

BUSINESS CYCLES, GROWTH CYCLES, AND THE CURRENT EXPANSION

Now that over a year and a half has passed since the beginning of the current economic expansion in November 1970, sufficient economic data are available to allow a meaningful comparison of the current business cycle with those of the recent past. This article discusses the current economic expansion in terms of the traditional business cycle and compares the current cycle with an average cycle representative of the three most recent business cycles in the U. S. Some of the distinguishing noncyclical features of the current cycle are also examined. Finally, there is a short discussion of a recently proposed alternative approach to cyclical economic analysis, the growth cycle.

THE BUSINESS CYCLE

Traditionally, the term business cycle has been used to denote the recurring sequence of economic contraction, trough, economic expansion, and peak. Analysis of these cycles, which are characteristic of economic activity in the United States, can be conducted on different levels. Since the term business cycle is meant to apply to generally widespread fluctuations in economic activity, the behavior of comprehensive aggregate economic indicators should be one important consideration in any analysis of the business cycle. A number of such indicators have been selected from the National Bureau of Economic Research (NBER) list of coincident economic indicators: nominal GNP, real GNP, industrial production, non-agricultural payroll employment, and the rate of unemployment. These indicators generally reflect changes in the overall level of economic activity at approximately the time such changes occur and will be used to examine cyclical behavior in this article.

Since World War II, two significant changes in the nature of the business cycle have been reflected in the behavior of these economic indicators. In terms of the amplitude of their expansions and contractions, the severity of the post-World War II cycles has declined relative to that of pre-World War II cycles. Also, the length of the contraction phase of the cycle has declined in the post-World War II period. Both of these changes are also apparent in the behavior of the current business cycle.

Although the recurring ups and downs in the level of business activity constitute the common element of the business cycle, each cycle is also accompanied by its own distinctive economic, political, social, and institutional phenomena. The most obvious distinguishing features of the current business cycle, the beginning of which is taken by the NBER as the November 1969 peak, include the automobile strike of late 1970, an unusually persistent high rate of inflation and the consequent institution of a wage-price control system. Less obvious, but equally important, are the noncyclical changes in the labor market, which have had a significant impact on the behavior of unemployment in the current cycle.

THE CURRENT CYCLE AND THOSE OF THE PAST

Duration The duration of cyclical contractions in the United States since World War II appears to be declining. Based upon cyclical turning points established by the NBER, the average duration of the seven business contractions that occurred between the two World Wars was 16 months. The average length of the post-World War II recessions was 11 months. On the basis of a tentatively established November 1970 trough date, the contraction prior to the current expansion lasted 12 months.¹ The average length of the interwar expansions lasted approximately 35 months. During the post-War periods, the expansions averaged about 49 months. The increase in average duration of expansions is due entirely to the 103 month expansion from 1961 to 1969.

The Coincident Economic Indicators The cyclical behavior of the chosen indicators for the current cycle and for a representative post-War cycle is presented in Chart 1. The representative cycle is computed as the average of the given economic series for the three business cycles having their troughs in August 1954, April 1958, and February 1961. The behavior of both the current and the average cycle is depicted over the period beginning with the fourth quarter

¹ If the 1970 automobile strike had been averted, it seems likely that the contraction would have ended no later than August 1970, thus lasting only nine months. This possibility is suggested by Solomon Fabricant in *Recent Economic Changes and the Agenda of Business-Cycle Research*, National Bureau Report 8, Supplement (New York: National Bureau of Economic Research, May 1971).

prior to the trough and ending with the fifth quarter after the trough.

