

The Length of Business Cycles

Among the analyses made in connection with the study of business annals for seventeen countries was one pertaining 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 supplementary 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 not completed a 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:

Duration in Years	Number of Observations
1	3
2	19
3	33
4	31
5	25
6	24
7	18
8	13
9	11
10	6
11	3
12	1
Total	187

The evidence is clear that while it is possible to state that 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 reviews, reports by organizations engaged in business cycle analysis, consular and diplomatic reports, and government records. Yet indirectly and directly considerable use has also been made of statistical material: the original analysts doubtless based their opinions largely upon statistical records and their descriptive statements have been checked with statistical data.

Certain difficulties surround the task of compiling business annals. First, it is impossible to measure prosperity or depression in all countries by the same standards. 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 mind of the business man, as well as in the mind of the observer who views a statistical chart, a year is judged by comparison with preceding and succeeding years. It is in this relative sense that the terms are 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 country, for both industrially and geographically 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-summary is an endeavor to sound the keynote. "Prosperity except in coal and textiles" is obviously not complete prosperity, yet prosperity as the dominant tendency is implicit in the statement. Reviewers generally agree, for example, that 1925 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 revival or from revival to prosperity. As far as possible the turning points as given here indicate turning points in attitude 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 changes may be introduced, it is not probable that the basic record will be substantially altered. It is this 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 FREDERICK C. MILLS. To be published in October. Orders accepted now. 700 pp. \$5.00

In this volume, which continues the general price studies of the National Bureau and extends work done for 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 production costs and in prices are measured by means of new index numbers, here published for the first time. New measurements of the growth of capital and of credit are presented. Changes in the degree of displacement of industrial labor are defined.

The study deals with the course and character of our economic development during two periods of notable expansion, the more recent of which culminated in 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.

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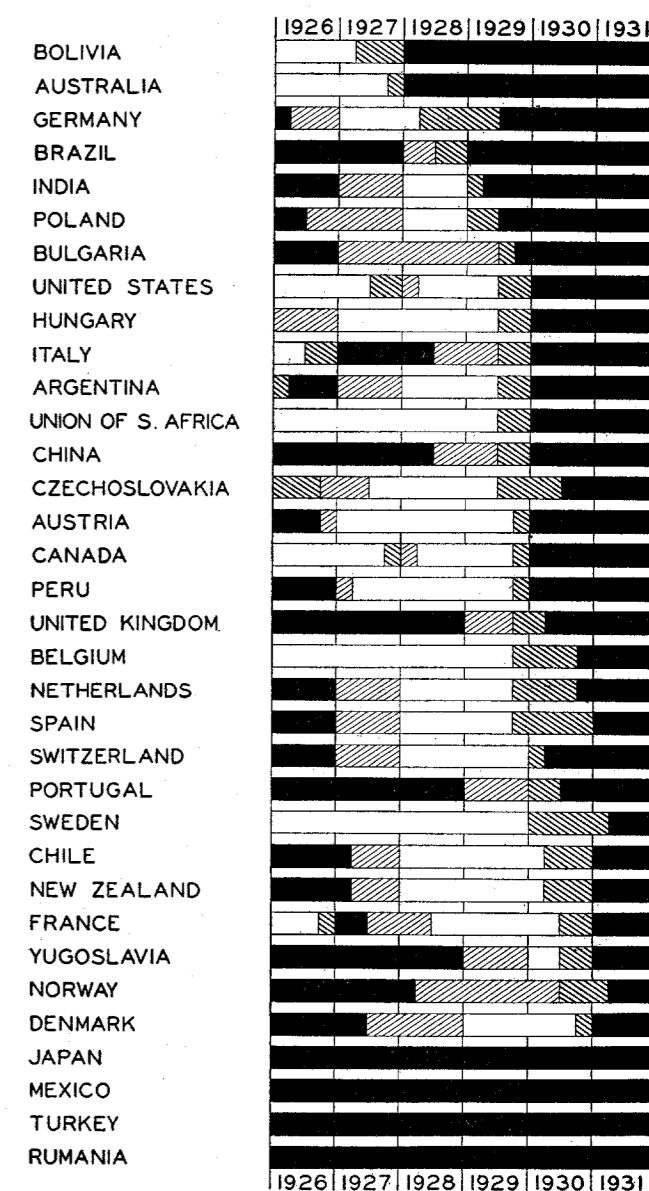
The Depression as Depicted by Business Annals

