THE GROWTH RATE OF GNP AND ITS IMPLICATIONS FOR MONETARY POLICY

Remarks by

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Few economic forecasters anticipated the impressive growth in Gross National Product (GNP) that occurred in 1984. The 5.9 percent fourth quarter over fourth quarter increase in real GNP was well above the 3.4 percent average rate of increase we experienced during the 1950's and 1960's, and 2½ times the 2.2 percent rate of increase we experienced from 1973 to 1983. Some economic analysts have suggested that the economy has entered a new era. They expect real GNP growth of 5 percent or more for the rest of the 1980's. My impression is that most economists still believe that sustained real GNP growth at such a rapid pace is unlikely. Although there is some diversity of opinion among them, most economists predict real growth rates between 2.0 percent and 4.0 percent for the remainder of the 1980's.

At first glance, a couple of percentage points difference in an economic forecast may not seem like a matter to concern us very much, but in fact they can have very large implications for appropriate fiscal and monetary policy. I am told by budget experts that, as a very rough approximation, GNP growth at a steady 6.0 percent rate for the next five years would probably eradicate most of the structural deficit in the Federal budget without any further action by Congress. A 3.5 percent real rate of growth on the other hand could mean no reduction in the deficit over that period, all other things equal. Consequently, forecasts of rates of growth differing by only a percentage point or two can dramatically affect the economic implications of overall tax and spending programs.

The Full Employment and Balanced Growth Act of 1978 (The Humphrey-Hawkins Act) requires the Federal Reserve to carry out monetary policy in a manner consistent with the maintenance of full employment and balanced growth. To accomplish this, the Federal Open Market Committee (FOMC) sets growth targets for the monetary aggregates consistent with achieving over time non-inflationary rates of economic growth. Thus, real GNP growth forecasts are important because they provide a context for the formulation of monetary policy.

My remarks tonight will focus on three related topics. First, I will undertake to give a brief account of the post World War II behavior of GNP, contrasting the poor performance of the economy in the 1970's with our more recent spurt in economic activity and comparing previous recoveries with the current economic recovery. Next, I'll develop the basis for the growth range of real GNP I expect will evolve. Finally, I will discuss some aspects of short run forecasting of GNP and the requirement of consistency with the targets set for growth of the monetary and credit aggregates.

Since 1951, real GNP has grown at a 3.2 percent average annual rate. Of course, if GNP had grown at a constant 3.2 percent annual rate quarter after quarter from 1951 till today, real GNP forecasts would be much less controversial. Unfortunately, for economic policy makers, the data reveal a large amount of variation in quarter-to-quarter and year-to-year growth rates.

Some historical perspective might be useful in interpreting the recent recovery. Last year's 5.9 percent rate was one of the best fourth quarter over fourth quarter growth rates we have ever recorded, but there were actually quite a few year long periods when the economy grew even faster. In fact, real GNP grew faster than 8 percent from the second quarter of 1958 to the second quarter of 1959, and again from the first quarter of 1983 to the first quarter of 1984. The first quarter of 1984 is one of the ten quarters when GNP growth exceeded a 10 percent annual rate. Thus, the performance of our economy last year was impressive but not unprecedented.

The Department of Commerce data reveal a considerable variation in quarter-to-quarter and year-to-year growth rates, but substantially less variation in rates of growth for periods of five to ten years. For example, in the latter half of the 1970's we experienced growth of real GNP faster than 4 percent and in the early 1960's real growth was sustained at more than 5 percent for a five year period. But since World War II we have never recorded sustained real GNP growth of 5 percent for a ten year long period. The volatility of quarter-to-quarter and year-to-year real GNP growth relative to growth rates for longer periods of time suggests that it is important to distinguish temporary or cyclical behavior from long run or trend behavior of real GNP.

The trend rate of real GNP growth appears to have slowed after 1973. Economists have offered a wide array of explanations for the decline in real growth rates of the mid-seventies: the oil shocks of 1973 and 1979, reduced research and development expenditures during the late 1960's and early 1970's, increases in environmental and other regulation during the early 1970's, absorption of the inexperienced female and baby boom population, effects of high and variable inflation on investment incentives and capital accumulation. To the extent that one can measure these phenonmena, they account for only a fraction of the dip in labor productivity we experienced in the 1970's.