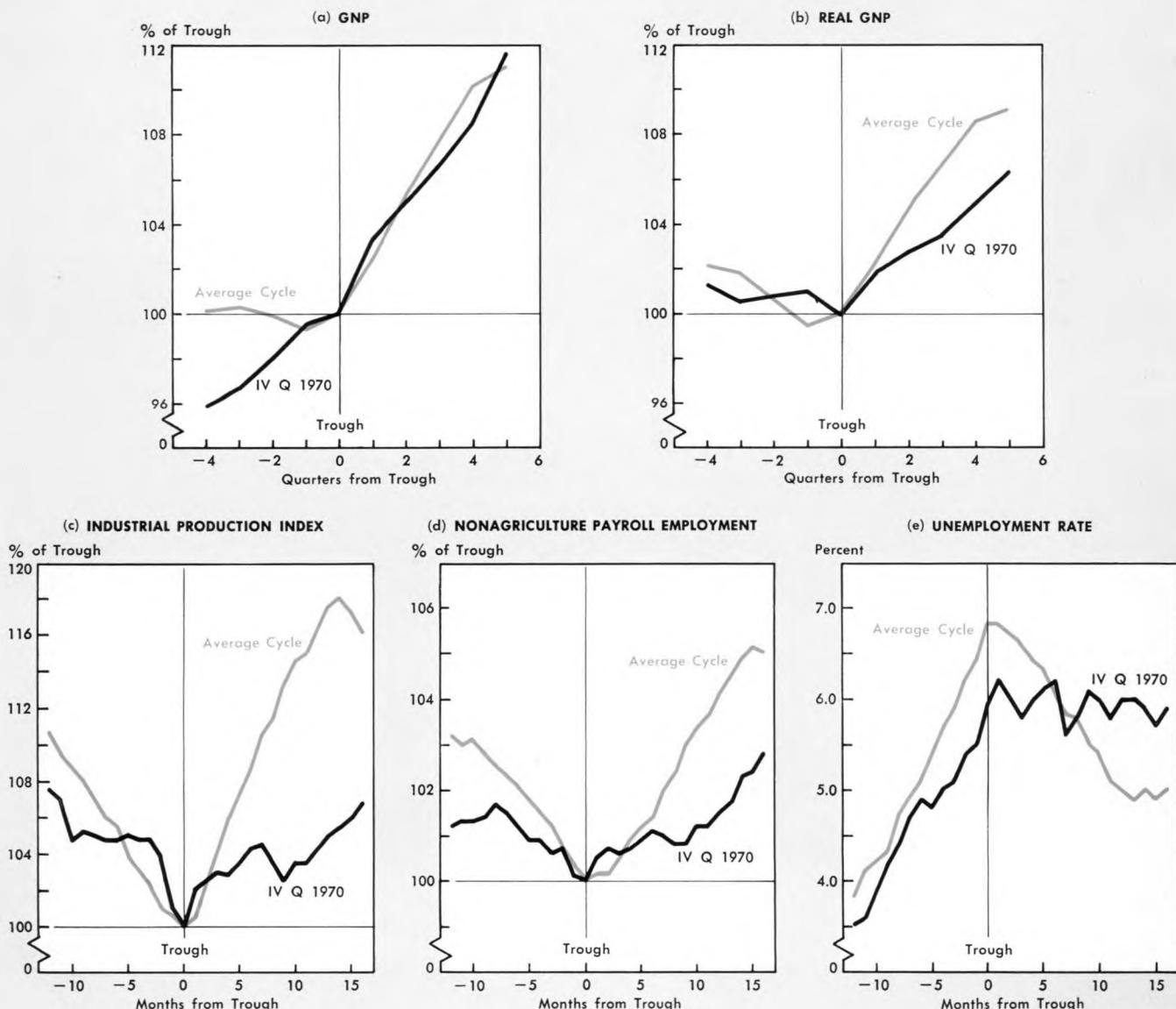
The post-War contractions have been characterized by relatively mild fluctuations in aggregate economic activity. During the average post-War contraction, total spending, as measured by the annual rate of Gross National Product (GNP), fell by less than 1.0% as shown in Chart 1a. During the 1970 contraction, GNP actually rose by over 4.0%, reflecting an unusually high rate of inflation for a contraction period. Economic recovery following these mild contractions has likewise been characterized by rela-

tively mild GNP growth. During the first five quarters of recovery in the average cycle, GNP rose by about 11.0%. The rate of GNP growth during the first five quarters of the current expansion was slightly less than 12.0%.

