Part Six

SOME PROBLEMS INVOLVED IN ALLOCATING INCOMES BY STATES

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Discussion

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A WIDESPREAD and growing demand for income data for geographic divisions of the country comes from a great variety of business, research, and government sources.[1] Since in general it is not very articulate as to precisely what information is desired or what geographic unit is to be used, the investigator must determine for himself just what he can provide in response to what he considers the needs. He will be guided in part by the nature of the source material. The concepts and scope of income estimates for the United States as a whole have become fairly well standardized and the differences that persist are usually reconcilable. Seemingly these same methods should lend themselves to the determination of income for geographic divisions with no added difficulty. However, the very act of making geographic allocations and emphasizing relative magnitudes raises many new questions and enlarges existing problems.

In this paper an attempt will be made to raise and discuss several questions concerning the various purposes for which state income estimates might be prepared, the items to be considered

1 The Income Section of the Department of Commerce recently released estimates of state income payments which include wages, salaries, interest, dividends, entrepreneurial income, net rents and royalties, direct relief, Social Security benefits, and the soldiers' bonus. See R. R. Nathan and J. L. Martin, *State Income Payments, 1929–37* (National Income Section, Division of Economic Research, Department of Commerce, May 1939). This Bulletin can be obtained on request. The Department plans to publish a volume later this year or early in 1940 presenting the estimates in considerable detail and discussing the concepts, scope, sources, and methods underlying the figures.

for inclusion or exclusion for the different purposes, problems of a conceptual nature, sources and methods of estimation, the use of states as geographic divisions for the apportionment of income, and the qualifications that must be considered in interpreting the figures. Although it may not be the most logical sequence, the paper presents these questions in the order listed.

I *Purposes of State Income Estimates*

The uses for which estimates of income for the various states may be prepared are many. It is important for the estimator to have in mind the objectives of his study since the concept and scope of the estimates will vary considerably depending upon the particular uses to which they are to be put. A variety of income figures might be developed for each state and each set of estimates would be useful for limited purposes. In suggesting different estimates for various uses, problems of measurement are largely disregarded in this section but will be considered later.

1 MARKET ANALYSIS

From the viewpoint of the government and particularly such an agency as the Department of Commerce, state income estimates should be designed to include information helpful to business enterprises for the purpose of market analysis. Advertising agencies and firms that distribute their commodities nationally are eager for information that indicates the magnitude of, and the changes in, the purchasing ability of individuals in the various states and in smaller geographic divisions. For this purpose, the estimates should presumably include all the monetary receipts of individuals available for current expenditures within the state. Even with such a seemingly simple concept it shortly becomes apparent that the precise scope of appropriate figures is difficult to define.

If income received were confined to compensation received for services rendered, serious limitations would attach to the estimates, primarily because of transfers of income across state lines. Thus, dividend recipients or wage earners in one state make gifts to individuals in other states. Remittances by persons to relatives or dependents in other states exercise a significant influence on the purchasing capacity of residents of certain areas. Thus, in the District of Columbia there are many government employees who send part of their earnings to dependents in their home states. On the other hand, many hopefuls come to the District of Columbia in search of jobs and require remittances from the folks back home pending success in their quest for a government position. Similar forces are at work in other large cities. Remittances from parents to students in out-of-state schools and colleges involve a rather substantial transfer of funds. Such transfers of income may not affect the total social income or the total purchasing ability of all persons in the United States but in addition to influencing the size distribution of income, they may exert an important influence on the total purchasing power of individuals within limited geographic areas.

In considering interstate transfers of income as an influence on purchasing power, some thought must be directed toward the treatment of the transfer of assets as well. From the viewpoint of possessing command over goods and services, the recipient of funds or goods that were a part of the current income of the giver is in the same position as the recipient of funds or goods that were part of the cash accumulation, receipts from the sale of assets, or goods of the giver. Inheritances may have the same effect on purchasing power as gifts which find their source in current income. Perhaps it will be necessary to classify interstate transfers of income and wealth on the basis of their probable use by the recipients in order to determine whether to include the receipts as contributions to purchasing power where received. Similarly the alternative uses by the transferer of the income or wealth to be transferred must be considered in order to give proper attention to necessary deductions from aggregate purchasing power where the transfer originates. These considerations apply, at least in part, to intrastate as well as to interstate transfers.

The sale as well as transfer by gift or inheritance of assets across state lines may be a factor in determining income available for current purchases of goods and services. Capital transactions within a state would not affect total purchasing power since the receipts of the seller would be offset by the absorption of the purchasing power of the buyer. However if a resident of one state sells his assets to a resident of another state, total current or liquid purchasing power in the former state is expanded. Of course, all assets possessing marketability are in themselves purchasing power, having command over other goods and services. The owner of a house has as much purchasing capacity as the one who has just sold his house and possesses cash, provided neither or both intend to use the house or cash for purchases of other goods and services. The net withdrawal or deposit of funds in banks or other savings institutions by individuals might influence net funds available for current purchases depending upon the use to be made of the withdrawals or alternative use of the deposits and upon the effect of these deposits or withdrawals upon bank investments. Subjective elements are clearly important in evaluating the effects of transfers of claims to assets. 'Purchasing power' might well form the basis for a paper in itself and the discussion here is designed to point out some of the problems involved in the scope of income estimates for marketing analysis rather than to discuss purchasing power itself fully. Asset transfers are on the whole disregarded in this paper, which deals primarily with the current flow of income and, to a minor extent, with transfers of income.

Some question might also be raised concerning the exclusion from income estimates for market analysis of portions of income that are contractually obligated for specific purposes such as life insurance premiums, Christmas savings accounts, or reserves to meet legal obligations such as taxes. Here again it seems apparent that rigid standards of inclusion or exclusion would find little agreement among different users of the figures. In the case of installment credit, some might suggest including the credit as purchasing power when granted and then deducting the installments when paid from current income of the debtor.

Other problems also affect the validity of estimates of income received in the various states as measures of purchasing power. Individuals may receive their income in one state and make expenditures in other states. Thus, during the winter vacation season, the income of the regular residents of Florida is substantially supplemented by the expendable funds of tourists who received their income in other states. The expendable funds of the regular residents in the home states of these vacationists is correspondingly reduced. To a less extent, goods purchased by direct mail also involve a movement of spendable income across state boundaries. Also many market areas cross state lines, as illustrated by the New Jersey and Connecticut residents who do much of their shopping in New York City. Thus, the estimates of income received, usually confined to receipts of residents in each state, are not precise measures of funds available for purchases or of actual purchases in specific areas.

