Sector Contributions to Recession

Roger H. Hinderliter

Through the fall of 1979, a surprisingly resilient economy time-and-again forestalled an announcement that a recession was upon us. While a large number of economic forecasts fixed the fourth quarter of 1979 as the initial period of recession, preliminary information indicates that the economy, after adjusting for inflation, continued to expand, albeit at a lower rate than in the third quarter. As in previous quarters, the strength exhibited in the fourth quarter was due primarily to unanticipated growth in the consumer sector. Real (inflation-adjusted) consumer spending rose in the fourth quarter of 1979 (offsetting declines in business investment and housing), as personal savings as a percent of disposable income fell to 3.3%, the lowest quarterly savings rate since 1950.

Despite the failure of the recession to show its true colors, there remains a firm underlying conviction that 1980 will indeed be a recession year. Virtually no widely reported forecast projects economic growth continuing throughout 1980, a view that apparently is shared by a wide range of business managers, investors, and others concerned with economic developments. This recession, however, is expected to be different from previous recessions in the postwar period. Higher savings rates are generally expected in 1980, and, to a greater extent than in past recessions, the downturn is expected to be transmitted through consumer spending. Weak business spending appears to be less of a contributing factor than in previous recessions. This is mainly due to a widespread belief that excessive inventories are less of a problem going into the recession than in prior episodes, and hence inventory liquidation may be less troublesome during the downturn. In addition, business fixed investment appears relatively firm for a recession year.

Defining Recession

Repeated misses in calling the turning point into recession are not unusual. Uncertainty over changes-of-course in economic activity is symptomatic of all business cycles, because cycles are complex interactions among diverse elements of economic behavior. Recessions, in general, result from "imbalances" that alter spending, production, and employment patterns, and are prolonged as adjustments to these imbalances work their way through the economic system. It is difficult to be more specific in further generalizing recession. Even such a stark episode as the Great Depression provokes debate on its causes many years after its end.[1]

Ultimately, a recession affects the economy through a number of channels and is manifest in declining general economic activity, commonly measured by real gross national product (GNP). The severity of a recession tends to be judged by the steepness of the rate of decline in real GNP during the downturn. This is not to say that reference dates (peak and trough) of economic activity are determined by GNP alone.[2] Undoubtedly, real GNP, the most general measure of economic activity, will decline during a recession, though the specific contraction in GNP need not perfectly coincide with reference dates.

Alternatively, recessions may be viewed in a "growth" context. A recession stage of a growth cycle develops when the economy shifts from relatively high real growth rates to relatively low (not necessarily negative) real growth rates for an extended period. In this case, it is not the direction of the economy but the rate of growth relative to some benchmark (for example, trend) that determines recession. In important respects, the two approaches to defining recession may yield somewhat different perspectives on economic behavior (compare footnote 4, below). However, growth cycles are less well understood than the standard approach that emphasizes the direction of economic activity, and most discussions of recessions refer to the standard view.[3]

GNP is the total spending by all sectors of the economy on goods and services produced currently. The major sector components of GNP include spending on personal consumption, residential housing, business fixed investment, and business inventories; also included is spending by governments and net purchases of U.S. goods and services by foreign entities. Examination of the components of GNP indicates the channels through which a recession is transmitted to general economic activity.

Growth (at annual rates) of real GNP and its components during five postwar recessions is shown in table 1. The individual sector-component growth rates are each weighted by the sector's share of GNP. Component rates are thus expressed in "GNP units," which sum to the growth rate of real GNP. A component growth rate measures a sector's contribution to general economic activity in the sense that it accounts for both the growth of spending in the sector and the importance of the sector in GNP.

1. Compare, in particular, explanations of the depression in Milton Friedman and Anna Jacobson Schwartz, *The Great Contraction: 1929—1933* (Princeton University Press, 1965), and Peter Temin, *Did Monetary Forces Cause the Great Depression?* (W.W. Norton, 1976).

2. The complexity of business cycles is clearly recognized by the National Bureau of Economic Research (NBER) in its effort, as the acknowledged monitor of economic change in the United States, to date cycle phases. The common view that a recession simply requires two successive quarters of negative growth of real GNP has been denied by NBER representatives on several occasions. Recessions are judged by the NBER in terms of contractions in a wide variety of different economic measures, which last over an extended period. See, for example, Geoffrey H. Moore, "Measuring the State of the Economy," *National Bureau Report,* National Bureau of Economic Research Report No. 13 (March 1974), pp. 3—6.

