistent with earlier studies. Conceptual and statistical refinement might be undertaken and should be welcomed. For subsequent analysis to be undertaken in this study, however, the pattern of tax rates developed here will be utilized. Nevertheless the caution that neither too much precision nor too little usefulness should be accorded the estimates developed here should be remembered in the analysis to follow.

#### SELECTION OF THE STATES TO BE USED IN TESTING MAJOR LEGISLATIVE PROPOSALS

The great diversity of major legislative proposals was indicated in Chapter II. Accurate analysis seemed to require an examination of each distinct proposal since choosing a single representative proposal from among the many representatives of each major type of subvention is not possible. Each major proposal requires evaluation. To render this evaluation reasonably manageable, eight states were selected to be used for the analysis of each of the proposals.

Selection of each state rested on a number of factors considered important in securing representation of essential and significant interstate differences which might lead to variations in impact of the several legislative proposals. Eight states were chosen in order to secure representation of each of the eight regional divisions of the United

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<sup>68</sup>Ibid., p. 99.

TABLE XXVIII  
ESTIMATED EFFECTIVE CONSOLIDATED FEDERAL AND STATE TAX RATES  
BY SPENDING UNIT INCOME BRACKETS, BY STATES, 1954<sup>a</sup>

State	Spending Unit Income Bracket (Thousands of Dollars)					
	0-2	2-3	3-4	4-5	5-10	Over 10
Continental United States	15.3	17.3	17.3	18.8	21.1	39.3
New England Region						
Maine	18.1	18.8	18.6	19.8	23.2	46.5
New Hampshire	17.3	20.2	18.7	20.1	23.0	47.4
Vermont	17.3	18.8	19.2	20.0	23.8	50.8
Massachusetts	16.4	19.5	18.5	19.9	22.5	46.6
Rhode Island	16.4	19.1	18.2	19.8	22.0	45.3
Connecticut	16.5	19.5	17.9	20.5	23.0	46.8
Midwestern Region						
New York	14.6	18.0	18.2	19.6	22.3	44.0
New Jersey	13.7	16.2	16.3	17.6	19.5	36.8
Pennsylvania	14.7	17.2	17.0	18.4	21.0	43.5
Delaware	18.2	22.3	20.7	23.2	26.9	58.9
Maryland	11.2	12.2	12.7	15.6	15.9	31.8
Great Lakes Region						
Michigan	16.1	17.9	18.2	19.6	21.5	36.6
Ohio	15.6	18.1	17.6	19.6	20.8	35.8
Indiana	14.2	16.1	16.2	17.2	19.3	32.1
Illinois	14.6	17.1	17.4	18.7	20.5	36.7
Wisconsin	9.3	15.2	15.5	16.6	19.7	39.7
Plains Region						
Minnesota	15.7	17.9	17.8	18.6	21.0	39.1
Iowa	13.3	14.7	15.1	15.8	18.6	31.8
Missouri	15.3	16.9	17.5	18.8	21.1	39.2
North Dakota	15.8	16.2	15.8	17.9	19.4	28.3
South Dakota	15.1	15.6	15.5	16.1	19.6	30.8
Nebraska	15.5	16.9	16.6	18.3	19.8	34.0
Kansas	14.6	15.7	16.5	17.4	20.0	34.2
Southeastern Region						
Virginia	14.5	16.0	16.1	17.3	20.6	30.3
West Virginia	17.6	19.3	18.5	20.2	22.4	37.1
Kentucky	14.4	15.6	16.3	17.2	20.3	37.3
Tennessee	15.1	16.3	16.2	18.0	20.2	34.8
North Carolina	25.0	16.2	15.7	17.5	20.0	38.4
South Carolina	16.5	17.2	16.7	18.1	20.2	34.2
Georgia	17.7	18.1	18.0	19.4	21.4	35.3
Florida	17.0	20.4	18.6	19.6	22.5	44.9
Alabama	15.2	16.3	15.7	17.3	20.0	33.4
Mississippi	15.4	15.8	15.3	16.8	18.4	29.9
Louisiana	18.6	19.3	19.1	21.1	22.3	35.0
Arkansas	16.1	16.4	16.4	17.7	20.0	32.7
Southwestern Region						
Oklahoma	16.5	17.1	17.1	18.7	21.2	35.4
Texas	14.7	15.6	15.8	17.5	19.6	34.3
New Mexico	17.7	17.7	18.3	18.8	21.3	31.0
Arizona	17.1	17.6	16.9	18.5	20.9	36.9
Rocky Mountain Region						
Montana	14.9	16.0	16.3	17.7	19.9	29.7
Idaho	15.6	16.1	16.9	18.4	20.3	33.9
Wyoming	17.3	19.1	17.4	19.5	21.1	35.1
Colorado	16.7	18.8	17.3	19.0	22.0	39.7
Utah	15.7	16.9	16.3	16.1	19.5	33.5
Far Western Region						
Washington	17.8	19.6	20.3	20.6	23.1	35.0
Oregon	14.4	17.0	17.1	18.0	20.7	35.6
Nevada	18.2	20.4	19.4	20.4	24.3	43.4
California	16.5	18.9	19.0	20.2	22.1	39.8

<sup>a</sup>Effective tax rate is defined as the ratio of computed tax allocation to computed adjusted personal income.

Source: Computed by the author.

States.<sup>69</sup> The eight regions correspond to those used by the Office of Business Economics of the Department of Commerce. The states comprising the regions are considered to be relatively homogeneous. The Office of Business Economics in presenting the new classification declared:

The regional groupings were based primarily on homogeneity of the States as studied from 3 standpoints: 1, income characteristics (the industrial and type-of-payment composition of total income, the level of per capita income, and the long-term trend of income); 2, industrial composition of the employed labor force in 1950 (which served as a check upon the income composition analysis); and 3, "noneconomic" characteristics of the States (based on selected statistical series reflecting demographic, racial or ethnic, cultural, and social factors).<sup>70</sup>

It seems probable that no completely defensible classification of the states into economically homogeneous regions can be formulated.<sup>71</sup>

Nevertheless, the evidence presented in the defense of the eight-region classification when it was presented to the Office of Statistical Standards of the Bureau of the Budget "...as a uniform system for reporting of economic and social data...."<sup>72</sup> was impressive.

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<sup>69</sup>The eight regions are designated as New England, Mideast, Great Lakes, Plains, Southeast, Southwest, Rocky Mountain and Far West. The state composition of these regions can be found in Tables III-X where this regional classification was used in presenting the allocators for taxes and expenditures.

<sup>70</sup>Schwartz and Graham, p. 138.

<sup>71</sup>Discussion of the problems of the formulation of homogeneous regional classification in the United States can be found in Morris B. Ullman and Robert C. Klove, "The Geographic Area in Regional Economic Research," Regional Income: Studies in Income and Wealth (Princeton, Princeton U. P., 1957), pp. 87-109; Donald J. Bogue, "An Outline of the Complete Systems of Economic Areas," American Journal of Sociology, IX (1954), pp. 136-39.

<sup>72</sup>Schwartz and Graham, p. 139. The report defending the classification can be secured from the Office of Business Economics of the Department of Commerce.

The eight states chosen for testing the legislative proposals are Massachusetts in the New England region, New Jersey in the Mideastern region, Illinois in the Great Lakes region, Nebraska in the Plains region, Tennessee in the Southeastern region, Oklahoma in the Southwestern region, Colorado in the Rocky Mountain region, and Oregon in the Far Western region. The variables that seem important to the determination of the effects of the proposals are accorded diverse representation by the selected states. On an a priori basis the relevant variables would seem to be per capita income, income per school-age child, income per public school pupil in average daily attendance, current expenditures for public school property per enrolled pupil, percentage of public school revenue derived from local and intermediate (e.g., county units) jurisdictions, extent of urbanization, population density, school-age population as a percentage of total population, total non-public school enrollment as a percentage of school-age population, and number of school districts.<sup>73</sup>

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<sup>73</sup>The terms used here are given their usual meanings. The definitions of the terms in which the variables are expressed are as follows: "...personal income is the current income received from all sources, inclusive of transfers from government and business but exclusive of transfers among persons..." Schwartz and Graham, Personal Income by States Since 1929, p. 57; school-age population is the civilian population of the Continental United States 5 to 17 years of age; current expenditure is the day-to-day spending for administration, instruction, plant operation and maintenance but excluding capital outlay and debt service payments, Schloss and Hobson, pp. 16-17; average daily attendance is the quotient secured when the total number of days attended by all pupils enrolled is divided by the average length of the school term in days; ...revenue receipts....are additions to assets which do not increase the school indebtedness and do not represent exchanges of school property for money...." Schloss and Hobson, pp. 13-14; non-public school enrollment is the estimated number of school-age persons registered in all denominational and nonsectarian elementary and secondary schools not supported as public schools; a school district is a local

Table XXIX presents the relevant information indicating the ranks of the eight selected states in the major factors judged to be critical in evaluating the legislative proposals. Furthermore a study of Tables III-X shows that for the most part the eight states chosen are centrally located within the range of the tax and expenditure allocators for the states comprising the regions.

The extent to which the selected states represent the range of the respective variables seems to be reasonably high. Moreover, all the geographic regions of the United States are represented. On balance a more defensible selection of states does not seem possible without multiplying greatly the number of states used in analyzing the proposals. Some deviations of individual states from the pattern of the regional representative state will occur and these deviations will be noted subsequently if they might vitiate or modify materially conclusions based on analysis of the selected states. However, regional representativeness and national dissimilarity seem as balanced as it is possible to secure.

The statistical framework for the analysis of the major legislative

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basic administrative unit of a school system; urban population is comprised of those persons who were so classified under the new definition of the 1950 Census. Urban population is given a summary definition in U. S. Department of Commerce, Bureau of the Census, Statistical Abstract of the United States, 1952, (Washington, 1952), p. 2: "...the urban population comprises all persons living in (a) places of 2,500 inhabitants or more incorporated as cities, boroughs, and villages, (b) incorporated towns of 2,500 inhabitants or more except in New England, New York, and Wisconsin, where 'towns' are simply minor civil divisions of counties, (c) the densely settled urban fringe, including both incorporated and unincorporated areas, around cities of 50,000 or more, and (d) unincorporated places of 2,500 inhabitants or more outside any urban fringe...." Population density is the total Bureau of Census population divided by the total land area.

TABLE XIII  
RANKS OF SELECTED STATES CHOSEN FOR ANALYSIS OF MAJOR EDUCATIONAL LEGISLATIVE PROPOSALS BY MAJOR VARIABLES USED IN SELECTION<sup>a</sup>

Major Variable Used in State Selection	State Rank <sup>b</sup>							
	New Jersey (Midwestern Region)	Illinois (Great Lakes Region)	Massachusetts (New England Region)	Oregon (Far Western Region)	Colorado (Rocky Mountain Region)	Nebraska (Plains Region)	Oklahoma (Southwestern Region)	Tennessee (Southeastern Region)
Per capita personal income	4	6	10	17	21	25	33	42
Income per school-age child	5	7	8	16	22	23	33	40
Income per public school child in average daily attendance	3	5	7	19	20	23	35	41
Current expenditures for public school education as a percentage of income payments	37	42	40	9	19	18	11	26
Average value of public school property per enrolled pupil	10	20	21	6	22	18	37	48
Per cent of public school revenue derived from local and intermediate jurisdictions	3	7	8	18	10	1	34	40
School-age population as a percentage of total state population	47 <sup>c</sup>	44	42 <sup>c</sup>	33	21	35	19	13
Non-public school enrollment as a percentage of total school-age population	6	7	5	32	23	19	30	41
Current expenditures per pupil in public school average daily attendance	3	7	11	23	18	25	34	44
Number of school districts	22	11	26	21	19	1	15	37
Population density	3	11	4	39	40	38	34	17
Percentage of population living in urban areas	1	7	3	26	15	34	29	36

<sup>a</sup>Income data are for 1956. Data on education are for 1951-1952 except data for average value of public school property per pupil enrolled which is for 1951-1952 academic year. Population density data are for the census year, 1950.

<sup>b</sup>All ranks are based on raw data arranged in descending order of magnitude.

<sup>c</sup>Identical ranks based on identity of percentages of school-age population in the total state population.

Sources: Adaptations and computations made by the author from the following sources: Personal income payments per capita, Charles F. Schwartz and Robert E. Graham, Jr., "Personal Income by States, 1955," *Survey of Current Business*, XLVI (August, 1955), p. 10; school-age population as a percentage of total population, Samuel Schloess and Carol Robeson, *Statistics of State School Systems: Organization, Staff, Pupils, and Finances, 1951-52*, U. S. Department of Health, Education and Welfare (Washington, 1953), pp. 50-51, Table II; current expenditures per pupil in average daily attendance, Schloess and Robeson, pp. 102-103, Table 37; percent of public school revenue derived from local and intermediate sources, Schloess and Robeson, pp. 72-73; number of school districts, Schloess and Robeson, pp. 36-39, Table 7; non-public school enrollment as a percentage of school-age population, Schloess and Robeson, p. 115, Table 49; population density and urban population, U. S. Department of Commerce, Bureau of the Census, U. S. Census of Population, 1950, Vol. I, *Number of Inhabitants*, (Washington, 1952), p. 1-12, Table 9, and p. xxiv, Table 0; other data from a revised National Education Association research report entered in the testimony of Earl J. McGrath, *Federal Aid to States for School Construction*, Hearings, Subcommittee of the Committee on Education and Labor, U. S. House of Representatives, 83d Cong., 2d Sess. (Washington, 1955), Pt. 2, pp. 185-88.



proposals has now been constructed. Testing of the effects of the proposals can only be partial but nevertheless it must rest on extensive empirical analysis. The analysis must be based not only upon knowledge of the federal taxes falling on the inhabitants of each state but also upon a knowledge of the burden of federal taxes upon the income groups within each state. Then if the federal tax burden is added to the burden of the state taxes falling on the income groups, a total state and federal tax burden by income groups can be determined.

The application of existing techniques enables a determination of total tax burdens by income groups to be made. Earlier empirical studies, notably those of Newcomer and of Mushkin and Crowther, have provided a technique for computing the interstate burden of federal taxes. By following the methods of these studies, the interstate allocation of federal taxes was undertaken. Then Musgrave's pioneering study was utilized as an underlying basis for the computation of tax and expenditure allocators; these allocators were applied to the federal and state tax burdens to yield income-group tax burdens.

Personal income computation by spending unit income brackets also was undertaken. The personal income statistics of the Department of Commerce were adjusted to yield a conceptually more adequate series; these adjusted state income totals were then allocated among the spending unit income brackets. Utilizing the resulting income bases, the tax payments were related thereto and effective tax rates were computed for federal taxes, state taxes, and consolidated federal and state taxes. The resulting pattern of rates was found to be reasonably consistent with the pattern revealed by other recent, well-known studies; this rate

pattern with its conceptual and statistical limitations will be used to analyze proposals for financial support of elementary and secondary education.

Finally, the need to render further analysis manageable led to the selection of eight states in which to test the potential effects of major legislative proposals. The eight states chosen are reasonably representative of the eight major, relatively homogeneous, economic regions of the United States; they also appear to represent adequately the major economic and educational variables which on a priori grounds seem likely to be determinative of the effect of the legislative proposals. Such is the statistical framework within which subsequent measurement of the economic effect of such proposals will be attempted.

## CHAPTER IV

### ANALYSIS OF THE FISCAL EFFECTS OF UNMATCHED FLAT GRANT LEGISLATIVE PROPOSALS

Unmatched flat grant legislative proposals have been numerous. They have also been widely dissimilar. Subjecting them to detailed testing in the eight states chosen to represent the United States economic regions would seem to provide a basis for their evaluation. Specifically, the amount of aid which would have been forthcoming per spending unit in each income bracket was computed for the several legislative proposals. This aid was then related to the added tax burden which, as a result of the taxation required to raise funds to finance the aid programs, would have fallen on each spending unit in each income bracket. The excess of benefit, as measured by the difference between the amount of aid received and the added tax burden imposed, was then determined. The interstate differences of net benefit per spending unit by income brackets was then studied to determine the extent to which the fiscal goals of federalism are approximated by each proposal. In this way the fiscal and related economic effects of the several proposals may become apparent, thereby contributing to an understanding of the issue of the best means by which education of adequate quantity and quality may be provided.

## DISTRIBUTION OF COST OF FINANCING FEDERAL

## AID TO EDUCATION

It was indicated earlier that meaningful analysis of federal proposals to aid education financially requires taking cognizance of the constitutional interpretation which holds that there can be no direct connection between the expenditures for a given purpose and the source of the revenue required. New expenditures do require procurement of additional revenue, either when the expenditures are made or when borrowed funds are repaid. Thus, proposals to expend public funds to aid education must face, at least obliquely, the knotty problem of the revenue source to be utilized to secure the funds. The need to secure federal funds for expenditures for educational support has been recognized by sponsors and supporters of such legislation. Typical of this recognition was Senator Robert A. Taft's position in 1948 that limited state access to the "...principal sources of taxation..."<sup>1</sup> justified federal aid secured by utilization of the personal and the corporate income tax. Even more explicitly Senator George Aiken, in explaining the financing of a legislative proposal he introduced, declared: "It is obvious that this money is to be paid out of excise and income taxes...."<sup>2</sup> In recent consideration of proposals the recognition of this need to secure revenue has been no less evident although not so explicitly expressed. Evidence of the concern about revenue sources is implicit in recent Congressional

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<sup>1</sup>Congressional Record, 80th Cong., 2d Sess., Vol. 94 (1948), p. 3348.

<sup>2</sup>Federal Aid to Education, Hearings, Subcommittee on Education of the U. S. Senate Committee on Labor and Public Welfare, 80th Cong., 1st Sess. (Washington, 1947), p. 29.

hearings on federal aid to education.<sup>3</sup> The conclusion seems clear; the legal requirement of complete separation of revenue sources and expenditures is maintained; the economic reality of their inevitable fusion is also recognized.

The testing of the possible programs for aiding education requires the making of certain preliminary decisions. Since the several legislative proposals were introduced in different years it would seem desirable to compare all of the proposals for a single year. The year chosen for comparison is 1954 both because this is a central year in the period under consideration and also, and more importantly, because 1954 is the year in which the most adequate statistical information on tax incidence is available. It was also necessary to determine which of the various measures of income would be superior for the analysis of the aid proposals. Since income-before-taxes seems a better measure of taxpaying ability than any other income concept, the personal income statistics of the Department of Commerce<sup>4</sup> are used unless otherwise indicated.

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<sup>3</sup>Illustrative is the testimony of Representative Carl D. Perkins discussing the tobacco tax payments and the federal income tax payments of consolidated corporations in relation to school needs. Federal Aid to States for School Construction, Hearings, U. S. House of Representatives Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), pp. 70-71. The testimony of Earl J. McGrath is also illustrative, Federal Aid to States for School Construction, Hearings, Subcommittee of the U. S. House of Representatives Committee on Education and Labor, 85th Cong., 1st Sess. (Washington, 1957), pp. 193-94.

<sup>4</sup>Two authorities who seem to agree that personal income is the best measure of state fiscal capacity are Ralph C. Geigle and P. H. Wueller. The Department of Commerce state personal income statistics were released after the articles by these writers were published but inferentially their acceptance of the concept of personal income seems clear. See P. H. Wueller, "Income and the Measurement of the Relative Capacities of the States," Conference on Research in National Income and Wealth, III, (New York, National Bureau of Economic Research, 1939), pp. 442-44; Ralph C. Geigle, "Relative Efforts of the States to Support Public Education," Elementary School Journal, LII (1951), pp. 221-33.

No attempt is made to adjust the state personal income statistics, either total or per capita, to recognize variations in purchasing power of the dollar.<sup>5</sup> Statistical study of regional price levels has recently been undertaken and cost-of-living indices have been computed for the states.<sup>6</sup> The state per capita incomes for 1953 computed by the Department of Commerce correlated with the 1953 state per capita incomes adjusted for purchasing power (the latest year for which such data are available) yields a rank correlation coefficient of .987.<sup>7</sup> Such a high coefficient would seem to support the inference that the significance of the adjustment of personal income data for interstate variation in price differentials would yield a result not greatly at variance with the results secured from the use of unadjusted data.

Because Congress necessarily recognizes the separation of revenue-raising and public expenditure, the exact method by which financial resources to aid education would be secured cannot be ascertained with

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<sup>5</sup>One writer on the topic of measurement of state ability to support public schools has argued that while "...no adequate index of the cost-of-living for states as units is available...", variations in the purchasing power of the dollar render state income data of limited value. Vernon Bowyer, "Relation of Public School Support to Subsequent Per Capita Wealth of States," Elementary School Journal, XXXIII (1933), p. 334. This article was published in 1933 prior to much valuable statistical study but nevertheless the conclusion predicated on an admitted absence of adequate evidence is of dubious logic.

<sup>6</sup>These pioneering computations are presented in Abner Hurwitz and Carlyle P. Stallings, "Interregional Differentials in Per Capita Income Change," Regional Income: Studies in Income and Wealth, XXI (Princeton, Princeton U. P., 1957), pp. 195-265.

<sup>7</sup>The adjusted state per capita income data are taken from Hurwitz and Stallings, pp. 252-55, Table A-7; the state personal per capita income data are taken from Schwartz and Graham, Personal Income by States Since 1929, pp. 142-43, Table 2. The computation of the Spearman rank correlation coefficient is by the author.

definiteness. General statements indicate Congress does recognize clearly that public expenditure requires revenue raising; however, Congressional statements do not indicate specifically which taxes would be utilized to finance educational aid. Nevertheless, the fiscal effect of the several proposals is inextricably related to the method adopted to secure revenue.

In the following analysis it is assumed that substantially the present federal revenue system would be relied upon to provide the necessary funds. As a result, the fiscal burdens upon the several spending unit income brackets have been determined on the basis of federal revenue to be derived 50 per cent from the individual income tax, 30 per cent from the corporate income tax, and 20 per cent from excise taxation.<sup>8</sup>

In computing the added fiscal burden falling on each income group it has been assumed that a constant dollar amount of aid, \$500 million, would be raised. This, of course, is at variance with the amount of appropriations authorized in some of the proposed acts, particularly in those of the early years under consideration. However, in recent years a \$500 million appropriation has frequently been suggested. Furthermore, the burden of a fractional part of this assumed appropriation can be determined from the computations presented here.

The total tax burden for each of the eight states selected for testing the aid proposals was determined by utilizing the same allocational bases as were used in determining federal tax incidence in

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<sup>8</sup>In the case of other proposals (e.g., providing for the specific transfer of the tobacco tax receipts or a given percentage of federal income tax receipts to the states for educational aid) modification of this assumed revenue pattern must be made.

Chapter III. Thus each state's burden of \$500 million in income taxes was determined to be the same percentage of the \$500 million as present state collections comprise of national collections of federal income taxes. A similar rationale governed the computation of the share of each of the eight selected states in the part of the \$500 million of tax revenue to be raised by other taxes. Each state's share of the corporate tax burden was ascertained on the basis of the state percentage of national dividend income receipts; each state's excise tax share was ascertained on the basis of the state percentage of total national retail sales. These burdens for the component parts of the total revenue required were then combined to determine the total tax burden for each state.

Allocation of the state tax burdens to the separate spending unit income brackets in the state followed the procedure used in determining federal tax burdens: individual income taxes of each state were allocated on the basis of income tax collections; corporation income taxes of each state were allocated on the basis of dividend income; excise taxes of each state were allocated on the basis of consumption expenditures. These separate burdens were then combined to determine the total tax burden for each income group in each state. Table XXX presents the burden of taxation, both in dollar amounts and in percentage of the state total, which would result from this tax program and which would fall on the spending unit income groups in the eight states chosen to test the proposals.

The allocation of added revenues needed to support federal educational aid raises certain questions which, although important, admit of



TABLE XXI

TAX BURDEN OF FIVE HUNDRED MILLION DOLLAR APPROPRIATION RAISED FROM PRESENT FEDERAL SOURCES,<sup>a</sup> BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954<sup>b</sup>

State	Spending Unit Income Bracket (Thousands of Dollars)						Total
	0-2	2-3	3-4	4-5	5-10	Over 10	
(By Thousands of Dollars)							
Massachusetts	563	1,105	1,539	1,684	5,460	8,772	19,123
New Jersey	396	765	1,471	1,719	7,576	9,100	21,027
Illinois	705	1,196	2,568	3,107	12,897	16,643	36,516
Nebraska	185	223	340	330	1,106	1,173	3,365
Tennessee	281	418	562	542	1,919	1,918	5,640
Oklahoma	207	227	413	498	1,557	1,915	4,812
Colorado	139	194	371	433	1,503	1,906	4,546
Oregon	99	201	375	522	1,782	1,629	4,608
(By Percentage of Total)							
Massachusetts	2.9	5.8	8.0	8.8	28.6	45.9	100.0
New Jersey	1.9	3.6	7.0	8.2	36.0	43.3	100.0
Illinois	1.9	3.3	7.0	8.5	35.3	43.9	100.0
Nebraska	5.4	6.6	10.3	9.8	32.9	34.9	100.0
Tennessee	5.0	7.4	10.0	9.6	34.0	34.0	100.0
Oklahoma	4.2	4.7	8.6	10.1	32.4	39.8	100.0
Colorado	3.1	4.3	8.2	9.5	33.1	41.9	100.0
Oregon	2.1	4.4	8.1	11.3	38.7	35.4	100.0

<sup>a</sup>Based on the present proportions of revenue now raised from the major tax sources of the Federal government. Present revenue basis as computed approximates a yield of 50 per cent from the individual income tax, 30 per cent from the corporation income tax, and 20 per cent from excise taxes.

<sup>b</sup>Detail does not necessarily add to total due to rounding.

Sources: Computed by the author.

no ready answer. It is probable that securing the required added tax revenues by the various taxes indicated would not be possible without altering tax rates, tax bases, or both. The effect of changing these variables might be to change the portion of the tax raised from the several income groups. Furthermore, the full effect of the alterations in tax rates or bases might also exert an impact on incentives to produce income in general, or to produce specific types of income. In addition, it should also be noted that a long-run impact of education on economic growth might stimulate production, raise the income payments to some or all of the income brackets and thereby reduce the long-run burden of the taxation initially required to finance the educational aid.<sup>9</sup> Important as these results are, they are not considered here; instead the explicit assumption that the \$500 million of taxes would not materially alter the short-run pattern of tax allocations is adopted. It seems probable that the effect of an increment of \$500 million might be small enough that changes in personal financial activity would not be worthwhile for the individuals concerned. At best, however, the issue remains conjectural.

#### DISTRIBUTION OF AID FROM LEGISLATIVE PROPOSALS

##### FOR UNMATCHED FLAT GRANTS

Further analysis of the differential impact of the numerous

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<sup>9</sup>Citation of the extensive literature dealing with the long-run effects of the various types of taxes is beyond the scope of this study. However, an extensive bibliography dealing with many of these peripherally relevant topics can be found in Wilbur A. Steger, "Classified Bibliography of Articles on Fiscal Policy," Readings in Fiscal Policy, eds. Arthur Smithies and J. Keith Batters (Homewood, Illinois, Richard D. Irwin, 1955), pp. 558-89 and in "Classified Bibliography of Articles on the Economics of Taxation," Readings in the Economics of Taxation, eds. Richard A. Musgrave and Carl S. Shoup (Homewood, Illinois, Richard D. Irwin, 1959), pp. 541-72.

legislative proposals for unmatched flat grant aid to education requires the determination of the amounts of aid accruing to the several states. The various proposals would almost certainly lead to differing amounts of aid to the states. It is this likelihood that is crucial in ascertaining the extent to which the proposals approximate the fiscal goal of federalism and thus reduce interstate fiscal inequities.

In the immediate postwar period, aid proposals took the form of teacher salary supplements. On the assumption that these programs of subventions were general and similar to aid such as would be provided by school construction aid, it was assumed that the benefit of the expenditures would have accrued to the school population. Therefore, the amount of state aid was determined and then allocated among the spending unit income brackets in each state. The allotment to each state resulting from each specific legislative proposal was distributed among the spending unit income brackets on the basis of the percentages presented in Table XXXI. These percentages are adopted not only for the specific unmatched flat grant proposals examined in this chapter but also for other types of aid examined in succeeding chapters. Once this income group benefit has been determined it can then be related to the income group tax burden resulting from the collection of the required revenue. Thus, a differential is secured which represents what may be called the net benefit of educational aid. Such net benefit may be a negative amount; it necessarily would be negative for some income groups in some states if the inherent interstate fiscal inequities were to be redressed even partially. This procedure for determining the net benefit of educational aid will be followed in evaluating both the aid programs which

TABLE XXXI

PERCENTAGE DISTRIBUTION BY STATES OF AID ALLOCATED BY LEGISLATIVE PROPOSALS BY SPENDING  
UNIT INCOME BRACKETS, SELECTED STATES, 1954

State	Spending Unit Income Bracket (Thousands of Dollars)						Total <sup>a</sup>
	0-2	2-3	3-4	4-5	5-10	Over 10	
Massachusetts	10.3	11.0	20.6	17.5	34.6	6.0	100.0
New Jersey	7.3	7.5	17.7	16.1	43.9	7.5	100.0
Illinois	7.7	6.9	17.9	16.3	43.1	8.1	100.0
Nebraska	16.0	11.0	21.3	14.6	31.7	5.4	100.0
Tennessee	14.9	12.8	21.0	14.6	31.6	5.1	100.0
Oklahoma	13.2	9.4	20.2	17.7	33.1	6.3	100.0
Colorado	10.3	8.2	18.9	17.9	37.7	7.0	100.0
Oregon	6.5	7.6	17.9	19.7	41.5	6.8	100.0

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.

would supplement teachers' salaries and in analyzing other types of grant programs.

