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Part Seven

INCOME AND THE MEASUREMENT OF THE RELATIVE CAPACITIES OF THE STATES

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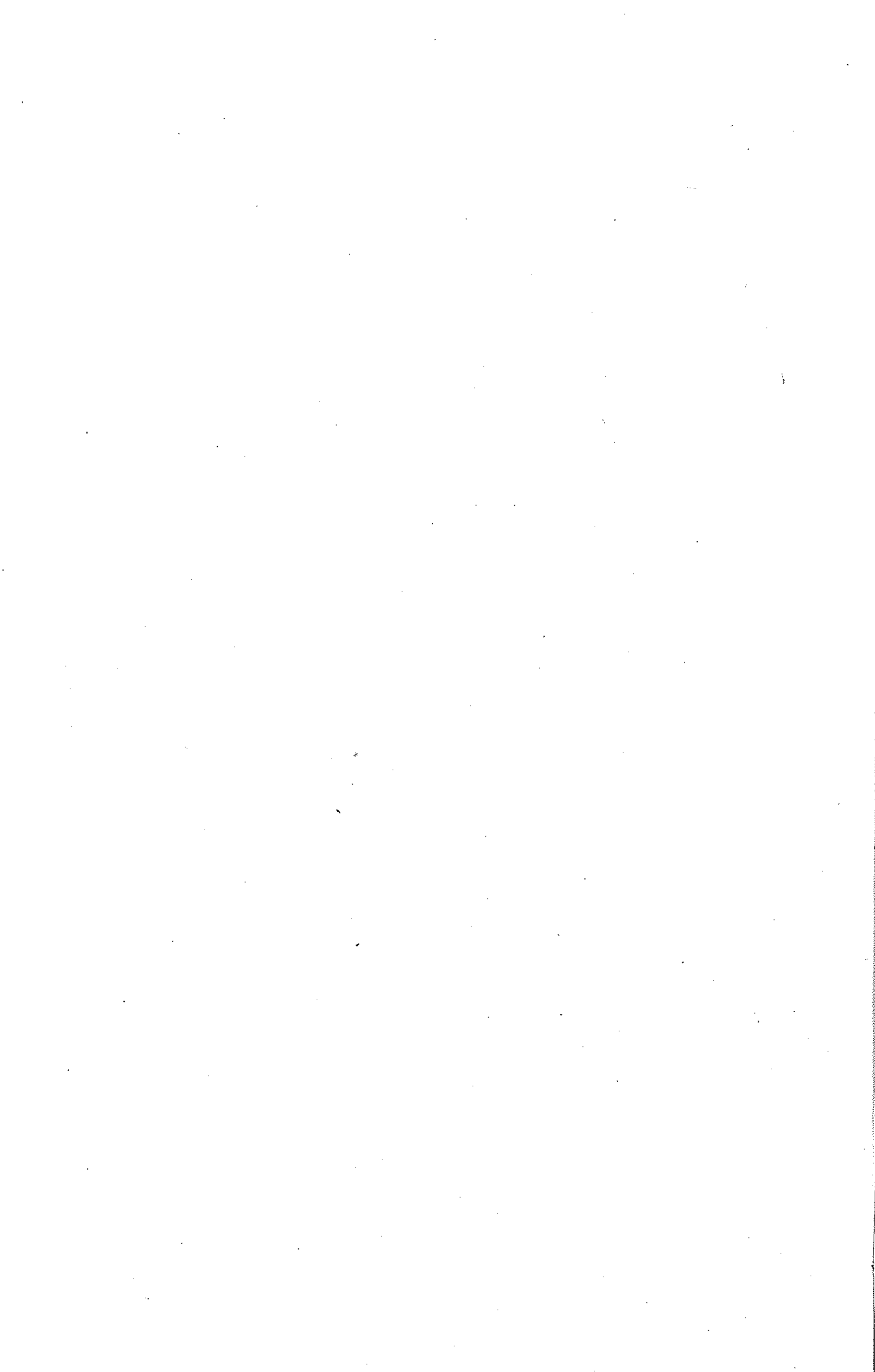

INCOME AND THE MEASUREMENT OF THE RELATIVE CAPACITIES OF THE STATES

P. H. WUELLER

THE MEASUREMENT of the relative capacities of the states to support selected services is rapidly becoming a major problem in federal-state fiscal relations.[1] The increasing attention it is receiving is in large measure attributable to the unprecedented increase in federal subventions to states [2] and to a strong feeling in some quarters that present procedures employed in connection with the allocation of federal grants among states are not satisfactory.[3]

In brief, the critics of contemporary grant allocation proce-

[1] The present writer wishes to mention his close association with J. T. Wendzel, Chief, Economic Studies Division. Social Security Board, Washington, D. C., while studying some of the related problems of income, fiscal capacity, and variable grants. For some time it has been the writer's privilege to act as fiscal consultant to the Social Security Board, and in that capacity he had the pleasure of close cooperation with Dr. Wendzel, whose broad knowledge of general theory has aided him materially in orienting his thought along specific lines with a view to directing it toward the solution of more general problems. Though indebted to Dr. Wendzel, the present writer assumes exclusive responsibility for the reasoning and tentative conclusions in this paper.

[2] In 1929 total federal subventions to states, expressed as percentages of state revenues, ranged from 2.4 for New Jersey to 48.4 for Wyoming. In 1934 the minimum and maximum percentages were 35.9 for California and 163.2 for South Dakota. See P. H. Wueller and Associates, *The Fiscal Capacity of the States: A Source Book*, Social Security Board, Bureau of Research and Statistics (2d ed.; Washington, April 1938), Tables S-I and IV.

[3] Cf. *Report of the Advisory Committee on Education* (Washington, February 1938), Sec. B; also, *Report of the Byrnes Committee* (Washington, January 1939).

dures point out that present federal subventions partake of the nature of either non-matching [4] or constant ratio matching grants [5] and that neither device is likely to enable the relatively poor states to offer services of such quality or quantity as appears desirable to the critics. To overcome what they consider a socially detrimental situation, they suggest that contemporary techniques be replaced or modified by [6] the introduction of variable ratio matching grants.[7] If the policy objectives of the advocates of variable grants are allowed, their insistence upon a change in federal allocation procedures seems justified. Non-matching grants may not elevate specific service standards substantially in the relatively poorer states, simply because the funds awarded may be used in lieu of, rather than in addition to, state appropriations. Federal constant ratio matching grants, on the other hand, while requiring the states to match federal funds as a condition of the award, in no way guarantee maintenance of service standards on a desired level. Even if we assume that the state accepts the grant and exerts a 'reasonable' tax effort by means of 'reasonable' tax levies, state service standards would, nevertheless, be limited by the resources of the state. The advocates of federal variable grants contend that the differences in resources of the states are such as to make the maintenance of 'reasonable' service standards impossible in the relatively poor states.

Inasmuch as the proponents of federal-state variable grants have found the device whose use they advocate ready-made in the fiscal tool chests of the states, it may be well to indicate briefly the nature of the type of variable grant that is at present used exten-

[4] Non-matching grants may be defined as transfer payments from one jurisdiction to another, for a specified purpose, which, though their relative magnitude may be determined partly by indices of presumed need and capacity, do not require the receiving jurisdiction to match the funds awarded in any ratio whatever.

[5] A constant ratio matching grant is a transfer payment from one jurisdiction to another, designated for a specific purpose, which, as a condition of award requires the receiving jurisdiction to match the funds awarded *in some proportion*, the proportionality factor being constant for all receiving jurisdictions.

[6] Senate Bill. S: 1265, 76th Cong., 1st Sess.