3. For an exploratory analysis of growth cycles in the United States, see Ilse Mintz, "Dating American Growth Cycles," in Victor Zarnowitz, ed., *The Business Cycle Today* (National Bureau of Economic Research, 1972).

Table 1 Behavior of the Economy during Postwar Recessions

Growth Rates of Real GNP (1972 $) and Its Sector Components from Peak Quarter to Trough Quarter, Measured at Annual Rates[a]

	Postwar recessions[b]					
	1953–1954	1957–1958	1960–1961	1969–1970	1973–1975	Average
GNP	-3.6	-3.4	-0.4	-0.6	-4.6	-2.5
Personal consumption	0.6	-0.1	-0.1	0.6	-0.6	0.1
Business fixed investment	-0.5	-1.7	-0.5	-0.8	-1.0	-0.9
Residential construction	0.4	0.0	-0.2	0.3	-1.1	-0.1
Net exports	0.4	-1.1	0.7	0.1	0.5	0.1
Change in business inventories	-1.3	-2.0	-1.5	-0.5	-2.9	-1.6
Government purchases	-3.2	1.5	1.2	-0.3	0.5	-0.1
Duration (peak to trough, in quarters)	3	3	3	4	5	3.6
Peak quarter	1953:III	1957:III	1960:II	1969:IV	1973:IV	

SOURCE: National Income Accounts.

a. Component growth rates are share-of-GNP weighted using peak quarter weights. Growth rates of "change in business inventories" cannot be calculated directly, because inventory change during recession is often negative. The growth rate assigned inventories is a residual—whatever rate causes the sum of all component rates to equal the growth rate of real GNP. The growth rates of "net exports" are computed by evaluating exports and imports separately and then differencing to find the net contribution to GNP growth.

b. Recessions are measured from the quarter containing the reference peak to the quarter containing the reference trough (National Bureau of Economic Research chronology). See U.S. Department of Commerce, *Business Conditions Digest* (July 1979), Appendix E, p.105.

Sector Contributions to Postwar Recessions

Postwar recessions have been highly concentrated in the business sector. The "average recession" shown in table 1 has been characterized by an annual rate of decline in real GNP of 2.5 percent between the quarter containing the reference peak and the quarter containing the reference trough. This decline is just equal to the decline in inventories (1.6 percent) plus the decline in business investment (0.9 percent). Changes in the other spending components—consumption, housing, net exports, and government—have, on average, contributed little to real GNP growth during recession (±0.1 percent), and these contributions have netted to zero. The average postwar recession clearly has been transmitted to general economic activity through business spending.

Individual recessions, of course, differ from each other in duration and severity. They also differ in terms of the sector contributions to decline, but the patterns within recessions are more clearly defined than might be expected. In particular, the drag on real GNP growth from the two business spending components was relatively large in all postwar recessions, whether mild or deep. The business sector was eclipsed as the most significant contributor to the decline in real GNP in only one recession, 1953–1954, when government spending fell sharply in the aftermath of the Korean involvement. Net exports was a major source of weakness only once, in 1957–1958, as was housing, in 1973–1975. The fall in net exports in 1957–1958 probably represented a downward adjustment from a level inflated by the Suez Canal crisis as well as recessionary pressures operating through the foreign sector. Housing in 1973–1975 was influenced by high mortgage rates, problems with funds availability, and rising fuel prices. The drag on real GNP growth from consumption spending generally has not been great. Even in 1973–1975, when the contribution to recession was greatest, the consumer sector was overshadowed by declines in business spending and housing. Nonbusiness sectors have been major sources of weakness only in the deeper recessions of the 1950s and 1973–1975.

An Outlook for 1980

As the recession repeatedly failed to take hold in 1979, some forecasts began to project a longer and deeper decline in 1980. A substantial number of forecasts still cling to the notion of a relatively short and mild downturn, a forecast that has been "standard" for at least a year. Despite differences among forecasts, characteristics that have been typical of the past are not expected to emerge in a recession in 1980. In terms of sector contributions, the consumer influence is expected to be more important in the transmission of the downturn to general economic activity.

