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U.S. ECONOMIC GROWTH TO 1975: POTENTIALS AND PROBLEMS

STUDY PREPARED FOR THE
SUBCOMMITTEE ON ECONOMIC PROGRESS
OF THE
JOINT ECONOMIC COMMITTEE
CONGRESS OF THE UNITED STATES

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LETTERS OF TRANSMITTAL

DECEMBER 12, 1966.

To the Members of the Joint Economic Committee:

For the information of members of the Joint Economic Committee, other Members and committees of Congress, and the general public, there is transmitted herewith an analysis by the committee staff of the potentials and problems of economic growth of the United States to 1975. This is one of a series of publications reviewing efforts of the committee and its staff to analyze trends in the economy and the possible issues which the committee and other organizations, public and private, may have to face in the years ahead.

It is understood, of course, that these materials do not necessarily represent the views of the committee or of any of the individual members, nor do they contain either implicitly or explicitly recommendations as to the direction of future public policy. The intention is to aid the process of discussion and study so that by the time the issues become sufficiently pressing to require decision, there will be an increased level of knowledge and wide areas of agreement as to the solutions. In this way, we may get more intelligent decisions by avoiding the necessity for last-minute decisions and an atmosphere of crisis or extreme time pressure. The study deserves the most careful consideration by all interested in the future of public policy.

WRIGHT PATMAN,
Chairman, Joint Economic Committee.

DECEMBER 9, 1966.

Hon. WRIGHT PATMAN,
Chairman, Joint Economic Committee,
U.S. Congress, Washington, D.C.

DEAR MR. CHAIRMAN: The results of the study transmitted herewith indicate very strong potentials for a high rate of economic growth in the next decade; in fact, a rate substantially above the long-term rate which has been experienced in the first two-thirds of this century. This high growth rate will be associated with a number of problems, both public and private, and these materials have been constructed in such a way that they may assist the Joint Economic Committee in the years ahead to study the issues that may arise in public and private policy and contribute to their solution by early recognition and action.

An undertaking such as the present long-range projection and associated policy analysis must be carefully distinguished from a flat prediction of the future. There are many unpredictable variables outside the realm of competence of economists that will affect the future course of economic events. Accurate prognostication is not therefore to be expected. On the other hand, it is most useful to attempt to project the future course of the economy on the basis of reasonable assumptions derived from past experience. This permits the development of a range of prospects for the future and an analysis

of the problems that will arise because extension of past trends into the future will reveal inconsistencies which will make realization of optimum performance in accordance with Employment Act objectives difficult or impossible, without policy changes. For example, what will happen to the fiscal budget over the years as a result of economic growth, if past trends are extended into the future unchanged, along with present policies? Will the high employment budget develop substantial surpluses which will impede the realization of full employment, such as happened in the late 1950's and the beginning of the 1960's? By formulating notions as to the magnitude of such prospects and many others, it is possible for the analyst to assist policymakers in arriving at reasonable ideas as to the scope of the programs that will have to be modified or improved to offset the effect of the continuation of past trends in the economy. The need for long-range policy planning by both private and public organizations is accentuated by rapid technological, social, and cultural changes occurring throughout the land.

It would be possible to derive projections and policy analysis, such as are in these materials, on a wide variety of assumptions. We have chosen two sets of assumptions which seem to embrace the range of the most reasonable prospects and because they are very useful in illustrating the kind of policy issues that are most likely to develop. It must be recognized, however, that from time to time in the years ahead such studies must be checked to insure that developments are not occurring that swing economic trends outside the bounds that are assumed here.

The staff was most fortunate in obtaining the cooperation of the Department of Commerce in the preparation of these materials. We are particularly grateful to the Department of Commerce for making available the professional expertise and judgment of Dr. Louis J. Paradiso, Associate Director, Office of Business Economics, and the services of his staff aides, Miss Mabel A. Smith and Mrs. Irene M. Mattia, to carry out in a personal capacity the projections and the underlying analyses contained in this work. The Office of Business Economics takes no responsibility for the projections and analyses. In addition, we are appreciative of the work done for us by Dr. Murray L. Weidenbaum, chairman of the Department of Economics, Washington University, St. Louis, Mo., for his work on the text of this study, particularly in his analysis of the policy alternatives we may face in the decade ahead. This study is undertaken as one of several projects in the program of the Subcommittee on Economic Progress which have been under the general direction of John R. Stark, deputy director of the Joint Economic Committee staff. I have worked closely at all stages of the planning, execution, and drafting of this report. Other members of the staff have contributed, and the final product should be regarded as a composite effort of all concerned. Obviously, there is no implicit or explicit recommendation as to policy in these materials or any conclusion of the staff as to needed directions of committee effort. Such recommendations and plans for the direction of committee work must be developed by the committee itself on the basis of its consideration of this study and others on the issues of the decade ahead which have been undertaken at the committee's request.

JAMES W. KNOWLES,
Executive Director.

CONTENTS

U.S. ECONOMIC GROWTH TO 1975: POTENTIALS AND GROWTH

WHAT THIS STUDY IS ALL ABOUT

The U.S. economy has a potential for a rate of economic growth of between 4 and 4½ percent per year between 1965 and 1975. This is between one-third and one-half above the rate prevailing in the first two-thirds of this century, and is substantially above the 3.5 percent prevailing over the 17 years from 1948 to 1965. This higher rate of growth will not be achieved automatically, but will require improvements and adjustments in economic policies, both public and private, if it is to be achieved in a manner that does not generate undesirable inflationary byproducts.

The above statement summarizes the results of a yearlong study undertaken by the Joint Economic Committee staff at the request of the Subcommittee on Economic Progress to determine the most probable range of the potential economic growth of the U.S. economy over the next decade and the problems that might be faced in achieving those objectives. Since this study concerns itself with economic growth as measured by potential gross national product it concentrates on changes in the Nation's ability to produce goods, services, and leisure. It is therefore not concerned directly with the conventional idea of economic progress or with the accumulation of wealth, nor with another conventional concept of economic change, namely, an expansion from year to year in real per capita gross national product.

The distinction between progress and growth in economics is a familiar distinction between means and ends. Progress relates to an increase in the welfare of the people of the Nation as a whole, while economic growth concerns itself with an increase in the economy's ability to provide the material means to satisfy individual or collective desires for different kinds of goods and services. Thus, in the end, economic growth contributes to the Nation's ability to progress, if this is what the Nation decides to do with its increase in means.

It must be kept clear, however, that economic growth does not guarantee an increase in wealth, in the skills and abilities of our people or in the quality of life. Economic growth may be accompanied by such economic progress, but we shall not here concern ourselves with whether the world is a little better for the growth or not.

The study's concentration upon economic growth naturally leads one to consideration of the Nation's capacity to produce. We have not used the word "capacity" above, but rather "potential." In many ways, the maximum output of the economy is flexible over a wide range and, hence, the capacity of the economy is indeterminate, even when industry or trade is operating at what managements ordinarily would call full capacity rates. We will not try to determine, therefore, what the capacity of the economy is, nor how fast it is

growing. This depends on factors that cannot now be foreseen. Instead, we have concentrated upon a measure of the potential or maximum employment output of our economy or the best operation which it is believed the economy is capable of sustaining on the average, year after year, without running into serious instability of employment, output, or prices. We have concentrated upon the Nation's potential output, or what would be a reasonably good performance of the economy, maintaining a stable relationship between output and capacity, without at the same time finding ourselves faced with an unacceptable rate of inflation. For each year, therefore, the potential output level represents the amount the economy could produce at assumed rates of use of the labor force and of capital, and under the assumption that productive resources are used at something approaching an economist's notion of the least cost combination of inputs. It is, in a word, a practical man's idea of what the economy as a whole could do under usual operating conditions maintainable over long periods of time, without inflationary strain or breakdown on the one hand, or wasteful slack in the system on the other.

The potential economic growth is concerned with the increase over time in the Nation's practical output at high employment of labor and plant and equipment resources without significant inflation—ideally, in fact, without any upward price movement at all on the average. We shall specify below some alternative assumptions about what this practical rate of use of production resources might be. At this point, it is sufficient to say that what we have tried to estimate are practical targets, not blue sky wonders to be produced only under the forced draft of excess demand.

The estimates for the next 10 years that are presented in the pages that follow should not be called predictions or forecasts. They are, instead, projections on the basis of a given set of assumptions, internally consistent, and reflect past relationships and trends in the economy, as well as current and known policies, public and private. They cannot be called predictions because they do not allow for those changes, particularly noneconomic changes, that may alter past relationships or trends in the future. Indeed, the very fact that such projections are made for the longer term and are studied by policymakers can put into motion forces which lead to changes in public and private programs and hence in the actual outcome. One might almost say that the very purpose of making such projections is to bring about changes that will produce a better situation in the future than would result from a mere extrapolation of the past. In no case should the economist or the agency making a projection of this sort be charged with having been a poor forecaster if the projection itself prompts adjustments in public and private policies.

It should also be clear that this study concerns itself with a portrayal of the economy within the framework of the national income and product accounts, as published by the Department of Commerce, Office of Business Economics. This particular characteristic of the study must be emphasized since this affects the way in which the outcome is determined. While other conventions or premises might be used to view and measure the economy's performance, these particular accounts are the most thoroughly developed, accurate, and generally understood set of numbers. It is for this reason that they are utilized here. Their use enables also comparison in the stream

of incomes going to various sectors of the economy and the expenditures and savings made by each of these, both public and private.

This study progresses in three stages. The first is to develop a projection into the future based upon past relationships, trends, and programs, carrying them forward into the future, without alteration. The purpose is to see what the world would look like 5 and 10 years hence if nothing were done to change the future course of events by deliberate changes in public or private programs. This "advance look" proceeds first through a projection of the supply of the goods and services that could be produced in the future; that is what has been called above the potential output of the economy, and then turns to the other side and tries to develop the stream of incomes and the demands resting upon them that would be consistent with past relationships, programs, and the future trend of the Nation's ability to produce.

The second stage is an analysis of this first model—the type of model which economists have labeled ex ante. The attempt has been made in this analysis to see what inconsistencies and imbalances turn up in the model when one tries to project the past into the future. From this was developed a series of alternative policy choices that it seems probable the Nation will have to make in the future, either in the public or the private sectors or in both. On the basis of this analysis, we moved on to stage three of the study.

The third stage of the study was the development of an illustrative model, or rather pair of models as it turns out, of how the economy might look in 1970 and 1975 if adjustments in policy were made, particularly in the public sector, that would make the model come out consistent, as far as demand and supply for goods is concerned. This adjusted or ex post model is labeled "illustrative." By this we simply mean that the particular method of bringing about a balance or equilibrium in this projection for the next 10 years is not the only one. It is not even a recommended package. It happens to be one which, from the test that it was possible to make on the model, might produce stable, high level economic growth, with a minimum of unemployment and a minimum of inflation over the period. But it is not the only possible combination of policies and it may not, as time goes on, look like the best combination. The purpose of this illustration is to point out the many complexities and adjustments as the economy responds to the changes in policy. It is to illustrate for those who must make the decisions in the future what is involved in the issues they will be faced with. It is hoped by this method to bring to the attention of technicians in public and private life who must make such choices some notion of the consequences that may be expected to flow from their decisions, and some idea of the magnitudes involved.

One thing this study is *not* concerned with—that is, recommendations by the staff, or those who aided in this study, as to what combination of policies should be followed in order to realize rapid growth, maximum employment, and stable prices in the future. The study is meant to illustrate the opportunities, the problems, and the alternatives as a guide and as a useful tool for those who must make the decisions.

WHY LOOK SO FAR AHEAD?

Since it is so difficult to analyze the economic outlook for even 6 months or a year ahead, why spend the time and resources necessary for a projection into the future for as long as a decade? The answer to this question is threefold.

First, it is actually easier to detect longrun enduring trends and structural relationships in the economy than it is to discover procedures for forecasting short-term fluctuations. In the long run, the more enduring structural characteristics of the economy dominate. The broad tides of change are so overpowering that they may in the short run produce unpredictable shifts in the outlook. In the short run, temporary changes in budget policies, military emergencies, weather cycles and agriculture, temporary speculative moods in the business world, and various events abroad may have sharp repercussions for a few months or even a year or two. Many of these forces affecting the short run are noneconomic in character; others are psychological; still others arise from temporary mistakes in public and private policies that wash out in the long run. To forecast this complex of forces and how they will affect the short-term outlook is extremely difficult, particularly for periods ranging from 6 months to 1½ or 2 years. (It should be noted however, that economists are achieving considerable success for periods up to 6 months.) Tests of longer run projections, however, uniformly show them to be more accurate than short-run projections or forecasts. Furthermore, the long-term projection is not really a forecast—it is an extension of the past into the future to see whether past structures and policies will produce longrun equilibrium and what policy issues are raised by any probable departures in the future from equilibrium. Thus the purpose of the exercise is more analytical than predictive.

Second, longrun projections provide a frame of analysis that enables us to reason in orderly fashion about the more enduring structural and persistent tendencies in the economy which dominate in the long run. As we come to understand better these long-term forces and how they operate, we improve our knowledge of the sources of temporary short-term departures from these longer run trends. Thus in a way the longer run exercise is of greater assistance in understanding and analyzing short-term events. It enables us to put them in better perspective.

Third, policy actions taken in response to short-range developments have a tendency to produce persistent and enduring effects for many years into the future. A thorough understanding of the longer run tendencies and the problems of maintaining the upward thrust of the economy over long periods are an essential precondition to correct decisionmaking in the short run. In private business, longer run projections are needed to aid management in deciding capital budget, long-range financing programs, changes in sales development programs that require long periods to accomplish, location of new facilities, product change or diversification, and similar questions which

have enduring results. Similarly, in Federal, State, and local governments the longer look is essential to provide a basis for deciding policies in regard to national security, civil works, community development, tax structures, trade development, and similar purposes. For some of these public and private purposes, the longer term projections can be confined to as little as 3 to 5 years; but in other cases, projections must go out for as long as 25 years or more for very long-lived facilities or where long-term policy decisions are at stake. We have chosen as a period for this projection the decade from 1965 to 1975; 1965 was the terminal date for a projection which was made in 1954 for the committee and 1975 seems to be far enough out, inasmuch as a 10-year span seems a suitable period for long-term analysis.

THE RELATION OF THESE PROJECTIONS TO OTHER COMMITTEE STUDIES

This study is the latest in a series of looks at the longer term projections which the staff has prepared for committee use over the past 20 years. For example, in connection with the development of policies to deal with the economic dislocations created by the Korean defense program, the staff brought together some projections for the period 1950 to 1956 under the title "National Defense and the Economic Outlook," which formed the basis for a unanimous report of the committee to the Congress entitled "Inflation Still a Danger," in August 1951.[1] In 1952, the committee published the staff analysis entitled "Sustaining Economic Forces Ahead," containing selected projections out to 1960.[2] In October 1954, the staff supplied the committee with a study very similar to the present one, cast in a similar framework extending detailed projections to the year 1965 under the title "Potential Economic Growth of the United States During the Next Decade."[3] Again in 1959, in connection with the committee's study of "Employment, Growth, and Price Levels," a member of the staff did the study of U.S. economic growth and provided alternative projections of output potentials to 1975 in a study paper entitled "The Potential Economic Growth in the United States."[4]

In addition to these longer range projections, the staff has maintained an active contact with similar projections made in private business firms, other Government agencies, and, in particular, the very extensive and regular long-range studies prepared and distributed by the National Planning Association. By this means they have kept abreast and have been able to answer questions about longer run trends between the occasions when more formal staff projects were submitted to the committee for publication. In addition to keeping track of such projections, it may be noted that the present study is part of a longer complex of studies extending over several years. One phase of this has been the preparation of some surveys of future issues that may face the Congress and the committee. Examples are a compendium of views titled "Fiscal Policy Issues of the Coming Decade: Statements by Individual Economists and Representatives of Interested Organizations,"[5] prepared for the Subcommittee on Fiscal Policy, and the compilation of views on the future of our system of economic statistics prepared for the Subcommittee on Economic Statistics in 1965.[6]

The Subcommittee on Economic Progress has had a number of studies, in addition to this one. A study on human resource programs of the Federal Government and their future is now in preparation. This deals with the ways in which Federal programs affect our human

[1] S. Rept. 644, 82d Cong., 1st sess., Aug. 15, 1951.
[2] Joint committee print, 82d Cong., 2d sess., December 1952.
[3] Joint committee print, 83d Cong., 2d sess., October 1954.
[4] Study Paper No. 20, 86th Cong., 2d sess., January 1960.
[5] Joint committee print, 89th Cong., 1st sess., February 1965.
[6] "Improved Statistics for Economic Growth: A Compendium of Views and Suggestions From Individuals, Organizations, and Statistics Users," joint committee print, 89th Cong., 1st sess., July 1965.

resource base which is so important to the economic growth of the Nation. Another project has reviewed the need for physical facilities in the public sector at the State and local level and the means for financing them. We have also started the preparation of a compendium of views of problems developing in the field of old age income assurance and the issues and alternatives facing the public and private sectors in the years ahead.

