The Behavior of the Labor Market Over the Business Cycle

By Steven P. Zell

In the years following World War II, economic fluctuations in the Western economies have, on the whole, been far less severe than in the past. Although the United States had experienced four postwar recessions by 1961, the surprisingly long expansion of the 1960's caused many persons to question whether the concept of the "business cycle" had become obsolete. In 1968, Arthur F. Burns noted the possibility that a "recession" may come to mean "merely a reduced rate of growth of aggregate activity instead of an actual and sustained decline" but added that "there is as yet insufficient ground for believing that economic developments will generally conform to this model in the near future."[1]

The brief recession of 1970, followed closely by the recent downturn—the most severe economic decline since the Great Depression—proved Burns correct in his caution. Yet, the experience of the 1970's has differed substantially from that of earlier decades. In particular, a high rate of inflation has strongly influenced both the timing and depth of the recent recession and the current recovery.

Just as the behavior of the economy has varied from one business cycle to another, developments within individual sectors of the economy, and their interpretation, also vary greatly over the course of each business cycle. This variability is especially evident in the labor market. Yet, discussions of labor market developments—in particular, of changes in the overall rate of unemployment—often ignore this fact. This article examines the behavior of the labor market over the recent business cycle with an emphasis on the changing significance and interpretation of these developments.

WHAT IS THE "BUSINESS CYCLE?"

Many processes are cyclical in nature. Day and night, the seasons, and the phases of the moon are natural cyclical phenomena. Similarly, the piston engine and the refrigerator operate on the basis of periodic expansions and contractions. All cycles—natural, mechanical, or economic—are simply recurring sequences of events with specifiable length, or period, and some measure of intensity, or amplitude.

An economy such as that of the United States can be considered as being composed of a large number of separate, though closely interrelated, sectors. At the broadest level, the economy might be divided into the government sector, the private consumption sector, and the private investment sector. Each of these sectors

[1] Victor Zarnowitz, ed., *The Business Cycle Today,* Fiftieth Anniversary Colloquium I, New York, National Bureau of Economic Research, 1972, p. 3.

may, in turn, be subdivided further. Government may be considered at the Federal, state, and local levels; private consumption includes agriculture, retail sales, manufacturing, construction, services, etc.; total private investment becomes investment in inventories, plant, equipment, and residential housing.

Over time, each of these sectors (and their component parts) tends to experience periods of relative expansion and contraction. While there is no reason to expect these movements to be either simultaneous, of equal duration, or of equal strength across the many sectors, the close interrelationship between the sectors tends to result in the reinforcement or synchronization of these individual cycles throughout the economy. Thus, for example, if bad weather results in layoffs in construction and reduced agricultural income, the amount of money spent on retail sales will decline, fewer orders will be placed with wholesalers and manufacturers, and layoffs may result in all of these areas. The impact of a decline in one sector thus tends to work its way, to varying degrees, throughout the economy.

Business cycles, then, are the net result of this multitude of "recurrent sequences of cumulative expansions and contractions" which are "directly observable in fluctuations of the major input and output series which reflect aggregate economic activity."[2] Because business cycles are the result of a large number of influences which never recur in exactly the same manner or sequence, they vary greatly in their duration and intensity. However, since cycles are measured from trough to trough (or peak to peak), they must, by definition, be "sufficiently long to permit cumulative movements to develop in both downward and upward directions, which normally requires several years."[3]

Officially determining the turning points of a business cycle is extremely complicated and requires many months of study.[4] Because of this complexity, most economists accept the determination of the National Bureau of Economic Research (NBER), a private, nonprofit corporation which has been instrumental in developing many of the basic economic statistics and indicators in use today. Although it involves some violation of the concepts used, fluctuations in the cycles may be conceived of as fluctuations in the broadest measure of economic activity — real gross national product (GNP).

Conceptually, a business cycle may be divided into four phases. Starting with the trough of the previous cycle, the first phase is recovery, when business activity rises from its low point to the previous high level of activity. The second phase is expansion, when business activity moves to higher and higher points. In the third phase, leveling out, business activity peaks and remains briefly at a plateau. Finally, in the fourth phase, contraction, business activity declines until a new bottom is reached. According to this description, the United States is now in the expansion phase of its seventh postwar business cycle. The dates from trough to trough of the six completed cycles (as determined by the NBER), and their duration in months, are given in Table 1, while Chart 1 illustrates the behavior of real GNP from the fourth quarter of 1949 through the fourth quarter of 1976, seasonally adjusted at an annual rate (SAAR).

THE BUSINESS CYCLE IN THE 1970'S

The latest completed business cycle extended from November 1970 to March 1975, or 52 months from trough to trough. The period from the peak of the cycle in November 1973 to

2 Victor Zarnowitz and Charlotte Boschan, "Cyclical Indicators: An Evaluation and New Leading Indexes," *Business Conditions Digest.* U.S. Department of Commerce, May 1975, p. v.