Real GNP (GNP corrected for inflation) is the most comprehensive indicator of real economic activity. Chart 1b shows that in the average post-War contraction real GNP declined by slightly more than 2.0%. There was an approximate 1.3% real GNP decline during the contractionary phase of the current cycle. In the first five quarters of the current

Chart 1

COINCIDENT ECONOMIC INDICATORS



Source: U. S. Department of Commerce, *Business Conditions Digest*, various issues.

expansion, real GNP rose by about 6.0%, compared to an increase of about 9.0% for the average post-War cycle.

Industrial production is a less comprehensive, though somewhat more volatile, indicator of real economic activity. Chart 1c indicates that the average decline in industrial production for the three previous business contractions was slightly less than 15.0%; during the 1970 contraction, industrial production declined by less than 8.0%. Industrial production rose by almost 7.0% during the first five quarters of the current expansion, compared to an approximate 16.0% rate of increase for the corresponding expansionary period of the average cycle.

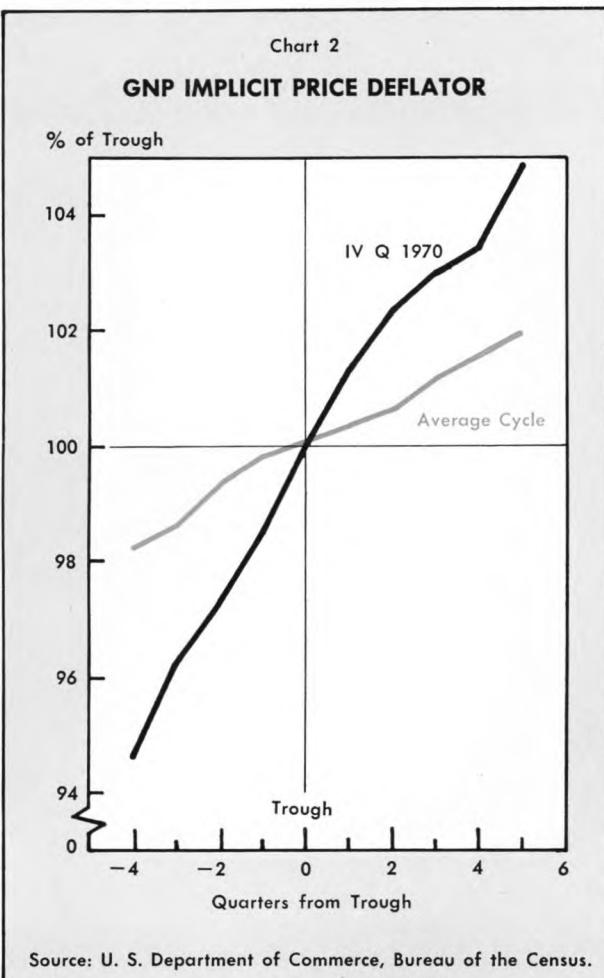
The cyclical behavior of employment is presented in Chart 1d. In comparison with the experience of the average post-War cycle, the current cycle has been characterized by a relatively mild fluctuation in employment. Nonagricultural payroll employment, which declined by about 3.0% during the average post-War contraction, fell by only about 1.0% in the contraction phase of the current cycle. Employment in the current expansion increased by a little less than 3.0%, compared to an approximate 5.0% increase during the first five quarters of the average expansion.

The most atypical cyclical indicator observed during the current business cycle was the unemployment rate, which is shown in Chart 1e. The unemployment rate rose by 2.4 points during the contractionary phase of the current cycle, and by 3.0 percentage points during the average contraction. But where the unemployment rate declined by 1.8 points during the first five quarters of average cyclical expansion, it remained relatively stable during the current expansion, fluctuating for the most part near the 5.9% level, which it reached at the time of the November 1970 trough.

NONCYCLICAL INFLUENCES

A proper understanding of the cyclical nature of economic activity requires an awareness of those important noncyclical forces that might be affecting the economy. Such forces may act either to exaggerate or dampen cyclical economic forces. Consequently, they may provide an insight into what might appear to be anomalous behavior on the part of economic indicators.