Not the least of these and other related studies has been the review by the committee of the 20 years of the Employment Act and the future ways in which it might usefully develop. This involved both an economic symposium on the 20th anniversary of the signing of the act, February 22, 1966, and a compendium of papers prepared later in the year on the basis of the printed record of that symposium.[7]

All in all, this sequence of studies and publications is intended to provide the committee with a longer range perspective on the problems and potentials of our economy. It may be seen, therefore, that the present study provides the overall economic framework within which to consider the various issues and alternatives turned up in this series of investigations. Furthermore, as was made clear earlier, it tries to provide an overview of the kinds of interrelated policy decisions that must be handled in the year ahead if we are to succeed in achieving simultaneously the objectives of the Employment Act: full employment, rapid economic growth, and stable prices.

[7] "Twentieth Anniversary of the Employment Act of 1946: An Economic Symposium" and "Twentieth Anniversary of the Employment Act of 1946: An Economic Symposium, Invited Comments on Directions for the Future," 89th Cong., 2d sess., February 1966 and August 1966, respectively.

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PRIMING THE PROJECTION MACHINERY: CRITICAL ASSUMPTIONS

As has been pointed out, the estimates presented in this study are projections not forecasts. The mechanism of the projection consists of a series of past relationships between various economic variables, together with observable long-term trends. To start up this machinery, one must first prime it with a set of assumptions that appear reasonable and realistic in view of the uses to which the resulting estimates are to be put in the later analysis. In the present case, the machinery was primed by starting off with the following basic assumptions:

(1) The war in Vietnam was assumed to terminate by the end of 1967, or at least cool down enough to allow some reductions in the size of the Armed Forces and the rate of expenditures thereafter.

(2) Two alternative sets of estimates or models are presented in the projections—the A set assumes that the rate of unemployment will average 3 percent of the civilian labor force; the B set is based on a 4-percent rate of unemployment.

(3) Different patterns were assumed for increases in gross national product per man-hour for the two models that were set up. For the A model, output per man-hour in the private sector was assumed to average 3.1 percent per year between 1966 and 1970, and 3.5 percent from 1970 to 1975; for the B model, the average annual gain was assumed to be about 3 percent per year throughout the period from now until 1975.

(4) Projections of the total labor force conform to the latest estimates of the Bureau of Labor Statistics, Department of Labor, a summary of which is provided in the next section of this report.

(5) For both sets of projections, the Armed Forces were assumed to average 2.7 million in 1970—about equal to the 1965 average—and 2.6 million in 1975.

(6) In both sets of projections, it was assumed that the average weekly hours would decline by one-half hour between 1967 and 1970, and an additional reduction of one-half hour between 1970 and 1975—these reductions being roughly comparable to those experienced in the decade of the 1920's when the economy was operating at high employment rates and enjoying rapid growth without inflation.

(7) Overall prices (as measured by the GNP deflator) for the A set were assumed to grow at an annual rate of 2 percent per year; for the B set, the price rise was assumed to be 1.5 percent per year, conforming to the experience of the period from 1959 to early 1965.

(8) Wage rates in both public and private employment were assumed to rise by the average annual gain in output per man-hour in the private economy, plus an allowance for the annual gain in consumer prices. This assumption insured that through the period of the projection the relative income shares of the GNP would be maintained at the fractions experienced at the beginning of the period.

(9) To produce a balanced model, it was necessary at a later stage in the construction of the projections to make assumptions about the rate of personal saving to disposable personal income. For the A set of projections, the assumption was 5 percent, for the B set, 5.5 percent.

It is worthy of note, in connection with these assumptions, that modest variations could be made without serious impact on the models that are projected in this study; but major changes in the assumptions would undoubtedly have important effects both on the magnitudes developed in the projection and on the analysis of their implications for policy. Specifically, should defense requirements—particularly for the Vietnamese war—mount substantially beyond what has been assumed and continue along—more than perhaps a year—beyond the termination assumed for the model, we would eventually need to reconsider the implications of this factor for the model.

The assumed changes in overall prices (GNP deflator) were chosen somewhat arbitrarily as being reasonable standards of achievement under the assumptions of 3 and 4 percent unemployment in the two sets of estimates. It is quite possible to arrive at other estimates according to what one assumes to be good or poor performance in maximum employment.

It should be stressed that the assumed rates of change in the GNP deflator and in wage rates are meant to represent effectively stable prices after allowance is made for the particular way in which prices and wages are handled in the national income accounts. The assumptions made above are roughly consistent with a stable wholesale price index but with rises in other non-goods prices to reflect two factors: First, the indexes treat changes in government wage rates as a change in the price of government services. Hence, if, as in this model, it is assumed that government wage rates move up in step with private wage rates, then the index will show a rise in the price of government services, there being no allowance for changes in productivity in this particular case. Second, the model assumes that overall shares in national income between wages and salaries, on the one hand, and other income shares, on the other, are constant. To insure this, it is necessary to make allowances in wage rates for the impact of rising service prices. If, alternatively, the model had assumed that all prices would be completely stable, that is, the GNP deflators were constant over the next ten years, then the parallel assumption for wages would be to keep them precisely in line with changes in productivity.

The reader is warned, too, concerning the basis for the assumptions about rates of personal saving. The average personal saving rate for the years 1961–65 was 5.5 percent, the rate used for the B projections. This seemed reasonable in view of the fact that this B set assumes a 4-percent unemployment rate. The lower saving rate used for the A set of projections was chosen because more of the employed labor force would be in the low-income group at a 3-percent rate of unemployment than would be the case were the unemployment rate to average 4 percent. It is a familiar phenomenon that low-income families generally save less as a proportion to their income than those in higher income classes. The increase in the proportion of the lower income group in the total labor force would naturally tend to reduce the actual saving rate.

One final warning to the reader: These projections do not present a detailed analysis of the financial side of the model. In particular, there is no explicit analysis of the relationship between the growth of the money supply and the performance of the economy under the assumptions of these two sets of projections. It was not necessary for the purposes here to specify an exact annual rate of increase in the money supply, however defined, nor to make a detailed analysis of the financial side of markets. In any case, this would have been beyond the resources available for the study. However, it must be clear that the model does assume that the Federal Reserve on the average will take steps to make possible whatever increase in the money supply proves by experience to be consistent with the growth in the economy and the assumed price levels.

HOW MUCH CAN WE PRODUCE: POTENTIAL SUPPLY

Although there are a number of ways of answering the question as to how much our economy can produce, one of the simplest ways of analyzing the problems of estimating the potential supply of GNP is: Estimate the total number of people working, the total number of hours worked, and the average output per man-hour—the total output being the product of these three numbers.

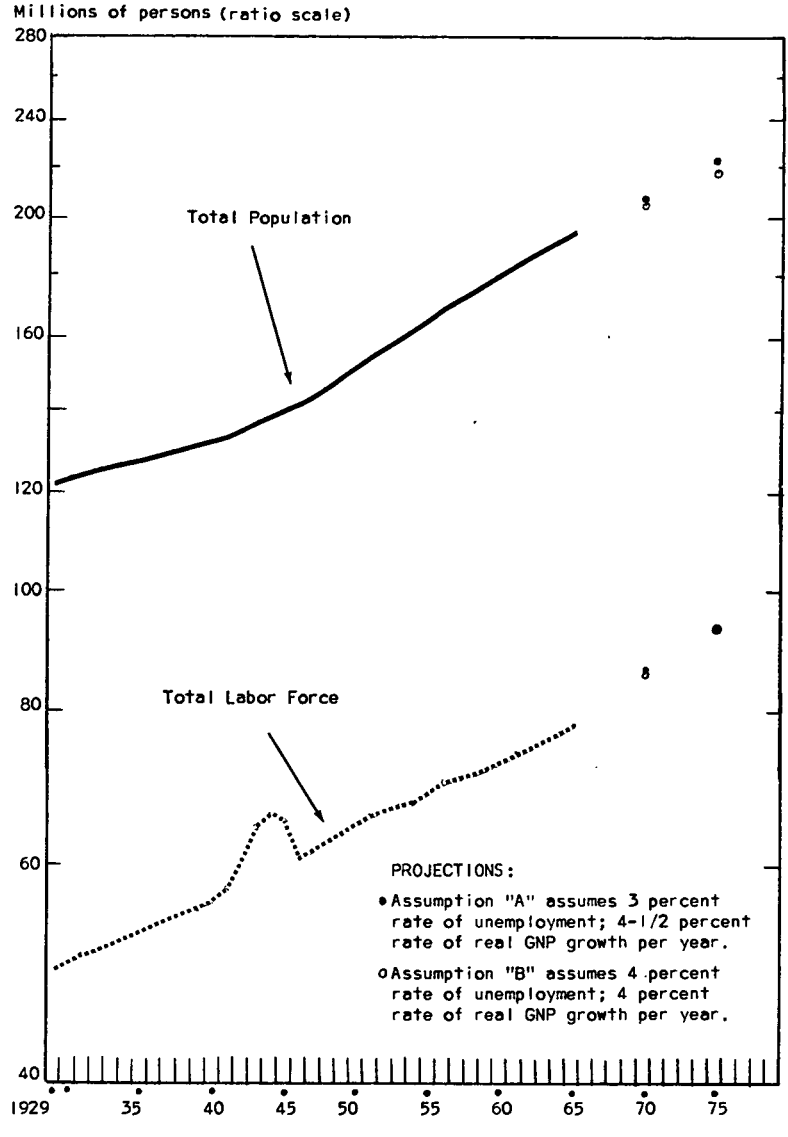
Projections of the total labor force used in this study conform with the latest estimates of the Department of Labor: Growing from about 80 million in 1966 to 86.4 million in 1970 and to 93.6 million in 1975 for the A set of estimates; and growing to 86 million in 1970 and 93.6 million in 1975 for the B set of estimates. These estimates imply an average annual rate of increase of about 1.8 percent over the coming decade, compared to the actual rate of 1.3 percent experienced from 1948 to 1964. This increased rate of growth in the total labor force reflects standard Bureau of the Census projections of the population (all of the population in the labor force in 1975 has already been born), and historical rates of participation of the total population in the labor force—the latter adjustment making allowances for the aged, the infirm, full-time students, housewives, and others not available for employment. Changes in the Armed Forces over the period are given in the assumptions in the previous section, as well as the rates of unemployment for the two sets, A and B. Labor force participation rates as a percentage of the population 14 years of age and over work out to 57.6 percent in 1970 and 57.5 percent in 1975 under assumption A, and 57.3 percent in 1970 and 57.5 percent under assumption B. Putting these figures together, we develop the estimates of labor force and employment given in table 1. Chart I pictures the movements in the total population and labor force, 1929–75. It will be noted that total employment rises somewhat more under the A assumption than under the B, rising from 74.9 million (including the Armed Forces) in 1965 to 90.9 million under the A assumption and to 90.0 million under the B assumption.

TABLE 1.—*Derivation of estimates of employment, 1965–75*

Year	Total labor force		Armed Forces	Civilian labor force		Rate of unemployment		Civilian employment	
	A	B		A	B	A	B	A	B
	Millions	*Millions*	*Millions*	*Millions*	*Millions*	*Percent*	*Percent*	*Millions*	*Millions*
1965	78.4	78.4	2.7	75.6	75.6	4.6	4.6	72.2	72.2
1966	80.0	80.0	3.1	76.9	76.9	3.8	3.8	74.0	74.0
1967	81.6	81.5	3.1	78.5	78.4	3.8	4.0	75.5	75.3
1968	83.2	83.0	2.7	80.5	80.3	3.5	4.0	77.7	77.1
1969	84.8	84.5	2.7	82.1	81.8	3.2	4.0	79.5	78.5
1970	86.4	86.0	2.7	83.7	83.3	3.0	4.0	81.2	80.0
1971	87.9	87.5	2.7	85.2	84.8	3.0	4.0	82.6	81.4
1972	89.4	89.1	2.7	86.7	86.4	3.0	4.0	84.1	82.9
1973	90.8	90.6	2.6	88.2	88.0	3.0	4.0	85.6	84.5
1974	92.2	92.1	2.6	89.6	89.5	3.0	4.0	86.9	85.9
1975	93.6	93.6	2.6	91.0	91.0	3.0	4.0	88.3	87.4

Source: U.S. Departments of Labor and Commerce; and staff, Joint Economic Committee.

CHART I.—GROWTH IN POPULATION AND LABOR FORCE, 1929–65, AND PROJECTIONS FOR 1970 AND 1975



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In the previous section, we have already indicated that we assume decline in average weekly hours by one-half hour between 1967 and 1970, and an additional one-half hour between 1970 and 1975. We also indicated assumptions about the increased output per man-hour. Chart II illustrates comparative movements in employment and output per man-hour. Putting these figures together in table 2 in index number form (1965=100), we obtain an increase in real GNP of 56.4 percent by 1975 under the A set of estimates, and at 50.7 percent under the B set. Translated into billions of 1958 dollars, this is a rise from $614 billion in 1965 to $960 billion in 1975 under the A assumption, and to $925 billion under the B set of estimates.

If we translate these constant dollar figures into current dollars using the assumption about the implicit price deflator given in the previous section, the GNP rises from $681 billion in 1965 to $1,310 billion in 1975 under the A set and to $1,205 billion under the B set. (See table 3.) It is interesting that the economy will move into the trillion dollar category around 1971 in the A model, and around 1972, a year later, in the B model.

It may be useful to look at the two models in historical perspective as illustrated in chart III. Both sets of estimates rise broadly in line with the trend of recent high employment years but somewhat above the long-term rate. The estimates indicate a potential for economic growth at a rate of 4 percent per year under the B model and 4½ percent per year under the A model over the decade, compared to about 3 percent over the last 60 years or more, and 3.5 percent over the 17 years from 1948 to 1965.[1] As will be seen in later analysis, these rates of expansion will not come automatically but will require some adjustment of public and private policies from time to time.

[1] Average annual rate of growth based on a logarithmic regression.

