

Editor's Summary

THE TENTH ANNIVERSARY CONFERENCE of the Brookings Panel on Economic Activity was held in Washington, D.C., on May 8 and 9, 1980. This issue of *Brookings Papers* contains the four articles presented at that conference together with formal comments on the articles and a summary of the general discussion of each. The participants who commented formally were invited to expand on their topics. Their comments, which frequently take different viewpoints from the authors, are more extensive than those in previous issues of *Brookings Papers*. The articles cover topics that have been of major interest to the profession and of concern to policymakers during the decade of the panel's existence: stabilization policy, the theory of employment arrangements, the system of flexible exchange rates, and inflation.

The 1970s will be remembered as the most disappointing decade for economic performance since the Great Depression. In the first article of this issue, James Tobin provides a comprehensive overview of stabilization policy and theory against the background of this performance, which has "frustrated policymakers, forecasters, and theorists" alike.

Tobin distinguishes two waves of monetarism challenging the consensus framework that emphasizes the effects of aggregate demand of both monetary and fiscal actions and the responses of prices and employment described by the short-run Phillips curve. Monetarism-1 makes variations in the stock of money the primary cause of fluctuations in nominal GNP, denying anything more than minor and transient effects from changes in fiscal policies or nonpolicy shocks to the economy. Both the consensus framework and Monetarism-1 predict that policy changes affect real output in the economy. Monetarism-2, the "new classical" eco-

nomics identified with the theory of rational expectations that developed during the decade of the 1970s, denies that systematic policy changes can affect real economic variables.

Because any change in nominal GNP is composed of changes in real GNP and in prices, the policy-ineffectiveness proposition of Monetarism-2 asserts that systematic policy is fully reflected in prices. Tobin notes that institutional inertia limits the response of prices and wages to variations in demand. Although contracts that contribute to this inertia could, in theory, try to take account of a range of unanticipated events to which policies could respond, actual contracts in the economy do not. As a result, policy changes based on new information can have an effect on output and employment and can be stabilizing.

Tobin provides a critical review of the claims and policy recommendations of Monetarism-1. He explains why fiscal developments as well as monetary policy matter for stabilization. And he discusses why inflation cannot be understood as simply a consequence of too much growth in money. Throughout the past decade, the monetary authorities have confronted the question of whether and how much to accommodate the ongoing inflation and the inflationary shocks that have occurred. They could not ignore the inertia of inflation. To the extent they have supported inflationary increases in the growth of nominal GNP, they have done so because less accommodation would have depressed the real economy more than they wanted. Thus, Tobin argues, even in its theoretical form, monetarism is no panacea for the problem of inflation.

Monetarism confronts the additional problem that no one monetary aggregate is a suitable instrument for policy to control. Fundamental monetarism focuses on the monetary base, which is clearly a controllable quantity. In practice, the fairly steady growth of the base in recent years has not prevented substantial variation in the growth of nominal GNP, prices, and real output. Transactions monetarism focuses on the dollar assets that are used in making payments. Tobin notes that no unique transactions medium can be defined, as the recent proliferation of bank and nonbank instruments available to the public illustrates. More fundamentally, he points out that nominal GNP is not limited by the stock of transactions media, and monetary policy does not work by providing or withholding transactions money to influence spending.

Rather than set targets for any particular monetary aggregate, Tobin recommends that policy set targets for economic performance—ranges

for nominal GNP growth or for its division into attainable combinations of inflation and real GNP growth. The Federal Reserve's targets should be consistent with the economic objectives and assumptions of the federal budget, forcing a coordination in the fiscal-monetary mix and permitting sensible congressional oversight of monetary policy.

Tobin regards the coordination of fiscal and monetary policy as important both in the stabilization arena and for meeting longer-run objectives. A growth-oriented long-run policy would combine a tighter budget to provide sufficient national saving with lower interest rates to encourage investment. Changes in the structure of taxation could also be used to favor capital formation. For countercyclical purposes, fiscal policy can often have a more prompt and predictable impact on the economy than can monetary policy. Moreover, fiscal stimulus may be needed to promote recovery if monetary policymakers are inhibited because low interest rates can depreciate the dollar and raise U.S. prices.

