The Length of Business Cycles

Among the many advances in connection with the study of business annals for seventeen countries was one pertin-ating to the length of business cycles. The measurements were made from the beginning of one recession to the beginning of the next, and only in units of full years. No distinction was made between so-called major and minor cycles.

The original study was based upon one hundred and sixty-six cycles. The summary data presented in this News-Bulletin make possible the addition of twenty-one observations to this list. During the last six years two countries, Japan and Russia, have completed only one cycle; the other fifteen countries have all completed at least one cycle, and some, such as the United States and Canada, two. The summary of the one hundred and eighty-seven observations now available shows that the cycles had the following durations:

<table>
<thead>
<tr>
<th>Duration in Years</th>
<th>Number of Observations</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
</tr>
<tr>
<td>5</td>
<td>17</td>
</tr>
<tr>
<td>6</td>
<td>21</td>
</tr>
<tr>
<td>7</td>
<td>24</td>
</tr>
<tr>
<td>8</td>
<td>29</td>
</tr>
<tr>
<td>9</td>
<td>30</td>
</tr>
<tr>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>11</td>
<td>31</td>
</tr>
<tr>
<td>12</td>
<td>16</td>
</tr>
<tr>
<td>Total</td>
<td>187</td>
</tr>
</tbody>
</table>

The evidence is clear that while it is possible to state that cycles three- and four-year cycles occur most frequently, they actually constitute only about one-third of the observations. There is no length which occurs with sufficient frequency to suggest that it be used as a basis for prediction.

The Nature of Business Annals

Business annals are based primarily upon the opinions of intelligent and expert observers. The chief sources are commercial and trade journals and papers, bank reviews, magazines, annual reports, reviews by organizations engaged in business cycle analysis, congressional and diplomatic reports, and government records. Yet indirectly and directly, considerable use has also been made of statistical material, the original analysis of which is based on the opinion-10- largely upon statistical records and their descriptive statements have been checked with statistical data. Although difficulties surround the task of compiling business annals, first, it is impossible to measure prosperity depression in all countries by the same standard. For instance, a year of prosperity in France is not comparable with a year of prosperity in India or Brazil. As a matter of fact, in the minds of the business men, as well as in the minds of the observers who view a statistical chart, a year is judged by comparison with preceding and succeeding years. It is in this relative sense that the term is here used. They relate to the stage of the business cycle rather than to the level about which it may play; they vary in exact meaning between countries, and within a country they may change over a period of years. Each country has therefore been studied as a separate unit.

Second, it is often difficult to determine the central tendency within a single cycle. Distinctly different and perhaps quite different conditions may exist in any one year. But just as averages are attempts to depict a variety of observations by a single typical expression, so this word-summaries of the cycles is an endeavor to sound the key-note. “Prosperity except it’s more than average” is obviously not complete prosperity, yet prosperity as the dominant tendency is implicit in the statement. Reviewers generally agree, for example, that 1923 was a prosperous year in the United States but they also remark that although construction activity made new records, the textile industries were depressed; and that although the Florida boom created great activity in the South, parts of New England and certain agricultural areas were virtually in a state of depression.

Third, the timing of the transition from one phase of the cycle to the next is often blurred. The down-turn can usually be determined with more assurance than the up-turn from depression to recovery, and the up-turn to prosperity. As far as possible the turning points as given here indicate turning points in attitudes and in interpretation of current conditions.

Business annals are essentially qualitative rather than quantitative. Since subjective judgments must play some part, the author fully realizes that other students may suggest various modifications in the record. Furthermore, as studies of business cycle history in particular countries are undertaken by specialized students, much more extensive material will be made available and utilized. But, while numerous minor modifications may be introduced, it is not probable that the basic record will be substantially altered. This is the basic record for the six years, 1926-31, covering thirty-four countries, that is given on the inserted page.