[7] A variable ratio matching grant is a transfer payment from one jurisdiction to another, designated for a specific purpose, which, as a condition of award, requires the receiving jurisdiction to match the funds awarded *in some proportion*, the proportionality factor being some function of a given receiving jurisdiction's need and fiscally exploitable resources.

sively in state-local fiscal relations.[8] The introduction of variable ratio matching grants by state legislatures arose out of an institutional situation in which certain public services were rendered by subordinate, though semi-independent. jurisdictions. The ratio of taxable resources to the cost of specific services varied among these jurisdictions in such a manner as to make it virtually impossible for some jurisdictions to attempt to finance a specified service of 'reasonable' quality out of tax bases designated for local exploitation. These grants provide that the matching ratio applicable to any one subordinate jurisdiction shall be some function of the specific need and resources of the grant receiving jurisdiction. Typically, the grants are so constructed that as the value of the specific need-resource ratio increases, the reimbursement fraction increases in some legislatively designated manner. The exact functional relation between specific need-resource ratio and reimbursement fraction is determined by the politically effective preconceptions obtaining in the larger community.

Generally speaking, the stronger the politically effective sentiment for equalization of service standards throughout the state. the more pronounced the tendency on the part of the state legislature to define service standards rigorously and to permit reimbursement fractions to vary with local specific need-resource ratios in such fashion as to facilitate the rendering of a standard service by all subordinate jurisdictions. provided these jurisdictions exert a 'reasonable' tax effort of their own. Whenever perfect equalization of benefits is the policy objective, state legislatures will not only define and make mandatory service offering as well as local tax effort, but also provide that the difference between the amounts produced by mandatory local tax effort and the cost of the prescribed service be met out of state funds. Such a subvention is usually designated an equalization grant.

Generalizing upon the various forces responsible for the introduction of grants-in-aid into state-local fiscal relations, it may be

[8] For a descriptive catalogue of grant-in-aid formulae, see R. J. Hinckley. 'State Grants-In-Aid', State of New York, *Special Report of the State Tax Commission* (1935), No. 9. For a critical appraisal of the device, see State of New York, *Report of the New York State Commission of State Aid to Municipal Subdivisions*, Legislative Doc. No. 58 (1936); also, V. O. Key, *The Administration of Federal Grants to the States* (Chicago, 1937). and H. J. Bitterman, *State and Federal Grants-In-Aid* (New York. 1938).

observed that the desire for inter-jurisdictional transfers of tax funds was generated by public sentiment in a state as a whole insisting upon the general provision of a standard or minimum level of some type of service despite (a) a historically conditioned situation under which the operating functions coincidental to the performance of the service in question were actually performed by subordinate though semi-independent government agencies; (b) marked differences either in fiscally exploitable resources or levels of social consciousness, which, as the case might be, made it either financially difficult, if not impossible, or unattractive for some minor jurisdictions to offer services or facilities of the quality demanded by potent groups within the larger community. Typically, when the emphasis of the state legislature has been upon stimulation of local tax effort, constant ratio matching grants have been employed, and when the legislative intent has aimed at some degree of inter-jurisdictional equalization of service standards, variable ratio matching grants have been pressed into service.

When the agitation for federal-state variable grants began, students as well as policy makers attempted to follow the state-local procedure pattern closely. They set to work, attempting to measure the fiscal capacity [9] of the states, by constructing so-called model tax systems, applying these systems to the economies of the different states, and measuring the states' fiscal capacities in terms of the differences in tax yields allegedly derivable from the economies of different states.[10]

With the passage of time, it was increasingly felt that this approach was unsatisfactory,[11] because, in essence, it defined the states' capacities to perform certain public functions in terms of the investigator's preconceptions regarding the proper relation

[9] The term fiscal capacity may be tentatively defined as a given investigator's conception of the proper ratio of taxes collectible to some measure or selected measures of wealth.

[10] For an illustration of this procedure, see Mabel Newcomer, *An Index of the Taxpaying Ability of the States* (Bureau of Publications, Teachers College, Columbia University, 1935); also L. L. Chism, *The Economic Ability of the States to Finance Public Schools* (Bureau of Publications, Teachers College, Columbia University, 1936).

[11] J. R. Blough, 'Equalization Methods for the Distribution of Federal Relief Funds', *The Social Service Review*, IX (September 1935), 423 ff.

of the private and public economies of the different states.[12] Increasingly, the interest of those concerned with federal-state variable grants has shifted from attempts to define and measure the fiscal capacities of the states in terms of some necessarily higher subjective frame of reference to possible approaches to the proximate measurement of the states' capacities to support essential or desirable services regardless of whether these services are made available through the instrumentalities of the private or the public economies.[13]

In the following pages an attempt is made (1) to investigate the possibilities of using income as a basic gauge in approximating the relative capacities of the states, (2) to consider what seem to

[12] In passing, another serious methodological defect of the model tax system approach may be pointed out. All model systems are but idealizations of contemporary state-local tax systems. Hence, somewhat more than half of the yield of any one of the systems, when applied to the economy of a given state, is derived from capital base taxes. Capital value is essentially a long run concept, implying perpetuity. Contrariwise, fiscal capacity, to be of significance for variable grant purposes, must be essentially a short run concept, relating to some such period as one fiscal year or a few fiscal years. If capital values and fiscal capacity are to be related, the time periods with which either concept is associated must be made comparable. Formally, this may be done either (a) by associating the concept of fiscal capacity with a time period of indefinitely long duration, or (b) by adjusting the capital value or values in question, by introducing what may be called a liquidity coefficient. The first solution is meaningless relative to the problem in hand, because what is to be measured is possible tax effort, that is, the maximum ratio of taxes collected to some measure of wealth over a relatively short period. The second solution, while not meaningless, is cumbersome, unless one can conceive of a liquidity coefficient that is independent of the income that has been derived or has a high probable derivability in the immediate future. In addition, there is reason to believe that the model tax system approach involves double counting of the same wealth phenomena. For instance, in addition to the capital value base, represented in the main by realty taxes, the model systems operate with a personal income tax. To be valid, this procedure presupposes that the ratio of taxable income derived from real estate to all other taxable income is constant for all states. On the basis of the limited evidence available, it would seem that the assumption in question is not substantiated by observable facts.

[13] In the present institutional set-up, the private economy would seem to differ from the public primarily by virtue of differences in motivating forces and the criteria by reference to which their respective operating efficiencies are judged. In the private economy the motivating force would seem to be the chance at profit realization and the operating criterion, the magnitude of the positive difference between out-payments and receipts. Contrariwise, the motivating force in the public economy would seem to be the production of services that are not produced in desired quantity or quality in response to the profit motive and the performance criterion, the judgment of the politically effective sector of the social group, a judgment typically not susceptible to pecuniary acquisitive tests.

be some major problems attending current attempts to develop federal-state variable grant proportionality factors on the basis of differences in the incomes of the residents of the various states.

For purposes of first approximation, it seems useful to think of a definable social group as a closed universe whose *raison d'etre* is the establishment of relations designed to facilitate the production and distribution of those goods and services its constituent parts consider essential or desirable. If we postulate the desirability of maintaining the group's capital intact, the rate at which desired goods and services become available at an instant in time may be conveniently thought of as being measured by the rate of flow of income produced at that instant.[14]

Though for some operations the concept of income produced is useful, it seems inadequate for the purpose of approximating the relative capacities of the states, simply because it is not in its entirety allocable among the states.[15] If a jurisdictional locus is to be assigned to income, the concept of income paid out[16] or personal income must apparently be utilized. The income paid out[17] that accrues to the residents of a given state measures the

[14] Income produced may be defined as the market value of all commodities produced plus the market value of all personal services rendered minus the market value of the fraction of the group's stock of goods that was destroyed coincidental to the production of both goods and services over a given interval. Cf., Simon Kuznets, *National Income, 1929–1932*, Senate Doc. 124, 73d Cong., 2d Sess. (Washington, 1934), p. 1.

