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## Publications of the National Bureau of Economic Research

### INCOME IN THE UNITED STATES

*Volume I.* A summary of an investigation of the Amount and Distribution of Income in the United States, 1909-1919, intended for readers who are primarily interested in the results. Size 7½ by 5¼ inches, 152 pages, with preface, 29 tables, 31 charts and indexed. Bound in cloth. \$1.58 postpaid. (Fourth printing.)

*Volume II.* A report giving in full the methods and estimates on which the results shown in Volume I are based. Size 9¼ by 6¼ inches, 440 pages, 222 tables, 35 charts and indexed. Bound in cloth. \$5.15 postpaid. (Out of print.)

### DISTRIBUTION OF INCOME BY STATES IN 1919

A study of the share of each state in the national income with a special analysis of the amount and relative importance of farmers' income. Size 9¼ by 6¼ inches, 32 pages, with preface and 9 tables. Bound in cloth. \$1.30 postpaid. (Third printing.)

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Results of an investigation made for the President's Conference on Unemployment. By the staff of the Bureau with 16 collaborators. Twenty-one topics covered. This report summarizes the known facts of unemployment and describes the various methods suggested to control the business cycle and alleviate cyclical unemployment. Size 9 by 6 inches, 405 pages, with 56 tables, 56 charts, and indexed. Bound in cloth. \$4.10 postpaid.

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Results of an inquiry conducted by the National Bureau of Economic Research, with the help of the U. S. Bureau of Markets and Crop Estimates and the Bureau of the Census, for the President's Conference on Unemployment. Designed to meet the special needs of all persons interested in the study of labor conditions. Gives full details of investigation summarized in *Business Cycles and Unemployment* to which it is companion volume. Size 9 by 6 inches, 147 pages, illustrated with 75 tables, 11 charts, and indexed. Bound in cloth. \$3.10 postpaid. (Second printing.)

### THE GROWTH OF AMERICAN TRADE UNIONS, 1880-1923

Results of a comprehensive investigation of trade union membership year by year; its fluctuations with the business cycle; effects of World War conditions; women in trade unions. Contains also a detailed analysis of the total working population. Size 9 by 6 inches, 170 pages, illustrated with 27 tables, 16 charts, and indexed. Bound in cloth. \$3 postpaid.

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NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.  
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for Impartial  
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## Purchasing Power in Each State Is Being Measured Varies With Business Cycle

### National Bureau of Economic Research Seeks Data to Throw Light on Marketing and Taxation Problems

*Where in the United States are the people most uniformly prosperous?*

*Do states having a large number of automobiles per thousand inhabitants have a high or low proportion of citizens living in rented homes?*

*Do states having equal total incomes furnish equal potential demands for articles of necessity? for luxuries?*

*If in a given state wages in one industry are higher, are wages and salaries in other lines of activity also above normal?*

*These are some of the questions that will be answered in the forthcoming report of the National Bureau of Economic Research, on "Income in the Various States."*

HOW purchasing power of the people in New York State compares with that in Pennsylvania, in New Jersey, in Illinois and in all the other States, will be authoritatively shown in the report of an investigation now being completed by the National Bureau of Economic Research, 474 West 24th Street, New York.

In addition to showing the changes in total cash income received by the inhabitants in each state from year to year, the Bureau's forthcoming report will indicate the changes in the buying capacity of these cash dollars in respect to various kinds of commodities.

#### Useful Results Expected

By furnishing more scientific data than is now available, the Bureau's work is expected to have a beneficial result in helping to eliminate some of the wastes now caused by misdirected selling efforts; to make taxation issues clearer; and to aid all who are desirous of understanding national economic conditions.

Entitled *Income in the Various States, Its Amount and Distribution, 1919, 1920 and 1921*, this report will give the results of an investigation which has required more than two years' work by Dr. Willford I. King; Mr. Maurice Leven, and a corps of assistants—all under the general direction of Dr. Edwin F. Gay, Professor of Economic History at Harvard University, and Dr. Wesley C. Mitchell, Professor of Economics at Columbia University, who are the co-directors of the research staff of the National Bureau of Economic Research.

Preliminary examination of the material already worked up indicates that the forthcoming report will cover more than 300 printed pages. It will include not only a study of income from the national point of view, but a detailed description of the economic status of the people in each of the forty-eight states and in the District of Columbia.