An example of a recession outlook for 1980, which is purely illustrative and not an official forecast, is shown in table 2. In duration and severity, this 1980 outlook suggests a downturn about the same as the average of postwar downturns. An annual rate of decline in real GNP of about 2.4 percent over three to four quarters seems fairly representative of many recent outlooks from which the example was distilled. The consumer sector plays the dominant role in the downturn. The share-weighted growth rate of consumption (-1.4 percent) is larger in absolute value and in relation to the decline in real GNP than in any previous postwar recession.

Business investment, housing, and inventories are also expected to contribute negative elements to real GNP growth. However, the role of the business sector is less prominent in defining this recession. The expected drag on real GNP growth from inventories is especially modest by historical standards, reflecting a belief that the business sector has learned to control inventories day-by-day. Traditionally, changes in business inventories during recession reflect the elimination of accumulated excesses as well as adjustments to the reduced sales potential of a weaker economy. This time, the evidence available suggests that inventory excesses are moderate. Consequently, only the influence of a weaker economy may be of major proportions.

If earlier recessions were "business recessions," a recession that would develop in 1980 along the lines of many current forecasts would be a "consumer recession."[4]

Table 2 An Illustrative Outlook for 1980[a]

Growth Rates of Real GNP (1972 $) and Its Sector Components, Measured at Annual Rates, as Suggested by a Variety of Recent Forecasts[b]

GNP	-2.4
Personal consumption	-1.4
Business fixed investment	-0.5
Residential housing	-0.7
Net exports	0.3
Change in business inventories	-0.5
Government purchases	0.4
Duration (peak to trough, in quarters)	3–4

a. The growth rates presented in this table represent the author's perception of the "standard outlook," circa mid-January 1980. They are not forecasts of the Federal Reserve Bank of Cleveland or the Board of Governors of the Federal Reserve System and should not be interpreted as reflecting the official view of the Federal Reserve. Forecasts are examined regularly in the financial press, often in considerable detail. For recent examples of leading economic forecasts, see Bureau of National Affairs, Inc., *Federal Controls*, Current Report No. 172, December 21, 1979, pp. 3:51-3:65.

b. Component growth rates are share-of-GNP weighted using fourth-quarter 1979 weights.

4. The growth cycle approach to evaluating sector contributions to recession would measure the changes in sector-component growth rates as the economy shifts from a fast pace to a slow pace. Here, the problem is one of determining the "swing" in GNP growth contributed by each sector. It can be argued on this basis that recessions have always been largely determined by the consumer sector. For example, if a table such as table 1 were constructed for postwar expansions in the U.S. economy, it would show an "average expansion" as follows:

	Annual growth rate
GNP	4.9
Consumption	2.9
Investment	0.7
Housing	0.3
Net exports	0.1
Inventories	0.5
Government	0.4

The difference between the "average recession" (slow-paced economy) and the "average expansion" (fast-paced economy) indicates that the largest contribution to the swing in real GNP growth is from consumption (-2.8 percent), while inventories (-2.1 percent) and investment (-1.6 percent) also are important. Still, the message in current forecasts is that the swing contribution from consumption is likely to be unusually large in 1980, while that of the business components might narrow.

Underlying strength in the consumer sector has characterized economic activity for some time; perhaps more than any other factor, failure to capture the persistence of this strength has been responsible for errors in forecasting a new recession. To accommodate spending, consumers drew down savings rates to low levels and have kept them low. Yet, recession outlooks for 1980 continue to project a snapback of savings rates to levels more consistent with past behavior. Whether this snapback will finally occur as forecast in 1980 depends on whether recent savings rates are relatively short-term aberrations or the result of factors that are producing "new norms." Several factors that might produce longer term changes in consumers' decisions to spend and save have been suggested. In particular, unrealized capital gains on assets, mainly houses, are sometimes viewed as an alternative to current saving. If capital gains accrue in the future as they have in the past, savings out of disposable income may remain low for some time.[5] Certainly, consumer behavior will bear close watching. The large share-weight of consumption in GNP (about 65 percent) means that if long-term changes are taking place in this sector, they will be transmitted to the economy largely intact.

5. See, for example, Alfred L. Malabre, Jr., "Review of Current Trends in Business and Finance," *Wall Street Journal*, January 21, 1980, p. 1.

The views stated herein are those of the author and not necessarily those of the Federal Reserve Bank of Cleveland or of the Federal Reserve System.

February 11, 1980

ECONOMIC COMMENTARY

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Research Department
Federal Reserve Bank of Cleveland
Post Office Box 6387
Cleveland, Ohio 44101

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