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ECONOMIC COMMENTARY

The Difficulty In Explaining Postwar Stability

by K. J. Kowalewski and Eric Kades

Since 1981, business activity has been cycling through high and low points so often that the casual observer might get the impression that the economy has become unstable.

Between 1981 and 1982, for example, inflation-adjusted (real) gross national product (GNP) suffered the worst drop since the end of World War II, falling at an average annual rate of 2.3 percent. At the same time, the inflation rate dropped annually from 10.0 percent to 3.4 percent, and unemployment rose from 7.4 percent to 10.6 percent.

From the end of 1982 to the middle of 1984, real GNP did an about-face and grew at an average annual rate of 7.1 percent. Inflation stayed about the same (3.5 percent), and unemployment fell to 7.4 percent.

From the middle of 1984 to the third quarter of 1985, real GNP did another flip-flop. It rose at only 2.4 percent, while inflation remained low, and unemployment declined slightly, dropping to 7.1 percent.

Noted economist Professor Ronald I. McKinnon of Stanford University believes that the rise and fall of economic activity in recent years has been increased by the current system of flexible exchange rates (Kristof 1985). The value of the dollar has been allowed to rise and fall according to world market conditions. This, in turn, is believed to have increased the amplitude of business cycles in the U.S.

However, even if Professor McKinnon is correct, the recent volatility in our economy is minor when compared to what happened between 1900 and the start of World War II.

Between 1900 and 1940, the growth rate of real GNP swung wildly. (See chart 1.) It varied between a high of 16.6 percent in 1909, to a low of -14.8 percent in 1932.

The period since the end of World War II, in contrast, has been relatively stable. Between 1947 and 1984, the maximum and minimum growth rates of real GNP were 9.6 percent in 1950 and -2.1 percent in 1982. Not only were the extremes reduced in the postwar period, but the standard deviation in the growth rate since 1900 was also reduced by almost 60 percent—excluding the years 1917 to 1921, which were influenced by World War I and its aftermath.[1]

This greater stability in economic output is also reflected in the unemployment rate (chart 2); it generally has been more stable in the post-World War II period.

Even the rate of inflation has become more stable. The standard deviation of the GNP implicit price deflator decreased by about 30 percent in the postwar period.[2] (See chart 3.)

The dramatic differences in the stability of inflation, GNP, and unemployment before and after the Second World War are of keen interest to economists. An effort to explain these differences is at the heart of the cur-

Chart 1 Percent Changes in Real GNP

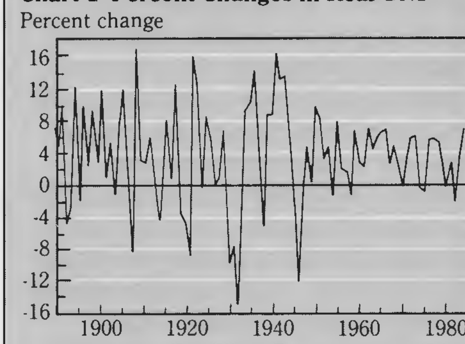
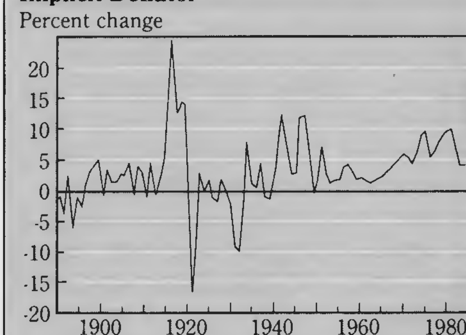


Chart 2 Unemployment Rate 1880-1984

Chart 3 Percent Changes in Implicit Deflator



SOURCES: Historical Statistics of the United States: Colonial Times to 1970, U.S. Department of Commerce, Bureau of the Census, 1975.

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

1. Some readers may ask why we examine output variability when the growth trend itself seems more important. The reason is that the growth rate of GNP has been remarkably stable at about a three percent annual rate in both the pre-and postwar periods. The standard deviation we discuss is a measure of how a series varies about its mean, with larger deviations implying larger variation.