FORTHCOMING PUBLICATION

Economic Tendencies: Aspects of Pre-War and Post-War Changes, by Frances P. Mitty. To be published in October. Orders accepted now. 700 pp. $5.00.

In this volume, which contains the general price studies of the Committee on Recent Economic Changes, Dr. Mills traces certain of the dominant tendencies prevailing between 1922 and 1929 and contrasts these tendencies with those of the era of pre-war expansion. Changes in the volume and character of production, in the productivity of labor, in the costs of production, in the credit available by means of new index numbers, here published for the first time, are discussed in detail. The recovery which has brought credit are presented. Changes in the degree of displacement of industrial labor are defined. The study of foreign trade and the character of our economic development during two periods of notable expansion, and the recent record of which a major depression. The analysis is not directed at an explanation of the depression but it throws light on many of the conditions out of which the depression developed and reveals some of the underlying tendencies which shaped the course of economic events in the United States during the decade of the twenties.

The Depression as Depicted by Business Annals

The current depression is worldwide but the timing of its recession and the incidence of depression have varied from country to country. In some countries recession was sudden, following several years of prosperity; in others, the depression has been continuous since 1926 and the present situation may be described as an intensification of economic conditions. Several countries entered the phase of recession in 1927 and 1928, long before the date usually taken as marking the crisis in the United States, that of the Wall Street crash of October 29, 1929. Of the thirty-four countries for which data have been compiled nine showed no down-turn prior to the end of 1929 at least, and four not until the middle of 1930. After the crash some countries found the downward-slope almost precipitous; others slid into depression by gradual stages.

The summary description of these differing national experiences, presented in this News-Bulletin, revises earlier studies of the National Bureau of Economic Research and continues them from 1926 through 1931. In Business Annals, published in 1926, the record of seventeen countries was compiled through 1925. The annals for 1926 were published in the News-Bulletin of May 20, 1927, and those for 1927 were included in Recent Economic Changes (II, 558), published early in 1929. It is believed that a concise survey of qualitative data, country by country, forms a useful supplement to the studies of quantitative data on business cycles, as it is now of special service to bring this record down to as late a date as possible.

The Background of the Depression

The accompanying chart and the data in tabular form on the insert summarize the recent business history of thirty-four countries.4 For each, business conditions are described in terms of the four phases of the business cycle: recovery, prosperity, recession and depression. The data are here simplified and in part are over-simplified, yet, graphically and with substantial truth it shows the course of the recession which has developed. It does not attempt to deal with the economic conditions of Bolivia, Australia, Germany and Brazil and their extensions to the world outside, extending finally to France, Yugoslavia, Norway and Denmark. The following table may be consulted to gain a record of the chart, indicating the relative

4. The authors of the paper are Karl Lassen, Jr. and Frances P. Mitty. The table used in its compilation is an unpublished report prepared for the Committee on Recent Economic Changes.

5. Russia, isolated economically to a large degree and with non-competitive features in its economic organization, is omitted from this survey.
National Bureau of Economic Research

2

The recession of 1929 was much less concentrated in its incidence. The divergence in timing, illustrated by such an extreme as the interval of over two years between its inception in Germany and in France, is apparent when the countries are listed in three groups as follows:

Recessions from 1927 Recessions during the 1920 In the middle of 1929 second half of 1929

