Economists and Inflation: Which Way Out of the Wilderness?

The shade of John Maynard Keynes hovered over the "supersummit" on inflation in Washington, D.C., on 27 and 28 September. A national cross section of leaders from government, industry, interest groups, and professions had been invited to contribute as panelists and delegates, but it appeared that more was hoped for from the economists. There had been two "mini-summits" for economists preceding the summit while single meetings had sufficed in other categories, and the economists' panel could claim pride of place as the last on the conference program. While everyone denied that any economic "quick fix" was feasible, the economists were treated by both the organizers and the press as if from their ranks might come a new Moses to lead the country out of the wilderness.

That role was last filled by Lord Keynes, whose ideas, expressed in his book, *The General Theory of Employment, Interest, and Money*, published in 1936, provided the basis of postwar economic policy for the United States and other Western industrial nations. Basic to Keynesian doctrine is the use of government fiscal power to stimulate the economy when unemployment is high and to restrain the economy when high employment and excessive demand begin to cause wage and price rises to reach an inflationary rate.

American economists have differed over how to implement Keynes's policies, particularly over the relative importance of fiscal and monetary policies. But federal economic policy since World War II—with some wavering during the Eisenhower Administration—has been post-Keynesian in the sense that most theorists and policymakers have agreed in principle on Keynes's ideas of how to deal with unemployment and inflation. At the Washington summit there was a clear division between liberals and conservatives among the economists, but the issue was the proper mix of Keynesian measures to fight inflation.

If Keynes's theories have prevailed, they also do not seem to be working very well lately. The past few years have been a bad time for economists. The present inflationary trend dates back to the middle 1960's. Domestically, the Vietnam war boom and fiscal mismanagement by the federal government are usually cited as causal factors. And the Americans are blamed for contributing to European inflation by forcing overvalued U.S. dollars on the Europeans, particularly in the form of investments. Then crop failures and soaring oil prices created a terra incognita for policy makers.

There is a rough consensus about how the present inflation evolved. The triumph of Keynesianism is usually dated from the early 1960's and the advent of what was then called the New Economics. When President Kennedy took office, the level of output was well below capacity, and unemployment for the previous 3 years had been around 6 percent and was rising. Kennedy's advisers diagnosed the trouble as stemming from the Eisenhower Administration's over restrictive fiscal policy. In the previous 2 years, the federal budget had shown an approximate balance of revenues and expenditures despite a recession.

Full Employment Goal

The new Administration set a "full employment" target of 4 percent unemployment and set out to stimulate the economy by increasing federal spending and sending the budget into deficit.

As for monetary policy, interest rates were to be kept low enough so as not to short circuit recovery. The boldest Keynesian stroke of all was a tax cut granted in 1964 aimed at further stimulating the economy. Wage and price guidelines and presidential "jawboning" were used to deter wage and price leapfrogging.

By early 1965 the economy had attained the full employment goal without a serious surge in prices, but the cost of the Vietnam war and of new Great Society programs were putting on the pressure. According to the Keynesians it was time for fiscal measures, notably a tax increase, to "fine tune" the economy.

An underestimate or understatement of Vietnam war costs from the Pentagon and the unwillingess of President Johnson to invite criticism of the cost of Great Society legislation foiled the administering of what might have been fiscal preventive medicine.

The ensuing big budget deficits were fuel on the fires of inflation. The Administration had done the opposite of what its own economic advisers had urged, and partisans of the New Economics insist that it didn't fail, but rather was never fully tried.

When President Nixon took office in early 1969, a tax surcharge belatedly voted by Congress was in effect, and the new Administration sought to counter inflation with a combination of tighter fiscal and monetary policies. The aim was to engineer a return to full employment and price stability, but without abrupt action which would cause a serious downturn in the economy. The policy was called "Gradualism." A combination of fiscal and monetary restrictions did result in a cut of the gross national product (GNP) but did not have the desired effect on the rate of inflation. The country was to become familiar with the unpalatable mixture of economic stagnation and inflation dubbed "stagflation."