Tobin carefully examines recent "supply-side" proposals that have renewed economists' long-standing interest in the determinants of economic growth and the design of policies to affect the economy's potential output. He observes that the tax system has interacted with inflation and distorted the incentives and burdens of taxation. He therefore advocates reform of both individual and business taxes to make taxation of capital earnings more neutral with respect to inflation and to spare individuals the taxation of that portion of capital gains and interest earnings that arises purely from inflation. But Tobin disproves many of the claims of supply-side proposals that go well beyond correcting for such distortions. One such claim is that the saving available for investment would be enhanced by well-structured changes in the personal income tax. Tobin points out that what matters is total saving, not any one component of the total. He shows that if tax reductions in some areas are compensated by increases elsewhere, restructuring the income tax would have only a slight effect on total saving. Uncompensated tax concessions fare worse: they can increase personal saving but are almost sure to reduce, rather than increase, total national saving, thus leaving less room for investment of all types.

Another supply-side claim is that the U.S. income tax burden has grown excessive and that income tax reductions would bring forth sizable increases in labor supply and productive effort. Tobin points out that disincentive problems *are* acute at the lowest income level. He urges a

reform and integration of assistance programs with the personal income tax and social security taxes to minimize the work disincentives of the present system. But Tobin observes that recent supply-side proposals are aimed at higher-bracket taxpayers for whom the effects on supply are dubious. He shows that, even if optimistic estimates of the labor supply response are accepted, the increased consumption from tax reductions would almost certainly exceed the increase in the supply of goods produced, thus reducing the total saving available for investment. Tobin also puts present U.S. taxes in perspective: the taxation of income in the United States is lower than it is in most European countries; and the after-tax rewards to additional work are greater today in the United States than in earlier periods, and greater here than in most other countries.

Tobin reaffirms the profession's verdict that only limited improvements in productivity can be obtained by increasing investment, and the returns in added consumption from such a program are long delayed. Despite the modest prospects, he favors policies to encourage investment and productivity growth. But he also dashes the hope that such policies can contribute noticeably to fighting inflation. Tobin argues that inflation yields neither to programs to expand supply nor to programs to restrict demand unless we are prepared to pay a great cost in unemployment and idle capacity. Thus, to slow inflation, Tobin advocates coordinating a gradual slowdown in nominal GNP growth with an auxiliary incomes policy using tax-based rewards and penalties.

At least since Keynes, the insensitivity of wages to variations in demand has been a key feature in explaining fluctuations in aggregate employment and output. In the second article of this issue, Robert E. Hall tries to explain this insensitivity as part of a model of efficient employment arrangements between firms and workers. Hall's stress on efficiency is an attempt to reconcile a central macroeconomic fact with a powerful microeconomic tool. In most macroeconomic models the unemployment that arises from sticky wages in the face of inadequate demand is seen as an inefficient waste of resources. Yet microeconomics presumes that inefficient arrangements will not exist in markets because both parties stand to gain from removing them.

Macroeconomists have generally advocated a stable growth of demand at high employment levels to avoid the costs of cyclical unemployment and forgone output. But in recent years some new classical theorists have

tried to model aggregate employment fluctuations as efficient. The implications of this line of thought for macroeconomic management are far-reaching: if observed fluctuations in output and employment are truly efficient, the basis for any stabilizing policy disappears. Hall recognizes that the question of efficiency arises at two distinct levels—whether employment arrangements between an individual firm and its worker are efficient, and whether total employment in the economy is always efficient. He makes a case for the former, but points out serious obstacles to accepting the latter.

Hall documents the importance of long-term wage and employment arrangements throughout the economy, a characteristic that is central to his efficiency model. He estimates that 54 percent of workers in their early thirties have been employed at their current jobs for three years or more and most will stay at those jobs for many years to come. Half of all workers are in jobs that will last fifteen years or more. In this situation, wage setting will be strongly influenced by the prospect of the job continuing for many more years. Hall notes that most of the value added in the economy comes from such jobs, while relatively little of it stems from the more numerous short-term jobs that are often stressed in studies of unemployment, precisely because the latter are brief.