2. We use the implicit deflator because there is a continuous time series on this variable. The behavior of the GNP implicit price deflator is similar to that of the wholesale price index, which is generally considered to be more reliable for the pre-war period.

rent debate in economics about the effectiveness of the goverment's fiscal and monetary stabilization policies.

For example, can the government, by using its taxing and spending powers, and the Federal Reserve System, by using its ability to alter the supply of bank reserves, control the business cycle enough to prevent the kind of instability that took place before the Second World War?

Economists have a number of widely differing viewpoints. Some, for example, such as Baily (1978) and DeLong and Summers (1984) use inflation, GNP, and unemployment data to argue that institutional and structural changes in the economy, as well as deliberate stabilization policies, have been responsible for the improved postwar performance.

Others, such as Herbert Stein of the American Enterprise Institute and Professor Christina Romer of Princeton University, argue that the effects of these changes are not so clear. Romer, in fact, argues that the difference in the economy's behavior before and after World War II is simply a quirk in the data! Her estimates of pre-World War I GNP show much less volatility in the economy—only slightly greater than that observed in the post-World War II period.

In this Economic Commentary, we survey the major arguments used to explain postwar economic stability and discuss why the data may be faulty.

Competitive Factors

Many economists believe that the amount of competition in product and labor markets has an effect on price fluctuations. In a perfectly competitive economy, with supply fixed in the short run, imbalances in supply and demand for goods and labor are quickly met with changes in prices and wages.

As markets become less competitive, prices rise and fall less quickly in response to unexpected economic events (such as oil supply shocks) that affect the balance between supply and demand. Thus, a less competitive economy experiences smaller short-run price changes. Some economists believe that the trend toward less competition since the end of the Second World War explains the increased stability in prices during the last 40 years.[3]

This argument centers on both the goods and labor markets. Labor markets, for example, became much less competitive after 1945. Labor unions gained membership, status and, hence, market power. Instead of bargaining with individual workers, each of whom had little market power, firms had to bargain with unions that could very effectively threaten the employer with a strike and the loss of customers and profits if wage demands were not met.

In the goods market, industry concentration increased after the war. For example, the value added by the largest 200 corporations increased from 23 percent of total value added in 1947 to 33 percent in 1970. The larger average size of firms and the smaller average number of firms per industry reduced the competitiveness of markets for the goods they sold, as well as for the factors of production they bought.

Implicit Contracts

The increased use of implicit contracts in the postwar period is another institutional change that many economists (Azariadis [1975], Baily [1974], and Okun [1980]) believe has promoted employment and customer stability.

The implicit contract theory states that because firms and workers are averse to risk and want to have stable incomes, they are willing to forego large income gains in order to avoid large income losses. Under this theory, workers will not leave a job when business is good and firms will not fire employees when business is bad. Workers thus avoid large income losses by avoiding job loss during recessions, and firms avoid lost income and larger hiring and training costs during expansions by maintaining a skilled and available labor force. Wages and employment are thus stabilized by this mutually beneficial relationship.

Okun extends the implicit contract theory to product markets. Instead of raising prices and increasing profits at peak capacity, firms increase back orders and ration available supplies among preferred customers. Thus, firms avoid alienating customers over the long run by not reacting to every increase in demand with a price hike. "By foregoing king-size markups in tight markets," says Okun, "the sellers build a clientele and establish a reputation that helps to retain customers when markets ease." Prices and output are thus stabilized.

Compositional Explanations

Some economists have looked at the components of GNP to see whether or not postwar economic stability has declined rather mechanically because the relatively more volatile components, such as farm output and consumer durables (cars, appliances, etc.), take up a smaller share of GNP than they did before the end of World War II.

Unfortunately, the data contradict this hypothesis. Agricultural output has declined dramatically as a fraction of GNP, but the notion that it is a volatile sector is unfounded. The standard deviation in the growth of agricultural output is less than the standard deviations in GNP both before and after World War II. Thus, a decline in the agricultural share of the economy should, all else remaining the same, increase the volatility of GNP.