A number of economists who have investigated the determinants of GNP growth have decomposed real growth into five components: population growth, the rate of change in labor force participation, the rate of change in hours worked per employee, the rate of change in the employment rate, and the rate of change of labor productivity. In this framework, the rate of growth of real GNP must be the sum of the rates of growth of each of the five components. By empirically identifying the determinants of each of the components of growth, economists have used the data to extrapolate past behavior into current and future behavior of real GNP.

I'd like to take a few minutes to offer my opinion as to the contribution each of these components is likely to make to real GNP growth over the next five years. In this way we can more easily identify the sources of disagreement which arise

between those who forecast close-to-trend growth and others who anticipate comparatively rapid growth. We will also be able to characterize the uncertainty inherent in any forecasting exercise of this type.

Some of the components of growth are easier to predict than others. The working age population consists of persons sixteen years and older. Consequently, the Bureau of the Census has already counted virtually all of the individuals who will make up the labor force for the next sixteen years. Immigration and migration contribute only a small amount to changes in the size of the working age population and death rates have been stable. Few demographers would quarrel with the Bureau of the Census projection of one percent growth per year in the working age population over the next five years.

Hours worked per employee have declined at an average .3 percent per year for the last decade. Because the rate of change in hours worked has been small, and because the rate of change has been relatively stable over time, economists who adopt the components approach to forecasting real GNP growth don't disagree very much over how the rate of change of hours worked will affect real GNP growth.

The rate of growth of the working age population, and the rate of change in the hours worked by employees are the least controversial components in any forecast of long run potential real GNP. Given past and projected behavior, the sum

of these two components (1.0-0.3 percent) provides a prediction of the contribution of population growth and hours worked to the trend rate of growth of real GNP. Thus, we can expect these two components to contribute about 0.7 percent to real GNP growth through the end of the decade.

There is, however, more uncertainty about the determinants of the evolution of labor force participation, labor productivity and total employment. The data indicate that labor force participation rates have increased at 0.5 percent per year over the last twenty years. But a closer look at the data indicate that participation rates have varied over time. From 1953 to 1965 the labor force participation rate did not change much at all. From 1973 to 1979 the accelerated entrance of women into the labor market pushed the rate of growth of the participation rate up to 0.8 percent per year.

Moreover, the data reveal a significant procyclical variation in the rate of entrance of workers into the labor force. Measured over the last five years, a period which included two recessions, there was only 0.2 percent per year increase in the labor force participation rate. Since the first quarter of 1983, a period of significant real GNP growth, the participation rate has increased from 63.8 percent to 64.5 percent, about 0.5 percent per year. The participation rate for adult females is 53.9 percent still well below the level prevailing for adult males, 78.3 percent. While the participation rate for adult males has been falling at a 0.4 percent annual rate over the

past five years, this decline has been more than offset by the 1.2 percent rate of increase for adult women. Because adult male participation rates are likely to continue falling for a while, as the adult female rate continues increasing although at a smaller rate, I would, somewhat optimistically perhaps, expect a 0.5 percent net rate of increase over the next five years.

So far I've discussed three of the five components of real GNP growth, the first two of which sum to 0.7 percent. With the additional 0.5 percent kick from increases in the labor force participation rate, we now have a sum of 1.2 percent GNP growth from these components. Now, what is the magnitude of the contribution we can expect from productivity and employment?

Unemployment now stands at an unacceptably high 7.4 percent, but I expect this rate to continue to decline over the next several years. The unemployment rate has declined over 3 percentage points in the last two years from a postwar high of 10.6 percent in 1982 to today's 7.4 percent. It is difficult, however, to imagine the economy continuing to generate enough jobs to push the unemployment rate down as <u>quickly</u> as it has over the recent past. Indeed, over the last year the unemployment rate has declined only 0.6 percent. During the last quarter when real GNP growth was 4.9 percent, the unemployment rate declined at only a 0.4 percent annual rate. (In January, as you know, the unemployment rate actually rose 0.2 percent.) An

optimistic scenario could have the economy generating enough jobs to bring the unemployment rate down to 6.0 percent within the next five years, the low side of the zone of the non-accelerating inflation rate of unemployment. Such an outcome would add another 0.3 percent growth to real GNP, bringing our total so far to 1.3 percent.