Australia 24 63 100

Argentina 7 24 63 100

Bolivia 15 51 30 100

Brazil 12 51 90 100

Bulgaria 1 24 68 100

Czechoslovakia 1 24 68 100

Chile 1 24 68 100

Hungary 1 24 68 100

India 1 24 68 100

Netherlands 1 24 68 100

New Zealand 1 24 68 100

Norway 1 24 68 100

Portugal 1 24 68 100

Poland 1 24 68 100

Portugal 1 24 68 100

Romania 1 24 68 100

Russian Empire 1 24 68 100

Turkey 1 24 68 100

U.S. 1 24 68 100

Yugoslavia 1 24 68 100

In 1926 the world situation was decidedly dark. In the next year improvement closely connected with financial developments was evident in many quarters. Currencies were stabilized in one form or another, and the extremes of inflation and deflation disappeared. In France, for example, revival started during the third quarter as some stability of price level and foreign exchange was achieved. In the United States and Canada a brief re- At 1926 in December 1931 is not inconsiderable. Four countries (Japan, Mexico, Turkey and Russia) are recorded as depressed for the entire six years, 1926-31; six countries (Brazil, Bulgaria, China, United Kingdom, Portugal and Norway) had revivals, but recoveries set in before prosperity was reached; two countries (Italy and Yugoslavia) enjoyed prosperity for less than a year and three, of the thirty-four countries, eleven had less than one year of prosperity during the period. In some of these twelve political conditions were unusual in a process of reorganization and economic transformation was taking place, and this was inevitably accompanied by disturbed economic conditions. Still others suffered from persisting effects of the War World upon their economic structure or upon their international trade and credit relationships.

The Timing of the Recessions by Countries

In an earlier study the National Bureau of Economic Research examined the records of seventeen countries for thirty-six years and found that a basic international pattern existed. This pattern now shows six complete cycles and a seventh in progress. Recessions points are defined by the following dates:

1920-21 1929-30

(1) 1920-21 (5) 1929-30

(2) 1920-21 (6) 1929-30

(3) 1920-21 (7) 1929-30

No country yet examined has had fewer than six cycles which are called for by this pattern, while most countries have had extra cycles of shorter duration. These added cycles seldom result from failure to participate in the international movements of activity and depression; they arise rather from the interpolation of what may be termed domestic recessions between the dates of international recessions. Most striking is the case of

2010-11 2016-17

(1) 2016-17 (5) 2016-17

(2) 2016-17 (6) 2016-17

(3) 2016-17 (7) 2016-17

(4) 2016-17 (8) 2016-17

The countries included were:

Australia, New Zealand, South Africa, Argentina, Chile, Brazil, Canada, India, Japan, and China. The records for the United States, Canada, U.S.S.R., and the United Kingdom were obtained from these sources, supplemented in some cases by such temporary divergences as occurred in the South American countries. The records were taken from 1919 to 1931, omitting 1914 and 1918.

The table shows the cyclical pattern as found for each of these countries, the dates of the beginning and end of the cycles of the order in which the countries were examined. The column headed 1926 shows the results of the examination made in 1926. The column headed 1931 shows the results of the examination made in 1931.

2016-17 2016-17

(1) 2016-17 (5) 2016-17

(2) 2016-17 (6) 2016-17

(3) 2016-17 (7) 2016-17

(4) 2016-17 (8) 2016-17

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2016-17 2016-17

(1) 2016-17 (5) 2016-17

(2) 2016-17 (6) 2016-17

(3) 2016-17 (7) 2016-17

(4) 2016-17 (8) 2016-17

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(4) 2016-17 (8) 2016-17

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2016-17 2016-17

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PUBLICATIONS of the NATIONAL BUREAU OF ECONOMIC RESEARCH, 1921-1932

Publication Number

*1 INCOME IN THE UNITED STATES

By Wesley C. Mitchell, Wilfred I. King, Frederick B. Macaulay and Oswald W. Knauth


Vol. II (1922) The methods and estimates upon which the results described in Vol. I are based. 440 pp.

*2 DISTRIBUTION OF INCOME BY STATES IN 1919 (1922)

By Oswald W. Knauth

50 pp. $1.30

*4 BUSINESS CYCLES AND UNEMPLOYMENT (1923)

By the National Bureau staff and 16 collaborators

Results of an investigation made for the President’s Conference on Unemployment

*5 EMPLOYMENT, HOURS AND EARNINGS IN PROSPERITY AND DEPRESSION, UNITED STATES, 1902-22 (1933)

By Wilfred I. King

Supplements Business Cycles and Unemployment

7 CITIES AND BUSINESS CYCLES (1928)

By Harry Jacobson

A statistical study of cycles in the supply of labor over a century of American experience.

