When the President of the United States noted, as he did in the opening sentence of his latest Economic Report, that the current expansion in business activity was about to enter its sixth year, he was not merely consulting the calendar. He was relying upon basic measurements of the business cycle developed after years of research. When the present and a former chairman of the Council of Economic Advisers agreed, as they recently did, that one of the chief factors making for stability in the wholesale price level during much of the past decade has been the remarkable stability in unit labor costs in manufacturing, they were using measures of productivity and unit labor costs that the National Bureau's researches have helped to develop and interpret since the 1930's. When business forecasters argued, as they did earlier this year, whether the gross national product in 1966 would be closer to $720 billion than to $730 billion, they were discussing the future trend of the economy according to a system of accounts originally designed in studies carried out at the National Bureau during the 1920's.

Not all the users of these economic measurements, and few of those who read or hear what the users have to say, are aware of the role of economic research in anticipating the nation's needs for basic information. I should like to take a few moments to describe that role, first in terms of the results of our researches during the past year, and then in terms of the plans we are making for the future.

HIGHLIGHTS OF CURRENT RESEARCH

It is always difficult to say what the significant results of current research are, because most of them will be realized in the distant future. When the decision to undertake research on

NOTE: This report was presented at the annual meeting of the Board of Directors of the National Bureau held in New York City, March 7, 1966. I am indebted to my colleagues for their contributions to the report, and especially to Arthur F. Burns, Solomon Fabricant, Hal B. Lary, and Victor R. Fuchs for their helpful suggestions on its content.
business cycles was made by Wesley Mitchell and the National Bureau's Board in 1921, no one could know whether the methods and findings would prove useful, or for how long a period. When, for example, one of the first published products of that research, Willard Thorp's Business Annals, was issued in 1926, no one could know that the business cycle chronology Thorp's work helped to establish would be continued to date and be widely used in business, government, and academic circles some forty years later. So, when we examine what we call the results of this year's activity, our appraisal can be only tentative, for we are seeking to discern the nature and significance of a long series of future uses and applications that will ultimately be regarded as attributable to this year's work. That is both the challenge and the fascination of a program of basic research.

Another difficulty in appraising last year's, or any year's, performance is that the reports emanating from the National Bureau's staff or conference groups in a single year deal with a wide variety of economic questions. Nine books and six Occasional Papers have been published since January 1, 1965, and five reports are in press. Even more numerous, and certainly bulkier, are the forty manuscripts or conference reports that are presently in one stage or another of completion. Finally, many of the studies currently under way have not yet reached the manuscript stage.

Each of these research efforts is described in the reports that appear below. Here I can mention only a few of the highlights, and have selected for comment four recently published works that seem likely to find important application throughout the nation in the years to come.

In February 1965 the National Bureau convened a conference on the Measurement and Interpretation of Job Vacancies. Planning for this conference began in the autumn of 1963, and the book containing the research papers prepared for discussion at the conference, together with the discussion itself, was published this March. The purpose of this undertaking, which was aided by the Office of Manpower, Automation and Training, was to stimulate research that would improve understanding of the concept of job vacancies and test the feasibility of compiling job vacancy statistics in this country. As Robert Ferber points out in his introduction to the volume, "there has been a growing awareness of the value such data might have, ranging from their use as a basis for job training efforts to their use as a tool of economic analysis." This awareness has been stimulated in recent months by the labor shortages that have begun to appear in various communities, occupations, and industries. The book could scarcely be more timely.

In the long run, however, its current timeliness will be of little consequence. What matters is whether it will stimulate a new advance in labor statistics comparable in its implications to that which occurred in the 1940's, when statistics on unemployment first began to be collected on a periodic, nationwide basis. My belief is that it will, and that our understanding of the demand side of the labor market—and also the supply side—will thereby be vastly improved.

If comprehensive job vacancy data were available today, they would undoubtedly reveal large numbers of unfilled jobs not only in manufacturing industries but also, and perhaps in greater degree, in the service industries. That is one of the many implications of the transformation of the United States from an "industrial" to a "service" economy, as Victor Fuchs dramatically put it in his report, The Growing Importance of the Service Industries. This shift will, in due course, bring about a similar shift in emphasis in the study of economics and in the statistical information upon which that study increasingly depends. The publication of this paper, therefore, can be counted as one of last year's products that foreshadows a change in what we know and think about the way our economy functions.