Inflation and Wage-Price Controls Perhaps the most conspicuous feature of the current business cycle has been the relative insensitivity of the unusually high rate of inflation to cyclical eco-



nomic contraction. This persistent inflation is reflected in the previously mentioned divergence between the growth rates of nominal and real GNP during the current business cycle. The behavior of the implicit GNP deflator, one indicator of price performance, is shown in Chart 2.

During periods of inflation, fiscal and monetary policy measures are intended to act on excess aggregate demand, the source of so-called demand pull inflation. During 1969, such policies were effective in dissipating the excess demand that had developed from 1966 to 1968. But in spite of the recession that began in late 1969, prices continued to rise substantially over the current cycle, with relatively little decline in their rate of increase. Subsequent application of expansionary policies to stimulate economic recovery was complicated by the possibility that such policies might exacerbate the inflationary problem. The apparent failure of prices to respond to cyclical contraction was attributed by many to the strong

inflationary expectations that had been generated from 1966 to 1968. This inflationary psychology presumably contributed to increasingly higher wage demands by workers trying to offset the effects of past and expected future inflation on their income. Wage settlements in 1970 and 1971 reflected the so-called cost push variety of inflation, which is relatively insensitive to the usual economic policies designed for demand pull inflation. The wage-price control system instituted in August 1971 was intended to eliminate the prevailing inflationary psychology and thereby contribute to a slowing in the rate of price increase. Typically, such controls have been instituted in response to demand pull inflation occurring during periods of economic expansion. In those situations, controls often lead to inefficient resource allocation, quality deterioration, and perhaps shortages for some products. Imposition of a control system during a period of slack economic conditions, however, suggested the possibility that such problems would be avoided. Economic recovery could occur without placing an immediate strain on production capacity. Moreover, increased productivity typical of cyclical recovery would have a moderating effect on inflationary pressures through its downward impact on unit labor costs. The goal of the control system is to eliminate inflationary expectations and their effects on prices before the economy again becomes subject to the demand pull pressures of a strong cyclical expansion. Once inflationary expectations are eliminated, it should be possible to rely on countercyclical monetary and fiscal policies to achieve relative price stability.

Strike Activity The automobile strike of 1970 and the threatened steel strike of 1971 provide important examples of the interrelations between the traditional business cycle and noncyclical factors that affect overall business activity. Although many economic indicators did reach a trough in November 1970 (or the fourth quarter for quarterly data), it is possible that the late 1970 automobile strike retarded the emergence of expansionary forces which had begun to appear earlier in 1970. Moreover, the subsequent resurgence in economic activity that occurred in the first quarter of 1971 in large part reflected a normal post-strike reaction rather than a fundamentally strong cyclical upturn in economic activity. Thus, the strong rebound in the automobile industry may have obscured strike induced weaknesses in other sectors of the economy. The problem of determining the actual cyclical turning point is further

complicated by the steel inventory buildup of early 1971, which occurred in anticipation of a possible August 1971 steel strike. If the cyclical reversal occurred subsequent to the early 1971 automobile rebound, it would provide one possible explanation for the sluggish nature of the 1971 cyclical recovery.

Labor Market Changes Noncyclical forces also had an important effect on the cyclical behavior of employment and unemployment in the current business cycle. Contributing to the somewhat slow recovery growth in payroll employment was an actual *decline* in manufacturing employment during 1971. Much of this decline has been attributed to reduced defense expenditures and the resulting employment effect in industries producing ordnance, aircraft, and communications equipment. At the same time, a relatively high rate of labor force growth has characterized the current expansion, tending to offset downward cyclical pressures on the unemployment rate. During the five quarter post trough period of the current cycle, the civilian labor force increased by almost 3.5%; the corresponding rate of increase in the representative cycle was only 1.8%.

The declining U. S. role in Southeast Asia has also contributed in a more direct manner to the employment situation. As the size of the armed forces declines, returning veterans contribute to the growing civilian labor force. Moreover, these veterans are usually young and inexperienced and consequently tend to have a higher than average rate of unemployment (6.9% in 1970 and 8.8% in 1971). As a result, there is further upward pressure on the unemployment rate to oppose the downward pressure of cyclical expansion.

