

Editors' Summary

THIS ISSUE OF BROOKINGS PAPERS contains the papers and discussions presented at the twenty-seventh conference of The Brookings Panel on Economic Activity in Washington, D.C., on April 26 and 27, 1979. Three articles report new research that extends and, at times, amends our understanding of areas that have been explored in previous Brookings papers. The first analyzes labor market dynamics and unemployment, a topic that has received attention in this journal several times, beginning with Robert Hall's article in 1970. The second examines business fixed investment, bringing to bear the experience of the seventies on some questions raised by Charles Bischoff's article in 1971. The third, which considers the appropriate response of monetary and fiscal policy to supply shocks, follows up the analysis by Robert J. Gordon in 1975. Five shorter reports in this issue address a range of current topics of theoretical and policy importance.

Aided by newly available data and supported by theoretical models of the job-finding process, much of the research on unemployment conducted during the 1970s has focused on the dynamics of the labor market experience—the movement of people between jobs and between employment, unemployment, and being out of the work force. Drawing on this body of analysis, public and policy discussions of unemployment have often emphasized the relatively brief, transitional unemployment that comes from job changing and from entry and reentry into the work force. In the first paper of this issue, Kim B. Clark and Lawrence H. Summers reexamine the nature of unemployment and find that it is less transitory and more concentrated than much of this discussion suggests.

The authors confirm earlier findings that most spells of unemployment

are relatively brief, but emphasize that this result is misleading. They note that, even if the monthly probability of leaving unemployment were the same for all people and for all durations of unemployment, the proportion of unemployment attributable to long spells would be substantially greater than the proportion of spells that are long. They then estimate the actual probabilities of leaving unemployment and find they are lower the longer the unemployment has lasted. This decline in the probability of leaving unemployment is especially steep between very short spells and spells of average duration. As a consequence, the brief spells experienced by many workers represent little of the total unemployment observed at any time. Most unemployment is attributable to workers who experience long spells; and the proportion of long-term unemployment is substantially greater than the assumption of constant probabilities of leaving unemployment would predict. For 1974, a year of relatively low overall unemployment, the authors find that one-half of unemployment was due to spells lasting three months or more. They also reaffirm that layoffs, which have been the focus of some recent analyses of labor markets, account for only a small fraction of unemployment.

The authors find unemployment is even more concentrated when measured by the amount experienced by different individuals. Using data that add up spells of unemployment for any individual during a year, they find that in 1974, 73 percent of total weeks of unemployment was attributable to individuals experiencing fifteen weeks or more of joblessness. Forty percent of all unemployment was experienced by the 2½ percent of the labor force who suffered more than one-half year of unemployment.

Clark and Summers note that many spells of unemployment end officially when persons drop out of the work force rather than when they find a job. The authors provide evidence that the distinction between being out of the work force and being unemployed is ambiguous and that the unemployment durations calculated from the official statistics understate the problem of joblessness for many individuals. Thus they calculate that for a hypothetical “indomitable” job seeker—whose probability of finding a job is assumed to match the average of those not leaving the work force—the average duration of an unemployment spell in 1974 would have been more than 70 percent higher than the average duration of a spell recorded in the conventional statistics. In a related calculation, they measure months of nonemployment during a year, a concept that includes, in addition to unemployment, months out of the work force for

those who indicated that they wanted to work. The authors find that average months of nonemployment per nonemployed person was one-third higher than the corresponding concept based on official unemployment. Two-thirds of total nonemployment was attributable to persons with more than six months of nonemployment during 1974.

The authors argue that neither contract theory nor search theory—two widely used models of the labor market—can explain their findings. Contract theory predicts firms will use layoffs rather than wage reductions in responding to weak demand. It thus offers an explanation for wage rigidity, but not for the problem of concentrated unemployment that they identify. Search theory describes unemployment as an investment in future income, with job seekers taking a job when the expected return to further search falls short of the forgone income from remaining jobless for a longer period. The authors show that the average duration of employment is relatively brief—ranging from six to eighteen months for all demographic groups except males aged 25 to 59. They find it implausible to interpret long unemployment as an investment in searching for a job with better pay when the job will not last long. They note further that most jobs are found using means that can be pursued while employed, so that the need to search is not an explanation for why persons become unemployed in the first place.

