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PART II

THE CURRENT AND FUTURE PROGRAM

The undertakings in which the National Bureau is engaged serve a twofold purpose. One is to furnish the material for rewriting economic history and reformulating economic theory on the basis of quantitative research. But history records the past and theory interprets the record, not for the sake of the past, but as the experiential source on which we must draw for guidance in the framing of policy. Thus we come to the second function. History serves us best when it discloses problems and indicates how or to what extent they have been solved. Such problems become the subject of special studies in which we apply the lessons of experience to avoid or meet recurring difficulties of a similar kind. Statistical investigations have superior value in the degree to which they yield a more precise and illuminating definition of problems as well as a more instructive record. In effect, of course, most inquiries do, or should, apply historical and analytical methods as well as recognize the essential interdependence of their endeavors, aspirations, and goals.

As set forth in Part I, National Bureau studies are not to be considered as the projects of single investigators, although each is usually directed by one staff member. They are part of the whole body of research in which the National Bureau participates through the Universities-National Bureau Committee and other cooperating agencies. That fact should not be forgotten in reading the following report of detailed activities in 1938.

INCOME AND CAPITAL FORMATION

National Income

While preliminary estimates for 1919-35 were being printed in *National Income and Capital Formation*, preparation of detailed tables and comments on sources and methods was begun. The unavoidably slow task of putting the estimates into final shape, checking them in the light of more recent data, and arranging them in a form convenient for reference has been completed for all specific industrial divisions. The rough estimate for the miscellaneous division is not yet complete, and the data must be cast in summary tables that will provide the basis for the analysis in the text. Meanwhile, Dr. Kuznets has written the first three chapters of *The National Income and its Composition*, dealing with the concept of national income, the difficulties of defining the various allocations of the total to make them useful for analytical purposes,

and the broad statistical characteristics of the estimates presented. He hopes to have the entire manuscript ready for reading by the Directors before the end of the year.

Similar estimates back to about 1880 will then be attempted under the immediate supervision of Lillian Epstein. If for this period it proves possible to obtain reliable measures of national income allocated by industries and types of income, they can be used in combination with the expected results of W. H. Shaw's study of capital formation, 1879-1919, to give a significant picture of changes in the national economy over six decades. We may then consider discontinuing our work on national income totals allocated by industrial sources and types of income, if, as we hope, the Department of Commerce continues its current estimates.

Income from Independent Professional Practice

Milton Friedman has devoted much time to revising and amplifying the study of incomes of physicians, dentists, accountants, and consulting engineers, 1929-32, which had been laid aside two years ago, and hopes to finish his draft of the report by summer. The more recent samples collected by the Department of Commerce have enabled him to extend the analysis through 1934 for dentists and through 1936 for physicians and accountants, as well as to add law to the professions covered. Some results of the study were published in *Bulletin* 72-73.

Capital Formation and Consumption

Volume One of *Commodity Flow and Capital Formation* contains detailed tables and is intended primarily for students interested in the basic data and how the estimates were derived. Volume Two will summarize the procedures, discuss the concepts underlying the measurement, and give some analysis of the final estimates. In bringing his estimates of net capital formation up to date Dr. Kuznets used Dr. Fabricant's preliminary estimates of capital consumption. Results of a cyclical analysis made by Dr. Kuznets largely in preparation for a report read at the December meetings of the American Economic and Statistical Associations may also be included.

Mr. Shaw's work has progressed rapidly and has already yielded estimates by commodity and industry groups of the output of finished and unfinished commodities at manufacturers' prices. They will probably be released in a *Bulletin* this year before the estimates of capital formation are completed.

Future work by the National Bureau in this field depends largely upon whether some other agency assumes the task of making current estimates and

revising estimates for earlier years whenever new and better data become available.

Conference on Research in National Income and Wealth

The papers prepared at the initiative of the Conference for the 1937 meetings of the American Economic and Statistical Associations and the 1938 Conference meeting, together with the discussion, were published in Volume Two of *Studies in Income and Wealth*.

