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# ECONOMIC TENDENCIES

IN THE UNITED STATES

*Aspects of Pre-War and Post-War Changes*

*by*

FREDERICK C. MILLS

*With an Introduction by*

THE COMMITTEE ON  
RECENT ECONOMIC CHANGES

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THE NATIONAL BUREAU OF ECONOMIC RESEARCH, INC.

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THE COMMITTEE ON RECENT ECONOMIC CHANGES

1932

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*Introduction by the  
Committee on Recent Economic Changes*

This volume is devoted, primarily, to a survey of economic tendencies which developed and prevailed during the period preceding the current economic depression. In order the better to bring out the character of these tendencies, they are reviewed in comparison with the tendencies prevailing during the period preceding the World War.

As a survey this study is important in its own right because of the economic importance of the period 1922-1929. It presents an extremely valuable segment of the continuing study of the phenomena of economic activity, which is being carried forward by the Committee on Recent Economic Changes in conjunction with the National Bureau of Economic Research.

For the scientific competency of this study—the gathering of the material brought together in the present volume, its interpretation, and the conclusions drawn therefrom—the National Bureau of Economic Research is solely responsible; but the Committee on Recent Economic Changes is happy to join with the Bureau in the publication of a study throwing such a flood of light upon the nature of recent economic movements in the United States, and the features and forces marking their essential character. It is most timely as a study of recent economic history and as such will be welcomed. But its importance goes beyond its timeliness. Because of its intelligent application of the methods of scientific analysis, assembly, and organization to the understanding of a body of actual economic phenomena, its importance as a contribution to realistic thinking and procedure, in the economic field, deserves appreciative recognition.

In the Committee's opinion, while this volume is important currently as a background study of our economic processes, its greatest value will be realized when the time comes that the depression itself can be analyzed. In the meantime the evidence it presents may

profitably be studied, checked and challenged, so that when the full record of the depression shall be ready for analysis, it may be studied and interpreted against a background of fact and conclusion made sound and useful by the processes of deliberation, verification and assimilation. The present volume and others shortly to follow may, therefore, be considered interim reports, bridging the span between the previous study, *Recent Economic Changes in the United States*, published by the Committee on Recent Economic Changes early in 1929, and the report this Committee anticipates publishing at that future date when the present economic cycle shall have run its course.

"If ultimately," says Dr. Mills in his conclusion, "we are able properly to interpret this complex experience, we may hope to determine whether anything approaching true economic equilibrium was achieved within the era bounded by the two great post-war recessions. We may hope, too, to determine more precisely the conditions that conduce to stable economic processes, and to define more accurately than is now possible the limits of tolerance of the existing order, in relation to the stresses and strains to which it is exposed."

This well expresses the underlying hope of the Committee on Recent Economic Changes, and the motive which has prompted the Rockefeller Foundation, the Carnegie Corporation, the Economic Club of Chicago, and various socially-minded groups and individuals who have so generously supported and encouraged the Committee in its continuing study of recent economic experience.

ARCH W. SHAW, <i>Chairman</i>	LEWIS E. PIERSON
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October, 1932

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## Foreword

Certain of the attributes of two economic eras are summarized in the following figures:

	Average annual rate of change,	
	1901-1913 (per cent)	1922-1929 (per cent)
Population of the United States.....	+ 2.0	+ 1.4
Physical volume of production.....	+ 3.1	+ 3.8
Volume of production, per capita of the population .....	+ 1.1	+ 2.4
Prices, wholesale .....	+ 1.8	- 0.5
Volume of employment, manufacturing industries .....	+ 2.7	+ 1.0
Per capita real earnings, manufacturing workers .....	- 0.1	+ 1.4
Prices of industrial common stocks.....	+ 2.8	+ 19.4

There are notable differences between these two periods. The physical volume of production expanded at a more rapid rate in the recent period, while population grew less rapidly. Wholesale prices rose in the earlier period, declined in the later. The volume of employment in manufacturing plants expanded considerably during the pre-war era and increased but slightly during post-war years. The real earnings of manufacturing workers declined slightly in the first period, increased substantially during the second. The prices of industrial common stocks rose in the earlier period at a rate but slightly in excess of that prevailing among wholesale prices; the more recent period was marked by a rapid climb in stock prices, at a rate sevenfold that of the pre-war era.

These figures have been given for the purpose of presenting a problem. In themselves they indicate certain resemblances and emphasize certain major differences between the two eras, but the questions they raise are more significant than is the information they give. Why do we find such pronounced differences among the changes in the real earnings of labor, in the volume of manufacturing employment, in the prices of common stocks? Over such

periods of time as these, what relations prevail among the various economic processes represented in the above table? More generally, upon what does the productivity of an economy depend? What conditions conduce to stability in the working of an economy? to instability? How should one define stability and instability in the working of an economy? Conceiving of an economy as a closely-knit system of elements moving forward in time through a related series of changes, it is desirable to know what elements play an active part in these changes and what elements are on the whole passive. One would like to differentiate between flexible and inflexible elements, between elements which adapt themselves promptly to changes in other factors, and in the general economic situation, and elements which are relatively rigid in the face of changing conditions. Finally, in any study of the parts played by different elements in economic operations, some effort should be made to distinguish between those elements upon which the finger of conscious control may be placed and those elements which are not subject to direct control.

