# Chapter 1

# THE ARITHMETIC OF OPTIMISM

*In real life, you have first of all to find the question; to learn to identify, almost as if by instinct, the one forgery amongst a mass of genuine signatures, or to spot the googly amongst a string of innocent leg breaks.*

—Speech by Mr. Anthony Tuke
Chairman of Barclays Bank, London



## 1.

While it is far easier to describe Heaven than it is to provide a map showing how to get there, the man who undertakes the first without considering the second has done us little service. Yet the economists who purvey the

glowing and finely detailed descriptions of the prosperity of the years ahead may have failed us on just this count.

Of course we face a dazzling opportunity. Our labor force is on the verge of an enormous expansion. Automation is rapidly increasing our ability to produce more goods with less work. Our economic history has been characterized by the happy combination of bold businessmen and ingenious engineers. Within the entire scope of our economy, from private houses to public works, we stand a real chance of stamping out want in the United States during the decade of the 1970s.

But we lack the directions to find our way to this economic paradise. Output and employment do not rise simply because men are looking for jobs or hungry mouths want to be filled. If this were so, we would never have unemployment, and poverty might long since have disappeared. This is, in fact, the central question to which this book is addressed: since the number of Americans seeking work in the decade ahead is going to increase more than half again as rapidly as during the years since the end of World War II, can we in fact make the adjustments necessary to create so many additional jobs? And what happens if we fail?

We must therefore begin with the recognition that the exciting forecasts of the late 1960s and the 1970s are not forecasts at all, even though they have every outward appearance of things to come. They are nothing more than real estate brochures about Heaven, based upon the assumption that somehow we will wind up there. They are economic

arithmetic, which is not yet a substitute for economic analysis. As a presentation of goals or potentials, they are useful; as indications of what *will* be, they are positively dangerous.

They are dangerous because they are based on the assumption that what has been will continue to be. Yet the ocean floors of history are littered with the hulks of economic predictions that never made the far shore—floating hopes that foundered because they were navigated under this false assumption. Belief in an everlasting prosperity contributed to the smash that hit us at the end of the 1920s. Assurance of a never-ending stagnation prolonged the depression—and then led to the erroneous expectation that the end of World War II would signify the immediate return of the deeply depressed conditions of the 1930s. It is difficult to remember now, but the inflationary avalanche of 1946 to 1948 was in large part intensified by policies that were based upon this incorrect extrapolation into the future.

It is amazing how frequently we have to learn—and how frequently we forget—that each age has its own peculiarities, its unique character. But that is probably because men hate change and are reluctant to accept its inevitability.

## 2.

Those who merely multiply the greatly increased number of potential workers by another greatly increased estimate for output per man-hour can indeed

come up with some dazzling possibilities for the years ahead.

But these arithmetic optimists have fallen into this tempting thought: because the number of potential workers will rise at an increasingly rapid rate in the coming decade and beyond, employment and incomes will expand; because employment and incomes will be high, demand will run strong; because demand will run strong, employment and income will be high. But in such circular logic, there is only *one* behavioral term: demand. Hence, we must first question how and why demand will rise. Without expanding demand, businessmen will refuse to raise their production schedules or to hire new workers; without rising production and employment, we have no economic growth. Demand, therefore, is the keystone of the whole structure upon which our projections of the future must be built.

In finding the path to full employment during a period when the number of workers is expanding more rapidly than in the past, we must begin with the recognition that economic analysis is meaningless if it ignores the dynamics of demand. Economics is more flesh and blood than mere arithmetic calculations, more a study of society than of technology. Physical facts—even those of the greatest economic importance, such as population structure, raw material supplies, and the character of technological progress—have meaning to the economist only as a backdrop against which human desires and decisions perform.

Economic growth, in short, is never guaranteed. Even if the capacity to produce expands, we have no assurance that demand will rise fast enough to absorb the additional output that can be produced. Indeed, expansion is usually undertaken only in response to signs of rising demand. But this means, in turn, that, if the demands of consumers and businessmen fail to increase fast enough to keep step with our productive capacities, the only way slow growth and unemployment can be avoided is through an accelerated increase in the quantity of our output that is purchased by the government.

This suggests that, under certain conditions, an increase in governmental activities might actually *stimulate* growth; this is a fundamental difference in emphasis from the widely held idea that they may be a burden more easily met if supported by an economy with a rising level of production. We might in fact test the proposition that government would have to be the support rather than the burden of an expanding economy, that our living standards might be higher with it than without it. We shall examine this possibility extensively in the chapters that follow.