The following reports, which will probably make up Volume Three, have been promised for the Conference's April meeting: Enid Baird and Selma Fine, Use of Income Tax Data in the National Resources Committee Estimate of the Distribution of Income by Size; R. W. Goldschmidt, Estimates of the Volume of Saving in the United States, 1933-1937; Charles Merwin, American Studies of the Distribution of Wealth and Income by Size; R. R. Nathan, Allocating Income by States; Charles Stewart, Income Capitalization as a Method of Estimating Distribution of Wealth by Size Groups; Clark Warburton, Three Estimates of the Value of the Nation's Output of Commodities and Services—a Comparison; P. H. Wueller, Income and the Measurement of the Relative Capacities of the States.

The two state studies with which the Conference is in close touch, Wisconsin and Delaware, are almost finished. The Wisconsin Tax Commission is issuing the detailed tabulation of income tax data for 1936 in six mimeographed volumes, of which four are at hand. Additional volumes with tabulations for the 1929, 1934, and 1935 data and for individuals reporting in each year 1929-35 are expected by July. The tabulation of Delaware returns for 1936 will presumably be published under the auspices of the Conference.

The survey of data on the distribution of income by size, under the direction of Dorothy Brady, Milton Friedman, and Clark Warburton, will cover recent large sample studies of incomes, special analyses of income tax returns, both federal and state, and statistics currently collected in connection with the administration of the social security laws. It is designed to summarize and appraise the character of these materials as an aid to investigators and as a step toward establishing criteria for future studies. The major bodies of data will be described by persons who have been intimately connected with them; summary chapters on minor sources and recommendations for definitions and procedures will be prepared by the committee.

The Executive Committee of the Conference for 1938-39 comprises: M. A. Copeland, Hildegard Kneeland, H. M. Groves, W. W. Hewett, R. R. Nathan, O. C. Stine; Simon Kuznets, Chairman; Milton Friedman, Secretary.

Production

At an early stage of our work it was realized that systematic study of the price system and of the diverse behavior of its components could be made more realistic and effective if combined with studies of the organization of production, structural changes, and shifts in volume. During 1938 C. A. Bliss, who is now Assistant Professor of Business Statistics at the Graduate School of Business Administration, Harvard University, completed his report: *The Structure of Manufacturing Production, A Cross-Section View*. It contains new, detailed material on the amount and character of our productive resources in manufacturing, and their allocation in the production of goods of different types.

A grant from the Maurice and Laura Falk Foundation has enabled us to push far more intensively than hitherto our investigations of industrial production and productivity. Under the direction of Solomon Fabricant indexes of the physical volume of output of many manufacturing industries have been computed for the fourteen census years from 1899 to 1937. These industries are divided into two groups: (A) those for which the value of the products covered by quantity data equals or exceeds 60 per cent of the total value of the industry's output and whose indexes are therefore considered as adequately representing the total output of the industry; (B) those for which the percentage falls below 60 and whose indexes are therefore taken merely as representing the specific products covered. The tabulation shows for each census year the number of industries belonging to each group covered by the investigation.

NUMBER OF INDUSTRIES FOR WHICH QUANTITY
INDEXES HAVE BEEN COMPUTED

	GROUP A	GROUP B	TOTAL
1899	40	8	48
1904	45	6	51
1909	52	6	58
1914	59	9	68
1919	62	8	70
1921	64	10	74
1923	73	8	81
1925	78	14	92
1927	114	16	130
1929	123	20	143
1931	127	20	147
1933	94	21	115
1935	118	25	143
1937	110	20	130

Changes in the pecuniary volume of output ('value added'), both between contiguous census years and in relation to a base period, have been determined for all (about 320) manufacturing industries. Their magnitude and their variation from industry to industry are being studied.

Productivity

Indexes of physical output per worker have been computed for all manufacturing industries for which there are indexes of output comparable with those of employment. These industries are listed above under group A. Computations have also been made of indexes of output per man hour. Owing to the paucity of reliable data on hours worked, such indexes can be presented for only about 14 individual industries or industrial groups in 1914; 16 industries in 1919-23; 17, in 1925; 18, in 1927; 19, in 1929-31; 35, in 1933; and 38, in 1935-37. For those industries for which there are comparable data on production and capital, indexes of output per dollar of capital are being computed.