Income in kind is also important in this connection. This factor is particularly significant in agricultural states where a substantial proportion of the total income of the farm population is received in kind, principally in the form of commodities produced on the farm and consumed by the farm family. Such income is of and in itself a command over these very goods but it is not the kind of income to which the business community looks for sales possibilities. Imputed income from owned durable consumer goods falls in this category. Of course, imputed income and income in kind increases the availability of the cash income of farm families for the purchase of goods other than those included in the income in kind.

The size distribution of income is a very important factor in determining marketing opportunities of different commodities and the nature of the income concept adopted would have a very important influence upon the size distribution of that income among the residents of any particular state. Thus the inclusion of gifts in the income of the recipient and their exclusion from the income of the giver would in itself effect a substantial change in the pattern of the size distribution.

2 ECONOMIC WELFARE

A very important use of income estimates for geographic divisions relates to the development of measures of general social and economic welfare. The figures desired for this particular purpose, though closely related to those developed for marketing uses, should give more attention to non-monetary income. The estimates should certainly include imputed income from the ownership and use of consumer durable goods, especially housing. No doubt the proportion of houses owned varies considerably from state to state and the inclusion of imputed income from owned houses would yield different results from state to state than would monetary income alone. Also desirable, but probably less susceptible to measurement, would be income derived from housewives' services and from functions performed by individuals for themselves or for other members of the household. Very likely the proportion of laundering, cooking, and similar services performed within the home as compared with commercial enterprises or hired help varies considerably from one region to another, thereby limiting the comparability of estimates confined primarily to income derived from the production of goods and services for sale in the market.

Perhaps estimates of income consumed are even more significant as measures of economic welfare than are estimates of income received. Income consumed within a state should include the value of goods and services consumed by individuals within that state, probably confined to consumption by regular residents so that the income and number of persons or consuming units will be comparable.

If the estimates of income received were used as evidence of economic welfare and were to serve as a basis for the allocation of public assistance grants by the Social Security Board or of jobs by the Works Progress Administration, it would seem desirable to exclude Social Security benefits or work relief earnings. Also it might be desirable to exclude expenditures by individuals that do not necessarily relate to the value of benefits received, and substitute the value of the benefits received. Federal taxes might thus be deducted from income received and, if possible, estimates of the value of government services might be added. Limitations attaching to the total and per capita dollar income estimates as evidence of welfare will be discussed later.

3 TAXATION

If the income estimates are to be used directly in determining tax yields or, indirectly, to study the incidence and burden of taxation, the concept of income received should conform to, or be adjusted so as to conform to, the definitions of the existing or proposed tax base. Such estimates, depending upon tax provisions, would probably exclude all relief and charitable receipts but would probably include inheritances and insurance benefits, particularly the excess of insurance benefits received over premiums paid to insurance companies. Realized capital gains and losses should be incorporated in accordance with the provisions of the revenue laws of the state.

If the income figures were confined to taxable items under existing laws and were shown separately for each type of taxable income, such estimates would obviously be useful only in each state individually. On the other hand, if the estimates were designed to provide a basis for determining potential income tax receipts from state to state on the basis of uniform tax laws, the figures would be comprised of all the items the tax estimator considered as properly subject to assessment. The size distribution of income would be essential for tax studies and here again the nature of the distribution would be influenced by the concept of income adapted. Varying size distributions on the basis of different inclusions would be most valuable in studying tax proposals, particularly if the tax rates were to be graduated.

4 PRODUCTIVITY

There is considerable interest in information bearing upon the economic productivity or output of one area as compared with another. Estimates of the net value of product of each state would provide a measure of the economic importance of the various states as contributors to national income. Classified by industrial source, these figures would measure not only the relative importance of different industries in the economic life of each state but would also make it possible to analyze economic fluctuations within the state on the basis of its industrial structure.

Some insight into the economic interdependence of the various states would be gained from studying measures of the net value of product in relation to the interstate flow of goods and services. Also important is the comparison of the net value of product with measures of other income concepts. Frequent expressions are heard to the effect that certain states, particularly those in the South, 'produce' a much greater supply of goods and services than are available for consumption by their residents. The validity of such comments can be tested only after the development and interpretation of appropriate measures. These will be discussed in greater detail in the following sections.

Perhaps too much emphasis has been placed upon the different uses to which income estimates might be put, but such a discussion makes possible a rather realistic consideration of some of the more important items that might be included in or excluded from income estimates. It demonstrates the problems of concept and scope involved in the development of state income figures and should serve to make the estimator 'label his ingredients' and the reader 'use with care'. For each purpose there may be one or more concepts of income and for each concept there may be a variety of uses, but obviously there is no one concept suitable for all purposes.

II Concepts of Income

The National Bureau of Economic Research and the Department of Commerce have defined national income or income produced for the country as a whole as "the net value of all goods and services produced in the United States" or as "the gross value of all goods and services produced minus the value of raw materials and capital equipment consumed in the processes of production". Also, national income has been defined as "the value of goods and services consumed plus or minus the value of changes in the national wealth resulting from current production activities", both after adjustment for the international flow of goods and services. The concept of income produced, which, for the purposes of state estimates, might be called 'the net value of product', seems to be a useful measure for industrial and geographic subdivisions as well as for the entire nation.

Income paid out as used in the Department of Commerce estimates is defined as "the compensation paid to individuals or aggregates of individuals for services rendered" and includes salaries, wages, other labor income, interest, dividends, net rents and royalties and entrepreneurial withdrawals. This measure is useful for determining the relative importance of the different factors of production as evidenced by income paid by producing units for the services of each factor. Income paid out differs from national income by positive or negative business savings; positive when business enterprises retain part of the net product and negative when business enterprises disburse more than they produce.

The Department of Commerce has developed a third series entitled 'income payments to individuals' which might better be termed 'income received by individuals' provided the figures were more fully developed. They differ from income paid out in that certain items that accrue to but are not actually received by individuals are deducted and other items that are actually received by individuals but do not represent payments for services currently rendered are included. Thus, income paid out includes the payroll taxes under the Social Security Act, whereas income payments exclude these assessments but include benefits received by individuals under the provisions of the Social Security Act. Also, income payments include direct relief disbursements, which are not counted as part of income paid out.

Another income concept which, as previously stated, seems particularly useful in the development of state estimates might be termed 'income consumed' and would consist of the net value of product *derived from* economic activity within the state less the value of the net outflow of goods and services from the state and minus the value of net increases in wealth within the state (the latter two may be positive or negative).