These questions will be in the backs of our minds in surveying the tendencies which prevailed during the period preceding the World War and that which followed it. Complete answers are not sought, for the present task is primarily descriptive. The descriptive work must, of course, be carried on within the framework of certain working hypotheses, must be based on certain assumptions concerning the ground plan of the economic structure. But the full interpretation of the complex changes which occur in an economy in operation, the complete tracing of the relations of cause and effect, of antecedence and consequence, among the elements of such an economy, lies beyond the present objective, and, indeed, beyond the limits of existing knowledge. This task of interpretation is an urgent one, if we are to secure a clearer understanding of economic processes than we now have. The present experimental study may contribute to a solution of the larger problem.

This investigation is, at once, a continuation of the general price studies begun by the National Bureau some time ago,<sup>1</sup> and an extension of certain work done for the Committee on Recent

<sup>1</sup> See *The Behavior of Prices*, National Bureau of Economic Research, New York, 1927.

Economic Changes.<sup>1</sup> The examination of price changes and of related industrial movements, which was one phase of the general study of economic changes, extended only to 1928 and dealt almost exclusively with post-war events. In order that the rate and character of the industrial advance of the 1920's might be more exactly defined, a broadening of that study was required. Furthermore, it seemed desirable to define in great detail differences between the movements of recent years and those which occurred from the turn of the century to the outbreak of the World War. These considerations were strengthened when the recession which began in 1929 set a terminus to the post-war expansion. The era from 1922 to 1929 constitutes a clearly-defined epoch, which lends itself to study as a unit. It is proper that the tendencies characteristic of post-war conditions in the United States be studied within this eight-year period.

The present study does not aim at an explanation of the recession of 1929, nor of the depression which ensued. It deals with tendencies prevailing in certain economic fields during the years preceding the crisis of 1929. These tendencies had a bearing, of course, on that crisis, but they do not necessarily account for the economic collapse. That is a problem which calls for a wider survey than is here attempted.

This account of economic tendencies runs in terms of measured events—of changes in the number of units of goods produced, in per-unit prices and production costs, in wages, in dividend payments, in trade and capital movements. These measurements cover a wide range, with respect to both subject matter and accuracy. Figures compiled and published by various agencies have been utilized. Many of the measurements cited have been derived in connection with the present study, and are here published for the first time. These have been given as high a degree of accuracy as the original data permit. This is believed to be reasonably high, as regards new index numbers of production and prices, and new measurements of changes in costs, derived from census compilations. In some other cases estimates of economic changes have been based upon less exact data. These rougher estimates are put forward without apology, for approximations are preferable to complete absence of knowledge, but with full recognition of the margins

<sup>1</sup> *Recent Economic Changes*, National Bureau of Economic Research, New York, 1929, Chapter IX.

of error involved in their use. They will have served a useful purpose if they stimulate further work aimed at more exact determination of the magnitudes involved.

The facts assembled in such an account as this do not fit into a nicely articulated structure. "It isn't a constructed tale I have to tell," says Ponderevo, in *Tono-Bungay*, "but unmanageable realities." It is difficult to give order and coherence to the refractory data of economic reality. Instead, then, of looking for perfect unity in this survey of tendencies, I have sought significant methods of handling and organizing the relevant data, suggestive ways of viewing them, possible modes of combining them, to the end that some light might be thrown on the processes of a going economic system during two eras of expansion. The resulting measurements, as presented in the following pages, lack the nice coherence which they might have if they were fitted into a constructed tale. But the telling of such a tale, and the precise fitting of observed facts into it, has not been one of the objectives of the present study. A new cosmology is not a necessary accompaniment of every new set of observations.

The task of giving a reasonably comprehensive factual basis to an account of economic movements is, of necessity, laborious. I have had the assistance, at different stages of this work, of Charles Bliss, Vladimir Kolesnikoff, Solomon Fabricant, Maude Remey, Mildred Uhrbrock and Gertrude Reaske. My debt to these co-workers for help in the tasks of compilation and calculation, for searching criticism and for fruitful suggestion, is a heavy one. I am indebted, in addition, to Mr. LeVerne Beales, of the Bureau of the Census, for his generous compliance with numerous troublesome requests. Finally, I wish to express my appreciation of the action of the President and Trustees of Columbia University in granting me a leave of absence from my University duties for the prosecution of part of this investigation.

F. C. M.

ECONOMIC TENDENCIES

IN THE UNITED STATES