CHART II.—EMPLOYMENT AND PRODUCTIVITY, 1929–65, AND PROJECTIONS FOR 1970 AND 1975

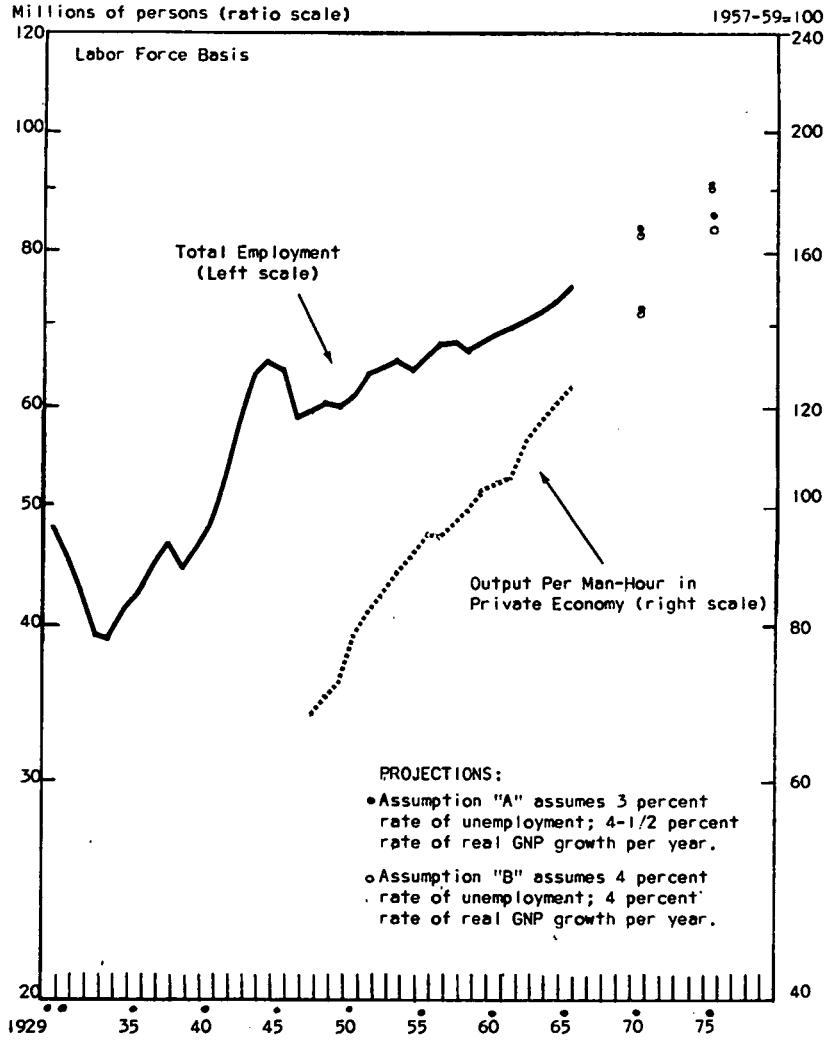

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CHART III.—GROWTH IN REAL GROSS NATIONAL PRODUCT, 1929–65, AND PROJECTIONS FOR 1970 AND 1975

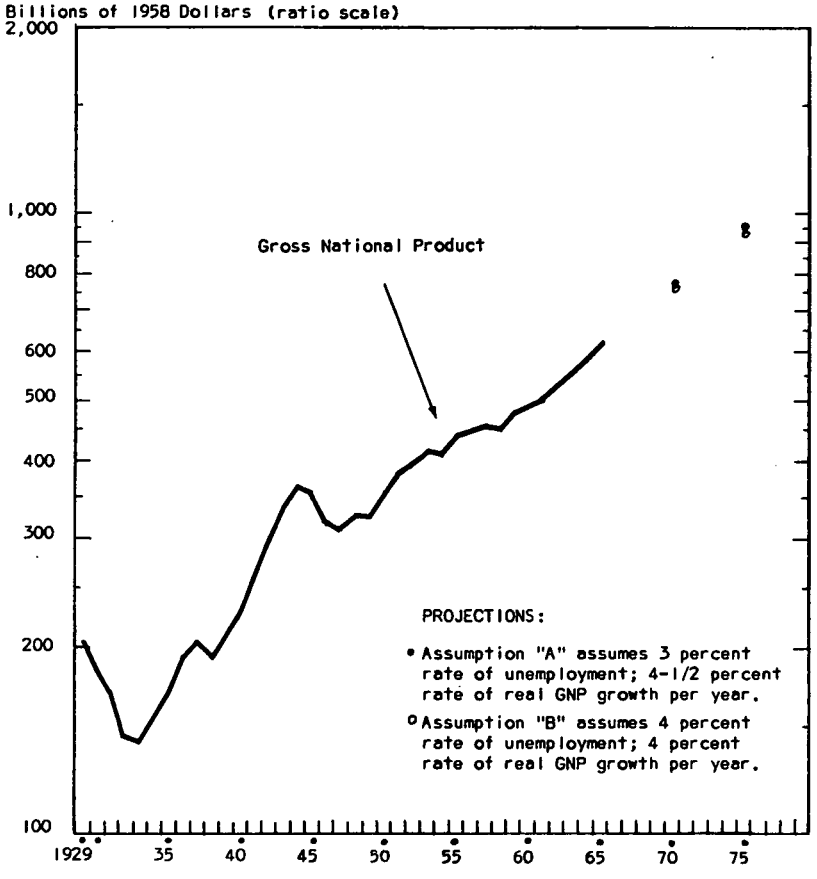

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TABLE 2.—*Estimates of potential supply of gross national product, 1966–75*

[Index 1965=100]

ASSUMPTION A

	Total employment	Hours worked per week	Total man-hours	Real GNP [1] per man-hour	Real GNP [1]	Real GNP [1] (billions of 1958 dollars)
1965 (actual)	100.0	100.0	100.0	100.0	100.0	614
1966 (estimate)	102.9	100.0	102.9	102.5	105.5	648
1967	104.9	100.0	104.9	105.1	110.3	677
1968	107.3	99.6	106.9	107.7	115.1	707
1969	109.7	99.2	108.8	110.7	120.4	739
1970	112.0	98.7	110.5	113.5	125.4	770
1971	113.9	98.4	112.1	117.2	131.4	807
1972	115.9	98.1	113.7	120.8	137.3	843
1973	117.8	97.8	115.2	124.6	143.5	881
1974	119.5	97.6	116.6	128.6	150.0	921
1975	121.4	97.4	118.2	132.3	156.4	960

ASSUMPTION B

1965 (actual)	100.0	100.0	100.0	100.0	100.0	614
1966 (estimate)	102.9	100.0	102.9	102.5	105.5	648
1967	104.7	100.0	104.7	104.9	109.8	674
1968	106.5	99.6	106.1	107.6	114.2	701
1969	108.4	99.2	107.5	110.6	118.9	730
1970	110.4	98.7	109.0	113.6	123.8	760
1971	112.3	98.4	110.5	116.3	128.5	789
1972	114.3	98.1	112.1	119.3	133.7	821
1973	116.3	97.8	113.7	122.2	138.9	853
1974	118.2	97.6	115.4	125.3	144.6	888
1975	120.2	97.4	117.1	128.7	150.7	925

[1] Assumes a 4.5-percent annual rate of growth for real GNP 1966–75 for assumption A, and 4.0 percent for asumption B.

Source: Staff of the Joint Economic Committee; and Office of Business Economics, Department of Commerce.

TABLE 3.—*Gross national product projections, 1967–75*

	Assumption A			Assumption B		
	GNP (billions of 1958 dollars) [1]	Implicit GNP price (1958=100) [2]	GNP (billions of current dollars)	GNP (billions of 1958 dollars) [3]	Implicit GNP price (1958=100) [4]	GNP (billions of current dollars)
1965 (actual)	614	110.9	681	614	110.9	681
1966 (estimate)	648	114.0	739	648	114.0	739
1967	677	116.3	787	674	115.7	780
1968	707	118.6	839	701	117.4	823
1969	739	121.0	894	730	119.2	870
1970	770	123.4	950	760	121.0	920
1971	807	125.9	1,016	789	122.8	969
1972	843	128.4	1,082	821	124.6	1,022
1973	881	131.0	1,154	853	126.5	1,080
1974	921	133.6	1,230	888	128.4	1,140
1975	960	136.3	1,310	925	130.3	1,205

[1] Assumes a 4.5-percent annual rate of growth for real GNP, 1966–75.
[2] Assumes a 2.0-percent annual increase for GNP implicit price, 1966–75.
[3] Assumes a 4.0-percent annual rate of growth for real GNP, 1966–75.
[4] Assumes a 1.5-percent annual increase for GNP implicit price, 1966–75.

Source: Staff of the Joint Economic Committee; and Office of Business Economics, Department of Commerce.

PROBABLE DEMAND PATTERNS IF THE FUTURE REFLECTS ONLY THE PAST

It is now time in this study to attempt a projection of the major components of demand over the next decade. As explained earlier, this is done in two stages. Stage 1 in this section projects the future as if it were a mirror reflection of past trends and relationships. It does not allow for the unexpected, for inconsistencies, for possible needs for policy changes. In a word, it lets the future unfold as if the economy never adjusted to growing inconsistencies between demand and supply, between incomes, expenditures, and savings. It is unfolded as if full employment, reasonably stable prices, and rapid economic growth could go on regardless of what happens to the surplus or deficit in the Government budget, regardless of what happens to the supply and demand for savings, regardless of whether incomes and expenditures really balance out in a manner that suits the preferences and habitual patterns of consumers, investors, and Government officials.

In general, these stage 1 projections of the major sectors of gross national product or expenditure and of national income were derived by one or more of the following techniques:

(1) Least squares regressions using GNP or other relevant variables which could be projected; (2) trends and ratios; and (3) other known factors which would affect the projections of particular items in the next 10 years. When the least squares method was used, the relationships were usually based on the high production years of the postwar period with little or no weight given to the recession and the early recovery years. In some cases, the more recent years were used as guides since the economic conditions or factors pertaining to the earlier years did not apply.

Projections of the Major Components of GNP in Current Dollars

1. *Personal consumption expenditures.*—These were derived as the difference between disposable personal income and other consumer outlays plus personal saving. It was therefore necessary, first, to project the national income, personal income, and disposable personal income as explained later in this section. Other consumer outlays were projected by use of a trend omitting the last few years (on the assumption that these high interest rates will not continue).

It was assumed that personal saving would be 5 percent of disposable personal income for the A projections and 5.5 percent for the B projections. The lower saving rate was used for A, since more of the employed would be in low income groups at the 3-percent rate of unemployed than would be the case for a 4-percent rate; those in the low income groups generally save less than those in the higher income classes. It may be noted that the average saving rate for the years 1961–65 was 5.5 percent, the rate used for the B projections.

(*a*) Durable goods—The projections in current dollars are based on a logarithmic regression on disposable personal income using the high employment years since 1948, excluding 1955 and 1965. This resulted in a relatively high proportion of durable purchases to disposable personal income in both 1970 and 1975.

(*b*) Nondurable goods purchases—The projections, in current dollars, were based on the extrapolation of the long-term trend of their ratios to disposable personal income.

(*c*) Services—These were obtained as a residual from total expenditures. The projected ratios of services to disposable personal income were reasonable when viewed in relation to the long-term postwar trend of these ratios.

2. *Residential structures.*—The projections were derived in real terms by extrapolating the postwar ratio to real GNP, also taking into account the projected growth of new family formations. The projected ratios of 4½ percent in 1970 and 5 percent in 1975 are higher than that of 1965, but lower than some of the high residential construction years of the postwar period, such as 1950.

3. *Change in business inventories.*—The trend of the level of real nonfarm business inventories as a ratio to real GNP was extrapolated for each year through 1975. The final inventory changes used for 1970 and 1975 were a modification of this method. It was assumed that the change in farm inventories would be negligible.

4. *Net exports of goods and services.*—These projections were obtained from a series of several relationships.

(*a*) Merchandise exports in constant dollars were computed from a relationship to a weighted average of GNP for OECD countries, Canada, and Japan (using U.S. exports to these countries in 1964 as weights) and merchandise imports for the preceding year. The regression was computed from the data for the years 1953–65 excluding 1956 and 1957. The growth rates assumed for the real GNP abroad represented extensions of trends of recent years; for the A set the annual growth rate was assumed to be 5.4 percent per year, and for the B set, 4.8 percent was used.

Exports of services in constant dollars were extrapolated by a trend developed from the period 1953–65.

(*b*) Merchandise imports in current dollars were derived from a relationship to GNP based on the period 1948–65; military expenditures were assumed to be close to the 1965 rate. Imports of services in current dollars were derived from a relationship to disposable personal income for the years 1953–65.

5. *Federal purchases of goods and services.*—A moderate rise was assumed in Federal civilian employment in 1970 and in 1975 from the 1965 level to conform with requirements for administering programs in existing legislation. Compensation per employee was increased by the assumed gains in private productivity and in consumer prices. Other purchases were held constant in real terms at the 1965 rate. It was assumed that the increases in prices of these other Federal purchases would be the same as those assumed for the total GNP implicit prices.

6. *State and local purchases.*—These were projected from a relationship of the purchases to national income (derived as described below).

The period used was 1952–65 excluding the recession years, 1954, 1958, and 1961.

7. *Nonresidential fixed investment.*—This was derived as a residual from the sum of the above sectors and the projected GNP. The resulting investment projections yielded ratios to real GNP in 1970 and 1975, which were considerably above the high 1965 ratio. Such high investment rates could not be sustained for long or, if so, would result in excess capacity which would be followed by a downward adjustment in investment. This implies that the projections as developed did not generate enough personal consumption expenditures or that government expenditures are insufficient, or both are too low. An illustrative case is given below in model II to show one way the projections could be modified so as to achieve an equilibrium condition at the assumed high levels of GNP and employment.

Implicit Prices

The conversion from current dollars to constant dollars, or vice versa, for the major GNP components, was usually obtained by projecting the implicit prices for each category on the basis of a logarithmic relationship to the overall GNP implicit price. The relationships were generally based on the period 1957–65; in most cases the correlation was quite high.

National Income

The national income projections were derived by adjusting the GNP for capital consumption allowances, indirect business taxes, and other items. The projections of national income were the same for both models I and II, although it is recognized that there should be a small difference in view of the lower rate of investment involved in model II from that of model I and, hence, a somewhat smaller projected capital consumption allowance—but this adjustment would be relatively minor.

(*a*) *Capital consumption allowances.*—These projections were based on the recent relation between corporate capital consumption allowances and GNP; that is, for the period 1962–65. The year 1962 was the first year of liberalized depreciation allowance and the relationship shifted from that of the earlier years. For the noncorporate capital consumption allowances, the 1960–65 trend was utilized.

(*b*) *Indirect business taxes.*—The Federal portion was projected from a regression to GNP (1955–65), adjusted to eliminate all so-called nuisance taxes. Projections of State and local property taxes were based on a regression with wages and salaries in State and local education, which, in turn, were derived from the trend of the number of school-age persons (5- to 21-year-olds) multiplied by the average expenditure per school-age person. All other indirect business taxes were based on a relationship with GNP for recent years.

(*c*) *Business transfers.*—These were based on separate trends for the corporate and noncorporate sectors; trends were also used to project subsidies less current surplus of Government enterprises.

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Shares of National Income

With projections of national income determined, the next step was to project the major shares.

(*a*) *Private compensation.*—The total of private wages and salaries and proprietors' income was based on projected private productivity, employment, hours, and consumer prices. Projections of proprietors' income (described below) were then subtracted to arrive at private wages and salaries. Private supplements were projected from their relation to wages and salaries and adjusted for changes in tax rates and base as defined in existing legislation; the estimates were derived by components.

(*b*) *General government compensation.*—Compensation per employee was increased at the rate of 4.8 percent per year for the A set of assumptions and 4.2 percent for the B set. The 1970 Federal employment conforms with recent BLS projections; from 1970 to 1975, Federal civilian employment was increased by 20,000 per year; the number in the Armed Forces was arbitrarily reduced from 2.7 million in 1970 to 2.6 million in 1975.

Projections of State and local government employment were based on a regression with total employment and a time factor to allow for net growth; an additional employment of 1 million was allowed by 1975 to provide for the expansion of the antipoverty programs under assumption A, and 700,000 under assumption B.

(*c*) *Proprietors' income.*—

1. For business and professional income, the 1948–59 trend was extrapolated for the A set, and the slower growth from 1960 to 1965 was used for the B set.

2. For farm proprietors' income, the projections were based on discussions with economists of the Department of Agriculture.

(*d*) *Rental income.*—The projections were based on the trend for 1960–65 for assumption A and for 1953–65 for assumption B.