## 3.

While our analysis of the future cannot avoid taking off from an understanding of the past, a tedious review of our postwar economic history would serve little purpose at this point. Yet we would do well to remember that the

past twenty-odd years have been marked by persistent change, usually in unexpected directions or in magnitudes that came as a surprise to most of us. The wide variety of economic experience we have known since the war is, then, a warning that the past is a most treacherous basis upon which to predict the future.

Nevertheless, if we study carefully all of the statistics, all of the events, all of the forces at work in the postwar years, we do find one strategic factor that was relatively constant during the 1940s and 1950s, that began to change only in the mid-1960s, and that will be entirely different in the 1970s. Furthermore, this factor emerged from a set of paradoxes. Although something new, its origin reached back to the period after World War I. Although man-made, it was inevitable. Although its ultimate influence was to create highly stimulating expectations, this new factor was itself the consequence of a less buoyant view of what the future might hold.

The factor to which I refer is the relative shortage of labor that characterized the postwar years and was in turn the consequence of the downward plunge in American birth rates that began at the end of World War I and deepened dramatically during the depression. Coming at the same time as the postwar boom, this strange quirk in our population structure had a critical impact on wage levels, business investment, and consumer behavior.

The figures are striking. During the 1930s, the number of children and teenagers actually declined. But during the

decade of the 1940s, they increased by 6.2 million and then by another 18.4 million during the 1950s. Meanwhile, the 20 to 24 age group showed virtually no change at all from 1940 to 1960 and the 25 to 34 group registered only a nominal rise. If we assume that the labor force is drawn from those people aged 14 to 64, we find that this group rose by less than ten million during the first ten years after the war and shrank from 66.5 percent of the total population to less than 61 percent.

But now this situation is changing rapidly. The increase in the number of people of working age from 1965 to 1970 will be as great as the entire increase from 1947 to 1957; the growth after 1970 will be at an even faster rate than during the 1960s. This means that, while we have become adjusted to the dearth of young workers that resulted from the post–World War I birthrate patterns, we must now seek an entirely new set of adjustments as we move into the years that will be influenced by the reversal of these patterns after World War II.

These figures also raise some other intriguing questions about the impact of population trends on the level of business activity. For example, the arithmetic optimists point to the increasingly rapid growth in the labor force as their key argument for a booming prosperity; they sweeten their case further by predicting that the growth in the number of young adults will swell the number of marriages and household formations and thereby greatly stimulate the demand for goods and services.

Unfortunately, economic behavior is more complicated than that. We are just not able to set a crude equation between an expansion in the labor force and a rise in the level of production. Thus, the increase in the 20 to 34 age group during the 1930s was about the same as during the 1920s and much greater than during the 1950s. Can the arithmetic optimists tell us, then, why economic growth during the 1930s was so much slower than during the 1920s? Indeed, if we follow their reasoning to its logical conclusion and argue that prosperity depends primarily upon a high marriage and household formation rate, then we should have had a deep depression during the 1950s, when the number of young adults and the number of marriages were actually declining!

These observations tell us that we can find no simple link here between cause and effect. Thus, if the number of people of working age grows more slowly than the rest of the population, we can have no assurance that we will have a repetition of the great postwar business boom (any more than a rapidly expanding labor force can promise rapid economic growth). In fact, if the relative shortage of labor leads to wage increases that depress profit margins—as classical economic theory would lead us to expect—businessmen may become discouraged and unemployment and depression will result.

The interesting aspect of the postwar period is that the traditionally depressing effect of rising real wages was reversed during these years into a powerfully favorable

influence on the economy, despite widespread and vocal complaints about the damage we were supposedly suffering from the wage-price spiral. On the one hand, business firms were induced to spend large sums on plant and equipment to economize on labor, the scarce and expensive factor of production. At the same time, the enjoyment of rising dollar incomes and the assurance that jobs were relatively easy to find created a free-spending and free-borrowing attitude among consumers; personal expenditures were a sturdy prop to the economy long after the first wave of pent-up postwar demands was satisfied and even though the typically highest-spending age groups lagged in number behind the rest of the population.

The powerful forward impetus of consumer spending is undoubtedly familiar; the impact of these trends on investment is worth spelling out. From 1947 to 1965, for example, modernization of plant and equipment and development of new products and new techniques of production led to an increase in total physical output that was nearly four times as fast as the increase in the number of people employed, while the number of hours worked declined at the same time. This is in contrast to the period from 1929 to 1947, when output increased only two and a half times as fast as employment.