There is much additional information concerning noncyclical factors that might facilitate an understanding of economic behavior in the current business cycle. For example, balance of payments problems, the international monetary crisis, and the consequent devaluation of the dollar are undoubtedly important considerations in the analysis of recent economic fluctuations. The foregoing is sufficient, however, to illustrate the difficulty involved in analyzing cyclical economic activity.

GROWTH CYCLES

Fluctuations in economic activity are characteristic of all modern industrialized states. In some, however, especially Japan and the countries of Western Europe, these fluctuations differ in one respect from the traditional business cycle that has been typical of the post-World War II U. S. economy. In these countries, the fluctuations in the rate of economic

growth are seldom so great that the growth rate becomes negative. Consequently, the actual level of economic activity seldom declines as it does during the contraction phase of the traditional business cycle. In order to provide a more suitable framework for the analysis of such fluctuations, and also to give a means of comparing U. S. economic activity with that of other countries, the concept of a growth cycle has been developed by NBER analysts as an alternative approach for investigating economic fluctuations.²

A growth cycle consists of a high growth phase and a low growth phase. The high growth phase can be defined as a period in which the actual rate of economic growth exceeds the normal rate and the low growth phase as a period of less than normal economic growth. The normal rate is simply the long-run rate of economic growth.³ The transitions from low growth to high growth and from high growth to low growth are termed the upturn and downturn, respectively. In Chart 3, the growth cycle is compared graphically to the traditional business cycle. The growth cycle concept of turning points can be applied to the traditional cycle by finding those points where the rate of economic growth during the traditional cycle (slope of the curve) equals the trend rate of growth (slope of the trend line), that is, at points D and U in Chart 3. In terms of the traditional cycle, a reduction in the rate of economic growth must occur before the level of economic activity actually declines, so that the downturn of the business cycle precedes its peak. In a similar manner, the shift from low growth to high growth occurs after the trough of the business cycle, since higher than trend growth can occur only after the growth rate (slope of curve) has changed from negative to positive. Consequently, the high growth phase will be shorter, and the low growth phase longer, than the business cycle counterparts.

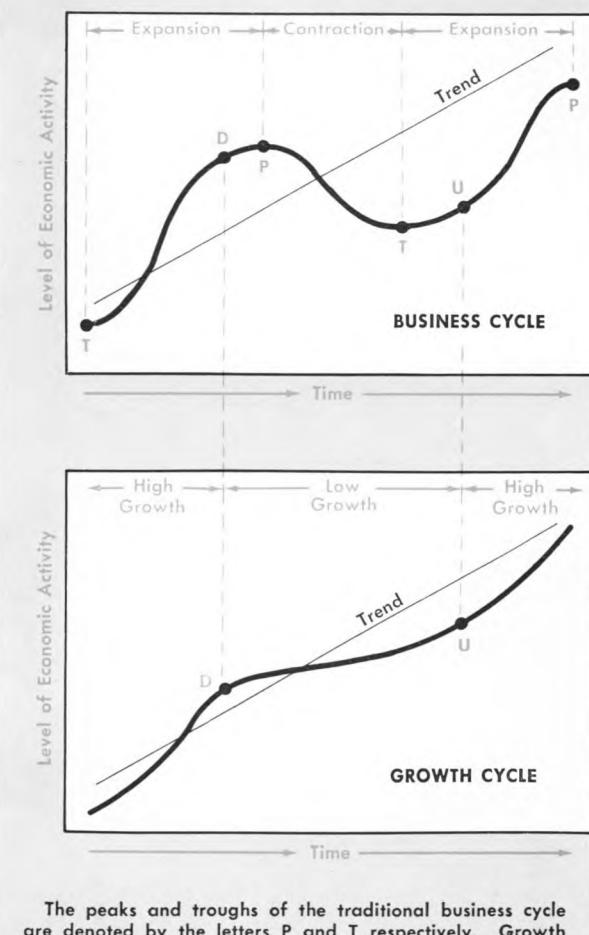
As in the case of business cycle analysis, growth cycle turning points are determined by a large number of economic indicators. Based on these indicators, growth cycle studies conducted by the NBER indicate that a low growth phase took place from the third quarter of 1966 to the fourth quarter of 1967. This low growth phase is reflected in the behavior of real GNP. During the low growth phase, real GNP

² For a further discussion of growth cycles, see Ilse Mintz, "Dating American Growth Cycles," *Business Cycle Today*, ed. Victor Zarnowitz (New York: National Bureau of Economic Research, 1972).