In jobs characterized by long-term employment arrangements, a firm and its workers have a mutual interest in maintaining their relationship over a long period of time because of the specific human capital that workers accrue. Hall describes several features that might characterize an efficient contractual arrangement under these conditions. The wage at any time would represent part of a long-term payment rather than the market-clearing price that would be efficient if workers and jobs were realigned continually. The firm would have the responsibility for varying employment and, within narrow limits, hours of work, in response to variations in demand for the firm's output. In addition, the firm could expect its employees to vary the amount of their work effort when needed. Each of these general features is actually observed in the economy. Wages are adjusted at intervals to accommodate changes in prices and other wages that cannot be accurately foreseen, but otherwise stay on what could be described as a long-term path. Temporary layoffs are the primary response to changes in demand for a firm's product, with variations in average hours of work confined to a limited range. And productivity varies with demand over brief intervals, indicating that em-

ployees work harder when there is more work to do. Although granting that these features are also subject to more traditional interpretations, Hall concludes that efficiency at the microeconomic level is compatible with the main features of employment arrangements in long-term jobs.

Hall is more skeptical about macro efficiency, and notes three ways in which the evidence does not support a description of cyclical fluctuations in employment as efficient. First, efficiency implies highly stable aggregate employment; there is no explanation for why large fluctuations in the work to be done should be efficient. Second, purely nominal influences should have no effect on the efficient level of employment; yet purely monetary changes do have such effects. Third, relatively little of total unemployment can be accounted for by the efficiency model. In a nonrecession year such as 1977, only 3 percent of total unemployment was due to workers on temporary layoff and only 12 percent was due to layoffs however classified. In a recession, about one-third of the *increase* in unemployment is accounted for by layoffs, but that fraction declines sharply as soon as recovery begins. Therefore, from the viewpoint of stabilization policy, Hall offers no evidence against policies that attempt to moderate cyclical fluctuations in unemployment.

In the decade since the Brookings panel first met, the world economy has moved from the Bretton Woods system of fixed exchange rates that centered on the U.S. dollar to the current system of flexible exchange rates and a greater diversity of international reserve assets. In the third article of this issue, Rudiger Dornbusch explores how, and how well, the present system works. Dornbusch first examines several theoretical views of exchange rate determination. He begins with one of the most simple theories that explains exchange rates in terms of demand for and supply of money under the assumption that goods produced in different countries are perfect substitutes and that exchange rates continuously and exactly maintain purchasing power parity among currencies by offsetting differences in inflation rates. Dornbusch rejects this view because it does not fit the facts: he finds substantial evidence of deviations from purchasing power parity under the flexible rate system and obtains poor results with equations that attempt to explain exchange rates using the monetary-purchasing power parity approach. He then reviews and extends the traditional Mundell-Fleming approach to modeling exchange

rates. In this model, when assets are perfect substitutes, exchange rate movements induced by interest rate differentials dominate any movements in the current account. Thus the most simple Mundell-Fleming model, in which interest rates rise cyclically with domestic activity, produces the paradoxical result that an increase in the demand for a country's output, even from increased domestic expenditures, causes its currency to appreciate. Dornbusch shows that the paradox remains even when the model includes some additional real world complexities.

Dornbusch makes an important addition to empirical explanations of exchange rates by introducing rational expectations into his model. At any point in time, spot and forward exchange rates fully incorporate all worthwhile information about their current and expected determinants. Changes in these rates must therefore come from new information about these determinants. Dornbusch uses the future rates implied by short-term interest differentials as a measure of anticipated exchange rates. The difference between this rate for any date and the spot rate that ultimately prevails at that date is the unanticipated change in the exchange rate. Dornbusch explains this unanticipated change using "news" about the current account, interest rates, and growth at home and abroad. The news is the difference between forecasts of these determinants at the time the future rate is observed and their eventual actual values. While this formulation performs quite well in explaining the effective U.S. exchange rate against a combination of other currencies and the dollar-yen exchange rate, it is not successful in explaining movements in the deutsche mark.

To explain the movements in the dollar-mark exchange rate, Dornbusch relaxes the assumption that assets in different currencies are perfect substitutes. In his view, a desire by international investors to increase the share of marks in their portfolios is the major reason for the real appreciation of the mark in recent years. He argues that the growing demand by international investors has outweighed the relatively larger supply of mark assets that has been created in the past few years by large German government deficits, and suggests this mark shortage will continue for some time.