These forces may be seen from another even more meaningful angle. One of the characteristic features of American economic history has been to increase the use of capital goods faster than we have expanded the use of

labor: we are a capitalistic economy in a very real sense of the word. During the postwar years, however, this tendency was greatly accelerated to triple the long-term relationship between the increase in capital goods and the increase in labor.[1]

## 4.

If we attempt to apply all of this to a forecast of what the level of output and employment will be in 1970 or 1975, we may fairly ask—as the arithmetic optimists fail to ask—whether the shift from labor shortage to a much more ample labor supply will in fact dampen or even eliminate the stimuli the economy enjoyed through the free-spending attitudes of consumers and the urgency of businessmen to substitute machines for workers.

Indeed, in making our forecast, we have only one sure fact on which to base our estimates: the number of people of working age is going to increase much more rapidly in the future than it has in the past. But what proportion of the people of working age will actually seek jobs? How many of those seeking work will find it? How many hours a week will they work? How much will each of them be able to produce in an hour's or a week's work? We have no answer to these questions—only guesses.

Nevertheless, because of the acceleration in the growth of the labor force, the increasing attractiveness of

work to married women, and the technological advances that are becoming commonplace in our time, even conservative responses to these questions can yield dramatic results to the arithmetic they imply. Nothing extravagant in the way of assumptions is required to conclude that our total output between 1965 and 1975 could increase faster than during the great postwar upsurge of 1947 to 1957 or in the powerful boom years that followed 1960. Remember—these are potentials rather than predictions, but the potentials are indeed impressive. They indicate, in short, that by 1975 we could be producing three times as much as we were able to produce when World War II came to an end, which works out to a tripling of output in about thirty years during which the population rose by less than fifty percent. In plain English, this means that the affluent society is within reach of reality.

If we are to achieve this objective, however, our discussion up to this point suggests that we must find favorable answers to two basic questions:

First, will the environment be congenial to such a rapid rate of growth in our capacity to produce? That is, will the labor force grow as fast and will the improvement in productivity be as great as these projections assume? If the assumptions are too optimistic, the physical and technical conditions that permit major economic growth will fall short.

Second, even if the physical *capacity* for production expands rapidly, will the dynamics of the years in which

labor was in short supply persist to such a degree that the *demand* for goods and services will increase just as rapidly or more rapidly when the supply of labor is expanding at an accelerated rate?

The answer to the first question is a hopeful one. History does show that the American economy is capable of achieving rapid rates of growth in output when called upon to do so by a burgeoning expansion in demand.[2] Indeed, except for very brief periods of time—one or two years at the most—our capacity to produce typically outruns demand by enough of a margin so that it is unlikely to be a limiting factor: it accommodates itself adequately to the growth in demand.

This means that we must continue to put our emphasis on the answer to the second question—the outlook for demand, the truly significant factor. But the prediction of demand, which depends upon behavioral and psychological considerations as well as economic ones, is much more difficult than the prediction of supply, which is primarily technical in character. This in itself is a crucially important point: it means that we can have no assurance that the demand for goods and services will expand as rapidly as our capacity to produce them.

Let us assume, for example, that consumers continue to buy the same proportion of our total production in 1970 as they bought on the average during the years 1960 to 1965, namely, 65 percent of the total. On the basis of projections by such reputable organizations as the National Industrial

Conference Board or the National Planning Association,[3] this implies a rise in consumer demand at an annual rate of better than 4.5 percent during the latter half of the 1960s, or, more precisely, that consumer spending will increase by more than $100 billion over five years.

This suggests a voracious appetite on the part of American families. To achieve this increase in consumer spending, per capita expenditures would have to rise more—and perhaps substantially more—than three percent a year. This is in contrast to an average annual increase in per capita consumer spending of 1.5 percent over the long period 1929 to 1965 and of 1.7 percent during the more recent period from 1955 to 1965. It is comparable only to the urgent recovery in demand from the trough of the depression in 1933 or to the tumultuous surge in spending that came after World War II—brief periods when per capita consumer spending was rising at about double normal rates.* Note that I am not excluding an increase in total consumer outlays or in spending figured on a per capita basis: I am casting doubt only on the expectation (or, more accurately, the necessity) that consumer spending in the years ahead will sweep upward as rapidly as it did from the trough of the depression or

* All of these calculations of consumer expenditures are in terms of dollars of constant purchasing power, in order to measure the *real* change in consumer demand and to eliminate the distortions caused by price increases.

the immediate postwar years. Furthermore, since consumers compose overwhelmingly the largest part of the market for our production, even small differences in the rate of increase in consumer spending can have a determining influence on the overall tempo of business activity.