Although Clark and Summers offer no remedies for the concentrated unemployment that they diagnose, they do urge a reexamination of those theoretical models and policy recommendations that feature a dynamic and largely transitory view of unemployment. Brief spells of unemployment resulting from normal transitions between jobs might be treated as merely a necessary by-product of an efficient job market. By contrast, the concentrated joblessness that they uncover calls for the attention and concern of policymakers. That concentration clearly points to personal and “human capital” characteristics as important determinants of unemployment experience. But the authors also find that the overall state of job availability makes a big difference in the experience of individuals. Comparing 1969 and 1975 with 1974, they find that long-term unemployment was low when the overall labor market was strong and was high when the market was weak.

Business fixed investment recovered slowly and weakly from the 1973–75 recession. Even at the end of 1978, real nonresidential fixed investment

was only only 8 percent above its peak value of the previous cycle, while real GNP exceeded its previous cyclical peak by 14 percent. In the second article of this issue, Peter K. Clark examines that record in an effort to identify its causes and the extent to which it can be explained by contrasting theories of business investment. He begins by discussing five models of business fixed investment that adopt different views about the key forces influencing capital formation. For each of these alternative models he fits equations for spending on structures and equipment based on data extending through mid-1973, and then evaluates the success of those equations in tracking actual investment through the subsequent recession and recovery.

The first and most venerable of Clark's models is the "accelerator." It relates investment to recent changes in output, reflecting a basic hypothesis that increases in output generate demands for new investment designed to expand capacity. The second model combines the accelerator with corporate cash flow, thereby including the availability of low-cost, internal sources of finance and the current profitability of past investment. Both the third and fourth models—the "neoclassical" and "modified neoclassical" interpretations—place special emphasis on the cost of capital, reflecting interest rates, dividend yields, inflation, depreciation, and the rates and base of the corporate income tax. The fifth, the securities-value model, focuses on the role of the stock and bond markets, linking the incentives of corporate executives for purchasing plant and equipment to the expected effect of such projects on the value of their firms' securities.

The chief determinants of business fixed investment, as interpreted by all these models, were adversely affected by the 1973–75 recession. Real GNP declined sharply; the stock market collapsed; real cash flow was depressed; and the cost of capital rose. In fact, during 1974–75, investment in equipment stayed up longer and fell less sharply than most of the models would have predicted. In 1977–78, years marked by the economic rebound and strengthening of most investment determinants, equipment investment rose, but by a little less than most models predicted. For the entire period since 1973, investment in equipment is tracked reasonably well by some models and very well by the accelerator. Clark concludes that it "has not been lower than what could have been expected."

But he renders a contrasting verdict for investment in nonresidential structures. Its performance during the 1973–78 period was generally weaker than the estimates based on the models, given the paths of output, cash flow, and capital costs during that interval. Thus the weakness of

structures, unlike that of equipment, does pose a puzzle. Delving further into that puzzle, Clark points to a decline of commercial building (largely offices and stores) and notes that "apart from commercial structures, no significant deficiency remains to be explained." In the author's judgment, the "bust" in the commercial area after 1973 can be viewed as a "natural reaction to overbuilding and overextension of credit," which is evident in rising vacancy rates and serious liquidity problems of real estate investment trusts. Clark concedes that such a piece-by-piece evaluation of investment is not fully satisfactory. He points out that, although equipment in the aggregate was on track, some of its components were not. In particular, business investment in motor vehicles has experienced a major surge in recent years, while purchases of other types of equipment have lagged behind.