Another shift in emphasis that has been taking place in recent years, both in the national economy and at the National Bureau under Hal Lary's leadership, is greater con-
cern with the international economic relations of the United States. A major innovation in the provision of information on our competitive position in international markets was marked with the publication of *Measuring International Price Competitiveness: A Preliminary Report*, by Kravis, Lipsey, and Bourque. This initial report, which is limited to iron and steel products but will be followed by reports on other metals, machinery, and transport equipment, describes a new approach to securing comparable price series for internationally traded products. In view of the importance of accurate information on export and import price competition to industrial concerns, to financial institutions, to government agencies concerned with the balance of payments, and to international organizations, it seems likely that this new analytical tool will, sooner or later, become a part of the nation's economic intelligence system. The countries with which we trade will, no doubt, be equally interested and some may wish to participate in continuing and broadening the price indexes initiated in this study.

A fourth illustration of research results that may have lasting consequences is provided by Hultgren's *Cost, Prices, and Profits: Their Cyclical Relations*. No one had yet shown as clearly and conclusively as Hultgren does that prices and costs per unit of output follow one another closely in their broader movements yet diverge significantly at strategic points in the business cycle. For example, in most manufacturing industries, when an expansion in sales gets under way, unit costs decline at first. But as the expansion continues, costs per unit generally begin to rise. The cyclical upturn in costs often produces a downturn in profit margins before sales reach their peak. Prices usually do not contribute to this tendency for margins to fall; the prime mover is unit costs.

Hultgren's study is the latest product of the National Bureau's long-established interest in price-cost relations. Mitchell's and Mills' lifelong concern with costs and prices; the studies promoted by the Conference on Price Research in the 1930's and '40's; the work on wages and productivity by Fabricant, Creamer, Rees, Long, Bry, Kendrick, and others—all these have contributed to knowledge of prices, costs, or both. But we have not seen the end of this subject. Public interest in cost-price relations was never greater than today. Conjecture about causes and effects is lively still, but evidence on what is actually happening is gradually supplanting hunches and wishful thinking. Nevertheless, there is much room for improvement of data and analysis, as the work on international prices just referred to testifies, and as Stigler's new study of industrial prices may demonstrate. One of the National Bureau's proper functions in the years ahead should be to remain in the forefront of efforts to promote accurate and timely information on costs and prices, and sound analysis of their interrelations.

**PLANNING FOR THE FUTURE**

A new Director of Research might be tempted to report that revolutionary changes have already been made in the organization and scope of the research program, and that still more revolutionary changes are in prospect. But such a report would not be correct in this instance, nor, in my judgment, would it represent the right course. Changes there have been. Douglas Eldridge, our new Executive Director, has quickly become familiar with the research, administrative, and financial affairs of the National Bureau, and has tackled his duties enthusiastically. Victor Fuchs, as Associate Director of Research, has taken hold of his new functions with vigor and imagination. We have begun to develop a new electronic data-processing unit centered around a computer that, after several delays, is now expected to be delivered this fall. We have started, with the aid of funds from the Carnegie Corporation, a new program of research in the economics of education, under Becker's direction. An enlarged series of studies of international economic problems, supported by a grant from the Ford Foundation, is getting under way, as Lary reports.
below. But these, and some other new research projects described in Part III, are evolutionary, not revolutionary changes.

One of the strengths of the National Bureau has been that it adopted from the beginning some inherently sound research policies, and it continued to adhere to them. One such policy, first expounded by Wesley Mitchell in the early 1920's, was to consider whether any new research undertaking would benefit from, and in turn contribute to, the results of earlier investigations. This helps to ensure that knowledge will cumulate, and it has other advantages in developing and making effective use of a skilled staff. Another basic policy is to take deliberate care in exploring a new research topic before committing substantial resources to it. To this end we seek, in advance, the advice and guidance of those whose knowledge and experience should be most helpful in designing the undertaking. A third, and clearly the fundamental policy underlying the Bureau's program, is to concentrate upon problems that are material to the functioning of our economy, susceptible of quantitative, objective treatment, and of concern from the standpoint of public policy.