In the time left before the expiration of the Maurice and Laura Falk Foundation grant Dr. Fabricant expects to prepare a detailed discussion of the concepts and of the available data, to check the indexes and measures already computed, and to summarize in various ways the year-to-year movements and trends revealed in production and productivity. It may be possible also to make a beginning in an analysis of the factors immediately related to productivity: technical processes, types and quantities of machines, plant layout, type of labor, quality of materials, etc. Use would be made of Dr. Jerome's data and of other materials collected by the National Research Project and the Bureau of Labor Statistics.

Certain results of another investigation of productivity changes in manufacturing industries, with special reference to employment, were published in *Bulletin 70*, by F. C. Mills. Active work on the general study, dealing with interrelations among costs, prices, productivity, and employment, especially the incidence and consequences of productivity changes, has given way to more immediate claims upon the time of Dr. Mills and his assistants arising out of the plans for the business cycle monographs.

Prices and Costs

Cost functions, which play a crucial role in modern price theory, are of interest not only to the economist, serving as an empirical test of hypotheses, but also to the entrepreneur, providing him with knowledge essential for an informed price policy. To determine the patterns of cost behavior of individual enterprises Joel Dean, one of four research associates we were able to engage

with funds granted by the Carnegie Corporation, has made case studies of short-run cost adjustments of three departments of a merchandising establishment and three manufacturing plants. Similar investigations of other enterprises are planned with a view to developing generalizations concerning short-period cost functions of firms in a variety of industries. The project is being conducted in close association with the activities of the Committee on Cost-Price Relationships, which in some respects acts as an advisory body. It will be supplemented, if funds are available, by investigations of long-run cost behavior as affected by size of plant and by fluctuations in the prices of input factors. Study of the relation of cyclical price flexibility to costs, including the relation of overhead costs and methods of inventory accounting to price rigidity, the bearing of differential price rigidity upon cyclical fluctuations in general business, etc., contributes to our general price-cycle investigation. And, needless to say, price rigidity has attained independent standing as an economic problem.

During the year measurements of current price behavior by commodity groups have been continued and the computation of detailed monthly measurements for the period prior to 1929 begun with the aid of a volunteer assistant. Since the maintenance of an adequate series of group index numbers is an appropriate task for a federal agency we have welcomed a contemplated extension by the Bureau of Labor Statistics of its index numbers of commodity prices by groups. Assumption of responsibility by a governmental department would relieve the National Bureau of having to maintain its own monthly index numbers.

Conference on Price Research

One of the studies launched by the Conference on Price Research has been published: *Report of the Committee on Prices in the Bituminous Coal Industry*. The status of the reports from the other five committees on prices is indicated briefly.

Iron and Steel (Chairman, S. S. Stratton, Harvard University). The investigations of governmental agencies connected with the Temporary National Economic Committee may necessitate some modification of the report on iron and steel prices which will describe briefly the characteristics of the industry that affect prices, give sources of data, outline research problems, and suggest feasible projects.

Petroleum (Chairman, M. W. Watkins, New York University). The report on a program of research in oil prices will soon be submitted to the Confer-

ence. The economics of the industry with reference to price problems are analyzed; an inventory of accessible data is provided together with an appraisal of their adequacy, reliability, and significance for specific projects, and suggestions are made for improvements. The objective of one important recommendation was achieved when the National Oil Marketers Association adopted a resolution initiating a new system of quotation whereby the prices of petroleum products obtained in actual transactions will be published.

Automobiles (Chairman, R. C. Epstein, University of Buffalo). During the summer of 1938 this committee engaged Albert Abrahamson of Bowdoin College, who had done extensive work on automobile prices for a division of the NRA, to prepare a special report on the basis of which an earlier draft has been revised. The final report describes factors that affect automobile prices, emphasizing especially the historical setting of the industry, its investment characteristics, the imperfectly competitive nature of the market, the role of the used car buying price in setting the selling price of new cars, and the price-setting process, at both the wholesale and retail levels. It also suggests research projects on the measurement, composition, and function of prices, the relation of prices to consumers' budgets, installment selling, and sales methods, and the bearing of the price-setting process upon price flexibility.

Textiles (Chairman, S. J. Kennedy, Rutgers University and Pacific Mills). Mr. Kennedy and Hiram Davis, vice-chairman, are reorganizing and rewriting several sections of a draft report. Part I describes the major textile products to give readers a basis for understanding price differentials based upon grade and quality and analyzes the characteristics of the numerous textile markets that link the successive stages of processing the various products. Part II outlines areas of investigation and the Appendix lists governmental sources of textile price data.