[15] This statement is not intended to imply that income produced could not be allocated among the states if one chose to postulate institutions basically different from those observable in the contemporary United States. Such allocation and actual transfer presupposes the establishment and enforcement of rules according to which it is to be made. The formulation of such rules implies that the market is superseded by some totalitarian authority that performs the allocation. This paper, however, proceeds on the assumption that the market is to be retained as the *primary* allocating agent of income. See R. R. Nathan, Part Six.

[16] Income paid out is defined as the "money receipts and the money equivalents of the receipts in kind", which accrue to natural persons over a given interval of time. Cf., Kuznets, *op. cit.*, p. 1. The difference between income produced and income paid out over comparable intervals of time is measured by business savings, positive or negative.

[17] For the sake of brevity, income paid out will henceforth be referred to as income. However, the general sentiment of the Conference on Research in National Income and Wealth has been to reserve the term 'income' for 'income produced' and to designate what has been called 'income paid out' by the term 'aggregate of income payments to individuals'. See *Studies, Volumes One and Two.*

rate at which goods and services become available to its residents in both their individual and collective capacities.[18]

If the above considerations are allowed to stand, personal income accrued to the residents may be looked upon tentatively as a measure that makes it possible to compare the relative capacities of different states. However, before the possibilities of comparing the states by means of the income measure are considered in detail, it seems necessary to introduce an institutional complication. So far the argument has proceeded on the assumption that the income accrued to the residents of a given state may be devoted entirely to the purposes of the state's private and public economies. This assumption, though convenient, does violence to the facts, because the federal government draws upon these incomes by means of federal taxes.

If it could be safely assumed, as apparently it sometimes is,[19] that the ratio of federal tax collections to the income of the residents of the states is constant, the impact of federal taxes upon the income of the residents would in no way affect the relative capacities of the states. However, the nature of federal levies, taken in conjunction with observable differences in the fiscally significant sectors of the frequency distributions of state incomes as well as differences in state institutions, lends credence to the belief that the impact of federal taxes upon state incomes varies widely.

Concretely, the severity of the impact of federal taxes upon the incomes of the residents of different states is influenced by

[18] Strictly speaking, income paid out as defined above measures only the rate at which goods and services *furnished through the money exchange economy* become available at an instant in time. To get a more adequate measure of welfare levels, all goods and services furnished through channels other than the exchange economy could be added to the first. For purposes of measuring welfare levels or relative state capacities, the *ideal* concept would define income as "the algebraic sum of (a) the market value of rights exercised in consumption and (b) the change in the value of the store of property rights" over an interval of time. Cf. H. C. Simons, *Personal Income Taxation* (Chicago, 1937), p. 50. Failure to take account of non-market economy services is likely to introduce an error into the determination of the relative capacities of the states, unless it can be established that the ratio of non-market economy goods and services to market economy goods and services is the same for all states. Students of national income have, however, strenuously objected to including changes in the value of existing property rights, i.e., capital gains, in national income. See especially *Volume One*, Part Four.

[19] Senate Bill, S. 1265, *op. cit.*

numerous factors, such as (a) the frequency distribution of personal income within a given state; (b) the type of tax system which obtains in a given state; (c) a state's basic institutions.

Inasmuch as both federal personal income tax rates and federal estate tax rates are, respectively, increasing functions of personal income and net worth of estates, the ratio of federal income taxes and estate taxes paid and payable to income of residents increases as the positive skewness of the income frequency distribution increases. In other words, the fiscally significant sector of a state's frequency distribution of personal incomes is a determinant of federal tax impact. There is ample evidence that the value of this determinant is markedly different for different states.[20]

Further differences in the impact of federal taxes upon the residents of different states reflect differences in the fiscal systems of the states in respect of the quantitative importance of special assessments or betterment taxes. Betterment taxes, in current practice, are deductible in determining liability under the federal income tax. Hence, as the ratio of betterment tax collections to total tax collections increases, the impact of the federal income tax upon the income of the residents of a given state decreases. Again, there is evidence that the impact of the federal estate tax is not uniform throughout. It is sometimes alleged that the Treasury, in determining the value of the real estate component of a given estate, is guided by and perhaps leans heavily upon local assessments. Hence, the market-assessed value ratios that prevail in a given state must be admitted as a determinant of federal tax impact. Last but not least, the impact of both federal personal income and estate taxes varies with the presence or absence of the institution of community of property in a given state. The relative importance of this factor cannot now be expressed quantitatively, although its presence in some states but not in others presumably tends to distort the picture. Likewise, the impact of federal excises can hardly be assumed uniform. To mention but one outstanding illustration, there are still some nominally dry states, despite the repeal of the eighteenth amendment.

[20] Wueller, *op. cit.*, State Table II, Alabama–Wyoming.

The above instances are cited merely to cast doubt upon the apparently widely held belief[21] that the impact of federal taxes can reasonably be presumed to be uniform throughout the states. It would not seem to require labored argument to show that, inasmuch as there is a strong presumption that the impact of federal taxes varies from state to state, all federal taxes paid out of personal income must be subtracted in order to obtain the income totals at the disposal of the residents of the states which measure their general capacity.[22]

Comparison of total state capacities,[23] adjusted for differences in the impact of federal taxes, is not socially meaningful unless related to general need or presumed general need. It seems reasonable to assume for purposes of first approximation that general need, in contradistinction to a specific need or selected specific needs, is directly proportional to population. If this assumption is accepted, total income of residents, adjusted for net federal drains and divided by total population, or per capita income,[24] would seem to furnish the foundation for quantitative

[21] Subscription to this belief seems to be implicit in the model tax system approach, for. in essence, that approach seems to proceed upon the assumption that the application of a given tax system to the economies of different states will abstract like percentages of the liquid wealth of different states. Cf. footnote 10 above.

[22] The amounts of the income of residents of a given state abstracted by means of federal taxes during one interval of time accrue in the form of income to the residents of the same state or other states at a succeeding interval. In other words, if the time interval chosen for computation purposes is selected judiciously, the results of the computations for the different states will represent personal income of state residents minus net federal drains.

[23] The above definition of capacity implies that the market is accepted as the arbiter of state income allocation. It has been suggested from time to time that income originating is a superior criterion for the purpose in hand to income actually accrued. This view, of course, rejects the arbitration of the market, but fails to suggest a satisfactory substitute. In practice, the proponents of this view would urge that the income of the stockholders of an oil company originated, say, in Texas, and that part of it should have been kept in Texas in the first place by means of severance taxes. The advocates of this view, however, fail to specify the nature of the standard by reference to which they would determine how much should have been kept in the first place. In view of the contemporary scramble for revenues, there is good reason to believe that Texas. or for that matter any other state, keeps, in the first instance, as much as competitive conditions allow.

[24] See Nathan, Part Six, for a discussion of some of the statistical difficulties in obtaining per capita income.

approximation of the relative general capacities [25] of the different states.

According to this reasoning, per capita incomes as measured over a given interval indicate the relative general capacities of the states. When factored they may be designated collectively as the general capacity series or capacity index of the states. Interpreted in terms of more or less, this index makes possible the generalization that a state that is associated with a number of smaller value than some other state has a lower capacity than the second state. In other words, the capacity index, constructed on the basis of income accrued to the residents of the states over a past interval, facilitates measurement of the differences that obtained in the respective states' general capacities to satisfy competing specific needs over that interval.

Before possible uses of the index for federal-state variable grant purposes are considered, it must be pointed out that the index describes a situation that is in equilibrium, in the sense that during the interval in question the federal government has completely redistributed all tax funds collected during the interval. Hence, upon termination of the interval, the federal government is without funds to redistribute by means of variable grants or any other reallocation device. If the printing press is disregarded, all federal funds to be redistributed upon termination of the interval must be obtained either by (1) additional taxation or (2) the withdrawal of some federal subvention made during the interval by reference to which the capacity index was constructed.

If we assume that policy makers [26] decide to obtain federal

[25] The term general capacity may be defined as the effective power of a definable social group to satisfy competing specific needs on a certain level.