In retrospect, it appears that the Administration caused a recession in 1970 to fight inflation. There is some evidence that "Gradualism" might have had more impact if, in the summer of 1971, the dollar had not weakened seriously on world markets. This led to a reversal of Administration policy and the imposition of sterner measures—including wage and price controls—in a package which came to be called the New Economic Policy (NEP).

Many observers believe that the record of the NEP in the following 2 years is clouded because the Administration was distracted by the Watergate troubles and that the only consistent anti-inflation measure taken was the raising of interest rates by the Federal Reserve.

Incidentally, a showdown between those who stress fiscal policy and those who stress monetary policy [control of the money supply] in managing the economy, which was predicted when Nixon took office, never really took place. The emphasis on controlling the money supply is associated with University of Chicago economist Milton Friedman and the so-called "Chicago school" of economists. George P.

Shultz, who became Secretary of the Treasury and was Nixon's principal adviser on the domestic economy for much of his truncated Presidency, was regarded as a loyal alumnus of the Chicago school. But, in practice, the Nixon Administration did not apply monetary discipline with single-minded rigor, and Friedman at the summit himself remarked that it had never really been tried. (The idea that purists of the Chicago school reject fiscal policy is exaggerated. At the same time, Keynesians in recent years have been much more willing to admit the importance of monetary policy than they were earlier. This is what lies behind Friedman's often quoted 1966 comment—"We are all Keynesians now, and nobody is any longer a Keynesian.")

That Richard Nixon too became a Keynesian was confirmed by his Administration's acceptance of the concept of the "full-employment budget." Under this concept, fiscal and monetary policy is to be used to stimulate the economy when unemployment rises above 4 percent, and measures are taken to restrain the economy when the full employment mark is exceeded. The willingness expressed by the Administration when the 1975 budget was released to contemplate a major program of public service employment if unemployment rose seriously is vintage Keynes.

At the Washington summit, the major point on which the economists agreed was that monetary policy should be eased somewhat. But the agreement was narrowly based, with the "liberals" arguing that, even if the money supply is allowed to grow slightly more rapidly, the degree of unemployment is likely to be unacceptable. The "conservatives" feel that, unemployment notwithstanding, a further gradual reduction of the money supply is necessary if inflation is to be reduced. The liberals, in general, tend to stress control of unemployment, while the conservatives stress the broader effects of inflation. The liberals also argued that the conservatives are putting too much faith in the efficacy of budget cuts.

Among the liberals at the summit were Paul A. Samuelson of MIT, the first American to win a Nobel prize in economics; Walter Heller of the University of Minnesota, who was chairman of the Council of Economic Advisers (CEA) in the heyday of the New Economics; and John K. Galbraith of Harvard, who as critic and author has served as a sort of Keynesian Lone

Collision at the Summit

One allegation made repeatedly during the ascent to the summit and at the Washington Conference on Inflation was that the cost of pollution-control efforts was a significant factor in inflation. The charge was made chiefly by representatives of business and industry, who took the same opportunity to ask that government regulatory, and antitrust and antimonopoly, legislation be reviewed and revised for the same reasons.

The riposte most often used against the charges about pollution control programs was based on data appearing in a recent study released by the federal Council on Environmental Quality (CEQ). The gist of the report is contained in the following excerpt from a committee report which CEQ chairman Russell W. Peterson presented at a presummit meeting on natural resources in Dallas.

> The economic impact of these expenditures [on environmental programs] is not nearly as significant as some would have us believe. Pollution control expenditures certainly are not responsible for our current problems of inflation. The Council on Environmental Quality's most recent analysis of the impact of environmental programs on the economy indicate that these programs account for at most roughly ½ of one percent of our current inflation. Nor are they any more responsible for high interest rates. Put in perspective, expenditures made during 1973 to satisfy requirements of federal water and air pollution control legislation amounted to approximately one percent of our GNP. Looking at it another way, they amounted to from two to three percent of all investments and five to six percent of total expenditures on plant and equipment. These numbers certainly are not large enough to have the economic impact that some are attributing to them.
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> Furthermore, a recent study showed that the projected investment and operating costs for pollution control devices over the next ten years would have an insignificant impact on the growth in GNP—4.3 percent per year without the pollution control program and 4.2 percent with it. And, of course, the increased value to the people of cleaner air and water is not included in the GNP.