Since the tax burden for each of the spending unit brackets was computed for 1954 insofar as possible all computations of the benefits accruing to the income groups also were made for 1954. The relevant data of educational variables were considered to be those for the 1953-1954 academic year. This conclusion was based on the fact that almost all proposed programs to aid education are based on the statistics of the most recent previous year or years.

The first of the proposals to supplement teachers' salaries was the 1947 Green-McGrath bill.<sup>10</sup> The plan which, for 1954, would have appropriated fifteen dollars per pupil in average daily attendance, would have required \$384,658,065.<sup>11</sup> The allocations to the eight states selected for testing the proposals are presented by spending unit income brackets in Table XXXII. Table XXXII presents not only the state allocations for the Green-McGrath bill but also for the state allocations for all other unmatched flat grant proposals discussed below.

Allocation of the total state aid to be received under the various proposals has been based on the percentage of the total public school-age population in each spending unit income bracket shown in Table XXXI. The assumption that federal aid to education would not lead to a marked change in the percentage of the total school-age population attending private schools seems reasonable since parental motives for sending

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<sup>10</sup>S. 81, 80th Cong., 1st Sess. The separate proposals are discussed in greater detail in Chapter II and in the Appendix.

<sup>11</sup>Based on total average daily attendance in the Continental United States of 25,552,061. Schloss and Hobson, pp. 60-61, Table 18.

TABLE XXXII

DISTRIBUTION BY STATES OF AMOUNTS OF AID ALLOCATED BY UNMATCHED PLAT GRANT LEGISLATIVE PROPOSALS BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954<sup>a</sup>  
(Thousands of Dollars)

Spending Unit Income Bracket	Allocations By Legislative Proposals <sup>b</sup>												
	Green- McGrath, S. 81, 1947 (\$385 million)	Landis, H.R. 1942, 1947 (\$200 million)	Kearns, H.R. 7581, 1949 (\$400 million)	Taft, S. 472, 1947 <sup>c</sup> (\$250 million)	Taft, Committee Draft 6, 472, 1947 <sup>d</sup> (\$300 million)	Taft, Senate Draft S. 472, 1947 <sup>e</sup> (\$300 million)	Almon, S. 199, 1947 (\$1,571 million)	Byrnes, S.R. 4711, 1946 <sup>b</sup> (As necessary)	Lucas, H.R. 1511, 1950 (\$300 million)	Bailey, H.R. 7607, 1954 (\$500 million)	Clements, S. 359, 1954 (\$500 million)	Holt, H.R. 8058, 1954 (\$500 million)	Kearns- Clark, S. 1134, 1957 (\$1,000 million)
Massachusetts													
0-2	981	565	1,612	.....	.....	659	3,981	.....	814	1,159	1,405	1,362	2,610
2-3	1,050	603	1,508	.....	.....	704	4,851	.....	901	1,238	1,502	1,433	2,574
3-4	1,956	1,120	2,824	.....	.....	1,318	7,951	.....	1,687	2,318	2,812	2,684	4,820
4-5	1,570	950	2,399	.....	.....	1,120	6,763	.....	1,433	1,909	2,389	2,280	4,095
5-10	3,302	1,898	4,744	.....	.....	2,214	11,772	.....	2,834	3,292	4,723	4,508	8,096
Over 10	573	329	823	.....	.....	384	2,319	.....	651	675	819	782	1,404
Total	9,542	5,464	13,711	.....	.....	6,800	38,647	.....	8,190	11,250	13,650	13,030	23,400
New Jersey													
0-2	768	662	1,155	.....	.....	405	3,165	.....	639	766	1,066	1,017	1,730
2-3	789	675	1,187	.....	.....	510	3,252	.....	657	788	1,095	1,045	1,778
3-4	1,861	1,121	2,801	.....	.....	1,204	7,675	.....	1,551	1,898	2,584	2,466	4,195
4-5	1,693	1,019	2,548	.....	.....	1,095	6,981	.....	1,410	1,690	2,351	2,213	3,816
5-10	4,616	2,779	6,944	.....	.....	2,965	19,035	.....	3,816	4,610	6,409	6,215	10,644
Over 10	789	475	1,187	.....	.....	510	3,252	.....	657	788	1,095	1,045	1,778
Total	10,515	6,331	15,827	.....	.....	6,800	43,360	.....	8,760	10,500	14,600	13,930	23,700
Illinois													
0-2	1,388	792	1,980	.....	.....	947	5,915	.....	1,206	1,513	2,010	1,918	3,330
2-3	1,244	710	1,774	.....	.....	849	5,301	.....	1,081	1,356	1,801	1,719	2,984
3-4	3,227	1,041	4,603	.....	.....	2,202	11,751	.....	2,803	3,517	4,672	4,459	7,782
4-5	2,939	1,677	4,191	.....	.....	2,005	12,522	.....	2,553	3,203	4,254	4,060	7,050
5-10	7,770	4,833	11,083	.....	.....	5,301	33,210	.....	6,749	8,669	11,249	10,736	18,641
Over 10	1,660	833	2,063	.....	.....	996	6,223	.....	1,268	1,592	2,114	2,018	3,403
Total	18,078	10,285	25,716	.....	.....	12,390	76,922	.....	15,660	19,650	26,100	24,910	43,250
Nebraska													
0-2	540	398	954	.....	.....	120	2,162	.....	403	664	672	642	1,296
2-3	371	273	683	.....	.....	220	1,886	.....	277	456	462	441	891
3-4	710	529	1,323	.....	.....	426	2,878	.....	537	884	895	856	1,725
4-5	493	363	907	.....	.....	292	1,973	.....	368	606	613	585	1,183
5-10	1,069	788	1,969	.....	.....	634	4,283	.....	799	1,216	1,331	1,271	2,568
Over 10	102	134	335	.....	.....	108	730	.....	136	224	227	217	437
Total	3,774	2,484	6,211	.....	.....	2,000	13,511	.....	2,520	4,150	4,200	4,010	8,100
Tennessee													
0-2	1,426	614	1,535	939	2,642	2,339	5,710	4,559	1,073	2,414	1,788	1,706	4,403
2-3	1,228	527	1,119	805	2,278	2,010	4,905	3,917	922	2,074	1,536	1,466	3,782
3-4	2,015	865	2,163	1,323	3,738	3,297	8,048	6,426	1,512	3,402	2,502	2,404	6,205
4-5	1,641	602	1,504	920	2,590	2,292	5,595	4,468	1,051	2,365	1,752	1,672	4,314
5-10	3,032	1,302	3,255	1,991	5,625	4,961	12,110	9,670	2,275	5,119	3,792	3,618	9,310
Over 10	409	210	525	321	708	801	1,944	1,501	357	836	612	584	1,507
Total	9,594	4,121	10,302	6,300	17,800	15,700	38,322	30,600	7,207	16,270	12,000	11,450	29,550
Oklahoma													
0-2	857	483	1,207	.....	752	620	3,484	1,703	806	1,235	1,010	964	2,185
2-3	610	364	860	.....	536	447	2,482	1,213	431	808	719	686	1,556
3-4	1,312	739	1,847	.....	1,152	969	5,311	2,666	927	1,737	1,545	1,475	3,343
4-5	1,191	642	1,619	.....	1,009	842	4,672	2,281	812	1,522	1,354	1,292	2,929
5-10	2,150	1,211	3,027	.....	1,887	1,539	8,736	4,270	1,519	2,807	2,532	2,418	5,478
Over 10	609	230	576	.....	357	296	1,063	811	289	502	482	460	1,043
Total	6,495	3,658	9,146	.....	5,700	4,700	24,393	12,900	4,590	8,600	7,650	7,300	16,550
Colorado													
0-2	376	226	564	.....	.....	277	1,521	.....	241	453	469	447	901
2-3	299	180	440	.....	.....	190	1,211	.....	224	351	373	356	718
3-4	690	414	1,015	.....	.....	416	2,791	.....	514	832	890	820	1,654
4-5	654	392	987	.....	.....	394	2,643	.....	489	788	814	777	1,566
5-10	1,377	826	2,064	.....	.....	829	5,507	.....	1,029	1,659	1,715	1,635	3,299
Over 10	255	153	383	.....	.....	154	1,074	.....	191	308	318	304	612
Total	1,642	2,190	5,476	.....	.....	2,200	14,767	.....	2,730	4,400	4,450	4,340	8,750
Oregon													
0-2	264	154	385	.....	.....	156	1,093	.....	197	299	328	311	611
2-3	309	180	441	.....	.....	182	1,278	.....	210	350	384	364	714
3-4	728	425	1,062	.....	.....	430	3,007	.....	542	821	906	863	1,483
4-5	801	468	1,169	.....	.....	473	3,112	.....	597	906	975	939	1,852
5-10	1,487	985	2,463	.....	.....	996	6,976	.....	1,257	1,999	2,096	2,001	3,901
Over 10	276	151	383	.....	.....	163	1,113	.....	206	311	343	328	639
Total	4,004	2,414	5,935	.....	.....	2,470	16,810	.....	3,030	4,600	5,050	4,820	9,400

<sup>a</sup>Detail does not necessarily add to total due to rounding.<sup>b</sup>Appropriations authorized rounded to nearest million dollars.<sup>c</sup>Grants not payable to all states under 1944 operation of the proposal.<sup>d</sup>Identical with S. 226, 81st Cong., 1st Sess., 1949.<sup>e</sup>The McNair bill, H. R. 10753, 86th Cong., 2d Sess. (1958) would be identical in operation toward the eight states analyzed.

Source: Computed by the author.

children to private schools would probably remain substantially unaffected. Furthermore, total public school population rather than total enrollment in public schools or total attendance seems the preferable measure of public-school educational need. The total public school-age population represents the population group for which it is hoped adequate education will be provided by use of public funds. The educational accomplishment of the entire school-age population is important but for the measurement of benefits from educational aid proposals not all of this population group is relevant.

The McCarran proposal of 1947<sup>12</sup> would have authorized supplementary aid for teachers' salaries and would have utilized a complicated formula that renders computation of state aid allotments impossible. Public school aid, which was to be conditioned on the distribution of teachers' salaries by salary levels, cannot be calculated since the salary distribution by states is not available.

Representative Landis' 1947 proposal<sup>13</sup> designed to provide supplements of two hundred dollars per year for each teacher's salary would have cost \$205,746,200 in 1954.<sup>14</sup> This would have exceeded the authorized appropriation of \$185 million provided in the Landis bill. However, in view of the increased educational load which has occurred since 1947<sup>15</sup> the added expenditure which would have been required would have

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<sup>12</sup>S. 170, 80th Cong., 1st Sess.

<sup>13</sup>H. R. 1942, 80th Cong., 1st Sess.

<sup>14</sup>This computation is based on a 1953-1954 academic year total of 1,028,731 public elementary and secondary school classroom teachers in the Continental United States. Schloss and Hobson, pp. 42-43, Table 9.

<sup>15</sup>Between the 1946-1947 academic year and the 1953-1954 academic year, public school elementary and secondary school enrollment increased

been less than the growth in load as measured by enrollment. Consequently, the analysis of the Landis bill is based on the total of two hundred dollars per teacher<sup>16</sup> rather than on the specific dollar appropriation which would have been authorized.

The Kearns bill,<sup>17</sup> another teachers' salary supplement proposal designed to raise salaries by five hundred dollars per teacher, would have authorized \$400 million for fiscal year 1950. Since the appropriation needed to provide five hundred dollars aid per classroom teacher in 1954 would have been approximately \$514 million,<sup>18</sup> this sum, rather than the \$400 million authorized, has been utilized.

In the computation of the state school aid which would have been forthcoming under the 1947 Taft bill<sup>19</sup> as it would have operated in 1954, adjustments of the provisions of the bill were required. The utilization of the forty dollar per school-age person allotment seemed unwarranted since price increases between 1947 and 1954 would have reduced the real value of the basic allotment in 1954 below the level considered to have been minimal in 1947. Consequently the minimum basic

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approximately 22 per cent from 23,657,000 to 28,836,000. Computed from Schloss and Hobson, p. 9, Table B.

<sup>16</sup>It is possible that not all public school elementary and secondary school classroom teachers would be counted to determine recipients of the salary supplements. Some attrition in the teaching ranks which occur each year would probably lower the yearly number of eligible teachers by an undeterminable number.

<sup>17</sup>H. R. 2584, 80th Cong., 1st Sess. (1949).

<sup>18</sup>This estimate, like that for the Landis bill, is based on 1,028,731 public elementary and secondary public school classroom teachers. Schloss and Hobson, pp. 42-43, Table 9.

<sup>19</sup>S. 472, 80th Cong., 1st Sess.



allotment used in computing the amount of state aid was adjusted upward to reflect the increased price level. Since there is no price index which uniquely reflects the change in educational costs, it was necessary to choose one of the existing indices. Because education has been administered almost exclusively at the state and local governmental level, the adjustment was based on the changes in the cost of state and local government purchases of goods and services. Between 1947 and 1954 the cost of such purchases rose by 37.3 per cent;<sup>20</sup> the basic allotment of forty dollars contained in the original Taft proposal was increased by 37.3 per cent and the resulting \$54.92 allotment rounded to fifty-five dollars. A similar process of adjustment was applied to the fifty dollar minimum allotment proposed by the Senate Committee and to the forty-five dollar allotment adopted by the Senate. Thus, in the following analysis, the Committee draft version of the Taft bill and the Senate version of the bill are considered to be based on allotments of sixty-nine dollars and sixty-two dollars respectively.

The original Taft proposal would have provided aid in 1954 for only one of the eight states selected for analysis--Tennessee. In 1947 the Taft bill as introduced would have aided twenty-five states;<sup>21</sup> changes made later by the Senate would have provided aid to all states by a minimum grant to each state of not less than five dollars per pupil. In

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<sup>20</sup>This index, developed by the Department of Commerce, is presented in U. S. President, Economic Report of the President, 1957, (Washington, 1957), p. 128, Table E-5.

<sup>21</sup>A table inserted into his testimony by Senator George Aiken presents this information in detail for 1947. Federal Aid to Education, Hearings, U. S. Senate Committee on Labor and Public Welfare, 80th Cong., 1st Sess. (Washington, 1947), p. 196.

the following analysis this five dollar minimum has been adjusted upward to \$6.86 to compensate for the increase in the cost of school operation between 1947 and 1954. Two other bills by Representative McGowen<sup>22</sup> and Representative Pace<sup>23</sup> would have granted a per pupil minimum state grant of three dollars per school-age child. However, since the five dollar minimum produced extended legislative discussion and eventual Senate approval, the analysis of this general type of aid plan is confined to the Senate version of the Taft plan. The McGowen and Pace bills would have displayed the same general characteristics as would have been found in the operation of the Senate version of the Taft bill.

The Taft bill would have provided aid only to those states for which 1.1 per cent of the five-year average income payments failed to provide the prescribed minimal allotment per school-child. In addition, states otherwise eligible to receive aid but which failed to spend 2.0 per cent of their five-year average income payments on education would have been denied aid. None of the eight states selected for testing plans for subventions would have been affected by this requirement. Furthermore, it was provided that the amount of aid would have been reduced by the fraction by which state elementary and secondary educational expenditures fell below 2.5 per cent of the five-year average income payments. In 1954, this provision would not have operated to deny funds to any of the states eligible for aid. The Senate version of the Taft act, with the requirement that after five years aid would have been accorded to states only if expenditures per pupil in average daily

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<sup>22</sup>H. R. 2593, 80th Cong., 1st Sess. (1947).

<sup>23</sup>H. R. 140, 80th Cong., 1st Sess. (1947).

attendance exceeded either 2.5 per cent of the income payments or \$165 per pupil in average daily attendance,<sup>24</sup> would have led to no denial of aid. In 1954 only four states (Alabama, Arkansas, Kentucky, and Mississippi) fell below the required current elementary and secondary expenditure of \$165<sup>25</sup> and each of these states expended well over 2.5 per cent of the five-year annual income payments on elementary and secondary education.<sup>26</sup>

Both the Senate Committee draft of the bill and the version of the bill approved by the Senate would have provided higher minimum allotments to the states than the original proposal. The effect of the increased allotment contained in the Committee draft would have been to provide aid to both Tennessee and Oklahoma of the eight test states. The amount of aid to Tennessee would have been over ten million dollars greater than under the original bill. The Senate bill, as finally passed, not only would have made a flat grant for each pupil in each state but would also have altered the basis for computing grants in excess of this minimum. If 1.0 per cent of the five-year average annual income payments would not have provided sixty-two dollars<sup>27</sup> aid,

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<sup>24</sup>This figure represents an upward adjustment of the prescribed \$120 by 37.3 per cent to reflect the relevant increased price level. The actual adjusted figure of \$164.76 has been rounded to \$165.

<sup>25</sup>Data on current expenditures for elementary and secondary education per pupil in average daily attendance by states are found in Schloss and Hobson, pp. 100-101, Table 38.

<sup>26</sup>Data on educational expenditures are taken from Schloss and Hobson, pp. 100-101, Table 38 and pp. 76-77, Table 26. Computations of income payments were made by the author from data in Schwartz and Graham, Personal Income by States Since 1929, pp. 178-79, Table 36; pp. 184-85, Tables 42 and 43; pp. 186-87, Table 45.

<sup>27</sup>This represents an upward adjustment of forty-five dollars to compensate for the upward trend of prices.

federal aid would have been granted to states to enable them to reach the sixty-two dollar minimum. As this act would have operated in 1954, Tennessee and Oklahoma of the eight test states would have received grants above the minimum authorized per pupil but the total aid would have been less than authorized by the Committee draft of the bill. The total grants that would have been made to each state under the original Taft bill and the Committee and the Senate changes of it are presented in Table XXXII as are the allocations of the state totals to the state income brackets.

One of the more liberal of the aid-to-education bills was introduced by Senator Aiken in 1947.<sup>28</sup> Under the provisions of the bill authorized appropriations for 1954 would have approximated \$1,571 million. This sum represents the product of sixty dollars<sup>29</sup> and the total average daily attendance in the United States as defined by the bill.<sup>30</sup> Since the bill provided that if this sum exceeded the specific dollar authorization of \$1,200 million the larger amount would be authorized, analysis is based on proposed expenditures of \$1,571 million. The allocations to the states from the authorized funds also were to have been

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<sup>28</sup>S. 199, 80th Cong., 1st Sess.

<sup>29</sup>Although the Aiken bill provided that the dollar expenditure level per school child should be increased yearly after 1948, for years after 1952 it specifically authorized the sixty dollar per school child figure in computing aid. Therefore, no upward adjustment of this figure to compensate for price increases is undertaken.

<sup>30</sup>The computation is based on average daily attendance of 26,179,000; the quotient resulting from a division of the aggregate days of attendance by the 175 days prescribed in the bill. Aggregate days of attendance totaled 4,581,240,000 in the academic year 1953-1954. Schloss and Hobson, pp. 60-61, Table 18.

based on attendance ratios;<sup>31</sup> allocations to spending unit income brackets were to have been based on the percentage of the public-school population contained in each of the income groups.

The use of average daily attendance data to compute state aid would have the effect of rewarding relatively wealthy states that provide longer average school terms than the less prosperous states and in which the percentages of enrolled pupils attending daily tends to be higher.<sup>32</sup> If the usual position that the per capita income level is the most defensible measure of state ability to support needed services is adopted, the distributional technique of the Aiken bill is anomalous. However, in this context the long-range aspect of the bill is noteworthy. If the aid provided to the poorer states would have enabled them to increase the length of school terms and to improve attendance more than the wealthier states, then the stimulative effects of the bill would have been operative. But this result is conjectural; it would seem that if aid were forthcoming on some basis which is not tied directly to the existing level of school activity (such as public school-age population) more improvement in poorer states might occur. But this too is only probable; it is not subject to a conclusive a priori determination.

The Byrnes bill of 1949<sup>33</sup> represented an unusual attempt to relate

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<sup>31</sup>State attendance figures were computed by dividing the state total aggregate attendance by 175. Ratios of state average daily attendance to such national attendance were then computed. Computations were based on data taken from Schloss and Hobson, pp. 60-61, Table 18.

<sup>32</sup>Schloss and Hobson, pp. 60-61, Table 18 presents the detailed information providing statistical verification of this tendency. Some specific exceptions may be noted but the general pattern seems observable.

<sup>33</sup>H. R. 4711, 81st Cong., 1st Sess.

state aid to public school budgets for current expenditures. If 2.0 per cent of the five-year state average annual income payments would have been inadequate to provide an amount per pupil in average daily attendance equal to 60 per cent of the United States average current expenditure per child in average daily attendance, then the amount of the deficiency would have represented the amount of aid extended. Only two of the test states--Oklahoma and Tennessee--would have received aid under this act; Table XXXII indicates by spending unit income brackets the amount of aid these states would have received. Tennessee which would have received the greatest amount of aid, \$30.6 million, had the lowest per capita income of the eight states.<sup>34</sup> Oklahoma, second lowest of the eight states in per capita income would have received \$12.9 million. The Byrnes proposal which would have tied the minimum educational level to be aided to the national level of expenditures and to a minimum state utilization of income would have required appropriations of an undetermined amount. Certainly the \$60 million sum which the original act would have authorized would not have proved adequate if allocations had been based on 1954 data. Representative Byrnes' testimony in 1949 indicated that neither Oklahoma nor Tennessee would have received aid under the existing expenditure and income levels; on the basis of the situation then prevailing only Mississippi would have received an appropriation as large as that which Oklahoma would have received in 1954.<sup>35</sup>

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<sup>34</sup>Income ranks are based on the 1954 per capita personal income. Schwartz and Graham, Personal Income by States Since 1929, p. 143, Table 2.

<sup>35</sup>The testimony of Representative Byrnes included a summary table showing the state allocations under the proposal. Public School Assistance Act of 1949, Hearings, U. S. House of Representatives Committee on

Thus, in operation the Byrnes bill, utilizing what would seem to be necessarily sizeable appropriations, would have varied aid inversely to need as indicated by per capita income. It would also have contributed to maintaining a minimum national level of current expenditures for education.

The 1950 Lucas bill<sup>36</sup> would have provided a conventional allocative design for the authorized appropriations. State school-age population to national school-age population ratios would have governed. Under the Lucas proposal, a grant of approximately \$8.73 would have been made for each school child in every state. While this seems a reasonable basis for distributing aid, it should be noted that because the percentage of school-age population attending non-public schools tends to be higher in wealthier than in poorer states,<sup>37</sup> the effect of using this allocative basis results in a larger public school-age population in the wealthier states than in the poorer states. Thus, under the Lucas bill the grant per public school-age child for each of the eight states would

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Education and Labor, 81st Cong., 1st Sess. (Washington, 1949), pp. 208-209.

<sup>36</sup>H. R. 1551, 81st Cong., 2d Sess.

<sup>37</sup>Public school-age population as a percentage of total school-age population in the eight selected states ranged from 97.5 per cent in Tennessee and 97.3 per cent in Oklahoma to 77.4 per cent in New Jersey and 77.2 per cent in Massachusetts. These percentages were computed by the author from Schloss and Hobson, pp. 50-51, Table 13 and p. 115, Table 49. However, it should be noted that since attendance at denominational schools represents a major part of non-public school attendance, religious conviction probably plays a significant role in motivating parents to send school-age children to non-public schools. Thus, in the 1953-1954 academic year approximately 90 per cent of all pupils enrolled in non-public elementary and secondary schools were enrolled in Catholic schools. Computed from Schloss and Hobson, p. 115, Table 49 and pp. 116-17, Table 50.

be as follows: New Jersey, \$11.36; Massachusetts, \$11.30; Illinois, \$11.07; Nebraska, \$9.84; Colorado, \$9.51; Oregon, \$9.35; Tennessee, \$8.96; and Oklahoma, \$8.93. From these figures, the conclusion seems clear. If non-public schools are to be denied federal aid funds and if the assumption is correct that non-public school attendance is not significantly contingent upon the amount of public school spending, then use of total school-age populations as the basis for fund allocation operates to give greater aid to the wealthier states. This distortion which would have appeared in the Lucas bill's operation can also be found in other programs utilizing total school-age population as a factor in the allocative formula. In the Lucas bill, however, the nature of the distortion of the flat dollar grant becomes most apparent.

Representative Bailey's 1954 proposal<sup>38</sup> to provide school construction assistance would have varied state grants inversely with the products of the states' percentage shares of the per capita national income and the educational load as measured by total school-age population. The allotments which would have resulted for the eight test states are shown in Table XXXII. Allocations to the spending unit income brackets within the states are also shown. The result of the Bailey formula would have been to vary the per school-age child grant so that there was perfect negative correlation between state per capita income ranking and state per pupil grant ranking of the eight states. The ratio of the highest state grant per school-age child to the lowest such grant would have been approximately 1.86:1; the ratio would have been reduced to 1.49:1 when computation was based on public school-age population rather

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<sup>38</sup>H. R. 7467, 83d Cong., 2d Sess.



than total school-age population. Nevertheless, the Bailey bill, which like the Lucas bill would have embodied the distortion of aid implicit in the use of total school-age population, would have provided greater aid to those states in which per capita personal income was lowest. Some indication of the attractiveness of the Bailey proposal to fellow legislators is revealed by the duplicate or near-duplicate proposals introduced in subsequent years.<sup>39</sup>

The 1954 Clements proposal<sup>40</sup> would have adopted the state-to-national school-age population ratios to apportion authorized appropriations. Since no specific sum was provided in the bill, an assumed \$500 million appropriation is utilized in the analysis of the bill. Under the proposal, each state in 1954 would have received approximately \$14.50<sup>41</sup> for each school-age child. The Clements bill, like the Lucas and Bailey bills would not have made a constant-dollar grant per public school pupil. The apparent 1:1 ratio of the proposal would have become a ratio of 1.27:1 with the greatest grant per public school-age child accruing to the wealthiest of the eight test states, New Jersey, and the smallest grant per public school-age child accruing to Oklahoma, second least wealthy of the eight states. Between the wealthiest and the poorest of the eight states, Tennessee, the ratio of aid per public school-age child would have been just slightly less than 1.27:1 with greater

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<sup>39</sup>See list of similar proposals presented in the Appendix.

<sup>40</sup>S. 359, 83d Cong., 2d Sess.

<sup>41</sup>Computations of per pupil grants have been based on data rounded to the nearest thousand. Thus allotments as finally computed from more accurate figures might have varied somewhat from the figures presented here.

aid to the wealthier state. State allotments of authorized funds and distribution of allotments among the spending unit income brackets appear in Table XXXII.

The 1958 Metcalf bill<sup>42</sup> was a simple modification of the Clements bill. Specific variable appropriations would have been authorized for fiscal years 1959 and thereafter but state allotments would have followed the state-to-national school-age population ratios. For each of the eight test states the state allocations from an assumed \$500 million appropriation would have been exactly the same as those of the Clements bill. However, the Metcalf bill would have curtailed allotments to those states whose average annual current expenditures per pupil in average daily attendance from state and local sources failed to equal or exceed the comparable national average<sup>43</sup> or whose state school effort index failed to equal or exceed the national school effort index. The effort index for the relevant jurisdictions was defined as the ratio of annual school expenditures from state and local sources per public school child in average daily attendance to the annual income payments per public school child. Unfortunately data on total school expenditures per pupil in average daily attendance from state and local sources are not available for each state; the data are available for current expenditures only. Utilizing this available existing information, a

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<sup>42</sup>H. R. 10763, 85th Cong., 2d Sess.

<sup>43</sup>The state annual average current expenditures per pupil in average daily attendance from state and local sources in the academic year 1953-1954 are presented in Federal Aid to States for School Construction, Hearings, U. S. House of Representatives Committee on Education and Labor (Washington, 1957), p. 186, Table 23.

national school effort index of 3.19 would have resulted.<sup>44</sup> None of the eight test states would have received reduced allotments under the provisions of the Metcalf bill but the computations based on available 1954 information indicate that nine states<sup>45</sup> would have experienced reductions in their allotments. The state allotment would have been reduced by the percentage by which the state school effort index fell below the national school effort index. Since the allotment of none of the eight test states would have been reduced under the provisions of the Metcalf bill, the operation of the reduction provision may be illustrated by its application to Missouri. In 1954 Missouri contained 2.40 per cent of the national school-age population and so would have received that percentage of the \$500 million appropriation, or \$12 million. But since Missouri's school effort index of 2.65 was only 83 per cent of the national index of 3.19, only 83 per cent of the basic allotment would have been made to Missouri. Therefore, Missouri would have received approximately \$10 million. Thus, the Metcalf proposal would have operated to penalize those states that failed, either in terms of utilization of state income or of dollar educational expenditures, to make an adequate minimum effort to provide educational support.