[26] Needless to say, the possible imposition of additional taxes presents problems of crucial importance which cannot be dealt with even tentatively in this paper. In passing, however, it may be pointed out that an intensive study of the state frequency distributions of income and the types of income disposition typically associated with different sectors of the frequency curve might aid considerably in approximating a rational solution. Such a study might make it possible to formulate tentative conclusions regarding the relation of modes of income disposition and economic progress—progress being defined as (a) an increase in the area under the income distribution curve, or (b) a lessening of the positive skew of the curve, or (c) some combination of (a) and (b)—thus laying the foundation for a rational fiscal policy, that is, a policy that given any objective whatever would be informed as to the means that could reasonably be expected to facil-

funds for reallocation among the states by means of additional taxation, it goes without saying that the capacity index must be adjusted to take account of the additional federal drains upon the incomes accruing to the residents of the states. Again, if we assume that the funds to be reallocated by means of variable grants are to be obtained by withdrawing a previously granted subvention, the capacity index must be adjusted to take account of the withdrawals.

Once the decision regarding the sources of federal variable grant funds has been made,[27] the properly adjusted capacity index. it would seem, could be utilized in connection with the determination of the variable grant proportionality factors, on the basis of which the federal government would match state appropriations for one service or for selected services. One simple solution suggested by the above argument would utilize the reciprocals of the components of the capacity index as proportionality factors.[28] Such a procedure is not only feasible but might be rational if the federal government made variable ratio block grants [29] to the states and permitted the states to budget the sum total of their receipts, including federal grants, as their judgment dictated.

itate the attainment of the given ends. Ever since the publication of E. R. A. Seligman's *Theory and Practice of Progressive Taxation*, in the 'nineties, it has been an article of faith with legislators that the overall effective tax rate assessable against taxpayers should be some increasing function of income magnitude. It is suggested that while this view may have been entirely reasonable when taxes absorbed but a small fraction of national income, it is essentially static in the sense that it fails to consider the probable effects upon the future behavior of aggregate income and bears reinvestigation.

[27] If federal variable grant funds are obtained by the withdrawal of some current federal subvention. e.g.. the present constant ratio matching grants, the cost of variable grants to the Treasury might conceivably be lower than the cost of currently made subsidies.

[28] The capacity index would apparently continue to serve a useful purpose even if the proportionality factors were not allowed to vary over so wide a range as might be indicated by the capacity reciprocals. The extent of the range over which it is desirable to allow proportionality factors to vary must be determined in large measure by (1) the decision as to the degree of equalization desired; (2) the sources of federal funds: (3) the probable sources of state matching funds.

[29] A variable ratio block grant may be defined as a transfer payment from one jurisdiction to another. *which is not designated for any specific purpose,* but which as a condition of award requires the receiving jurisdiction to match the funds awarded in some proportion. the proportionality factor being some function of a given receiving jurisdiction's general need and fiscally exploitable resources.

However, the use of the capacity reciprocals, when employed as proportionality factors in connection with the awarding of variable ratio matching grants for *specified functions*, implies subscription to the postulate that specific needs are proportional to general needs. Public opinion, whose dictum must be tentatively accepted, apparently does not subscribe to this proposition.[30] Nevertheless, it would seem that the capacity reciprocals suggested above could be put to use even though the proportionality of general and specific needs is not granted. Absence of proportionality, if more than an unsubstantiated claim, is measurable. *A priori*, there seems no reason to suspect that the measured specific need differences could not be associated with the capacity reciprocals. The combination of need differences and capacity reciprocals might then be used as proportionality factors in connection with the allocation of variable grants for specific functions, provided the reasoning that has led to the development of capacity reciprocals is accepted.

If the major considerations set forth above are granted, the following generalizations seem valid: (1) the problem presented by federal-state variable ratio matching grants is primarily a problem in territorial or jurisdictional income transfers, and, as such, implies the problem of personal income transfers; (2) inasmuch as the *raison d'être* of variable grants is income transfers, measured income differences must enter into the composition of the proportionality factors for which such grants provide; (3) state per capita income differences measure the differences in the states' general capacities to satisfy competing specific needs; (4) hence, the factored state per capita income reciprocals may serve as federal-state variable grant proportionality factors; (5) if differences in selected specific needs are not proportional to differences in general need, the deviations must be measurable, and, if measurable, they may be introduced as proportionality factor coefficients.

[30] Legislators, acting upon the assumption of proportionality when designing variable grants, would tend to generate a tendency toward proportionality. However, the philosophy that would make men act upon the proportionality assumption is the very antithesis of the philosophy underlying variable grants, since the latter proceeds upon the assumption that inferior adjustments of population to resources are fixed data that must be compensated for rather than removed.

In conclusion, the writer would like to point out that his observations are not offered as *the* solution to the federal-state variable grant problem. Rather, he has essayed to define and relate what seem to him the significant variables that characterize the issue. If his suggestions stimulate further and better thought, he will have accomplished his aim.

Discussion

I GERHARD COLM

Dr. Wueller suggests in his thoughtful paper that variable matching ratios should be used in allotting grants and that the ratios should vary according to the capacities and needs of the states. He argues that general need can be represented by population figures and that capacity can be measured by income received. He therefore suggests that the ratios be modified according to a reciprocal index of income per capita for the various states. This proposal has the great advantage of simplicity compared with suggestions to base grants on more specific measurement of fiscal capacity and need. I agree with Dr. Wueller's proposal but wish to examine two possible objections.

First, it may be questioned whether income is really the best available measure of the capacity of a state. Dr. Wueller suggests this method as an alternative to the attempts to measure fiscal capacity by using a 'model system' of state and local taxation. I do not discuss here the adjustments of income received proposed by Dr. Wueller, but assume that he applies a measure of income at the disposal of individuals, business,[1] associations, and public authorities. Income received then seems adequately to measure the funds available for the satisfaction of public as well as private needs. The point has been made by Mr. Martin that although Dr. Wueller objects to the application of a 'model tax' system, such a system is implicit in his own proposal. It was argued that using income as a yardstick of capacity is justified only if individual income taxes are regarded as the ideal method of taxation, and if the possibility of business taxation is neglected. Such a criticism may be illustrated by the following example. Consider two states, A and B, whose residents receive the same

[1] Here only the non-distributed profits are to be considered.

income. A has large factories which ship goods throughout the country and which disburse earnings to security holders throughout the country. B is a rural state with small scale production, where income produced is identical with income received. A's fiscal capacity is apparently greater than B's because A can increase its revenue at the cost of other states by various methods of business taxation. Such business taxes may either absorb some of the profits which otherwise would go to the security holders residing outside the state or, if prices increase because of these taxes, they may absorb consumer purchasing power. Dr. Wueller disposed of this argument by assuming that the revenues raised by such business taxes must appear somewhere in the income received; e.g., in the income of teachers or officials of that state. He assumes that "in view of the contemporary scramble for revenues" each state already taxes business "as much as competitive conditions allow". It might be concluded from this statement that an increase in such business taxes could not change the relative capacity of a state. To my mind such a conclusion would not be valid. It is true that a single state cannot increase business taxes without due consideration of the tax policy of competitive states. But if all states increased these types of taxes equally, it would not mean that the fiscal capacity of all states would be increased in the same proportion. States with relatively more productive facilities employed in interstate commerce and finance would increase their capacity more than states with predominantly local production or states in which many security holders reside. However, if the states make more use of this tax source for internal fiscal purposes the increased tax revenue will appear somehow in the income received (unless the money is spent for purchases from other states). Therefore it seems to me that the measurement of capacity by income received does not involve an implicit assumption of a model tax system, but that it is to a certain extent determined by the tax system actually used. This argument to my mind is not of very great practical importance. Possible objections against using either 'income produced' or a 'model tax system' seem of much greater weight. I therefore agree with Dr. Wueller's practical conclusion.