With the qualification for the shortfall in commercial structures, Clark concludes that, given the path of real GNP, business investment has not been unusually or unexpectedly weak. In discussing these findings, Alan Greenspan emphasized increases in risk premiums, or "hurdle rates of return" in recent years. He argued that these influence decisions for the long run adversely and may account simultaneously for the weakness of investment in long-lived structures, the strength of investment in short-lived motor vehicles, and the net shortfall in the combined total of structures and equipment.

Throughout the paper, the accelerator receives high grades for performance, and Clark stresses that "output is clearly the primary determinant of nonresidential fixed investment." In sharp contrast, the cost of capital has no statistically perceptible influence on business fixed investment. Clark infers that reductions in interest rates or in corporate taxation do not provide a quick and easy way to stimulate investment. That negative verdict attracted much attention and generated controversy during the discussion of the paper at the conference.

Reflecting his findings on the dominance of the accelerator, Clark concludes that "the best way to keep investment spending up is to keep capacity utilization high." Projecting business fixed investment over the next three years, Clark would expect it to rise fairly strongly if a recession can be avoided, but to sag in the event of a recession.

Supply-side disturbances, such as those that recently generated major increases of food and oil prices, are the subject of the article by Edward M. Gramlich. Such shocks confront fiscal and monetary policymakers with

a dilemma. They can “accommodate” the shock, in an effort to maintain the normally desirable path of output and employment; but then they must accept increased inflation. As an alternative, they can aim at offsetting the shock-induced inflation by pushing down on overall demand; but that imposes losses in output and employment and possibly a recession. As a third option, policymakers can pursue a compromise strategy, such as maintaining the previous target path of growth for the dollar value of GNP, with a slightly higher price level and somewhat lower output and employment.

To gauge the social consequences of alternative fiscal and monetary responses to a supply shock, Gramlich constructs a simple model relating prices, wages, and unemployment. The most innovative part of his analysis is an assessment of the relative social cost (or “pain”) of an extra point of unemployment and an extra point of inflation. One method of assessment relies on “revealed preference.” If policymakers have the same views about the inflationary effects of lower unemployment as those implied by Gramlich’s model, their actual behavior can be used to infer the relative pain or social cost they attach to the two evils. When this technique is applied to the 1954–77 period, it suggests that U.S. policymakers consider an added percentage point of unemployment between two and three times as costly as an added percentage point of inflation.

A second method uses responses to opinion surveys to infer the public’s relative distaste for inflation and unemployment. The Gallup poll has repeatedly asked respondents: “What do you think is the most important problem facing the country today?” Inflation and unemployment are often named. And, in fact, an increase in unemployment shifts the responses toward unemployment, while higher rates of inflation shift them in that direction. The responses can thus be used to infer statistically the strength of respondents’ aversion to the two evils. In general, a point of unemployment seems to be more painful than a point of inflation, but the ratio varies widely, from 1.3 to 4.0, depending on the statistical procedure used.

Gramlich shows analytically that, under a fairly broad class of assumptions, provided that fiscal and monetary policy is appropriate (neither excessively stimulative or unduly restrictive) prior to a shock, it should accommodate the shock fully—maintaining the initial unemployment target and accepting the added inflation. That result would be symmetrical for favorable shocks; in the event of a bumper crop or a collapse of OPEC that reduced the price level, policies should be aimed at a lower inflation rate with an unchanged target for unemployment.

Numerical examples provide clearer understanding of the analytical finding in favor of accommodation. In the examples, Gramlich adopts the view that fiscal and monetary policy was initially appropriate. This assumption justifies the revealed-preference estimate that a point of unemployment is as painful as 2.4 points of inflation. On that basis, he shows that a policy of full accommodation is far superior to both a compromise strategy and a policy of consistent nonaccommodation. One interesting result is the poor performance of the compromise policy; it is ineffective because it has a weak anti-inflationary effect initially and increases unemployment substantially thereafter. Another striking finding is that accommodation still fares well in comparison to other strategies if the relative social cost of a point of unemployment is assumed to be considerably lower than that of the revealed-preference estimate.