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<sup>44</sup>Information on state personal income payments per child of school-age are found in the 1957 House of Representatives Committee on Education and Labor hearings on federal aid to school construction. Ibid., p. 185, Table 20.

<sup>45</sup>The nine states are Nevada, Ohio, Maryland, Rhode Island, Missouri, Florida, Maine, Virginia, and Kentucky. Two cautions should be made. First, these computations are based on current expenditures; second, current data might alter or eliminate completely the states that would experience reduced allotments from the application of the Metcalf bill.

In the Holt bill of 1954<sup>46</sup> some of the features of the Committee and the Senate versions of the Taft bill and features of the Clements bill were joined. The Holt bill would have provided an equalizing grant to all states in the amount that 0.4 per cent of the annual state income payments failed to yield twenty dollars per school-age child. This, of course, corresponds to a basic allotment of fifty dollars per school-age child from 1.0 per cent of state income payments. The Taft proposal, as reported by the Senate Committee would have adopted a basic allotment of fifty dollars but would have used 1.1 per cent of the income payments in determining the amount of equalizing grants. As the Taft bill was approved by the Senate the equalizing allotments would have been based on the difference between forty-five dollars per school-age child and 1.0 per cent of income payments. In all versions of the Taft bill the income payments used in computation would have been an average of the five most recent years. The Holt bill would have utilized a fifty dollar per school-age child basic allotment and 1.0 per cent of income payments in the most recent single past year to determine equalizing grants; any residual funds after equalizing grants were determined would have been allocated on the state-to-national school-age population ratios.

Application of the Holt bill would have provided equalizing aid only to Tennessee of the eight test states. From an assumed appropriation of \$500 million, approximately \$22,892,000 would have been utilized for equalizing grants to eleven states.<sup>47</sup> From the remainder of the

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<sup>46</sup>H. R. 8868, 83d Cong., 2d Sess.

<sup>47</sup>This figure was presented by the Research Division of the National Education Association and entered in Federal Aid for School Construction,

appropriation each state would have received a flat grant per school-age child of approximately \$13.90. Thus each of the eight states would have received this amount while Tennessee, by virtue of its equalizing grant, would have received an approximate additional thirty-six cents per school-age child. Under the Holt bill the ratio of the grant per public school-age child in the poorest state to the grant in the richest state would have been 1.31:1. Details of the state allocations and their distribution by spending unit income brackets appear in Table XXXII.

The complicated Morse-Clark proposal of 1954<sup>48</sup> embodied a combination formula for allocation of the one billion dollars appropriation authorized. Half of the funds would have been distributed on the state-to-national school-age population ratios and would have yielded a flat grant of approximately \$14.50 for each school-age child in each state. The allocation of the other one-half of the appropriations would have been based on an adjustment of state school-age populations in inverse relation to the state levels of income per school-age child. When these resulting state allotments are combined, the grants per pupil range from a high of approximately \$35.82 in Tennessee to a low of approximately \$23.80 in New Jersey. There would have been a perfect negative correlation between the state per capita income rank and the state grant per school-age child rank; there would have been a 1.51:1 ratio between the grant for the poorest state and that of the wealthiest state. Computed on the basis of the grant per public school-age child in the poorest

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Hearings, U. S. House of Representatives Committee on Education and Labor, 83d Cong., 2d Sess. (Washington, 1954), p. 57.

<sup>48</sup>S. 1134, 85th Cong., 1st Sess.

state to the grant per public school-age child in the richest state the ratio would have reduced to 1.20:1. Nevertheless, no matter which basis of computation is used the grant per school child under the Morse-Clark bill would have tended toward a close inverse relation to the per capita income ranking of the selected states. Detailed allotment and allocational data are presented in Table XXXII.

#### COMPUTATION OF THE NET BENEFIT FROM UNMATCHED FLAT GRANT

##### LEGISLATIVE PROPOSALS

After the dollar benefit accruing to the several spending unit income groups has been determined and after the dollar tax burden falling on the same income groups has been ascertained, the net benefit from educational aid provided by the alternative programs can be computed. First, however, it is necessary to make explicit certain methodological decisions. Some of the legislative proposals would have authorized expenditures of specific sums; in the other proposals in which no specific sums were provided a \$500 million appropriation has been assumed. It is this latter assumption which poses a major problem. The effectiveness of any proposal in redressing interstate fiscal inequity is a function not only of the method of distribution of aid but also of the amount of aid provided. A grant which would enable the low income-receiving group in Tennessee to move one hundred dollars nearer a position comparable to that of the low-income group in New Jersey, if doubled would appear to accomplish even more in attaining interstate fiscal equity. The result of this fact is that if other things are held constant, the \$500 million appropriation assumed for the proposals which do not provide a specific

authorization will operate to make the proposals with less than \$500 million authorized seem less effective than those with the assumed appropriation. On the other hand, those bills with authorized appropriations greater than the assumed \$500 million will seem more effective in reducing interstate fiscal inequity.

The question which must be resolved before analysis can proceed logically is whether the variable appropriations should be retained in analysis or whether all computations of marginal net benefit from educational aid should be predicated on a constant appropriation. Some merit inheres in both of the alternatives. However, two considerations seem to argue persuasively for further analysis on the basis of a constant appropriation. First, the propensity of any given Congress to appropriate funds for aid to education is probably relatively independent of the distributional technique which would be employed.<sup>49</sup> Thus, an appropriation of \$500 million for one educational aid program would probably not be reduced if another program capable of securing favorable Congressional action were substituted. Second, since the major concern of this study is with the comparative fiscal effects of possible programs of federal financial support for education on the relative income differentials between income groups in different states, the technique by which funds might be distributed seems the crucial variable. Once the size of the appropriations is known, the differences in income-determining effects of the proposals stem from the method by which state

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<sup>49</sup>That this is not absolutely true is inferrable from the Senate unwillingness to adopt the original Taft bill without an amendment providing a flat grant per pupil in each state. See above, Chapter II, p. 64.

allotments are determined. As a consequence, the analysis that follows is based on an assumed constant appropriation of \$500 million.

Computations of allocations of educational aid to spending unit income brackets in the states have been based on the specific authorized appropriations, or \$500 million if the proposal did not provide a specific appropriation. In the following analysis, therefore, the grants allocated to income groups from appropriations either larger or smaller than the assumed constant of \$500 million have been adjusted to equal the grant which otherwise would have accrued to the income group from a uniform \$500 million appropriation.<sup>50</sup>

In the case of the Byrnes bill, the appropriate factor for adjusting total authorized appropriations to the constant tax burden allocation of \$500 million is not definitely ascertainable. As has been indicated previously, the computation of the exact appropriation does not seem warranted; as a result no correction factor has been employed. This decision rests in part on the size of the allocations which would have been made to aided states and in part to the absence of allocations to some states. Admittedly this decision is an arbitrary one but in view of the relatively unpopular political character of proposals that would aid only a few states at the expense of many other states, further

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<sup>50</sup>An illustration of the method of adjustment should clarify this procedure. The Taft bill as introduced authorized total aid of \$250 million. The allocations of aid to Tennessee and to each spending unit income bracket in that State have been doubled in computing the net benefit that would result. This adjustment is necessary since the tax burden for Tennessee and for her spending unit income brackets has been computed on the basis of \$500 million, not \$250 million as provided in the authorized appropriations of the Taft bill. Similar adjustment in aid allocations for other proposals authorizing appropriations in amounts other than \$500 million has been undertaken.



extensive computations do not seem justified.

The adjusted allocations of educational aid to each spending unit income bracket can be compared with the tax burdens falling on each of the brackets. Since both educational aid and tax burden are based on a constant of \$500 million, the net dollar benefit can be derived by subtracting the dollar amount of aid received from the added dollar tax burden resulting. Table XXXIII presents the net benefit from educational aid provided by the unmatched flat grant legislative proposals considered here.

A final step in the analysis of the unmatched flat grant proposals is the attempt to determine which of the legislative offerings contains the greatest fiscal merit. In a federal polity, the fiscal goal of the national jurisdiction, insofar as a specific program is otherwise considered defensible, is the maximum reduction of inequities stemming uniquely from the individual's state of residence. The possibility of political success for a program should also exist. However, the analysis here of only those proposals which have received serious legislative consideration would seem to obviate the need to further evaluate programs for possible political success. Consequently, the decision as to the preferable program for subventions will be made on the basis of consistency with federalism's fiscal goal.

The logical procedure for recomputing the estimated effective federal tax rates by spending unit income brackets after the net benefit from the various educational aid proposals has been determined cannot be followed expediently. The net dollar benefit from educational aid is too small in relation to the personal income of the relevant spending

TABLE XXVIII

DISTRIBUTION BY STATES OF NET DOLLAR BENEFIT PER SPENDING UNIT INCOME BRACKET RESULTING FROM UNMATCHED FLAT GRANT LEGISLATIVE PROPOSALS, SELECTED STATES, 1950<sup>a</sup>  
(Thousands of Dollars)

Spending Unit Income Bracket	Net Dollar Benefit from Educational Aid <sup>b</sup>												
	Green- Modrath, S. 81, 1947	Landis, H.R. 1942, 1947	Keame, H.R. 2584, 1947	Taft, S. 472, 1947	Taft, Committee Draft S. 472, 1947	Taft, Senate Draft S. 472, 1947	Atkins, S. 199, 1947	Dymally, H.R. 4711, 1949	Loosa, H.R. 1511, 1950	Palmer, H.R. 7457, 1952	Clements, S. 359, 1952	Holt, H.R. 6868, 1952	Morse- Clark, S. 1134, 1957
Massachusetts													
0-2	715	810	807	- 563	- 563	534	711	- 563	846	595	843	779	642
2-3	260	360	358	-1,105	-1,105	71	255	-1,105	400	117	377	328	182
3-4	1,617	1,207	1,200	-1,537	-1,537	652	1,008	-1,537	1,278	779	1,273	1,145	671
4-5	487	649	643	-1,686	-1,686	185	489	-1,686	794	705	705	596	364
5-10	-1,167	- 848	- 858	-5,460	-5,460	-1,763	-1,181	-5,460	- 727	-1,566	- 727	- 952	-1,412
Over 10	-8,027	-7,973	-7,974	-8,772	-8,772	-8,131	-8,030	-8,772	-7,952	-8,097	-7,953	-7,990	-8,070
New Jersey													
0-2	602	777	724	- 396	- 396	432	617	- 396	671	370	670	621	469
2-3	261	369	386	- 765	- 765	87	276	- 765	332	23	330	280	124
3-4	948	1,253	1,246	-1,471	-1,471	580	965	-1,471	1,119	387	1,113	995	627
4-5	482	747	753	-1,719	-1,719	110	515	-1,719	635	29	632	524	189
5-10	-1,575	- 823	- 836	-7,576	-7,576	-2,521	-1,485	-7,576	-1,253	-2,366	-1,267	-1,461	-2,374
Over 10	-8,074	-7,946	-7,949	-9,100	-9,100	-8,248	-8,059	-9,100	-8,003	-8,312	-8,005	-8,055	-8,211
Illinois													
0-2	1,099	1,220	1,216	- 705	- 705	876	1,168	- 705	1,329	808	1,305	1,213	960
2-3	473	529	525	-1,196	-1,196	272	500	-1,196	674	160	605	533	286
3-4	1,627	1,911	1,897	-2,568	-2,568	1,109	1,632	-2,568	2,123	549	2,124	1,891	1,303
4-5	714	968	958	-1,107	-1,107	714	970	-1,107	1,157	59	1,147	953	418
5-10	-2,796	-2,124	-2,116	-12,897	-12,897	-4,044	-2,302	-12,897	-1,626	-4,128	-1,646	-2,161	-1,577
Over 10	-14,145	-14,019	-14,022	-16,043	-16,043	-14,380	-14,055	-16,043	-13,975	-14,151	-13,979	-14,025	-14,191
Nebraska													
0-2	517	782	779	- 185	- 185	329	507	- 185	488	479	487	457	463
2-3	259	440	440	- 223	- 223	146	253	- 223	240	233	239	218	223
3-4	547	937	935	- 346	- 346	371	573	- 346	549	536	547	506	514
4-5	311	552	550	- 330	- 330	158	301	- 330	285	276	283	255	262
5-10	-1,220	- 847	- 848	-1,106	-1,106	- 47	- 865	-1,106	228	210	225	165	178
Over 10	-1,220	- 847	- 848	-1,173	-1,173	- 293	- 939	-1,173	- 946	- 949	- 946	- 956	- 955
Tennessee													
0-2	1,577	1,211	1,200	1,597	1,597	1,625	1,526	4,210	1,511	2,113	1,507	1,475	1,721
2-3	1,178	663	661	1,196	1,196	2,039	1,152	3,497	1,122	1,630	1,116	1,046	1,473
3-4	2,058	1,500	1,506	2,084	2,084	4,064	2,013	5,064	1,953	2,840	1,950	1,842	2,521
4-5	1,279	921	917	1,298	1,298	3,286	1,248	1,526	1,213	1,823	1,210	1,130	1,615
5-10	2,023	1,245	1,238	2,063	2,063	6,266	1,256	7,721	2,880	3,200	2,873	2,599	2,750
Over 10	- 537	-1,404	-1,405	-1,776	-1,776	- 580	-1,293	- 377	-1,305	-1,092	-1,306	-1,134	-1,164
Oklahoma													
0-2	912	972	969	- 202	- 202	833	913	1,501	810	233	808	762	890
2-3	566	609	607	- 227	- 227	511	557	986	493	581	492	459	551
3-4	1,293	1,383	1,379	- 613	- 613	1,172	1,293	2,193	1,125	1,326	1,137	1,062	1,259
4-5	971	1,077	1,072	- 498	- 498	891	907	1,785	868	1,024	866	794	966
5-10	1,218	1,186	1,179	-1,557	-1,557	1,042	1,239	2,713	980	1,290	975	859	1,182
Over 10	-1,271	-1,356	-1,356	-1,915	-1,915	-1,421	-1,363	-1,102	-1,432	-1,373	-1,433	-1,455	-1,393
Colorado													
0-2	350	410	408	- 139	- 139	210	348	- 139	330	314	330	308	311
2-3	175	243	242	- 124	- 124	107	197	- 124	170	167	179	162	156
3-4	526	435	433	- 371	- 371	324	427	- 371	491	462	499	449	452
4-5	328	520	518	- 433	- 433	225	413	- 433	364	364	381	344	350
5-10	287	504	499	-1,503	-1,503	- 219	278	-1,503	215	156	212	133	147
Over 10	-1,573	-1,534	-1,534	-1,996	-1,996	-1,649	-1,575	-1,996	-1,507	-1,593	-1,588	-1,602	-1,600
Oregon													
0-2	244	275	275	- 99	- 99	162	253	- 99	230	200	229	214	207
2-3	201	234	234	- 201	- 201	103	208	- 201	163	149	161	165	156
3-4	571	650	655	- 375	- 375	313	588	- 375	510	440	529	464	467
4-5	579	615	612	- 522	- 522	264	538	- 522	475	384	473	428	404
5-10	411	612	607	-1,782	-1,782	- 115	450	-1,782	317	127	314	216	158
Over 10	-1,270	-1,238	-1,237	-1,629	-1,629	-1,357	-1,263	-1,629	-1,285	-1,316	-1,294	-1,301	-1,327

<sup>a</sup>Details does not necessarily add to total due to rounding.<sup>b</sup>Net dollar benefit per spending unit income bracket resulting from educational aid is the difference between the added tax burden per income bracket required to provide financial support to education and the added benefit per income bracket derived from the expenditures. All computations here are based on a total expenditure of \$500 million.

Source: Computed by the author.

unit income brackets to effect a significant change in the estimated effective rates. It should also be remembered that the effective rates already computed are studied approximations; therefore, small changes in the effective rates might be given undue emphasis. The net effect of these limitations is to necessitate analysis from the computed net dollar benefits rather than from further computations of changes in estimated effective tax rates. Nevertheless, it is possible to conclude that if greater per spending unit aid goes to the corresponding income groups in low income than in high income states, then movement toward greater fiscal equity is occurring.

Since the recomputation of the estimated effective tax rates does not seem to be a feasible technique for determining the differences among the aid proposals, the net benefit has been reduced to a per spending unit basis to facilitate analysis. The procedure adopted was to ascertain the average number of persons per spending unit in 1954 and then to convert 1954 state populations into spending unit totals.<sup>51</sup> These state spending unit totals were then allocated among the spending unit distributions contained in Tables III-X.<sup>52</sup> These state allocations

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<sup>51</sup>The average number of persons per spending unit in 1954 was approximately 2.95. The spending unit data are taken from "Technical Appendix, 1955 Survey of Consumer Finances: Purchases of Durable Goods in 1954," Federal Reserve Bulletin, XLI (1955), p. 472; the population estimates are taken from U. S. Department of Commerce, Bureau of the Census, "Estimates of the Population of States: July 1, 1950 to 1956," Current Population Reports: Population Estimates, Ser. P-25, No. 165, November 4, 1957, p. 7.

<sup>52</sup>As has been noted earlier, there is a probable distortion in the spending unit distributions. The distortion, resulting from the likelihood that upward income adjustments will tend to increase the percentage of spending units in higher income brackets, is not amenable to measurement and correction. It may be hazarded that further methodological

and totals are presented in Table XXXIV. The net dollar benefit accruing from each educational aid proposal was then divided by the number of spending units in each income bracket. The resulting data which show the net dollar benefit per spending unit are presented in Table XXXV. To further enable comparison of the several proposals, the dollar tax burden falling on the several spending unit income brackets was reduced to a per spending unit basis. These data are presented in Table XXXVI. Finally, in Table XXXVII the net dollar benefit per spending unit was expressed as a percentage of the net dollar tax burden per spending unit. Comparisons of the several legislative proposals can now be made based on this material.

Generalizations about how income classes would have been affected by the various legislative proposals are difficult to make. Redistribution of income is implicit in each proposal for educational aid.<sup>53</sup> However, care should be taken not to conclude that need for aid is less acute in the lowest income group in New Jersey than in the lowest income group in Tennessee. Low personal income imposes stringent limitations upon the standard of living with little regard for the recipient's state

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refinement, if it were possible, would render results more precise but would probably not alter the general pattern prevailing between states. It is this general pattern that is important here.

<sup>53</sup>The distinction between redistribution and changes in income distribution made in Facing the Tax Problem (New York, Twentieth Century Fund, 1937), p. 203, is followed here. Initially educational aid proposals would effect redistribution simply by transferring income taken from one group by taxation to another group by social service expenditures. It is conceivable that increased educational expenditures might raise the productivity of lower income groups and thus eventually improve their income position by more than the amount of the net benefit of the educational aid program. This latter development, which includes redistribution but is a broader concept, constitutes a change in income distribution.

TABLE XXXIV

NUMBER OF SPENDING UNITS PER SPENDING UNIT INCOME BRACKET, SELECTED STATES, 1954<sup>a</sup>

Spending Unit Income Bracket (Thousands of Dollars)	Number of Spending Units <sup>b</sup> (Thousands of Units)							
	Massachusetts	New Jersey	Illinois	Nebraska	Tennessee	Oklahoma	Colorado	Oregon
0-2	376.3	312.0	576.8	150.6	346.2	305.1	116.7	90.0
2-3	272.1	219.1	351.7	69.8	203.0	146.2	63.0	71.6
3-4	293.3	296.2	524.4	78.5	190.6	181.1	83.2	96.2
4-5	229.7	247.2	441.1	49.3	121.8	146.2	72.9	96.8
5-10	389.4	578.5	1,002.5	92.6	228.9	236.2	132.0	176.2
Over 10	68.4	99.9	188.2	16.0	37.2	45.5	24.6	29.1
Total	1,629.2	1,752.9	3,084.7	456.3	1,127.8	1,059.3	492.5	559.3

<sup>a</sup>Detail does not necessarily add to total due to rounding.

<sup>b</sup>Spending units allocated among spending unit income brackets on the basis of spending unit distribution presented in Tables III-X. Number of spending units per state computed by dividing the total state population for 1954 by the average number of persons per spending unit in the United States for 1954. Spending unit data are taken from "Technical Appendix, 1955 Survey of Consumer Finances: Purchases of Durable Goods in 1954," Federal Reserve Bulletin, XLI (1955), p. 472; population data are taken from U. S. Department of Commerce, Bureau of the Census, "Estimates of the Population of States: July 1, 1950 to 1956," Current Population Reports: Population Estimates, Ser. P-25, No. 165, November 4, 1957, p. 7.

Source: Computed by the author.

TABLE XLV

NET DOLLAR BENEFIT FROM EDUCATIONAL AID PER SPENDING UNIT, DERIVED FROM UNMATCHED PLAT GRANT LEGISLATIVE PROPOSALS  
BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1952<sup>a</sup>

Spending Unit Income Bracket <sup>a</sup> (Thousands of Dollars)	Net Dollar Benefit from Educational Aid per Spending Unit <sup>b</sup>												
	Orrin- McCrath, S. 61, 1947	Landis, H.R. 1942, 1947	Kearse, P.R. 2581, 1949	Taft, S. 112, 1947	Taft, Committee Draft 3, 672, 1947	Taft, Senate Draft 8, 672, 1947	Aiken, S. 109, 1947	Byrnes, H.R. 4711, 1949	Lucas, H.R. 1513, 1950	Bayley, H.R. 7667, 1950	Clemente, S. 350, 1950	Walt, H.R. 8466, 1950	Morse- Clark, S. 1134, 1951
0-2													
Tennessee	6.55	3.50	3.69	4.61	11.95	10.47	5.47	12.36	4.36	6.16	4.35	4.12	5.55
Oklahoma	2.99	3.19	3.18	- .66	- .65	2.73	2.99	4.92	2.65	1.06	2.65	2.50	2.92
Nebraska	3.43	5.19	5.17	- 1.21	- 1.23	2.32	3.17	- 1.23	3.74	3.15	3.23	3.03	3.07
Colorado	3.00	3.51	3.50	- 1.19	- 1.19	2.06	2.98	- 1.19	2.83	2.69	2.83	2.64	2.66
Oregon	2.71	3.06	3.06	- 1.10	- 1.10	1.80	2.70	- 1.10	2.66	2.22	2.75	2.40	2.70
Massachusetts	1.90	2.15	2.14	- 1.50	- 1.50	1.53	1.49	- 1.50	2.25	1.58	2.24	2.07	1.71
Illinois	1.71	2.17	2.11	- 1.72	- 1.72	1.52	2.06	- 1.72	2.27	1.60	2.26	2.10	1.66
New Jersey	1.93	2.11	2.32	- 1.77	- 1.77	1.38	1.98	- 1.77	2.15	1.19	2.15	1.99	1.50
2-3													
Tennessee	5.00	4.25	4.24	5.80	16.68	14.48	5.67	17.24	5.53	8.36	5.53	5.16	7.26
Oklahoma	3.77	4.17	4.15	- 1.55	- 1.57	3.50	3.84	6.78	3.37	3.57	3.37	3.10	3.77
Nebraska	3.71	6.30	6.30	- 1.19	- 1.19	2.06	3.52	- 1.19	3.44	3.14	3.14	1.17	3.19
Colorado	3.30	3.68	3.68	- 1.68	- 1.68	1.70	3.05	- 1.68	2.06	2.66	2.06	2.77	2.52
Oregon	2.81	3.30	3.30	- 2.81	- 2.81	1.80	2.79	- 2.81	2.56	2.22	2.56	2.34	2.10
Massachusetts	.96	1.32	1.32	- 4.06	- 4.06	.96	.96	- 4.06	1.67	.69	1.66	1.71	.67
Illinois	1.20	1.50	1.69	- 3.10	- 3.10	.63	1.67	- 3.10	1.73	.65	1.72	1.69	.64
New Jersey	1.24	1.78	1.75	- 3.67	- 3.67	.60	1.26	- 3.67	1.42	.10	1.51	1.20	.57
3-4													
Tennessee	10.80	8.04	8.06	10.94	20.80	25.76	10.56	30.77	10.30	14.00	10.27	9.66	13.33
Oklahoma	7.14	7.64	7.61	- 2.78	- 2.83	6.17	7.34	12.13	6.27	7.33	6.25	5.06	6.95
Nebraska	7.48	11.74	11.91	- 4.43	- 4.43	6.62	7.32	- 4.43	6.99	6.83	6.97	6.45	6.55
Colorado	6.37	7.04	7.01	- 4.46	- 4.46	3.89	6.27	- 4.46	5.90	5.50	5.88	5.60	5.13
Oregon	5.94	6.74	6.81	- 3.30	- 3.30	3.57	6.11	- 3.30	5.51	4.66	5.10	5.07	4.76
Massachusetts	3.67	4.17	4.09	- 5.25	- 5.25	2.76	3.64	- 5.25	4.36	2.66	4.34	3.90	2.97
Illinois	3.10	3.51	3.52	- 4.90	- 4.90	2.11	3.10	- 4.90	4.03	1.81	4.02	3.61	2.48
New Jersey	3.20	4.23	4.21	- 4.97	- 4.97	1.82	3.33	- 4.97	3.78	1.31	3.76	3.36	2.12
4-5													
Tennessee	10.50	7.50	7.53	10.76	31.10	26.90	10.25	32.21	9.06	14.97	9.93	9.28	13.26
Oklahoma	6.02	7.17	7.33	- 1.41	- 1.42	6.09	6.32	12.21	5.87	7.00	5.86	5.61	6.61
Nebraska	6.11	11.20	11.16	- 6.59	- 6.59	1.20	6.11	- 6.59	5.78	5.60	5.78	5.17	5.31
Colorado	4.50	7.11	7.11	- 5.94	- 5.94	3.09	5.67	- 5.94	5.27	4.87	5.27	4.72	4.60
Oregon	5.36	6.35	6.35	- 5.36	- 5.36	2.77	5.56	- 5.36	4.91	3.97	4.89	4.44	4.17
Massachusetts	2.12	2.83	2.80	- 7.33	- 7.33	.81	2.09	- 7.33	3.09	1.24	3.07	2.59	1.50
Illinois	1.67	2.17	2.17	- 7.01	- 7.01	.55	2.04	- 7.01	2.62	.22	2.60	2.16	.95
New Jersey	1.95	3.00	3.05	- 6.95	- 6.95	.64	2.08	- 6.95	2.57	.12	2.56	2.12	.76
5-10													
Tennessee	8.84	5.44	5.41	9.01	32.65	27.81	8.55	33.06	8.21	11.08	8.18	7.47	11.97
Oklahoma	5.24	5.87	5.84	- 6.74	- 6.74	4.42	5.25	11.49	4.15	5.16	4.13	3.64	5.00
Nebraska	3.07	8.74	8.68	- 11.04	- 11.04	.73	2.04	- 11.04	2.16	2.27	2.16	1.70	1.97
Colorado	2.17	3.87	3.78	- 11.37	- 11.37	.90	2.11	- 11.37	1.63	1.18	1.63	1.01	1.11
Oregon	2.33	3.47	3.44	- 10.11	- 10.11	.98	2.05	- 10.11	1.80	.72	1.78	1.24	.95
Massachusetts	- 1.00	- 2.14	- 2.20	- 14.02	- 14.02	- 4.53	- 1.00	- 14.02	- 1.87	- 4.03	- 1.80	- 2.46	- 3.63
Illinois	- 2.79	- 2.12	- 2.14	- 12.76	- 12.76	- 4.01	- 2.10	- 12.76	- 1.62	- 4.62	- 1.64	- 2.16	- 3.57
New Jersey	- 2.72	- 1.62	- 1.65	- 14.10	- 14.10	- 4.48	- 2.57	- 14.10	- 1.99	- 5.13	- 2.62	- 2.53	- 4.10
Over 10													
Tennessee	- 14.44	- 17.65	- 17.85	- 41.30	- 10.41	- 15.60	- 14.76	- 42.60	- 35.03	- 29.35	- 35.13	- 35.66	- 31.77
Oklahoma	- 27.93	- 29.80	- 29.09	- 42.90	- 40.90	- 31.23	- 30.40	- 41.72	- 31.47	- 30.18	- 31.40	- 31.93	- 30.62
Nebraska	- 58.50	- 52.04	- 53.00	- 71.11	- 73.31	- 67.00	- 58.60	- 73.11	- 67.17	- 59.11	- 59.12	- 62.75	- 59.69
Colorado	- 63.46	- 62.36	- 62.36	- 77.40	- 77.40	- 67.03	- 66.07	- 76.14	- 64.51	- 64.09	- 64.55	- 65.12	- 65.04
Oregon	- 63.46	- 62.36	- 62.36	- 77.40	- 77.40	- 67.03	- 66.07	- 76.14	- 64.51	- 64.09	- 64.55	- 65.12	- 65.04
Massachusetts	- 117.35	- 116.34	- 116.58	- 128.25	- 128.25	- 110.07	- 110.07	- 128.25	- 110.07	- 110.07	- 110.07	- 110.07	- 110.07
Illinois	- 75.15	- 74.49	- 74.51	- 84.24	- 84.24	- 75.41	- 75.41	- 84.24	- 75.41	- 75.41	- 75.41	- 75.41	- 75.41
New Jersey	- 80.82	- 79.44	- 79.57	- 91.09	- 91.09	- 81.16	- 81.16	- 91.09	- 81.16	- 81.16	- 81.16	- 81.16	- 81.16

<sup>a</sup>Details do not necessarily add to total due to rounding.