A second objection might be raised against the assumption that the population can be used as a measure of general need. It

seems to me that there are differences in the costs required for satisfying public and private needs from state to state, so that a different portion of the capacity is absorbed in fulfilling the same type of service in various states. The costs of shelter are different in various regions. Different expenses are required for protection against cold, and similarly, the costs of government services differ between sparsely and densely settled regions, between rural and industrial areas, between plains and mountains. If a northern state shows income per capita four times as high as a southern state it would hardly be right to conclude that the northern state is four times as well equipped for fulfilling additional state functions. Yet, I hesitate to suggest that a direct measurement of general need should be applied as one variable in the matching ratio. The measurement of standard household costs in various regions is not yet sufficiently accurate for such a practical use and the measurement of standard government costs has hardly been attempted. Until much more progress has been made in this respect, the use of per capita figures as an approximation seems justified.

The use of income per capita as the basis of variable matching grants has two defects. First, such an index makes no allowance for the fact that it is more difficult to collect money from individuals with a generally low income level than from wealthy individuals or large corporations. It may be assumed that this tendency acts against the states with low incomes per capita.

On the other hand, the omission of the direct measurement of general, private and public need may act against the interests of the wealthier states since there is some reason to suppose that in these states costs for private and public goods and services are higher than in the states with lower average incomes. It is difficult to say which of these opposite tendencies is more important. If it is believed that the second tendency outweighs the first, the matching ratios should vary less than the income per capita figures. The inadequate measurement of need also leads to the conclusion that grants for specific purposes must be based on a gauge that includes a direct measurement of specific needs (e.g., housing, unemployment, costs of education). Here again we support a practical proposal of Dr. Wueller's by a somewhat different argument.

II E. L. DULLES

The manner in which state incomes are measured is clearly dependent on the purposes for which measurements and rankings based on these measurements are used, as brought out in the discussion of Dr. Wueller's paper. I think there may be some misconceptions prevalent as to the nature of the purposes that now influence practical procedures in the United States. The comments on model tax programs for states and on the measurement of state capacity made earlier by educational and other groups seem to me to indicate clearly the possibilities of misunderstanding tendencies today and tomorrow.

In my opinion—and it must remain an opinion rather than a fact—there has been a marked departure from the earlier ideas. Those now working in the field tend, with certain exceptions, to stress not the importance of influencing the fiscal policy of the states in a constructive way or even of measuring capacity relative to need, a somewhat later development, but of looking at the matter to a considerable extent as a question of equalizing the flow of purchasing power and the demand for consumers' goods. Combined with this effort is the hope that this will increase national stability and expand national production. Implicit in some recent ideas relative to comparison of states is the notion that if we can 'prime the pumps' of demand and production in certain states, the nation as a whole will benefit and unemployment be reduced. Some may question the efficacy of a program based on such an idea, others may accept it; but I think one must watch carefully in the consideration of any set of rankings or any comparisons that may become available in the future to see whether there has been a shift toward this particular approach. I am inclined to think that the Byrnes' bill does represent this approach, and that the Wagner bill combines something of this idea with an attempt to emphasize need. Dr. Wueller's discussion of net federal drains is pertinent in this connection. It would carry no weight with those who wish to stress the purchasing power equalization whereas it has more significance to those who wish to talk about capacity relative to 'need'. The

choice between income produced or income paid out is also considerably influenced by the relative emphasis placed on these three approaches.

III H. M. GROVES

Dr. Wueller's paper deals with the economic capacity of the states and takes no account of the political institutions by which economic capacity is converted into public revenue and the means of supporting public functions. For example, the distribution of income has been mentioned in the foregoing discussion and the opinion expressed that it should not be left out of the picture in determining state capacity. Is an even distribution of income a favorable or unfavorable factor in relative capacity? One may answer affirmatively on the ground that even distribution reduces extremes of wealth and poverty, neither of which is economically desirable; but he may also answer negatively on the ground that an even distribution allows little free surplus (above necessary expenditures) and that only such free surplus is a proper subject for taxation. Regardless of the correct answer to this question it illustrates the importance of the tax system in determining the ability to support public functions. As a matter of fact income is the basis for only a very small proportion of state taxation and more taxes are based upon income produced in a given state than upon the income received by its residents. It might be possible for a state to have a relatively high economic capacity with relatively small potentialities for revenue under existing tax institutions. Some of the economic power might not be convertible into fiscal power.

Dr. Wueller has mentioned attempts to take account of tax institutions by estimating and comparing yields of a model tax system in the various states. This is objected to on the grounds that the choice of a model tax plan is subjective. The objection could be avoided were the actual tax plan employed instead of a model one. The actual tax plan would necessarily represent a sort of consensus of procedure in the states. For example, the percentage of state and local revenue derived from property, income, and sales taxes might be used to give these taxes proper

weight. The average rate of tax upon each of these bases might be applied to determine relative fiscal capacities. The great objection to this proposal is that the statistics on the distribution of wealth and sales by states are much less satisfactory than those for the distribution of income received. Nevertheless the use of per capita net income received as the sole criterion of fiscal capacity, when the tax system in many cases taxes everything except such net income, seems imperfect.

IV GORDON KEITH

Dr. Wueller proposes that an index of the fiscal capacities of the several states to support selected services be derived from the per capita income paid out to the residents after allowance has been made for federal drains. In selecting per capita income as the sole basis for his measurement of capacity, Dr. Wueller deliberately departs from the model tax plan approach to this problem by excluding the direct contributions of property and of business enterprise from his index, and by making no allowance for the effect of different distributions of income upon fiscal capacity. I question both the theoretical validity and the practical wisdom of these exclusions.

While it is fair to ask whether property that does not yield an income easily measurable in terms of money contributes anything to the fiscal capacity of a state, it is hard to deny that a state with much such capital within its taxing jurisdiction is better off than a state with little. The latter, if it is attempting to raise the general welfare of its people, has more claims upon its income than the former. Furthermore, property, whether it is income yielding or not, is an existing source of tax revenue that cannot be wholly discounted. If it is held to be desirable to give property less weight in measuring fiscal capacity, it would seem to be more reasonable to effect such a change under the model tax plan than to throw it out altogether, as Dr. Wueller suggests.

Similarly, the formal difficulty of estimating the extent of the contribution business enterprises make to the fiscal capacity of a state cannot justify the exclusion of such contributions when they are as certain as that business enterprises pay taxes. More-

over, to the extent that any one state has a relative advantage over other states in the production of any commodity, it can exploit that advantage through its tax system to increase its real income at the expense of non-resident owners, and, under certain conditions, of non-resident consumers. Nor does the argument that the contribution of business enterprise will be reflected in the income of state employees seem tenable. If business enterprise contributes to fiscal capacity, this contribution should be measured directly, not indirectly.

Finally, per capita income is an average which may conceal greater inequalities within states than it reveals between them. The fact that two states have equal per capita income does not necessarily mean that they have equal fiscal capacities, for it is well established that the more unequally income is distributed within a state, the greater is the capacity of that state to support public services. It seems, therefore, that any formula for the correct apportionment of variable grants-in-aid between the states should make allowance for such differences in income distribution.

Yet if we admit into an index of fiscal capacity these contributions of property and business enterprise, and if we allow for differences in income distribution, it is apparent that this index will be seriously affected by the extent to which the states are exploiting their sources of tax revenue. It is not reasonable to hold that a state has a low fiscal capacity merely because a faulty tax system does not enable it to collect all the revenue it could under the rules of the market. So, apparently we must return to the model tax plan approach if we are to include and weight correctly all the factors that contribute to the fiscal capacity of a state.

V J. L. MARTIN

These comments deal with the use of measures of income as indexes of fiscal capacities in the making of variable grants. Granted the validity of variable grants and of reference to income data in the making thereof, two concepts inherent in Dr. Wueller's approach could well receive further analysis and extension: the idea of model tax systems and of priority of claims

against income. Discussion of these two concepts cannot be entirely separated.