Distributional Costs and Pricing Policies at Retail (Chairman, A. R. Burns, Columbia University). The operation of the Robinson-Patman Act and other fair trade laws gives fresh significance to this subject, on which little objective research has been done. Dr. Burns' report, prepared on the basis of preliminary memoranda and detailed suggestions by committee members, covers the effects of the changing organization of distribution upon retail prices, the character of competition in retail markets, the relation of distributional costs to prices, the efficiency of distribution, and proposals for research.

Facing diverse difficulties in their respective industrial fields these committees have naturally differed somewhat in effectiveness. For six large industries the Conference has succeeded in bringing together representatives from

business, from technical divisions of the federal government, and economists from research and academic institutions. Matters of common interest have been discussed, sometimes with traces of heat but always with illumination; ways to improve the reporting of basic data have been explored, and agreement has been reached upon research projects that may be expected to contribute to the solution of problems that concern industry, government, and economics.

Committee on Bituminous Coal Prices. At its 1938 meeting the Conference decided to set up a standing committee on pricing in the bituminous coal industry, instructed to give special attention to price fixing. Rate regulation has been practiced by federal and state bodies in this country for many years, yet little attention has been paid to the principles and wider consequences of price fixing in general. The Exploratory Committee on Prices of Bituminous Coal, under the chairmanship of Waldo E. Fisher of the University of Pennsylvania, has prepared the ground for further work and the recent act creating the National Bituminous Coal Commission and providing for definite price fixing affords an excellent laboratory case. Mr. Fisher has agreed to serve as chairman of the new committee.

Committee on Cost-Price Relationships. To gain clearer insight into the relationships between costs and selling prices, it is necessary first to define more sharply the economic meanings attached to such terms as costs, depreciation, and profits; second to analyze historical data relating to selected commodities. Satisfactory results are most likely to be secured by the cooperation of accountants, business men, and economists. Consequently the Conference invited the American Institute of Accountants and the National Association of Cost Accountants to lend their aid. A Committee on Cost-Price Relationships was appointed with E. S. Mason of Harvard as Chairman. The other members are Robert W. Burgess, Western Electric Company; J. M. Clark, Columbia University; C. Oliver Wellington, McKinsey, Wellington and Company; R. H. Whitman, R. H. Macy and Company; T. O. Yntema, University of Chicago. C. M. Armstrong is an advisory member and Joel Dean the executive secretary. The Committee has commissioned Dr. Dean to prepare a short monograph on methods of analyzing cost behavior. His related studies in the statistical determination of cost functions will facilitate the work.

The importance of studying the price-setting process has been emphasized in recent months and there is promise that much new material will become available as a result of the activities of the Temporary National Economic Committee. The possibilities of effective work on industrial price policies, by

a body acting in cooperation with but independent of the Committee on Cost-Price Relationships, are being explored by the Executive Committee of the Conference: F. C. Mills, Chairman; Anne Bezanson, M. A. Copeland, E. S. Mason, O. C. Stine, and W. L. Thorp. The membership of the Conference has been further extended by the addition of Cornell University.

The tragic death of Henry Schultz in November 1938 was a severe and irreparable loss to the Conference, which was acknowledged by the Executive Committee in the following minute:

"The Executive Committee of the Conference on Price Research records with sorrow the enduring loss suffered by the Conference and by American economics in the tragic and untimely death of Henry Schultz. As a member of the Conference and of its Executive Committee from its beginning, Henry Schultz brought to its councils wisdom, ripe experience, and standards of high intellectual probity. In him were combined in admirable proportions the disciplined mastery of technique, the alert curiosity, and the freely ranging imagination that are the elements of scientific greatness. His completed contributions to economic science will endure. It is part of the tragedy of his death that the science of economics must lose the further contributions that were still potential in him."

LABOR

Wage Rates

Dr. Wolman's study of wages in the United States has frequently been interrupted by other commitments. Meanwhile, however, wage data were being collected and tabulated. The wealth of material and the complexity of the problem has led Dr. Wolman to contemplate a series of volumes, each dealing with a more or less well-defined aspect.