The share of consumer durable purchases in GNP actually has risen during the last 50 years, so the rela-

3. Although this argument strictly deals with relative prices, there is evidence that more variable relative prices contribute to more variable absolute prices. (See Stockton 1985.)

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tive volatility of this segment of the economy is irrelevant to decreased swings in overall GNP.

Some economists believe that the postwar economy has shown increased stability because it has become more service-oriented. Services, such as transportation, communications, private education, etc., take up a larger share of GNP, and are seen as a stabilizing influence because they are less volatile than other sectors, such as consumer durable goods. This argument, however, is difficult to evaluate because data on services before 1929 do not exist, and because the share of services in GNP since then has risen only slightly.

Government's Stabilizing Effect

A more credible compositional explanation for the decreased variation in real GNP is the growth in the government sector. From under 1 percent in 1900, total government outlays now amount to roughly 25 percent of GNP. Government outlays help stabilize GNP because a large portion of them (about 70 percent) do not vary much over time. Other components of government expenditures actually react to counter output fluctuations as they begin. These important institutionalized "automatic stabilizers" are discussed below.

Federal civilian employment also has increased greatly. From about 1 percent in 1900, civilian employment of the federal government as a percent of total civilian employment rose to almost 4 percent in 1970. Again, federal civilian employment does not vary much over time, thus helping to stabilize employment and income.

Finally, DeLong and Summers argue that government regulation also has a stabilizing effect. They report statistics compiled by Nutter and Einhorn (1969), which show that close to 22 percent of GNP in 1958, before the complaints of the "regulatory state" in the 1960s and 1970s, was produced in sectors of the economy in which government was a predominant presence.

Automatic Stabilizers

Some economists explain the relative stability of the postwar economy by pointing to governmental factors, such as the creation of programs that function like automatic stabilizers. These stabilizers are programs that stand in place at all times to react automatically to dampen business cycle swings. Most operate by smoothing fluctuations in personal income. For example, unemployment insurance prevents the income of those laid-off during a recession from falling to zero. The unemployed worker's subsequent ability to maintain even a low level of spending prevents the effect of his or her layoff from having larger ripple effects on the rest of the economy.

The progressive income tax is an automatic stabilizer that also affects personal income. In expansionary times, as citizens make more money and creep into higher tax brackets, a greater percent of their income is taxed away. They thus have less money to spend, which helps stabilize the economy by slowing demand for goods and services. In a recession, as personal income falls, the tax burden is reduced, which again helps stabilize the economy by helping to maintain the demand for goods and services.

Another important automatic stabilizer established by the federal government is deposit insurance (the FDIC and FSLIC, respectively). Many economists feel that the very existence of deposit insurance has helped limit the number of bank runs and financial panics that were so common before World War II. As long as citizens maintain confidence that the government will cover any deposit losses due to bank failure, they have no incentive to frantically withdraw funds from suspect banks.

Policy Tools

The effect of discretionary policy tools is far more controversial than the effect of automatic stabilizers. Generally, these policy tools are changes in federal government spending and taxes and in the availability of bank reserves that are made at the discretion of policymakers in order to counteract undesired income and price changes. Although most economists believe that the use of these tools can affect prices and real output at least in the short run, many believe that policymakers cannot use their stabilization tools effectively.

Critics charge that policymakers do not have enough information about the current state of the economy, that their understanding of the economy is imprecise, that there are delays that distort the policymaking process, and that political concerns often override efficient economic considerations. The record of the effective use of discretionary policy is considered mixed. (See Perry 1976).

Other Explanations

DeLong and Summers do not attempt to explain the greater stability of postwar prices. They show that decreased price variance (for whatever reason) lessens output fluctuations. Volatile prices make estimating future inflation difficult. The less able the private sector is to forecast prices, the greater difficulty it has in forecasting future real interest rates. Why? Because the real interest rate is approximately the difference between the nominal interest rate and the expected inflation rate. And when the real interest rate is difficult to predict, demand for interest-sensitive goods becomes more variable. Every time the real interest rate dips at all, demand will rise; while every interest rate rise decreases demand. This, in turn, increases fluctuations in the amount of goods and services being offered, thus affecting the business cycle.