(*e*) *Net interest.*—The projections were derived from an extrapolation of recent data using a free hand curve so as to allow for an assumed decline in interest rates from recent highs.

(*f*) *Corporate profits and IVA.*—These were projected as a residual, that is, the sum of other shares subtracted from the projected national income.

(*g*) *Corporate profits tax liability.*—These were projected by applying 1966 effective tax rates to corporate profits before taxes.

(*h*) *Dividends.*—These were projected on the basis of a regression involving corporate cash flow and a time trend. Cash flow is defined as corporate retained earnings plus capital consumption allowances. The following identity was used: Corporate profits after taxes equals dividends plus retained earnings.

Personal Income and Disposable Personal Income

The new elements needed for these projections are: Contributions for social insurance, transfer payments, interest paid by Government and consumers, and personal taxes.

1. *Contributions for social insurance.*—These projections were obtained primarily on the basis of relations of the major components to taxable wages and salaries with adjustments made for changes in tax rates and base in accordance with present legislation.

2. *Government transfers to persons.*—The projections are based on estimates of number of beneficiaries. For OASI these were estimated from a trend of past years; for unemployment insurance, the number was projected from a relation of average unemployment insurance beneficiaries to unemployment in high employment years. For other transfers, a trend was used. Benefits due to added programs in present legislation which apply to future years were based on projections for 1970 by the Department of Health, Education, and Welfare and other agencies; for 1975 increases were extrapolated on a judgmental basis.

Transfer payments to foreigners were projected from a trend for recent years.

3. *Net interest paid by the Government.*—Federal net interest paid was projected from a relation to gross Federal debt (assumed to be held at a ceiling of $335 billion) and interest rates; a slow rise in interest rates from those in 1964 was assumed. State and local net interest paid was projected lower than the level in recent years on the assumption that interest rates will be somewhat lower.

4. *Personal taxes.*—Projections of Federal personal taxes were derived from a relationship of these taxes to personal income less transfers for the period 1964–66 when tax rates were reduced. State and local personal taxes were related to personal income less transfers for the period 1960–65.

5. Finally, to obtain projections of personal outlays, it was necessary to estimate personal outlays other than purchases of goods and services. These were based on a relation to GNP for the period 1955–63, assuming some reduction from the high interest rates of the past two years.

The projections developed in these stage 1 extensions of the past into the future are summarized in tables 4 through 10. It cannot be too strongly emphasized that these are preliminary estimates obtained by projecting the past into the future without adjustment for any imbalances or distortions which the economy would normally adjust to as it went along, and without allowing for any changes in policy which might be made in response to these developing imbalances. They are intended to point up the areas in which adjustments must be expected and which may call for policy shifts in the years ahead. They set the background for the next stage in the two sections below which analyze these imbalances and the policy choices which they present. The final projections are in the last section of this report.

TABLE 4.—*Projections of gross national product* [1]

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
	Billions of current dollars				
Gross national product	681.2	950.0	1,310.0	920.0	1,205.0
Personal consumption expenditures	431.5	593.0	790.5	575.7	741.3
Durable goods	66.1	91.2	121.9	86.5	111.6
Nondurable goods	190.6	244.2	305.7	238.3	288.0
Services	174.8	257.6	362.9	250.8	341.7
Gross private domestic investment	106.6	157.0	249.3	151.0	213.6
Nonresidential fixed investment [2]	69.7	101.5	160.9	98.5	135.6
Residential structures	27.8	46.0	72.7	44.3	66.0
Change in business inventories	9.1	9.5	15.7	8.2	12.0
Net exports of goods and services	7.0	9.2	10.8	9.3	12.1
Exports	39.0	52.1	69.2	51.0	66.2
Imports	32.0	42.9	58.4	41.7	54.1
Government purchases of goods and services	136.2	190.8	259.4	184.0	238.0
Federal	66.8	79.0	93.1	76.9	88.3
State and local	69.4	111.8	166.3	107.1	149.7
	Billions of 1958 dollars				
Gross national product	614.4	770.0	960.0	760.0	925.0
Personal consumption expenditures	396.2	498.3	611.8	491.6	595.4
Durable goods	66.4	91.1	120.9	87.0	112.6
Nondurable goods	178.2	210.7	245.0	208.7	238.6
Services	151.6	196.5	245.9	195.9	244.2
Gross private domestic investment	97.8	129.0	183.4	126.3	165.9
Nonresidential fixed investment [2]	64.9	86.7	123.9	85.3	110.5
Residential structures	24.1	34.6	48.0	34.2	46.2
Change in business inventories	8.8	7.7	11.5	6.8	9.2
Net exports of goods and services	6.3	7.9	8.5	8.1	9.9
Exports	37.3	49.6	64.7	48.6	61.9
Imports	31.0	41.7	56.2	40.5	52.0
Government purchases of goods and services	114.1	134.8	156.3	134.0	153.8
Federal	57.8	58.8	60.3	58.8	60.9
State and local	56.3	76.0	96.0	75.2	92.9

[1] The set of projections in tables 4–10 are based on existing Federal tax legislation and programs together with other economic assumptions described in the text.
[2] Obtained as residual.

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

NOTES

Gross national product
- Assumption A based on 4.5 percent annual rate of growth for real GNP and 2.0 percent annual price increase 1966–75.
- Assumption B based on 4.0 percent annual rate of growth for real GNP and 1.5 percent annual price increase 1966–75.

Personal consumption expenditures—
- Assuming a personal saving rate of 5.0 percent under assumption A and 5.5 percent under assumption B.
- Durable goods—a relatively high proportion of DPI.
- Nondurable goods —extenstion of trend of ratio to DPI.
- Services—residual.

Residential structures—ratio to real GNP.

Change in business inventories—ratio to real GNP.

Net exports—
- Merchandise exports (58$) = −2.090+.198 GNP abroad +.238 merchandise imports in preceding year. (53–65 ex. 56, 57).
- Services exports (58$) −trend (53–65).
- Merchandise imports=.158+.0295 GNP (48–65).
- Services imports= −2.688+.0224 DPI (53–65).
- Military expend.—arbitrary.

Federal purchases—Compensation per employee increased with private productivity gain and consumer price rise. Other purchases held constant in real terms; price increases of 2.0 percent and 1.5 percent per year for assumptions A and B, respectively.

State and local purchases—Y= −29.30+.1796 (national income) (52–65 ex. 54, 58, 61).

Nonresidential fixed investment—Residual.

Deflators—Based on relation to GNP implicit price.

TABLE 5.—*Gross national product and national income*

[In billions of dollars]

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
Gross national product	681.2	950.0	1,310.0	920.0	1,205.0
Less: Capital consumption allowances	59.6	78.2	101.6	76.6	96.2
Indirect business tax and nontax liability	62.7	83.7	115.8	81.4	108.2
Business transfer payments	2.6	3.3	4.1	3.3	4.1
Statistical discrepancy	−1.6				
Plus: Subsidies less current surplus of Government enterprises	1.0	.8	.4	.8	.4
Equals: National income	559.0	785.6	1,088.9	759.5	996.9
Less: Corporate profits and IVA	74.2	106.5	151.6	99.2	118.1
Contributions for social insurance	29.2	49.5	69.3	48.4	66.0
Plus: Government transfer payments to persons	37.1	60.6	84.4	59.6	79.5
Interest paid by government (net) and consumers	20.6	28.6	37.9	27.9	35.6
Dividends	19.2	25.4	33.4	24.6	29.8
Business transfer payments	2.6	3.3	4.1	3.3	4.1
Equals: Personal income	535.1	747.5	1,027.8	727.3	961.8
Less: Personal tax and nontax payments	66.0	104.9	169.0	100.3	152.9
Equals: Disposable personal income	469.1	642.6	858.8	627.0	808.9
Less: Personal outlays	443.4	610.5	815.9	592.5	764.4
Personal consumption expenditures	431.5	593.0	790.5	575.7	741.3
Other personal outlays	11.9	17.5	25.4	16.8	23.1
Equals: Personal saving	25.7	32.1	42.9	34.5	44.5
Personal saving rate (percent)	5.5	5.0	5.0	5.5	5.5
National income	559.0	785.6	1,088.9	759.5	996.9
Compensation of employees	392.9	555.2	779.8	543.1	731.5
Wages and salaries	358.4	501.0	701.5	489.9	657.8
Private	289.1	399.2	560.1	392.2	525.1
General government	62.3	92.3	128.3	88.5	120.3
Government enterprises	6.9	9.5	13.1	9.2	12.4
Supplements to wages and salaries	34.5	54.2	78.3	53.2	73.7
Private	28.5	45.8	66.7	44.9	62.7
General government	5.5	7.7	10.7	7.6	10.1
Government enterprises	.6	.7	.9	.7	.9
Proprietors' income	55.7	71.0	84.0	65.0	75.0
Business and professional	40.7	55.0	68.0	50.0	60.0
Farm	15.1	16.0	16.0	15.0	15.0
Rental income of persons	18.3	20.9	23.5	20.2	22.3
Corporate profits and IVA	74.2	106.5	151.6	99.2	118.1
Profits before tax	75.7	109.5	154.6	101.7	120.6
Profits tax liability	31.2	45.7	65.1	42.5	50.8
Profits after tax	44.5	63.8	89.5	59.2	69.8
Dividends	19.2	25.4	33.4	24.6	29.8
Undistributed profits	25.3	38.4	56.1	34.6	40.0
Inventory valuation adjustment	−1.5	−3.0	−3.0	−2.5	−2.5
Net interest	17.8	32.0	50.0	32.0	50.0

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

NOTES

Capital consumption allowances—
Corporate—Y = 1.44 + .0512 GNP (62–65).
Noncorporate—trend (60–65).

Indirect business taxes—
Federal—Y = 1.12 + .024 GNP, adjusted for tax cuts enacted (55–1st half 65).
State & local property taxes—log Y = .353 + .793 log (state and local public education wages and salaries) (50–65).
Education wages and salaries = Number. of 5–21 year olds × average expenditure for each (trend).
All other indirect business taxes—Y = −3.25 + .038 GNP (60–65).

Business transfers—Corporate—Trend (55–65 ex. 62). Noncorporate—trend (55–65).

Subsidies, etc.—Federal Trend (61–65 ex. 63). State and local—trend (59–65).

Private wages and salaries (plus proprietors' income)—Based on changes in private productivity, employment, hours, and consumer prices.

Private supplements—Relation to wages and salaries adjusted for changes in tax rates and base; derived by components.

General government compensation—Compensation per employee increased 4.8% per year under assumption A and 4.2% per year under assumption B. 1970 employment from BLS. For 1975, Federal civilian employment increased 20,000 per year; military reduced to 2.6 million (2.7 million in 1970); state and local employment based on regression with total employment and time factor plus additional 1 million under poverty programs under assumption A, and 700 thousand under assumption B.

Proprietors' income—
Business & professional—Trend (48–59) for assumption A; slightly higher rate of growth than in 1960–65 used for assumption B.
Farm—Based on discussion with Department of Agriculture economists.

Rental income—Trend (60–65) for assumption A; trend (53–65) for assumption B.

Net interest—Freehand extension of trend (curve).

Corporate profits and IVA—Residual.

Dividends—Y = 5.97 + .1415 (cash flow) + .336 (yaar-1960) (55–65).

Other personal outlays—Y = −3.44 + .022 GNP (55–63) (assuming interest rates will come down).

Contributions, transfers—See Table 7 notes.

Taxes—See Table 6 notes.

TABLE 6.—*Government receipts and expenditures*

[In billions of dollars]

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
FEDERAL GOVERNMENT					
Receipts	124.9	187.0	277.0	179.1	246.9
Personal tax and nontax receipts	54.2	84.0	132.7	80.4	120.5
Corporate profits tax accruals	29.1	42.6	60.6	39.6	47.3
Indirect business tax and nontax accruals	16.8	17.7	24.1	17.2	22.2
Contributions for social insurance	24.8	42.7	59.6	41.9	56.9
Expenditures	123.4	169.4	222.8	163.8	203.1
Purchases of goods and services	66.8	79.0	93.1	76.9	88.3
Transfer payments	32.4	54.3	76.5	53.3	71.6
To persons	30.3	51.9	73.9	50.9	69.0
To foreigners (net)	2.2	2.4	2.6	2.4	2.6
Grants-in-aid to State and local governments	11.2	20.0	35.0	17.5	25.0
Net interest paid	8.7	11.1	12.6	11.1	12.6
Subsidies less current surplus of government enterprises	4.2	5.0	5.6	5.0	5.6
Surplus or deficit(−), national income and product accounts	1.6	17.6	54.2	15.3	43.8
STATE AND LOCAL GOVERNMENT					
Receipts	75.3	116.8	177.2	111.0	156.0
Personal tax and nontax receipts	11.8	20.9	36.3	19.9	32.4
Corporate profits tax accruals	2.0	3.1	4.5	2.9	3.5
Indirect business tax and nontax accruals	45.8	66.0	91.7	64.2	86.0
Contributions for social insurance	4.5	6.8	9.7	6.5	9.1
Federal grants-in-aid	11.2	20.0	35.0	17.5	25.0
Expenditures	73.7	116.9	172.2	112.2	155.6
Purchases of goods and services	69.4	111.8	166.3	107.1	149.7
Transfer payments to persons	6.9	8.7	10.5	8.7	10.5
Net interest paid	.6	.6	.6	.6	.6
Less: Current surplus of government enterprises	3.2	4.2	5.2	4.2	5.2
Surplus or deficit(−), national income and product accounts	1.6	−.1	5.0	−1.2	.4

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

NOTES

Personal taxes—
- Federal—Relation to personal income less transfers for selected quarters of 1964–66.
- State and local—log $Y = -3.574 + 1.727$ log (personal income less transfers) (60–65).

Corporation profits taxes—
- Federal—Trend of ratio to profits before taxes.
- State and local—Trend of ratio to profits before taxes.

Indirect business taxes—See table 5 notes.

Contributions for social insurance—See table 7 notes.

Federal grants-in-aid—
- For assumption A, same average percentage increase 65–75 as in 60–65.
- For assumption B, somewhat larger average absolute increase than 62–65.

Purchases of goods and services—See table 4 notes.

Transfer payments to persons—See table 7 notes.

Transfer payments to foreigners—Trend.

Net interest paid—
- Federal—Relation to gross Federal debt (held at $335 billion); slow rise in interest rates.
- State and local—arbitrary.

Subsidies less current surplus of government enterprises—Table 5 notes.

TABLE 7.—*Contributions for social insurance and government transfers to persons*

[In billions of dollars]

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
CONTRIBUTIONS FOR SOCIAL INSURANCE					
Old-age and survivors insurance	17.4	33.2	47.3	32.6	45.0
Employer contributions	8.2	15.7	22.5	15.5	21.5
Private	7.2	14.3	20.6	14.1	19.6
Government	1.1	1.4	1.9	1.4	1.9
Employee contributions	8.2	15.7	22.5	15.5	21.5
Self-employed persons contributions	1.0	1.8	2.3	1.6	2.0
Unemployment insurance	3.8	5.1	6.8	5.0	6.5
Other	8.0	11.2	15.2	10.8	14.5
Total	29.2	49.5	69.3	48.4	66.0
GOVERNMENT TRANSFER PAYMENTS TO PERSONS					
Old-age and survivors insurance	18.1	31.4	42.7	31.4	42.7
Unemployment insurance	2.3	2.7	3.3	3.7	4.4
Other	16.8	26.5	38.4	24.5	32.4
Total	37.1	60.6	84.4	59.6	79.5

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

NOTES

Contributions to social insurance—Primarily, relation to wages and salaries adjusted for changes in tax rates and base; derived by components.

Government transfers to persons—

Number of beneficiaries: OASI-trend; UI—relation to unemployment in high employment years. Other transfers—trend.

Increase in benefits—Judgment, based on projections for 1970 by HEW and other agencies.