3 *Ibid.*

4 See, for example, Ilse Mintz, "Dating American Growth Cycles," *The Business Cycle Today.* pp. *39-88.*

Table 1
POST-WORLD WAR II U.S. BUSINESS CYCLES

Business Cycle Dates (trough to trough)	Duration (months)	Cycle Peak	Recessionary Fall in Real GNP from Peak to Trough (% at SAAR)*
October 1945-October 1949	48	Nov. 1948	-1.4
October 1949-May 1954	55	July 1953	-3.6
May 1954-April 1958	47	Aug. 1957	-3.4
April 1958-February 1961	34	Apr. 1960	-0.4
February 1961-November 1970	117	Dec. 1969	-0.6
November 1970-March 1975	52	Nov. 1973	-5.3

SOURCE: **Julius Shiskin, "Employment and Unemployment: The Doughnut or the Hole?" Monthly Labor Review, February** 1976, **pp. 3-10.**
'GNP changes are calculated from the quarter containing the peak month to the quarter containing the trough month.

the March 1975 trough (Chart 1) represents the recent recession, the longest and most severe in postwar history.[5]

The sharp 16-month decline in business activity during the recent recession may be thought of as one of four distinct movements in business activity following the 1970 trough. As Chart 1 shows, business activity rose rapidly from the fourth quarter of 1970 through the first quarter of 1973. After leveling off for the remainder of the year, activity then plummeted until the end of the first quarter of 1975, the trough of the last business cycle. The beginning of the present cycle saw activity rise rapidly through the first quarter of 1976, and then temporarily level off for the remainder of the year.[6] The 2-year rise in activity, the leveling off, the recession, and the current recovery-expansion thus represent the four major periods of business activity since the last quarter of 1970.[7]

Over these four phases, delineated in Table 2, conditions within the labor market have generally fluctuated along with GNP. However, just like the overall economy, the labor market is composed of numerous sectors, each with its own cyclical pattern. Thus, at any particular point in the business cycle, statistics that indicate a given condition in the labor market as a whole might, at the same time, represent a variety of different conditions in the component sectors.

THE CYCLICAL BEHAVIOR OF UNEMPLOYMENT

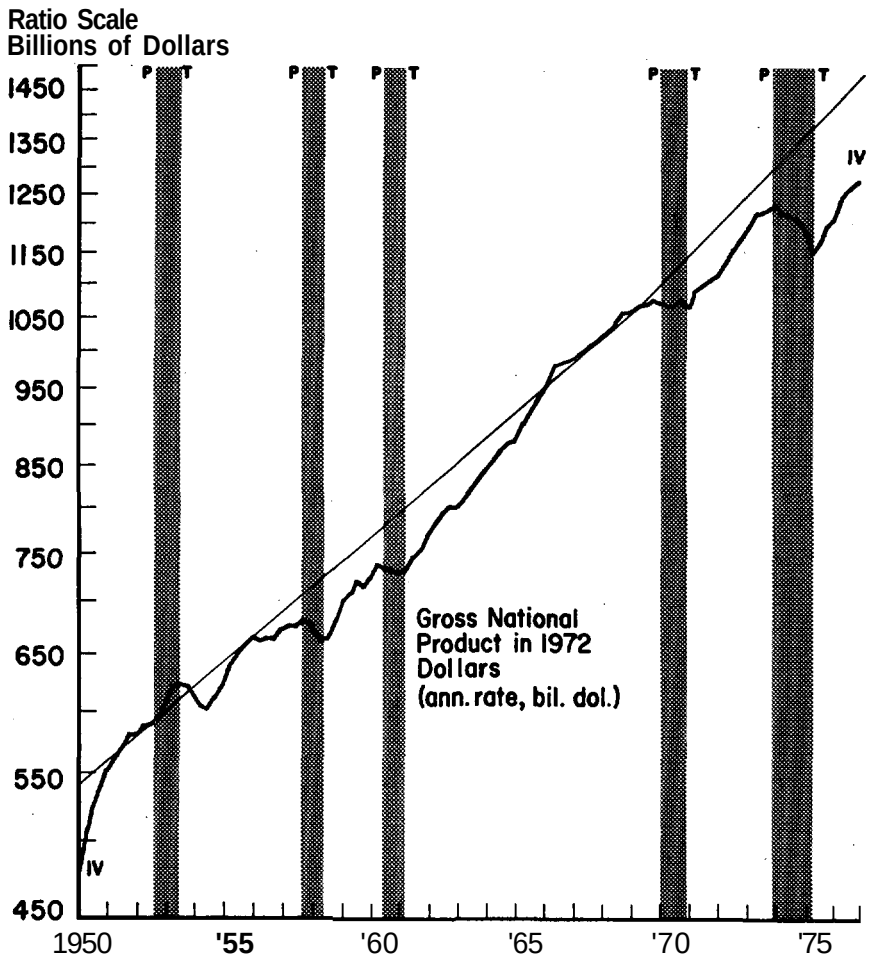
Certainly, the most closely watched labor market indicator is the overall rate of unemployment. An inverted series—it tends to move up when business conditions worsen and fall when they improve—the unemployment rate generally leads the business cycle at peaks but lags at troughs. Thus, for example, following the trough of the 1970 recession the