Dornbusch turns from explaining exchange rates to examining how the flexible exchange rate system has worked and how governments and central banks have operated within the system. He finds that official intervention has been directed mainly at offsetting unexpected movements in

exchange rates, a policy of “leaning against the wind.” While the authorities have thus attempted to smooth exchange rate fluctuations, they have not tried to adhere rigidly to particular exchange rate targets. Dornbusch does find that German interventions have been influenced by cyclical considerations as well as by exchange rate surprises, resulting in a “beggar-my-neighbor” strategy vis-à-vis the dollar. Their intervention policy has responded both to unemployment and inflation, holding down the mark relative to the dollar in the first case and supporting it in the second.

When monetary policy is used to affect real output, the change in interest rates also tends to move the exchange rate, thus adding more inflation for a given reduction in unemployment. However, Dornbusch finds no evidence that interest rate policies have been modified in recognition of this interaction with exchange rates. Nor does he find that interest rates have been geared toward financing current account imbalances by generating offsetting capital flows. Interest rate policies have apparently simply been geared to the domestic business cycle. As a consequence, current account surprises have given rise to exchange rate instability and, under the protection of intervention, to capital flows that increase the instability. Intervention has been used to permit the monetary authorities to pursue domestic objectives. At the same time, intervention has permitted asset holders to adjust their holdings in different currencies with profit.

Dornbusch views flexibility in real exchange rates as an important vehicle for correcting fundamental imbalances in the current account. But he advocates a more active use of interest rate policy to finance disturbances in the current account that can be identified as transitory to reduce this source of exchange rate fluctuations. He also counsels a more stable macroeconomic policy as a way of reducing unexpected transitory disturbances in exchange rates. James Tobin, among others, has suggested a modest tax on conversions of one currency into another so as to limit speculative capital flows and thus the transmission of financial market disturbances to exchange rates. As he puts it, he wants to “throw some sand in the wheels of our excessively efficient international money markets.” Dornbusch rejects this prescription because it might interfere with legitimate efforts to finance temporary imbalances and might prevent asset holders from acquiring a portfolio denominated in the currencies they prefer. Dornbusch agrees that shifts in portfolio preferences, like the movement into marks that he identifies, should be accommodated without affecting exchange rates. But he recommends changing the rela-

tive supply of assets to match such shifts rather than interfering with capital flows. In particular, he recommends expanding the supply of mark assets in the current environment.

In the final article of this issue, George L. Perry examines the inflation of the past decade and presents a model that explains wage inflation in terms of the response of firms to changes in the demand for their products. Perry records how the two big bursts of inflation during the decade—first in 1974 and again in 1979—were both dominated by huge increases in energy prices. And he notes that some cyclical variation in price inflation comes from sensitive raw materials and from the margin of other prices over standard wage costs. Nonetheless, he focuses his model on wage setting because it underlies most of the cyclical and chronic inflation in the economy. Understanding the wage-setting process helps define the limitations and possibilities for affecting inflation through policy.

Perry divides the process of nominal wage setting into two distinct parts. The first is the response of nominal wages to unemployment and demand. In this part of the process, firms adjust their wages relative to the market in order to achieve desired levels of employment. Through such adjustments, wage changes allocate labor among firms and sectors. At the same time, this codetermination of wages and employment at the level of the firm leads to a relation in the aggregate between average wage increases and both the level of and the change in the rate of unemployment, a slight variant on the simple Phillips curve.

The second part of the wage-setting process in Perry's model is the response of individual wages to a norm rate of wage increase for the whole economy. This response of wages to the norm is central to understanding the inertia in wage behavior that produces chronic inflation, but it does not have allocative significance for employment among firms and industries. Keeping up with the norm is the allocatively neutral wage strategy for individual firms; it neither improves nor worsens their positions as employers.

Perry describes changes in the wage norm as somewhat discontinuous and episodic responses to economic conditions rather than as *continual* adjustments to experienced or expected actual inflation. During sustained periods of exceptionally strong or weak demand that result in persistent departures of actual wage changes from the prevailing norm, the norm

will eventually move. But brief departures of actual wage behavior from a prevailing norm do not seem to affect it much. Similarly, some part of the cyclical change in inflation arises from the normal and expected cyclical variation in relative wages and does not automatically change the wage norm. While the norm does not respond promptly to price changes such as those that came with the energy price explosions of the past decade, it may eventually adjust for part of the erosion in real wage gains that results from such price explosions. In principle, the norm may be influenced by direct policies of the government such as wage guideposts or standards associated with other incomes policies. Or it may be responsive to a "policy commitment" strategy such as William Fellner advocates in his comments on Perry's paper.