Under the Bureau's by-laws, all reports of its research staff must be submitted, for critical comment and review, to a board of directors, who represent all the important factors in society which view economic problems from divergent angles. In this way all danger of personal

opinion or bias entering into the findings is eliminated, and facts and statistical conclusions only are presented in the final report.

One of the most important parts of the report will deal with the economic phenomena of the post-war boom and reaction. Up till now there has been in no single place the answers to such questions as:

Was there an immense increase in the incomes of the people of the United States in 1919 and 1920, and a tremendous drop in 1921? If so, were the changes real? Did they affect the ability of the people to buy goods, or were they merely changes in the nominal values, resulting from fluctuations in the purchasing power of the dollar?

#### Light on Agricultural Situation

Another important section will show how the agricultural interests of the United States actually fared when business collapsed in the latter part of 1921. Included in these findings, will be the answers to such questions as:

In which states did the farmers borrow most heavily from the banks?

What are the chief sources of farm income in each state?

What are the major farm expenses?

In which states is the welfare of the farmer the dominant factor?

Other interesting problems which these data are expected to solve are:

Did the panic and boom effect mainly the owner of the nation's industries or was the brunt borne by the employees?

Who suffered most, salaried employees or wage earners?

How did the distribution of income among the different states change between the prosperous year of 1919 and the depression period of 1921?

How does population growth affect volume of construction in different parts of the United States?

#### Many Sources of Information

Since the issuance of the Bureau's first report on the subject of income in the United States, more than three years ago, many additional sources of information have been found, a number of new collections of statistical data have become available, and several improved methods of utilizing the material on hand have been devised. For these reasons, most of Dr. King's time and that of his assistants has since 1922 been spent in improving the estimates of income for the years 1909 to 1918, and in extending the figures to cover 1921.

Income as used in this report is defined as the sum of those kinds of individual book incomes commonly accounted for in terms of money. If every individual kept an accurate set of private accounts, and thereby arrived at his net money income for the year, and if all these net incomes were added together, the resulting totals would be those which this report will attempt to approximate.

#### Facts Relate to 40,000,000 Persons

These figures should not be confused with tax returns. They involve research far more complicated than merely classifications based upon Internal Revenue Department documents. They represent as nearly as possible, the actual incomes earned, received by or imputed to every income earner or income receiver in the United States. The determination of this "actual income" requires the study of the facts relating to the income of over 40,000,000 people. Tax data cover less than 7,000,000 and then owing to exemptions do not give a true picture of even that fraction of income receivers.

Please turn the page

## NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

**T**HE National Bureau of Economic Research, Incorporated, was organized in 1920 in response to a growing demand for exact and impartial determinations of the facts bearing upon economic, social, and industrial problems.

The Bureau seeks not merely to determine facts, but to determine them under such auspices as shall make its findings carry conviction to Liberals and Conservatives alike. It deals only with topics of national importance which are susceptible of quantitative treatment.

By issuing its findings in the form of fact reports, entirely divorced from propaganda, the Bureau hopes to aid all thoughtful men, however divergent their views of public policy, to base their discussions upon objective knowledge as distinguished from subjective opinion.

No report of the Research staff may be published without the approval of the Board of Directors. Rigid provisions guard the Bureau from becoming a source of profit to its members, directors or officers, and from becoming an agency for propaganda.

The Bureau assumes no obligation to present or future contributors, except to determine and publish facts.

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### Statistical Difficulties Overcome

The great variety of climatic conditions and the differences in the distribution of natural resources, together with certain historic factors governing the distribution and the composition of the population, have caused the various sections of the United States to develop along distinctly different economic lines. The development is, of course, not yet at an end.

It is apparent that no single factor can be used with any degree of accuracy to determine the income of the inhabitants of each state. The sources of income in each state are different and what complicates the problem still further, the income produced in each state does not correspond to the amount received by those living within the state. To Mr. Maurice Leven was assigned the task of overcoming these obstacles and how they were surmounted is described in detail in the second section of the report.

Natural resources, composition of population, advantages gained by priority of settlement and development, strategic position with respect to shipping and marketing, accumulation of capital in older communities form one set of factors, affecting income. A second set centers around the industrial composition of different localities and is responsible for short-time changes in total income.