TABLE 8.—*Percent distribution of GNP* [1]

	Actual 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
GNP	100.0	100.0	100.0	100.0	100.0
Personal consumption expenditures	63.3	62.4	60.3	62.6	61.5
Durable goods	9.7	9.6	9.3	9.4	9.3
Nondurable goods	28.0	25.7	23.3	25.9	23.9
Services	25.7	27.1	27.7	27.3	28.4
Gross private domestic investment	15.6	16.5	19.0	16.4	17.7
Nonresidential fixed investment (residual)	10.2	10.7	12.3	10.7	11.8
Residential structures	4.1	4.8	5.5	4.8	5.5
Change in business inventories	1.3	1.0	1.2	.9	1.0
Net exports of goods and services	1.0	1.0	0.8	1.0	1.0
Government purchases of goods and services	20.0	20.1	19.8	20.0	19.8
Federal	9.8	8.3	7.1	8.4	7.3
State and local	10.2	11.8	12.7	11.6	12.4

[1] Based on table 4.

TABLE 9.—*Percent distribution of real GNP* [1]

[In billions of dollars]

	Actual 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
GNP	100.0	100.0	100.0	100.0	100.0
Personal consumption expenditures	64.5	64.7	63.7	64.7	64.4
Durable goods	10.8	11.8	12.6	11.4	12.2
Nondurable goods	29.0	27.4	25.5	27.5	25.8
Services	24.7	25.5	25.6	25.8	26.4
Gross private domestic investment	15.9	16.8	19.1	16.6	17.9
Nonresidential fixed investment (residual)	10.6	11.3	12.9	11.2	11.9
Residential structures	3.9	4.5	5.0	4.5	5.0
Change in business inventories	1.4	1.0	1.2	.9	1.0
Net exports of goods and services	1.0	1.0	.9	1.1	1.1
Government purchases of goods and services	18.6	17.5	16.3	17.6	16.6
Federal	9.4	7.6	6.3	7.7	6.6
State and local	9.2	9.9	10.0	9.9	10.0

[1] Based on table 4.

TABLE 10.—*Percent distribution of national income* [1]

	Actual 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
National income	100.0	100.0	100.0	100.0	100.0
Compensation of employees	70.3	70.7	71.6	71.5	73.4
Private	58.2	57.9	58.8	58.9	60.3
Wages and salaries	53.0	52.0	52.6	52.9	53.9
Supplements	5.2	5.9	6.2	6.0	6.4
General government	12.1	12.7	12.8	12.7	13.1
Federal	5.1	4.7	4.3	4.7	4.4
State and local	7.0	8.1	8.5	8.0	8.7
Proprietors' income	10.0	9.0	7.7	8.6	7.5
Business and professional	7.3	7.0	6.2	6.6	6.0
Farm	2.7	2.0	1.5	2.0	1.5
Rental income	3.3	2.7	2.2	2.7	2.2
Net interest	3.2	4.1	4.6	4.2	5.0
Corporate profits and IVA (residual)	13.3	13.6	13.9	13.1	11.8

[1] Based on table 5.

THE PAST BECOMES UNBALANCED IN THE FUTURE

As we moved from the past into the future in the previous section, it became quickly apparent that some of the relationships would indicate the development of distortions or imbalances between various components of the economy in future years. In this section we note briefly the major imbalances that appeared; then in the following section we will discuss something of the policy alternatives and their implications as they may arise over the next decade. The last section of the report will give illustrative solution to the problem of attaining equilibrium in the years ahead.

The projections described above were examined for reasonableness by comparing relevant ratios with those for the postwar period. As already indicated, the ratio of real nonresidential fixed investment to real GNP was higher than any year of the postwar period for both the A and B sets. Corporate profits ratios were also high by the same standard.

The foregoing detailed projections permitted the computation of the Federal surplus generated in 1970 and 1975 under existing tax legislation and programs. One other item is needed to obtain this computation, that is, Federal grants-in-aid to State and local governments. For the A set these are assumed to grow at the same average percentage increase in the 1965–75 period as in the 1960–65 period; for the B set, a somewhat larger absolute annual increase than that of the 1962–65 period was used. The surplus turned out to be very large for both the A and B sets of projections.

It is quite apparent that if the past relationships continued into the future they indicated a tendency for the economy to reach investment levels that were completely unsustainable for any long period of time and, at the same time, a tendency for large Federal surpluses to act as an impediment to maximum economic performance. The general problem presented, therefore, was to outline the ways in which the economic policies of the Government, as well as the private sector, could be readjusted so as to bring out a sustainable set of relationships between incomes, expenditures, savings, and investment that would be consistent with continuing maximum employment, rapid economic growth, and reasonably stable prices. The section below outlines some of those choices and their implications.

Major Policy Implications

Long-term projections of the American economy, such as those contained in this report, point up some of the important emerging questions of public policy in the field of economics. The distinction between longer term projections (those covering 5 to 10 years or more) and shorter term projections (covering the next year or two) carries over into any analysis of their policy implications. This study focuses on those longer term policy implications. Specifically, it is assumed that by the 1970–75 time period, U.S. military expenditures

in Vietnam will be considerably reduced from the present level. Various military and political conditions are consistent with that essentially economic assumption, ranging from an informal cessation of hostilities to the formal signing and execution of an international peace agreement.

In any event, this section of the report does not deal with the important current questions of the economic adjustments to the present defense buildup required to carry out U.S. commitments in Vietnam. Rather, it deals with the types of problems that are likely to exist in the period thereafter. It is hoped that, given this leadtime, significant advance thought and attention can thus be focused on the types of economic problems that are likely to face the Nation in the coming decade.

It should be recognized, however, that important long-term implications may flow from current short-term decisions. For example, the choice of tax increases to finance Vietnam costs would strengthen future revenue capabilities of the Federal Government vis-a-vis future requirements for Government spending. Reliance on tighter restraints on nondefense public outlays would serve to add to the backlog of unfilled civilian demands in the public sector which would be present in the post-Vietnam period.

The following is an attempt to show the variety of the questions of long-term economic policy that are likely to arise during the coming decade and to indicate many of the difficult interrelationships. The tabulation by no means is exhaustive:

1. What are the major alternative methods of attaining the economic growth rates projected in this report and what are the implications involved in selecting among these methods?
2. What are likely to be the policy reactions to the rising supply of potential workers as indicated by projections of the labor force age group?
3. How can the projected relatively rapid rates of economic growth be reconciled with the fairly moderate estimates of future increases in the aggregate price level?
4. What are the alternative methods of encouraging additional manpower training and, again, what are the implications involved in selecting among them?
5. What are likely to be the major effects of alternative wage policies?
6. What are likely to be the major choices among alternative tax and other fiscal policies?
7. What are the major economic considerations involved in the changing composition of Federal Government expenditure programs?
8. What are likely to be the major effects of the alternative methods of Federal aid to State and local governments?
9. How do the various Great Society programs influence regional income distribution and economic development?
10. What are the alternate means of promoting public and private investment, consumer spending, and a rising standard of living?

Attaining the Projected Economic Growth Rate

As a result of fiscal and monetary policies, structural measures to combat unemployment and other public and private efforts, the overall growth rate of the national economy has been accelerated during the past 5 years and the unemployment rate has been reduced substantially. However, not until the recent Vietnam military buildup did the rate of unemployment come down to the Council of Economic Advisers' "interim" target of 4 percent of the civilian labor force.

It has been pointed out, moreover, that the pace of economic expansion during 1962–65 has been considerably above the rate of increase that this Nation has been able to sustain over an extended period in peacetime, at least in the past.[8] It can be inferred from the projections presented earlier that inability during the 1970–75 time period to maintain the current, historically high rate of economic growth would result in a substantial rise in the unemployment rate, assuming other factors do not change significantly.

But, other factors will be changing significantly. The Nation's labor force is projected to grow more rapidly in the next decade than in the past 10 years. Productivity (as measured by output per man-hour) is estimated to continue increasing, as a result of the large-scale investments in human and physical resources—business plant and equipment purchases, research and development, education, training, and so forth.

The accelerated expansion in the Nation's potential productive capacity can be responded to in a number of ways, and it may be helpful to examine some of them.

One level of choice involved in achieving a high and rising level of economic activity is the selection of emphasis among the major sectors of the national economy. As shown in table 11 below, the choice of sector emphasis also implies decisions as to (1) whether the economy will become more or less oriented to private versus public needs and desires; (2) whether the major national concern is with the acceleration of the rise in the standard of living or with the enhancement of the Nation's productive capacity; and hence (3) whether the main thrust of the economic policies are of a relatively shortrun or longrun nature.

Table 11.—*Alternative sector emphasis in achieving economic growth*

Sector	Illustrative factors to be considered		
	Private or public orientation	Standard of living or productive capacity	Effect
Consumer spending [1]	Private	Living standard	Short term.
Business investment [2]	do	Productive capacity	Long term.
Government purchases	Public	Mixed	Mixed.

[1] Some Government programs, of course, have important direct effects on consumer spending, such as transfer payments which directly bolster consumer purchasing power.

[2] Some Government programs have important effects on the volume and composition of business investment, such as tax incentives to expand acquisition of new producer durable equipment.

[8] "Manpower Report of the President," March 1965, pp. 46–47.

Certainly, the factors shown in table 11 are merely illustrative of the fact that a decision in one sphere of economic policy almost inevitably has repercussions in other areas. None of the materials presented here are intended to recommend one possible course of action over another. Rather, the purpose is to help those who will determine or influence economic policy by presenting more formally some of the many factors that may need to be considered.

A limitation to be borne in mind is that any tabulation of this sort, by necessity, does not reveal the often subtle and indirect nature of economic relationships. For example, those Government purchases of goods and services which mainly involve the "purchase" of the services of Government employees are far more public-sector oriented than are Government purchases of standard products, whose price is determined in private markets. There is, indeed, a spectrum of possibilities here. In the case of the defense and space programs the public-sector orientation is pervasive; the private manufacturers often utilize Government-supplied fixed and working capital, producing commodities whose characteristics are determined in advance by the Government, under conditions often specified in Government procurement contracts, and at profit rates subject to subsequent governmental revision.

In other cases, such as in agriculture and mining, the Federal Government can strongly influence the prices of many commodities through its position as a dominant customer. It can also affect the labor costs of business firms by setting wage and other working standards in its contracts and through its position as a major employer of many types of skills.[9]

Many Government purchases, however, do not influence the private sector so strongly. Procurement of conventional office equipment and medical supplies provide common cases in point.

Policy Reactions to Rising Supply of Potential Workers

Another type of future economic choice involves the Nation's policy reaction to the growing potential productive capacity, particularly as indicated by the rising labor force age group. As pointed out earlier, the labor force is projected to grow at a much faster rate during the coming decade than in recent years; the numbers of those in the 18 to 24 age group, whose unemployment rates have been much above average, are anticipated to increase at double the national average. Decisions as to the most desirable methods of responding to the increased potential supply of workers involve also considerations of the different effects each of the approaches would have on other important aspects of the American economy. Again, the effects shown below in table 12 are meant to be illustrative and do not exhaust the possibilities.

[9] Cf., U.S. Congress, Joint Economic Committee, "The Relationship of Prices to Economic Stability and Growth," compendium of papers, Mar. 31, 1958, pp. 529–554; M. L. Weidenbaum, "The Defense-Space Complex: Impact on Whom?" Challenge, April 1965.

TABLE 12.—*Adjustments to rising labor force age group*

Nature of adjustment	Types of other effects				
	On output	On leisure	On productivity	On prices	On international competitiveness
Increase employment via—					
Economic growth	Expansion	Neutral	Mixed	Increase pressures	Mixed.
Reduced standard workweek	Reduction	Expansion	do	Mixed	Increase pressures.
More paid holidays, vacations, and sabbaticals.	do	do	do	Increase pressures	Do.
Lower minimum wage law for new entrants.	Mixed	Reduction	do	Reduce pressures	Reduce pressures.
Reduce participation rates:					
More schooling and training	Long- and short-term differences	Short-term expansion	Long-term expansion	Mixed	Do.
More retirement programs	Reduction	Expansion	Neutral	Reduce pressures	Mixed.
Rising unemployment	do	do	Mixed	do	Do.

As can be seen, although each of the seven approaches listed in table 12 would represent an adjustment to the rising availability of persons of working age, almost every one of them would influence differently the total output of the economy, or the amount of leisure-time available, or the productivity of the economy, or the price level, or the competitiveness of this Nation's industries in world markets. Many of these approaches are not mutually exclusive and the effects of some may be additive. Also, the time horizons may differ. For example, education and training would tend to raise future productivity and output at the expense of current output. Furthermore, the subsequent reactions to any of the alternative adjustments would influence the effects of utilizing that approach; should employers be able to absorb the added costs of longer vacations without raising prices, the inflationary pressures would be less than if the added costs were passed on to consumers.

In many cases, the choice of emphasis among these approaches may not be determined primarily on economic grounds, but from social or political viewpoints. For example, decisions to lower the retirement age for social insurance programs would reduce the participation rate of the labor force age group; however, such determination as to the minimum age at which covered workers can retire and receive benefits—although it has important economic repercussions—is essentially a political decision as to desirable social norms. Similarly, a reduction in the standard workweek (which could be encouraged through amending existing Federal legislation governing the payment of overtime) would represent a social choice as to the relative importance of leisure.

Clearly, at least one of the possible adjustments to the rising potential supply of workers would be negative or passive—merely to accept a rising trend of unemployment in the American economy.

Price Level Implications

A perennial source of concern in considering public policy for a rapid rate of economic growth is the resultant pressure on prices. This is an important example of the need to balance off various objectives. At one extreme, a low utilization of the Nation's resources—as indicated by high unemployment rates and large amounts of excess industrial capacity—could eliminate inflationary pressures in the United States. Conversely, indifference to inflationary price level considerations might temporarily help to achieve virtually full employment; however, major problems of balance-of-payments disequilibrium likely would arise as well as pressures from specific groups of the population which would not be greatly benefited by full employment, but would be hurt by the inflation. Retired persons and others living on fixed incomes are obvious examples of the latter category. Indifference to price level considerations might also create economic unbalances and distortions which themselves could lead to unemployment and underutilization of resources.

American history provides some interesting examples of rapid rates of economic growth accompanied by falling aggregate price levels.[10] Shifts in demand from relatively inefficient to more efficient sectors

[10] National Bureau of Economic Research, "Trends in the American Economy During the 19th Century," Princeton, Princeton University Press, 1950; U.S. Bureau of the Census, "Historical Statistics of the United States, Colonial Times to 1957," Washington, D.C., 1960.

of production (from agriculture to industry during the 19th century) may provide some part of the explanation.

John Maurice Clark pointed out that the relationship between the price level and economic expansion is not a simple one.[11] He maintained that it is inherently probable that a demand-induced inflation is more favorable to expansion than one pushed up from the cost-price side, and that a spontaneously stable price level may be more favorable to growth than creeping inflation. Clark also stated that a mild inflation is a more stimulative condition than one marked by such drastic restrictions as would be necessary to stamp it out.

There is no universally accepted tradeoff between avoiding inflation and achieving an acceptable rate of economic growth and thus a high level of employment.[12] To many persons, a 4-percent unemployment rate is considered to be close to the maximum rate of labor utilization which can be achieved without such strain on the Nation's resources as to create severe inflationary pressures. However, it needs to be acknowledged that some observers think that a lower rate of unemployment, somewhere in the vicinity of 3 percent, would be a more desirable target either because they believe that inflationary pressures can be contained, or that some price level increases are an acceptable "price" to pay for reducing unemployment.

Conversely, some persons contend that serious inflationary pressures arise prior to the Nation reducing unemployment to 4 percent. One school of thought maintains that "structural" deficiencies in the economy are the obstacles; education, retraining, and other programs designed to enhance labor skills and promote labor mobility are considered necessary in this case.

Despite manifest difficulties in designing public and private policies to deal with the problem of inflationary pressures developing under maximum employment and rapid economic growth, the appropriate objective is clear. Economic policy should be directed at improving the economy so as to eliminate *both* structural inflation and structural unemployment.