III Allocation of Net Value of Product

At this point certain theoretical aspects of these concepts should be considered. Perhaps the most important relates to the geographical allocation of the net value of product. Questions of measurement will be taken up later. First it is necessary to establish certain criteria for the allocation of income by geographic areas.

In general, the basic income measures may be divided into two broad categories, one concerned with income as received by individuals and the other with the net value of product of economic activity. The significance of different measures of income received, varying in the items to be included, has been discussed in some detail earlier in this paper, and aside from the matter of scope, these estimates seem to involve no great conceptual problems. The geographic allocation of income produced or the net value of product does, however, raise serious problems of a fundamental nature.

A simple illustration may make it possible to understand clearly one problem involved. Let us assume that an individual residing in New York has considerable means and wishes to make an investment. He decides to invest his funds in the building of a plant in North Carolina for the manufacture of men's clothing. Plant, equipment, and raw materials are purchased with the funds provided by the New York investor and are located in North Carolina. At the end of a year's operation the net value of product of this particular plant might total $100,000. Let us assume that the entire net value of product is distributed and $80,000 goes to the employees in the form of wages and salaries and the other $20,000 to the absentee owner in New York who has provided the necessary capital. In an attempt to allocate national income, or the net value of product, by states on the basis of these facts, would the entire $100,000 be credited to North Carolina or would only $80,000 be credited to North Carolina and $20,000 to New York?

Obviously, the physical process of making the men's clothing out of raw materials took place in North Carolina. The capital equipment consumed in their production was there and the labor services of North Carolina residents were applied in that state. As to the factors of production, labor's contribution was made in North Carolina, but the capital contribution was made in New York if the situs of ownership might be said to be the place of contribution, or in North Carolina if the actual location of the capital equipment is accepted as the place where the contribution was made.

Perhaps the significance of geographic areas should be considered further. Is any particular importance to be attached to a geographic area as such, or is the important determinant the persons within the confines of a certain place, or more particularly, the residents of a territory? Seemingly a territory apart from its residents has limited significance and allocation would be more fruitful with reference to the geographic location of individuals rather than territorial boundaries as such. With this in mind, the question arises, is there any point in determining the net value of goods and services *derived from* economic activities taking place within the physical confines of North Carolina or any other state when this net product is *derived by* residents of other states as well as by residents of North Carolina? This question has more than mere academic importance in these days when conflicting economic interests seem to be arising anew in different states and are manifesting themselves in trade barriers of one kind or another. Complaints to the effect that much of what is 'produced' in southern states is taken away by northern interests who have 'foreign' claims upon it can best be analyzed by understanding all the implications of such statements and by presenting appropriate data.

In view of these considerations it would seem more important, *if a choice were necessary*, to allocate the net value of product by states on the basis of such a concept as 'the net value of product *derived by* residents of a state from their labor and from the services of their property, wherever located', rather than on the basis of the concept of 'the net value of product *derived from* the resources of labor and wealth employed in a state'. The former measure would, in the illustration used, allocate \$80,000 to North Carolina *residents* and \$20,000 to New York *residents*, whereas the latter measure would assign the entire \$100,000 to the *state* of North Carolina. The results of the former choice would be identical with assigning the net value of product to the location of the residence of the one making the contribution to production, assuming that the capital contribution is made at the situs of the owner or investor. The estimate of net value of product derived by the residents of any one area would then be equal to the income for services rendered that is received by or accrues to residents of the area.

If the person, as a contributor of his capital to production, is the primary force rather than the capital itself, then the 'derived by' concept is more significant. On the other hand, if the actual capital equipment is regarded as the primary force, the 'derived from' concept predominates. Capital equipment accumulates through the investment and savings process, the savings representing an abstention from consuming all that is produced. By saving, individuals acquire goods or claims thereto, and receive income for making the goods available for further production. Without savings the capital equipment would not exist and without the decision of the owner it would not be made available for further production. Therefore, the contribution of capital to production is the contribution of the owner and the product of its use should be allocated to the owner wherever he may be.

It should not be intimated that the acceptance of the measure of the net value of product *derived by* individuals in a state as the more important concept will satisfy everyone or that the *derived from* concept is of no value. Many feel that mere situs of ownership is irrelevant and incidental in the matter of income produced. They claim that the contribution of capital is made where the physical capital is located and that the yield of that contribution should be allocated to the state where the assets are located and not to the state of residence of the person possessing the claim to these assets. Further, it is pointed out that the proposed measure of income *derived by* individuals in a state is not indicative of the productivity of labor and capital residing in that state. If the investors were to move about frequently from state to state, there would be marked shifts in the figures whereas the goods and services coming into being within each state might remain unchanged.

If estimates are developed of the net value of product *derived from* economic activity in each state, they are likely to be interpreted in such a way that misunderstanding will increase. It is inevitable that the state as such, and its residents as such, will be used interchangeably and the figures will erroneously be used as measuring the value of output of the *residents* of each state. The conversion of these estimates to a per capita basis, also inevitable, would yield not only meaningless figures but ones that would be compared with per capita income received and would tend to further confusion and misinterpretation.

Perhaps a wrong impression is left after this discussion. It is not intended to imply that the 'net value of product *derived by*' concept is the only important one and that no use whatsoever can be found for measures of 'net value of product *derived from*' each state. Of the two concepts, which measure entirely different things, the former seems the more important. The latter is useful but it must be used with understanding. In tax studies, where the net value of product is the proposed base of taxation, such data would be exceedingly helpful, but here again any overall comparison of total receipts from taxes of all kinds with figures on the net value of product *derived from* each state would be misleading, for taxes are usually based on a variety of income concepts. If a geographic area were of economic importance as such, a measure of the output of the factors of production actually applied there would be important for determining the contribution of that area (not of its residents as such) to the national economy. States are entities primarily for administrative purposes and inherently have limited economic significance. The use of states as geographic divisions for economic studies is determined largely by practical considerations. The state income estimates for all concepts are thereby limited in usefulness but this limitation seems to reduce the usefulness of the 'income *derived from*' estimates more than that of other measures.

In all this discussion, income attributed to the services of property has alone been considered specifically. The geographic allocation of net value of product might be further confused by the problems arising from interstate flow of wages and salaries. We may examine another instance which brings out this point more clearly. Let us assume that no one lives in Delaware and that there are no assets existing in that state (for the sake of simplicity, land is disregarded as a factor of production). Individuals in Pennsylvania make investments by purchasing machinery and plant which is then located in Delaware and all individuals employed in this plant reside in Pennsylvania. The question arises: Is any of the net value of product of this economic undertaking to be assigned to the state of Delaware?