Where one or more industries, or groups of industries form the chief support of the population, fluctuations affecting these individual industries may exert great influence upon the income in the states. Such fluctuations may, in any year, bring the average income of the people of a state normally belonging in a higher income level, down to, or even below, the average income of the states usually characterized by low incomes.

### Period Covered by this Report

No year is a *normal* year for all industries, and consequently conditions obtaining in any one year can not be accepted as being fully descriptive of the position of any state with respect to income. The data for a series of years must be analyzed. For this reason, the three years—1919, 1920 and 1921—were grouped and carefully studied for the period of this investigation.

Dr. Willard L. Thorp, in his Business Annals, now being prepared for the National Bureau of Economic Research in connection with its forthcoming analyses of business cycles, briefly characterizes these three years as follows: "1919—Uncertainty. Extraordinary activity begins in late Spring. Business revival. Enormous output of new securities. Speculation. Money tightens. Labor troubles. Moderate crop; 1920—Great activity. Prices high. Money tight. Rapid decline, beginning late Spring, to stagnation and unemployment. Many failures. Moderate crops; 1921—Deep depression. Severe unemployment. Money eases. Rapid liquidation and revival begins at mid-year. Crops short and prices low."

We see that, for the country as a whole, the period selected presents almost a complete economic cycle with the top around the latter part of 1919 and the beginning of 1920 and the bottom at the end of 1920 and the beginning of 1921.

### Presentation of the Material

The report now in preparation, which will form a volume of considerably over 300 printed pages, is intended to be chiefly a statistical presentation of the more salient factors pertaining to the income of the people of the United States, its sources, and geographic distribution.

Only the more important material has been selected for presentation, but even in the selected material, the number of items is multiplied to such an extent by the forty-nine geographic units covered that it is obviously impracticable in a volume of even this size, to do justice to all the points of interest revealed by the data.

## New Data to Aid Students of Income and Taxation

The view is widely held that in a democratic country, good government requires that the burden of taxation be felt by all citizens, for there can be no healthy interest in government, unless the majority of the people feel that they contribute materially towards its support. However, it is also strongly contended that taxation should be graduated in accordance with the ability of the citizens to pay, and that, all things being considered, the best basis for the apportionment of taxes is income.

It often becomes necessary for a state to choose between the "pay as you go" policy and that involving the issuance of long-term bonds. Is it good policy to defray the expenses of a certain public project through added taxation, or must the payment for it be deferred to some future date and generation? How does the burden of taxation in the given state compare with that of others?

The problems of the student of taxation have, therefore, been considered in the preparation of the forthcoming report of the National Bureau of Economic Research on *Income in the Various States*. It is hoped that the analytical tables appearing in the last chapter will prove of particular value. In these tables, an attempt has been made to view the income of the people in each state from as many angles as is compatible with reasonable accuracy.

## Income Data as Applied to Marketing Problems

Aside from being an aid in measuring the economic status of the people in the various states, the geographic distribution of income may be made to serve an important function in problems pertaining to the marketing of goods.

However, not all the income received is spent for consumption goods, and the portion so used does not vary in exact proportion to the total income, particularly in the case of certain classes of consumption goods.

To measure the ability of the people to purchase commodities the indices must be carefully selected to fit the special problems at hand. The needs of investigators along this line have been given careful consideration in the preparation of the forthcoming report of the National Bureau of Economic Research on *Income in the Various States*. Not only in the final summaries and in the analytical tables, but also in the material presented in connection with sectional estimates of income, data will be found that should prove of help in the solution of marketing problems.

Practical advertising and sales research experts who have followed the work of the National Bureau of Economic Research have volunteered the statement that information such as the Bureau is developing is of the greatest importance to them and to all who are concerned with the capacity of consumers in different sections of the country

- to buy goods of various sorts;
- to absorb securities;
- to bear taxation;
- to support community projects.

Numerous requests for just such data have been received by the Bureau from sales managers, national advertisers and advertising agencies, manufacturers, public utility operators, investigators of sociological problems; banking houses, insurance companies, educators, and representatives of various organizations appealing to the public.

### Contributors Receive Publications

Persons who wish to receive early copies of all the future publications of the Bureau may enroll as contributing subscribers, paying a minimum of \$25 a year. In addition to receiving the publications, the contributing subscribers will be kept in touch with the work of the Bureau as it progresses. Subscribers enrolling during June will receive a complimentary copy of *Income in the Various States*, as well as all other reports issued during a full year from date of subscription.