In view of the increased level of economic literacy since the passage of the Employment Act over 20 years ago, it is a bit surprising to find economists still talking about the appropriate "tradeoff" between rising prices and unemployment.

Policy should not be directed at determining how large a general price rise to trade for so many jobs for the unemployed, nor at agreeing on the increase in unemployment to accept for added price stability. Rather, the task is to comply fully with section 2 of the Employment Act, by designing policies which will lead to realization simultaneously of a stable general price level and jobs for all those able, willing, and seeking work.

It should be noted that the rates of aggregate price increase assumed in the economic projections presented earlier are lower than those which have accompanied similarly rapid periods of economic growth in recent years—in the absence of the direct controls which have been imposed during wartime periods.

[11] John Maurice Clark, "The Wage-Price Problem," New York, American Bankers Association, 1960, pp. 16–17.

[12] Cf., Paul A. Samuelson and Robert M. Solow, "Analytical Aspects of Anti-Inflation Policy," American Economic Review, May 1960, pp. 177–194; A. W. Phillips, "The Relation Between Unemployment and the Rate of Change of Money Wage Rates in the United Kingdom, 1861–1957," Economica, November 1958, pp. 283–299.

Studies by George Perry tend to indicate that, at rates of productivity increase and profits experienced by the American economy during the period since World War II, price increases above those assumed here would accompany the reduction of unemployment to 3 percent.[13] However, since completing his research, Perry has stated that, "* * * recent wage increases [and hence price increases] have been more modest than one could have predicted from past experience with any of the equations estimated here, or almost certainly with any equation of this general type." [14]

During the past year, the increase in the generally used measures of the aggregate price level has been more rapid than can be inferred from Perry's remarks. A number of factors may help to explain the differences.

For example, a part of the current rapid rise in the price level is due to relatively temporary special conditions relating to farm products rather than to demand-pull market conditions. Also, a substantial portion of the price rise is resulting from the sharp acceleration in defense procurement—defense contracts and other "obligations" were one-third higher in the fiscal year 1966 compared to the previous year. The abrupt and substantial shift in resources which this action requires gives rise to wage and other cost increases which would not be present in the period of stable growth envisioned in these projections.

More fundamentally, education, training, and retraining programs are likely to make possible higher labor utilization rates than in the past without generating substantial inflationary pressures.

In general terms the methods which have been used to deal with inflationary questions include: (1) indirect Government actions (fiscal and monetary policies); (2) direct wage and/or price controls; and (3) appeals for wage and price restraints to labor and management alike. Experiences in 1966 seem to indicate that voluntary compliance with wage-price guidelines is more readily secured during a period of price stability than during times of substantial inflation.

Perhaps one of the obstacles to a better understanding of inflation is the differential effects on various groups of the population, indeed the same individual may be affected differently in his various roles as worker, consumer, and investor. For example, as shown in table 13, an individual—in his role as a consumer—may be hurt by inflation as he sees the purchasing power of his money reduced. However, the same individual—as an employee—may find that he is benefited, or at least not hurt, by inflation as his wage payment and other income increase at the same rate, or faster, than the aggregate price level. Simultaneously, as an investor he might be hurt or benefited by a general rise in the price level, depending on whether he has fixed or fluctuating value investments.

[13] George Perry, "The Determinants of Wage Rate Changes and the Inflation-Unemployment Tradeoff for the United States," Review of Economic Studies, October 1964 and "Unemployment, Money Wage Rates and Inflation," MIT Press, 1966.

[14] Perry, op. cit., p. VII.

TABLE 13.—*Some impacts of inflation*

	Possible beneficiaries	Possible sufferers
Consumers		X.
Employees:		
Fixed earnings (e.g., Government workers)		X.
Negotiated earnings	X	
Retired workers		X.
Business:		
Capital—intensive industries		X.
Labor—intensive industries	X	
Government:		
Treasury	X	
Procurement agencies		X.
Investors:		
Bonds, life insurance, and other fixed-value investments		X.
Stocks, land, and other fluctuating-value investments	X	

The same ambivalence may exist in the Government, where Treasury officials see tax receipts rise with price level expansion, while procurement officers find the purchasing power of their appropriated funds diminished.

Similarly, the impact of inflation on business firms is subject to a very wide variance, both among and within individual companies. For example, the marketing departments of insurance companies may be quite concerned with the adverse effects of inflation on potential buyers of insurance; however, the investment departments may find distinct benefit via higher returns on their investments and a greater spread between the resulting income and the proceeds required to meet the commitments of policyholders. Capital-intensive industries might tend to experience real capital losses, to the extent that depreciation allowances computed at historical costs do not adequately finance replacement at substantially higher price levels. More labor-intensive industries would be in a more favorable position especially to the extent they could pass on labor cost increases in relatively price-inelastic product markets.

ENCOURAGING MANPOWER TRAINING

As mentioned earlier, it has been suggested that unemployment might be further reduced, without generating substantial inflationary pressures, through programs of manpower training and retraining. Again, there is no single simple way of insuring that the requisite labor force will be trained in the proper skills at the needed time. However, there is a wide array of public policies that could encourage such training. As shown in table 14, these involve varying degrees of public sector and private sector participation.

TABLE 14.—*Methods of encouraging additional manpower training*

Governmental operation of training facilities:
1. Direct Federal operation of training facilities, including military training facilities.
2. Grants to States and local governments for their training programs.

Incentives to the private sector:
3. Expenditure subsidies for private industry training programs.
4. Tax incentives for private industry training programs.
5. Federal assistance to schools and other nonprofit institutions for specialized training.
6. Changes in regulatory programs (e.g., minimum wage legislation) to encourage on-the-job training.

None of the six approaches in table 14 is recommended as the optimum method of providing additional manpower training. Indeed, each of them opens up one or more additional questions of public policy. Governmental operation of training facilities may provide the most direct way of focusing on the specific manpower areas of greatest need, although not necessarily the most effective or efficient method.

Another illustration that the selection of economic policies may be difficult is contained in the illustrative alternatives shown for offering incentives to the private sector. For example, although tax incentives may provide an effective means of encouraging private industry, this approach may run counter to the desire to keep special-benefit provisions out of the tax system because of the concern for tax simplification and "equal treatment of equals." Certainly, suggestions to permit even temporary reductions in the statutory minimum wage encounter serious opposition on the part of those concerned with maintaining minimum income standards.

Alternative Wage Policies

One currently applied standard for assessing wage policies is the wage-price guideposts of the President's Council of Economic Advisers. In general, these guideposts are intended to limit wage increases to the trend growth of productivity in the national economy (with specified variations); hopefully, the application of this standard would not result in generating any additional inflationary pressures. On the basis of the most recent experience many technicians would conclude that these guideposts are more effective in dealing with potential cost-push inflationary pressures than in a general demand-pull inflationary situation such as accompanied the initial phase of the Vietnam defense buildup.

John Maurice Clark, who suggested in 1960 that inflation could be avoided by limiting wage increases to the economywide rate of increase in productivity, also pointed out that such an outcome requires: (*a*) restraint in organized labor's use of its market power, either voluntarily or enforced by employers' stiff resistance and (*b*) ready downward flexibility of prices where the state of costs and profits permits.[15]

Were the general trend of wage rates in the economy to rise at a faster rate than productivity, it is likely that some inflationary pressures would result. However, to some observers this might be acceptable if the pattern of wage increases encourages more persons to enter the labor force, and thus, to raise potential economic output. To some extent, such wage and resultant price increases would effectuate an intergeneration distribution of wage costs and incomes. Retired persons receiving income from pension funds would find the purchasing power of their annuities reduced and hence find that they are in effect self-financing more of their retirement-age expenditures than they had intended to bargain for.

To the extent that there are differentials between wage and price changes in different branches of the economy (e.g., higher and offsetting productivity growth in goods as compared to services), those elements of the population purchasing a higher than average amount

[15] Clark, op. cit., pp. 38-39.

of services—again the relatively older particularly in the case of medical services—may find themselves more adversely affected than would be indicated by the aggregate price increases.

Alternate Tax and Fiscal Policies

On account of the overall progressive tax structure, Federal revenues in the coming decade are likely to be rising faster than the GNP. A staff memorandum to the committee in 1961 analyzed in detail the relationship between Federal receipts and expenditures on the one hand, and the business cycle and economic growth on the other.[16] That study indicated that Federal tax receipts fluctuated much more violently than national income or GNP, reflecting the fact that the marginal rate of tax on changes in incomes or profits is substantially larger than the average rate. After all, tax rate structures are progressive and some incomes are not taxable. It appears that, in general, as the economy grows along the full employment or potential trend, Federal revenues rise by about one-fourth of the year-to-year rise in potential GNP in current prices. On the other hand, the average share of Federal revenues in the cyclical departures of the actual GNP from the full employment or potential trend has been over one-third, or about 36 percent in the period 1954–61.

According to several recent studies, such revenues are also likely to be rising more rapidly than the "normal" or trend increase in Federal expenditures.[17] However, the recent acceleration of military costs occasioned by events in Vietnam has resulted in an acceleration in Federal spending which, at least temporarily, eliminates the potential Federal surpluses envisioned in these earlier studies. In the period after Vietnam, when improvements in the international environment permit the reduction of U.S. military outlays, the Nation faces large and growing high employment budget surpluses, actions would need to be considered to reduce the overall effective Federal tax rate as necessary (or to increase expenditures further).

The major problem involved here would be to identify initial policies which would be sufficiently prompt and effective to prevent serious unemployment and excess industrial capacity from developing. Such negative influences, if unchecked, could accelerate into a major recession.

In such "contingency" planning, the balance struck between tax reduction and increased Government spending would be influenced by the inferences as to the relative importance to be accorded to the private sector versus the public sector—to private demand for such goods and services as food, clothing, housing, and recreation, as against public demand for roads, space exploration, public health, and social services.[18]

[16] 1961 Joint Economic Report, H. Rept. 328, 87th Cong., 1st sess., pp. 119–125.

[17] Cf. Joseph A. Pechman, "Financing State and Local Government," in American Bankers Association, Proceedings of a Symposium on Federal Taxation, 1965, pp. 71–84; Selma J. Mushkin and Robert F. Adams, "Emerging Patterns of Federalism," National Tax Journal, September 1968, pp. 225–247.

[18] Cf., U.S. Congress, Joint Economic Committee, "Twentieth Anniversary of the Employment Act of 1946: An Economic Symposium, Invited Comments on Directions for the Future," 1966, pp. 188–189.

At the present time, the type of fiscal policy decisions that face economic policymakers appear to be quite conventional, involving restraint on civilian expenditures and otherwise dampening any latent inflationary pressures resulting from the military buildup. Assuming successful resolution of the Vietnam situation in the near future, the type of longer run fiscal policy decisions that would be facing the Nation appear to be more pleasant ones. These may involve primarily choices among alternative methods of tax reform and reduction. Tax reductions, under those conditions of stable or declining defense spending, could both assist in achieving a maximum employment economy and also be possible because of a rapidly rising level of GNP.

At the margin, of course, the choice may be somewhat more difficult, involving balancing the desirability of providing additional Government services against the benefits of a larger private sector of the economy. Table 15 indicates some of the possible alternative methods of tax reduction. Possible expenditure increases are dealt with subsequently.

Table 15 also lists a few of the many factors that would need to be taken into account in selecting among possible tax changes. In good measure, the evaluation may be a question as to which are the dominant purposes of the tax action. Clearly, an increase in personal exemptions—which benefit the lower brackets more than proportionately—would tend to act as an income equalizer by reducing after-tax income inequality; a reduction in estate and gift taxes—which are borne primarily by the highest income groups—would have the reverse effect.

In contrast, a choice between excise reductions and cuts in the corporate income tax would involve judgments as to the extent that either of these taxes are shifted and of the ultimate incidence, technical questions which are still being debated in the public finance literature. An example of a more widely controversial question would be the relative emphasis on low-bracket individual income tax reductions versus high bracket and corporate tax reductions in an effort to increase the level of national output. Some contend that increasing the investment funds available to the high-saving individuals and corporations would be more effective in fostering economic growth; others, of course, contend that bolstering the purchasing power of consumers, particularly those in the low-income groups who spend virtually all of their available income, would provide the needed demand to generate rising employment and economic growth. This may also represent the type of issue that is never completely settled, but is continually present in determining the proper degree of emphasis between one or another at any given point in time.

TABLE 15.—*Choices among alternative tax policies*

POSSIBLE TAX CHANGES	SOME FACTORS TO BE CONSIDERED
Across-the-board changes in rates	Effects on equity among taxpayers
Corporate taxes:	Effects on income distribution
Depreciation practices	Effects on GNP growth rate
Investment credits	Effects on allocation between consumption and investment
Basic rates	Effect on built-in stabilizers
Individual taxes:	Effect on relative emphasis between saving and investment
Emphasizing upper brackets	
Emphasizing lower brackets	
Exemptions	
Deductions	
Capital gains treatment	
Pension trusts	
Excises:	
General	
Selective	
Estate and gift taxes	
User charges	

THE CHANGING COMPOSITION OF FEDERAL EXPENDITURES

This report, as do most others dealing with future trends in the American economy, shows very substantial increases in civilian Government expenditures, if past trends continue into the future. On the other hand, projections of defense spending are notoriously unreliable. Should the current rise in military outlays continue longer than anticipated, or accelerate, decisions would be necessary as to whether these additional requirements should be at the expense of foregoing some tax reduction or some projected civilian government expenditure increases.

Under the assumptions underlying this report, very substantial increases are projected in civilian government spending programs. Numerous program choices are involved in these projected levels of government spending. The recent introduction of a planning-programing-budgeting system in the Federal Government is highlighting the types of choices that can be made, but hardly simplifies the process of allocating public resources among numerous competing ends.

Table 16 is an attempt to illustrate, in perhaps the simplest form, how proposed new or expanded Federal expenditure programs can be related to the broad and basic functions of purposes of government.[19]

TABLE 16.—*Some possible Federal expenditure increases*

Possible increases	Defense	Welfare	Economic development
Second Panama Canal	Primary		Secondary.
Supersonic transport	Secondary		Primary.
Social security liberalization		Primary	
Planetary exploration	Primary		
Operational desalinization			Primary.
Universal veterans' pensions		Primary	
Large-scale rural development program		Secondary	Primary.
Many others			

The most general level of choice might be of the nature of selecting among (1) developing a supersonic commercial transport aircraft, (2) proceeding with an operational brackish and salt water desaliniza-

[19] For an attempt at implementing this approach, see M. L. Weidenbaum, "Which Resources for What Goals: Another Look at the Budget," Challenge, July 1964.

tion effort, or (3) embarking upon a large-scale rural development program, all aimed at promoting the economic development of the United States. So viewed, these—and other similar programs—are alternatives for each other in attaining a major national objective. Likewise, liberalizing the benefit paid under the social security program and establishing universal pensions for all veterans over 65 are alternate means of providing supplementary incomes to the Nation's elderly population. The present emphasis in the executive branch's planning-programing-budgeting system appears to be on the specific program or department level. However, the eventual application of the choice-among-alternatives approach may alter considerably the overall program emphasis in the Federal budget, by indicating the relative advantages (in such terms of high ratios of benefits to costs) of one category of Government program over another.

Recently, the Joint Economic Committee has attempted to encourage analysis of the various economic effects of individual Federal programs. An example is its "Inquiry Relating to Human Resources Programs" which is attempting to illuminate the following aspects of these programs:

1. Effects on the distribution of personal income.
2. Effects on the productivity and earnings of workers.
3. Effects on business competition, growth, and management.
4. Effects on the stability and level of employment, wages, costs, production, sales, prices, and other phases of economic activity.
5. Variations in the geographic impacts of these programs.
6. Contribution to the growth rate of GNP.[20]

After allocative decisions are made to devote a certain portion of the Federal budget to a given program of function, another type of choice is required—the selection of the specific governmental mechanism to utilize. In practice, decisions as to the method of conducting a new government program and the general level of funding are made simultaneously. One example of the range of such possible choices is contained in table 14, "Methods of encouraging additional manpower training."