The application of these policies is well illustrated by the investigation of banking structure and performance that was recently approved by the Executive Committee. Initial discussion between officers of the National Bureau and of the American Bankers Association concerning the possibility of an investigation in this area took place more than a year ago. At that time we suggested that an exploration was needed to determine what the principal factual issues were and what kind of investigation, if any, might be feasible. The Association made a small grant to the National Bureau for this purpose. Donald Jacobs of Northwestern University and George Morrison, now at the University of Buffalo, were asked to take charge of the exploration, and an advisory committee of a dozen experts in this field, headed by Lester Chandler of our Board, was appointed. Jacobs and Morrison interviewed bank economists, university economists, and government officials; reviewed the literature; wrote several drafts of a report and consulted with the advisory committee about them. The final report, completed last summer, described some six interrelated research projects. Further discussions ensued last fall and winter, and the end result is a commitment to investigate two of the six areas.

Both of the topics selected are focused on the question whether, and to what degree, the terms and conditions of bank lending are related to the structure of banking markets. One is concerned with consumer lending, the other with business lending. The choice of consumer lending was influenced partly by the fact that we have, during the past half-dozen years, been engaged upon a massive study of consumer finance, and the data and expertise developed in that work will help us in the new study. Both studies, too, seem likely to contribute further to the knowledge gained from the work on consumer and on business finance conducted by the Bureau in the late 1930's and early 1940's. Finally, the strategic position of commercial banks in our economy, the substantial changes that banking markets have undergone during the postwar period, and the broad public interest in the effects of these changes upon credit terms all suggest that the subject is an appropriate one for investigation.

While there has been, and will continue to be, a large element of continuity in the research policies of the National Bureau, they provide also for flexibility and therefore for innovation and for growth. The needs and opportunities for basic economic research are growing, and the National Bureau's program should, in an orderly fashion, grow with them. The committee headed by George Roberts and Joseph Willits, which reported to the Board a year ago, provided a valuable set of guidelines on how this might be accomplished, and several actions have been taken since.

Shortly after last year's meeting of the Board, Arthur Burns, Solomon Fabricant, and I began to sketch the broad outlines of a plan for the National Bureau's growth over the next decade. The plan provided for a gradual but substantial enlargement of the research
program, greater flexibility in choosing new topics for research, an expanded training program for younger economists, further development of electronic computer and charting facilities, better means for making available to scholars the Bureau's extraordinary collection of unpublished statistics, more attention to the needs and interests of foreign scholars, and greater effort to secure wide public understanding of the Bureau's findings and their relevance to current issues.

This plan envisages a substantial growth in the National Bureau's budget, and hence requires a strong effort to improve our financial resources, along the lines indicated in the Roberts committee report. It requires, also, an organized effort to work out the details of the plan and to keep it attuned to changing research needs and opportunities as they arise in the future. Here, too, the committee's report provided guidance, and we have recently taken steps to organize an Advisory Committee on Research. A dozen outstanding economists, including some members of the Board, have been invited to join this committee and to convene at a two-day meeting this spring. The function of the committee will be to advise and assist the directors and staff by reviewing critically the National Bureau's current research program, suggesting how it can be improved and strengthened, and recommending new areas or topics for research.

We expect the meeting to be devoted to (1) discussion of the Bureau's present program as set forth in this report, (2) presentation by the staff of plans for research projects that are still in their early stages, (3) discussion of the broad program for growth outlined above, and (4) suggestions for new research by members of the committee.

It would seem to be desirable, if the work of the Advisory Committee is to be most effective, that a special meeting of the Board be held in the autumn to consider the results of the Advisory Committee's deliberations. Such a meeting would give this new effort at planning the Bureau's future its best hope of success, and I hope that arrangements for a special meeting will be approved by the Board.

The National Bureau will, in 1970, celebrate its fiftieth anniversary. It is none too soon to begin to plan for this event, and the special meeting suggested for next fall might devote attention to such plans.

These several efforts at planning the National Bureau's activities over the next few years will, I hope, serve the nation by anticipating its needs for basic economic knowledge. Many of these needs we cannot anticipate. But if we choose as wisely as our predecessors—if we concentrate upon important topics, put the investigations in the hands of resourceful scientists, and safeguard the impartial quality of the work—that is, if we undertake such studies as those of Becker on human capital and the economics of education; of Friedman, Cagan, Guttentag, Shay, and Earley on money and finance; of Mincer and Easterlin on the labor force and unemployment; of Ture and his colleagues on taxation and economic growth; of Kendrick and Juster on capital formation and national income; of Mack, Zarnowitz, Mintz, and others on business cycles and forecasting, to name but a few—we shall anticipate a goodly number of these vital needs.

Geoffrey H. Moore