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Introduction

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Regional income differentials within the United States have been a source of interest for at least as long as estimates of national income have been available. The publication by the National Bureau in 1922 of estimates of national income for 1909–1919 was followed closely by the publication of Oswald W. Knauth's *Distribution of Income by States, 1919*. Similarly, official estimates of state income payments appeared soon after the Department of Commerce first released its official national income estimates.[1] At least one attempt was made to estimate income by counties within a state before official state estimates were available, and during recent years county estimates have been prepared for a number of states.[2]

With this evidence of such an extensive interest in regional income data, it may seem surprising that it was not until June 1955 that regional income within the United States was made the principal subject of a meeting of the Conference on Research in Income and Wealth.[3] Much of the demand for state, county, and other local-area income estimates has stemmed from problems to which definite geographic boundaries can be assigned. State and local government

[1] See *Income in the United States: Its Amount and Distribution, 1909–1919 Detailed Report*, Wesley C. Mitchell, ed., 1922; Oswald W. Knauth, *Distribution of Income by States in 1919*, 2nd ed., 1922; Maurice Leven, *Income in the Various States: Its Sources and Distribution, 1919, 1920, and 1921*, 1925, all published by National Bureau of Economic Research. The first official estimates are in *National Income, 1929–32*, S. Doc. 124, 73rd Cong., 2nd Sess., 1934. Robert R. Nathan and John L. Martin, *State Income Payments, 1929–37*, Dept. of Commerce, May 1939, initiated the state estimates.

[2] W. M. Adamson, *Income in Counties of Alabama, 1929 and 1935*, University of Alabama, 1939. The states for which recent county estimates have been published include Alabama, California, Colorado, Florida, Georgia, Iowa, Kentucky, Louisiana, Mississippi, New York, North Carolina, Tennessee, Virginia, and Washington.

[3] Several papers relating to regional income have been published in earlier volumes of these *Studies in Income and Wealth:* R. R. Nathan, "Some Problems Involved in Allocating Incomes by States" and P. H. Wueller, "Income and the Measurement of the Relative Capacities of the States" in *Volume Three* (1939); Herbert E. Klarman, "A Statistical Study of Income Differences Among Communities" in *Volume Six* (1943); and D. Gale Johnson, "Some Effects of Region, Community Size, Color, and Occupation on Family and Individual Income" in *Volume Fifteen* (1952); all published by National Bureau of Economic Research. Also Walter Isard and Guy Freutel, "Regional and National Product Projections and their Interrelations," in *Long-Range Economic Projection*, Volume Sixteen, Princeton University Press for National Bureau of Economic Research, 1954.

officials are continuously searching for more, and more relevant, data relating to the characteristics of their jurisdictions. Merchandising firms find uses for local-area data in locating untapped markets and in judging the effectiveness of their advertising or sales programs. The results of such uses typically are embodied in internal documents, or in an occasional public document designed for local consumption. While most economists are preoccupied with problems of national or even more general scope, some have found certain elements of their problem highlighted in small-area data.

Those who have extensively used regional data hold a variety of viewpoints. One group has been primarily interested in using existing economic theory and knowledge to assess the growth, current status, and potential of some particular region. This group in recent years has produced the extensive appraisals of the economies of New England, the South, and the Southwest.[4] Another group has explored the relevance to economic theory of one or more space-connected variables—transportation costs, plant location, urbanization, and the spatial organization of production, markets, and consumption. Still others are exploring the possibilities and limitations of using regional data systematically to gain insights into economic relationships and processes, such as the consumption of durable goods and the transmission of cyclical influences from one industry to another.

Economists also interpret observed interregional differentials in widely different ways. At one extreme, there are those who look upon any difference between two regions as potentially important and think it worthwhile to explore both its sources and consequences. At the other extreme, there are those who doubt that a study of gross interregional differences can contribute importantly to our understanding of economic problems. Between these extremes, there is room for such a variety of viewpoints that no listing of them could pretend to be exhaustive. Several are reflected in the papers in this volume.

The ten papers are readily divided into three major groups. The first four, those by Hochwald, Perloff, Isard, and Ullman and Klove, are concerned with some of the conceptual issues generally applicable to any study of interregional differences. The next three, those by Hanna, Hurwitz and Stallings, and Mansfield, are accounts of recent empirical investigations of interregional differentials. The

[4] *The Economic State of New England*, New England Council, Yale University Press, 1954; C. B. Hoover and B. U. Ratchford, *The Economic Resources and Policies of the South*, Macmillan, 1951; and the unpublished report of the Committee on the Southwest Economy which was prepared for the Council of Economic Advisers.

three papers by Thompson, Fulmer, and Shryock, which constitute the concluding group, relate to important problems encountered in the estimation of county income.

Almost all of the regional income data available is one or another variant of personal income.[5] The fact that a complete set of economic accounts, or at least some measure of gross or net product, consumption, and investment, is not available for regions is sometimes lamented by those working with regional data. More frequently, the lack of a multiplicity of measures is cited as a reason for rejecting regional data as a working tool. Werner Hochwald considers both the statistical problems connected with producing and the conceptual problems of interpreting the various measures of income produced or received in an area smaller than the nation. In the discussion of Hochwald's paper, D. J. Daly supports the position that personal income, being built up largely from industry data, is a superior measure of regional activity. Richard Easterlin, however, finds significant interregional differences in the ratio of income produced to income received and urges partial if not complete adjustment of the income received measures to make them more suitable for comparisons of resource productivity and to shed additional light on the inducements to persons and firms to move. F. H. Leacy suggests a value-added method for estimating the volume of regional output that does not depend upon interregional moneyflows.