10 BUSINESS CYCLES: THE PROBLEM AND ITS SETTING (1937)

By Wesley C. Mitchell

Supersedes the author’s Business Cycles, published in 1913, which was the standard work of its time.

*11 THE BEHAVIOR OF PRICES (1927)

By Frederick C. Mills

A pioneer study of the inter-relations of commodity prices, individually and by groups.

12 TRENDS IN PHILANTHROPY (1928)

By Wilfred I. King

Contributions in a typical American city (New Haven, Conn.).

13 RECENT ECONOMIC CHANGES (1922-23) (1930)

By the National Bureau staff and 15 collaborators

An analysis of developments in the National Bureau’s “Recent Economic Changes” of 1922-23, made for the Conference on Recent Economic Changes of the President’s Conference on Unemployment.

14 INTERNATIONAL MIGRATIONS

Vol. I, Statistics (1920) 1,312 pp. $7.00

Compiled on behalf of the International Labour Office, Geneva, with Introduction and Notes by Ivar Fangevik, and Edited on behalf of the National Bureau of Economic Research by Wilfred F. Willcox.

Vol. II, Interpretations (1921) 725 pp. $5.00

Analyses of migration statistics for twenty countries by as many writers, edited by Wilfred F. Willcox.

*15 THE NATIONAL INCOME AND ITS PURCHASING POWER (1934)

By Wilfred I. King

The fourth National Bureau publication on national income. Details of the annual changes in national income and its purchasing power from 1909 to 1928.

16 CORPORATION CONTRIBUTIONS TO COMMUNITY SERVICE (1930)

By Percy Williams and Frederick E. Crockett

(Sponsored and endowed by a national committee of industrialists.) Data for nearly 130 cities in the United States are analyzed.

17 PLANNING AND CONTROL OF PUBLIC WORKS (1930)

By Leo Wolman

The result of an investigation into the relation between expenditures for public works and providing economic conditions in the United States, continuing with the aid of the Department of Commerce, the surveys made for the Committee on Recent Economic Changes.

29 THE SMOOThING OF TIME SERIES (1931)

By Frederick B. Macaulay

Explains time-saving yet scientific methods of graduating economic series.

20 THE PURCHASE OF MEDICAL CARE THROUGH FIXED PERIODIC PAYMENT (1931)

By Percy Williams

A study made at the request of the Committee on the Costs of Medical Care to discover the extent to which people in the United States make use of the principle of insurance to secure medical and hospital care.

Number and Percentage of Countries Participating in Prosperity and Depression

Prosperity

Depression

<table>
<thead>
<tr>
<th>Year</th>
<th>Number of Countries</th>
<th>Percentage</th>
<th>Number of Countries</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>1920</td>
<td>15</td>
<td>5</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>1921</td>
<td>15</td>
<td>5</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>1922</td>
<td>15</td>
<td>5</td>
<td>15</td>
<td>5</td>
</tr>
</tbody>
</table>

United States which has participated in all seven turning-points listed above and had, in addition, domestic recessions in 1909, 1910, 1917, 1924, 1929, and 1933.

NATIONAL BUREAU OF ECONOMIC RESEARCH

The National Bureau of Economic Research was organized in 1920 in response to a growing demand for scientific determination and impartial interpretation of the facts bearing on current social and industrial problems. Freedom from bias is sought by the limitation of its Board of Directors in which executive control is vested and without whose approval no report may be published. Rigorous guarding of the National Bureau from becoming a source of profit to its members, directors or officers, or from becoming an agency for propaganda.

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\(\star\) - Recession or depression at some time during the year constitutes agreement.

- - Recovery or prosperity at some time during the year constitutes agreement.

- - From the list of countries in footnote 3 Russia is omitted.