5 **Allowing for the fact that GNP is measured quarterly while the cyclical turning points are in specific months, Chart 1 shows that real GNP fell for at least two consecutive quarters in each of the postwar recessions.**

6 **Chart 1 is drawn with real GNP on a logarithmic scale. As a result, equal vertical distances represent equal** *percentage* **changes in GNP, measured from any base point.**

7 **In the discussion that follows, the recovery and expansion phases of the business cycle will be treated as one and the "phases," or periods, discussed will be the four just enumerated.**

Chart 1
REAL GROSS NATIONAL PRODUCT



NOTE: The shaded areas represent recessionary periods, with P and T, respectively, denoting the cyclical peak and trough. The trend line is one measure of potential GNP and varies from a slope of **3.5-4.0** per cent over different segments. See Economic Report of the President, January **1977,** pp. **48-57.**

unemployment rate continued to rise for three quarters. After falling for the remainder of the expansion period, the rate then started to rise again one quarter before the business cycle peak in the fourth quarter of **1973.** This climb also continued beyond the cyclical trough, in this case for one additional quarter until the second quarter of **1975,** after which the unemployment rate fell slowly through the first half of 1976 before rising for the final two quarters of the year.

Further insight into the cyclical behavior of the unemployment rate may be obtained by examining its component parts, with one approach being that of looking at the unemployment rates for adult men (20 years of

Table 2
BUSINESS CYCLE MOVEMENTS SINCE THE TROUGH, FOURTH QUARTER (QIV) 1970

Behavior	Beginning Date	Ending Date	Duration (quarters)
Recovery-expanston I	QI 1970	QI 1973	9
Leveling off	QI 1973	QIV 1973	3
Recession	QIV 1973	QI 1975	5
Recovery-expansion II	QI 1975	QIV 1976	7

age and older), adult women, and all teenagers (16-19 years of age). In Chart 2, the relative cyclical behavior of the overall unemployment rate and the unemployment rates for these three population subgroups is contrasted with the cyclical movements in real **GNP.**

With this breakdown, it is easy to see that the overall rate of unemployment, and its cyclical movements, hide a great disparity in the levels and movements of its component parts. While the male unemployment rate is always below that for females, and both adult rates substantially below the teenage rate, cyclical fluctuations in the male rate tend to be substantially greater than those for adult females, which differ, in turn, from those for teenagers. This higher cyclical sensitivity of the male unemployment rate is largely due to the fact that men are employed to a greater extent in industries which, like manufacturing and construction, tend to significantly vary their employment in response to aggregate economic conditions. However, while this age-sex breakdown does provide more information than the overall unemployment rate alone, it has several drawbacks which make it inferior to other analytical approaches.

An Alternative Look at the Unemployment Rate

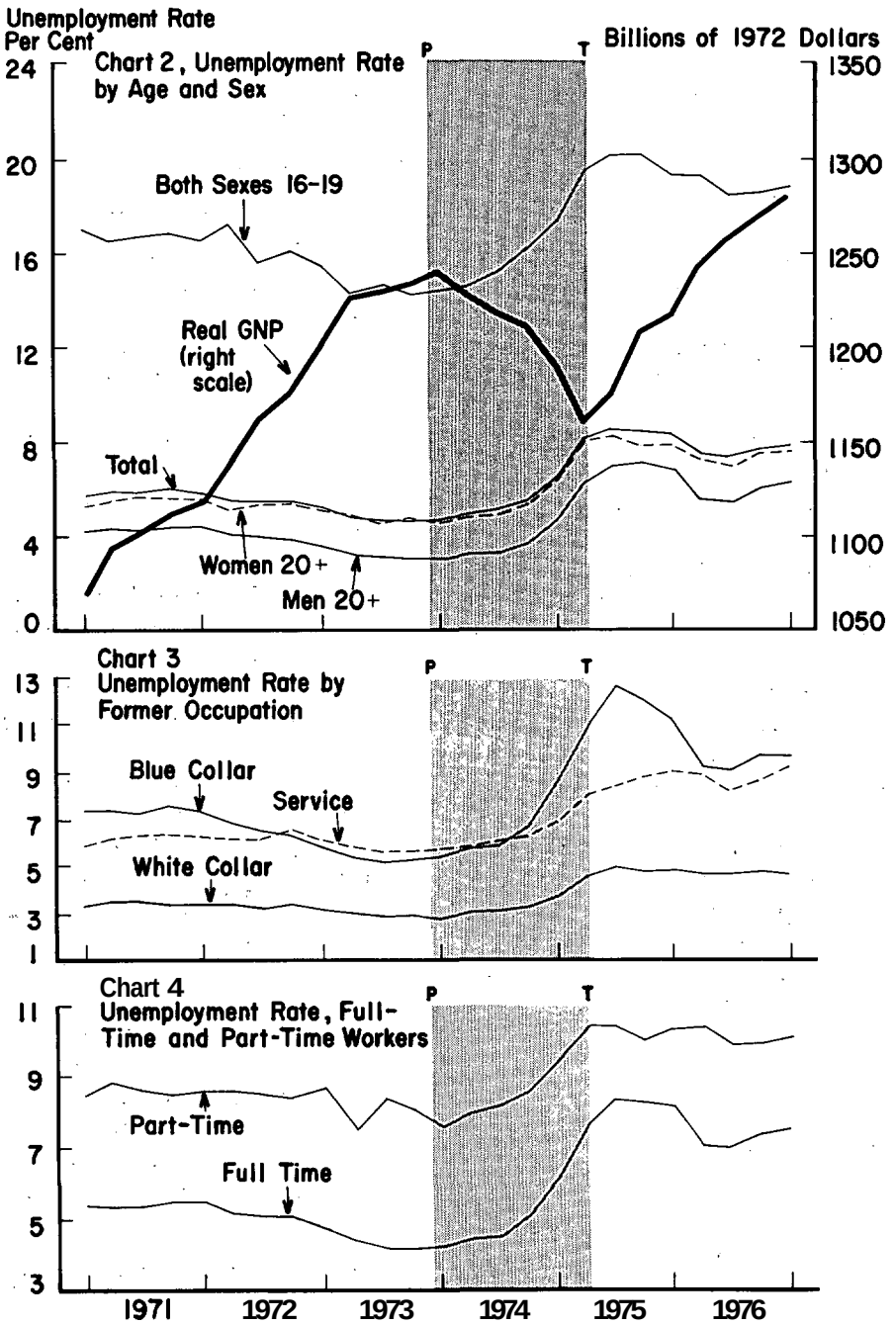
In recent years, there has been considerable debate as to the proper definition of unemployment and how it might best be measured. In his discussion of some alternative formulations of the overall unemployment rate, Julius Shiskin, Commissioner of Labor Statistics, noted that the complexity of this issue is due in large part to the fact that "the unemployment figures are used by many persons for different purposes."