The first, entitled *Wage Rates, A Study of the American Labor Market*, will (a) examine the raw data critically and discuss the definition of wage rates and the best means of measuring them; (b) record the history of rates since 1890; (c) show changes in the structure of wage rates revealed by study of rate differentials by industry, occupation, skill, sex, region, and extent of union organization; (d) discuss the problem of adjusting money wages to changes in prices. Becoming more and more dissatisfied with the record of wage rates, 1890-1914, particularly for the first decade, Dr. Wolman has concentrated attention on this period. He is now in a position, if not to revise the pre-War wage record, at least to interpret it more accurately, and hopes to submit the manuscript of this volume to the staff committee not long after the middle of the year.

The relation of wage rates, or the price of labor, to the earnings of work-

ers and the total wages bill of industry will be the subject of a second volume. Material and ideas for it will be derived as by-products from his work on the cyclical behavior of personal incomes, one of the business-cycle monographs, which takes precedence.

In connection with the study of American wages Dr. Wolman has assembled wage statistics for England, Canada, Australia, and Germany. He intended to include, in *Wage Rates*, several chapters on the movement of rates and changes in the wage structure of these four countries. But since these comparisons would have required additional material, delaying publication, and are worthy of more elaborate treatment, he now proposes a third volume.

Union Membership

Ebb and Flow in Trade Unionism, published in 1936, brought the record of union membership down to the organization of the C.I.O. Since then the problem of measuring union membership has changed and it will probably be several years before the record of these years can be supplied. Meanwhile Dr. Wolman is collecting the current convention proceedings and reports of both new and old unions, from which it will in time be possible to reconstruct membership statistics since 1935.

Beginning in the autumn of 1933, federal and state labor boards have been holding elections for employee representatives more and more frequently. The results constitute a unique source of information concerning workers' opinions of unions in general and their choice of one organization among several competing ones. Classified by industry and organization and interpreted in terms of economic and political conditions, they will afford the material for an interesting and informative study.

Important as it is to ascertain accurately what changes are taking place currently in labor conditions, these changes cannot be understood thoroughly until they are viewed in their historical setting. The more intimately one comes to know present conditions, the more problems one encounters that can be solved only by studying past trends that have shaped the attitudes of wage earners, union officers, employers, government officials, and the public. Thus Dr. Wolman's experience in carrying out the researches listed above has led him to project several long-range studies, and the materials he has discovered indicate that they can be prosecuted with good prospects of reaching definite results.

A history of wages in the United States. Scattered series of wage statistics make it clear that, with adequate funds and sufficient time, it should be possible to piece together the history of wages in this country, certainly since the Civil

War and perhaps for several decades before. There are available for this purpose many payrolls of individual firms and similar isolated records that can be pieced together and interpreted with the aid of the large collection of wage data preserved by the Aldrich Report.

A history of employment. The future course of employment and unemployment is one of the most important problems with which this country is faced. How far trends in employment since 1930 are unique is a question about which it should be possible to learn a great deal by studying the sources of increased employment in the past, the conditions under which employment declined and expanded, the effects of immigration on employment, the way in which employees released by declining industries and displaced by new processes and machinery were absorbed in other industries, and the time required in the course of past business cycles for employment to reach and exceed previous peaks.

A history of hours of work. When statistics on wages and employment are being compiled from payroll records, governmental reports, and union agreements, it should not be a formidable task to include also hours of work. After a few years we should have a record of changes in the length of the work-week and day from which we could determine the conditions under which the major reductions in hours have occurred.

Standards of living. In *Recent Economic Changes* the relation of consumption to living standards was reviewed. The unique fund of materials since accumulated would form the basis for an adequate study of the meaning of living standards, methods of measuring them, and the circumstances under which they advance or decline. The inquiry by the National Resources Committee into consumption expenditures by income groups and the completion of the real estate financing project make the time opportune to set a small staff to work. Proposed studies of cyclical fluctuations in personal incomes, the distribution of income by size, and the social consequences of business cycles should supply fresh material.

Public works. Data on public expenditures in the United States and foreign countries and on employment and wages in public construction have become available since the publication of *Planning and Control of Public Works* and *Public Works in Prosperity and Depression* in 1930 and 1935. With the experience and knowledge gained from these studies, the more comprehensive measures of total construction now available, and recent theoretical discussions of the subject, the National Bureau could now resume its study with better prospects of publishing a definitive report.