The many decisions that underlie interregional comparisons—the demarcating of the specific regions to be compared, the attributes, characteristics, and measures available and their limitations, and the problems incident to differential changes over time—are outlined and discussed by Harvey S. Perloff. The relative utility of specific purpose regions, particularly dynamic or changing regions, and the criteria to be employed in demarcating them received additional attention in the comments of Edgar M. Hoover and B. U. Ratchford.

The manner in which regional data can be brought to bear on the formulation of national and regional policies is treated by Walter Isard. Illustrative materials are drawn from policy problems relating to resource use, transportation, tariffs, depressed areas, and

[5] The Conference was held, however, before the National Income Division made available the new state personal income series for 1929–1954 in the *Survey of Current Business* (Dept. of Commerce, September 1955). In addition to providing state estimates conceptually consistent with the national estimate of personal income, the new series represents a complete statistical revision of the previously available state income payments estimates. The *Survey of Current Business* article states, "the new series modifies in only moderate degree the recent-year distributions and long-term shifts which had been shown by State income payments."

monetary and fiscal institutions. Some of the Canadian experience in these fields is described by E. P. Weeks in his comments on Isard's paper.

The regional classifications of states into nine divisions used by the Bureau of the Census since 1910 is familiar to most students. The Department of Commerce statisticians currently use two other "general purpose" systems of grouping states into regions. Morris B. Ullman and Robert C. Klove describe the recent attempt of the several Commerce Department organizations to formulate a single general purpose grouping of states into a regional structure. The record of the criteria considered, the measures devised, and the problem encountered in dealing with borderline states is an impressive one. Whether the system developed is adopted or not, a careful reading of this record and Margaret Jarman Hagood's discussion of it should go a long way toward providing guidance to research workers faced with the problem of choosing between using the general purpose regions and constructing a specific purpose system of their own.

Of the possible ways in which national data can be distributed geographically, state distributions are by far the most frequent. Two of the three empirical papers included in this volume deal with interstate differences. In addition to a brief description of the behavior of the state income payments series since 1929, my paper also reports on several investigations of the extent to which the observed differences between states can be viewed as transformations of differences between industries, occupations, and certain demographic characteristics.

The paper by Abner Hurwitz and Carlyle P. Stallings fills a long recognized gap in regional data by providing estimates of state and regional price indexes for the period 1929–1953. Many regional studies, based as they necessarily have been on current dollar estimates, have been plagued by the question of whether the results would disappear, remain about the same, or grow larger if interregional price differentials were taken into account. Hurwitz and Stallings' finding that variation in price change between states did not substantially shift the relative position of most states during this period increases the confidence with which the investigator may undertake regional analyses.

It has been observed repeatedly that income level tends to rise with an increase in city size. Some have thought that a substantial part of observed interregional differences might be associated with the varying numbers of cities of various sizes in the regions. Edwin Mansfield's paper brings the income data from the 1950 census to bear on this problem. He finds marked regional differences in the median consumer-unit incomes within the cities of approximately the same size.

A volume dealing with regional income would not be complete if it ignored the extensive work on the estimation of county incomes which has been undertaken during recent years. Fortunately, the results of these undertakings for the various states have been accompanied by reasonably complete records of the problems faced, the decisions or compromises reached, and the methods employed in arriving at the results.[6] Many of those active in this work have expressed some dissatisfaction with existing methods and some have experimented with alternatives. In planning the Conference, of which this volume is a record, the county-income estimators were asked to suggest topics which would be most helpful to them and their co-workers. From the voluminous response, three topics most frequently mentioned were chosen for discussion: short-cut methods, the estimation of agricultural income, and the intercensal estimation of population by counties. Some experiments in estimating Virginia county incomes from a limited amount of current data and from relationships derived from earlier years are discussed by Lorin A. Thompson. John L. Fulmer proposes a method of estimating agricultural income for small areas. This method depends largely upon relationships derived from the state income payments series and limited amounts of current data. That making adequate county estimates of agricultural income is particularly troublesome is attested both by the paper and the vigorous discussion of it. The final paper, by Henry S. Shryock, Jr., describes and appraises the methods being used by the Census Bureau and agencies of the various states for making current intercensal estimates of the populations of local areas.

At the Conference at which these papers were read and discussed, there was in evidence an eagerness to exchange experience, a lively interest in both substantive findings and technical problems, and an optimism that further exploration of regional income would turn up worthwhile results. Despite the substantial array of difficult problems besetting such explorations disclosed in the course of the meeting, only an occasional voice questioned whether a continued search for solutions would be rewarding. Even the presentation of results labeled by their authors as not wholly satisfactory was accompanied more by a feeling that the experience gained could be capitalized than by one of frustration. The volume that follows is evidence that

[6] Lewis C. Copeland, *Methods for Estimating Income Payments in Counties*, University of Virginia, 1952, and literature there cited.

the experience gained to date has been substantial, that the problems encountered in analyzing and interpreting the results of regional income are many, and that regional income analysis affords a promising approach to some important economic problems.