> Many use them to assess current conditions and short-term prospects, that is, as a cyclical indicator. Others use the data as a measure of how well the economy relieves the economic and psychological hardships experienced by job seekers. But judgments as to what constitutes hardship arising from unemployment vary greatly among different political, social, and economic groups.[8]

This complication highlights the major drawback of an age-sex breakdown of the unemployment rate. When such an analysis is made, there is an implicit judgment that unemployment in one population group is more important than unemployment in another group. While this differential importance may appear obvious on the surface, this is not necessarily the case. For example, though the immediate economic cost of teenage unemployment is lower than that of adult unemployment, a strong argument can be made that the disappointing labor market experience of teenagers has a long-run

8 Julius Shiskin, "Employment and Unemployment: The Doughnut or the Hole?" *Monthly Labor Review.* February 1976, pp. 3-4.

Charts 2, 3, and 4
THE CYCLICAL BEHAVIOR OF UNEMPLOYMENT RATES ON THE 1970'S



detrimental effect on their development into responsible adult members of the labor force.

Economists have long recognized that interpersonal comparisons of utility or hardship cannot be meaningfully made and, therefore, prefer to concentrate on the measurable question of' the economic cost of unemployment. However, even when used as an indicator of economic performance, the age-sex breakdown remains analytically deficient because it assumes a stable labor market structure. If it were true that all female workers, or even some fixed percentage of them, were secondary workers in their families, or held only part-time jobs, or had weak labor market ties, while all adult males held stable full-time jobs, the delineation by sex would be a reasonable proxy for the relative impact of each group's unemployment on the economy. This hypothetical relationship, though, is clearly incorrect. For the entire postwar period, female labor force participation has been increasing while male participation has fallen. Furthermore, in recent years, the job distributions of males and females have become increasingly similar. It would seem reasonable, then, that more information about the cyclical behavior of the economy could be obtained by examining statistics that directly reflect the relationship between unemployment and aggregate economic activity over the business cycle.

THE UNEMPLOYMENT RATE REVISITED

The relationship between unemployment and cyclical economic activity may be clarified by a variety of available statistics. One approach is to examine the nonagricultural unemployed classified into three categories of their former occupation: white-collar workers, blue-collar workers, or service workers.

Former occupation of the Unemployed

In .broad terms, white-collar workers include professional and technical workers, nonfarm managers and administrators, salesworkers, and clerical workers, while blue-collar workers consist of craft and kindred workers, operators, and nonfarm laborers. Unemployed workers are classified as either white-collar, blue-collar, or service, depending on their latest full-time civilian job lasting 2 weeks or more. The classification groups are those defined in the **1970** Census of Population. As is seen in Table **3** and Chart **3,** the impact of the business cycle on both the levels and cyclical behavior of the unemployment rates of these three groups is quite varied.