Dr. Wueller points out that the use of estimated revenues from model tax systems as measures of fiscal capacities has been subjected to significant criticism, in part on the grounds that the selection of models involves the investigators' preconceptions. It is important to recognize, however, that the use of unadjusted income data as indexes of fiscal capacities provides no absolute solution for this problem. Such an approach merely assumes a model tax system in which every dollar of income, within the limitations of the concepts employed in the measurement thereof, is equally taxable.[1]

In considering the problems inherent in the use of income data in the construction of indexes of fiscal capacities, it might first be profitable to consider a few generalizations [2] on the nature of the relation between our public and private economies. (a) Tax structures are determined by public opinion, or politically effective sentiment. (b) Further, taxes take three general forms: levies against income, transactions, and wealth. (c) The functioning of our government units today is such that it is extremely doubtful that any differentiation can be made beyond the national government on the one hand and a combination of state-county-city-minor divisions on the other.[3] (d) There are claims against tax revenues that have a priority status relative to other claims. (e) There are claims against income of such a nature that the amounts thereof are less subject to taxation than the rest of income.

The control of tax structures by public sentiment raises some presumption that the assumed model tax system should be based upon the existing system. It is not reasonable to presume that public sentiment will approve any assumed structure that is radically different from the existing structure. Assumption of a

[1] Dr. Wueller implies that some dollars are not equally taxable when he recommends deduction of federal tax collections from income before computation of indexes.

[2] Subject, of course, to the usual exceptions.

[3] That is, there is a relatively distinct cleavage between the services performed by the federal government and by all other government units. The cleavage is much more ragged between the services rendered by each of these other government units.

radically different structure may well tend to defeat the purpose for which the assumption is made, since the inherent rigidity of the tax structure might prevent the raising of the revenue that is presumed in the indexes of fiscal capacities. This consideration is especially important because the idea of variable grants apparently tends to become effective in government policy when sufficient revenue is not raised for performance of a service at a given level. There is merit, of course, in the application of the same model in all units.

If this interpretation of the importance of existing tax structures is accepted, some attention must be given to the relation between taxation and income. Existing tax structures levy against income, transactions, and wealth. The Bureau of the Census shows in official figures for 1931–32 [4] that only a small proportion of state and local revenues were then derived from taxation of income as such and part of this probably represents taxes levied against corporate income.[5] Because of the effect of exemptions and variable tax rates, even this small proportion will probably not be related directly to measures of income. Taxes levied against wealth are taxes levied against valuations of future income or consumption and need bear no fixed relation to current income. Taxes levied against transactions are related to current income perhaps even less directly.

The interlocking functioning of state, county, city, and minor division government units in the rendering of services may be readily demonstrated.[6] This interlocking becomes important when the priority of claims against tax revenues is considered because, granted the priority, the adjustments to income figures in recognition thereof would need to be based on the total costs of the services as rendered by all the different units. An illustration of priority of claims to tax revenues lies in the reasonable

[4] *Financial Statistics of State and Local Governments: 1932*. These are the latest official and comprehensive figures.

[5] Such income may or may not be included, at least directly, in the measurement of income used as a basis for computing an index of fiscal capacities. The percentage of revenue derived from income taxes has risen in the interim but probably remains definitely less than revenue from other sources.

[6] In 1931–32 government cost payments by counties for health and sanitation were 29 per cent of all such government cost payments in Ohio and 17 per cent in Indiana. Cities contributed 38 per cent of all government cost payments for highways in Ohio and 25 per cent in Indiana. Similar illustrations are numerous.

certainty that such services as the protection of persons and property will be maintained at some level or degree before services such as the payment of pensions to the aged are initiated.

The establishment of priorities is difficult. There is a possible presumption, however, that the services first provided by government are the most important, although such a presumption is subject to limitations imposed by changing public sentiment. Perhaps more fruitful analysis could be made in terms of the services first curtailed when government units have adopted programs of economy. To the extent that rationalizing from the order of establishment or curtailment of services provides a basis for determining priority of claims against tax revenues, this problem may be solved with relative ease. Ideally, however, the analysis should be made in terms of levels of services and this treatment would be more difficult. Perhaps some workable solution is derivable by an assumption of priorities on the basis of some type of analysis suggested above with an arbitrary assignment of priority to the service to be initiated, equalized, or expanded in such position that expenditures for services of later priority would tend to offset possible economies in expenditures for services of earlier priority.[7] Of course, the whole idea of priority of claims is necessarily based on the assumption that tax revenues are limited.[8]

Some forms of income are not subject to taxation as income, but they are relatively limited. All, or nearly all, income is subjected to taxation when translated into consumption or savings. More important is the fact that different forms of income, consumption, and savings are taxed at different rates. They are taxed at different rates both because of their inherent nature and because of their tendency to be identified with different classes of income recipients. The emphasis today on taxation levied on

[7] For instance, assume the existence of services A, B, C, and D and the proposal to add service E. Analysis determines the priority ranking of A, B, C, and D in that order. We assign E to a position between C and D on the further assumption that possible economies in the cost of A, B, and C will make it possible to continue D at some level and render service E at a defined level. This is an illustration, not a formula.

[8] If government had the means of performing all conceivable services there would be no problem as to which services to perform and at what level. This is obvious, but its recognition is important because it establishes priority as a function of revenue.

the basis of so-called ability to pay is clear in the field of income taxation proper. To the extent that wealth and income are similarly distributed the tendency is also clear for taxation levied against wealth. The relation of taxation levied against transactions to income is less clear. Perhaps no exact quantitative solution can be formulated to express the relation of taxation to income, but the importance of the consideration might well warrant the assumption of some arbitrary per capita deduction from income before computation of indexes of fiscal capacities.

These many problems might seem to demolish the case for the use of income data in the making of variable grants were it not that the existence of a better basis for making such grants has not been demonstrated. Pending the development of a better basis, it might be wisest to make adjustments to income data and to employ these adjusted figures in the construction of indexes of fiscal capacity. The need for adjustment arises from the two ideas these comments have sought to establish: not all income dollars are equally taxable; a priority of claim against tax revenues exists. In general, the solution to the first problem will be found in detailed analysis of income by type of payment,[9] and to the second in detailed analysis of the structure of government.

The adjustment procedure might follow some such pattern as this: (a) From total payments or income of each type in all units to receive the grants, deduct all collections of taxes by the government unit making the variable grant, since the assumption of a superior priority for such collections is vital to the logic of variable grants.[10] (b) From the net totals above subtract some amounts totaling to an approximation of the amount of income to which other claims exist of priority superior to other tax claims. This might be a standard amount varied between localities on the basis of relative costs of a standard of living. Because all, or nearly all, income is subject to taxation in its disposition if

[9] Pending the development of or supplementary to analysis of size distributions of income.

[10] Note the difficulty of assigning deductions as charges against types of payment. This difficulty should not cloud the theory, however, and no better approach offers itself pending the development of size distributions of income. Similar treatment might also be given to borrowings of the unit making the variable grant to the extent that such borrowings increase total debt, but such an adjustment is not practicable because of the difficulty of identifying geographic sources of funds.

not in its receipt, these deductions can be merely approximations to the amount of income per capita not subject to taxation under the general pattern of taxation standardized from existing tax structures.[11] (c) Adjust the remainders for all units in such manner that each dollar of combined type of income or payment totals will be equally taxable. This process would be essentially one of applying different weights to different type of income payment remainders.[12] (d) Convert the figures for all units adjusted in step (c) to the level of the sum of the remainders (b) for all units. This amount is gross potential tax revenue by definition, since prior claims to income have been deducted in (a) and (b). (e) From the gross potentials above, subtract amounts determined to be superior claims on tax revenues. The resulting net revenue potentials will serve as a basis for computing indexes of fiscal capacity.