The ranking spokesman for science at the summit was H. Guyford Stever, science adviser to the President and director of the National Science Foundation. At the summit, Stever briefly summarized the recommendations of the Washington meeting on science and technology (4 October 1974), but in a statement prepared earlier for the summit (but not delivered) he made the following comment bearing on the environment-inflation issue.

> We have seen major changes in national policies for health, safety, and the integrity of the environment in response to a new public view of need, possibility and immediacy—a revolution of rising expectations.
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> These new policies have been concerned principally with extension of the benefits of available technologies, such as in health care, or with alleviation of undesirable burdens arising from particular uses of technology, such as air pollution from automotive transportation and energy production. In retrospect, we should have paid more attention to time-scale and total cost. For without such consideration the seeking of these desirable objectives has contributed to inflation.

Asked by *Science* to comment on the strength of sentiment for curbing pollution control efforts, Stever replied, "I have the feeling that if inflation and the economy get worse we'll be glad we got started early [with environmental programs]. Energy and the environment are going to be in confrontation for the rest of our lives. We might as well face up to confrontation."

Stever said that he personally hopes there will not be a wholesale retrenchment on the environmental front but, like some others at the meeting, noted that the far-from-perfect auto emissions control devices installed on 1974 automobiles represented an example of a technological "backfire" which could have been avoided by a relatively short delay in putting new technology into use.

Stever said that what seriously concerns him is that some threats to the environment may not be investigated as promptly and fully as they should be. He gave as examples the recently cited possible danger to the ozone layer of the stratosphere from the cumulative effects of Freon gas in aerosol cans, the effects of supersonic aircraft flight on the upper atmosphere, and the long-term consequences of acid rain.

To what extent the recommendations at the summit will be translated into legislation and administrative action is impossible to predict at this stage, but the discussions did bring into the open the tension between those who emphasize the costs and others who stress the benefits of environmental programs.—J.W.

Ranger. The conservatives were weightily represented by all of President Ford's top economic team. On hand were Arthur F. Burns, chairman of the Federal Reserve Board; William E. Simon, Secretary of the Treasury and the chairman of the newly created Economic Policy Board, which is designed to orchestrate federal efforts to fight inflation; William Seidman, presidential aide and new economic coordinator; Roy L. Ash, director of the Office of Management and Budget; and Roger Greenspan, chairman of the CEA. Also attending and speaking as a panelist was Professor Friedman. It is not irrelevant, of course, that the conservatives are "in" and the liberals are "out."

The only direct disagreement which surfaced at the summit was on the question of if and when to resort to a system of wage and price controls. Conservatives lean to the view that controls require a huge bureaucracy to administer them, fight symptoms not causes, and actually prolong inflation. Liberals argue that, despite their disadvantages, wage and price controls are the only equitable and effective method to employ after inflation has taken hold. A minority of the liberals appeared to be in favor of controls immediately.

It is interesting that the only detailed recommendations agreed on by the economists were in a list of 22 "structural" reforms that covered a wide range of federal rate-setting, regulatory, or protectionist measures. There seems

Briefing

NIH Cliques Assailed on Training Grants

A lawsuit seeking to reform cliquish and allegedly discriminatory practices in the award of training grants by the National Institutes of Health (NIH) appears to be making headway. In late August, a district court judge ordered NIH to turn over information on the backgrounds of the scientists who award the grants and information on both successful and unsuccessful applications to the Association of Women in Science (AWIS) which is bringing the suit.

