

Remarks by Karl R. Bopp, President of the Federal Reserve Bank of Philadelphia, before the Eighth Annual Meeting of ACES, held on Monday, April 21, 1958, at 12:15 p.m., in the Ballroom of the Bellevue-Stratford Hotel, Philadelphia, Pa.

I do not bring you simple solutions to difficult problems. I shall raise more questions than I answer. In the process I hope to stimulate your own thinking, in the belief that at this juncture in our experience it is important to consider our alternatives.

I would like to discuss with you some problems of economic growth. We hear a great deal these days about growth, especially about relative rates of growth in the United States and in the U.S.S.R.

Although I shall emphasize the economic aspects, it would be a fatal mistake to assume that growth is exclusively a matter of economics. Growth is compounded of many ingredients. Most important is that the genes of some individuals have been combined in such a way that they have an insatiable desire to comprehend the universe of which we are a part. They devote their lives to what we have come to call basic research. No other ingredient contributes as much to growth as do those rare geniuses motivated by what most people consider the naive desire to comprehend. Mere mention of a few names will prove my point: Newton, Descartes, Harvey, Gibbs, Einstein, Fermi.

If we really are interested in progress, we shall want to create an environment in which such individuals can flourish. What kind of an environment is that? We must concede that such individuals have appeared even under very adverse conditions. Galileo, for example, lived and wrote under intellectual tyranny. Unfortunately we shall never know how many intellects of similar com-

petence were suppressed because they did not have the courage that compelled Galileo to say of the earth, under his breath, even as he yielded openly to his sentence: ". . . even so, it still moves."

We can give a clue as to the environment in which such individuals flourish by observing their behavior. What did the men of genius do in the inter-war period? Mention of some names gives a clue to the answer: Einstein, Fermi, Casals. Men of genius in all fields, from science to music, fled tyranny and embraced freedom.

If we are interested in growth let us maintain a free market place in ideas. This, of course, is part of our heritage. Thomas Jefferson, for example, expressed it in his first inaugural address when he said: ". . . let them (those "who would wish to dissolve this Union or to change its republican form") stand undisturbed as monuments of the safety with which error of opinion may be tolerated where reason is left free to combat it." Let us not assume we know all the answers and suppress those who differ from us.

A second ingredient of growth is technological progress, or the application of knowledge to the productive process. Here belong such names as Burbank, Edison, Firestone, Ford, Mary Follett. This is the field of discovery and invention in their wider definitions. Time permits me to mention only a few categories: products, machines, processes, and organization - and only a few results: synthetic fibers and plastics, electronic computers and metal extruders, the assembly line and crop rotation, human relations, staff and line functions.

A third ingredient of growth resides in the basic ambitions of the people. As you know, for centuries and even millennia the vast populations of the Orient have been dominated by variations of the doctrine of contemplation or renunciation as expressed, for example, by Sri Krishna in the Bhagavad-Gita. Peoples of the West, on the other hand, have been concerned with "getting ahead" for them-

selves and their children. At times this is called the conflict between spiritualism and materialism. Frankly, I am not competent to discuss the really important facets of this apparent conflict.

It must be clear to all observers, however, which approach is conducive to a rising standard of living. Nevertheless, I shall allude to this issue once more at the conclusion of my remarks.

I move next to some economic ingredients of growth. We must begin with a few elementary propositions. The first is that we cannot consume more than we produce. If, therefore, we wish to increase our standard of living, we must increase our output more rapidly than we increase our population. The second proposition is that we can increase our output only by increasing (within limits) the number of hours we work or by increasing our output per hour worked. If, therefore, we desire shorter hours as part of our increasing standard of living, our only option is a still greater increase in output per hour worked.

How can we achieve this result? I have discussed one method already: discovery and invention. In general, however, discovery and invention, in themselves, contribute little directly to increased output. To increase output, they must be applied. This means that we need plant and equipment. In order to construct this plant and equipment we must save and invest.