<sup>b</sup>Net dollar benefit from educational aid per spending unit is the quotient of the difference between the aided tax burden required to provide financial support to education and the total benefit derived from the expenditures divided by the spending units per spending unit income bracket. Computations of taxes and benefits are based on 1950 million.

<sup>c</sup>States have been ranked in ascending order of per capita income.

Source: Computed by the author.

TABLE XXXVI

DISTRIBUTION OF NET DOLLAR BURDEN PER SPENDING UNIT RESULTING FROM TAX BURDEN OF \$500 MILLION  
RAISED BY PRESENT FEDERAL SOURCES<sup>a</sup> BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954

State	Spending Unit Income Bracket					
	\$0-\$2,000	\$2,000-\$3,000	\$3,000-\$4,000	\$4,000-\$5,000	\$5,000-\$10,000	Over \$10,000
Massachusetts	\$1.50	\$4.06	\$5.25	\$7.33	\$14.02	\$128.25
New Jersey	1.27	3.49	4.97	6.95	13.10	91.09
Illinois	1.22	3.40	4.90	7.04	12.86	85.24
Nebraska	1.23	3.19	4.43	6.69	11.94	73.31
Tennessee	.81	2.06	2.95	4.45	8.38	51.56
Oklahoma	.66	1.55	2.28	3.41	6.59	42.90
Colorado	1.19	3.08	4.46	5.94	11.39	77.48
Oregon	1.10	2.81	3.90	5.39	10.11	55.98

<sup>a</sup>Net dollar burden represents the quotient obtained by dividing the tax burden per spending unit income bracket resulting from a \$500 million appropriation raised by present Federal sources as presented in Table XXX by the number of spending units per spending unit income bracket as presented in Table XXXII.

Source: Computed by the author.

TABLE XXVII  
DISTRIBUTION OF NET PERCENTAGE BENEFIT<sup>a</sup> PER SPENDING UNIT RESULTING FROM UNMATCHED FLAT GRANT LEGISLATIVE PROPOSALS  
BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES,<sup>b</sup> 1954

Spending Unit Income Bracket (Thousands of Dollars)	Net Percentage Benefit Per Spending Unit												
	Green- McGrath, S. 81, 1947	Larkin, H.R. 1942, 1947	Kearns, H.R. 2546, 1949	Taft, S. 472, 1947	Taft, Committee Draft S. 472, 1947	Taft, Senate Draft S. 472, 1947	Alben, S. 199, 1947	Byrnes, H.R. 4711, 1949	Lucas, H.R. 1511, 1950	Sadley, H.R. 7667, 1954	Glenns, S. 359, 1954	Molt, H.R. 8858, 1954	Morse- Clark, S. 1114, 1957
0-2													
Tennessee	561	432	431	569	1,479	1,293	552	1,526	538	760	537	509	685
Oklahoma	453	490	482	-100	523	414	453	745	402	464	402	379	442
Nebraska	279	422	420	-100	-100	189	274	-100	463	259	263	246	250
Colorado	352	295	294	-100	-100	173	250	-100	238	226	238	222	224
Oregon	266	274	278	-100	-100	244	258	-100	233	202	231	213	209
Massachusetts	128	143	143	-100	-100	95	126	-100	180	105	150	136	114
Illinois	257	174	173	-100	-100	125	169	-100	186	115	185	172	136
New Jersey	252	184	183	-100	-100	109	156	-100	169	94	169	157	118
2-3													
Tennessee	282	206	206	265	810	703	275	837	268	396	267	250	352
Oklahoma	250	269	268	-100	295	226	280	435	217	235	217	203	243
Nebraska	146	197	197	-100	-100	65	113	-100	108	105	107	98	100
Colorado	101	125	125	-100	-100	55	99	-100	93	86	92	83	81
Oregon	100	117	117	-100	-100	64	99	-100	91	79	90	83	82
Massachusetts	24	33	33	-100	-100	6	23	-100	35	12	35	30	17
Illinois	75	44	44	-100	-100	19	42	-100	51	13	51	44	75
New Jersey	16	51	52	-100	-100	11	35	-100	44	3	43	37	16
3-4													
Tennessee	366	274	273	371	1,010	879	358	1,043	349	505	348	327	452
Oklahoma	313	335	334	-100	365	284	316	531	275	321	274	257	305
Nebraska	269	270	269	-100	-100	104	165	-100	138	154	157	146	144
Colorado	312	171	171	-100	-100	87	141	-100	132	124	132	121	122
Oregon	152	175	175	-100	-100	91	157	-100	141	119	141	130	124
Massachusetts	64	78	78	-100	-100	43	66	-100	83	51	83	74	57
Illinois	63	72	72	-100	-100	43	71	-100	82	37	82	74	51
New Jersey	64	85	85	-100	-100	37	67	-100	76	26	76	68	43
4-5													
Tennessee	236	170	169	250	701	606	230	724	224	136	223	209	298
Oklahoma	200	216	215	-100	238	179	200	358	172	205	172	159	194
Nebraska	94	167	167	-100	-100	44	91	-100	86	84	86	77	79
Colorado	76	120	120	-100	-100	52	95	-100	89	82	88	79	81
Oregon	99	118	117	-100	-100	51	103	-100	91	74	91	82	77
Massachusetts	29	39	38	-100	-100	11	29	-100	42	17	42	35	22
Illinois	23	31	31	-100	-100	8	29	-100	37	3	37	31	13
New Jersey	28	44	44	-100	-100	6	30	-100	37	2	37	31	11
5-10													
Tennessee	106	65	65	108	390	332	102	444	98	167	98	89	143
Oklahoma	80	89	89	-100	102	67	80	174	63	83	63	55	76
Nebraska	26	73	73	-100	-100	-4	24	-100	21	19	20	15	16
Colorado	19	33	33	-100	-100	-8	19	-100	14	10	14	9	10
Oregon	23	34	34	-100	-100	-7	25	-100	18	7	18	12	9
Massachusetts	-21	-16	-16	-100	-100	-32	-12	-100	-13	-29	-13	-17	-26
Illinois	-22	-16	-17	-100	-100	-31	-10	-100	-13	-34	-13	-17	-28
New Jersey	-21	-11	-11	-100	-100	-36	-20	-100	-15	-19	-15	-18	-31
Over 10													
Tennessee	-28	-71	-71	-67	-71	-30	-67	-19	-68	-57	-68	-70	-61
Oklahoma	-65	-69	-69	-100	-67	-73	-71	-76	-71	-70	-71	-75	-71
Nebraska	-80	-72	-72	-100	-100	-85	-80	-100	-81	-81	-81	-82	-81
Colorado	-82	-80	-80	-100	-100	-87	-83	-100	-87	-87	-87	-87	-87
Oregon	-78	-76	-76	-100	-100	-83	-78	-100	-79	-81	-79	-80	-80
Massachusetts	-92	-91	-91	-100	-100	-93	-92	-100	-91	-92	-91	-91	-92
Illinois	-88	-87	-87	-100	-100	-90	-88	-100	-87	-90	-87	-87	-89
New Jersey	-89	-87	-87	-100	-100	-91	-89	-100	-88	-91	-88	-89	-90

<sup>a</sup>Net percentage benefit represents the net dollar benefit per spending unit expressed as a percentage of the net dollar tax burden per spending unit. Minus figures indicate that the tax burden exceeds the amount of aid so the net dollar loss is expressed as a percentage of the tax burden. Net dollar benefit data are from Table XXVI; net dollar tax burden data are from Table XXVII.

<sup>b</sup>States have been ranked in ascending order of per capita income.

Sources: Computed by the author.



of residence. What must be remembered is that federal assistance to low income groups in high income states will not redress the fiscal differences between states which are grounded in the denial of access of a state to lucrative revenue sources outside its boundaries. Therefore, it would seem that net benefit from educational aid should vary the aid per income bracket spending unit in inverse relation to the level of state per capita income.

In none of the legislative proposals to provide educational aid by unmatched flat grants would the per capita net dollar aid to all spending unit income brackets have been varied inversely with the per capita income ranking of the states. However, it is the Bailey proposal which almost would have attained the goal of such inverse variation. For all the test states and for all the spending unit income brackets except the highest, the inverse variation is found.<sup>54</sup> In the highest bracket the contribution required from taxpayers in Colorado would have been greater than that from the Oregon taxpayers although the per capita income was lower in Colorado than in Oregon; the contribution required from highest bracket taxpayers in the third wealthiest state, Massachusetts, would have exceeded that required in Illinois and New Jersey. The greater per spending unit benefit (reflecting educational benefit more nearly

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<sup>54</sup>It is probable that the net dollar aid per spending unit as presented in Table XXXV is of greater significance as supporting evidence than the net percentage per spending unit shown in Table XXXVII. It is not the net percentage benefit but the absolute net dollars gained which determine the extent of educational aid resulting from a proposal. Nevertheless, the pattern of net percentage gain shown in Table XXXVII also reveals the Bailey bill to be the preferable bill. Any deviations not shown in Table XXXV are of little apparent significance to the fiscal evaluation undertaken here. However, ease in comparison of percentages would seem to justify the detailed computations shown in Table XXXVII.

approximating the related tax burden) in Oregon than in Colorado reflects primarily greater percentages of individual income tax liability, corporation tax liability, and excise tax liability borne by the over \$10,000 income bracket in Colorado<sup>55</sup> and not offset by sufficiently greater amounts of educational aid.

The upper income bracket in Massachusetts, the third ranking state on the basis of 1954 per capita income, would have made a much greater net contribution than would have been made by the upper income bracket in the first and second ranking states of New Jersey and Illinois. This anomalous situation would have resulted partially from the smaller percentage of public school population found in the highest income bracket in Massachusetts compared with that found in that comparable bracket in New Jersey and Illinois. When this situation is combined with the much smaller number of spending units found in the upper income bracket in Massachusetts, the strange situation is rendered understandable even though it remains unconventional.

Overall the prevailing allocational pattern of the net benefit in the highest income bracket would have displayed a close agreement with the percentage of the total school population attending non-public schools.<sup>56</sup> Except for Colorado and Nebraska, the upper income group

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<sup>55</sup>The basic tax allocators for these taxes which reveal this disparity are found in Tables IX and X, Chapter III.

<sup>56</sup>The eight states ranked in descending order of percentages of total public school population enrolled in non-public schools were Massachusetts, 22.8 per cent; New Jersey, 22.6 per cent; Illinois, 21.3 per cent; Nebraska, 11.7 per cent; Colorado, 8.6 per cent; Oregon, 6.4 per cent; Oklahoma, 2.7 per cent; and Tennessee, 2.5 per cent. Percentage computations are based on data from Schloss and Hobson, pp. 50-51, Table 13, and p. 115, Table 49.

allocations from every proposal except the Aiken bill would have shown a direct relation between the net benefit per spending unit and non-public school enrollment percentages. The reversal of rankings of Nebraska and Colorado stems from the fact that public-school enrollment in Nebraska's upper-income group is not sufficiently great to offset the larger tax burden which would have fallen on Colorado's upper-income group which would have borne a relatively greater share of the state's total federal tax burden than was borne by the comparable group in Nebraska.<sup>57</sup>

It is also significant that the relative size of the net benefits received by the spending units in the income brackets in the test states is greater from the Bailey bill than from any other general aid program. As revealed by Table XXXVII, except for the upper income bracket, the magnitude of the percentage benefits going to the least wealthy states is greater than would go to those states from other proposals. Thus, not only is the fiscal goal of federalism most nearly approximated by the Bailey bill, it also succeeds in a maximum amount of readjustment consistent with that general goal of fiscal equity.

Several other interesting conclusions may be drawn from the computations of net benefit from educational aid by spending units. First, the pattern of aid does not display a progressive structure such as is associated with the federal tax structure as revealed in Table XXVI. The net benefit per spending unit tends to be regressive from the \$2,000-\$3,000 income bracket to the \$3,000-\$4,000 income bracket.

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<sup>57</sup>Evidence is inferrable from the spending unit distribution contained in Table XXIV and the federal tax burden presented in Table XXII.

Highest grants per spending unit are made in the \$3,000-\$4,000 income bracket with generally declining amounts being made to higher income brackets. This pattern is not indefensible per se although on the assumption that progressivity in net benefit from educational aid per spending unit (represented by declining net aid as spending unit money income increases) is desirable within states, it becomes indefensible. As greater educational loads per spending unit may fall on units in the \$3,000-\$4,000 bracket, a progressive aid pattern may seem less imperative. However, in the absence of the information about the net benefit from other government programs, important but needed information for the comprehensive evaluation of the educational aid programs is lacking.

Second, in every single proposal the net benefit accruing to the upper income group would have been negative. This reflects the substantial federal income and corporate tax burden which would have fallen upon this income bracket. If other things were assumed constant, the total effect of positive benefits in the lower brackets and negative benefits in the upper bracket would have been to increase the overall progressivity of the federal revenue and expenditure structure. This is the income redistribution which would have resulted within states as well as between states.

Third, in the equalization programs utilizing unmatched flat grants (the Taft and the Byrnes bills) some states would have received no aid. In these proposals the outright interstate income redistributive effects seem clear. But the pattern of aid which in other proposals would not have tended to be progressive within states would have been

progressive for unaided states in these programs. This would have resulted from the absence of positive aid allocations to offset the progressive nature of the federal tax system. In the aided states, however, the general pattern of aid found in other proposals and discussed above would have prevailed. In the case of the Byrnes bill the larger appropriations to Tennessee would have increased the regressivity of the net benefit from educational aid over that found in the Taft bills or in the other programs not avowed to be equalizing in intent.

Fourth and finally, the adherence of any proposal to the criterion of reduction of interstate fiscal inequity leaves unanswered a crucial philosophical question: if spending unit income brackets in poor states should receive larger net aid than is received by the same brackets in rich states, how much more aid should be received? This question is akin to the question of the extent to which the tax system itself should be progressive. Although in the last analysis the resolution of this knotty problem is an exercise in political reconciliation and implementation of ethical concepts of equality and economic concepts of economic growth, the extensions implicit in the analysis undertaken here should be recognized.

This analysis of unmatched legislative proposals to aid education has been based first of all on recognition that any educational aid proposal must face squarely the crucial problem of securing the needed revenue. On the assumption that \$500 million of aid would have been raised by the proportionate reliance on revenue sources that prevailed in 1954, total added tax burdens by spending unit income brackets were determined for the eight test states. Second, the total amount of aid which each

of the eight states would have received in 1954 under the provisions of each of the major legislative proposals was determined. This amount of state aid, adjusted to represent the state shares from the expenditure of an assumed constant appropriation of \$500 million, was then distributed among the spending unit income brackets on the basis of the percentages of the state public school population in the income brackets. The aid totals and the tax totals by spending unit brackets were related and the net benefit per spending unit income bracket was determined. This net benefit was then reduced to a per spending unit basis to increase the comparability of the data among the states.

Although methodological and philosophical problems abound and resolution of most of them remains beyond the scope of this study, certain tentative conclusions can be drawn about the legislative proposals for unmatched flat grants. If the criterion of maximum reduction of interstate fiscal inequity is accepted, then the Bailey bill of 1954 is the preferable proposal. Even in this proposal some minor but explainable deviation from the criterion appears but the closer adherence of the Bailey plan seems apparent. Subsequent analysis may reveal other major proposals of a different type to be superior to the Bailey bill; however among the unmatched flat grants and on the relevant fiscal grounds the Bailey proposal seems clearly superior to any other thus far examined.

## CHAPTER V

### ANALYSIS OF THE FISCAL EFFECTS OF MATCHED GRANT LEGISLATIVE PROPOSALS

#### MATCHED FLAT GRANT LEGISLATIVE PROPOSALS

Matched flat grant legislative proposals for aid to education have been less numerous than those for unmatched flat grants to provide such aid. They have not, however, been less important. The matched grant proposals, displaying relatively greater homogeneity, are amenable to the same analysis already developed in examination of the unmatched flat grant bills.

Much of the preliminary analysis undertaken in Chapter IV is applicable in this, and the succeeding, chapter. The sources of revenue are considered to be the same as those which would be utilized to finance matched grant programs. The same allocation of tax burdens among the spending unit income brackets would prevail. The same method for determining the net benefit from educational programs would be applicable. Finally, the same basis for determining the preferable legislative proposal is relevant. The essential points of difference are two: first, the amount of aid which would have been forthcoming under the several bills and second, the effects that would have flowed from the matching requirements imposed by the several matched grant proposals.

DISTRIBUTION OF AID FROM LEGISLATIVE PROPOSALS FOR  
MATCHED FLAT GRANTS

Detailed examination of the specific allocative formulae embodied in the matched grant proposals reveals not only the relatively high degree of homogeneity noted above, but also the great similarity between unmatched and matched flat grant proposals. This similarity of proposals is hardly surprising since matching itself is the major difference between the two categories. In only two specific cases, the Kearns bill of 1954<sup>1</sup> and the Committee draft of the Kelley bill of 1957,<sup>2</sup> would new allocative formulae have been adopted.

The earliest of the major matched flat grant legislative proposals was the Robertson bill.<sup>3</sup> This 1949 plan would have been identical with the Lucas unmatched grant bill analyzed in Chapter IV except for the proviso requiring the state to match federal funds provided on a dollar-for-dollar basis. Consequently, the amounts of aid forthcoming to each of the eight selected states and the distribution of such aid to the spending units within the states would have been identical with that of the Lucas bill. The allocations to the states which would have been provided by the Lucas bill and which also would have been forthcoming under the Robertson bill are contained in Table XXXII.<sup>4</sup>

The crucial issue is whether the capital outlays for education made

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<sup>1</sup>H. R. 10052, 83d Cong., 2d Sess.

<sup>2</sup>H. R. 1, 85th Cong., 1st Sess.

<sup>3</sup>S. 137, 81st Cong., 1st Sess.

<sup>4</sup>Chapter IV, p. 162.



by the states for construction of new buildings and additions to existing buildings would have been adequate to have matched federal allotments on the prescribed basis.<sup>5</sup> During the 1953-1954 academic year, each of the eight test states made capital outlays for new buildings and additions to old buildings in excess of the amount of the proposed federal allotment. In 1953-1954 approximate capital outlays by states were: Massachusetts, \$32,737,000; New Jersey, \$51,500,000; Illinois, \$99,512,000; Nebraska, \$4,602,000; Tennessee, \$15,786,000; Oklahoma, \$19,435,000; Colorado, \$18,743,000; and Oregon, \$24,673,000.<sup>6</sup> These amounts were made without any stimulation provided by federal funds requiring matching. It is probable that if state outlays would have been inadequate to match any federal allotments provided, some added outlays might have been forthcoming. The extent to which states could and would be willing to exert added effort to secure revenue for matching cannot be determined. However, the amounts by which expended funds exceed the allotments indicate that for the amount of aid most likely to have been forthcoming, the stimulative power of educational grants

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<sup>5</sup>Capital outlays for site procurement are excluded whenever possible. The exclusion is grounded in the tendency of educational aid bills to prohibit the use of federal funds to procure construction sites. In none of the eight test states does expenditure for site procurement exceed 11 per cent of total expenditures for new buildings and additions. Computed from Schloss and Hobson, pp. 92-93, Table 34. In subsequent analysis, combined capital outlays for land and buildings have been reduced by 10 per cent to yield the capital outlays for new buildings and additions exclusive of site procurement expenditures.

<sup>6</sup>Computed from Schloss and Hobson, pp. 92-93, Table 34. The data on capital outlays are provided on the basis of the "...cost of publicly owned plants completed and made available for use during the years...." with no regard for the year in which the money was expended. Ibid., p. 14.

would have been of little practical importance.

The Humphrey-Ives bill of 1956<sup>7</sup> would have provided the same basis for grants as the unmatched grant plan of the 1954 Clements bill. States would have been required to match federal funds on a dollar-for-dollar basis. State allotments which would have been forthcoming under provisions of the Humphrey-Ives bill are the same as those found in Table XXXIII<sup>8</sup> under the Clements bill. In both cases \$500 million has been assumed to be the amount of necessary appropriations. For each of the eight test states, the amount allocated could have been matched by the capital outlays actually made during the year. In actual operation, therefore, there would have been no significant difference between the Humphrey-Ives bill providing for matched flat grants and the Clements bill providing an equal sum for matched grants.

The lack of adequate information makes impossible the computation of the state allotments which would have resulted from application of the provisions of the Kearns bill of 1954.<sup>9</sup> State allotments from a three-year aggregate appropriation of \$5 billion would have been made in the ratio that the state cost of constructing needed classrooms bore to the national total cost of constructing needed classrooms. However, the necessary data on total cost of needed classrooms by states are not available. Not even the number of total classrooms needed is available for

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<sup>7</sup>S. 480, 84th Cong., 1st Sess.

<sup>8</sup>Chapter IV, p. 162.

<sup>9</sup>H. R. 10052, 83d Cong., 2d Sess.

all states.<sup>10</sup> Furthermore, even if the data on the number of needed classrooms were available it would be indefensible to assume a necessary correlation between cost and the number of needed classrooms. Regional diversity of climate alone would be sufficient to render valueless such an assumed correspondence of number and cost. A further complication arises from the fact that information about the number of classrooms needed is a composite total of the classrooms needed "to accommodate excess enrollment" and those needed "to replace unsatisfactory facilities."<sup>11</sup> The determination of needed classrooms which would have been based on certifications from state educational agencies might have varied substantially from such sketchy totals as are available. The non-availability of information coupled with the non-comparability of existing data thus operates to preclude a meaningful computation of allocations and net benefits resulting under the Kearns bill.

The Kelley proposal of 1957<sup>12</sup> would have provided a \$600 million

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<sup>10</sup>One of the most comprehensive surveys of school facilities, William O. Wilson and James Woofter, Report of the Status Phase of the School Facilities Survey, U. S. Department of Health, Education, and Welfare, Office of Education, (Washington, 1953), p. 138, Table XXXXI, lacks data for Idaho, Missouri, New York, South Carolina, Utah, Virginia, and Wyoming. The widely quoted study by the U. S. Department of Health, Education, and Welfare, Fall Statistics on Enrollment, Teachers, and School Housing in Full-Time Public Elementary and Secondary Day Schools, Office of Education Circular No. 490, (Washington, 1957) lacks data for New Jersey, Oregon, Louisiana and New Mexico. The reliability of the data in Circular 490 is both questioned and defended in the U. S. House of Representatives Committee on Education and Labor Report on H. R. 1, School Construction Act of 1957, H. Rept. No. 489 (Washington, 1957), pp. 25-27, pp. 29-41.

<sup>11</sup>Schloss and Hobson, Report on Enrollment, Teachers, and School-housing, p. 3.

<sup>12</sup>H. R. 1, 85th Cong., 1st Sess. is the best known of the bills embodying the ideas of the late Representative Augustus Kelley. Two

annual appropriation allocated on the basis of state-to-national school-age population ratios. Allotments were to have been matched equally from state funds. The proposal would, therefore, have operated fiscally like the Robertson bill of 1949 and, except for the matching provision, like the Lucas unmatched flat grant proposal of 1950. Except for a doubling of all dollar allocations, the fiscal operations of the Kelley bill as introduced would have been identical with the operations of the Lucas bill as presented in Table XXXII.<sup>13</sup>

The House Committee on Education and Labor, before reporting the Kelley bill favorably, made a material change in the allocative formula of the bill. Half of the appropriation, reduced to \$300 million, would have been allocated on the basis provided in the bill as originally introduced. The remaining one-half would have been allocated by a new and complicated formula. In this formula the state allotment ratio was computed by dividing the state income per school-age child by the national income per school-age child, multiplying this quotient by .55, and then subtracting the result from 1.00. This allotment ratio became a factor for weighting the state school-age population. The resulting weighted school-age population was then reduced to a fraction of the national total of such populations; the fraction represented the part of the total allotment which would have gone to the state. The separate allotments from each half of the appropriation would have been combined to

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earlier similar introductions by him were H. R. 7152, 84th Cong., 1st Sess. (1955) and H. R. 7535, 84th Cong., 2d Sess. (1956). The detailed listing of similar proposals in the Appendix attests to the popularity of this type of plan.

<sup>13</sup>Chapter IV, p. 162.

yield the total state allotment. Table XXXVIII presents the state allocations of educational aid by spending unit income brackets resulting from the formula of the Committee version of the Kelley bill. Table XXXIX contains the net dollar benefit by spending unit income brackets resulting from the proposal; Table XL presents the marginal net benefit per spending unit by spending unit income bracket. In Table XLI the net percentage benefit (the net dollar benefit per spending unit expressed as a percentage of the dollar tax burden per spending unit) is shown.

#### FISCAL EVALUATION OF MATCHED FLAT GRANT LEGISLATIVE PROPOSALS

The rationale for the evaluation of aid proposals utilizing matched flat grants has already been developed in Chapter IV. There it was argued that the preferable program to aid education was one which provided aid that, to the greatest possible extent, redressed fiscal inequities arising from the nature of the federal system. This same rationale can now be applied to the several matched flat grant proposals just discussed.

The major types of measures under discussion here are represented by the Robertson bill, the Humphrey-Ives bill, and the Committee Draft of the Kelley bill. In fiscal operation the original Kelley bill differed from the Robertson bill only in the size of appropriations authorized; the fiscal operation of the Kearns bill could not be adequately evaluated because of the unavailability of necessary data. The pattern of net benefit from educational aid per spending unit is presented in Table XXXVII, (see page 90), Table XL and Table XLI. In Table XXXVII the Robertson plan has its counterpart in the Lucas bill; the Humphrey-Ives

TABLE XXXVIII

DISTRIBUTION BY STATES OF AMOUNTS OF AID RESULTING FROM APPLICATION OF COMMITTEE DRAFT OF  
 KELLEY BILL<sup>a</sup> BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954<sup>b</sup>  
 (Thousands of Dollars)

State	Spending Unit Income Bracket						Total
	0-2	2-3	3-4	4-5	5-10	Over 10	
Massachusetts	726.2	775.5	1,452.3	1,233.8	2,439.3	423.0	7,050
New Jersey	492.8	506.2	1,194.8	1,086.8	2,963.2	506.2	6,750
Illinois	955.3	856.0	2,220.7	2,022.2	5,347.0	1,004.9	12,405
Nebraska	415.2	285.4	552.7	378.9	822.6	140.1	2,595
Tennessee	1,327.6	1,140.5	1,871.1	1,300.9	2,815.6	454.4	8,910
Oklahoma	695.0	494.9	1,063.5	931.9	1,742.7	331.7	5,265
Colorado	288.9	230.0	530.1	502.1	1,057.5	196.4	2,805
Oregon	192.4	225.0	529.8	583.1	1,228.4	201.3	2,960

<sup>a</sup>Kelley Bill, H. R. 1, 85th Cong., 1st Sess. (1957) as reported by the House Committee on Education and Labor.

<sup>b</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.

TABLE XXXIX

DISTRIBUTION BY STATES OF AMOUNTS OF NET DOLLAR BENEFITS RESULTING FROM THE COMMITTEE  
DRAFT OF KELLEY BILL<sup>a</sup> BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954  
(Thousands of Dollars)

Spending Unit Income Bracket	Net Dollar Benefit from Educational Aid <sup>b</sup>							
	Tennessee	Oklahoma	Nebraska	Colorado	Oregon	Massachusetts	Illinois	New Jersey
0-2	1,936.1	958.6	508.4	343.5	222.3	649.8	890.4	427.0
2-3	1,486.6	559.5	253.6	384.1	174.8	190.1	233.5	80.4
3-4	2,562.7	1,363.0	575.0	514.3	509.8	886.3	1,140.6	524.3
4-5	1,630.5	1,058.3	302.8	405.5	451.8	376.4	270.1	96.0
5-10	2,783.1	1,353.3	267.7	263.0	269.4	-1,386.4	-3,967.5	-2,637.5
Over 10	-1,159.2	-1,361.1	-939.0	-1,578.0	-1,292.8	-8,065.6	-14,364.8	-8,254.6

<sup>a</sup>Kelley Bill, H. R. 1, 85th Cong., 1st Sess. (1957) as reported by the House Committee on Education and Labor.

<sup>b</sup>Net dollar benefit from educational aid is the difference between the added tax burden required to provide financial support to education and the added benefit derived from the expenditures. Computations of taxes and benefits are based on \$500 million. States have been ranked in ascending order of per capita income.