Labor productivity growth appears to have accelerated from its slow 1973 to 1979 pace. During this period, labor productivity increased only 0.6 percent per year -- much lower than the 2.3 percent rate of growth we experienced from 1953 to 1973. Since 1979, labor productivity has increased at a 1.4 percent rate. The Bureau of Labor Statistics estimates that productivity in the nonfarm business sector during 1984 rose a bit over 2 percent.

Many of the factors economists have identified as contributors to the decline in productivity during the 1973 to 1979 period have reversed themselves. Oil prices are falling, the GNP share of research and development expenditures is rising, deregulation of industry is proceeding, the baby boom population has been absorbed into the labor force, marginal tax rates have declined, inflation is much lower, women's labor force participation rates are beginning to approach the levels of men, and new and more efficient plants -- such as in the auto industry -- have come on line while older less efficient ones have been closed. These developments have led some to predict a surge in the rate of increase in labor productivity. But since we have only a

limited explanation for the decline in productivity, we are still left with a significant amount of uncertainty about the magnitude of the pick up in productivity we can expect over the next five years.

There is a considerable diversity of opinion about the magnitude of the rate of productivity growth we can expect over the next decade. Some analysts would have us believe that we have entered a new era in which our economy can produce year over year advances 3 to 4 percent in output per year. Forecasts of sustainable real GNP growth of 5 to 6 percent rely on very rapid productivity growth along with large increases in labor force participation and employment. These forecasters point to the improved factors I mentioned earlier to support their claims that productivity growth must improve. Certainly, an improved economic environment has helped boost productivity, but this may not be anything really new.

It is very important to make a clear distinction between cyclical, temporary changes in productivity growth, and more fundamental, long run changes in productivity. Economists have long observed the procyclical variation in the growth rate of labor productivity. During recoveries, productivity growth usually accelerates. Output per labor hour increases faster because firms are able to employ their labor force more efficiently as the pace of the economy picks up. At the beginning of a recovery, firms do not hire new workers; they use those they have more intensively. Output goes up even faster than overtime

hours worked leading to an acceleration in the rate of measured labor productivity growth. On the other end of the cycle, during the downturn, labor productivity suffers as firms attempt to hold on to their workers in the face of reduced output. Total hours fall more slowly than output, leading to a decline in the rate of productivity.

The rapid advance in productivity during the current recovery has not been unusual. Based on data from our current expansion, it is difficult to identify an unusual departure from the typical behavior of the rate of growth of productivity.

Many of the factors which "fast growth" forecasters contend will boost productivity growth can only do so for a limited amount of time. No one is predicting that energy prices will fall forever. The incorporation of new inventory control and other production techniques can produce short run increases in productivity, but once these techniques have been adopted, what is the engine that sustains the accelerated productivity growth rate? The scenario outlined by those who look for 5 percent growth would require not just an improved technology management performance now, but an impressive encore year after year.

A comparison of the performance of the economy during the current recovery to other post World War II recoveries suggest that productivity growth has not behaved very differently from what we have observed in previous upswings. I believe most

economists would place the trend rate of growth of productivity for the next five years somewhere between one percent and 2 percent. I would not quarrel with this assessment.

Now for the grand total. I expect to see on average in the coming years a one percent contribution to real growth from population, and a .5 percent contribution from labor force participation as the economy continues to attract more women into the labor force. The rate of change of hours worked will make a small negative contribution of 0.3 percent as Americans continue to decrease their hours worked. Growth in employment consistent with a 6.0 percent rate of unemployment in 1989 would contribute another 0.3 percent to real GNP growth. Finally, growth in labor productivity consistent with the broad consensus of economists who investigate such things as the determinants of productivity growth should contribute 1.0 to 2.0 percent to real GNP growth. There may be quarters when we are outside this range, but the evidence examined suggests that the sustainable pace of real GNP growth over the next five years is probably in the range of 2.5 percent to 3.5 percent. I would not like to choose a single number but I'll note that 3.0 percent real GNP growth is in the middle range. Thus, in my view, 3.5 percent real growth would be optimistic, while 2.5 percent would be on the pessimistic side.

Now it is important to distinguish between forecasts of real GNP growth to be used as a rough indication of what can be reasonably expected over the long run (five years or so) and

shorter forecasts (about a year or a little more). In the context of FOMC policy formulation, a forecast of a year to a year and a half is "long run," while a forecast of the next quarter is looked at as short run. The FOMC utilizes both quarterly and year-out forecasts, but monetary policy, of course, is set in the context of evolving developments. Thus, the performance of the economy over shorter periods can be taken into account in establishing or changing desired growth rates of the monetary aggregates.