The Federal Government and the States

A related question is the appropriate level of government at which a given program should be conducted. A number of recent studies have pointed out a possible "fiscal mismatch" between needs and resources. Under nonwar conditions, the supply of readily available Federal revenues appears to rise faster than current demands on the Federal purse, but the State-local situation is the reverse; expenditure demands on State and local governments rise faster than readily available revenue supply.

The so-called Heller proposal for block grants to the States is one of a family of possible ways in which the financial resources of the Federal Government can be utilized to assist State, county, and city governments. As shown in table 17, other methods of utilizing the potential increase in Federal revenues include expanded program or tied grants, tax sharing, individual Federal tax credits for State and local taxes paid, and new direct Federal activities in the various localities.

[20] U.S. Congress, Joint Economic Committee, Subcommittee on Economic Progress, "*Inquiry Relating to Human Resources Programs*," Joint Committee Print, September 1965.

TABLE 17.—*Alternate methods of utilizing potential increases in Federal revenue to aid State and local governments*

Method	Analysis of effects					
	Federal role in economy	Federal influence on States	Income equalization	Tax progressivity	Built-in stabilizers	Role of cities
Direct Federal programs	+	0	+	0	0	0
Tied grants	0	+	+	0	0	0
Block grants	−	0	+	0	0	−
Tax credits	−	0	−	0	0	−
Tax sharing	−	0	0 or +	−	−	+
Federal tax reduction	−	0	0	−	−	0

NOTE.—Legend: Increase is +; no change is 0; decrease is −.

It may be helpful to examine these alternative ways to deal with the fiscal situation that may become prevalent in the 1970–75 time period.[21]

Some of the potential increases in Federal revenue could be devoted to new activities to be conducted by the Federal Government itself in all 50 States. This approach would call for the largest amount of Federal intervention, since no provision would be made for State or local government participation. There would be State and local benefits to the extent that facilities would be provided which otherwise would have to be financed locally.

This approach, which would require abstaining from reductions in Federal income taxation, would maintain the progressivity of the overall tax structure and the role of the built-in or automatic stabilizers. Depending on the type of expenditure programs selected, the impact on income distribution could be more or less equalizing.

An alternative would be to expand the use of "tied" or conditional grants to State and local governments for specific functions. This approach would make the Federal Government an even more important influence in State and local fiscal operations. Use of conditional grants would not affect the progressivity or stabilizing effects of the tax structure. Most Federal grant programs have an income equalization effect because Congress often uses allocation formulas based on population or income.

One proposal for block or unconditional grants would set up a permanent trust fund to distribute an amount equal to 2 percent of the Federal income tax base among the States on a per capita basis. This approach would reduce the role of the Federal Government both in the national economy and in relation to State and local government action. It would also exercise a moderately equalizing effect between high income and low income States, but would not affect the overall progressivity of the tax structure or the importance of the automatic stabilizers. This method might be far from an unmixed blessing for urban areas because Federal funds would be funneled entirely through the State governments. Some methods could be developed to include local as well as State governments as recipients of the Federal funds, thus changing the effect shown in table 17.

Alternatively, a portion of Federal revenues could be distributed to the States on the basis of source of collection. This would result in

[21] Cf., M. L. Weidenbaum, "State Needs and Federal Funds," Business Topics, Winter 1966.

high income States, with high tax payments, receiving the larger shares. The State governments would be left free to determine the allocation of their funds. The effects on overall tax progressivity and stability would be the same as block grants.

Tax credits would provide Federal income taxpayers a more liberal writeoff of State and local taxes by giving them an option either to deduct their State and local taxpayments from taxable income, as they can do now, or to deduct some portion of State and local taxpayments from their Federal tax bills. The major benefits would accrue to persons in the low and middle tax brackets who carry above-average State tax loads. This method could help local, as well as State, governments by softening resistance to increases in State and local taxes.

Outright reductions in Federal taxes would be an indirect way of aiding State and local governments. This would permit them to increase their tax rates without increasing the total tax bill of the average citizen, but introduces questions of interstate rivalry. The overall national tax structure would become less progressive (as well as less anticyclical), because the Nation would be placing greater reliance on frequently proportional and regressive State and local taxes. The role of the Federal Government, both in relation to State and local governments and to overall economic activity would be diminished with a reduction in its fiscal resources.

In a society with plural objectives, no single fiscal approach would satisfactorily meet more than a few of them—and might adversely affect other goals. Direct Federal expenditures might optimize income stabilization and income redistribution objectives, but bypass both State and local governments. Tax reduction decreases the size of the Federal sector, but meets State and local public needs only indirectly, if at all. Tax sharing and block grants provide for the allocation of public funds among programs to be made individually by the States, who presumably are more familiar with the needs and desires of their residents than the National Government; but questions have been raised about the adequacy of provisions for the burgeoning financial requirements of counties, school districts, cities, and towns.

The Regional Distribution of Income

Another factor to consider in the allocation of Federal resources is the effect on the geographic distribution of income. As shown in table 18, some types of Federal programs have a far stronger tendency to act as "income equalizers" among the different regions than others.[22] Specifically, farm price supports and Federal aid to education demonstrate this characteristic to a very strong degree. In contrast, defense and space contract awards tend to be received by those highly industrialized States that also have above-average income levels.

The basic implication that follows from the data in table 18 is that expansion in Great Society and other domestic civilian programs results in shifts in the geographic distribution of Federal expenditures in favor of greater equality in the regional distribution of income.

[22] The data are taken from M. L. Weidenbaum, "Shifting the Composition of Government Spending: Implications for the Regional Distribution of Income," a paper presented to the annual meeting of the Regional Science Association, Nov. 14, 1965.

TABLE 18.—*Regional shares of population, income, and selected Federal expenditure programs, 1963 percentage distributions*

Region	Population	Personal income	Defense	Composite nondefense	NASA	Reclamation	Highways	Veterans	Public assistance	Corps of Engineers	Education [1]	Farm subsidies
Low income	29.7	22.9	17.8	36.2	21.8	22.4	31.1	32.8	37.1	38.7	45.1	52.9
Southeast	21.7	16.1	11.2	24.6	18.8		21.8	23.9	26.2	21.4	34.6	30.9
Southwest	8.0	6.8	6.6	11.6	3.0	22.4	9.3	8.9	10.9	17.3	10.5	22.0
Average income	36.3	37.7	32.1	33.9	15.8	48.2	39.9	35.4	31.9	28.6	28.0	42.5
Rocky Mountain	2.4	2.3	4.2	3.2	.4	35.4	5.8	2.5	2.8	.3	1.8	1.6
Plains	8.3	7.9	6.3	13.8	9.6	12.8	9.5	8.9	8.7	21.1	8.9	31.7
Great Lakes	19.8	21.0	12.6	13.0	3.3		19.6	17.2	14.5	5.8	14.2	9.2
New England	5.8	6.5	9.0	3.9	2.5		5.0	6.8	5.9	1.4	3.1	(2)
High income	34.0	39.4	50.1	29.9	62.4	29.4	29.0	31.8	31.0	32.7	26.9	4.6
Mideast	21.4	24.6	22.0	12.9	11.8		15.1	20.1	15.9	10.1	17.6	.3
Far West	12.6	14.8	28.1	17.0	50.6	29.4	13.9	11.7	15.1	22.6	9.3	4.3

[1] Program for fiscal year 1966.

[2] Less than 0.005 percent.

Public and Private Investment

Projected profits and cash flow would appear to be high enough to finance the rising level of business investment contained in the projections. Bert Hickman has attempted to show that the American economy has experienced a declining capital-output ratio over time.[23] In a sense, this may point up the need for accelerated investment in human resources. Theodore Schultz and others have shown that so-called investment in human beings—in such forms as education and training—has been expanding more rapidly than investment in physical capital.[24]

It may well be that the overall capital output ratio (where capital is defined to include both physical and nonphysical investments) has been relatively constant in recent years. This implies, over the coming decade, choices between increased stimulus to business investment or continued acceleration in outlays for education and training and other nonphysical capital investments, in order to meet the economic capacity increases projected here.

Also, recent efforts by the National Aeronautics and Space Administration and the Department of Commerce to accelerate the transfer of defense and space technology to civilian uses may stimulate additional investment for new products. Certainly, the reservoir of commercially exploitable technology is likely to increase during the remainder of the decade. New technical developments may spur businessmen to replace older equipment more rapidly and to purchase equipment capable of producing entirely new products. On the other hand, some innovations may make capital equipment more efficient and thus reduce the amount of investment needed to create any given amount of capacity. The net balance of these offsetting tendencies is hardly clear.

Promoting Consumer Spending and Living Standards

Expansions in social security, private pensions, disability and unemployment insurance, hospital insurance, and medicare may all act to maintain, if not reduce, the consumer's propensity to save on his own account.

It should be recognized that there will likely be strong forces in the remainder of the 1960's which could tend to shift the saving rate toward a lower level. The high birth rates of World War II and early postwar years will be reflected in higher rates of new family formation. These individuals will be in the stage of life when automobiles, household furnishings, and other durable goods typically are acquired for the first time.

Hence, public attention may at some point in the decade need to be focused on the desirability of encouraging private saving to promote private-oriented investment, risk bearing, and entrepreneurship.

[23] Bert G. Hickman, "Investment Demand and U.S. Economic Growth," Washington, D.C., Brookings Institution, 1965, p. 15. My colleague, Hyman Minsky, has pointed out to me that the continued high level of final demand implies reduced uncertainty for the businessman and thus may lower the threshold for considering new investment projects.

[24] Theodore W. Schultz, "Investment in Human Capital," American Economic Review, March 1961.

A Cautionary Note

The need to improve the statistical reporting systems and the tools and concepts used in analyzing the data remains very great. Hence, the continuing requirement will be present to review at frequent intervals both the assumptions underlying these and other projections and the changing economic developments occurring subsequent to the issuance of the estimates. Certainly, the great need for judgment in translating economic statistics into workable economic policies should not be underestimated.

AN ILLUSTRATION OF THE PROCESS OF ADJUSTING POLICIES TO PRODUCE BALANCED ECONOMIC GROWTH

So far we have projected the past into the future, noted the imbalances that seemed to occur as a result, and reviewed the policy choices that may face public and private policy makers in the years ahead.

However decisions are made to produce a better equilibrium than would occur from merely letting the economy continue into the future as in the past, one thing is made clear, we hope, by this point. The adjustment process will involve many complicated reactions of the economy to any changes in policy that are made. Furthermore, a wide variety of choices are available as to the shifts in policy that can be made. Merely to illustrate the complexities involved and to show how maximum employment, rapid growth, and stable prices could be achieved, the staff, in cooperation with the Office of Business Economics, sets forth in the accompanying tables and charts a full employment growth model achieved by adjusting essentially public policies. This stage 2 or illustrative model is purely arbitrary. The large Federal surplus generated in the stage 1 projection of the past into the future was apportioned so that in 1970 there would still remain a Federal surplus equal to about one-half of 1 percent of the GNP in that year, and rising to about 1 percent of the GNP in 1975.

The remaining surplus was then distributed so that one-third would go for personal tax cuts and the remaining two-thirds would be increases in Federal expenditures, mostly in the form of transfers and grants-in-aid to State and local governments.

This remaining two-thirds was then allocated by functions on the basis of order of priorities. For example, 30 percent was allocated for aid to elementary and secondary education in addition to the amount implied in the grants-in-aid used in model I; 25 percent went for additional aid for urban renewal and community facilities. Table 24 shows the allocations used by major functions. The amounts by functions were then distributed by type of Federal expenditures—purchases of goods and services, transfer payments, and grants-in-aid to State and local governments—roughly on the basis of trends shown for the period 1962–65. (See Survey of Current Business, July 1966.)

The resulting aggregate of grants-in-aid to State and local governments was then assumed to be reflected in additional purchases of goods and services by State and local governments.

The additional transfer payments yielded an adjusted personal income from that of model I; and together with the cut in personal taxes, a new estimate of disposable personal income was derived. Federal purchases were increased by the amount derived from the procedure explained above.

With these modified projections, a new set of estimates for the components of GNP and income were derived using the relationships

applied in model I, but maintaining the levels of GNP and national income. Many of the components of GNP and national income were, of course, modified as a result of the injection of the additional Federal expenditures and the personal tax cuts.

In particular, projections of real nonresidential fixed investment derived in model I, which were exceptionally high in relation to real GNP, were reduced so that their ratio to real GNP would conform with the long-term downward tendency of this ratio since 1929.

The reworking of the new estimates through the accounts yielded projections of personal consumption expenditures which were of an order of magnitude consistent with extrapolations of past relationships; personal saving rates turned out to be close to those assumed in model I and corporate profits were consistent with the new rates of investment. This illustrative projection is presented in tables 19 through 28 in the same detail as the original stage 1 projections which carried the past into the future unaltered. To make the outcomes a little easier to see, we have prepared charts IV through VIII which illustrate the developments from 1929 through 1965, together with projections for 1970 and 1975.

TABLE 19.—*Projections of gross national product, with major components, adjusted to illustrate an equilibrium full-employment position* [1]

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
	Billions of current dollars				
Gross national product	681.2	950.0	1,310.0	920.0	1,205.0
Personal consumption expenditures	431.5	601.7	815.8	583.4	753.9
Durable goods	66.1	92.7	125.6	87.5	113.5
Nondurable goods	190.6	247.9	315.7	241.5	292.9
Services	174.8	261.1	374.5	254.4	347.5
Gross private domestic investment	106.6	142.9	201.4	137.5	183.5
Nonresidential fixed investment	69.7	87.4	113.0	85.0	105.5
Residential structures	27.8	46.0	72.7	44.3	66.0
Change in business inventories	9.1	9.5	15.7	8.2	12.0
Net exports of goods and services	7.0	9.2	10.8	9.3	12.1
Exports	39.0	52.1	69.2	51.0	66.2
Imports	32.0	42.9	58.4	41.7	54.1
Government purchases of goods and services	136.2	197.8	282.0	189.8	255.5
Federal	66.8	80.9	99.3	78.5	93.1
State and local	69.4	116.9	182.7	111.3	162.4
	Billions of 1958 dollars				
Gross national product	614.4	770.0	960.0	760.0	925.0
Personal consumption expenditures	396.2	505.0	631.1	498.3	606.0
Durable goods	66.4	92.5	124.6	88.0	114.5
Nondurable goods	178.2	213.5	253.0	211.5	243.0
Services	151.6	199.0	253.5	198.8	248.5
Gross private domestic investment	97.8	117.7	150.7	115.5	143.6
Nonresidential fixed investment	64.9	75.5	91.2	74.5	87.9
Residential structures	24.1	34.5	48.0	34.2	46.5
Change in business inventories	8.8	7.7	11.5	6.8	9.2
Net exports of goods and services	6.3	7.9	8.5	8.0	9.9
Exports	37.3	49.6	64.7	48.5	61.9
Imports	31.0	41.7	56.2	40.5	52.0
Government purchases of goods and services	114.1	139.5	169.7	138.2	165.5
Federal	57.8	60.0	64.3	60.0	64.5
State and local	56.3	79.5	105.4	78.2	101.0
Ratio of nonresidential fixed investment to real GNP in 1958 dollars (percent)	10.6	9.8	9.5	9.8	9.5

[1] Projections in tables 19–28 are illustrative only and portray one possible method of achieving equilibrium at full employment by the use of Federal fiscal policy.