Source: Computed by the author.

TABLE XL

DISTRIBUTION BY STATES OF NET DOLLAR BENEFIT PER SPENDING UNIT INCOME BRACKETS  
 RESULTING FROM THE COMMITTEE DRAFT OF KELLEY BILL,<sup>a</sup> SELECTED STATES, 1954

Spending Unit Income Bracket (Thousands of Dollars)	Net Dollar Benefit from Educational Aid <sup>b</sup>							
	Tennessee	Oklahoma	Nebraska	Colorado	Oregon	Massachusetts	Illinois	New Jersey
0-2	\$ 5.59	\$ 3.14	\$ 3.38	\$ 2.94	\$ 2.47	\$ 1.73	\$ 1.54	\$ 1.37
2-3	7.32	4.10	3.63	6.10	2.44	.70	.66	.37
3-4	13.45	7.53	7.32	6.18	5.30	3.02	2.18	1.77
4-5	13.39	7.24	6.14	5.56	4.67	1.64	.61	.39
5-10	12.16	5.73	2.89	1.99	1.53	- 3.56	- 3.96	- 4.54
Over 10	-31.16	-29.91	-58.69	-74.15	-44.43	-117.92	-76.33	-82.63

<sup>a</sup>Kelley Bill, H. R. 1, 85th Cong., 1st Sess. (1957) as reported by the House Committee on Education and Labor.

<sup>b</sup>Net dollar benefit from educational aid per spending unit is the quotient of the difference between the added tax burden required to provide financial support to education and the added benefit derived from the expenditures divided by the spending units per spending unit income bracket. Computations of taxes and benefits are based on \$500 million. States have been ranked in ascending order of per capita income.

Source: Computed by the author.



TABLE XLI

DISTRIBUTION OF NET PERCENTAGE BENEFIT<sup>a</sup> PER SPENDING UNIT RESULTING FROM COMMITTEE DRAFT OF KELLEY BILL<sup>b</sup> BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954

Spending Unit Income Bracket (Thousands of Dollars)	Net Percentage Benefit Per Spending Unit							
	Tennessee	Oklahoma	Nebraska	Colorado	Oregon	Massachusetts	Illinois	New Jersey
0-2	690	476	275	247	225	115	126	108
2-3	355	265	114	198	87	17	19	11
3-4	456	330	165	139	136	58	44	36
4-5	301	212	92	94	87	22	9	6
5-10	145	87	24	17	15	- 25	- 31	- 35
Over 10	- 60	- 70	- 80	- 96	- 79	- 92	- 90	- 91

<sup>a</sup>Net percentage benefit represents the net dollar benefit per spending unit expressed as a percentage of the net dollar tax burden per spending unit. Minus figures indicate that the tax burden exceeds the amount of aid so the net dollar loss is expressed as a percentage of the tax burden.

<sup>b</sup>Kelley Bill, H. R. 1, 85th Cong., 1st Sess. (1957) as reported by the House Committee on Education and Labor.

Source: Computed by the author.

counterpart is the Clements bill. Tables LX and LXI present the data on the Committee Draft of the Kelley bill.

A comparison of the Robertson and Humphrey-Ives bills reveals the great similarity between the two programs. Differences in net benefit from educational aid show a maximum variation of only four cents. This difference, which may well be meaningless, certainly is so small that comparison can be reduced to that of a common Robertson and Humphrey-Ives program and the Committee Draft of the Kelley bill.

When the comparison is reduced to this basis, the conclusion seems clear that the Committee version of the Kelley bill is preferable to the other matched flat grant proposals.<sup>14</sup> Some deviations from a pattern of inverse variation of net aid per spending units by income brackets and per capita income ranking of states can be found. The greatest deviations occur in the upper income brackets with minor deviations also occurring in the two lowest income brackets. However, the number of deviations occurring under the Kelley bill are comparatively at a minimum. Furthermore, the extent of inverse variation as revealed by a comparison of the net percentage benefit (Table XXXVII and Table XLI), is greater under the Committee Draft of the Kelley bill than under the other proposals. Finally, since the appropriations assumed in this analysis are small enough that the funds provided can be matched by each test state, the Kelley bill suffers no defect of operating to deny some aid to some state.

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<sup>14</sup>The great similarity between the Committee Draft of the Kelley bill and the unmatched grant proposal of the Morse-Clark bill is apparent from a comparison of Table XXXVII and Table LX.

A concluding reflection is in order: the entire program of matching appears anomalous in any situation where current levels of state expenditures provide more than enough funds for matching federal subvention of the size proposed. In such a case no stimulation can be forthcoming. It would, therefore, seem preferable to simplify the administration of the grant by resorting to unmatched grants.

As in the analysis of unmatched flat grant proposals, the analysis of matched flat grants must face methodological and philosophical problems. Resolution of such problems is neither definitive nor conclusive. To the extent they are resolved, conclusions can be drawn within the fiscal framework of this study. The Committee Draft of the Kelley bill emerges as the preferable matched flat grant proposal. However, the present levels of state educational expenditures relative to the federal grants that might be made tend to support the conclusion that flat grants on an unmatched basis are preferable to the meaningless matching of such grants.

#### LEGISLATIVE PROPOSALS FOR FLAT GRANTS WITH EQUALIZED MATCHING

Legislative plans to provide financial support for primary and secondary education also have frequently proposed variable state-federal ratios for matching allocated funds. Proposals of this type have been relatively numerous; however, they have been remarkably similar in nature.

#### DISTRIBUTION OF AID TO STATES FROM FLAT GRANTS WITH EQUALIZED MATCHING LEGISLATIVE PROPOSALS

The pioneering proposal for a flat grant with equalized matching

was the 1949 program of Senator Neeley and ten other senators.<sup>15</sup> Except for the initial year of operation an appropriation of \$490 million per fiscal year would have been authorized. This sum was to have been allocated among the states on the familiar formula of state-to-national school-age population ratios. This proposal would have led to state allocations similar to those of the Bailey unmatched flat grant proposal<sup>16</sup> and to those of the Humphrey-Ives matched flat grant proposal.<sup>17</sup> The significant difference was the provision that the federal matching percentages were to vary from 40 per cent in the wealthiest states to 60 per cent in the poorest state.

The total state allocations may be assumed to be those contained in Table XXXII and represented by the Bailey bill. If this is assumed then the questions arise as to what matching percentages would have been imposed on each of the eight selected test states and whether these matching requirements would have operated to deny funds to any state. In computing the variable matching percentages, the average of the per capita incomes in the three previous years was to have been used. Since computations here have adopted 1954 as the year for which comparisons are made, the variable ratios were based on average per capita income for 1951, 1952, and 1953. On this basis the smallest state matching percentage of 40 per cent would have been assigned to Mississippi; the 60

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<sup>15</sup>S. 287, 81st Cong., 1st Sess.

<sup>16</sup>See Table XXXII, Chapter IV, p. 162. The Bailey bill was assumed to have been based on \$500 million rather than \$490 million appropriations authorized in the Neeley bill. This difference has been considered relatively so small that recomputation of state allocations has not been undertaken.

<sup>17</sup>See above, p. 162.

per cent maximum matching requirement would have fallen to Delaware.<sup>18</sup> The matching percentages resulting from the use of 1951-1953 average incomes lead to slightly different percentages than would have prevailed using the 1946-1948 average incomes which would have been required for the year in which the proposal was introduced.<sup>19</sup> However, the approximate state matching percentages for 1954 would have been Massachusetts, 53; New Jersey, 57; Illinois, 57; Nebraska, 50; Tennessee, 44; Oklahoma, 46; Colorado, 51; and Oregon, 53.<sup>20</sup> If current state expenditures on primary and secondary education would have constituted a percentage of federal funds allocated to the state equal to or greater than the computed state matching percentage, then the state would clearly have been able to secure its full allotment under the act. Based on the 1954 state expenditures for new buildings and additions to buildings, each of the selected states spent an amount well in excess of that required to receive its full federal grant.<sup>21</sup> Since no additional state effort to

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<sup>18</sup>These matching percentages are determined from average per capita income of the states for 1951-1953 as presented and used in the 1955 House of Representatives hearings on proposals to aid education. Federal Aid to States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74 and also Pt. III, p. 850.

<sup>19</sup>The 1949 matching percentages were inserted in the 1949 Senate hearings by Dr. Edgar Fuller. Federal Aid to Education, Hearings, U. S. Senate Committee on Education and Labor, 81st Cong., 1st Sess. (Washington, 1949), p. 136.

<sup>20</sup>Computed from the three-year average per capita income as presented in Federal Aid to States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74.

<sup>21</sup>Based on Schloss and Hobson, pp. 92-93, Table 34. As was indicated above some estimation was required because the detail with which state expenditures for new buildings and additions is presented is not completely comparable for all states.

match federal allocations would have been required, the variable matching percentages would have been insufficient to stimulate states to increase educational expenditures. Likewise, since in every case state expenditures for new buildings and additions would have exceeded the federal allocations, the variable matching percentages would not have operated to make federal funds available to states that would otherwise have been unable to qualify for their full federal allotments on an equal matching basis. It would appear that the complications introduced by variable matching are not defensible unless the provisions either stimulate state action or make possible state aid otherwise precluded by other matching arrangements.

The Humphrey bill of 1949<sup>22</sup> would have specifically authorized \$500 million per year and would have established state allotments on the state-to-national school-age population ratio basis. Thus state allotments would have been the same as those of the 1954 Bailey unmatched flat grant proposal presented in Table XXXII and would have been almost identical with those of the Neeley bill just examined. Federal matching percentages, not to have exceeded 75 per cent nor to have fallen below 33 1/3 per cent, were to have borne the same ratio to 50 per cent as the state three-year average annual per capita income bore to the national three-year average annual per capita income.

As this proposal would have operated, the state matching percentages required of the eight selected test states would have been Massachusetts, 54; New Jersey, 60; Illinois, 61; Nebraska, 47; Tennessee, 34;

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<sup>22</sup>S. 1670, 81st Cong., 1st Sess.

Oklahoma, 39; Colorado, 49; and Oregon, 51.<sup>23</sup> The conclusion drawn from the consideration of the Neeley bill appears to follow here. The least wealthy states, Tennessee and Oklahoma, which emerge with the low state matching percentages have been making current expenditures for construction of educational facilities that make the lower matching percentages unnecessary for them to secure their full federal allotment. Therefore, states would not have been stimulated to greater fiscal effort to construct classrooms and facilities. Furthermore, the wealthier states, Illinois and New Jersey, were expending funds for school construction at a level high enough so that the higher state matching percentages would not have operated to deny federal funds to them.<sup>24</sup> Operationally, then, the Humphrey proposal would appear to have introduced complications in administration without providing offsetting advantages.

Legislative proposals similar to the Humphrey and Neeley bills discussed above were frequent. One of these proposals, S. 2317,<sup>25</sup> also introduced by Senator Humphrey, was like the original 1949 Humphrey proposal (S. 1670) except that a variable matching plan basically the same as that of the Neeley bill was incorporated. This second Humphrey bill which passed the Senate on October 17, 1949 would have operated fiscally substantially as would the Neeley and the first Humphrey bill. Neither stimulation nor deprivation of funds would have occurred despite the

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<sup>23</sup>Computations are based on income data presented in Federal Aid to States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74.

<sup>24</sup>Schloss and Hobson, pp. 92-93, Table XXXIV.

<sup>25</sup>81st Cong., 1st Sess. (1949). This was introduced by Senator Humphrey for the Committee on Labor and Public Welfare.

complications introduced into the matching formulae. Senator Bricker's 1949 proposal<sup>26</sup> would have allocated funds to the states on the basis of the state need which was to have been determined by the United States Commissioner of Education; federal matching percentages would have fallen between 40 and 90 per cent. This proposal, however, cannot be tested since the Commissioner of Education never determined the needs of the several states.<sup>27</sup>

The 1955 Eisenhower program for aid to education was contained in a bill introduced by Senator Smith and others.<sup>28</sup> In Title III of this omnibus proposal \$200 million was authorized for aid in school construction. State allotments were to have been based on the state-to-national school-age population ratio basis. The state matching percentages were to have varied between 40 to 60 per cent; they were to have been determined on the basis of the same formula as that contained in the first Humphrey bill. State matching percentages would thus have been: Massachusetts, 54; New Jersey, 60; Illinois, 60; Nebraska, 47; Tennessee, 40; Oklahoma, 40; Colorado, 49; and Oregon, 51.<sup>29</sup> Again the fiscal operation of this bill would have been like that of the Humphrey bills and

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<sup>26</sup>S. 1699, 81st Cong., 1st Sess.

<sup>27</sup>It appears possible that the range of matching percentages might have operated somewhat differently than the percentages which would have resulted from the application of either the Humphrey bills or the Neeley bill.

<sup>28</sup>S. 968, 84th Cong., 1st Sess.

<sup>29</sup>Computations are based on income data presented in Federal Aid to States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74.



the Neeley proposal.<sup>30</sup>

One final observation about variable matching plans seems called for. The analysis undertaken here for the eight selected test states has been predicated on a \$500 million authorized appropriation. On this basis none of the proposals under consideration would necessarily have operated either to have stimulated state efforts toward school construction or to have denied federal funds to states. Furthermore, none of the actual proposals would have authorized more than \$500 million; some would have authorized less. However, if the amount of federal authorizations were increased, state allotments would also increase and eventually a point might be reached where denial of funds would result unless state effort were intensified.<sup>31</sup> Finally, the flat grant with variable matching proposals examined here are all basically alike in their effects in redressing the fiscal inequities arising from the federal system. If an authorized appropriation of \$500 million is utilized as a basis for analysis, then the net benefit per spending unit by spending unit brackets will be the same as that forthcoming under the Bailey unmatched flat grant proposal. This similarity is grounded in the ability

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<sup>30</sup>State allocations are not computed separately for the separate spending units in the several states. In each case they would have been approximately two-fifths of the allocations under the Bailey unmatched flat grant proposal of 1954 which are presented in Table XXXII, Chapter IV, p. 163.

<sup>31</sup>This point of intensified state effort would correspond to the total authorized appropriation which when multiplied by the allotment ratio and then multiplied by the variable matching ratio would total the current state expenditure level. Or, if  $P_A$  represents the school-age population of State A,  $P_N$  represents the national school-age population,  $R_A$  represents the state matching percentage for State A,  $C_A$  represents current school expenditures for State A,  $E$  represents the total appropriation authorized, then the point of intensified effort would be that point at which  $(P_N/P_A \cdot E) (R_A) = C_A$ .

of the several states to match federal funds without increasing expenditures for school construction above the level that would otherwise exist. A decision as to which of the variable matching proposals is preferable is, therefore, a somewhat pedantic exercise. A criterion of relative simplicity might indicate that matching within narrow limits of 40 to 60 per cent might be preferable and therefore the Neeley, the Smith, and the second Humphrey bills all seem equally acceptable. This same criterion, however, also suggests that unmatched flat grants are preferable to all the variable matching proposals, for such unmatched flat grants are a simpler technique for attaining an equal amount of fiscal adjustment in the federal system.

#### MATCHED EQUALIZATION GRANT LEGISLATIVE PROPOSALS

Proposals to extend educational aid to the states by matched equalization grants first received serious consideration in 1953 but in the following five years they represent the major type of aid plan advanced. These proposals can be subjected to the fiscal analysis already undertaken for other types of aid programs; they can then be evaluated by the same criteria.

#### DISTRIBUTION OF AID TO STATES FROM MATCHED EQUALIZATION GRANT PROPOSALS

In 1953 Representative Frelinghuysen advanced a program<sup>32</sup> for matched equalization grants to aid in constructing needed elementary and

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<sup>32</sup>H. R. 9841, 83d Cong., 1st Sess.

secondary school facilities. The authorized appropriation was \$250 million. The state allotments were to have been computed by a relatively complicated formula. Under the proposed act, a "federal percentage" was first computed for each state and then the state school-age populations were to be weighted by the resulting federal percentages squared. The "federal percentages" were limited to the range defined by limits of  $33 \frac{1}{3}$  per cent and 75 per cent. The federal percentage for each state was to have been 100 per cent less the percentage which bore the same ratio to 50 per cent as the state per capita income bore to the national per capita income. State allotments were to have been based on weighted state to weighted national school-age populations subject to the provision that no state would receive an allotment of less than \$100,000. Federal matching percentages were not to have exceeded the lesser of 40 per cent of the cost or \$500 per school-age child to be accommodated in any facility. A later introduction by Representative Frelinghuysen<sup>33</sup> provided that no state would have been entitled to an allotment of more than 5 per cent of the total authorized appropriation.

This second Frelinghuysen bill, however, was substantially like a more important and more widely-known Senate bill introduced by Senator Hill and twenty-nine co-sponsors.<sup>34</sup> The similarities were so great that in testimony before the Senate Committee on Labor and Public Welfare, Representative Frelinghuysen observed:

...On the opening day of this session I introduced H. R. 764 which

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<sup>33</sup>H. R. 764, 84th Cong., 1st Sess. (1955).

<sup>34</sup>S. 5, 84th Cong., 1st Sess. (1955).

is roughly a companion bill to S. 5 (which you are also considering), except for the fact that the authorization in H. R. 764 is \$250 million for each year of the 2-year period, while the figure is \$500 million in S. 5. H. R. 764 is an emergency bill and the basic provisions of the bill, except for authorization, are the same as in S. 5.<sup>35</sup>

Attention, therefore, will be directed to the Hill bill, S. 5, rather than to either of the first two Frelinghuysen bills. Two further observations seem in order: first, some minor differences between the Hill bill and the Frelinghuysen bills did exist<sup>36</sup> and second, the preponderance of legislative attention to the Hill bill certainly justifies emphasis on that proposal.

The Hill bill contained several provisos of importance. First, each state would have been assured a minimum allotment of \$200,000.<sup>37</sup> Second, a federal percentage was to be computed for each state. This percentage, which could not exceed 70 per cent nor fall below 40 per cent, was to be 100 per cent less the percentage which bore the same ratio to 45 per cent (rather than the 50 per cent of the Frelinghuysen bill) that the three-year average of state per capita income bore to the three-year average of national per capita income. Each state allotment was then to be the ratio that the product of the squared federal percentage

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<sup>35</sup>Emergency Federal Aid for School Construction, Hearings, 84th Cong., 1st Sess. (Washington, 1955), p. 148.

<sup>36</sup>For example, the Frelinghuysen bill provided a 40 per cent limitation on the federal share in the construction of any facility; the Hill bill allowed the federal percentage to rise as high as 66 2/3 per cent.

<sup>37</sup>This proviso would, in fact, have been meaningless. No state's allotment would have fallen below \$300,000. Federal Aid to States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74.

and the state school-age population bore to the sum of such products for all the states.

When this plan was applied to the eight selected test states, the resulting state allocations ranged from approximately \$17,836,000 to Tennessee to approximately \$4,326,000 to Colorado. The allocations for the eight test states, both in total and by spending unit income brackets, are presented in Table XLII. The state matching percentages were to be the percentages which bore the same ratio to 50 per cent as the state's three-year average per capita income bore to the corresponding national income. For the eight states the matching percentages, limited to a  $33\frac{1}{3}$ -66  $\frac{2}{3}$  percentage range, would have been Massachusetts, 53; New Jersey, 60; Illinois, 61; Nebraska, 47; Tennessee, 34; Oklahoma, 38; Colorado, 49; and Oregon, 51.<sup>38</sup> The net dollar benefit from educational aid resulting from the application of the Hill bill is presented by spending unit income brackets in Table XLIII; the net dollar benefit is presented on a per spending unit basis by spending unit income brackets in Table XLIV. Table XLV presents the net percentage benefit per spending unit.

It should be noted that the Hill bill would have made allotments to the least wealthy states slightly greater than would have been forthcoming under the Bailey bill. Slightly smaller allotments would have gone to the wealthier states. But no test state would have been

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<sup>38</sup> Computations based on income data presented in Federal Aid to the States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74. These percentages are identical with those of the Smith bill's flat grant variable matching percentages except for the Smith bill's range limitation of 40 to 60 per cent.

TABLE XLII  
DISTRIBUTION BY STATES OF AMOUNTS OF AID ALLOCATED BY MATCHED GRANT LEGISLATIVE  
PROPOSALS, BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954<sup>a</sup>  
(Thousands of Dollars)

Spending Unit Income Bracket	Allocations by Legislative Proposal				
	Cooper, S. 2601, 1953	Hill, S. 5, 1955	Glenn, S. 4, 1955	Smith, S. 2905, 1956	McConnell, R. R. 1966, 1957
Massachusetts					
0-2	\$ 1,232.4	\$ 2,190.1	\$ 1,111.8	\$ 563.6	\$ 698.5
2-3	1,316.2	1,270.9	1,219.4	573.1	756.0
3-4	2,644.8	2,380.1	2,283.5	1,073.3	1,397.1
4-5	2,093.9	2,022.0	1,932.9	911.8	1,186.8
5-10	4,139.9	3,997.7	3,835.4	1,802.7	2,346.6
Over 10	717.9	653.2	644.1	312.6	406.9
Total	11,965.0	11,554.0	11,085.0	5,210.0	6,782.0
New Jersey					
0-2	820.2	681.6	853.7	460.6	400.7
2-3	842.6	700.3	877.1	471.2	411.7
3-4	1,988.6	1,652.6	2,070.0	1,115.9	971.6
4-5	1,908.0	1,503.3	1,882.9	1,015.9	883.7
5-10	4,912.2	4,098.9	5,134.1	2,770.1	2,409.7
Over 10	842.6	700.3	877.1	471.2	411.7
Total	11,235.0	9,337.0	11,695.0	6,310.0	5,482.0
Illinois					
0-2	1,531.5	1,277.7	1,522.7	798.9	856.6
2-3	1,372.4	1,144.9	1,382.4	715.9	767.6
3-4	3,450.3	2,070.1	3,580.3	1,857.1	1,991.4
4-5	3,242.1	2,704.7	3,265.7	1,691.1	1,813.4
5-10	8,472.6	7,151.6	8,635.1	4,471.6	4,790.9
Over 10	1,611.1	1,344.0	1,622.8	840.4	901.1
Total	19,890.0	16,593.0	20,035.0	16,375.0	11,125.0
Nebraska					
0-2	670.4	698.6	683.2	345.6	457.0
2-3	460.9	480.1	469.7	240.1	314.2
3-4	892.5	931.0	909.5	465.1	608.3
4-5	611.7	637.4	623.4	319.0	417.0
5-10	1,320.2	1,384.0	1,353.6	692.6	905.4
Over 10	226.3	235.8	230.6	118.0	154.2
Total	4,190.0	4,366.0	4,270.0	2,185.0	2,856.0
Tennessee					
0-2	2,220.8	2,657.6	2,162.7	912.6	1,511.5
2-3	1,907.8	2,283.0	1,857.9	784.0	1,298.4
3-4	3,140.0	3,745.6	3,040.2	1,266.2	2,130.2
4-5	2,176.1	2,604.1	2,119.2	894.2	1,451.0
5-10	4,710.0	5,636.2	4,586.7	1,935.5	3,205.5
Over 10	760.2	900.6	740.1	317.4	517.1
Total	14,905.0	17,830.0	14,515.0	6,125.0	10,144.0
Oklahoma					
0-2	1,239.5	1,361.6	1,426.9	781.4	791.7
2-3	882.7	969.6	1,016.1	556.5	561.8
3-4	1,806.8	2,083.6	2,181.6	1,195.8	1,211.6
4-5	1,662.0	1,825.8	1,913.6	1,047.8	1,061.6
5-10	3,104.1	3,414.1	3,478.1	1,959.5	1,985.3
Over 10	591.6	649.8	681.0	371.0	377.0
Total	9,390.0	10,315.0	10,810.0	5,920.0	5,998.0
Colorado					
0-2	448.6	445.6	453.6	244.3	309.9
2-3	357.1	354.7	358.8	186.6	246.7
3-4	823.1	617.6	826.9	430.0	564.7
4-5	779.5	774.4	782.1	407.2	530.6
5-10	1,641.8	1,630.9	1,549.4	857.7	1,134.4
Over 10	304.8	302.8	300.2	159.2	210.6
Total	4,355.0	4,326.0	4,375.0	2,275.0	3,009.0
Oregon					
0-2	292.8	286.8	311.4	192.7	201.4
2-3	342.4	335.4	389.2	225.1	235.5
3-4	800.4	789.9	916.1	530.7	554.7
4-5	887.5	849.4	1,010.6	534.3	610.5
5-10	1,898.6	1,811.4	2,127.0	1,230.5	1,246.1
Over 10	306.3	309.1	348.8	201.6	310.7
Total	4,505.0	4,413.0	5,130.0	2,995.0	3,099.0

<sup>a</sup>Detail does not necessarily add to total due to rounding.

Source: Computed by the author.

TABLE XLIII

DISTRIBUTION BY STATES OF NET DOLLAR BENEFIT PER SPENDING UNIT INCOME BRACKET RESULTING FROM  
MATCHED FLAT GRANT LEGISLATIVE PROPOSALS, SELECTED STATES, 1954<sup>a</sup>  
(Thousands of Dollars)

Spending Unit Income Bracket	Net Dollar Benefit from Educational Aid <sup>b</sup>				
	Cooper, S. 2601, 1953	Hill, S. 5, 1955	Clements, S. 4, 1955	Smith, S. 2905, 1955	McCormell, H. R., 1956, 1957
Massachusetts					
0-2	669	627	579	920	713
2-3	211	166	111	43	44
3-4	225	841	745	608	613
4-5	410	338	256	140	144
5-10	-1,320	-1,462	-1,625	-1,855	-1,846
Over 10	-8,054	-8,082	-8,107	-8,147	-8,145
New Jersey					
0-2	424	296	458	525	221
2-3	78	65	112	181	131
3-4	418	182	599	763	25
4-5	90	216	164	313	338
5-10	-2,634	-1,477	-2,442	-2,036	-3,685
Over 10	-8,257	-8,400	-8,223	-8,158	-8,496
Illinois					
0-2	827	573	838	593	614
2-3	176	51	106	26	14
3-4	292	402	1,018	1,146	499
4-5	135	402	158	275	314
5-10	-4,324	-5,745	-4,262	-3,953	-5,513
Over 10	-11,432	-14,628	-14,420	-14,362	-14,655
Nebraska					
0-2	435	514	408	515	513
2-3	210	207	247	243	201
3-4	544	582	562	503	589
4-5	282	307	293	308	312
5-10	222	278	218	272	288
Over 10	-947	-937	-942	-937	-936
Tennessee					
0-2	1,040	2,377	1,882	1,545	2,047
2-3	1,490	1,865	1,440	1,408	1,582
3-4	2,568	3,184	2,486	2,010	2,719
4-5	1,634	2,062	1,577	1,246	1,739
5-10	2,791	3,717	3,680	1,953	3,017
Over 10	-1,150	-1,008	-1,178	-1,293	-1,121
Oklahoma					
0-2	1,033	1,160	1,225	1,351	1,717
2-3	646	741	789	789	641
3-4	1,684	1,571	1,771	1,979	1,453
4-5	1,144	1,338	1,435	1,594	1,347
5-10	1,551	1,847	2,021	2,103	1,500
Over 10	-1,323	-1,265	-1,234	-1,169	-1,333
Colorado					
0-2	310	357	312	330	338
2-3	151	151	145	170	186
3-4	452	447	440	482	505
4-5	347	341	340	341	346
5-10	139	128	144	212	244
Over 10	-1,401	-1,603	-1,600	-1,588	-1,482
Oregon					
0-2	364	488	234	280	211
2-3	141	134	189	260	162
3-4	411	415	443	660	479
4-5	306	347	482	646	418
5-10	88	49	347	579	199
Over 10	-1,121	-1,329	-1,280	-1,226	-1,304

<sup>a</sup>Detail does not necessarily add to total due to rounding.

<sup>b</sup>Net dollar benefit from educational aid is the difference between the added tax burden required to provide financial support to education and the added benefit derived from the expenditures. Computations here are based on a total expenditure of \$500 million.

Source: Computed by the author.