³ This approach is open to the criticism that the long-run rate is dependent upon the time period over which the long-run rate is computed. An alternative approach is to establish growth cycles such that each high (low) growth phase is greater (less) than the average rate for the two low (high) growth phases immediately preceding and following. In practice, the two approaches yield very similar turning points.

Chart 3

ECONOMIC ACTIVITY UNDER ALTERNATIVE CONCEPTS OF CYCLICAL BEHAVIOR



The peaks and troughs of the traditional business cycle are denoted by the letters P and T respectively. Growth cycle turning points, denoted by the letters U and D, respectively, occur when the actual rate of economic growth changes from greater than to less than (downturn), or from less than to greater than (upturn), the trend rate of growth. In algebraic terms, these transitions occur at the points where the slope of the curves is equal to the slope of the trend line. Thus, upturns and downturns can be determined for both types of cycle.

grew at an annual rate of 2.9%, compared with the normal rate of approximately 4.0% for the 10-year period from 1960 to 1969. Real GNP grew by approximately 5.5% in the preceding high growth period from the second quarter of 1964 to the second quarter of 1966. During the high growth period from the first quarter of 1968 to the first quarter of 1969, real GNP grew by about 4.1%. The 1966-1967 low growth phase could have conceivably developed into an actual contraction. The fact that it did not can probably be attributed in part to easing

monetary policy actions in late 1966 and early 1967 and to expansive fiscal actions later in 1967.

Some economists believe that the frequency of actual contractions in U. S. business activity will decline and that future economic fluctuations will be better characterized as growth cycles. This trend can be attributed to a number of factors. The application of monetary and fiscal stabilization policies has already been mentioned as a moderating influence on cyclical swings.⁴ There are also institutional arrangements, such as the income tax structure and unemployment compensation programs, that contribute to stability in the level of aggregate demand by offsetting cyclical fluctuations in income.

The changing structure of the U. S. economy, in particular the relative growth in the size of the service sector and the government sector, provide further stabilizing influences on economic activity. Services, unlike tangible goods produced in the industrial sector, cannot be stored by the producer or the consumer. Since the consumer cannot generally stockpile services but must purchase them at the time they are needed, there is less fluctuation in the demand for consumer services than for consumer goods. Moreover, since production of a service must occur simultaneously with its consumption, the service sector is relatively free from the effects of procyclical

inventory investment, which occurs in the industrial sector. Relative to the industrial sector, the service sector is also characterized by a large number of self-employed persons and white collar workers whose jobs are somewhat less sensitive to cyclical fluctuations in the level of business activity. The size of the government sector also exerts a considerable stabilizing influence on economic activity. Decisions concerning the provision of many public services (and goods) are generally not related to fluctuations in the level of economic activity, though the timing of many government expenditures can be used as a tool of stabilization policy. Together with the stabilizing effects of monetary and fiscal policies and institutional arrangements, the structural shift towards a more service-oriented economy should continue to moderate the magnitude of cyclical swings in the level of economic activity.

CONCLUSION

In the heady economic atmosphere of the booming 1960's, it was not hard to find economists willing to argue that cyclical economic analysis had become an anachronism. Moreover, there were numerous economists willing to concede the obsolescence of the business cycle as a useful mode of economic analysis. Undesirable though it may have been, recent experience has served as a reminder that cyclical forces are still operating in the economy.

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⁴This is not a universally accepted view of course. There are many economists, most notably Milton Friedman, who argue that monetary and fiscal policy actions do indeed contribute to economic fluctuations.

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