By WILLARD L. THORP¹

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CONSPECTUS OF BUSINESS CONDITIONS IN 34 COUNTRIES, 1926 - 1931

PROSPERITY DEPRESSION
RECESSION REVIVAL



THE current depression is world-wide but the timing of 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 depression has been continuous since 1926 and their present situation may be described as an intensification of economic distress. 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 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 certain countries found the down-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 completed 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, 858), 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, and that it is now of especial 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.² For each, business conditions are described in terms of the four phases of the business cycle: revival, prosperity, recession and depression. The picture is over-simplified, yet, graphically and with substantial truth, it shows the sweep of the recession which began in Bolivia, Australia, Germany and Brazil and spread throughout the world, extending finally to France, Yugoslavia, Norway and Denmark. The following table summarizes the record of the chart, indicating the relative

¹The author was assisted by Karl Laubenstein and Frances Goldberg. Many helpful suggestions were made in an unpublished report prepared for the Committee on Recent Economic Changes by Dr. Simon Kuznets.

²Russia, isolated economically to a large degree and with non-comparable features in its economic organization, is omitted from this survey.

importance in each year of conditions of revival, prosperity, recession and depression; in other words, the table is a computation for each year of the amount of white, black and shadow on the chart. For convenience, the results have been reduced to percentage form.

Per Cent of Countries by Quarters Showing Cyclical Phases

	Revival	Prosperity	Recession	Depression	Total
1926	7	24	6	63	100
1927	30	28	5	37	100
1928	15	51	4	30	100
1929	15	39	18	28	100
1930	1	7	24	68	100
1931	—	—	1	99	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 recession occurred in the last half of the year but there was no depression and revival was immediate. In 1928 prosperity reached its height for the period, prevailing in eighteen of the thirty-four countries. In 1929 pre-existing depression continued in six countries, five passed into depression, and seventeen entered the recession phase. During 1930 fifteen additional countries experienced the pangs of depression, while recession began in nine others. The year 1931 witnessed a uniformity of depression never before recorded for an entire year.

The extent of depression persisting from January 1926 to December 1931 is not inconsiderable. Four countries (Japan, Mexico, Turkey and Rumania) are recorded as depressed for the entire six years, 1926-31; six countries (Brazil, Bulgaria, China, United Kingdom, Portugal and Norway) had revivals, but recessions set in before prosperity was reached; two countries (Italy and Yugoslavia) enjoyed prosperity for less than a year. Thus, of the thirty-four countries, twelve had less than one year of prosperity during the period. In some of these twelve political conditions were unsettled; in others 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 World War upon their economic structure or upon their international trade and credit relationships.

The Timing of the Recession by Countries

Recessions of the past have not spread from country to country in any uniform manner. In the recession usually associated with the year 1907 China was the only country to record a down-turn in 1906, and Japan was the only other country to follow suit before the summer of 1907. Recession then swept quickly through the rest of the world so that by the end of the year all the other countries in which the cyclical pattern prevailed had been affected.

In 1920 business activity in Italy started to decline at the beginning of the year, and the pace of business in all the other countries which participated in the recession had begun to slacken before the fourth quarter. In both 1907 and 1920 the recession was sharply defined, and the

down-turns appeared in all the different countries, with but one or two exceptions, within a six-month period.