## Topics in Text and in Tables of Income in the Various States

I  
 Estimates for the Entire Country Not Applicable to Individual States; Dissimilarity Among States; the Method of Estimating Income by States; Current Income vs. Total Net Income; Income as a Measure of Economic Welfare; Income Data as Applied to Marketing Problems; Income and Taxation; Factors Influencing Income in Different States; The Period Covered by this Report; The Presentation of the Material.

II  
 Importance of Wages and Salaries in the National Income; Manufactures; The Census of Manufactures; Cyclical Fluctuations not synchronous throughout the Country; Fluctuations in Total Payrolls and Composition of Industries; Rate of Development of Manufacturing not the Same in All Sections of the Country; Yearly Index for Each State of Total Manufacturing Payrolls; Power Laundries; The Final Estimates; Distribution of Manufacturing Activities; Mines, Quarries, and Oil Wells; The Census Year; The Inter-censal Years; The Final Estimates; Agriculture; Farm Wages Form a Small Fraction of Total Payrolls for All Industries; Geographic Distribution of Farm Wages; Method of Estimating; Salaries of Farm Managers.

III  
 Index of the Volume of Construction by States; Index for the Apportionment of Wages and Salaries by States in the Construction Industry; Estimated Income from Wages and Salaries in the Construction Industry.

IV  
 Males and Females in Industry; Ratio of Average Earnings of Males to Average Earnings of Females; Wages in Manufacturing and Agriculture; Wages in Mining and Agriculture; Wages in Agriculture and Power Laundries; Wages in Mining and Manufacturing; Wages in Building Trades and Manufacturing; Salaries of Teachers as Compared with Salaries of Clergymen; Union Wages; Summary.

V  
 Total Wages and Salaries of Employees in Trade, Transportation, and Miscellaneous Industries in 1919; Total Wages and Salaries in Trade, Transportation, and Miscellaneous Industries in 1920 and 1921.

VI  
 Average Earnings of Employees.

VII  
 Farm Crops; Dairy Products; Meat Products; Poultry and Eggs; Farm Income from Wool; Income from Honey and Wax; Sale of Dairy Cows for City and Village Use; Horses and Mules; Price Changes and Agricultural Income; Farm Income from the Sale of Land for Urban Use.

VIII  
 Expenses for Farm Implements; Farm Expenses for Fertilizer; Farm Expenses Incurred in the Business Use of Automobiles; The Value of Farm Buildings and the Number of Automobiles on the Farm; Farm Expenses for Feed; Farm Expenses for Seed; Farm Expenses for Binder Twine; Farm Expenses for Harness and Saddles; Cost of Outside Labor and Material for Agricultural Buildings; Interest Paid Out on Farmers' Loans; Business Taxes in Agriculture.

IX  
 Changes in Value of Agricultural Inventories; Total Agricultural Income of Entrepreneurs and Property Holders; The Share of the Farmers of the Different States in the Total Agricultural Income.

X  
 Entrepreneurial and Property Income; Dividends; Business Operated by Individuals; Unreported Incomes of Entrepreneurs; Income Received by Individuals in the Form of Interest; Rent; Gains or Losses on Inventories; Total Entrepreneurial and Property Income; A Comparison of the Geographical Distributions of Total Entrepreneurial and Property Income and Total Income from Wages and Salaries; Miscellaneous Incomes; Urban Gardens and Poultry; Income from Dairy Cows; The Imputed Rent of Owned Urban Homes; Rental Value of Farmers' Homes; The Imputed Interest on Durable Consumption Goods.

XI  
 The Distribution of the Total Net Income; The Total Net Income; Adjustment for Purchasing Value; The Net Total Income from All Sources on a Per Capita Basis; The Share of the Farm Population in the Total Net Income; The Distribution of the Current Income; The Total Current Income by States; The Per Capita Current Income of the Entire Population; The Per Capita Current Income of Non-farm Population; The Per Capita Current Income of the Farm Population; Current Income per Farmer; The Share of the Farm Population in the Current Income of Each State; The Income of the Bulk of the People; Higher Incomes Eliminated; Current Income of the Population in Income Classes Below \$10,000; Current Income of the Population in Income Classes Below \$5,000; Distribution of Income by Specified Income Classes by Geographic Divisions; Per Capita Current Income of the 95 Per cent of the People Included in the Lower Income Classes.