VI HANS NEISSER

Dr. Wueller's index is based on two premises, that 'ability' can be measured approximately as average income in the state, and that 'needs' are approximately proportionate to population. I shall not attempt to discuss here the validity of these standards; rather I shall attempt to present the logic of the regional income concept to be applied if these standards are accepted. The problem is: to what extent must federal taxes be considered as reducing ability, and federal disbursements as increasing it? From a theoretical point of view, any state finds itself in a situation strictly analogous to the situation of the nation as a whole in relation to foreign countries. Now, we define the available income in the United States as given by the value of the net output plus or minus the balance of the current debt payments from or to foreign countries; voluntary contributions sent abroad are not treated as reducing available income.

[11] Persons at or below these levels will pay taxes, but the amount of such taxes should be approximately equivalent to the additional taxes persons above these levels would have paid had all their income been subject to taxation.

[12] Note that payments of different types may be taxable directly or indirectly more than once and in more than one jurisdiction. Further, this adjustment or equalization must also take care of the equation to income of taxes levied against transactions and wealth as well as income, consumption, and savings.

Correspondingly, the available income in a region or state is equal to the value of the net output plus or minus current debt payments from or to 'abroad'; 'abroad' denotes here not only the other states but also the federal government.

The value of the *private* net output is equal to the sum of net incomes plus cost taxes minus subsidies. Cost taxes are all taxes payable by an entrepreneur and deductible from his taxable in-come. It does not matter by what authority these cost taxes are imposed, whether by the state or by the federal government, but it matters *where* they are imposed. Tariff duties, for example, affect only the *price of import goods*, which do not represent a part of the net output in the state. On the same grounds the in-come in state A is not affected by excise taxes or sales taxes im-posed on capital goods produced in state B by either federal or state government, even if these goods are exported to and uti-lized in state A.

The 'public income' in any state is given by the net value of services performed in the state by the government, exclusive of mere 'transfer expenditure'. Services of the federal government are on the same footing as services performed by the state or mu-nicipal government. A difficulty is created by the centralized serv-ices of the federal government, i.e., its activities in Washington, D. C., the costs of the army and navy, etc. One can either leave them out of consideration or distribute them among the states according to some standard.

Main interest centers around the correction of the value of the net output to allow for current debt payments. Interest, rent, and dividend payments from firms in one state to residents of an-other state represent the one item. The other item is represented by federal taxes. From the outset it is clear that no 'federal drain' from the state is created by cost taxes which, not being levied *in* the state (according to the principle stated above), do not affect the income in the state; and it follows too, that it does not matter much *which* federal cost taxes were included in computing the value of the private net output of the state: because the federal cost taxes included cancel out against the corresponding item in the federal drain. The items that really count are federal non-cost taxes, especially income and estate taxes.

Against the federal drain, constituted as just described, we

have to put, in the 'balance of payments' of the state concerned, the 'federal reflux', i.e., payments from the federal treasury to the state regardless from what sources or for what purpose. In other words, the available income in the state consists first of the services of certain federal officers residing in the state, and second, of the income these officers receive from Washington and enjoy as members of the community they are living in. To convince oneself that no double counting is involved one has only to consider the limiting case in which the total federal drain is returned as salary for, say, federal judges residing in the state: the *net* federal drain is zero and the services of the judges are a part of the income in the state.

If the regional income, determined in the way just indicated, is to be used as the basis for assigning federal grants, then it must not be overlooked that such grants would form a part of the federal reflux and, therefore, would increase the regional income. The most logical thing to do is to include the grant in question in the 'hypothetical' regional income and to compare it with the 'hypothetical' income in other regions. Otherwise, splitting up the grant in successive portions would affect the result.

VII MILTON FRIEDMAN

Dr. Dulles' comments on Dr. Wueller's paper serve to bring to the fore a confusion that seems to account for much of the failure of the author and the other commentators to see eye to eye. Dr. Wueller objects to model tax systems while Dr. Groves and Dr. Keith defend them; Mr. Martin and to some extent Dr. Groves suggest that a particular model tax system is implicit in Dr. Wueller's scheme and that this implicit system is undesirable since it assumes all taxes directly related to income; Dr. Wueller's reply seems to be that this is not a valid objection because the assumption is not far from the truth, but that it would not matter even if the assumption were far from the truth because the additional tax income appears in the accounts as income of government officials; Dr. Colm agrees with Dr. Wueller's conclusion but for only the second of the two reasons advanced.

These confusing and contradictory attitudes can, it seems to

me, be resolved if we follow up the hint that Dr. Dulles lets drop. Dr. Groves, Dr. Keith, Mr. Martin, and, I believe, Dr. Colm interpret the per capita income figures primarily as intended to measure relative capacity to secure revenues for government functions, i.e., as intended to measure relative *fiscal capacity*. In their view, Dr. Wueller takes the concern of the government unit that is contemplating the making of grants—presumably the federal government—as primarily the maintenance of the functions of the governments to whom the grants are made—presumably the states—at a level fairly uniform from state to state. The level of activities other than those financed by public bodies is taken to be either of no concern or of only secondary concern to the government making the grants. If this interpretation were accepted, and strictly adhered to, the objections of the commentators would have to be granted almost complete validity. The relevant question from this point of view is the amount the states can raise as revenues; and if taxes based on or closely related to income do not provide the greater part of the revenues of the states, it will be a pure accident if per capita income is a good index of fiscal capacity in this sense. Moreover, it is no answer to this criticism that the tax receipts appear as the income of government officials and therefore are fully taken into account by measures of per capita income. This is the same sort of lifting-oneself-by-the-bootstraps argument as the contention that because individuals spend their incomes, a particular firm can pay any amount to its employees, since the more it pays the more it gets back. The point is that so far as part of the funds paid to government officials are returned to the state in the form of taxes, this merely means that the *net* cost of government services is less than the figures entered in the books; and the larger the total sum paid to employees the greater the reverse flow. But obviously this in no way accounts or allows for differences in the ease with which the funds to meet this *net* cost can be obtained from the rest of the community—the real point at issue.

Another interpretation of the purpose for which the per capita income figures are to be used is, however, possible. One may interpret them as measuring the capacity of the states to perform both government and private activities, i.e., as measuring relative *economic capacity*. Under this interpretation the purpose of

grants by the federal government would be to equalize the level of 'real' income among the states whether this income is provided by public or private activities. From this point of view, the use of per capita income can no longer be objected to on the grounds that many taxes are neither based on nor closely related to income. The character of the tax system will determine the relative share of public and private activities in a state's economy; it will only indirectly affect the absolute level of 'real' income, except as one state can through taxation divert to itself income that would otherwise have gone to a different state. Further, the inclusion of both the incomes of public officials and the taxes paid out of income in measuring the per capita income of the state is entirely valid and completely allows for the direct influence of differences in tax systems.

It is not entirely clear to which of these interpretations Dr. Wueller adheres. His seemingly studied avoidance of the modifier 'fiscal', his repeated reference to 'public and private economies' in discussing services, and the internal structure of his argument all point, though by no means unambiguously, to adherence to the second interpretation.

A clear differentiation between the two interpretations suggested serves to clear up several difficulties in addition to those already mentioned. Consider, for example, the question whether federal drains should be deducted in computing per capita income. If the per capita income figures are interpreted as measures of fiscal capacity, the first interpretation, and if there is a clear separation between the functions of the federal government and of the state and local governments, then the federal drains clearly should be deducted, for they represent part of the income of the state that cannot possibly be used to finance functions of the state or local governments. On the other hand, if the per capita income figures are interpreted as measures of economic capacity, the second interpretation, the treatment of federal drains depends, in theory at least, entirely on the use made of them. That portion of the funds that is used to provide services enjoyed by the residents of a state, or that is returned to the state in the form of grants, clearly should not be deducted; the remainder equally clearly should be deducted. (The remainder might of course be either positive or negative.)

Again, consider the problem stressed by Dr. Groves, the treatment of differences in inequality of income. Of two states with equal per capita incomes but different distributions of income, the state with the greater degree of inequality presumably has the greater *fiscal* capacity, but the smaller *economic* capacity.