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 to the middle of 1929	Recessions during the second half of 1929	Recessions in 1930
Australia	Argentina	Chile
Bolivia	Austria	Denmark
Brazil	Belgium	France
Germany	Bulgaria	New Zealand
India	Canada	Norway
Poland	China	Portugal
	Czechoslovakia	Sweden
	Hungary	Switzerland
	Italy	Yugoslavia
	Netherlands	
	Peru	
	Spain	
	Union of So. Africa	
	United Kingdom	
	United States	

Recession came earliest in those European countries where monetary and credit stability were most uncertain—Germany and Poland—and in those colonial countries which are dependent in considerable part upon the export of one or two basic raw materials—Australia, on wool and wheat, Bolivia, on tin, and Brazil on coffee. Among the last to succumb were seven European countries, four of which were neutral during the World War, Switzerland, Sweden, Denmark and Norway, and two of which had been belligerent and invaded, France and Yugoslavia. Both New Zealand and Chile export raw materials, yet they also appear in this third group. Evidently the behavior of each country must be explained primarily in terms of the character of its international economic relationships and the stability of its domestic economy.

The International Pattern of Business Cycles

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.² This pattern now shows six complete cycles and a seventh in progress. Recession points are defined by the following dates:

(1) 1890-91	(5) 1918
(2) 1900-01	(6) 1920
(3) 1907-08	(7) 1928-30
(4) 1913-14	

No country yet examined has had fewer than the 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 the

²—The countries included were the United States, England, France, Germany, Austria, Russia, Sweden, The Netherlands, Italy, Argentina, Brazil, Canada, South Africa, Australia, India, Japan and China. The records for the first five countries were compiled from 1790, 1790, 1840, 1853 and 1867, respectively. See *Business Annals* (1926).

Conspectus of Business Fluctuations in Thirty-four Countries, 1926-1931

(Roman numerals refer to quarters, other than the first, in which a new phase begins)

	1926	1927	1928	1929	1930	1931
<i>Western Europe</i>						
United Kingdom	Deeper depression	Mild depression	Mild depression	Revival; recession (IV)	Recession; depression (II)	Depression
France	Prosperity; recession (IV)	Depression; revival (III)	Revival; prosperity (III)	Prosperity	Prosperity; recession (III)	Depression
Belgium	Prosperity	Prosperity	Prosperity	Prosperity; recession (IV)	Recession; depression (IV)	Depression
Netherlands	Depression	Revival	Prosperity	Prosperity; recession (IV)	Recession; depression (IV)	Depression
Switzerland	Depression	Revival	Prosperity	Prosperity	Recession; depression (II)	Depression
Italy	Prosperity; recession (III)	Depression	Depression; revival (III)	Revival; recession (III)	Depression	Depression
Spain	Mild depression	Revival	Prosperity	Prosperity; recession (IV)	Slow recession	Depression
Portugal	Depression	Depression	Depression	Revival	Recession; depression (III)	Depression
<i>Scandinavian Countries</i>						
Denmark	Depression	Depression; revival (III)	Revival	Prosperity	Prosperity; recession (IV)	Depression
Sweden	Prosperity	Prosperity	Prosperity	Prosperity	Recession	Recession; depression (II)
Norway	Depression	Depression	Depression; revival (II)	Revival	Revival; recession (III)	Recession; depression (II)
<i>Central Europe</i>						
Germany	Depression; revival (II)	Prosperity	Prosperity; recession (II)	Recession; depression (III)	Depression	Depression
Austria	Depression; revival (IV)	Prosperity	Prosperity	Prosperity; recession (IV)	Depression	Depression
Hungary	Revival	Prosperity	Prosperity	Prosperity; recession (III)	Depression	Depression
Czechoslovakia	Recession; revival (IV)	Revival; prosperity (III)	Prosperity	Prosperity; recession (III)	Recession; depression (III)	Depression
<i>Eastern Europe and the Balkans</i>						
Poland	Depression; revival (III)	Revival	Prosperity	Recession; depression (III)	Depression	Depression
Rumania	Lessening depression	Mild depression	Depression	Depression	Depression	Depression
Yugoslavia	Depression	Depression	Depression	Revival	Prosperity; recession (III)	Depression
Bulgaria	Depression	Revival	Slow revival	Revival; recession (III); depression (IV)	Depression	Depression
Turkey	Depression	Depression	Depression	Depression	Depression	Depression
<i>Asia</i>						
Japan	Depression	Depression	Depression	Depression; deepening (III)	Depression	Depression
China	Depression	Depression	Depression; revival (III)	Revival; recession (III)	Depression	Depression
India	Depression	Revival	Prosperity	Recession; depression (II)	Depression	Depression
<i>North America</i>						
United States	Prosperity	Prosperity; recession (III)	Revival; prosperity (II)	Prosperity; recession (III)	Depression	Depression
Canada	Prosperity	Prosperity; slight recession (IV)	Revival; prosperity (II)	Prosperity; recession (IV)	Depression	Depression
Mexico	Depression	Depression	Depression	Depression	Depression	Depression
<i>South America</i>						
Argentina	Recession; depression (II)	Revival	Prosperity	Prosperity; recession (III)	Depression	Depression
Brazil	Depression	Depression	Revival; recession (III)	Depression	Depression	Depression
Bolivia	Prosperity	Prosperity; recession (II)	Depression	Depression	Depression	Depression
Peru	Depression	Revival; prosperity (II)	Moderate prosperity	Prosperity; recession (IV)	Depression	Depression
Chile	Depression	Depression; revival (II)	Prosperity	Prosperity	Prosperity; recession (II)	Depression
<i>Africa and Oceania</i>						
Union of So. Africa	Prosperity	Prosperity	Prosperity	Prosperity; recession (III)	Depression	Depression
Australia	Prosperity	Prosperity; recession (IV)	Depression	Depression	Depression	Depression
New Zealand	Depression	Depression; revival (II)	Prosperity	Prosperity	Prosperity; recession (II)	Depression