FINANCE

A Committee on Research in Finance was appointed late in 1937 to formulate plans for studies in this field and be responsible for their execution: G. W. Blattner, W. J. Carson, David Friday, Wesley C. Mitchell, R. A. Young, and Leo Wolman, all of the National Bureau; F. Cyril James, University of Pennsylvania; Shepard Morgan, Chase National Bank; Winfield W. Riefler and R. B. Warren, Institute for Advanced Study; Donald S. Thompson, Federal Deposit Insurance Corporation; J. H. Williams, Federal Reserve Bank of New York; Donald Woodward, Moody's Investors Service. Consulting personnel will be added from time to time.

The first two projects have been started: consumer installment financing and corporate bond standards. To coordinate activities, provide continuity and general supervision a central staff has been set up under a grant from the Rockefeller Foundation made to cover the planning and administrative phases of the program as well as special research activities. At present it is composed of G. W. Blattner and R. A. Young.

To acquaint the National Bureau with urgent financial problems so that current and potential research may be organized to the best advantage, an Advisory Conference on Research in Finance has been formed of representatives from academic institutions, governmental agencies, and various branches of banking, industry, trade, and labor. Thomas Jefferson Coolidge, of the Old Colony Trust Company, Boston, is Chairman, and F. Cyril James, Secretary.

Consumer Installment Financing

The project on consumer installment financing is carried on at Hillside with money provided by the Banking Research Fund of the Association of Reserve City Bankers. The functions and credit standards of institutions that supply installment credit to consumers are under intensive investigation. A draft report on personal finance companies is being revised. Sales finance companies are being examined by W. C. Plummer of the University of Pennsylvania; Morris Plan and industrial banking under the direction of R. C. Wood; the consumer financing activities of commercial banks, both in the personal lending and sales financing phases, by J. M. Chapman and R. J. Saulnier of Columbia University; the operations and credit experience of governmental agencies, namely the Electric Home and Farm Authority and the Federal Housing Administration, by J. D. Coppock of Swarthmore College.

When these detailed institutional studies are completed, a composite

study that will give a broad general picture of the facilities for financing the consumer on an installment basis and their role in credit organization will be made. These studies have required extensive and time-consuming field work, but the contacts made have given the staff deeper insight into the financial role of these companies, many of which have cooperated cordially.

Since reliable estimates of consumer installment debt do not exist, a special study, directed by Duncan Holthausen, has been started in cooperation with other agencies. The statistical pattern of installment debt is being analyzed by Blanche Bernstein. By using the family expenditure schedules of the Consumer Purchases Survey by the Bureau of Home Economics and of Labor Statistics, it is possible to show the distribution of installment debt by income class, occupation, size of family, and community in 1935-36.

The legal framework within which installment credit agencies function is the subject of a report by Nathan Isaacs of the Graduate School of Business Administration, Harvard University. It will describe the effects of legal enactments and rules on the development of such institutions, and the reciprocal influence of the institutions on the evolution of the law.

Gottfried Haberler of Harvard University has recently undertaken to direct the investigation of the relation between installment consumer financing and economic stability.

Bond Standards

A quantitative investigation of the investment experience, market prices and yields of corporate bonds, and the terms of corporate bond financing was planned in 1938 and begun early in 1939. The Board of Governors of the Federal Reserve System, the Comptroller of the Currency, the Federal Deposit Insurance Corporation, the Securities and Exchange Commission, and four financial advisory services—Fitch Investors Service, Moody's Investors Service, Poor's Publishing Company, and Standard Statistics Company—are cooperating with the National Bureau in planning and supervision. Winfield W. Riefler is chairman of the committee immediately in charge; M. W. Brethouwer is Project Director.