This brings me to the third proposition. We cannot both consume and invest the same goods. What we consume cannot be invested; in order to invest we must refrain from consumption; that is, we must save. And here we reach a paradox. The more we save, the lower our present standard of living and the more rapid our growth. The more we consume, the higher our present standard of living and the slower the rate of growth.

Now, barring a nuclear war, our children and grandchildren are almost certain to have a higher standard of living than we enjoy. How much should we save

so that they may have a still higher standard?

The possibility of war and the requirements of an adequate defense bring into focus the role of the government. Although economic strength and military potential are related in a general way, modern defense requires military strength in being as well as in potential. The chief direct effects of defense on growth arise from the particular expenditures. They may be seen dramatically in such areas as nuclear energy and electronics. The effects of our defense requirements on growth are not limited, however, to the expenditures. Because of the sheer magnitude of total government expenditures the ways in which the funds are raised greatly influence the rate of general economic growth.

Permit me to make some arbitrary assumptions to demonstrate the point. Assume that the government relies exclusively on personal income taxation to raise its revenue. The current standard of living and the rate of growth will be greatly affected by whether the tax is assessed on a uniform or a graduated basis. Obviously, if a uniform rate is selected a larger proportion of the taxes will be paid by those with lower incomes. Now it is an understandable fact that people with lower incomes consume a larger fraction of their incomes than do those with higher incomes. Such a tax, therefore, will tend to reduce current consumption and to increase saving and investment. For our people as a whole it will tend to increase the rate of growth and our future standard of living at the expense of our current standard of living.

A steeply graduated income tax, on the other hand, would tend to increase our current standard of living and reduce the rate of increase in that standard.

The point I want to make is that consumption and investment are alternative ways of using our real output. We cannot use identical goods and services for both purposes.

I move next to the role of monetary policy. There are those who believe

that the Federal Reserve System should pursue policies designed to achieve a specified rate of growth each year. I would like to indicate why I do not believe this to be an appropriate objective of monetary policy. The first reason is that determination of the specific rate of growth that is to be sought involves ethical judgments of the kind that a central banker should not be called on to make. As I have indicated, it involves decisions as to the relative importance of the present and of the future. Some of this is inevitable in fiscal policy. I would not add still more centralized control through the central bank.

A second reason is that general monetary policy has relatively little direct effect on the factors of growth that I have mentioned. As a consequence there would be a continuing compulsion to seek other and more effective ways of securing growth.

One of the tempting alternatives would be to direct the flow of credit into areas that seemed to promise growth and away from those that do not. This might involve diverting credit from consumers to produce. It might also involve trying to keep the inefficient producer going with credit so that his output would not be lost immediately. Yet we will not secure maximum efficiency and growth in the long run unless the efficient producer can draw our human and material resources away from the inefficient producer. We operate in a profit and loss economy. We cannot expect it to remain dynamic if we underwrite losses.

The proper role of monetary policy is to foster an environment of economic freedom. Its purposes should be to promote a dollar of reasonably stable purchasing power so that individuals and businesses may make rational decisions and a reasonably full use of our economic resources so that we do not waste our resources. In this way we tend to maximize our total output. Beyond that, so far as monetary policy is concerned, we can leave to those in the market place the decisions as to how much they wish to consume and how much to invest.

A final word on growth and our children and grandchildren. I have said that, barring a nuclear war, our heirs are likely to have a standard of living significantly above our own. For them, the hard core of our economic problems may be solved. Before we envy them too much, however, let us remember that there is joy and importance in work. The thrill of the craftsman at whatever task is one of life's real satisfactions. Long hours of leisure are not necessarily an unmixed blessing, even when they are voluntary.

It is quite possible that the problems our children and grandchildren will face will be much more baffling than the economic problems that confuse us. They will have time for thought and contemplation. Are we preparing them to use it?

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