This approach of developing a long run forecast based on average relationships simply is not applicable to a given year. The FOMC operates in the short run and by law must establish its targets on a 12 to 18 month horizon. Forecasts based on predictions of labor force participation, hours worked, productivity, etc. could be swamped by other developments in such an interval. Special short run factors, data revisions, and refinements make monitoring and anticipating the quarterly twists and turns of the economy much more difficult than identifying long run trends in historical data. In this same sense, it is easier to forecast 10 year averages than 2 years ahead. Short run forecasts rely more heavily on what is happening currently, using judgment (more or less) and econometric models to monitor the evolution of the economy.

In its semi-annual "Humphrey-Hawkins" Report to Congress, the FOMC sets out for the coming year the range of forecasts of its individual members for real and nominal GNP, the GNP deflator,

and the unemployment rate expected to prevail at the end of the year.

Yesterday, the Federal Reserve submitted its "Humphrey-Hawkins" Report. You may be interested to know the projections of FOMC members for 1985. They are as follows:

Nominal GNP	7 to 8-1/2 %
Real GNP	3-1/4 to 4-1/4 %
GNP Deflator	3 to 4-3/4 %
Average Unemployment rate in 4th quarter	6-1/2 to 7-1/4 %

As mentioned earlier, the FOMC must also at the same time present its growth targets for the monetary aggregates viewed as consistent with the economic projections. They are as follows:

M1	4 to 7 %
M2	6 to 9 %
M3	6 to 9-1/2 %
Total Domestic nonfinancial debt	9 to 12 %

It is important to keep in mind that a real GNP forecast and the associated monetary target ranges are not to be viewed as a speed limit arbitrarily imposed on the economy by the FOMC. Indeed, in July 1983 we foresaw growth rates for 1984 within a range of 3 to 5 percent with a central tendency between 4 and 4-1/2 percent. That did not stop the economy from substantially

out performing our forecasts. One could argue that the economy might not have performed as well as it did if the Federal Reserve had tried to plan for or stimulate 5.9 percent real growth through rapid expansion of the monetary aggregates. Inflationary expectations might well have been higher, hence long term interest rates could well have been higher and more volatile, and the recovery more uncertain and ultimately less sustainable. In short, the nation probably would not be in as good a position as it is right now to continue the strong employment gains and advances in real GNP growth we all hope to achieve.

One other point should be made in connection with the setting of the targets for monetary growth. It might be contended that the exceptionally brisk pace of the recent recovery was to some extent stimulated by the relatively rapid growth of the monetary aggregates. (In 1982, M1, M2 and M3 grew by 8.8, 9.1, and 10.0 respectively; and in 1983 their growth rates were 10.4, 12.2, and 10.0 respectively.) Since this occurred in a context of declining inflation, should not then, the obvious prescription for assuring continued rapid economic growth with low inflation be that of maintaining the relatively rapid rate of growth of the aggregates? In my judgment, it would be dangerous to assume that continued expansion of the aggregates at a high rate could be accomplished together with further progress against inflation.

Several factors helped limit the inflationary impact of money growth in the last couple of years. First, the high rate of unemployment and low capacity utilization provided a degree of latitude for expansion not present in previous recoveries. Consequently, supply pressures, bottlenecks and tightness in labor markets have not yet occurred. Second, for some time into the recovery the velocity of M1 and M2 was either declining or increasing significantly below trend. This behavior followed declines in short term market interest rates in combination with financial deregulation and innovation, including the creation of new deposit and financial market instruments. That weakness in velocity had the effect of increasing the amount of money required to sustain any given level of nominal GNP. In addition, the strength of the dollar has reduced prices of imported goods and, thus, increased price competition from foreign producers. Domestic firms have limited price increases and streamlined their operations in order to hold on to domestic sales. As the expansion proceeds we cannot count on these factors continuing to help limit inflation.

Further progress against inflation requires that we continue gradually to lower targets for monetary growth. The pace at which targets are lowered will depend on conditions in the economy, including the state of labor, product, and credit markets, as well as variations in the velocity of money. We have made progress in the past few years. I believe that the

prospects are good that we can, with some help from a more restrained fiscal policy, achieve the basic goal of all of us -- an economy growing at its productive potential with reasonable price stability.