Yet, a prediction of the trend of business expenditures for plant, equipment, and inventory is even more complex and even more uncertain. What we are dealing with here is no ice-cold set of mechanical relationships, as we frequently see them presented, but rather with a fragile and volatile variable. From 1955 to 1960, gross private domestic investment actually declined and only in 1962 was the 1955 level surpassed. We surely could and probably will have such stagnant periods again. They are typical of the history of free enterprise economies that run to excesses of optimism and give us little or no basis for projecting any particular rate of growth in these types of outlays in the future. In any case, recent authoritative studies suggest that, even under optimistic assumptions, the demand for capital goods may grow more slowly than the requirements of the economy as a whole.[4]

## 5.

What happens if demand and supply fail to mesh? With an unavoidably accelerated rate of growth in the number of people seeking work, thanks to the high birth rates of the postwar years, and with the technological achievements of

our scientists and business leaders proceeding at a startling pace, our capacity to produce goods and services is certainly going to grow more rapidly in the next ten years than it grew even during the prosperous ten years just past. But we have no equivalent assurance that our willingness and ability to buy will grow at the same rate.

The arithmetic of pessimism is just as disturbing as the arithmetic of optimism is exhilarating. Thus, for example, *even if* the demand for goods and services rises as rapidly as it did during the decade 1947 to 1957, but assuming also that output per man-hour continues to improve at the rapid pace of recent years, nearly ten percent of the labor force would be unemployed in 1970 and twenty percent would be unemployed by 1980. If American economic growth reverts to the long-term annual rate of three percent (as compared with nearly four percent from 1947 to 1957), unemployment could hit one out of every eight workers as soon as 1970 and about one out of every four by 1980.*

In short, unless the demand for goods and services expands as rapidly as it did in the great postwar and Korean surge of 1947 to 1957, we shall have a serious unemployment problem even if the improvements in labor productivity slow down. Or, to put it another way, if technology and automation continue at their current rate or better, we shall

* The calculations underlying these estimates are set forth in the statistical appendix.

have a serious unemployment problem unless the demand for goods and services grows substantially faster than it grew during the 1947 to 1957 decade; maintenance of the extraordinary 1960 to 1965 growth rates would be barely adequate to prevent a dangerous level of unemployment in the years to come.

Indeed, the problem may be even more serious than it has been painted here. All of the assumptions underlying these calculations are reasonable and within the limits of recent experience. There has been no distortion to produce a dramatic result. We have avoided throwing into the projections the impact of a major depression, brought on perhaps by balance of payments or credit and financial maladjustments, in which demand not only fails to grow but actually collapses. Nor have we considered the possibility that employers might resist any shortening in the workweek or that political resistances might curtail the role of government and require even greater rates of growth in expenditures by consumers and business firms. Yet each of these excluded factors would make the problem substantially worse than it appears to be already.

## 6.

There is no denying the unpleasant implications. But we have strayed into error once again: the technique we have used is still only economic arithmetic, not economic

analysis. Each component of the picture has been estimated separately, yet each influences the others and is influenced by them. Productivity changes, the size of the labor force, the expectations of businessmen and consumers, government policies—none of these is a completely independent variable that we can project in isolation.

One point, however, does seem clear: unless demand rises at least as rapidly as it rose during the first half of the 1960s, or, in other words, unless the expansion in demand can be sustained well above the long-term record of the American economy, we are headed for trouble. Even under the best of circumstances, the adjustment from an economy characterized by labor shortage to one with a surplus of labor can hardly be smooth and easy.

Remember that we have no guarantee at all that consumers and businessmen will increase their expenditures at a rate fast enough to provide jobs for all those who seek them. If the demands of the private sector fall short, then only the government is left to take up the slack, whether it be large or small. We have no other alternative to the waste and social turmoil of massive unemployment. Yet current attitudes toward government spending and toward the financing of government expenditures are ambivalent, confused, distorted, and biased. The persistence of these attitudes into the 1970s can be positively dangerous. The following chapters, therefore, are an attempt to take a fresh look at this subject by cutting away the myth and analyzing the reality.