Throughout the period analyzed, the unemployment rate of white-collar workers is always substantially below that of the other two groups. In addition, the unemployment rate of service workers is generally less than that for those in blue-collar occupations. However, because of the tremendous cyclical fluctuations in the blue-collar rate, coupled with the relative stability of service worker unemployment, these two unemployment rate series have frequently crossed. The most striking example of this relative fluctuation took place during the **1973-75** recession. During that period, the unemployment rate of blue-collar workers rose **78.0** per cent at an annual rate, compared with a 42.1 per cent climb for white-collar workers and only a **31.2** per cent increase for service workers. Table **3** also shows that the unemployment rates of all three groups lagged the business cycle at the two recent troughs by one to three quarters but led the cycle by two quarters at its peak.[9]

Full-Time and Part-Time Workers

Another approach to tracing the relationship between the business cycle and the rate of

[9] **In other words, the respective unemployment rates continued to rise following the beginning of each recovery period for the number of quarters indicated until they reached their specified high rate. Likewise, the respective unemployment rates reached their indicated low points in the leveling off period, two quarters before the peak of the cycle.**

Table 3
CYCLICAL BEHAVIOR OF UNEMPLOYMENT RATES, BY OCCUPATION

Unemployment Rate During Period (in per cent)	White Collar	Blue Collar	Service
Recovery I			
Beginning date (QIV-70)	3.4	7.5	5.9
End date (QI-73)*	3.0	5.4	5.9
Per cent change over period (SAAR)†	—5.4	—13.6	0.0
Cyclical high/	3.6	7.6	6.4
No. of quarters after trough	1	3	3
Level Off			
End date (QIV-73)*	2.9	5.4	5.7
Per cent change over period (SAAR)†	—4.4	0.0	—4.5
Cyclical low/	2.9	5.2	5.6
No. of quarters before peak	2	2	2
Recession			
End date (QI-75)*	4.5	11.1	8.0
Per cent change over period (SAAR)†	42.1	78.0	31.2
Recovery II			
End date (QIV-76)*	4.6	9.7 (9.1)‡	9.2 (8.3)‡
Per cent change over period (SAAR)†	1.3	—7.3	8.3
Cyclical high/	5.0	12.6	9.0
No. of quarters after trough	1	1	3

'The end date of each period is the beginning date of the next period.
†SAAR is seasonally adjusted at an annual rate.
‡In the current recovery, the unemployment rates of these two groups rose in the second half of 1976. The numbers in parentheses are the unemployment rate lows before this increase.

unemployment is to consider the unemployed as divided into full-time and part-time workers. The definitions used by the Bureau of Labor Statistics in this delineation, however, are somewhat different from what one might imagine. The unemployment rate of full-time workers is equal to the number of unemployed workers who are looking for full-time employment divided by the full-time labor force, which is the sum of the unemployed full-time workers and the employed full-time workers. It is this latter category that is complicated. The number of employed full-time workers is defined as consisting of:

1) Persons working 35 hours or more in the survey week,

2) Persons working from 1 to 34 hours for noneconomic reasons but who usually work full time,[10] and

[10] Workers in these first two categories are classified as "on full-time schedules." ***Economic Reasons*** for part-time work include: slack work, material shortages, repairs to plant or equipment, start or termination of a job during the survey week, and inability to find full-time work. ***Noneconomic reasons*** include: labor dispute, bad weather, own illness, vacation, home housework, school, no desire for full-time work, and full-time workers only in peak season.

3) Persons on part time for economic reasons whether or not they usually work full time.

This definition of the full-time employed therefore includes about 40 per cent of those workers who worked less than 35 hours. While most of those included usually work full time, some of them usually work part time but are now working part time for economic reasons. On the other hand, the number of persons in the part-time labor force consists of those unemployed persons seeking only part-time work plus those workers voluntarily working part time (for noneconomic reasons) who usually work part time.

When compared with the overall unemployment rate (Chart 4), the rate for full-time workers is found to be consistently lower, though not by very much. It also tends to be somewhat more cyclically sensitive, in the sense of having larger swings over the different cyclical phases. The reason is that part-time workers who are omitted from this series generally have relatively weak labor market ties, and both those employed part time and those unemployed and seeking part-time work tend to base their labor market behavior to a much smaller degree on economic conditions. Thus, the full-time worker unemployment rate can be considered a refinement of the overall rate in that it more closely reflects the impact of economic conditions on the labor market.

JOB LOSERS, JOB LEAVERS, AND OTHER UNEMPLOYED WORKERS

One of the most informative approaches toward understanding the cyclical behavior of unemployment is to examine the unemployed by whether they were job losers, job leavers, reentrants, or new entrants to the labor force. Data for this breakdown, which have only been collected since January 1967 and published since early 1969, have recently been extended by a series that divides job losers into those on layoff and those permanently separated from their jobs.[11]

By definition, the sum of the job losers, job leavers, reentrants, and new entrants equals the total number of unemployed.[12] However, the proportion of the total that each group represents varies greatly over the business cycle. The reason is largely a function of movements in the job loser group, which is both the largest group and, by far, the most cyclically sensitive. The group of job losers is of analytic interest for three reasons. First, its movements dominate those of the other groups. Second, of the four groups, only the job loser unemployment is involuntary, in the sense of being controlled by the employer. Third, over half of the job losers are household heads, whose unemployment generally has the largest economic impact on the family.[13]