Here we are confronted with determining not only the allocation of income resulting from the contribution of capital as a factor of production, but also the contribution by labor as a factor of production. Should labor's contribution to the production of goods and services be assigned to the place where the effort is expended or where the laborer resides? The only logical conclusion consistent with the suggested treatment of capital necessitates assigning the net value of product contributed by labor to Pennsylvania in the estimates of 'income *derived by* the residents of a state' and to Delaware in the estimates of 'income *derived from* the labor and wealth employed in a state'. True, the contributor resides in Pennsylvania and makes his contribution in Delaware but the product of his efforts is derived by a resident of Pennsylvania. He can be looked upon as a person possessing a capacity to work. The person is a resident of Pennsylvania and owns the capacity to work, which capacity is applied in Delaware.

In this particular example, the question might well be asked: What would be the use or importance or real meaning, aside from industrial source and type of payment analysis, which may have no significant relation to state lines, of figures that measured the net value of product *derived from* economic enterprise in Delaware? There are no residents there and no income is received there. No per capita income could be derived by dividing income by the number of residents, which is usually considered the first requisite step for comparative purposes. This extreme example illustrates the need for clearly defining and understanding different concepts and for properly interpreting the various measures of income.

IV Methods of Measurement

Many income items appear in a considerable number of different income estimates and it is perhaps more satisfactory to consider each item individually at this point rather than attempt to discuss methods of measurement for each income concept. Although any actual attempt to prepare estimates requires a determination of precise sources of data and methods of estimation, the discussion here is in more general terms and little detail is presented as to the limitations of source material.

1 WAGES AND SALARIES

Data on wages and salaries are becoming increasingly abundant and estimates for these items on a state basis can now be prepared with a considerable degree of accuracy for most industries. The basic data are most satisfactory for the larger industries and the margin of error usually increases with the decreasing relative importance of the industry. In 1935 the Bureau of the Census covered many new industries. Payrolls in covered industries totaled more than $21 billion and accounted for more than 60 per cent of the total wage and salary bill of all industries in 1935. In the industries not covered a wide variety of source material may be used for determining base period estimates, including the 1930 Censuses of Occupation and Unemployment which make it possible to develop estimates of employment by industrial groups for April 1930. The limitations of the industrial classification of gainful workers, however, favor the use of these figures only if more direct employment and payroll data are lacking.

Some of the sources of data used by the Department of Commerce for developing basic estimates and for determining annual or monthly changes include various reports of the United States Office of Education, Interstate Commerce Commission, Bureaus of Mines, of Agricultural Economics, and of Labor Statistics. federal and state banking authorities, state departments of labor and industry, some confidential memoranda transmitting special tabulations, and questionnaires for certain industrial categories. In addition, estimates for specific states could no doubt be greatly improved through the use of data from state registration, licensing, job placement, and administrative bureaus. Old age insurance and unemployment compensation payroll data should prove invaluable.

A rather difficult problem arises concerning the interstate flow of wages and salaries. Most data on wages and salaries available from the various industrial censuses are for the state or locality where payments are made. For other industries, however, the source material does not provide direct figures and the methods of estimation yield figures on the basis of the residence of the recipient. For most of these industries the 1930 Censuses of Occupations and of Unemployment serve as a primary basis for geographic allocation of employment, to which average pay rates from related series can be applied.

By and large, most wages and salaries are received within the state where paid, but in certain areas this generalization definitely does not apply and the resulting per capita incomes (using the number of residents for deriving per capita figures) are inaccurate. This is particularly true in the case of the District of

Columbia where a great number of persons are employed who live in Virginia and Maryland. This situation also exists around New York City and Philadelphia. No doubt, there are more persons living in New Jersey and employed in New York City and Philadelphia than there are residents of these cities employed in New Jersey.

This problem of interstate payment of wages can be solved by making special studies of income recipients through mail or interview questionnaires or through employer payroll records in regard to the residence of workers. State tax statistics might contribute to the solution of this problem, particularly where the law provides for separate reporting of earnings from employment in other states or where employers must report on payrolls to individuals in other states. Perhaps an analysis of the wage records collected under the state and federal unemployment compensation and old age insurance provisions, relating the address of the recipient to the address of the employer might be helpful. Of course, such data would be needed only where adjoining areas in different states lead to the crossing of state lines by a substantial number of individuals in their daily travel to and from their places of employment. Traffic surveys of daily interstate travelers or data on holders of licenses for the use of connecting bridges and tunnels should prove enlightening. In addition to employees crossing state lines in regular travel from their residences to their places of employment, there are firms that always have some men traveling, whose checks are mailed to them. It is difficult to approximate the importance of this interstate flow of wages and salaries but the various approaches suggested above might furnish some indication.

2 ENTREPRENEURIAL INCOME

Statistical bases for developing estimates of entrepreneurial incomes are perhaps the least satisfactory of the available source material for various items in national income and would seem at least equally barren for the purpose of studying state income. Fortunately, for two areas in which entrepreneurial incomes are particularly important, agriculture and professional services, which in 1937 accounted for nearly two-thirds of this type of income, some direct information is available. The Bureau of

Agricultural Economics of the Department of Agriculture is now engaged in preparing income and expenditure estimates for each state. The 1929 and 1935 censuses of agriculture provide much useful primary material. In addition, the departments of agriculture of many state governments and universities have gathered considerable agricultural data which make it possible to determine fairly accurate net income figures. For many professions the Department of Commerce has conducted questionnaire surveys which, while not entirely satisfactory for all states because of the small samples, nevertheless provide some basis for determining the net incomes of individuals engaged in independent professional practice. For other industries it may be necessary to adopt general assumptions, such as that the net income of entrepreneurs is the same as the average wages and salaries of employees in identical industries. Perhaps in the near future, data on net income of unincorporated enterprises will be collected by the Bureau of the Census or else field surveys on income, such as the Consumer Purchases Study or the current Minnesota Income Study, will have sufficient coverage for the development of satisfactory estimates of this item. Special tabulations of individual income tax returns to be made on the present Treasury-Works Progress Administration project in Philadelphia should provide useful data.