The suit seeks to halt the entire NIH training grant program—which has been revamped several times by the Administration and by Congress in recent years—until NIH produces court-approved regulations for processing applications. To help build its case, the AWIS went to court to seek the following from NIH:

► The curriculum vitae of those who sit on awards committees, which AWIS will use to determine what, if any, common ties exist between the committee members and successful applicants,

► enough information from grant applications themselves to show whether the successful applicants actually followed NIH rules.

According to NIH, in fiscal 1973, when the training grants program was still healthy, training grant awards of all kinds totaled $139 million and supported approximately 16,400 people. Since then, the administration has tried to reduce the program repeatedly. Congress, in response, has just passed a law known as the National Research Act which would expand the program in fiscal 1975 to an authorization of $205 million (*Science*, 2 August 1974).

Gladys Kessler, who is Washington counsel for AWIS on the case, explains that eventually, she hopes to demonstrate a pattern of cliquish and ingrown behavior among successful grant applicants and committee members. How many of those regularly funded by a particular committee have members of their academic department sitting on the committee? Do people from institutions other than those represented on a committee tend *not* to be awarded grants by it? Among other things, the suit seeks to prove that the current practices discriminate against women training grant applicants.—D.S.

New Look for Public Works Committee

The House Public Works Committee has taken a step toward divesting itself of its old pork barrel image with the establishment of a science advisory panel whose job is to help the committee make decisions along the lines of a national public works investment policy.

Committee chairman John A. Blatnik (D–Minn.), who is retiring from Congress this year, has been thinking seriously about the role of public works in population distribution and regional development since he went to the Mexican-American AAAS meeting in 1972 and talked with people such as Roger Revelle, who heads the Harvard Center for Population Studies. Last year the committee asked Richard Royce, a Florida-based environment and energy consultant who used to head the staff of the Senate Public Works Committee, to help put together an advisory group of scientists and social scientists. Officially established last spring, the panel has been divided into four task groups. They have been drafting policy papers on (i) population distribution, applying the ecological concept of "carrying capacity" to metropolitan and regional development; (ii) the potential for planning and service delivery within state, substate, and regional governing units; (iii) the role of transportation in population distribution and regional economic development; and (iv) values, assumptions, and implications of alternative federal public works policies. Some of the work will be presented in testimony for committee hearings on a national public works investment policy which were begun last fall and are scheduled to continue for 2 days later this fall.

The establishment of such a panel is an unusual step for a congressional committee, but it is very much in line with other efforts within Congress—such as those by the new Office of Technology Assessment—to bring some long-range thinking into the legislative process and institutionalize communication between lawmakers and scientists and academics. The panel evidently fills a need felt by scientists as well as the committee. A staff member says the staff was amazed at the eagerness of those invited to participate.

Among the 19-member group are Ralph Widner, whose Academy for Contemporary Problems is contributing some of its study findings to the committee, and David Freeman of the Ford Foundation's Energy Policy Project. —C.H.

to be growing agreement among economists that efficiency in the economy is being significantly hampered by arrangements favoring special interests and by sheer bureaucratic meddling.

There was not much sign at the summit of an impending great leap forward in economic theory. Of course, no Marxist or New Left economists were invited to the Washington session. There is concern among many economists about finding ways to assess the increased impact of international economic developments on the American economy and also to understand domestic economic behavior that doesn't accord with the assumptions which govern orthodox economic policy decisions. But no new "general theory" appeared to be threatening the Keynesian conventional wisdom.

Macroeconomics, the study of the economy as a whole, which might be expected to produce promising ideas for public policy, seems to be in something of a recession. Microeconomics, the study of portions of the economy, on the other hand, is where many professional economists say the most interesting work is being done these days. Microeconomic study, not only of business firms or particular industries, but of such things as crime, marriage, welfare programs, and environmental problems seems to be yielding illuminating results.

Econometric model builders have had serious disappointments with big mathematical models of the U.S. economy. Some observers think that, when ways are found to aggregate the new data from the microeconomists into the big models, it will prove possible to improve the quality of the forecasting which is so important to making Keynesian policy work.