Even with the best feasible response of general fiscal and monetary policy, the supply shocks are costly and generate a bulge in inflation that can linger for several years. In Gramlich's judgment, these results underline the need for other policies that might prevent or neutralize supply shocks.

Gramlich cites William Fellner's credibility thesis as an important potential objection to the findings of the paper in support of accommodating policies. In Fellner's view, the willingness of the government to accept more inflation may lead the behavior of the private sector to become more inflationary—a possibility that is not incorporated in Gramlich's inflation model and that may result in an underestimate by the model of the cost of a policy of accommodation. Gramlich takes Fellner's argument seriously, but expresses skepticism on balance. While he agrees that a credible nonaccommodating posture by government would push private responses in the right direction, he doubts that private behavior would change enough to reverse his findings in favor of accommodation. Moreover, he suspects that an announced strategy of nonaccommodation might be neither credible in prospect nor sustainable in operation because the cost and duration of its temporary unemployment and the strong political opposition by powerful interest groups might force the government to relent.

William Fellner elaborates on the credibility effect in a short report that follows Gramlich's article. He argues that the strong inertia of inflation observed in the seventies reflects the public's perception of a lax, accommodating posture of monetary and fiscal policy. Private decision-makers tend to translate recent cost inflation—whether from excess de-

mand or from supply shocks—into further rounds of price and wage inflation because they expect the government to accommodate those actions. If, however, they expected demand policies to be aimed consistently at stabilizing prices, they would be more likely to restrain wages and markups, as they did in the fifties and sixties. Fellner points to the pattern of errors in Gramlich's wage equation as support for his view that demand policies were perceived as lax during the seventies. That equation, fitted to the 1954–77 period, on average underpredicts wage inflation since 1971, while overpredicting for 1954–70.

Fellner distinguishes the credibility hypothesis from the rational expectations hypothesis. In the latter, the public is assumed always to estimate and to be influenced by the probable future actions of policymakers. But Fellner points out that the public can detect a system of policymaking and thus predict the government's response, "only if the authorities play effectively into the hands of the market participants by behaving consistently in an understandable fashion." Thus he feels that it takes a credible policy stance to validate the rational expectations assumptions.

In Fellner's view, the American public is becoming convinced that price stability must be restored and that it cannot be restored by other methods; thus it would accept a credible policy of demand restraint. If that policy were adopted, the public would gradually adjust its cost-setting practices over a transition period of perhaps three to five years, during which "somewhat subnormal resource utilization rates" must be expected and accepted.

The balance of trade in manufactured goods has conventionally been explained by the incomes and relative costs and prices among competing nations. In the second report of this issue, Robert Z. Lawrence examines problems that arise in using the relative cost and price performance of the United States for assessing its competitiveness and hence for predicting pressures on its trade balance. Lawrence observes that the United States has lost manufacturing competitiveness relative to the rest of the industrial world even though its manufacturing prices and unit labor costs had below-average increases when measured in dollars. He attributes this development to the fact that, in many foreign economies but not in the United States, the prices of manufactured exports rise less than the prices of manufactured goods in general. He points out that some possible explanations for that phenomenon—such as declining profitability or gov-

ernment subsidies of export industries abroad—are implausible in view of its persistence for a sustained period of time.

For Japan, Lawrence is able to disaggregate costs and prices by industries; he directly identifies the better price performance of export industries relative to the manufacturing average and links that to faster productivity growth in those industries. He suspects that such a dualism between the costs in the export sector and elsewhere also exists in other foreign economies; but he is unable to isolate the phenomenon for other countries with available data. Until this historical finding is better understood, Lawrence warns against using aggregate indicators of prices and costs as evidence of U.S. price competitiveness. If history is a guide, equal inflation in the price of manufactured goods here and abroad will lead to a declining trade balance for the United States.