A final point, quite unrelated to the preceding, perhaps deserves emphasis. If per capita income is conceived of as a measure of *economic* capacity, and if the purpose of grants is conceived of as the equalizing of 'real' income, then the problem of the geographic unit for which per capita figures are computed becomes of paramount importance. It may be hazarded that the observed differences among states in per capita income are more largely attributable to differences in degree of urbanization than to differences in the incomes of individuals residing in the same size of community; i.e., it may be hazarded that the per capita income of Alabama is lower than that of New York not primarily because a farmer in Alabama has a very much lower income than a farmer in New York or because a resident of a city of 100,000 in Alabama has a much lower income than a resident of a city of 100,000 in New York, but rather because, in both states, farmers have lower incomes than city dwellers and farmers constitute a larger proportion of the population of Alabama than of the population of New York. If this guess is right, and there is some slight evidence in its favor, a real question arises concerning the extent to which transfers of income from states with high per capita income to states with low per capita income will serve to equalize 'real' income.

In the first place, the problem of differences in cost of living becomes really acute; the general presumption is that the cost of living varies greatly among different sizes of community, although we have as yet not succeeded in measuring these differences at all satisfactorily. In the second place, and this is perhaps even more fundamental, even if cost of living were the same for all sizes of community, unless each state attempted to equalize incomes within the state, equalizing grants by the federal government might increase rather than decrease inequality. Suppose for example that farmers in Alabama and New York have identical average incomes, and so do residents of any given size of community, and that within both states the average income of

residents is higher the larger the size of community in which they reside. Because of the greater importance of large cities in New York per capita income in New York State would, under these conditions, be considerably higher than per capita income in Alabama. In making equalizing grants based on measures of per capita income, funds would be raised in New York State and transferred to Alabama. The net result, in the absence of attempts to equalize incomes within the states, would be that the poor farmer in Alabama would be subsidized, and the equally poor farmer in New York taxed! If the differences among sizes of community in average income reflected in the main differences in cost of living, the end product would be even more undesirable. In that case, equal standards of living in two states would necessarily be rendered unequal by equalizing grants. This tendency would be even stronger if, as Dr. Colm suggests, the cost of rendering the services supported by the grants varied in the same manner as cost of living in general.

I am not of course suggesting that the hypothetical situations I have outlined are correct and adequate representations of the existing situation. But the chance that they are not completely unreal seems sufficiently great to raise a serious question as to the wisdom of utilizing state per capita income figures as the basis for apportioning equalizing grants before the nature of state differences in per capita income and of size of community differences in cost of living are thoroughly investigated.

VIII P. H. WUELLER

I should like to take this opportunity to call attention to an apparent misunderstanding between myself and the commentators on my paper. As Mr. Friedman has pointed out, one "may interpret" [1] my suggestions as being concerned with the proxi-

[1] In the spirit of 'vindictiveness', I beg leave to point out that, in my opinion, Mr. Friedman's phrase "may interpret" accords the commentators a more lavish measure of the benefit of douht than they are entitled to. In partial substantiation of this opinion, it may be pointed out that, seemingly, only two of the seven commentators (Gordon Keith and J. L. Martin) criticize my proposal on the assumption that the formulation and quantification of some concept of *fiscal* capacity is the issue under consideration. Dr. Groves, on the other hand, though observing

mate measurement of (a) the states' *fiscal* capacities or (b) the states' *economic* capacities. For the sake of clarification, I wish to state emphatically that my suggestions are concerned with the measurement of *economic* capacity for federal-state variable grant purposes.

With this stumbling block removed, the subsequent observations will be devoted to a brief consideration of some of the specific issues raised by the commentators. First, as regards the contention that some model tax system is implicit in the use of income as a capacity determinant, I can do no better than deny this contention and refer to the comments of Dr. Colm and Mr. Friedman for a justification of this denial.

Second, some commentators (Dr. Groves and Dr. Keith) have suggested that federal-state variable grants be made on the basis of the states' fiscal capacities.[2] Though Dr. Keith rests his case with a dictum to the effect that the model tax system approach *must* be used, Dr. Groves is more specific when he proposes to measure fiscal capacities by 'the actual tax plan', such 'actual tax plan' to represent a sort of consensus of procedure in the states.

Though, on the surface, Dr. Groves' plan seems to avoid the difficulties that seem inescapable whenever an investigator's preconceptions are admitted as fiscal capacity determinants, unfortunately, upon closer inspection, this does not seem to be the case. The choice of the average tax system [3] is but one of an infinitely large number of possible choices. It is explicable only in

by way of introductory remark that "Wueller's paper deals with . . . economic capacity", seems to turn about and criticize the proposals on the assumption that I set myself the task of suggesting possible measures of *fiscal* capacity.

[2] In passing, it may be observed that none of the suggestions contains or refers to a definition of fiscal capacity. For an attempt at the formulation of alternative concepts of fiscal capacity see P. H. Wueller and Associates, *The Fiscal Capacity of the States: A Source Book,* section on 'Method and Measures'.

[3] In the light of the marked differences among tax systems (see *ibid.,* Table III, Alabama–Wyoming) the possibility of constructing a statistically significant average system may be doubted. I gathered the impression at the meeting of the Conference that some of the proponents of the model tax system approach proceed upon the assumption that the hypothetical importance of a given tax system upon different state economies facilitates the computation of hypothetical state tax revenues whose actual abstraction would represent equal tax effort for all states. In the light of what is common knowledge with respect to the differences in the economies of the states, the validity of the equal tax effort assumption is not beyond dispute.

terms of the investigator's preconception as to the 'proper' relation of the private to the public economy. Again, use of the average tax system seems unsatisfactory, because to be truly representative it would make extensive use of capital values for tax base purposes.[4]

Third, Mr. Martin, though apparently accepting income as a basic capacity gauge, proposes to use the measure in a somewhat different manner from that suggested by me. Mr. Martin seems to object to the suggested use of income data on two grounds. In the first place, he seems to be of the opinion that the suggested approach implies subscription to the postulate that "all income dollars are equally taxable". Second, he feels that "a priority of claims against revenue exists" which the suggested approach allegedly disregards. Mr. Martin's first contention seems to lose its relevance if it is clearly realized that I aimed at suggesting a measure of *economic* rather than *fiscal* capacity. In considering Mr. Martin's second contention, it is well to remember that one of the purposes of variable ratio grants is to change the "existing priority of claims against tax revenue".[5]

In conclusion, it may be permissible to call attention to some of the possible objectives of federal-state variable ratio matching grants. As Dr. Dulles has pointed out, different interests may wish to use the federal-state variable grant device for different purposes. To clarify my position, I should like to state that throughout my paper, I proceeded upon the assumption that it was the purpose of federal variable grants to facilitate some degree of equalization of service offerings.

Last, as regards the probable degree of equalization that could reasonably be expected if federal-state variable grants were incorporated into the contemporary institutional framework, I share Mr. Friedman's point of view. He suggests that at least in those

[4] Cf., *ibid.*

[5] To the extent that Mr. Martin's priority argument is a logical derivative of his claim with respect to the alleged rigidity of tax systems, it is of doubtful validity. The term 'rigid', which Mr. Martin applies to state tax systems, is not meaningful unless related to some point of reference. Some such necessary relation Mr. Martin fails to establish. However, tax systems, that is, the absolute and relative yield of specific tax bases, nominal and effective rates carried by specific bases, as well as the relative magnitude of total revenue fractions devoted to specific purposes, exhibit higher rates of change than some basic series such as income paid out, population, volume of product, and sales.

states which provide for the financing of a given function by means of state-local constant ratio matching grants, federal variable grants may well accentuate intra-state variations in service or cash offerings. In other words, inter-state equalization devices without intra-state variable grants cannot reasonably be expected to equalize service or cash offerings.