It is proposed that business savings of unincorporated enterprises be disregarded in state estimates, assuming that the net income and no more or less, is withdrawn by the proprietor. In the first place the national estimates of business savings of entrepreneurs are highly conjectural and the state figures would probably be even less accurate. Second, from a theoretical viewpoint, there are arguments favoring the use of net income as withdrawals and regarding business savings of entrepreneurs as nil, as well as arguments favoring the breakdown of entrepreneurial net income into withdrawals and business savings. It is no doubt true that during periods of prosperity assets are built up by leaving savings in the business, while during depressions assets are reduced by withdrawals in excess of net income. On the other hand, it may be argued that the entrepreneur and his enterprise are inseparable, that he withdraws his entire net income, that during prosperity the entrepreneur, in the role of an individual, makes new investments in his business, and that during depressions he compensates himself only to the extent of his net income, and that additional amounts withdrawn represent disposition of assets by him as an individual, similar to the sale of securities by a stockholder. According to these arguments, savings of entrepreneurs are more closely related to savings of individuals than to corporate savings. The theoretical and practical difficulties involved in this problem are not easily overcome and are the subject of continuing thought and analysis.

3 DIVIDENDS AND INTEREST

The estimation of dividends and interest brings to the fore not only the problem concerning source material, but also the question of where they are to be counted. In the case of wages and salaries they were treated as being received where paid, thus assuming away the question of where they should be included. Were we to attempt to estimate the net value of products *derived from* certain areas and were the estimates to be determined by first estimating income paid out and then adding corporate savings, it would be necessary to allocate dividends, interest, and corporate savings to the states where the capital equipment was in existence. This would be almost impossible. In the first place, data on net income, dividend and interest payments, or corporate savings are not available for all states in accordance with the location of the physical plants. The state tabulation of corporation income tax returns by the Bureau of Internal Revenue is by the states in which the returns were filed, which is where the principal place of business or principal office of the corporation was located.

Many corporations have plants throughout the country and dividends and interest are paid from the place of incorporation or the principal offices in one state. No estimates are available on the value of corporate assets located in the various states and even if such overall or industrially classified figures could be had, they could be used for this purpose only by adopting many arbitrary assumptions. A partial solution lies in having figures on the value of corporate assets in each state for each company; even then it would be necessary to assume that for a company engaged in many activities, the assets in each state contributed proportionally to the net product. Actually some products or processes are more profitable than others and the assets of one corporation in different states are frequently used to produce different products. Income tax returns under many state revenue laws provide for allocating the net income of interstate corporations to the particular state on the basis of one or more items, such as assets, sales, and payrolls. These allocations could be accepted if consistent from state to state, recognizing, of course, the limitations mentioned above. Not all states have income tax laws, and in those states that have such statutes, the definitions of net income and the bases for allocating net income of interstate corporations are not consistent. Obviously, this is a very difficult problem.

On the other hand, if the suggested concept of the net value of product *derived by* individuals in each state is adopted, we can allocate at least dividends and interest to the state of residence of the recipient with a fair degree of accuracy. The problem of allocating corporate savings geographically is almost impossible under any concept. Even if we were to assume that corporate savings should be allocated geographically on the basis of the location of the owner of the property, it would be unsatisfactory to make this apportionment on the basis of dividends. Data on dividends received by states are not available on the basis of industrial source and the relation between corporate savings and dividends varies considerably from industry to industry. Also, dividends are certainly not a satisfactory basis for the allocation of corporate savings when savings are negative and a great number of corporations have paid no dividends. Certainly it cannot be assumed that the stockholders in every state hold stock of the same industrial distribution or that their dividend record is uniformly favorable or unfavorable from state to state. Nor is it likely that positive or negative savings will be distributed geographically in accordance with the holdings of securities on which dividends are paid. These limitations make doubtful the possibility of preparing estimates of the net value of products derived either from each state or by the residents of each state.

If dividends and interest are to be estimated according to the location of the recipient, it is necessary to resort to the use of data provided by the Bureau of Internal Revenue in its annual publication, *Statistics of Income*. About 70 per cent of the estimated total dividends flowing to individuals directly or through insurance companies, building and loan associations, savings banks and other organizations considered as 'aggregates of individuals' are reported as received by individuals who submit federal income tax returns. The annual *Statistics of Income* present data on dividends received by individuals in each state and thus provide a basis for allocating this 70 per cent by states.

For general purposes, it would seem that the other 30 per cent of dividends unaccounted for by income tax returns could be apportioned state by state on the basis of the geographic distribution of the 70 per cent. This assumes that the indirect flow of dividends to individuals through the savings organizations mentioned above would be in the same proportion from state to state as are the dividends reported by the higher income recipients. The error arising from this assumption is probably not very large, particularly in relation to the total income figures in each state and even in relation to total dividend income. Insurance policies, savings bank accounts, building and loan association deposits, and similar evidences of savings are held by persons in both the higher income and the tax exempt brackets and, with some exceptions, these holdings are probably distributed in somewhat the same way geographically as are holdings of securities by individuals. In Delaware these claims are probably less important relatively to direct security holdings than for the rest of the country and probably more important, relatively, in California.

The unaccounted residual is presumably received by individuals whose incomes fall below the level necessitating the submitting of income tax returns. There is no known way of even rationalizing as to whether the geographic distribution of this amount is identical with the geographic distribution of dividends received in the higher brackets. Again, Delaware seems to be an exception with a larger portion of dividends received in the upper income brackets than for the country as a whole. The error in total per capita income by states would probably be slight were it assumed that the geographic distribution of this residual paralleled that of the 70 per cent accounted for on income tax returns. For more specific purposes, this assumption might be entirely untenable.

Considerable further study of source material might make possible refinements obviating the necessity of the assumption that dividends not accounted for in federal income tax returns are distributed geographically in the same manner as those so reported. If the magnitude of dividends received by the different 'aggregates of individuals' is determinable for the country as a whole, they might be apportioned by states on the basis of legal reserves on insurance outstanding in each state and on deposits in savings banks, building and loan associations, and other savings institutions. Intensive analysis of existing data should yield some information on the total dividend receipts of each of these types of organizations in the United States.

As to the dividends received by the individuals in the exempted brackets, there are good prospects for fruitful analyses in the various state studies now in progress or already completed. Wisconsin receives several times as many individual income tax returns as are submitted by its residents to the federal Bureau of Internal Revenue. This is the result of a lower exemption under the state law and different filing requirements. The Wisconsin data should provide excellent material for analyzing the proportion of reported dividends appearing at different income levels as well as the relation of dividends to other income items or to total income at the different income levels. Results of the Delaware income tax project, where the tax returns of practically all income recipients of the state are being tabulated for 1936, should yield interesting evidence on this problem. Likewise, studies of the composition of income in the various income levels, as reported in the Consumer Purchases Study and as will result from the Minnesota Income Project, should prove helpful.