Publication Number	*1	INCOME IN THE UNITED STATES By WESLEY C. MITCHELL, WILLFORD I. KING, FREDERICK B. MACAULAY and OSWALD W. KNAUTH Vol. I. (1921) A summary of the amount and distribution of income, 1909-19. 152 pp.	
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United States which has participated in all seven turning-points listed above and has had, in addition, domestic recessions in 1893, 1896, 1903, 1910, 1923 and 1927. When a country skips an international recession, as did South Africa in 1907, the reason is usually that it has recently suffered a severe domestic recession and is already depressed. By means of a statistical summary, in which countries are regarded as equal units, the extent of the tendency toward an international pattern persisting through prosperity and depression is measured in the tabulation below.

It is evident that there is a greater agreement in depression than in prosperity. This holds true except for the depression of 1901. By the end of 1900 the United States, Canada and Italy were all in the revival stage or had already returned to prosperity while South Africa was still in a state of slow recovery from five years of nearly continuous depression. It may be suggested, from this material, that domestic factors may be strong enough to prevent a country from joining the rest of the world in prosperity but that they are seldom sufficient to maintain prosperity in one country in the face of international depression. It is certainly true that throughout the world recovery from depression has usually been much more ragged than recession from prosperity.

As the table clearly shows, the present depression is not the first which may be described as world-wide. Both in 1908 and 1914 all countries examined followed the international pattern of recession and depression. Yet there is one significant difference. The 1908 depression lasted less than one year in five countries, and revival was evident in ten countries in the first quarter of 1909. Again in 1914 the depression lasted less than one year in seven countries, and war activity and revival brought improvement to nine countries by the early months of 1915. While the present depression is comparable to these earlier ones in its international inclusiveness, it belongs to quite a different class in intensity and duration.

Number and Percentage of Countries Participating in Prosperity and Depression

Years	Prosperity				Depression				
	Agreement ^a		Difference		Agreement ^a		Difference		
	Number of Countries	Percentage	Number of Countries	Percentage	Number of Countries	Percentage	Number of Countries	Percentage	
<i>For sixteen countries^b</i>									
1899	15	94	1	6	1901	12	75	4	25
1906	14	88	2	12	1908	16	100	0	0
1912	15	94	1	6	1914	16	100	0	0
1920	14	88	2	12	1921	15	94	1	6
1929	11	69	5	31	1931	16	100	0	0
<i>For thirty-four countries</i>									
1928	25	74	9	26	1930	34	100	0	0
1929	24	71	10	29	1931	34	100	0	0

^a—Revival or prosperity at some time during the year constitutes agreement.

^c—Recession or depression at some time during the year constitutes agreement.

^b—From the list of countries in footnote 3 Russia is omitted.