The next two reports, one by Richard D. Porter, Thomas D. Simpson, and Eileen Mauskopf and the other by William Poole, examine the unusual weakness in the growth of the monetary aggregates during the last quarter of 1978 and the first quarter of 1979. In the former report, the authors carefully analyze the effect of institutional and legal changes on M_1 and on the conventional monetary aggregates in general. They calculate that the automatic transfer services authorized in November 1978 and the growing importance of negotiable orders of withdrawal during the past few years both encouraged some shifting of funds out of demand deposits; but quantitatively, these innovations explain little of the recent weakness in the monetary aggregates.

By contrast, the authors emphasize the importance of intensified cash management by the business sector—the sector that accounts for most of the unusually weak demand for money. They identify this development of cash management by business both with a reduced cost and with an increased incentive resulting from higher interest rates. Although the growing volume of short-term liquid assets, such as security repurchase agreements and money-market mutual funds, has coincided with the increased use of cash-management techniques, the authors conclude that these two instruments cannot account for all the weakness in M_1 . Furthermore, they do not believe that including these assets in a broader definition of money would lead to a better aggregate for guiding monetary policy. A variety of liquid assets exist as actual or potential substitutes for demand deposits and for other liquid assets. There is neither a theo-

retical basis for including some and not others in a new monetary aggregate nor an empirical basis for predicting which ones would contribute to a more reliable aggregate. The authors conclude that uncertainty about the appropriate path for any monetary aggregate will continue, making it important that policymakers also include in their analysis information on other financial assets, interest rates, and direct indicators of current and future developments in the economy. For the current period, the authors expect any target path of nominal GNP to be consistent with somewhat slower growth in the conventional monetary aggregates than the historical relationships suggest.

In the second of the two reports, William Poole argues for taking the sharp deceleration of M_1 and M_2 seriously, warning that it may herald a major recession, particularly if that slow growth is allowed to continue. He notes that intensified cash management and responses of demand deposits to interest rates characterized financial markets before the aggregates slowed sharply late in 1978. To the extent that recent developments increase uncertainty about the reliability of the monetary statistics, he believes that policymakers should place less weight on monetary aggregates than otherwise—but should not ignore them. The abrupt slowdown in the aggregates signals that policy was too tight, in his judgment. The Federal Reserve should have responded by reducing both interest rates and its targets for growth in the aggregates. This would have prevented the undue tightening of monetary policy that Poole believes has occurred and also affirmed the Federal Reserve's determination to set appropriate targets for the aggregates and then to meet those targets.

Poole believes that the use of the federal funds rate as a direct instrument of policy may have inhibited the Federal Reserve from following what he regards as a steady policy. Because the funds rate has become a closely watched indicator of the Federal Reserve's intentions, lowering it would have been viewed publicly and politically as a premature easing of policy. Continued concern about such a public reaction may make the Federal Reserve move too slowly to avoid or minimize recession.

An analysis of growth and inflation by industry is presented by Hendrik S. Houthakker in the final report of this issue. When demand curves shift, output and prices are pulled in the same direction—moving upward or downward together. When supply curves shift, output and prices are pushed in opposite directions. Macroeconomists expect demand shifts to

dominate in the *aggregate*, generating a positive association between strong growth of real GNP and rapid inflation. Houthakker shows that, at the *industry* level, supply shifts are dominant: overwhelmingly, changes in output are negatively associated with changes in prices.

Over the entire 1947–77 period, industries with rapid growth of real output have tended to display relatively low inflation rates. The industries with the best performance in both growth of output and price stability have generally experienced rapid growth of productivity. Their strong productivity growth has been converted mainly into a lower growth of unit labor costs (rather than higher growth of wages), and those lower costs in turn have been passed on to customers through lower rates of inflation.

Examining the year-to-year fluctuations of prices and output in each individual industry, Houthakker finds that years of above-average growth in an industry's output have typically been years of below-average increases in the industry's prices. That holds true, not only absolutely, but also when the growth and inflation of an industry are measured relative to the average for the economy as a whole.

At the industry level, rapid growth of output, strong productivity growth, and low inflation go together. Houthakker's agenda for further research includes questions about how advances in technology, economies of scale, and the competitiveness of markets contribute to that striking combination.