Estimates of interest received by individuals in different states are subject to a greater margin of error than are the estimates of dividends received, since the proportion of the estimated total interest paid to individuals and aggregates of individuals in the United States, which is reported on federal income tax returns of individuals, is much smaller than that of dividends. The Bureau of Internal Revenue reports taxable interest received by individuals by states annually. Unpublished data on tax exempt interest received by individuals in the different states is in the hands of the Bureau of Internal Revenue, but its completeness in any one year and the consistency of coverage from year to year and from state to state are to be doubted. The aggregate of the tax exempt and the taxable interest receipts as reported by individuals submitting federal income tax returns accounts for only about one-fourth to one-third of the total estimated interest paid to individuals and the aggregates of individuals from 1929 through 1936. The assumption that the rest is distributed geographically in the same proportion as the reported receipts is obviously subject to a substantial margin of error. It is no doubt true that a substantially larger segment of total interest than of dividends flows to individuals through aggregates of individuals rather than directly. Therefore a study of these savings organizations, suggested above for dividends, is even more desirable for the interest item. The various state studies should also provide basic data upon which to base needed refinements in the estimates.

4 OTHER ITEMS

The only figures available on a geographic breakdown of rents are those reported by individuals on income tax returns. Pending a thorough revision of the estimates of net rents now in progress by the Department of Commerce, it is not possible to give an accurate percentage that the rent received by income tax reporters bears to total rent received by individuals or aggregates of individuals.

As pointed out in discussing the theoretical aspects of allocating income by geographic divisions, the problem of allocating corporate savings by states is difficult and does not seem to lend itself to satisfactory treatment for all states. However, where state laws require data on the value of assets located within the state these figures might be of some use in an attempt to allocate savings to the state where the physical plant is. Both the dividends and corporate savings of an interstate corporation might be allocated to a particular state on the basis of the ratio of the value of physical assets in it to the value of total physical assets of the corporation. This apportionment assumes uniformity of profitability or of contribution by assets from state to state. A satisfactory allocation requires a very detailed cost accounting system for operations in each state for each corporation with plant and equipment in more than one state.

A further question of a theoretical nature is involved in allocating corporate savings: should corporate savings be assigned exclusively to the holders of equity capital? If corporate savings are held to accrue exclusively to the stockholders, then the suggested allocation could be made on the basis of the geographic distribution of the stock according to the residence of the stockholders, or on the basis of the location of the physical plant and equipment, depending upon the concept adopted. Some believe that business savings should not be considered as accruing to equity holders alone. Adherents to this viewpoint would state that if corporations were required to pay out only what they produced, no more and no less, the share of the net product going to the different factors of production would not be the same as when savings are assigned to the stockholders. In order to prepare estimates of the net value of product *derived by* residents of each state, business savings would have to be allocated to some group or groups to whom it is held to accrue.

Whatever concept is adopted, serious limitations will, apparently, attach to the allocation of income produced by states because of the lack of satisfactory data for allocating business savings. An attempt to allocate business savings on the basis of the residence of the equity holders ('income derived by' concept) would be more difficult and lead to a greater degree of statistical error than would the allocation of business savings on the basis of the location of the plant and equipment ('income derived from' concept). However, even the latter approach cannot at this time be followed for all states, but only in those where state income tax laws require data upon which the allocation can be based; even then the figures will be subject to many limiting factors.

Work relief and direct relief payments can be apportioned by states without a great deal of difficulty although for the early part of the Federal Emergency Relief program and before 1933, the distinction between work relief wages and direct relief payments is not very clear and some approximations are necessary to separate the two items. For other labor income, particularly compensation for injuries, satisfactory reports are available for some states and less suitable reports for most of the others. However, refinements must frequently be made because of the way in which self-insurers are reported. Private pension payments are relatively minor in importance. They should be allocated on the basis of the geographic location of the recipients of the pensions. The same practice should be followed in allocating pensions to war veterans. In both private pensions and compensation for injuries, the estimates of income received by individuals should include actual payments to individuals in each year, while for estimates of the net value of product, only the contributions of employers to these funds or reserves in each year should be included. Further, if employees contribute to private pension plans, their contributions should not be considered as part of the wage and salary item in the estimates of income received by individuals.

Many other items such as gifts, inheritances, insurance benefits, and other interstate transactions were mentioned earlier as factors in determining the purchasing power of the citizens of any particular area. There is practically no information available today on the flow of these transfer items from one state to another and it would seem necessary to rely entirely on questions relating to these items to be gathered by sample surveys of families, such as the Consumer Purchases Study and the proposed income project of the Minnesota Resources Commission which provides, among other plans, for a field survey of a sample of urban and rural families in Minnesota. It would be necessary not only to determine receipts from the recipient, but also to have data on payments at their source. Perhaps, as the basis of a check, it would be desirable to ask the recipient not only how much he got in the form of a transfer of a certain type, but also the residence of the one who made the gift. Also, the giver could be questioned about the residence of the recipient.

No attempt has been made in discussing the method of measurement to explain specifically the derivation of any particular item in any particular industry. It is apparent that wages in manufacturing would in general be derived for alternate years from the biennial Census of Manufactures. Obviously these data would have to be interpolated on the basis of payroll indexes for the particular state. For the many industries not covered by censuses related data would have to be used. Thus, for water transportation, traffic data might prove useful, or for domestic servants, records of United States Employment Service on placements, registration, and starting wages would be very helpful. For certain hand trades, license bureaus within the states might provide very valuable information. Innumerable other sources can be found and the degree of accuracy attained will depend in large measures on the industry and ingenuity of the estimator in ferreting out direct data and in developing reasonable relationships with other series when direct information is not available.

V Inclusions and Exclusions

It might be well to summarize the items that would appear in various types of income measures. For estimates of the net value of product, or income produced, the same items would be included as appear in national income figures: wages, salaries, interest, dividends, entrepreneurial withdrawals, net rents and royalties, and business savings. Also incorporated in the estimates would be work relief wages and other labor income which represent part of the current wage bill to employers. For income paid out, which is useful for measuring the relative compensation to the different factors of production, only business savings would be excluded from the items comprising national income.

In estimates of income payments to individuals, or what might better be termed 'incomes received by individuals', numerous other adjustments must be made. For wages and salaries, all payroll deductions at source, namely those items which are included in census and other payroll reports and which accrue to individuals but are not immediately received by individuals, should be deducted. These include social security assessments on both the employer and the employee, assuming that the original source data for salaries and wages included these assessments. Also, contributions by both the employer and employee to private pension systems or sick benefit associations should be deducted; again provided they are included in the basic figures. All benefits paid to individuals under the unemployment compensation and old age insurance provisions of the state and federal Social Security programs should be added. Also, payments from private industrial pension funds to pensioners should be included.