A comparison of the cyclical behavior of these groups may be made with the aid of

11 The new series also goes back to 1967, but appears first in the Bureau of Labor Statistics' February 1977 issue of *Employment and Earnings.* The composition of each group of unemployed persons by reason for unemployment is as follows:

1. Job losers are persons either on *temporary layoff* (of less than 30 days) or on *indefinite layoff* (of 30 days or more with no definite recall date), with both of these groups making up the new "on layoff' series, plus those persons who left their jobs involuntarily (being either fired or retired) and began looking for work immediately. Persons in this latter group are referred to as *permanent job losers;*
2. Job leavers are persons who quit their previous employment (including voluntary retirees), and immediately began looking for work. For job losers and leavers, "looking for work immediately" effectively means looking in the 4 weeks preceding the survey;
3. Reentrants are those who previously worked at a full-time job lasting 2 weeks or longer but who later dropped out of the labor force for a period of time before looking again for work; and
4. New entrants are persons who never worked at a full-time job lasting 2 weeks or longer.

12 In the seasonally adjusted series that are published, this may not be exactly true because each individual series is seasonally adjusted separately.

13 Curtis L. Gilroy and Robert J. McIntire, "Job. Losers, Leavers, and Entrants: A Cyclical Analysis," *Monthly Labor Review.* November 1974. p. 35.

Table 4 and Chart 5. Three interesting relationships may be studied: (1) the relative growth of total unemployment and its component parts over the several cyclical phases; (2) the relative share of total unemployment represented by job losers at different points in the cycle; and (3) the variability in the percentage of job losers represented by those on layoff.

Just like the unemployment rate, the total number of unemployed persons tends to move countercyclically, lagging at troughs and leading somewhat at peaks. Following the trough in the fourth quarter of 1970, unemployment continued to rise for four quarters before falling, so that it was only about 5 per cent (SAAR) below the trough level at the beginning of the next cyclical phase. During that phase, the leveling off period, total unemployment was essentially unchanged. However, in the 1973-75 recession, unemployment rose over 55 per cent (SAAR). It then continued to rise to a new high in the recovery period, after which it fell for four quarters before rising again in the final two quarters of 1976.[14]

Over these same periods, the behavior of the four major components of unemployment varied greatly, due to the different factors influencing the individual series. For example, consider the relative behavior of the different groups in a recession. As the economy worsens, firms respond to decreasing demand by expanding both layoffs and permanent separations. Thus, the job loser group increases. On the other hand, the propensity of workers to leave their jobs in search of better positions decreases when economic conditions worsen because the probability of finding new employment also worsens. So, while the number of job losers tends to move countercyclically, the size of the job leaver group tends to be procyclical.

Contrarily, movements in the number of reentrants and new entrants, which generally parallel each other, both tend to be somewhat countercyclical. However, fluctuations in these two series are usually not too large because they are determined by conflicting factors influencing job search. When people enter the labor force to search for employment, especially as new entrants or reentrants, they tend to spend some time unemployed. Thus, all other things equal, factors that tend to increase the number of entrants in the labor force also tend to increase the number of unemployed entrants as well. In an economic downturn, for example, the declining availability of jobs tends to discourage job search, both among teenage new entrants and the predominantly female reentrants. On the other hand, additional job search is encouraged by the increased unemployment of primary workers and the accompanying loss of family income. Furthermore, in recent years, job search by these so-called "secondary" workers has been increased by the rapid rate of inflation and the resulting need for supplementary income.

As shown in Table 4, fluctuations have been most dramatic in the job loser series. Falling slightly in the first two cyclical periods and the second recovery phase, the number of job losers more than doubled, at an annual rate, during the last recession. Changes in the other groups, however, were significantly less. Because of this variability, the percentage that job losers represented of the total unemployed fluctuated over a very broad range.

During the recovery from the 1970 recession, the number of job losers fell from 48 per cent to under 40 per cent of the unemployed. By the end of the recession, however, the rapid rise in the number of job losers raised this percentage to 54 per cent, and then further, to 57 per cent of the unemployed, as unemployment continued to climb as the economy recovered.

14 The rise in unemployment in the final two quarters of 1976 was anomalous for that phase in the cycle. In the first five quarters of the recovery phase, unemployment fell 5.0 per cent (SAAR) to 7.0 million.