Perry notes that the wage-setting process may exhibit a bias that ratchets up inflation in successive business cycles. One possible source of bias arises if firms actively raise their relative wages to expand employment but rely on normal attrition, rather than initiating active relative wage reductions, to reduce employment. Another possible source of bias arises if firms are more anxious to keep up with signs of an increase in the wage norm than they are to lead the way in tracking a perceived slowdown in the norm. Such an asymmetry may arise from the interest of firms in being known as "a good place to work," an important consideration in maintaining good long-run relationships with workers.

Perry's model challenges the relevance of the natural unemployment rate and wage acceleration—two concepts that pervade many of the inflation models of recent years. His model explains how inflation can originate, vary, and persist without reference to a natural unemployment rate. It also explains how inflation can get worse under a variety of conditions without signifying that unemployment has fallen below some accelerationist threshold. The model is concerned with the wage inflation that coexists with involuntary unemployment and underutilized capacity, which is the problem that actually exists, and not with the wage inflation that would arise if unemployment approached a largely frictional or structural minimum.

Because changes in the wage norm are not related to economic or policy variables in any mechanical way, Perry's empirical estimates of his wage model allow for only two discrete shifts in the norm: one following the two quick recessions interrupted by only an abortive recovery in the late 1950s and early 1960s, and one following the sustained expan-

sion that brought very low unemployment and rising inflation in the late 1960s. It is evidence in support of his wage norm concept that even this simple representation of changes in the wage norm renders lagged wage inflation statistically insignificant in the equations. Lagged inflation has often been used in empirical studies to capture the inertia in wage inflation and has at times been interpreted to imply an accelerationist model and a natural rate of unemployment.

The empirical estimates are generally consistent with the conceptual model. Wage inflation is responsive to cyclical conditions—the tightness in labor markets and changes in employment or unemployment—as well as to shifts in the norm. The cyclical effects alone are relatively weak, indicating that inflation responds only slowly to variations in aggregate demand or to slack or tightness in the labor market. Perry also finds that the guideposts under President Johnson and the Nixon controls both slowed wage inflation. Consistent with earlier studies, his paper identifies a modest direct impact of consumer prices on wages.

Perry also assesses the ability of some alternative models to explain inflation. He shows that money has no special explanatory power when added to his framework and that monetarist explanations of the 1970s do poorly when taken by themselves. The new classical models are harder to examine empirically. According to these models, unanticipated changes in nominal demand, often equated with unanticipated changes in money in these models, affect real output and employment, while anticipated changes affect only prices and wages. Because neither money nor nominal demand can be divided into anticipated and unanticipated components for direct testing, Perry looks at indirect evidence by examining the variances of prices, output, money, and nominal GNP during each of the past three decades. He finds no support for the new classical models in this analysis. In particular, in a new classical interpretation of the 1960s, the long expansion of that period should have been largely “anticipated,” and the steady decline in unemployment throughout the decade should therefore be interpreted as a continuous equilibrium with a steady decline in the natural unemployment rate. Perry concludes there is little that is distinctive in the new classical models if “such a dramatic change in actual unemployment is simply relabeled in this way.”

In simulations with his empirical model, Perry illustrates the weak response of inflation to recession. A recession raising unemployment to 9.0 percent followed by an average recovery reduces wage inflation

temporarily by a little more than 1.0 percentage point before it returns to its initial rate as unemployment returns to prerecession levels. Only a shift down in the wage norm produces a persistent and substantial reduction in wage inflation. When he simulates the model allowing for a hypothetical but plausible decline in the norm in response to a sustained recession that keeps unemployment at 9.0 percent, the rate of wage inflation is reduced from 9.2 percent to 4.6 percent after five years. Perry concludes that any attempt to cure inflation should combine an incomes policy that directly pushes down the wage norm with fiscal and monetary restraint on demand.