TABLE XLIV

NET DOLLAR BENEFIT FROM EDUCATIONAL AID PER SPENDING UNIT RESULTING FROM MATCHED GRANT LEGISLATIVE PROPOSALS BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954

Spending Unit Income Bracket <sup>b</sup> (Thousands of Dollars)	Net Dollar Benefit from Educational Aid per Spending Unit <sup>a</sup>				
	Coyne, S. 2601, 1953	Hill, S. 5, 1955	Clements, S. 1, 1955	Smith, S. 2905, 1956	McConnell, H. R. 3586, 1957
0-2					
Tennessee	\$ 5.60	\$ 6.87	\$ 5.44	\$ 4.46	\$ 5.91
Oklahoma	3.40	3.80	4.02	4.46	3.33
Nebraska	3.22	3.42	3.31	3.42	3.45
Colorado	2.66	2.63	2.67	2.83	2.90
Oregon	2.16	2.09	2.60	3.18	2.34
Massachusetts	1.78	1.67	1.54	1.36	1.35
Illinois	1.43	.99	1.45	1.55	1.06
New Jersey	1.36	.95	1.47	1.68	.71
2-3					
Tennessee	7.34	9.19	7.09	6.94	7.79
Oklahoma	4.49	5.08	5.40	5.78	4.38
Nebraska	3.41	3.68	3.54	3.70	3.74
Colorado	2.59	2.56	2.62	2.84	2.95
Oregon	1.97	1.87	2.64	3.49	2.26
Massachusetts	.81	.61	.42	.15	.16
Illinois	.50	.15	.53	.67	.04
New Jersey	.36	.30	.51	.83	.60
3-4					
Tennessee	13.47	16.71	13.03	10.55	14.27
Oklahoma	8.19	9.23	9.76	10.93	8.02
Nebraska	6.93	7.41	7.16	7.43	7.50
Colorado	5.43	5.37	5.40	5.88	6.07
Oregon	4.48	4.31	5.64	7.13	4.98
Massachusetts	3.16	2.87	2.52	2.07	2.07
Illinois	1.89	.77	1.94	2.19	.95
New Jersey	1.75	.61	2.02	2.58	.08
4-5					
Tennessee	13.42	16.93	12.95	10.23	14.28
Oklahoma	7.96	9.00	9.68	10.93	7.78
Nebraska	5.72	6.23	5.94	6.25	6.33
Colorado	4.76	4.68	4.80	5.23	5.43
Oregon	3.78	3.50	5.05	6.67	4.32
Massachusetts	1.78	1.47	1.11	.61	.63
Illinois	.31	.91	.36	.62	.71
New Jersey	.36	.87	.66	1.27	1.45
5-10					
Tennessee	12.19	16.24	16.02	8.53	13.18
Oklahoma	6.47	7.86	8.56	10.00	6.35
Nebraska	2.40	3.00	2.68	3.01	3.11
Colorado	1.05	.97	1.11	1.61	1.85
Oregon	.50	.28	1.97	3.85	1.13
Massachusetts	- 3.39	- 3.75	- 4.17	- 4.76	- 4.74
Illinois	- 4.31	- 5.73	- 4.25	- 3.94	- 5.50
New Jersey	- 4.55	- 6.01	- 4.22	- 3.52	- 6.68
Over 10					
Tennessee	- 31.13	- 27.10	- 31.67	- 34.76	- 30.13
Oklahoma	- 29.08	- 27.80	- 27.12	- 25.69	- 29.30
Nebraska	- 59.19	- 58.56	- 58.88	- 58.95	- 58.50
Colorado	- 65.08	- 65.16	- 65.04	- 64.55	- 64.31
Oregon	- 45.46	- 45.67	- 43.99	- 42.13	- 44.85
Massachusetts	- 117.75	- 118.25	- 118.52	- 119.11	- 119.08
Illinois	- 76.68	- 76.10	- 76.62	- 76.31	- 77.87
New Jersey	- 82.65	- 84.08	- 82.31	- 81.65	- 84.74

<sup>a</sup>Net dollar benefit from educational aid per spending unit is the quotient of the difference between the added tax burden required to provide financial support to education and the added benefits derived from the expenditures divided by the spending unit per spending unit income bracket. Computations of taxes and benefits are based on \$500 million.

<sup>b</sup>States have been ranked in ascending order of per capita income.

Source: Computed by the author.



TABLE XLV

DISTRIBUTION OF NET PERCENTAGE BENEFIT<sup>a</sup> PER SPENDING UNIT RESULTING FROM MATCHED GRANT LEGISLATIVE PROPOSALS, BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954

Spending Unit Income Bracket <sup>b</sup> (Thousands of Dollars)	Net Percentage Benefit Per Spending Unit				
	Cooper, S. 2601, 1953	Hill, S. 5, 1955	Clements, S. 4, 1955	Smith, S. 2905, 1955	McConnell, H. R. 3986, 1957
0-2					
Tennessee	691	848	672	551	730
Oklahoma	515	576	609	676	505
Nebraska	262	277	269	279	280
Colorado	224	221	224	238	244
Oregon	195	190	236	289	213
Massachusetts	119	111	103	91	91
Illinois	117	81	119	127	87
New Jersey	107	75	116	132	56
2-3					
Tennessee	356	446	344	337	378
Oklahoma	290	328	348	347	283
Nebraska	107	115	111	116	117
Colorado	84	83	85	92	96
Oregon	70	67	94	124	80
Massachusetts	20	15	10	4	4
Illinois	15	- 4	16	20	1
New Jersey	10	- 9	15	24	- 17
3-4					
Tennessee	456	566	442	350	484
Oklahoma	359	405	439	479	352
Nebraska	156	167	162	167	169
Colorado	122	130	123	132	116
Oregon	115	111	145	183	128
Massachusetts	60	55	48	39	40
Illinois	39	15	40	45	19
New Jersey	35	12	41	52	2
4-5					
Tennessee	302	380	291	230	321
Oklahoma	233	266	284	321	228
Nebraska	86	93	89	93	95
Colorado	80	80	81	88	91
Oregon	70	66	94	124	80
Massachusetts	24	20	15	8	80
Illinois	4	- 13	5	9	- 10
New Jersey	5	- 11	9	16	- 21
5-10					
Tennessee	145	194	191	102	147
Oklahoma	100	119	130	142	96
Nebraska	20	25	22	25	26
Colorado	9	9	10	14	16
Oregon	5	3	12	38	11
Massachusetts	- 24	- 27	- 30	- 34	- 34
Illinois	- 34	- 45	- 33	- 31	- 43
New Jersey	- 35	- 46	- 32	- 27	- 51
Over 10					
Tennessee	- 60	- 53	- 61	- 67	- 58
Oklahoma	- 68	- 65	- 63	- 60	- 68
Nebraska	- 81	- 80	- 80	- 80	- 80
Colorado	- 84	- 84	- 84	- 83	- 83
Oregon	- 81	- 81	- 80	- 75	- 80
Massachusetts	- 92	- 92	- 92	- 93	- 93
Illinois	- 90	- 92	- 90	- 90	- 91
New Jersey	- 91	- 92	- 90	- 90	- 93

<sup>a</sup>Net percentage benefit represents the net dollar benefit per spending unit expressed as a percentage of the net dollar tax burden per spending unit. Minus figures indicate that the tax burden exceeds the amount of aid so the net dollar loss is expressed as a percentage of the tax burden. Net dollar benefit data are from Table XLIV; net dollar tax burden data are from Table XXXVI.

<sup>b</sup>States ranked in ascending order of per capita income.

Sources: Computed by the author.

prevented from securing its full allotment simply on the basis of current level of expenditures. However, had equal federal-state matching been adopted, it would have operated to deny some federal funds to Tennessee unless additional fiscal effort had been exerted by that state.<sup>39</sup> Once again the question of the wisdom of adopting complicated formulae for providing aid when the aid will be secured without additional effort, arises; the use of relatively complicated but ineffective matching proposals seems of dubious merit.

Senator Cooper's bill of 1953<sup>40</sup> would have provided a variation on the theme of the Hill and Frelinghuysen proposals. Half of the authorized appropriation would have been distributed on exactly the same basis as the Hill bill would have used; the other one-half would have utilized unsquared federal percentages in weighting state school populations and in determining allotment ratios. Maximum federal percentages of 75 per cent would have been allowed. The federal matching maximum of the lesser 40 per cent per facility or \$500 per pupil to be accommodated was adopted from the 1953 Frelinghuysen bill. Also incorporated from the first Frelinghuysen proposal were a limitation on state allotments of 5 per cent of total authorized appropriations and a minimum of \$100,000 per state.

Allotments from the application of the Cooper bill are presented in Table XLII. These computations are not strictly comparable with those of the Hill bill. Computations undertaken during the legislative

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<sup>39</sup>Relevant Tennessee expenditures on primary and secondary construction approximated \$15,786,000 for 1954; its allotment would have totaled \$17,836,000. See above, p. 199, and Table XLII.

<sup>40</sup>S. 2601, 83d Cong., 1st Sess.

hearings utilized income data covering a period of 1950-1952. Two considerations operated to suggest that detailed computation to secure absolutely comparable data was probably not justified. First of all, the relative state allotments seem to be insignificantly affected.<sup>41</sup> Second, Senator Lister Hill, in introducing S. 5 on January 6, 1955, indicated that S. 2601 and S. 5 were very similar in structure.<sup>42</sup>

The same basic pattern of aid is found in both the Hill and the Cooper bills. The somewhat higher aid accruing to the poorer states under the Hill bill reflects the added advantage given to poorer states by the squaring of the federal percentages in determining state allotments. The squaring, employed in the Hill bill for allocation of all funds, would have been adopted to determine allocation of only half the funds authorized in the Cooper bill. The net benefit of the educational aid which would have been extended by the Cooper bill is presented in Tables XLIII, XLIV, and XLV.

The requirement that each state would have had to provide 60 per cent or more of the funds for each approved project would have raised questions not presented by other proposals thus far analyzed. Most of the test states would have been able to secure their full allotments by the state and local expenditures actually made in 1954 but in two cases, Tennessee and Nebraska, 1954 expenditures would have been inadequate to

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<sup>41</sup>Cf. the table in Construction of School Facilities, Hearings, U. S. Senate Committee on Labor and Public Welfare, 83d Cong., 2d Sess. (Washington, 1954), p. 107 and the table in Federal Aid to the States for School Construction, Hearings, U. S. House Committee on Education and Labor, 84th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 74.

<sup>42</sup>Congressional Record, 84th Cong., 1st Sess., Vol. 101, Pt. 1.

qualify for the full federal allotment.<sup>43</sup> This renders concrete the heretofore theoretical issue of the stimulative effects of federal grants on state fiscal affairs. Put simply, the question is whether or not states should be indirectly coerced to expend more funds or to expend funds in a different way than they would choose to do in the absence of federal financial pressure. Not only are the somewhat abstract problems of the legitimate extent and values of local autonomy raised but the question of a reasonable minimum of state fiscal effort in a federal system is also raised.

On the basis of the 1954 current expenditures for public education from state and local sources as a percentage of income payments, both Nebraska and Tennessee exceeded the national average of 2.29 per cent.<sup>44</sup> Tennessee's expenditures were 2.43 per cent; Nebraska's were 2.71 per cent.<sup>45</sup> Thus, if this measure of effort is accepted, then additional effort would have imposed an added burden on already relatively overburdened states. However, on the basis of tax effort measured as the percentages of state per capita income taken by state and local taxation a somewhat different picture emerges.<sup>46</sup> The national mean state and

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<sup>43</sup>See above, p. 199 for 1954 state expenditures for capital additions in the form of school construction. A 40 per cent federal matching requirement would require each state to expend one and one-half times the allotment to qualify for the full allotment without additional fiscal effort.

<sup>44</sup>Testimony of Dr. Earl J. McGrath in Federal Aid to States for School Construction, Hearings, U. S. House Subcommittee of the Committee on Education and Labor, 85th Cong., 1st Sess. (Washington, 1957), Pt. I, p. 188, Table 26.

<sup>45</sup>Ibid.

<sup>46</sup>Bureau of Census data on state government finances are readily available on a comparable basis but local government data are not equally

local tax burden as a percentage of state per capita income was 7.94 per cent yet both Tennessee and Nebraska fell below this level of tax effort.<sup>47</sup>

The apparent conclusion would seem to be that despite the lower than national average per capita income of Tennessee and Nebraska, further tax effort by these states should be required before the equity of the Cooper plan is denied.<sup>48</sup> In short, if the conditional grant is the form of aid to be adopted, then the reasonableness of the grant program would seem best tied to objective economic facts. On the basis of the most logically appearing objective standards, the operation of the Cooper bill appears reasonable.

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available. Therefore, the 1952-1953 data on state and local government finance were used in computing the statistics presented here.

<sup>47</sup>These computations are taken from a study prepared for the U. S. Senate Committee on Labor and Public Welfare by the Legislative Reference Service of the Library of Congress. Federal Aid for School Construction, 84th Cong., 1st Sess. Report prepared by Charles A. Quattlebaum. (Washington, 1955), p. 87.

<sup>48</sup>Other economic factors might be suggested as relevant to the determination of the equity of operation of aid plans. The factors suggested in the Legislative Reference Service report have been used here. See Federal Aid for School Construction, loc. cit. Average value of public-school property per pupil enrolled might be considered a relevant measure of educational effort in which case, on a 1951-1952 basis, the United States mean was \$525, Nebraska \$579, and Tennessee, \$148. Testimony of Dr. Earl McGrath, Federal Aid to States for School Construction, Hearings, U. S. Subcommittee of the Committee on Education and Labor, 85th Cong., 1st Sess. (Washington, 1957), Pt. I, p. 187, Table 25. Or, the trend of state general expenditures for education might be defended as a measure of effort. Then while the mean national change from 1953 to 1954 in these expenditures increased by 6.3 per cent, the Tennessee expenditures rose by 11.7 per cent, and the Nebraska expenditures fell by 3.0 per cent. U. S. Department of Commerce, Bureau of the Census, Compendium of State Government Finances in 1954 (Washington, 1955), pp. 53-54, Table 39. The question of what constitutes a valid measure of reasonable effort is complex and not capable of resolution on purely objective bases. The arbitrary resolution adopted above however, seems defensible, if imperfect.

The Clements bill of 1955,<sup>49</sup> authorizing a \$500 million appropriation contained an allotment formula even more complicated than that of the Cooper bill. The state allotments would have been the sum of two allocations made from an equal division of the total appropriation. Half of the authorized appropriation was to be allocated on state-to-national "effort" ratios. These effort ratios represented a weighting of school-age populations by the quotient secured by dividing school expenditures from state and local sources by total state income payments. The other half of the appropriations authorized was to be allocated on state-to-national "need" ratios. These ratios again represented a weighting of state school-age population by the quotient secured by dividing the national average per capita income by the state average per capita income. The resulting total state allocations resulting from the Clements bill are presented in Table XLII; net benefits resulting are presented in Tables XLIII, XLIV, and XLV.<sup>50</sup>

State matching percentages under the bill were to fall between  $33 \frac{1}{3}$  and  $66 \frac{2}{3}$  per cent of the cost of any school facility. However a matching percentage was not formulated for each state. Instead the act provided that each state plan, subject to approval by the U. S. Commissioner of Education, should:

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<sup>49</sup>S. 4, 84th Cong., 1st Sess.

<sup>50</sup>Statistical limitations have necessitated the use of the computations prepared by proponents of the bill and presented in the legislative hearings. Specifically, the state and local expenditures for schools include current expenditures only, not the more exact current and capital expenditures. It may be hazarded that Representative Watts was substantially correct in observing, at the time he presented the available data, that these figures were quite usable. Emergency Federal Aid for School Construction, Hearings, U. S. Senate Committee on Labor and Public Welfare, 84th Cong., 1st Sess. (Washington, 1955), pp. 44-45.

...establish standards for determination of the Federal share of the cost of a school facilities project, approved by the state educational agency, which shall provide equitably (and to the extent practicable on the basis of objective criteria) for variations between projects or classes or projects on the basis of the economic status of the areas, relative need as between areas for additional school facilities, and other relevant factors...<sup>51</sup>

The result of this provision would have been to accord states greater autonomy than most aid proposals would have allowed. However, a determination of the relative ability of all states to secure their allotted funds without material change in their fiscal structures is also precluded.

Senator Smith, in 1956, proposed a bill<sup>52</sup> similar to a portion of the Clements plan. Under this Smith bill an annual appropriation of \$250 million was authorized with all state allotments computed on the basis of effort ratios as formulated in the Clements plan. The allocations to the test states which would have resulted from this proposal are presented in Table XLII. Net benefit allocations are presented in Tables XLIII, XLIV, and XLV.<sup>53</sup>

Matching percentages were to have been varied for the several states inversely with state income per school-age child. No percentage was to have exceeded  $66 \frac{2}{3}$  per cent nor to have fallen below  $33 \frac{1}{3}$  per

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<sup>51</sup>S. 4, Part B, Sec. 112 (a) (4).

<sup>52</sup>S. 2905, 84th Cong., 2d Sess.

<sup>53</sup>Computations are subject to some error because of inadequacy of information. Computations have been based on data presented in the testimony of Representative Watts in Emergency Federal Aid for School Construction, Hearings, U. S. Senate Committee on Labor and Public Welfare, 84th Cong., 1st Sess. (Washington, 1955), pp. 44-45. To the extent that errors have appeared, they would seem to understate allocations to New Jersey and Illinois.

cent. Thus, on the basis of the 1953-1954 income per school-age child the state matching percentages would have been: Massachusetts, 59; New Jersey, 65; Illinois, 60; Nebraska, 51; Tennessee, 39; Oklahoma, 43; Colorado, 51; and Oregon, 53.<sup>54</sup> As in most of the other proposals utilizing variable matching percentages, no state would have failed to qualify for the allocations which would have resulted either from the proposal as introduced or from the same proposal with an authorized appropriation of \$500 million.<sup>55</sup> The Smith bill, however, by stressing effort to the exclusion of need in the determination of state allocations leads to slightly higher allocations in wealthy states where the extra dollar of a higher income expended on education probably imposes a lesser burden than the extra dollar taken from lower per capita incomes. This exclusion of need would seem to indicate, as is borne out by the pattern of net benefit per spending unit by state spending unit income brackets shown in Table XL, that a program such as embodied in the Clements bill is preferable to that of the Smith bill.

The McConnell bill of 1957<sup>56</sup> would have authorized appropriations of \$325 million with allocation to have been made on the basis of weighted state-to-national school-age population ratios. Weights were to have been state "allotment ratios" determined by subtracting from 1.00 the product of .50 and the quotient secured by dividing state

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<sup>54</sup>Computed from data presented in testimony of Dr. Earl J. McGrath in Federal Aid to States for School Construction, Hearings, Subcommittee of the U. S. House Committee on Education and Labor, 85th Cong., 1st Sess. (Washington, 1955), Pt. I, p. 185, Table 20.

<sup>55</sup>See above, p. 199, and Table XLII.

<sup>56</sup>H. R. 3986, 85th Cong., 1st Sess.



income per child by the income per child for the Continental United States. These resulting allotments were not to have exceeded .75 nor to have fallen below .25. Once the state allotment had been determined from these weighted state-to-national school-age population ratios, some reduction might have been made in the allotment. A "school-effort index" was to have been computed for both the nation and each state by dividing the school expenditures per child of school-age by the income per child of school-age. For any state whose effort index fell below the national effort index and which also failed to spend a dollar amount per child of school-age equal to the corresponding national dollar amount, a reduction in allotment would have occurred. Federal matching percentages would have been equal to "allotment ratios" between the limits of  $33 \frac{1}{3}$  and  $66 \frac{2}{3}$  per cent. State allocations which would have resulted from the application of the formula of the McConnell bill are presented in Table XLII;<sup>57</sup> net benefit allocations are presented in Tables XLIII, XLIV, and XLV. State matching percentages for the test states would have been: Massachusetts, 61; New Jersey,  $66 \frac{2}{3}$ ; Illinois,  $66 \frac{2}{3}$ ; Nebraska, 46; Tennessee,  $33 \frac{1}{3}$ ; Oklahoma, 37; Colorado, 50; and Oregon, 52.<sup>58</sup> As in the other proposals to provide aid by matched grants, the McConnell bill would not have operated to deny any test state access to the full amount of the funds allocated.<sup>59</sup>

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<sup>57</sup> Computations are based on data presented by Representative Kelley in Federal Aid to States for School Construction, Hearings, Subcommittee of the U. S. House Committee on Education and Labor, 85th Cong., 1st Sess. (Washington, 1955), p. 222.

<sup>58</sup> Ibid. Computations have been made from these data by the author.

<sup>59</sup> See above, p. 199.

## FISCAL EVALUATION OF MATCHED EQUALIZATION GRANT

## LEGISLATIVE PROPOSALS

The evaluation of the specific plans to aid education by the use of matched equalization grants can now be made on the basis of the rationale developed earlier. It was argued that since any educational aid plan should be consonant with equity in a federal system, then the preferable plan would be that one which accomplished most in equalizing interstate fiscal differences of persons in otherwise similar fiscal positions.

When this underlying basis for evaluation is applied to the five matched equalization grant proposals, the Cooper bill appears to be preferable. As the Cooper bill would have operated (assuming each state qualified for its full allotment) there would have been a perfect inverse relation between the net benefit per spending unit and the per capita income ranking of the state in all spending unit income brackets except the highest. Even in the income bracket over \$10,000 only two deviations from the inverse relationship appear (in the reversal of the positions of Tennessee and Oklahoma and in the heaviest burden which falls on Massachusetts). These reversals also would have occurred in the operation of the McConnell bill but in the McConnell bill reversal of the net benefit position of the spending units of Oklahoma and Nebraska spending units under \$2,000 also would have occurred.

However an additional consideration of some importance colors this conclusion. If the extent of difference between the poorest state, Tennessee, and the wealthiest state, New Jersey, as shown in net percentage benefit computations presented in Table XLV, are examined, the

McConnell bill is found to embody a greater difference than the Cooper bill. Thus the ratio between the marginal net benefit which would have accrued to the lowest income bracket in Tennessee and the marginal net benefit which would have accrued to the same bracket in New Jersey is 9.3:1 under the McConnell bill; it is only 4.9:1 under the Cooper bill. For the successively larger spending unit income brackets the similarly determined ratios would have been 8.4:1; 17.8:1; 16.7:1; 19.9:1 and .36:1 under the McConnell bill; under the Cooper bill they would have been 4.1:1; 20.4:1; 7.7:1; 37.3:1; 16.7:1; and .38:1.<sup>60</sup> The result is that the amount of improvement, measured between the poorest and the richest state, is greatest under the McConnell bill in all except the \$2,000-\$3,000 and the \$4,000-\$5,000 spending unit income brackets. The apparent conclusion would seem to be that if consistent adherence to the rationale of achieving fiscal equity is given primacy the Cooper bill would have been preferable but if reasonable adherence to the rationale be combined with an overall maximum amount of fiscal readjustment, then the McConnell bill seems at least as defensible as the Cooper bill. Although this apparent impasse is not of major practical consequence, it can, however, be resolved in favor of the Cooper proposal. The allotment formula of the Cooper bill is much less involved than that of the McConnell program. Furthermore, preference for the Cooper bill arises from the fact that since current levels of state and local expenditures would have been adequate to match the federal allotments with little increased financial effort, there is no apparent reason for preferring one proposal to another. Therefore, it would seem that the fiscally

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<sup>60</sup>Computed by the author from Table XLIV.

preferable matched equalization grant proposal would have been the Cooper bill of 1953.

When the comparative evaluation is undertaken of the preferable matched flat grant proposal, the Committee Draft of the Kelley bill, and the preferable matched equalization grant proposal, the Cooper bill, the Committee Draft of the Kelley bill seems more desirable. A comparison of the net benefit per spending unit resulting from the two bills shows similar dollar amounts and net percentage benefits not dissimilar in important ways. The major difference in the bills, therefore, is that which appears in the matching plans. Since the Committee Draft of the Kelley bill provided a simpler matching plan than the Cooper bill and since it does not differ in any other significant way, the scale is tipped in favor of the Kelley proposal. Nevertheless, the relative lack of efficacy of the matched grant proposals to stimulate states to increased fiscal effort would seem to indicate that flat grants, such as would have been provided by the Bailey bill, are to be preferred to matched grant proposals.

## CHAPTER VI

### ANALYSIS OF THE FISCAL EFFECTS OF MISCELLANEOUS LEGISLATIVE PROPOSALS

Few legislative proposals to provide financial support to elementary and secondary education have received serious consideration unless they were conventional plans for either matched or unmatched flat or equalization grants. Nevertheless, one unconventional proposal, generally known as the Scrivner plan,<sup>1</sup> has been considered by the Congressional committees on education even though support for the proposal has apparently never been great. Three modifications of the Scrivner plan have been suggested<sup>2</sup> but none of these proposals was accorded important consideration. The preponderance of legislative emphasis given to the Scrivner plan would seem to justify concentration of analysis on it.

#### FISCAL OPERATION AND EFFECTS OF THE SCRIVNER PLAN

The Scrivner bill was a tax-sharing proposal. It would have

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<sup>1</sup>H. R. 1582, 81st Cong., 1st Sess. (1949). The reintroductions of this plan in subsequent legislative sessions, as evidenced by the information presented in the Appendix, attest to the appeal of the proposal to some legislators.

<sup>2</sup>H. R. 11828, 85th Cong., 2d Sess. (1958) introduced by Representative Hillings, S. 3606, 85th Cong., 2d Sess. (1958) introduced by Senator Proxmire, and S. 3687, 85th Cong., 2d Sess. (1958) introduced jointly by Senators Proxmire, Morse, and Murray. Representative Hillings' bill was not referred to the Committee on Education and Labor but to the Ways and Means Committee. Congressional Record, 85th Cong., 2d Sess. Vol. 104 (1958), p. 5523.

authorized the transfer to each state of 1.0 per cent of the federal individual and corporate income tax collections made in the state. The transferred funds would have been utilized for school room construction "...as prescribed by the law of each State...."<sup>3</sup> Except for an express prohibition of federal interference or control, no other provisions were included.

The aid which would have accrued to each of the eight test states is presented in Table XLVI. The state totals are the sum of 1.0 per cent of the federal individual income tax collections for 1954<sup>4</sup> and 1.0 per cent of the corporate income tax collections for the same period.<sup>5</sup> The total amount of aid provided for all the states would have been approximately \$479 million. The dollar amounts of aid which spending unit income brackets would have received in each of the test states is also presented in Table XLVI. These aid allotments have been made on the same basis as the spending unit allotments made for other proposed aid programs examined in Chapters IV and V.

However, it cannot be assumed that the tax burden of the Scrivner plan would have been the same as the tax burden previously developed for other bills considered. Previously it was assumed that the federal funds to finance aid programs would have been derived generally from the same taxes (and in the same proportions) as are now used to finance the Federal government. The Scrivner proposal, on the other hand,

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<sup>3</sup>H. R. 1582, 81st Cong., 1st Sess. (1949).

<sup>4</sup>Computed from Table I, p. 90, Chapter III.

<sup>5</sup>Computed from Annual Report of the Commissioner of Internal Revenue for the Fiscal Year Ended June 30, 1954, pp. 44-45, Table I.

TABLE XLVI

DISTRIBUTION BY STATES OF AMOUNTS OF AID ALLOCATED UNDER SCRIVNER PLAN<sup>a</sup>  
BY SPENDING UNIT INCOME BRACKETS, SELECTED STATES, 1954  
(Thousands of Dollars)

Spending Unit Income Bracket	Massachusetts	New Jersey	Illinois	Nebraska	Tennessee	Oklahoma	Colorado	Oregon
0-2	1,425.3	1,227.1	3,068.9	382.7	625.4	564.6	387.4	227.5
2-3	1,522.2	1,260.8	2,750.1	263.1	537.2	402.0	308.4	266.0
3-4	2,850.6	2,975.4	7,134.2	509.5	881.4	864.0	710.8	626.5
4-5	2,421.6	2,706.4	6,496.5	349.2	612.8	757.0	673.2	689.5
5-10	4,787.9	7,379.6	17,177.9	758.3	1,326.3	1,415.7	1,417.9	1,452.5
Over 10	830.3	1,260.8	3,228.3	129.2	214.0	269.5	263.3	238.0
Total <sup>b</sup>	13,838.0	16,810.0	39,856.0	2,392.0	4,197.0	4,227.0	3,761.0	3,500.0

<sup>a</sup>Scrivner Bill, H. R. 1582, 81st Cong., 1st Sess. (1949) would have allocated approximately \$479 million for educational aid.

<sup>b</sup>Detail may not add to total due to rounding.

Source: Computed by the author.

specifically would have secured funds only from the individual and corporate income taxes. On the assumption that this plan would not have forced the Federal government to increase taxes to secure additional funds for other functions deprived of funds by the educational aid bill, the Scrivner plan was analyzed on the basis of its exclusive reliance on the Federal individual and corporate income taxes.<sup>6</sup>

The tax burdens which would have resulted from the adoption of the Scrivner proposal are presented in Table XLVII. The tax burden of the Federal income tax has been computed for each state following the conventional assumption that the incidence of the Federal individual income tax is on the person paying the tax. Therefore, that part of the educational aid revenue which would have been derived from transfer of individual income tax receipts was considered to have been secured from 1.0 per cent of each state's actual collections. Although the corporate income tax collections would have been transferred to the states on the basis of their state-of-origin, the incidence of this tax burden would probably not have rested on the states in a way identical with the individual income tax burden. If, as has been argued earlier, the incidence of the corporate income tax falls on dividend receivers, then the 1.0 per cent of the total Federal receipts from this tax must first be allocated among the states on the basis of their share in the total dividend

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<sup>6</sup>The assumption made here may be unsound. The \$479 million of Federal revenue diverted from other activities might have led to increased taxes to prevent curtailment of those activities. However, since the effect of increasing Federal taxes on the basis of the present proportions of the several taxes now used would have been to increase the individual and corporate income tax collections (thus also altering the amount of Federal funds going to each state under the Scrivner plan), for analytical purposes the assumption made here seems to be necessary.