The first stage will be confined to the compilation of data with WPA funds as a work relief project. As said above, for each railroad, public utility, and industrial bond issued from 1900 to 1938 the class of issue, industry of borrower, amount offered, proceeds to borrowers and underwriting spread, amount outstanding, ultimate repayment or default, prices and yields, rating, etc. will be recorded. Thus materials will be provided for a series of capital-market studies including the behavior and loss experience of bonds grouped

by industries, quality, maturity, and other characteristics; net yields (yields adjusted for losses) on investments in bonds of given type and quality; terms of financing through the capital market in different industries, including, if possible, the true interest cost to borrowers; market differences in bond quality, measured by yields as compared with ratings by the financial services and in legal lists. These and other studies will be undertaken, it is hoped, by the National Bureau, the cooperating agencies, and other organizations. They should be useful in framing public policy regulating financial institutions, in developing objective investment standards, and in establishing a broader empirical base for dealing with general interest problems and theory.

FISCAL POLICY

The Committee on Research in Fiscal Policy has chosen the economic effects of direct federal taxes as the first item in its program. It hopes later to develop a comprehensive investigation of the economic effects of fiscal policy—broadly defined to include taxation, debt, and expenditures of federal, state, and local governments—upon production, savings, consumption, national income and wealth, and related matters.

The first study constitutes a manageable unit and offers the possibility of treating thoroughly problems of pressing public importance. The integration of direct taxes with other phases of fiscal policy is so close that the results will bear upon fiscal policy as a whole. Detailed planning of the work, and the scheduling of its parts must await the decision of the Directing Committee: Jacob Viner, Chairman; W. L. Crum, and Dan T. Smith, which, in turn, awaits funds.

Meanwhile, E. Gordon Keith, another research associate, is compiling a general bibliography of fiscal policy. It will be immensely helpful not only in the taxation study, but also in the various other studies the Committee contemplates. As soon as the taxation project is started the Committee will turn its attention to planning the second project in its program, presumably the economic effects of federal expenditures.

BUSINESS CYCLES

By January 1, 1939, 1,100 statistical series had been analyzed by our standard technique. The number analyzed during 1938, namely 108, is smaller than in past years because the business cycle unit is devoting more and more time to special tabulations and to research connected with the preparation of the

Studies in Cyclical Behavior, the plan of which was outlined in the Annual Report for 1937. The manuscript of the first study, *Methods of Measuring Cyclical Behavior*, is nearly ready to be mimeographed for the Directors. The National Bureau's technique of measuring cyclical behavior and detailed tests of the assumptions underlying it are described in full. Dr. Mitchell and Dr. Burns have spent a good fraction of this year in extending the range and effectiveness of these tests.

Three more monographs are also approaching completion: Production of Commodities, Construction, and Transportation. Dr. Mitchell has reworked and expanded early versions of the first and third; Dr. Burns has written the first draft of a chapter on Railroad Construction and revised the chapters on Building Construction.

Dr. Mills expects to be on leave from Columbia University during the second half of the year and will devote himself to a monograph on the cyclical behavior of prices. The index numbers of prices and individual commodity price series already analyzed by the standard procedure of the business cycle unit will be utilized, but many more series must be included. The field is being canvassed for accurate, authenticated, and representative series of commodity prices that will fill gaps in the list already analyzed. It is hoped that the search will be facilitated by recent activities of federal agencies designed to provide series that truly reflect the prices at which important commodities have been bought and sold, account being taken of discounts, changes in the terms of trade, and other modifications of quoted prices. In addition, the analysis of cyclical price movements discussed in *The Behavior of Prices* will be checked and extended.

One of the darkest corners in the statistical picture of business cycles is the behavior of commodity stocks and plant capacity. Moses Abramovitz, a third research associate, began work on this problem last fall. In addition to making a general survey of the way commodity stocks behave during business cycles, Dr. Abramovitz plans to study intensively a few industries, using data on production, shipments, prices, foreign trade, orders, and other items, to interpret the statistics of stocks held by different hands in industries for which less complete data are available.

During the coming year Dr. Wolman will begin work on the monograph on Personal Incomes, describing cycles in payrolls, employment, and per capita earnings, and Dr. Kuznets will begin his work on the Flow of Commodities from Producers to Consumers. We hope to get several other monographs started, particularly on Money and Banking, Security Markets, and International Economic Relations. Meanwhile Dr. Mitchell can accomplish a

good deal of preliminary work on the volume that will attempt to give a theoretical account of how business cycles come about. He plans to devote nearly all his time to this synthesis in the next few years.