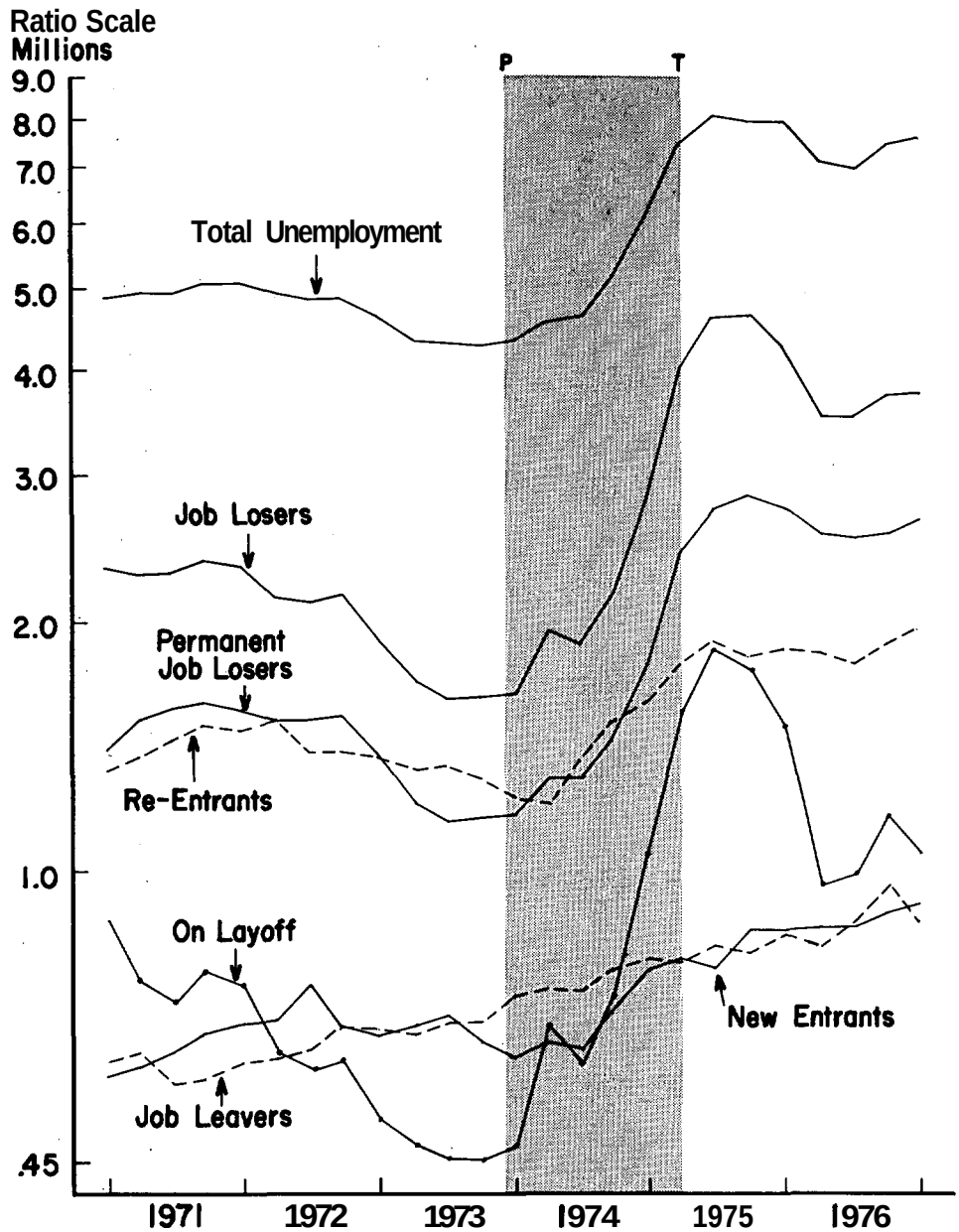
Table 4

CYCLICAL ANALYSIS OF THE REASON FOR UNEMPLOYMENT
(In Thousands or Per Cent)

Unemployment During Cyclical Periods	Unemployed	Job Losers					Job Leavers	Reentrants	New Entrants
		Total	% of All Unemployed	On Layoff	% of Job Losers	Not on Layoff			
Recovery I (QIV-70/QI-73)									
Beginning quarter	4,859	2,314	47.6	885	38.2	1,428	598	1,364	579
End quarter*	4,310	1,704	39.5	476	27.9	1,228	641	1,360	658
Per cent change over period (SAAR)†	−5.2	−12.7	–	−24.1	–	−6.5	+3.1	−0.1	+5.8
Unemployment high (QIV-71)‡	5,085	2,318	45.6	734	31.7	1,584	599	1,490	669
Level Off (QI-73/QIV-73)									
End quarter*	4,318	1,673	38.7	475	28.4	1,197	729	1,252	607
Per cent change over period (SAAR)†	+0.2	−2.4	–	−0.3	–	−3.4	+18.7	−10.4	−10.2
Unemployment low (QIII-73)‡	4,285	1,640	38.3	452	27.6	1,188	665	1,326	638
Recession (QIV-73/QI-75)									
End quarter*	7,476	4,003	53.5	1,586	39.6	2,418	770	1,809	784
Per cent change over period (SAAR)†	+55.1	+101.0	–	+162.4	–	+75.5	+4.5	+34.2	+22.7
Recovery II (QI-75/QIV-76)									
End quarter*	7,632	3,765	49.3	1,077	28.6	2,688	875	1,982	922
Per cent change over period (SAAR)†	+1.2	−3.4	–	−19.8	–	+6.2	+7.6	+5.4	+9.7
Unemployment high (QII-75)‡	8,087	4,637	57.3	1.894	40.8	2,743	828	1,925	777

*End date of each period is the beginning date of the next period.
†Seasonally adjusted annual rate.
‡The respective high and low unemployment numbers for each subgroup are those occurring in the same quarter as the high or low figure for total unemployment. The numbers are therefore not necessarily the actual high or low figures in each series.