In the estimates of income received, no change would be made in the estimates of entrepreneurial income or in net rents as used in the income produced or income paid out series. Thus it is assumed that the entrepreneur receives only his net income from his business, no more and no less. This necessitates the further assumption that during hard times when the entrepreneur depletes his business assets, he is disinvesting just as the wage earner uses his savings and the security holder sells his security for procuring the means of livelihood.

However, for dividends and interest, it seems advisable to substitute income actually received by individuals from the 'aggregates of individuals' for the dividend and interest income flowing to 'aggregates of individuals'. In other words, dividends and interest received by savings banks, insurance companies, building and loan associations, and other collective savings institutions would be deducted from the estimates of dividends and interest used in the income produced and paid out series and in their place actual disbursements by these institutions to depositors or policyholders would be substituted, not however including those disbursements which represent a return of capital. The latter differentiation makes such a correction almost impossible until more information is available on the flow of funds through aggregates of individuals. Of course it might be suggested that for these institutions, such as life insurance companies, the net excess of benefits over premiums should be included. This, however, means including funds from the liquidation of assets, and to be consistent it would be necessary to include net withdrawals from savings accounts, net receipts from the sale and purchase of assets, and related items, the inclusion of which is very questionable, as already stated.

In the present annual national income and income paid out series and the state and monthly income payment figures of the Department of Commerce it is presumed that dividends and interest received by the aggregates of individuals are in turn, though not immediately, paid to individuals. It is apparent that, in the case of an insurance company, the actual payments to individual beneficiaries for death claims, annuities, or on any other basis, do not in the aggregate represent as much as the original premiums plus all the dividends and interest received by the insurance company. The difference represents loading charges. Presumably, the insurance company pays out to individuals all that the individuals have paid in, plus the dividends and interest received by the insurance company, and further, the individual pays back part of his receipts to the insurance company for the investment and insurance services the company rendered him. Or, looking at it in another way, we might say that only part of the original premium represents an investment; the other part represents a payment to the insurance company for services rendered. Insurance benefits then represent a repayment of that part of premiums which represented an investment plus returns on that investment. The loading charges are like payments for any other services, i.e., doctors' bills or theatrical admissions, and appear in part in the wages, salaries, and other final income payments by the insurance company. It seems impossible to apportion the two-way flow of funds between insurance companies and individuals as between the portion representing loading charges, the portion representing investment or disinvestment. and the portion representing returns on investment.

Of course, there are gradations others might care to adopt which might result in the inclusion or exclusion of only some of the items listed above. It is particularly important to emphasize again that the items to be included or excluded in estimates of income received will depend in large measure on the uses to which the estimates are to be put; one concept will not serve all purposes.

VI Interpretation of State Income Estimates

There are so many qualifications attaching to the meaning of state income figures and statistical limitations involved in their estimation that one might, at first blush, question the reward for the long and tedious effort required in their preparation. On the other hand the various uses and purposes outlined in the first section of this paper will in large part be satisfied by the estimates that can be developed, especially if the user is aware of the factors essential to proper interpretation.

While the states are not suitable economic units, they are, singly or in groups, first approximations to broad economic entities. As administrative units for tax purposes, enactment of laws of an economic nature, and related matters, they are not entirely devoid of economic importance. The income measures will in themselves reveal the industrial structure of the various states and will make possible combinations of states of a more or less homogeneous nature and comparisons of like and unlike states. While geographic regions with more significant economic boundaries would be desirable, a breakdown of income by states will be a step in that direction.

Perhaps the most important single matter to be considered in interpreting the estimates is the difference between different areas and groups in living standards and costs. The layman's first impulse is to view a higher per capita income in one state as indicative of a proportionately higher standard of living. This interpretation is not, however, justified since living costs vary from one area to another and within one area from one community or part of a community to another. Account must be taken of these price differentials.

Still more important is the fact that certain goods and services that make up part of the consumption pattern in one area are entirely absent in another area. Attendance at legitimate theaters, meals in restaurants, heating equipment in every house, and similar items are more or less regular types of consumption in any large northern city but are largely absent in a southern rural community. The same variations in consumption exist within states from urban to rural areas and even within cities from prosperous to slum areas. It is extremely difficult to derive a formula for converting incomes to a common denominator that would make possible precise comparisons for welfare purposes. Therefore the figures themselves must stand largely as they are and qualitative factors be considered in their interpretation.

These factors include differences among states between the urban and rural population as well as the color and racial composition of the population. The urban-rural breakdown should encompass size-of-community classifications for the urban residents and the proximity of the rural residents to larger communities. Climatic conditions are important in determining differences in fuel, housing, clothing, and even food requirements. Other elements for consideration include the pattern of the size distribution of income; the scope of services performed by government units; economic activities performed within the home or on a purely cooperative basis; differences in age distribution and in the employable proportion of the population; variations in the skill, education, and energy of the workers; availability of natural resources; and other matters of more or less importance.

In the derivation of per capita figures, the Bureau of the Census estimates of population can be used but the allocation of persons is not always coextensive with the allocation of income. This is obviously true for estimates of income *derived from* a state, but it is also true of income received. As previously noted, many persons work in one state but are counted by the Census as residing in another state and, unless the income figures can be shifted over to the state of residence (or *vice versa*) the per capita figures are in error. A significant portion of the District of Columbia payroll should be shifted to Virginia and Maryland. There should be some adjustments in population figures for transients. When a large group of transient workers enter a state for work during the harvest season, they are for the time being both residents and income recipients. Data for such adjustments are not readily available. There is the further question of large property income recipients who maintain residences in several states and whose property income is assigned to the place where their income tax return is filed. This place may or may not be the same as the residence reported to the Census Bureau.

Other problems may arise in the mind of the reader but these will serve further to illustrate the need for careful consideration of the limitations of state income estimates. The purpose of this paper is not to provide answers so much as to raise questions that will stimulate further thinking on these matters and lead to quantitative investigations relating to the more significant problems.

Discussion

I SIMON KUZNETS

Income measures are tools to be used rather than works of art to be contemplated. Their efficacy must be judged in the light of the applications to which they have been or may be put. Mr. Nathan has therefore prefaced his presentation of the problems of allocating income by states by a discussion of the purposes of state income estimates. In the light of the purposes singled out for discussion he concludes that "it would seem more important, *if a choice were necessary,* to allocate the net value of product by states on the basis of such a concept as 'the net value of product *derived by* residents of a state from their labor and from the services of their property, wherever located', rather than on the basis of the concept of 'the net value of product *derived from* the resources of labor and wealth employed in a state' " (Sec. III). And while Mr. Nathan is careful to point out that net value of product derived from each state is still a useful concept, the tenor of the discussion is such as to minimize its usefulness. Indeed, of the four groups of purposes submitted as ones for which state income estimates are utilized—market analysis, economic welfare, taxation, and productivity—the concept of net value derived from is found useless for the first two, misleading for the fourth, and useful possibly only for the third, that is, if and when the state uses this particular income concept as a basis for taxation.