TABLE XLVII  
DISTRIBUTION BY STATES OF TAX BURDEN OF APPROPRIATIONS, SCHWARTZ PLAN,<sup>a</sup> BY SPENDING UNIT  
INCOME BRACKETS, SELECTED STATES, 1954

Spending Unit Income Bracket (Thousands of Dollars)	Tax Burdens By States		
	Total Tax Burden <sup>b</sup> (Thousands of Dollars)	Total Tax Burden <sup>b</sup> (Percentage of Total)	Spending Unit Tax Burden <sup>c</sup> (Dollars)
Massachusetts			
0-2	325.8	1.7	.87
2-3	823.5	4.2	3.03
3-4	1,151.2	5.9	3.92
4-5	1,335.2	6.8	5.81
5-10	4,950.1	25.2	12.71
Over 10	11,051.9	56.3	161.61
Total	19,650.2	100.0	.....
New Jersey			
0-2	206.2	1.0	.66
2-3	533.0	2.6	2.43
3-4	1,091.7	5.3	3.69
4-5	1,347.1	6.5	5.45
5-10	6,678.9	32.2	11.55
Over 10	10,925.7	52.6	109.37
Total	20,761.8	100.0	.....
Illinois			
0-2	310.1	1.0	.59
2-3	601.4	2.3	2.28
3-4	1,866.5	5.3	3.56
4-5	2,406.0	6.8	5.45
5-10	11,162.1	11.6	11.15
Over 10	18,811.4	51.1	100.06
Total	35,407.6	100.0	.....
Nebraska			
0-2	65.2	2.3	.43
2-3	121.0	4.3	1.73
3-4	120.4	7.4	2.58
4-5	225.9	8.0	4.58
5-10	875.8	30.9	9.16
Over 10	1,335.9	47.1	83.49
Total	2,835.9	100.0	.....
Tennessee			
0-2	88.8	1.9	.26
2-3	208.8	4.5	1.03
3-4	326.1	6.9	1.71
4-5	362.6	7.7	2.98
5-10	1,528.3	32.6	6.68
Over 10	2,179.3	46.4	58.52
Total	4,693.8	100.0	.....
Oklahoma			
0-2	72.8	1.7	.24
2-3	115.8	2.8	.79
3-4	262.3	5.8	1.34
4-5	332.8	7.0	2.28
5-10	1,250.0	29.8	5.31
Over 10	2,188.4	52.0	48.10
Total	4,208.6	100.0	.....
Colorado			
0-2	62.0	1.5	.53
2-3	117.4	2.8	1.86
3-4	246.9	5.9	2.97
4-5	302.9	7.2	4.16
5-10	1,235.5	29.5	9.36
Over 10	2,224.7	51.1	90.39
Total	4,190.8	100.0	.....
Oregon			
0-2	43.1	1.1	.48
2-3	118.4	2.9	1.65
3-4	242.6	6.0	2.52
4-5	359.8	9.0	3.72
5-10	1,428.9	35.6	8.13
Over 10	1,824.5	45.4	62.70
Total	4,017.2	100.0	.....

<sup>a</sup>Schwartz Bill, H. R. 1582, 81st Cong., 1st Sess. (1949) would have allocated approximately \$479 million for educational aid.

<sup>b</sup>Detail may not add to total due to rounding.

<sup>c</sup>Represents quotient secured by dividing the tax burden per spending unit income bracket by the number of spending units per spending unit income bracket as presented in Table XXXIV.

Source: Computed by the author.

receipts of the nation. This allocation was undertaken and the total tax burden falling on each of the selected test states was computed. The total state tax burden appears in the first column of Table XLVII.

The tax burden of the Scrivner plan as it would have fallen on the spending unit income brackets in each state is also presented in Table XLVII. The spending unit income bracket allocation, like the state allotments, represents a composite total. The individual income tax burden which would have fallen on each state was allocated on the basis of the percentage of income tax liability accruing to each income bracket.<sup>7</sup> To this individual income tax burden, a share of the state's corporate income tax liability was allotted on the basis of the share of the total dividends accruing to each spending unit income bracket in each state.<sup>8</sup> This composite total represents the tax incidence per spending unit income bracket which would have resulted from the implementation of the Scrivner plan in 1954. The second column of Table XLVII shows the percentage of the total tax burden of each state which would have been borne by each spending unit income bracket. Finally, the tax burden per spending unit is shown by states for each spending unit income bracket. These data which appear in the third column of Table XLVII were derived by dividing the dollar burden per spending unit income bracket by the number of spending units in the income bracket.<sup>9</sup>

The next step in the analysis of the Scrivner plan was

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<sup>7</sup>These percentages are presented in Tables III-X, Chapter III, pp. 108-115.

<sup>8</sup>Ibid.

<sup>9</sup>These data are presented in Table XXXIV, Chapter IV, p. 186.

determination of the net dollar benefit which would have accrued to the states under that plan. The analysis followed the procedure adopted in analyzing other aid proposals. The net dollar aid was computed first by determining the difference between the amount of aid which would have been secured and the tax burden which would have been borne by each spending unit income bracket in each state. This net dollar aid was then reduced to a net dollar amount per spending unit by dividing the net dollar aid per income bracket by the number of spending units in each income bracket in each state.<sup>10</sup> The total net aid per spending unit income bracket appears in the first column of Table XLVIII; the net aid per spending unit appears in the second column of this Table. Finally, as shown in the third column of Table XLVIII, the net dollar aid per spending unit was reduced to a percentage of the tax burden per spending unit which would have resulted for the income brackets in the test states. These data are comparable to the data presented in Table XXXVII<sup>11</sup> for unmatched flat grant proposals and Table XLI<sup>12</sup> for matched grant legislative proposals.

#### FISCAL EVALUATION OF THE SCRIVNER PLAN

The major criterion used in determining the fiscal desirability of an educational aid proposal was then applied to the Scrivner bill. That criterion, as developed previously, was that insofar as possible, a

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<sup>10</sup>Ibid.

<sup>11</sup>Chapter IV, p. 190.

<sup>12</sup>Chapter V, p. 207.

TABLE XLVIII

DISTRIBUTION BY STATES OF NET DOLLAR BENEFIT PER SPENDING UNIT INCOME BRACKET, NET DOLLAR AND NET PERCENTAGE BENEFIT PER SPENDING UNIT BY SPENDING UNIT INCOME BRACKET, SCRIVNER PLAN,<sup>a</sup> SELECTED STATES, 1954

Spending Unit Income Bracket <sup>b</sup> (Thousands of Dollars)	Net Dollar Benefit By Spending Unit Income Bracket <sup>c</sup> (Thousands of Dollars)	Net Dollar Benefit Per Spending Unit <sup>d</sup> (Dollars)	Net Percentage Benefit Per Spending Unit <sup>e</sup>
0-2			
Tennessee	536.6	1.55	596
Oklahoma	491.8	1.61	671
Nebraska	317.5	2.12	491
Colorado	325.4	2.78	525
Oregon	184.4	2.05	427
Massachusetts	1,079.5	2.32	316
Illinois	2,728.6	4.73	802
New Jersey	1,020.9	3.27	495
2-3			
Tennessee	328.4	1.62	157
Oklahoma	286.2	1.96	248
Nebraska	142.1	2.04	118
Colorado	191.0	3.03	163
Oregon	147.6	2.06	125
Massachusetts	698.7	2.57	85
Illinois	1,948.7	5.54	243
New Jersey	727.8	3.32	137
3-4			
Tennessee	555.3	2.91	170
Oklahoma	621.7	3.43	256
Nebraska	292.1	3.81	142
Colorado	463.9	5.58	188
Oregon	383.9	3.99	148
Massachusetts	1,699.4	5.79	148
Illinois	5,267.7	10.05	282
New Jersey	1,883.7	6.36	172
4-5			
Tennessee	250.2	2.05	69
Oklahoma	424.2	2.90	127
Nebraska	123.3	2.50	55
Colorado	370.3	5.08	122
Oregon	322.7	3.42	92
Massachusetts	1,046.4	4.73	81
Illinois	4,090.5	9.27	170
New Jersey	1,359.3	5.50	101
5-10			
Tennessee	- 20.2	- .09	- 1
Oklahoma	161.7	.68	13
Nebraska	- 117.5	- 1.27	- 13
Colorado	182.4	1.38	15
Oregon	23.6	.13	2
Massachusetts	- 162.2	- .42	- 3
Illinois	5,995.8	5.98	64
New Jersey	700.7	1.21	10
Over 10			
Tennessee	- 1,965.3	- 52.83	- 90
Oklahoma	- 1,918.9	- 42.17	- 88
Nebraska	- 1,206.7	- 75.42	- 90
Colorado	- 1,960.4	- 79.69	- 88
Oregon	- 1,586.5	- 54.42	- 87
Massachusetts	- 10,723.6	- 449.47	- 92
Illinois	- 15,581.1	- 82.80	- 83
New Jersey	- 9,664.9	- 96.75	- 83

<sup>a</sup>Scrivner Bill, H. R. 1582, 81st Cong., 1st Sess. (1949).

<sup>b</sup>States have been ranked in ascending order of per capita income.

<sup>c</sup>Net dollar benefit per spending unit income bracket is the difference between the total aid allocated per spending unit income bracket, and the total tax burden per spending unit resulting from the adoption of the Scrivner plan.

<sup>d</sup>Net dollar benefit per spending unit is the quotient obtained by dividing the net dollar benefit per spending unit income bracket and the number of spending units per spending unit income bracket as presented in Table XXXIV.

<sup>e</sup>Net percentage benefit per spending unit represents the net dollar benefit per spending unit expressed as a percentage of the net dollar tax burden per spending unit as presented in Table XLVII. Minus signs indicate that the tax burden exceeds the amount of aid so the net dollar loss is expressed as a percentage of the tax burden.

Source: Computed by the author.

fiscally acceptable aid program should provide relatively greater aid to spending units in poorer states than to the similarly situated units in wealthier states. If this criterion were equally well met by several proposals, it was further argued that simplicity of the aid program itself became a second criterion for evaluating the plans.

When the first criterion of the maximum redress of fiscal inequities arising from the federal system was applied, the Scrivner plan significantly failed to meet the standard of evaluation. Even a cursory examination of the data of Table XLVIII reveals that both in net dollar benefit and in net percentage benefit per spending unit, a wealthy state, Illinois, would have secured greatest aid. In dollar amounts of aid which would seem to be crucial in the actual raising of standards of education, the net dollar benefit which would have gone to Illinois and New Jersey spending units generally would have exceeded those dollar amounts going to the same spending units in the less wealthy states of Tennessee and Oklahoma. Even in the net percentage benefit which measures the excess of net dollar benefit over the tax burden spending unit, Illinois would have benefited most. On the other hand, Tennessee and Nebraska would have secured neither net dollar nor net percentage benefits sufficiently large to have commended the Scrivner plan as a fiscally effective aid program to support elementary and secondary education. The crucial problem of the Scrivner proposal seems to have been its reflection of the fact that the wealthy states have relatively high taxable incomes resulting in large Federal tax collections from which the aid allocations would have been made. This very unsatisfactory element was perhaps, a major reason why relatively little serious

consideration was given to the proposal.

#### MODIFICATIONS OF THE SCRIVNER PLAN

Several modifications of the Scrivner tax-sharing proposal were introduced in the Second Session of the Eighty-Fifth Congress. None was given serious legislative consideration. Furthermore, one of the proposals was not strictly a conventional tax-sharing plan<sup>13</sup> since it would have distributed a fraction of the Federal individual and corporate income tax collections to the states on the basis of state-to-national school-age population ratios. Thus, it would have become simply an unmatched flat grant proposal with the amount of aid authorized determined by the amount of Federal income tax collections. This type of aid plan was analyzed in Chapter IV. But a further defect of this specific proposal seems to flow from the counter-cyclical nature of Federal income tax receipts. Since Federal income tax receipts fall more than in proportion to declines in national income, the source from which funds for aid would have been provided would have fallen most drastically at exactly the time when states would be relatively least able to secure funds to maintain their educational programs. This defect, of course, would be present in any program which would specifically tie the amount of aid to a relatively elastic tax source such as the Federal income tax.

A second of the 1958 modifications of the Scrivner plan was the Proxmire proposal<sup>14</sup> which would have increased the amount of aid

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<sup>13</sup>The Proxmire-Morse-Humphrey bill, S. 3687, (1958).

<sup>14</sup>S. 3606, 85th Cong., 2d Sess. (1958).

granted to the states from 1.5 per cent of the Federal individual and corporate income tax collections in fiscal year 1958 to 3.0 per cent in fiscal year 1959 and to 5.0 per cent in succeeding fiscal years. However, this proposal would have contained the same defects as the Scrivner plan. Fiscal inequities would not have been redressed. The school aid funds would have been tied to an automatically counter-cyclical revenue source which would have provided proportionally more funds when states could have independently done most to provide educational facilities. A greater amount of aid would have been forthcoming in years after the first than would have been provided by the Scrivner bill.<sup>15</sup>

The Hillings bill<sup>16</sup> of 1958 seemed the most promising of the modifications of the Scrivner plan. Implicitly the Hillings proposal recognized the defects of the parent bill; it would have varied the percentage of Federal income tax collections returned to each state inversely with the size of the collections. The minimum percentage which would have been returned to the wealthy states was 1.0 per cent of the annual collections. A graduated scale would have been authorized; the actual percentage of Federal income tax collections which would have been returned would have been graduated upward to a maximum of 5.0 per cent for the least wealthy states. The defect associated with the

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<sup>15</sup>This greater amount of funds would ostensibly have provided greater improvement of education than would have occurred under the Scrivner plan. However, two relevant issues are involved which are beyond the scope of this study: First, is the relation between the level of educational expenditures and quality of education direct and proportional? Second, how much aid, if any, does the Federal government need to make available to the states to secure a minimum satisfactory quality of education in all the states?

<sup>16</sup>H. R. 11828, 85th Cong., 2d Sess.

counter-cyclical nature of the source of revenue of the Scrivner plan would also have been contained in the Hillings proposal but it seems probable that the somewhat acute failure of the Scrivner bill to redress fiscal inequities might have been partially corrected by the Hillings modification. The modification, however, received virtually no serious legislative consideration so it was not examined here as extensively as its parent plan.<sup>17</sup> However, a superficial consideration of the Hillings plan would seem to indicate that it would probably be the least unacceptable of the various miscellaneous proposals.

A final conclusion which seems to follow from the study of the miscellaneous proposals is that the weaknesses of the proposals may serve to explain why no great amount of support has appeared for them. The most widely considered of the miscellaneous aid programs, the Scrivner plan, has the serious defect of doing little to redress the fiscal inequities arising from American federalism. Modifications of this plan seem to embody the defects similar to those of the parent plan. The final decision, therefore, would seem to be that the best aid plan is some conventional version of either matched or unmatched subventions.

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<sup>17</sup>The necessary adoption of a basis for inclusion of aid proposals to be analyzed intensively (the holding of legislative committee hearings on a bill) has operated to exclude the Hillings bill from further study here. However, arbitrary basis for inclusion of bills in the group of aid proposals analyzed probably does not lead to a serious omission here. The Hillings proposal, it should be remembered, also would have contained the defect of reliance on a counter-cyclical revenue source no matter what other merits extensive statistical study might have revealed.



## CHAPTER VII

### CONCLUSIONS

A final appraisal can now be attempted of the major Federal legislative proposals introduced in the period 1947-1958 to provide support for primary and secondary education. A framework within which a fiscal evaluation of the several proposals may be undertaken has been constructed. The major legislative introductions have been classified and, within a detailed statistical framework, have been subjected to a comparison on fiscal grounds. The analysis has been a partial one utilizing eight carefully selected test states. Nevertheless even on the basis of this limited and admittedly imperfect analytical procedure, it is possible to provide tentative answers to questions previously raised.

#### RELATION OF EDUCATIONAL AID TO UNITED STATES FEDERALISM

Insofar as it is possible, federal tax and expenditure policies should be directed to the maximum realization of the values that inhere in contemporary United States federalism. The extensive economic integration that has occurred in our federal system has contributed to the difficulty in implementing social and economic policies that are considered to be desirable. In the field of primary and secondary education it is now apparent that the educational policies of autonomous state governments extend their influence throughout the entire nation. Yet to the extent that the policy of each state is entirely independent of

federal support, the state policy is rigidly circumscribed by the scarcity of fiscal resources that must be apportioned among competing ends. If, in the national interest, Federal tax and expenditure programs are adopted to attain a minimum service level in education, then those programs should attempt to maximize the values of federalism. For, even disregarding the apparent emotional support which seems to guarantee federalism's survival in the United States, it would appear desirable to adopt fiscal policies which emphasize the responsibilities of citizenship grounded in personal participation in the operation of least remote governmental units.

Tax and expenditure policies do not operate in a vacuum, however; instead they are applied in a social environment in which definite, although somewhat abstract goals are held. "Fiscal fairness" is one of these abstract goals but such a vaguely phrased goal lacks practical content. It is possible to delineate the aspects of such a phrase as "fiscal fairness" but when the decision is finally made, the most commonly accepted component apparently is "fiscal equity." Fiscal equity embraces equity in assessment and collection of taxes, equity in consistency of application of tax laws, but more importantly, it embraces equity in the treatment of similarly situated persons in a like manner. However, in a federal state this latter aspect of fiscal equity is difficult to realize since persons similarly situated in all relevant ways except state-of-residence may receive sharply dissimilar treatment.

An examination of the fiscal operation of United States federalism reveals that the Federal government increasingly has attempted to provide minimum social service levels in fields which increasing economic

integration has rendered nationally important. Since the end of World War II, education has become of particular concern as an area in which Federal fiscal participation may be necessary to insure acceptable minimum service levels. Attention has effectively been limited to the question of the amount of financial support primary and secondary education needs; the question of how aid to education might best be used to improve the fiscal equity of the Federal system in the United States has been almost entirely ignored.

Of all the fiscal techniques that might be employed to provide Federal educational aid, it seems probable that some form of the now widely-used grant-in-aid would be employed. Logically, the unconditional subvention would seem most likely to enable states to maximize their autonomy as governmental units while at the same time improving the service level of the aided function. Such a grant, if wisely utilized, might be expected to provide a maximum improvement in education in each state. Nevertheless, it is doubtful if the United States Congress will, in the near future, adopt a program of unconditional grants as the form to be used in extending educational support. Instead, it might be expected that aid, if it is forthcoming, will utilize one of the several types of conditional grants-in-aid now widely used.

The fiscal problem involved in Federal aid to support elementary and secondary education in the United States becomes that of securing a maximum of interstate fiscal equity when the aid is provided by a conditional subvention. The resolution of the problem might proceed on a theoretical basis but the empirical testing of the variety of proposals is likely to be equally revealing. For if, as seems probable, the form

in which any plan to provide aid to education that might be adopted has already appeared in aid legislation examined by Congressional committees, then such an empirical study may provide a realistic answer to the type of aid program that is preferable.

It is probably true that if education is effectively aided by Federal financial support, not all the economic gain will be realized in the improvement of fiscal equity. Important cultural advantages do inhere in an education of quality, and improved quality of education might result from increased educational expenditures. Economic growth might be enhanced by better education flowing from improved educational facilities. However, the probability that immeasurable gain may flow from increased financial aid to education is not the only important issue; the reconciliation of any Federal financial support with the goal of greater fiscal equity in a federal system should be attempted.

#### EXTENSIVE VARIATION IN FEDERAL LEGISLATIVE PROPOSALS TO PROVIDE FINANCIAL SUPPORT FOR EDUCATION

Conditional grants-in-aid to provide Federal support for education have been great in number and varied in type. Not only have legislative enactments embodied plans for flat grants and for variable grants in various forms, they have also contained a variety of matching formulae. So extensive have the legislative proposals been, it is almost impossible, and certainly of little value, to attempt to ascertain which type or combination of types of plans has been most popular. The evidence seems to support one major conclusion that no significant type of an unconditional grant-in-aid failed to be presented at least once in the

period between 1947 and 1958.

STATISTICAL FRAMEWORK FOR THE FISCAL EVALUATION OF  
LEGISLATIVE PROPOSALS

Additional expenditures to undertake a new Federal governmental function or to increase the level of support for an old function will necessarily operate in two ways. The burden of the taxes which will be necessitated to provide funds to aid the function will ultimately come to rest on persons who have no alternative but to bear the burden. Resulting expenditures will eventually redound to the benefit of some persons. The new taxes and the new expenditures, whether for education or for some other purpose, will impinge on the prevailing net income position of the members of society.

The analytic need in the study of any proposals for Federal financial support of education is a knowledge of the present position of the taxpayers. Once the situation of the taxpayers is determined for the income groups in the several states (for, despite the fact that the burden is personal, the analysis must be on some generalized basis), some attempt can be made to decide whether or not proposals move toward greater interstate fiscal equity. The discovery of the present position of taxpayers in the several states is essentially an inquiry about and application of the somewhat tenuous theories of tax incidence. Refinements of existing techniques, particularly those of Professor Richard A. Musgrave of the University of Michigan, can be made which yield state-by-state patterns of tax incidence not only for the Federal taxes but also for state taxes and for federal and state taxes combined. The need

to utilize Professor Musgrave's studies as an analytical foundation necessitated adoption of a common year, 1954, for which all tax and expenditure programs could be analyzed. On the basis of modified statistical techniques, the evidence of the existence and the pattern of fiscal disparities among the similarly situated income groups in the several states is revealed. Unresolved methodological and philosophical issues remain enmeshed in the procedures and the results of any complicated analysis of tax incidence but it is unlikely that refinements would alter the pattern of interstate income-group tax incidence that seems a priori defensible.

The evidence resulting from the analysis of tax incidence does tend to show the wide disparity in state tax burdens which reflect at least in part the economic heterogeneity from which diverse state functions must be financed. It is on these disparate state fiscal structures that Federal funds to aid education would exert their impact. If, on some measurable basis, evidence could be developed showing that one plan for aiding education would do more to redress interstate fiscal inequities than any other plan, then on fiscal grounds that plan would be most effective in the support of the values of a dynamic federalism in the United States.

It would be a monumental task to test every major legislative proposal introduced into the United States Congress in the eleven years after 1946 by applying each proposal to each of the forty-eight states. The need for such heroic labor can be obviated by the careful selection of a small group of test states. The states actually chosen--New Jersey, Illinois, Massachusetts, Oregon, Colorado, Oklahoma, Nebraska and

Tennessee--represent a wide range of the relevant variables and so seem to provide a desirable cross-section of the United States. Probably no selection of states could be made which would approach perfection. However, the synthesis of regional coverage with broad per capita income and educational variations appears to render the eight states chosen at least as defensible as any other states which might be selected.

#### TECHNIQUES FOR TESTING SPECIFIC LEGISLATIVE PROPOSALS

Although great variety characterizes the legislative proposals to support elementary and secondary education, a common technique can be applied to test the extent to which each one serves to reduce existing interstate fiscal inequities. The technique involves the determination of the aid which would accrue to each spending unit in the six income brackets in each state for which calculations can be made. The approximations of the allocations which would result rest on a synthetic distribution of the school-age population among the income brackets in each state. The explicitly adopted assumption that the benefit from Federal aid funds will be directly related to the school-age population seems clearly superior to any other assumption that might reasonably be utilized. When the aid allocation is made and related to the tax burden falling on the comparable spending unit, a residual appears. If the residual is positive then the spending unit secures a net benefit; if it is negative, then a net loss results. Comparability of the effects of the several proposals seems enhanced by reducing the net dollar benefit or loss so computed to a percentage of the tax burden resulting from the aid proposals.

The analysis explicitly recognizes that the net benefit accruing to spending units in the several states is a function not only of the method of distributing Federal funds to the states but also of the amount of aid authorized. However, any specific Congress, if it decides to provide financial support to education, would tend to have a propensity to authorize a given amount of funds irrespective of the allocational formula adopted. Thus, the important variable for fiscal analysis of aid programs appears to be the type of distributional technique embodied in the conditional subvention. Therefore, the analysis of each proposal was explicitly predicated on the assumption of a common appropriation. Statistical adjustment was undertaken for each legislative bill which specifically authorized an appropriation of an amount different from the amount assumed.

#### RESULTS OF TESTING AID PROPOSALS

The evidence resulting from the application of the technique developed for testing the Federal legislative proposals for support of elementary and secondary education appears to indicate that a flat grant proposal without matching will produce a maximum reduction in interstate fiscal inequities. Of the specific legislative introductions of this type, it is the 1954 Bailey bill<sup>1</sup> that would be the most effective aid program. Not only did the Bailey bill seem most effective in achieving a maximum of fiscal equity, it also embodied a relatively simple formula for apportioning aid. The Bailey plan would have distributed

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<sup>1</sup>H. R. 7467, 83d Cong., 2d Sess.



appropriations to the states on the basis of percentage of school-age population as weighted inversely by a percentage expressing the ratio of each state's per capita income to that of the nation. As in virtually every other educational aid plan, the Bailey bill contained a clause designed to assure state autonomy in the administration of allotted funds. It also required, in a provision which in view of recent Supreme Court decisions seems obsolete, equitable and non-discriminatory state apportionment of allotted funds for separate educational facilities maintained for minority races. The Bailey plan, as evidenced by duplicate legislative introductions, was a popular type of conditional subvention even though favorable legislative action never occurred.

Legislative plans providing matching, either on a fixed or a variable basis, were frequently considered. However, since most of these plans authorized appropriations too small to require states to increase expenditures for education in order to qualify for the full grant, the matching requirements would only serve to complicate the aid proposal. It should be recognized, however, that as the size of authorized appropriations is increased, the stimulative power of matching provisions increases. Nevertheless, if larger appropriations are assumed, the matching provisions embodied in the specific legislative proposals studied would have operated to deprive less wealthy states of funds needed to improve education more certainly than they would have deprived wealthy states of funds. The question of the desirability of the indirect control effective matching requirements might impose on poorer states that are forced to divert state funds from some other function otherwise considered of equal or greater importance is of no little

consequence. However, even more important is the question of whether or not stimulating state expenditures on education or any other function in less wealthy states will not actually intensify the interstate fiscal inequities now found in our federal system. In brief, if the criterion of reducing fiscal inequities is accepted, the program which gives the greatest proportion of authorized funds to the less wealthy states will be most desirable.

Equalization proposals, such as the Taft plans<sup>2</sup> and the Byrnes bill<sup>3</sup> would have accomplished even more to redress fiscal inequities than the flat grant or matched grant proposals. Computations of net percentage benefits resulting from the subventions make this clear. It should be recognized that the extent of improvement in fiscal equity is limited to those states aided; all unaided states find their fiscal position vis-a-vis those aided states worsened. Nevertheless, these proposals seem to lack a necessary political ingredient for success: they openly take funds from some states and redistribute them to poorer states. The Congressional opposition to openly equalizing grants-in-aid appears to support the inference that some program for unmatched flat grants-in-aid like the Bailey bill in which all states share on some basis will, if any proposal is adopted, do most to move toward the goal of fiscal equity in a dynamic federal system.

No matter how extensive the analyses of educational finance nor how heated the controversies developing from proposals to aid it,

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<sup>2</sup>S. 472, 80th Cong., 1st Sess. (1947) as introduced, as reported by the Committee on Labor and Public Welfare, and as amended by the Senate.

<sup>3</sup>H. R. 4711, 81st Cong., 1st Sess. (1947).

educational philosophies and the operation of educational systems remain issues of paramount national importance. To the extent that fiscal analysis can contribute to an understanding of issues implicitly embodied in programs to finance education, to that extent it also contributes to the vitality of the Western culture of which education is an integral part.

## APPENDIX

### SELECTED FISCAL PROVISIONS OF MAJOR LEGISLATIVE PROPOSALS AND RELATED LEGISLATIVE VARIATIONS TO PROVIDE FINANCIAL SUPPORT TO ELEMENTARY AND SECONDARY EDUCATION, 1947-1958

#### UNMATCHED FLAT GRANT PROPOSALS

S. 81, 80th Cong., 1st Sess. (1947) was introduced by Messrs. Green and McGrath to supplement teachers' salaries in free public primary and secondary schools. Appropriations of such sums as necessary to implement the act were authorized. Appropriated funds were to be allotted to public school districts at the rate of \$15 per pupil in average daily attendance. Assurances were required that funds for teachers' salaries from state and local sources would not be reduced below the level prevailing in the next preceding fiscal year.