Chart 5
THE CYCLICAL BEHAVIOR OF THE REASON FOR UNEMPLOYMENT, 1970-76



NOTE: This chart is drawn with the levels of unemployment in ratio scale. As a result, equal vertical distances represent equal percentage changes in the respective periods.

As a result, of the 3.8 million increase in the number of unemployed from the unemployment low in the third quarter of 1973 to its high in the second quarter of 1975, fully 79 per cent were job losers.

But perhaps the most interesting data are those provided by the new series dividing job losers into those on layoffs, either temporary or indefinite, and permanent job losers. This dichotomy is very important to researchers studying the causes and potential solutions for the unemployment problem, because workers on layoff awaiting recall to their jobs are likely both to search differently and to respond quite differently to various attempts to reduce unemployment than those who are unemployed for other reasons.[15]

These data reveal that the number of job losers on layoff varies much more over the cycle than the number of job losers with permanent separations, even though the latter group is always larger. Thus, for example, whereas the number of permanent job losers rose over 75 per cent (SAAR) during the recession, those job losers on layoff rose an enormous 162 per cent. Similarly, the number of persons on layoff fell greatly in both recovery periods, compared with only small changes for the permanent job losers.

As a result of this greater variability, layoffs ranged from a low of 28 per cent of all job losers, when unemployment was at its low point in 1973, to a high of 41 per cent, when unemployment peaked in the second quarter of 1975. Finally, because of the great fluctuations in the number of job losers on layoff, these workers constituted a much larger percentage of the variation in both the total number of job losers and the total number of unemployed than they represented of the total of either group when observed at any one time.[16]

SUMMARY

The unprecedented business expansion of the 1960's seemed to many economists to indicate either that the economy could be "fine-tuned" or that a major structural change had taken place. In any case, serious fluctuations in economic activity associated with the business cycle appeared to be under control. In a sense, the mildness of the brief recession of 1969-70 supported this view. However, the precipitous decline in economic activity, which followed only 3 years after the 1970 trough, made it painfully clear that the business cycle remained very much alive.

Like the major measures of economic activity or output, unemployment and the unemployment rate are cyclical in nature, with movements closely paralleling those of real GNP. While the overall unemployment rate is perhaps the most closely followed economic statistic, it suffers from the major problem that people expect it to measure much more than a single number can. However, the unemployment rate is an average, and its many components are readily available in the monthly publications of the Department of Labor. This provides an opportunity to study in much greater depth the question of what sectors in the economy are being most affected over the various phases of the business cycle.

The first components of the overall unemployment rate examined in this article were those dividing the population into adult males, adult females (both 20 years of age and older), and teenagers (16-19 years of age). While the adult male unemployment rate is the

15 See Martin S. Feldstein, "The Importance of Temporary Layoffs: An Empirical Analysis," *Brookings Papers on Economic Activity*, 3:1975, pp. 725-44, and Thomas F. Bradshaw and Janel L. Scholl, "The Extent of Job Search During Layoff," *Brookings Papers on Economic Activity*. 2:1976, pp. 515-26.

16 For example, at the beginning and at the end of the recession, layoffs were, respectively, 11 per cent and 21 per cent of total unemployment. However, layoffs constituted over 35 per cent of the 3.2 million recessionary increase in unemployment.

most cyclically sensitive, the economic information conveyed by this breakdown is severely limited because of the increasingly similar labor market characteristics of the two adult groups. More productive approaches toward understanding the cyclical behavior of unemployment consist of analyzing unemployment rate fluctuations in those sectors of the labor market that more clearly reflect different types of activity. One such breakdown involves studying the nonagricultural unemployed, classified according to their former occupations as white-collar, blue-collar, or service workers. Such a comparison reveals, for example, that while blue-collar and service workers both have unemployment rates substantially above white-collar workers, the blue-collar rate is extremely volatile, moving far above the service worker rate during recessions and then gradually below it during expansions.

Similarly, data on the number of unemployed persons were also studied, with an emphasis on examining the unemployed by the reason for their unemployment: Were they job leavers, job losers, reentrants, or new entrants to the labor force? In addition, a new series also makes it possible to delineate job losers by whether they were on temporary layoff or whether they had permanently lost their job. Information about the distribution of the unemployed among these groups can be very important in the design and implementation of manpower policies because workers who are on layoff awaiting recall will search for employment in a very different manner from those who have either permanently lost their jobs or who are new entrants or reentrants to the labor force. For example, while the availability of public service employment may be relevant for these latter two groups, it is unlikely to have much effect upon the unemployment of those on layoff. The need for considerations of this nature are clear for the recent recession when, not only was the percentage increase in job losers at least three times as great as that for either job leavers, reentrants, or new entrants, but within the category of job losers, the percentage increase among those on layoff was again more than twice that of permanent job losers.