In the absence of definite criteria of usefulness, controversies concerning the relative importance of different income concepts are likely to be futile. And I would agree with Mr. Nathan that in the light of the purposes stated by him little use can be found for a measure of income derived from productive agencies within each state. But it seems to me that his list of purposes is too narrow, being restricted largely to those for which state income measures have been used in the past and underemphasizing uses to which such measures, if carefully compiled, might be put in the future. The comments below, intended as a supplement to Mr. Nathan's paper rather than as a direct disagreement with his statement, attempt to indicate the aims allocation of income produced by states may satisfy.

The uses of measures of income totals and of their components can be divided into three broad groups: analytical, evaluative, and administrative. By analytical we mean uses of income measures in attempts to establish stable relations in a changing universe, testable relations that would be valid over broad ranges of space and time. Representative examples are the employment of income estimates for such purposes as determining the factors that affect the growth and decline of the wealth of nations; of income breakdown by industrial sources to establish a common pattern of changing industrial structures in various capitalist nations. Evaluative uses are based upon particular interest in the productivity or welfare of a distinctive group, be it a nation, an economic class, an occupational group, or any other collective entity that possesses consciousness of kind. The measure of income is then used in an attempt to evaluate the relation between the group and the economic system at large, with reference to the group's contribution and returns. The welfare interpretation of income measures and the use of some types of apportionment (e.g., by urban and rural groups, or among various types of income payments) belong largely to this category. By administrative we mean all uses of income measures in which the latter are employed as a factor in determining policy, whether of public and semi-public agencies or of private enterprises. The purposes Mr. Nathan describes under taxation and market analysis belong in this category.

We may now consider, with reference to each of these three broad groups of purposes, the utility of allocating income by states, no matter which concept of income is employed; and particularly the utility of measuring income derived from productive agencies within each state (briefly, income produced).

The value for analytical purposes of allocating income by states lies in the fact that, like all breakdowns of larger totals, it may reveal effects of different combinations of factors and thus facilitate the isolation of the specific effects of each. Whether income by states is treated as the independent variable that affects others or as a dependent variable affected by others, the establishment of the distribution by states may reveal a range of variation that can be associated with variation, within the same state units, of other factors. It may thus provide leads in the search for stable relations, the establishment of which is the final goal of all scientific analysis.

For this type of use the allocation by states of income produced has obvious value. If the analysis is directed at the factors that determine the production of income, at the relations that govern the amount of net income originating in the economic system, then it is the allocation of the total income produced by states that is needed. True, such allocation will not be useful for analytical purposes if confined to *totals* of income originated: it should be cross classified by industrial source, type of income, etc. But the desirability of such cross classification for analytical purposes holds, of course, not only for the state allocation of income produced but also for income received, consumed, etc.

For evaluative uses allocation of income by states is important so far as it makes possible a better judgment of the relations between distinct groups and the economic system of the country at large. Thus, if the inhabitants of North Carolina feel a consciousness of kind that makes them particularly eager to know how much they contribute and how much they receive, as compared with the rest of the country; if the same curiosity besets the inhabitants of a region or members of any other group that can be segregated by using state boundaries, then state estimates will serve to satisfy it and help form a more enlightened judgment.

It would seem, offhand, that since evaluative uses are grounded largely in the interests of a given group of people they call for state allocation of income *derived by* to the exclusion of allocations of income *derived from*. But this inference overlooks the possibility that consciousness of kind may extend to the productive resources to which a given group applies its labor; that inhabitants of a given state may have a sense of proprietary interest in the total output in whose production they participate; and that their judgment of the performance of the economic system in its bearing upon them may be largely dependent upon a comparison of their share with the total they assisted in producing.

This is especially the case when a group living in a given state contributes only one of the productive factors, the others being contributed by residents of other states. To refer again to the possible feeling of the South as an exploited region, its residents must obviously base their judgment not only upon what income they receive but upon a comparison of that income with income originating in the productive activity in which they participate. If we assume that all residents of the South are in receipt of service incomes only, whereas property income and business savings accrue to residents outside, the important questions that must be answered are: Is income produced in the South relatively smaller than in other parts of the country? Is the distribution of income as between service income payments on the one hand and property income and business savings on the other substantially different from that in other parts of the country? I believe that Mr. Nathan suggests the need for this purpose of measuring both income *derived from* and income *received by*, although he does not make an explicit statement to this effect.

The utility of allocation of income by states for administrative purposes is obvious. The very fact that states are jurisdictional and administrative units makes it important to have such income measures not only for purposes of public policy but also for use by private agencies. The activity of private agencies is affected by the existence of these administrative units; and their boundaries can conveniently be used in order to plan activity of such enterprises as are endowed with a wide market and must rely not only upon intuition but also upon measurable and recordable knowledge.

It is also obvious that these uses may demand the allocation of income produced or derived from no less than income received or derived by. If state governments perform functions for the protection and welfare of the residents, they also protect and encourage the productive properties within the state. It is but natural that in considering sources of state revenues, income originated within the state should be considered a basis for taxation. For market analysis total income received is a more useful measure than total income originated. But it must not be overlooked that for the marketing of such commodities as capital goods, parts of income originated, such as business savings, may be a much better guide to possible demand than any of or all the components of income received by state residents.

This discussion suggests the possible uses of allocation of income originated by states. It does not consider the difficulties that would arise in any attempt to arrive at such an allocation. That the main difficulty, allocating property and undistributed income to the place in which it originated, is formidable need not be denied. But some attempts to deal with it have already been made in administrative procedures. Also, in a considerable body of statistics this allocation is made implicitly, as may be seen from the fact that value added is given by the Census of Manufactures for various manufacturing industries by states.

Whatever the conceptual and statistical difficulties, the importance of the uses to which it may be put warrants careful consideration of the feasibility of allocating income by states within whose boundaries it originated. The difficulty of the problem should but serve as stimulus to early and serious scrutiny. It is to be hoped that the agencies concerned with state allocations will devote some time to experimenting with the problems of measuring income derived from productive agencies within the various states or within the boundaries of other jurisdictions.