To meet a real need of business men and students of current business trends one minor byproduct of the business-cycle studies was published last year in *Bulletin 69*, Statistical Indicators of Cyclical Revivals.

Real Estate Financing and Economic Stability

D. L. Wickens, assisted by R. T. Bowman, our fourth research associate, has completed a statistical handbook giving (1) the value of all nonfarm residential properties for 1930, by states and size of city groups, and for 1934 by geographic divisions; (2) the rent of dwellings for 1930 by states and size of city groups; (3) for the 52 cities covered by the Financial Survey of Urban housing, values and rents in 1934, and family incomes, correlated with values, rents, rent delinquencies, and mortgage debt; information relating to the financing of residential real estate, and an estimate of the total mortgage debt on nonfarm dwellings; (4) estimates of residential construction, 1890-1936, in terms of the number of units and value.

A *Bulletin* on differentials in housing costs is scheduled to appear in 1939. It will present the variations in housing standards and housing costs in different parts of the country, as well as in cities and towns of different size and in rural areas.

The comprehensive material on American real estate and its financing assembled by this project, much of which will be published in the Handbook, provides a basis for other interpretative studies, centering particularly on mortgage practices and their economic effects. A foundation has also been laid for an appraisal of the relation of housing to industry.

Agricultural Production in relation to Business Cycles

Eugen Altschul writes from the University of Minnesota that he will soon send a manuscript for review by the staff committee. His study, made under a grant from the Maurice and Laura Falk Foundation, is primarily an analysis of the agricultural situation in the United States since 1920. In his view, evidence supplementary to that in *Bulletin 67* substantiates the thesis that the agricultural depression as a long-run phenomenon is the result of fundamental changes in supply conditions, among which mechanization of farming plays the main role. A feature of his manuscript is a treatment of leading American and European theories of the agricultural depression and of the relation between long-run disturbances in agriculture and business cycles.

As byproducts of the investigation two further studies are in preparation: (1) the supply of agricultural raw materials, their price behavior during the last fifty years, and their significance in business cycles; (2) the displacement of labor in the cotton belt due to increased mechanization of farming and its effects upon the labor market.

Trends and Causes of Changes in Basic Agricultural-Industrial Relationships

The plan of the joint study by the Bureau of Agricultural Economics of the United States Department of Agriculture and the National Bureau, outlined in the Annual Report for 1937, has been narrowed somewhat in scope. A draft of a monograph, *Gross Farm Income, Indexes of Farm Production and of Farm Prices in the United States, 1869-1935*, prepared by Frederick Strauss, was circulated among several experts in the field. It is expected that a revised version, covering total agriculture and such subgroups as are significant for economic analysis, will soon be published by the Department of Agriculture. A preliminary analysis in summary form may appear in one of our *Bulletins*.

UNIVERSITIES-NATIONAL BUREAU COMMITTEE

The members and alternates (in parentheses) making up the Universities-National Bureau Committee are: California, R. D. Calkins (M. R. Benedict); Chicago, Jacob Viner (S. E. Leland); Columbia, J. C. Bonbright (Carter Goodrich); Harvard, J. D. Black (A. H. Hansen); Michigan, I. L. Sharfman (W. A. Paton); Minnesota, R. A. Stevenson (R. G. Blakey); North Carolina, E. W. Zimmerman (Clarence Heer); Pennsylvania, Anne Bezanson (W. J. Carson); Stanford, J. S. Davis (N. J. Silberling); Wisconsin, M. G. Glaeser (H. M. Groves); National Bureau, Wesley C. Mitchell (Simon Kuznets).

At its meeting on November 26, 1938, the Universities-National Bureau Committee recommended: (1) That the chairman of each of the four cooperative projects be made a member *ex officio* of the Committee (G. W. Blattner, Research in Finance; W. L. Crum, Fiscal Policy; Simon Kuznets, Income Conference; F. C. Mills, Price Conference). (2) That Morris A. Copeland, J. Frederic Dewhurst, and Winfield W. Riefler be added to the Committee as individuals. These recommendations were accepted by the Directors of the National Bureau on February 27, 1939.

Much of the cooperative program of the National Bureau has been fostered by the Universities-National Bureau Committee. Its object is to consider the possibilities (and limitations) of joint action among the universities, the National Bureau, and other research agencies, and, in general, ways of