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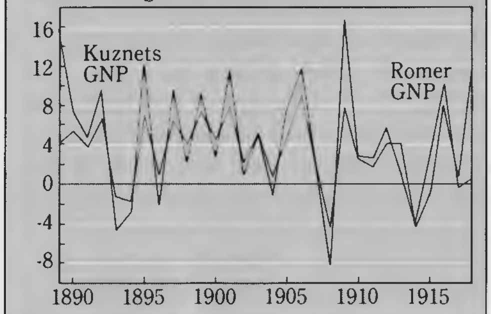
Chart 4 Comparison of GNP Growth Rates, 1889-1918

Percent change, annual rate



SOURCES: Historical Statistics of the United States: Colonial Times to 1970, U.S. Department of Commerce, Bureau of the Census, 1975; Romer, Christina, Working Paper, Princeton University, May 1985.

DeLong and Summers emphasize that the decreased volatility of prices since World War II has made it easier for businessmen to forecast future real interest rates and thus has allowed them to make more effective investment decisions over a period of time.

Nevertheless, price stability is probably only a minor factor in explaining decreased output variation. Gross private investment has accounted for a relatively small share of GNP (ranging from 13 percent to 19 percent) since at least 1910 and, over the same period, changes in investment have not been large relative to changes in GNP. Further, subsequent spending changes as a result of the initial investment changes are not large enough to explain all of the relative stability noted in the output of goods and services in the postwar period.

John Taylor (1984) avoids rationalizations of price stability and its impact on real output fluctuations and attempts to "let the data speak for themselves" in a purely statistical approach. He finds that the size of "shocks" to the economy is smaller in the postwar period. Thus, he sees the smaller price and output fluctuations in the postwar period as merely "good luck." However, it is difficult to place much faith in Taylor's results because the economic model he uses is, at best, a crude approximation of the true correlations between prices and quantities.

Is Postwar Stability Spurious?

Intuitively, one would expect the different variabilities of the two periods to be understated because it would seem that the pre-war data contain relatively more smooth approximations for missing data. However, in a recent paper, Christina Romer (1985) argues that these smooth approximations are swamped by a key assumption that imparts excessive volatility to the pre-war numbers.

When Kuznets computed the data shown in chart 1, he essentially factored commodity output measured at producer prices up one-for-one to GNP. However, Romer argues that this relationship is not one-for-one because the components of GNP ignored by Kuznets because of a lack of data—for example, transportation and distribution costs and services—move less than one-for-one with GNP. When Romer corrects this assumption, she finds that the variability of pre-war GNP growth is reduced by about 40 percent (see chart 4). Thus, she argues that there has not been a dramatic reduction in the variability of economic activity in the postwar period.

Romer's estimates understandably have not been widely accepted by other economists. Although she presents a persuasive argument, there is other evidence that points to greater stability in the postwar period. For example, estimates of the duration of business cycles computed by the National Bureau of Economic Research, which are based on a wider data set than that used by Romer, suggest greater stability. Compared with the period from 1854 to 1940, the average duration of recessions in the postwar period is shorter by about 10 months, while that of expansions is longer by about 16 months.

Conclusion

The debate about the causes of greater economic stability after the Second World War may seem remote and esoteric. However, the outcome is important because it will influence government policy decisions that will affect just about every aspect of our economy in the future.

The growing governmental share of GNP, as well as some automatic stabilizers, such as deposit insurance, remain the least controversial factors contributing to postwar stability and thus can be used to argue for a continued governmental role in such matters.

However, the effect of discretionary governmental policies on the business cycle is not clear; more research definitely is warranted. If it is found to be true that the greater stability of the postwar period is simply a statistical mirage, then arguments for reducing the role of government in the economy would be strengthened.

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