It may be that the results of perfecting Keynesian policies would be only academic in the face of the quadrupling of oil prices. The lesson taught by experience with the New Economics of the Kennedy-Johnson era and the Nixon New Economic Policy is that economic theory often gives way to political reality, and this may prove true, in spades, of Fordian economic policy as well.—JOHN WALSH

"Transient" Nuclear Workers: A Special Case for Standards

Buffalo, New York. For the Buffalo area's unemployed laborers, for the moonlighters, college students, and the young men recruited from small farming towns south of the city, the guarantee of half a day's pay for a few minutes' work was an offer they couldn't refuse. Attracted by the prospect of easy money, they flocked by the hundreds to the Nuclear Fuel Services company between 1966 and the middle of 1972 to perform some of the dirtiest jobs in what one official of the Atomic Energy Commission (AEC) calls "the dirty end of the nuclear business."

The business of Nuclear Fuel Services (NFS) is the chemical extraction of uranium and plutonium from the highly radioactive spent fuel rods of nuclear power reactors. Situated in pastoral, wooded hills 40 miles south of Buffalo, the chemical plant was the nation's first commercial fuel processing facility. Although the technology it used was far from experimental, the NFS plant proved less than a smashing technical success. Almost from the time it opened in 1966 until it ceased operating in June of 1972 (for a major repair and enlargement program to be finished in 1977) the plant suffered repeated breakdowns and leaks of radioactivity. To clean things up and make repairs, the company relied heavily on the Buffalo area's abundant labor pool.

During 5½ years of operation, according to correspondence between NFS and the AEC, the company each year hired an average of 1400 "supplemental" workers from surrounding communities, making up a temporary, continually changing work force that outnumbered the plant's permanent, trained operating staff by more than 10 to 1. With an apparent minimum of instruction in safety procedures and the potential hazards of their jobs, the supplemental men were put to work decontaminating equipment and working areas, burying low-level nuclear waste, and repairing radioactive equipment.

Some of these workers were as young as 18 and others are alleged to have been recruited from bars for an afternoon's work. Some would last a week or more on the job. Others reached legal exposure limits within minutes and were promptly paid off—half a day's pay (at around $3 an hour)—and replaced, in the derisive phrase of a former full-time employee, by "fresh bodies."

On the average, according to AEC inspection reports, the plant's temporary workers received a whole-body radiation dose of 1.73 to 2 rems, an amount not considered harmful, but the equivalent nevertheless of five chest x-rays. This is less than the maximum the AEC allows for full-time radiation workers but much more than the industrywide average of 0.2 rem per year and more than the 0.5 rem allowed for members of the general public.*

The temporary workers, like the plant's permanent staff, also were exposed to small airborne concentrations of plutonium and other radioactive fission products whose hazards are under debate (*Science*, 20 and 27 September).

At one time the plant and its radioactive effluents were the focus of environmental protests, but these objections largely subsided, first as waste treatment improved and later when the plant closed. The company's public relations efforts have generally been effective, and a predominantly blue-collar region now seems to regard NFS as a welcome source of jobs. Local opposition to a planned tripling of the plant's capacity thus have been limited to a handful of conservationists and a few families whose sons worked at the plant. It is expected to reopen in about 3 years, at which time, AEC officials say, the plant will be much cleaner. If it isn't, one official adds, "we're in trouble."

Dormant as it is right now, the NFS plant provides a particularly vivid example of a common and long-standing practice in the nuclear industry. The AEC has long condoned the use of

* Federal radiation protection guidelines in force since 1960 recommend that individuals in the general population receive no more than 0.5 rem per year of nonmedical radiation to the whole body. Nuclear workers are limited to 5 rems per year, but the guidelines allow a worker to accumulate unused exposure according to the formula $5(n - 18)$ where n is his age. The worker may draw on his "body bank" at a rate up to 3 rems per quarter or 12 rems per year.