S. 170, 80th Cong., 1st Sess. (1947) was introduced by Mr. McCarran to increase the rate of teachers' salaries. Appropriations of \$600 million were authorized for the first fiscal year and for successive fiscal years as necessary to implement the act. Payments to be made per teacher were based on variable supplementary rates. A grant of \$25 per \$100 of the first \$1,000 of salary was authorized plus grants of \$15 per \$100 on salary from \$1,001 to \$2,000, \$10 per \$100 on salary from \$2,001 to \$3,000, and \$5 per \$100 on salary from \$3,001 to \$4,000. Expenditure was specifically limited to public schools. Related proposals were H. R. 1942, 80th Cong., 1st Sess. (1947) introduced by Mr. Landis which authorized \$185 million for the 1948 fiscal year for increasing teachers'

salaries \$200 per year; H. R. 2584, 81st Cong., 1st Sess. (1949) introduced by Mr. Kearns which authorized \$400 million for the 1950 fiscal year to increase teachers' salaries \$500 per year.

S. 472, 80th Cong., 1st Sess. (1947) was introduced by Mr. Taft to aid in financing a minimum educational foundation program and to reduce inequalities in educational opportunities. Authorized appropriations were \$150 million for fiscal year 1948, \$200 million for fiscal year 1949, and \$250 million for each succeeding fiscal year. Each state was to receive an allotment of the difference between 1.1 per cent of the average annual income payments of the state for a preceding five-year period and the school-age population of the state multiplied by \$40. State allotments were to be reduced proportionately if a state failed to spend 2.5 per cent of the five-year average annual income on current educational expenditures. After a four-year period had elapsed any state which failed to spend 2.25 per cent of its five-year annual average income on current educational expenses and also failed to establish a minimum \$55 annual current expenditure per pupil in average daily attendance in all districts was to be denied allotments. Specific protection against reduction in educational expenditures was provided. Non-public schools were allowed to share in federal funds allotted to a state with allotments to be made on whatever basis was currently in effect in the several states. Minority races were issued a share of the federal funds for segregated schools on a "just and equitable basis." The Senate Committee on Labor and Public Welfare reported the bill favorably with authorization of appropriations of \$300 million for fiscal year 1948 and for succeeding fiscal years. Allotments to each state

were to be the difference between 1.1 per cent of the average income payments as defined in the initial bill and the product of the school-age population in the state and \$50. As the bill finally passed the Senate on April 1, 1947 by a vote of 58 yeas, 22 nays, each state was authorized a minimum allotment of \$5 per school-age child or the difference between 1.0 per cent of the average income payments and the product of the school-age population of the state and \$45. After a five-year period a state wishing to participate in the appropriated funds would have been required to spend 2.5 per cent of its annual five-year average state income or a minimum of \$120 per pupil in average daily attendance, whichever was lesser. S. 472, as passed by the Senate in 1947, was resubmitted as S. 246, 81st Cong., 1st Sess. (1949) and passed by the Senate on May 5, 1949 by a vote of 58 yeas, 15 nays.

H. R. 2593, 80th Cong., 1st Sess. (1947) introduced by Mr. McGowan and H. R. 140, 80th Cong., 1st Sess. (1947) introduced by Mr. Pace were substantially similar to S. 472 except that both provided a minimum of \$3 per school-age child would be allotted to each state.

H. R. 4643, 81st Cong., 1st Sess. (1949) introduced by Mr. Barden was substantially the same as S. 472 except \$50 was substituted for \$45 in computing the state allotment and non-public schools were specifically denied access to federal funds.

S. 199, 80th Cong., 1st Sess. (1947) was introduced by Mr. Aiken to aid in providing a national floor under current expenditures in public schools and to provide limited aid to tax-exempt non-public schools. Appropriations authorized for fiscal year 1948 were to be either \$400 million or \$20 per pupil in average daily attendance in

1946; for fiscal year 1949, \$600 million or \$30 per pupil in average daily attendance in 1947; for fiscal year 1950, \$800 million or \$40 per pupil in average daily attendance in 1948; for fiscal year 1951, \$1,000 million or \$50 per pupil in average daily attendance in 1949; for fiscal year 1952 and each fiscal year thereafter, \$1,200 million or \$60 per pupil in average daily attendance in the second year next preceding; and for every year the greater sum was authorized. An additional \$60 million was authorized annually for non-public school aid. Funds for public schools were to be allocated to the states on the basis of the yearly ratio of the state's pupils in average daily attendance to the national total of pupils in average daily attendance. Non-public appropriations were to be allocated on the basis of the ratio of state pupils attending non-public tax-exempt schools of secondary grade to the comparable national total. Receipt of allotments by states was to be conditioned upon the maintenance of certain minimum levels of current expenditures per pupil in average daily attendance both on a state and on a local administrative unit basis. Equal treatment was assured segregated schools. Average daily attendance was defined as the aggregate days of attendance by regularly enrolled pupils divided by 175.

H. R. 4711, 81st Cong., 1st Sess. (1949) was introduced by Mr. Byrnes of Wisconsin and was designed to assist public schools in meeting their current expenses. Authorized appropriations for fiscal year 1950 and fiscal years thereafter were to total \$60 million. The allotment to each state was to be the difference between 60 per cent of current expenditures per school-child-average daily attendance and 2.0 per cent of the five-year average annual income of the state. Initially states

spending less than 2.0 per cent of the average income, so defined, were to be ineligible for federal aid; this percentage was to rise to 2.5 per cent subsequently.

H. R. 1551, 81st Cong., 2d Sess. (1950) introduced by Mr. Lucas declared its purpose to be to assist states to provide adequate public elementary and secondary school educational systems. Appropriations authorized were to be \$300 million to be expended in grants and an equal amount to be available for loans. The appropriations were to be allocated to each state in the same ratio that the state's school-age population bore to the nation's school-age population. The Reconstruction Finance Corporation was to administer the funds.

H. R. 7467, 83d Cong., 2d Sess. (1954) introduced by Mr. Bailey to assist the states in the construction of needed elementary and secondary school facilities authorized appropriations as necessary. Allotment of appropriations was to be on the basis of state school-age population to national school-age population with an adjustment to provide an inverse variation in relation to the states' per capita incomes. The allotment was to be computed by multiplying the state school-age population by the fraction representing the percentage of per capita national income accruing to the state and then reducing this product to the ratio it bore to the sum of the products so computed for all states. The act provided that once funds were paid into a state treasury such funds would become exclusive state revenue subject to absolutely no federal regulation. States with separate school facilities for minority races were required to apportion federal funds to such facilities on an equitable and non-discriminatory basis.



H. R. 7667, 83d Cong., 2d Sess. (1954) introduced by Mr. Metcalf and S. 2779, 83d Cong., 2d Sess. (1954), introduced by Mr. McClellan and others, were identical to Mr. Bailey's proposal. In the 84th Cong., 1st Sess. (1955) two substantially identical bills were S. 686, again introduced by Mr. McClellan and others, and H. R. 108 introduced by Mr. Harris. Mr. Fogarty in H. R. 1791, 84th Cong., 1st Sess. (1955) proposed specific authorization of appropriations of \$500 million for each of five successive fiscal years after the passage of the act. The remainder of the act was substantially identical to H. R. 7467.

S. 359, 83d Cong., 2d Sess. (1954) to provide aid to states in assisting school districts in constructing needed school facilities was introduced by Mr. Clements. Appropriations as necessary were to be authorized for fiscal year 1954 and for five succeeding fiscal years. Allotments to states were to be made in the same ratio as their school-age populations bore to total national school-age population. However no state was to receive less than \$100,000 nor more than one-third of the average annual state and local expenditures for construction of public elementary and secondary schools in the previous three years.

H. R. 8868, 83d Cong., 2d Sess. (1954) introduced by Mr. Holt authorized appropriations as necessary. Allotments to each state were to be determined on the following basis: From the product of the state school-age population and \$20 was to be subtracted 0.4 per cent of the average annual income of the state. Any positive difference between those computed values represented an equalizing state allotment but the remainder of appropriated funds, after paying the equalizing allotments, was to be allotted on the basis of the state-to-national school-age

population ratios. States failing to spend 2.5 per cent of their annual income on education were to receive an allotment reduced in the ratio the actual percentage of annual income spent on education bore to 2.5 per cent.

Mr. Morse and Mr. Clark introduced S. 1134 in 85th Cong., 1st Sess. (1957) to authorize a program of federal financial assistance to education. For fiscal year 1958 and succeeding fiscal years \$1,000 million was the authorized appropriation. State allocations consisted of the total of two separate allotments. Half of the appropriated funds were to be allotted on the state-to-national school-age population ratio. The other half was to be allotted in the proportion that the weighted state school-age population bore to the weighted national school-age population. Weighted school-age population was defined as the product of the state school-age population and the quotient secured by dividing the annual state per school-age child income of each state by the school-age child income of the state with the highest such income.

H. R. 10763, 85th Cong., 2d Sess. (1958) was introduced by Mr. Metcalf to aid the states both in remedying the shortage of classrooms and the shortage of an adequate number of teachers. Appropriations authorized for fiscal year 1959 were to be the product of \$25 and the national school-age population; for fiscal year 1960, the product of \$50 and such population; for fiscal year 1961, the product of \$75 and such population; and thereafter the product of \$100 and such population. Allotment to each state was to be separated into a school construction and basic equipment component and a teachers' salaries component. The division of any state allotment into components was to be dependent upon

school construction plans approved so the teacher salary component was residual. The allotment to each state was to be on the basis of the ratio of state school-age child population to national school-age population corrected by any failure of the state school effort index to equal the national school effort index. The school effort index was the quotient secured by dividing annual school expenditures per public school child in average daily attendance by the annual income per public school child for the relevant jurisdictions. In any state in which the average annual current expenditures per public school child equalled in amount the average annual national current expenditures per public school child in average daily attendance, the state school effort index was to be assumed equal to the national school effort index. Reductions in allotments were to be made in proportion to the failure of a state school effort index to attain the required national school effort index. Three-fourths of any allotment for teachers' salaries was to be allotted to school districts within a state on the basis of the ratio of the number of public school teachers in a district to the total number of public school teachers in the state. On July 2, 1958 the Subcommittee on General Education of the Committee on Education and Labor ordered H. R. 10763 favorably to the full Committee. S. 3311, 85th Cong., 2d Sess. (1958) introduced by Mr. Murray and twelve other Senators was substantially the same proposal. H. R. 11854, 85th Cong., 2d Sess. (1958) introduced by Mr. Engle was similar except that the appropriations authorized were \$500 million for fiscal year 1959 and for three successive fiscal years and there was no teachers' salaries component of state allotments. Mr. Kennedy's S. 3179, 85th Cong., 2d Sess. (1958) was also

similar to H. R. 11854 except \$300 million was authorized to be appropriated for fiscal year 1959 and thereafter, and equal federal matching was prescribed.

#### MATCHED FLAT GRANT PROPOSALS

S. 137, 81st Cong., 1st Sess. (1949) introduced by Mr. Robertson of West Virginia authorized appropriations of \$300 million for grants and an equal amount for loans to aid states in providing elementary and secondary buildings and necessary attachments. This program which was to be administered financially by the Reconstruction Finance Corporation, authorized state allotments on a state-to-national school-age population ratio but grants were to be based on equal federal-state matching.

H. R. 1551, 81st Cong., 1st Sess. (1949) introduced by Mr. Lucas and discussed above, was similar to this bill except the matching provision was not included in it.

S. 480, 84th Cong., 1st Sess. (1955) was introduced by Mr. Humphrey and Mr. Ives. The act to authorize federal payments to the states to assist in constructing schools, authorized necessary sums for fiscal year 1956 and for five succeeding fiscal years. Allotment of appropriated funds was to be on the state-to-national school-age population ratio with equal federal and state matching required. Substantially similar bills introduced in the 84th Cong., 1st Sess. were S. 522 introduced by Mr. Dirksen, H. R. 14 introduced by Mr. Kearns, H. R. 15 introduced by Mr. Bailey, and H. R. 2612 introduced by Mr. Lesinski. H. R. 653, 84th Cong., 1st Sess. (1955) introduced by Mr. Denton was also very similar except for authorizing the specific amount of \$550 million

annually for the same years covered by S. 480. Mr. Bennett's H. R. 2548, 84th Cong., 1st Sess. (1955) differed materially only in that it authorized \$1,000 million annually for fiscal year 1956 and for four succeeding years.

H. R. 10052, 83d Cong., 2d Sess. (1954) introduced by Mr. Kearns to aid state educational agencies in school construction, authorized an aggregate \$5,000 million for the fiscal years 1955, 1956, and 1957. Allotments to the several states were to be based on the ratio of the total state cost of constructing needed classrooms to the total classroom construction cost for the entire nation. The United States Commissioner of Education was to make determination of needs based on data to be supplied by state educational agencies. Equal matching was provided. H. R. 768, 84th Cong., 1st Sess. (1955) introduced by Mr. Jenkins was similar in most substantive features except for providing an aggregate authorized appropriation of \$2,000 million for the fiscal years 1956, 1957, and 1958.

H. R. 1, 85th Cong., 1st Sess. (1957) was introduced by Mr. Kelley of Pennsylvania. It was proposed to authorize federal assistance to states and local communities in financing an expanded program of school construction. Fiscal year authorizations for the five fiscal years beginning with 1958 were to total \$600 million. Allotments were to be made on the state-to-national school-age population ratios; equal federal-state matching was required. As H. R. 1 was reported from the Committee on Education and Labor the authorized appropriation was reduced to \$300 million annually. Half of the authorized appropriation was to be allotted to the states on the basis provided in the bill as

introduced. The other half was allotted in the same proportion that the state's school-age population multiplied by the state's allotment ratio bore to the sum of such products for all states. The allotment ratio for any state was defined as 1.00 less the product of .55 and the quotient secured by dividing the state income per child by the income per child of school-age for the United States. Equal cumulative matching was required. A bill by Mr. Kelley, H. R. 7535, 84th Cong., 2d Sess. (1956), substantially similar to H. R. 1 as he introduced it in 1957 and modification of H. R. 7152, 84th Cong., 1st Sess. (1955), was reported by the Committee on Education and Labor but was defeated in the House of Representatives on July 5, 1956 by a vote of 224 nays, 194 yeas. The number of identical or substantially similar proposals was large. Substantially identical proposals all introduced in the 85th Cong., 1st Sess. (1957) were H. R. 5007 by Mr. Chudoff, H. R. 3218 by Mr. Denton, and H. R. 3416 by Mr. Thompson of New Jersey. H. R. 3523 by Mr. Kearns authorized appropriations as necessary but was otherwise substantially identical; H. R. 1946 also introduced by Mr. Kearns and authorizing necessary appropriations for a six fiscal year period was also similar. S. 777, 85th Cong., 1st Sess. (1957) introduced by Mr. Neuberger was like the original H. R. 1; S. 870 and Title XII of S. 872, both 85th Cong., 1st Sess. (1957) and both introduced by Mr. Humphrey were like Mr. Kearns' H. R. 3523. Mr. Machrowicz and Mr. Rabaut introduced identical bills, H. R. 3067 and H. R. 3080, 85th Cong., 1st Sess. (1957), which differed materially from H. R. 1 only in that \$1,000 million in appropriations were authorized for each of the two fiscal years of 1958 and 1959. S. 197, 85th Cong., 1st Sess. (1957) introduced

by Mr. McNamara was identical with the Machrowicz and Rabaut bills. Mr. Kearns reintroduced his proposal which had appeared as H. R. 3523 in the 1st Session of the 85th Congress as H. R. 11625 in the 2d Session of the Congress.

#### FLAT GRANT WITH EQUALIZED MATCHING PROPOSALS

S. 287, 81st Cong., 1st Sess. (1949) introduced by Mr. Neeley and ten other Senators, to aid in public school construction, authorized \$98 million for the fiscal year 1949 and \$490 million for each of the next five succeeding years. Apportionment was to be on the basis of state-to-national school-age population ratios. Federal matching percentages, however, were to be varied from 40 to 60 per cent inversely in relation to the three-year average per capita annual income of the states. Mr. Perkins reintroduced this proposal on four successive occasions except the appropriations authorized were to be \$500 million for three consecutive fiscal years. Those reintroductions were H. R. 4913, 82d Cong., 1st Sess. (1951), H. R. 544, 83d Cong., 1st Sess. (1953), H. R. 44, 84th Cong., 1st Sess. (1955), and H. R. 859, 85th Cong., 1st Sess. (1955). H. R. 4545, 82d Cong., 2d Sess. (1952) introduced by Mr. Bailey was also fundamentally like the proposal of Mr. Perkins.

S. 1670, 81st Cong., 1st Sess. (1949) introduced by Mr. Humphrey to provide aid in public school construction authorized \$500 million for six fiscal years beginning with fiscal year 1950. Again apportionment was to be on the basis of state-to-national school-age population ratios. The variable state matching ratios were to bear the same ratio to 50 per

cent as the state three-year average annual per capita incomes bore to the per capita income of the Continental United States. The federal matching percentage was not to exceed 75 per cent nor to fall below 33 1/3 per cent. Appropriations authorized for 1949 were partially reserved for emergency construction projects resulting from national defense activity. S. 1699 introduced by Mr. Bricker in the same Session of the same Congress authorized \$250 million for the 1950 fiscal year and the four succeeding fiscal years but provided that while the same allotment basis was to be used, the federal contributions, to be determined by the United States Commissioner of Education on the basis of need, were to fall between 40 and 90 per cent of the cost of school facilities to be constructed under the act. No state allotment was to be less than \$300,000. S. 2317, 81st Cong., 1st Sess. (1949) introduced by Mr. Humphrey and others was substantially like S. 1670 but authorized appropriations for each fiscal year as Congress decided were necessary. Matching contributions of the federal government were to be adjusted inversely to state average annual income. S. 2317 was introduced as a composite bill after the Senate Committee on Labor and Public Welfare decided to report a bill favorably. It was passed by the Senate on October 17, 1949. H. R. 5718, 81st Cong., 1st Sess. (1949) introduced by Mr. Rains was identical with S. 2317. S. 536, 83d Cong., 1st Sess. (1953) was a reintroduction of S. 2317 as it had been passed by the Senate.

H. R. 249 introduced by Mr. Elliott in the 1st Session of the 83d Congress (1953) authorized appropriations as Congress deemed necessary, but was otherwise similar to Senator Humphrey's 1949 bill, S. 2317.



Other similar legislative proposals were S. 3358, 82d Cong., 2d Sess. (1952) introduced by Messrs. Hill and Murray; H. R. 7105, 82d Cong., 2d Sess. (1952) again introduced by Mr. Elliott, and H. R. 7399, 82d Cong., 2d Sess. (1952) which provided not variable, but equal matching.

S. 968, 84th Cong., 1st Sess. (1955) was introduced by Senator Smith of New Jersey and others, and was substantially the program President Eisenhower had requested. Title III, dealing with grant assistance, authorized \$200 million in aggregate appropriations for fiscal years 1956, 1957, and 1958. Allotments to states were to follow the often-suggested state-to-national school-age population ratios. The federal share in an approved project utilizing allotted funds was to be 100 per cent less a percentage which bore the same ratio to 50 per cent as the state three-year per capita income average bore to the similar national income average except the federal matching percentage could not exceed 60 per cent nor fall below 40 per cent.

#### MATCHED EQUALIZATION GRANT PROPOSALS

H. R. 9841, 83d Cong., 1st Sess. (1953) introduced by Mr. Frelinghuysen and designed to provide emergency aid to eliminate overcrowding in elementary and secondary schools, authorized \$250 million annually for two successive fiscal years. The allotment from total appropriations for each state was to be in the same ratio as the product of the school-age population of the state and the square of the state's federal percentage bore to the national sum of such products. Federal percentages were to be variable and were to be computed for each state as 100 per cent less the percentage which bore the same ratio to 50 per

cent as the three-year per capita income of the state bore to the three-year national per capita income. Such percentages could not exceed 75 per cent nor be less than  $33 \frac{1}{3}$  per cent and no state was to be granted an allotment of less than \$100,000. In any facility, the federal share also was not to exceed 40 per cent of the total construction cost or \$500 per school-age child to be accommodated, whichever was less. H. R. 764, 84th Cong., 1st Sess. (1955) also introduced by Mr. Frelinghuysen was substantially the same bill with the added proviso that no state's allotment was to exceed five per cent of the total appropriation. H. R. 361, 84th Cong., 1st Sess. (1955) introduced by Mr. Donohue embraced most of the same principles as H. R. 764 except the five per cent limitation on the allotment to any state was not included.

S. 2601, 83d Cong., 1st Sess. (1953) introduced by Mr. Cooper was a minor modification of S. 2294 introduced earlier in the Session by himself. The appropriation authorized was \$100 million annually for four fiscal years; in S. 2601 \$500 million was authorized over a period of two years. The original allotment formula which was similar to that of H. R. 9841 was modified in S. 2601. Under that allotment procedure, one-half of the appropriation was to be apportioned among the states in the ratio that the product of their school-age populations and the squares of their federal percentages bore to the sum of the products for all the states. The federal percentage for any state was to be 100 per cent less the percentage which bore the same ratio to 45 per cent as the state three-year average per capita income bore to the three-year average national per capita income. Federal percentages were to be limited to a 75 per cent maximum and a  $33 \frac{1}{3}$  per cent minimum. The other

one-half of the appropriation was to be apportioned in the same general pattern as indicated for the first half except that the federal percentages were not to be squared in the computation. State allotments were to be limited to a maximum of 5 per cent of total appropriations; a state minimum of \$100,000 was prescribed. Federal matching was to follow the plan of H. R. 9841 and was to be limited to \$500 per child to be accommodated by any proposal or 40 per cent of the construction cost of any project, whichever was lesser. A similar version of this bill, introduced again by Mr. Frelinghuysen, was H. R. 10149, 83d Cong., 2d Sess. (1954).

S. 5, introduced by Mr. Hill and twenty-nine other Senators, 84th Cong., 1st Sess. (1955) was designed for the frequently expressed purpose of providing assistance to states for construction of needed public elementary and secondary school facilities. For fiscal years 1956 and 1957 annual appropriations of \$500 million were authorized. The allotment plan was like that embodied in S. 2501 with the following modifications: Federal percentages to be used in computing state allotments, now prescribed as a minimum \$200,000 were to be limited to a maximum of 70 per cent and a minimum of 40 per cent. The entire allotment to states was to be based on the ratio of the products based on squared percentages. The matching requirement, however, was more varied than that contained in S. 2601 and provided that the federal construction share, which was not to exceed  $66 \frac{2}{3}$  per cent nor fall below  $33 \frac{1}{3}$  per cent, was to be determined as 100 per cent less the percentage which bore the same ratio to 50 per cent as the state's three-year average per capita income bore to the three-year average national per capita income.

Bills containing virtually identical provisions were Mr. McClellan's S. 686, 84th Cong., 1st Sess. (1955), Mr. Elliott's H. R. 1565, 84th Cong., 1st Sess. (1955) and H. R. 1120, 85th Cong., 1st Sess. (1957). H. R. 4302, 84th Cong., 1st Sess. (1955) introduced by Mr. Perkins was also substantially like S. 5.

S. 4, 84th Cong., 1st Sess. (1955) introduced by Mr. Clements and carrying the same appropriation authorization as S. 5, provided an even more complicated allotment formula. The allotment to each state was to be a total of two separate allotments from an equally divided appropriation. Half was to be allocated among the states on the basis of an "effort" computation which, for each state, was to be reduced to a percentage of the sum of such effort computations for all the states. The effort formula was the product of total state school-age population and the quotient secured by dividing total school expenditures from state and local sources by total income payments received by a state. Allotment of the other half of the appropriations was authorized in the ratio that the "need" computation for each state bore to the sum of the need computations for all the states. The need formula was the product of the state school-age population and the quotient of United States average annual per capita income divided by state average annual per capita income. On any project the state share was not to exceed  $66 \frac{2}{3}$  per cent nor be less than  $33 \frac{1}{3}$  per cent. S. 2279, 83d Cong., 2d Sess. (1954) was similar to this proposal. H. R. 1633, 84th Cong., 1st Sess. (1955) introduced by Mr. Watts, allotted funds for which an authorization of appropriations as Congress deemed necessary was provided, would have allotted funds on the basis of the same ratios as computed under

S. 4 and with the same matching limits provided. S. 2905, 84th Cong., 2d Sess. (1956) introduced by Mr. Smith of New Jersey and others, provided an aggregate appropriation of \$1,250 million for five years to be expended at a rate of \$250 million annually. Allotments were to be based on state-to-nation effort ratios computed as in S. 4 although any state for which average school expenditures per public school child were equal to average national school expenditures per public school child was assumed to have a state effort index equal to the national effort index. Variable matching was prescribed in that the required federal matching percentage for each state was to be inverse to the state's per school-age child income. The specific federal percentages were determined to be  $66 \frac{2}{3}$  per cent for the state with the smallest such income per child and  $33 \frac{1}{3}$  per cent for the state with the largest such per-child income. Other percentages were to be determined between these limits.

H. R. 3986, 85th Cong., 1st Sess. (1957) was introduced by Mr. McConnell and again was designed to assist states and local communities in increasing public elementary and secondary school construction. Authorized appropriations were \$325 million for four successive fiscal years beginning July 1, 1957. Computation of each state's allotment required that an "allotment ratio" be computed and multiplied by the school-age population which product was to be reduced to a percentage of the sum of such products for all states. This percentage then represented the state's share of the total appropriation. The state "allotment ratio" was computed as 1.00 less the product of .50 and the quotient secured by dividing state income per child by the Continental

United States income per child. No allotment ratio was to exceed .75 nor fall below .25. The state allotment was to be reduced if its "school-effort index" fell below the nation's school-effort index. For both states and the nation the school-effort index was defined as the school expenditures per child of school-age divided by the income per child of school-age as was relevant to the jurisdiction under consideration. Any state for which expenditures per child of school-age equalled the average national expenditures per child of school-age was assumed thereby to have a state school-effort index equal to the national school-effort index. The federal matching share for any state was to be equated to the state's allotment ratio except that such federal share was not to exceed 66 2/3 per cent nor be less than 33 1/3 per cent. This program, when introduced by Mr. Frelinghuysen, was indicated to be the outgrowth of President Eisenhower's 1955 State-of-the-Union message calling for "affirmative action" to meet the need for classrooms. H. R. 3976 introduced into the same session of the Congress by Mr. Frelinghuysen was identical with H. R. 3986, as was S. 889 introduced by Mr. Smith of New Jersey and thirteen other Senators. H. R. 3858, also introduced in this session of Congress by Mr. Perkins was substantially different only in authorizing an appropriation of \$600 million annually for five fiscal years. Mr. Powell's legislative entry, H. R. 1213, also in the same Congressional Session authorized \$1,000 million for six fiscal years beginning July 1, 1958 and provided that compliance with United States court orders was to be a requisite for receipt of federal funds.

The 85th Cong., 2d Sess. (1958) witnessed the introduction of a

number of bills substantially identical with H. R. 3986 of the preceding session. S. 3216 introduced by Mr. Javitz substituted .55 for .50 in computing the allotment ratios and proposed appropriations of \$600 million for four fiscal years beginning July 1, 1958. Equal rather than variable matching was prescribed and extensive regulations governing compliance with the school integration decisions of the United States Supreme Court were embodied. H. R. 9731 introduced by Mr. Teller differed materially from S. 3216 only in authorizing appropriations for five fiscal years instead of four. Mr. Frelinghuysen's H. R. 11530 authorized \$600 million for three fiscal years and prescribed equal matching but was otherwise similar to H. R. 3976.

#### MISCELLANEOUS PROPOSALS

H. R. 1582, 81st Cong., 1st Sess. (1949) introduced by Mr. Scrivner to provide funds for educational purposes, provided for the transfer of one per cent of all federal income taxes collected in each state to that state. This plan for the return of individual and corporate income tax receipts to the state on the basis of state-of-origin was reintroduced by Mr. Scrivner in H. R. 3255, Mr. Teague in H. R. 3256, Mr. Gwinn in H. R. 4201, and Mr. Poff in H. J. Res. 76, all in the 85th Cong., 1st Sess. (1957).

H. R. 11828, 85th Cong., 2d Sess. (1958) introduced by Mr. Hillings provided a modification of H. R. 1582. Federal income tax collections to be transferred to the states on the basis of origin were to be varied on the basis of the volume of state income tax collections ranging from one to 5 per cent as state collections in each state decreased from \$10

billion or over to under \$1 billion.

S. 3606, 85th Cong., 2d Sess. (1958) introduced by Mr. Proxmire approached transfer of federal tax collections by proposing to vary the amounts transferred to the states from 1.5 per cent of collections in fiscal year 1958 to 3.0 per cent in fiscal year 1959 and 5.0 per cent thereafter. S. 3687, 85th Cong., 2d Sess. (1958) introduced by Messrs. Proxmire, Morse, and Murray authorized appropriations on the same basis as S. 3606 and authorized the appropriation of a fraction of the total income tax collections to the several states on a state-to-nation school-age population ratio.

H. R. 4498, 85th Cong., 1st Sess. (1957) introduced by Mr. Ashmore declared its purpose to be to aid states and localities in finding and implementing means of solving their educational financial problems, expressing the belief that no adequate evidence of state and local inability to meet state needs for finances for educational purposes had been presented, the act proposed the creation of an Advisory Council on School Financing. This Council was to undertake studies of school finances when requested to do so and to make recommendations for solutions of problems discovered.

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