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee

TABLE 20.—*Gross national product and national income, with major components adjusted to illustrate an equilibrium full employment position*

[In billions of dollars]

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
Gross national product	681.2	950.0	1,310.0	920.0	1,205.0
Less:					
Capital consumption allowances	59.6	78.2	101.6	76.6	96.2
Indirect business tax and nontax liability	62.7	83.7	115.8	81.4	108.2
Business transfer payments	2.6	3.3	4.1	3.3	4.1
Statistical discrepancy	−1.6				
Plus: Subsidies less current surplus of government enterprises	1.0	.8	.4	.8	.4
Equals: National income	559.0	785.6	1,088.9	759.5	996.9
Less:					
Corporate profits and IVA	74.2	102.7	139.4	97.0	118.2
Contributions for social insurance	29.2	49.5	69.3	48.4	66.0
Plus:					
Government transfer payments to persons	37.1	62.1	89.3	60.9	83.3
Interest paid by government (net) and consumers	20.6	29.0	38.5	28.5	36.5
Dividends	19.2	24.5	30.7	24.1	29.8
Business transfer payments	2.6	3.3	4.1	3.3	4.1
Equals: Personal income	535.1	752.3	1,042.8	730.9	966.4
Less:					
Personal tax and nontax payments	66.0	105.6	171.8	100.9	152.8
Tax reductions		4.3	13.7	3.6	10.6
Adjusted personal tax and nontax payments		101.3	158.1	97.3	142.2
Equals: Disposable personal income	469.1	651.0	884.7	633.6	824.2
Less:					
Personal outlays	443.4	619.6	841.8	600.8	777.9
Personal consumption expenditures	431.5	601.7	815.8	583.4	753.9
Other personal outlays	11.9	17.9	26.0	17.4	24.0
Equals: Personal saving	25.7	31.4	42.9	32.8	46.3
Personal saving rate (percent)	5.5	4.8	4.8	5.2	5.6
National income	559.0	785.6	1,088.9	759.5	996.9
Compensation of employees	392.9	559.0	792.0	546.3	734.4
Wages and salaries	358.4	504.5	712.7	492.9	661.9
Private	289.1	399.2	560.1	392.2	520.4
General government	62.3	95.8	139.5	91.5	129.1
Government enterprises	6.9	9.5	13.1	9.2	12.4
Supplements to wages and salaries	34.5	54.5	79.3	53.4	72.5
Private	28.5	45.8	66.7	44.9	60.8
General government	5.5	8.0	11.7	7.8	10.8
Government enterprises	.6	.7	.9	.7	.9
Proprietors' income	55.7	71.0	84.0	65.0	75.0
Business and professional	40.7	55.0	68.0	50.0	60.0
Farm	15.1	16.0	16.0	15.0	15.0
Rental income of persons	18.3	20.9	23.5	20.2	22.3
Corporate profits and IVA	74.2	102.7	139.4	97.0	118.2
Profits before tax	75.7	105.7	142.4	99.5	120.7
Profits tax liability	31.2	44.1	59.9	41.5	50.8
Profits after tax	44.5	61.6	82.5	58.0	69.9
Dividends	19.2	24.5	30.7	24.1	29.8
Undistributed profits	25.3	37.1	51.8	33.9	40.1
Inventory valuation adjustment	−1.5	−3.0	−3.0	−2.5	−2.5
Net interest	17.8	32.0	50.0	31.0	47.0

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

TABLE 21.—*Government receipts and expenditures, adjusted to illustrate an equilibrium full-employment position*

[In billions of dollars]

	Actual, 1965	Projection A		Projection B	
		1970	1975	1970	1975
FEDERAL GOVERNMENT					
Receipts	124.9	181.7	260.7	175.1	237.4
Personal tax and nontax receipts	54.2	80.2	121.2	77.3	111.0
Corporate profits tax accruals	29.1	41.1	55.8	38.7	47.3
Indirect business tax and nontax accruals	16.8	17.7	24.1	17.2	22.2
Contributions for social insurance	24.8	42.7	59.6	41.9	56.9
Expenditures	123.4	177.9	250.3	170.9	224.4
Purchases of goods and services	66.8	80.9	99.3	78.5	93.1
Transfer payments	32.4	55.8	81.4	54.6	75.4
To persons	30.3	53.4	78.8	52.2	72.8
To foreigners (net)	2.2	2.4	2.6	2.4	2.6
Grants-in-aid to State and local governments	11.2	25.1	51.4	21.7	37.7
Net interest paid	8.7	11.1	12.6	11.1	12.6
Subsidies less current surplus of Government enterprises	4.2	5.0	5.6	5.0	5.6
Surplus or deficit (−), national income and product accounts	1.6	3.8	10.4	4.2	13.0
STATE AND LOCAL GOVERNMENT					
Receipts	75.3	122.0	193.8	115.2	168.6
Personal tax and nontax receipts	11.8	21.1	36.9	20.0	32.3
Corporate profits tax accruals	2.0	3.0	4.1	2.8	3.5
Indirect business tax and nontax accruals	45.8	66.0	91.7	64.2	86.0
Contributions for social insurance	4.5	6.8	9.7	6.5	9.1
Federal grants-in-aid	11.2	25.1	51.4	21.7	37.7
Expenditures	73.7	122.0	188.6	116.4	168.3
Purchases of goods and services	69.4	116.9	182.7	111.3	162.4
Transfer payments to persons	6.9	8.7	10.5	8.7	10.5
Net interest paid	.6	.6	.6	.6	.6
Less: Current surplus of government enterprises	3.2	4.2	5.2	4.2	5.2
Surplus or deficit (−), national income and product accounts	1.6	0	5.2	−1.2	.3

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

TABLE 22.—*Contributions for social insurance and government transfers to persons*

[In billions of dollars]

CONTRIBUTIONS FOR SOCIAL INSURANCE

	Actual 1965	Projection A		Projection B	
		1970	1975	1970	1975
Old age and survivors insurance	17.4	33.2	47.3	32.6	45.0
Employer contributions	8.2	15.7	22.5	15.5	21.5
Private	7.2	14.3	20.6	14.1	19.6
Government	1.1	1.4	1.9	1.4	1.9
Employee contributions	8.2	15.7	22.5	15.5	21.5
Self-employed persons contributions	1.0	1.8	2.3	1.6	2.0
Unemployment insurance	3.8	5.1	6.8	5.0	6.5
Other	8.0	11.2	15.2	10.8	14.5
Total	29.2	49.5	69.3	48.4	66.0

GOVERNMENT TRANSFER PAYMENTS TO PERSONS, ADJUSTED TO ILLUSTRATE AN EQUILIBRIUM FULL EMPLOYMENT POSITION

Old age and survivors insurance	18.1	31.4	42.7	31.4	42.7
Unemployment insurance	2.3	2.7	3.3	3.7	4.4
Other	16.8	28.0	43.3	25.8	36.2
Total	37.1	62.1	89.3	60.9	83.3

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee

TABLE 23.—*Projected Federal budget surplus (national income accounts basis) for 1970 and 1975 and an illustration of a possible allocation*

[In billions of dollars]

	Projection A		Projection B [1]	
	1970	1975	1970	1975
Projected surplus under existing tax legislation and Federal programs and other economic assumptions	17.6	54.2	15.3	43.8
Illustrative allocation of surplus:				
1. Amount remaining as surplus in Federal budget	4.8	13.1	4.6	12.0
2. Reductions in personal income taxes [2]	4.3	13.7	3.6	10.6
3. Increases in Federal purchases, transfers, and grants-in-aid to State and local governments [3]	8.5	27.4	7.1	21.2

[1] Assuming ½ of 1 percent of GNP in 1970; 1 percent of GNP in 1975.
[2] Assuming ⅓ of projected Federal surplus allocated in reduced personal taxes.
[3] See table 24 for Federal surplus allocated by functions and expenditure type.

Source: Staff, Joint Economic Committee.

TABLE 24.—*Federal surplus allocated by function and expenditure type* [1]*—An illustration*

	Percent allocated (illustrative) [2]	Assumption A (in billions of dollars)								Assumption B (in billions of dollars)							
		1970				1975				1970				1975			
		Total	Purchases of goods and services	Transfer payments and net interest paid	Grants-in-aid	Total	Purchases of goods and services	Transfer payments and net interest paid	Grants-in-aid	Total	Purchases of goods and services	Transfer payments and net interest paid	Grants-in-aid	Total	Purchases of goods and services	Transfer payments and net interest paid	Grants-in-aid
Amount of Federal surplus to be allocated		8.50				27.40				7.10				21.20			
Elementary, secondary, and higher education	30	2.55	0.13	0.13	2.29	8.22	0.41	0.41	7.40	2.13	0.11	0.11	1.91	6.36	0.32	0.32	5.72
Urban renewal and community facilities	25	2.13	.21	.11	1.81	6.85	.69	.34	5.82	1.78	.18	.09	1.51	5.30	.53	.26	4.51
Health and hospitals	15	1.27	.45	.25	.57	4.11	1.44	.82	1.85	1.06	.37	.21	.48	3.18	1.11	.64	1.43
Labor (training, etc.)	15	1.27	.25	.70	.32	4.11	.82	2.26	1.03	1.06	.21	.58	.27	3.18	.63	1.75	.80
Natural resources, including recreation	10	.85	.76		.09	2.74	2.47		.27	.71	.64		.07	2.12	1.91		.21
Veterans—education, hospitals, etc.	5	.43	.11	.32		1.37	.34	1.03		.36	.09	.27		1.06	.27	.79	
Total	100	8.50	1.91	1.51	5.08	27.40	6.17	4.86	16.37	7.10	1.60	1.26	4.24	21.20	4.77	3.76	12.67
Addendum:																	
Government compensation		3.77				12.24				3.15				9.47			
Federal		.82				2.65				.69				2.05			
State and local		2.95				9.59				2.46				7.42			

[1] Allocation of parts made on basis of 1961–65 trend of ratios by type of expenditure and function.

[2] Arbitrary.

Source: Staff, Joint Economic Committee.

TABLE 25.—*Percent distribution of real GNP*[1]

	Actual 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
GNP	100.0	100.0	100.0	100.0	100.0
Personal consumption expenditures	64.5	65.6	65.7	65.6	65.5
Durable goods	10.8	12.0	13.0	11.6	12.4
Nondurable goods	29.0	27.7	26.4	27.8	26.3
Services	24.7	25.8	26.4	26.2	26.9
Gross private domestic investment	15.9	15.3	15.7	15.2	15.5
Nonresidential fixed investment	10.6	9.8	9.5	9.8	9.5
Residential structures	3.9	4.5	5.0	4.5	5.0
Change in business inventories	1.4	1.0	1.2	.9	1.0
Net exports of goods and services	1.0	1.0	.9	1.1	1.1
Government purchases of goods and services	18.6	18.1	17.7	18.2	17.9
Federal	9.4	7.8	6.7	7.9	7.0
State and local	9.2	10.3	11.0	10.3	10.9

[1] Based on table 19.

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

TABLE 26.—*Percent distribution of GNP*[1]

	Actual 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
GNP	100.0	100.0	100.0	100.0	100.0
Personal consumption expenditures	63.3	63.3	62.3	63.4	62.6
Durable goods	9.7	9.8	9.6	9.5	9.4
Nondurable goods	28.0	26.1	24.1	26.2	24.3
Services	25.7	27.5	28.6	27.7	28.8
Gross private domestic investment	15.6	15.0	15.4	14.9	15.2
Nonresidential fixed investment	10.2	9.2	8.6	9.2	8.8
Residential structures	4.1	4.8	5.5	4.8	5.5
Change in business inventories	1.3	1.0	1.2	.9	1.0
Net exports of goods and services	1.0	1.0	.8	1.0	1.0
Government purchases of goods and services	20.0	20.8	21.5	20.6	21.2
Federal	9.8	8.5	7.6	8.5	7.7
State and local	10.2	12.3	13.9	12.1	13.5

[1] Based on table 19.

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

TABLE 27.—*Percent distribution of personal consumption expenditures*[1]

	Actual 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
Total personal consumption expenditures	100.0	100.0	100.0	100.0	100.0
Durable goods	15.3	15.4	15.4	15.0	15.1
Nondurable goods	44.2	41.2	38.7	41.4	38.8
Services	40.5	43.4	45.9	43.6	46.1

[1] Based on table 19.

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

TABLE 28.—*Percent distribution of national income* [1]

	Actual, 1965	Assumption A		Assumption B	
		1970	1975	1970	1975
National income	100.0	100.0	100.0	100.0	100.0
Compensation of employees	70.3	71.2	72.7	71.9	73.7
Wages and salaries	64.1	64.2	65.5	64.9	66.4
Private	51.7	50.8	51.4	51.6	52.2
General government	11.1	12.2	12.8	12.0	13.0
Government enterprises	1.2	1.2	1.2	1.2	1.2
Supplements to wages and salaries	6.2	6.9	7.3	7.0	7.3
Private	5.1	5.8	6.1	5.9	6.1
General government	1.0	1.0	1.1	1.0	1.1
Government enterprises	.1	.1	.1	.1	.1
Proprietors' income	10.0	9.0	7.7	8.6	7.5
Business and professional	7.3	7.0	6.2	6.6	6.0
Farm	2.7	2.0	1.5	2.0	1.5
Rental income	3.3	2.7	2.2	2.7	2.2
Net interest	3.2	4.1	4.6	4.1	4.7
Corporate profits and IVA (residual)	13.3	13.1	12.8	12.8	11.9

[1] Based on table 20.

Source: Department of Commerce, Office of Business Economics, and staff, Joint Economic Committee.

CHART IV.—CONSUMER MARKETS, 1929–65, AND PROJECTIONS FOR 1970 AND 1975

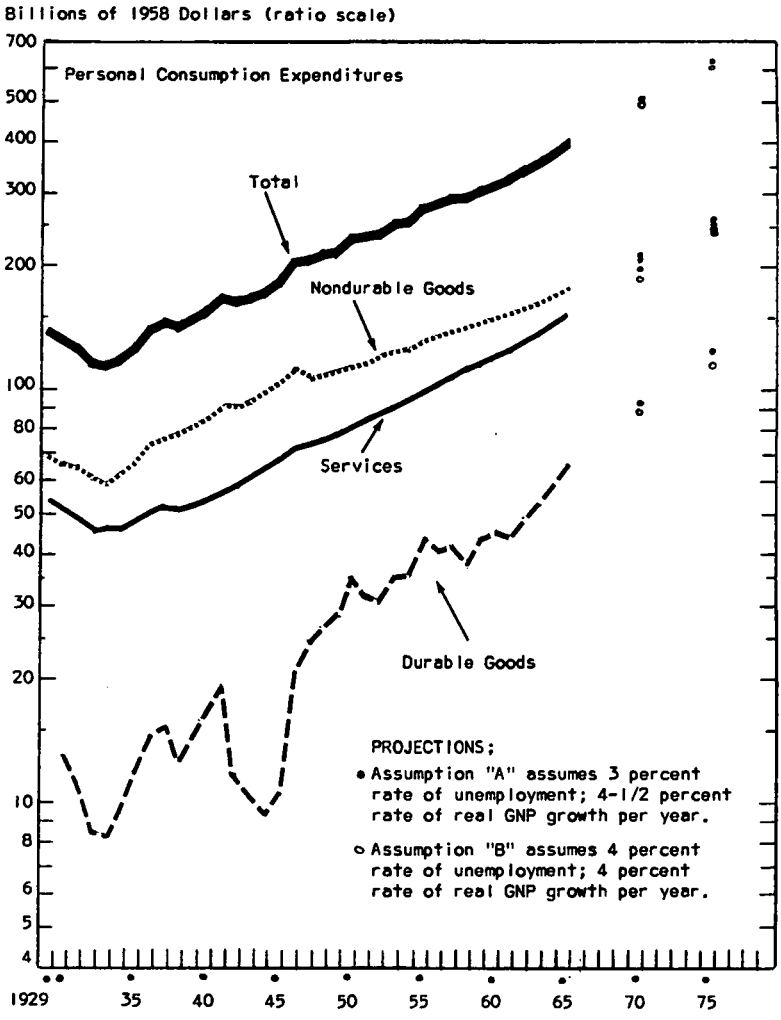

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CHART V.—BUSINESS FIXED INVESTMENT, 1929–65, AND PROJECTIONS FOR 1970 AND 1975

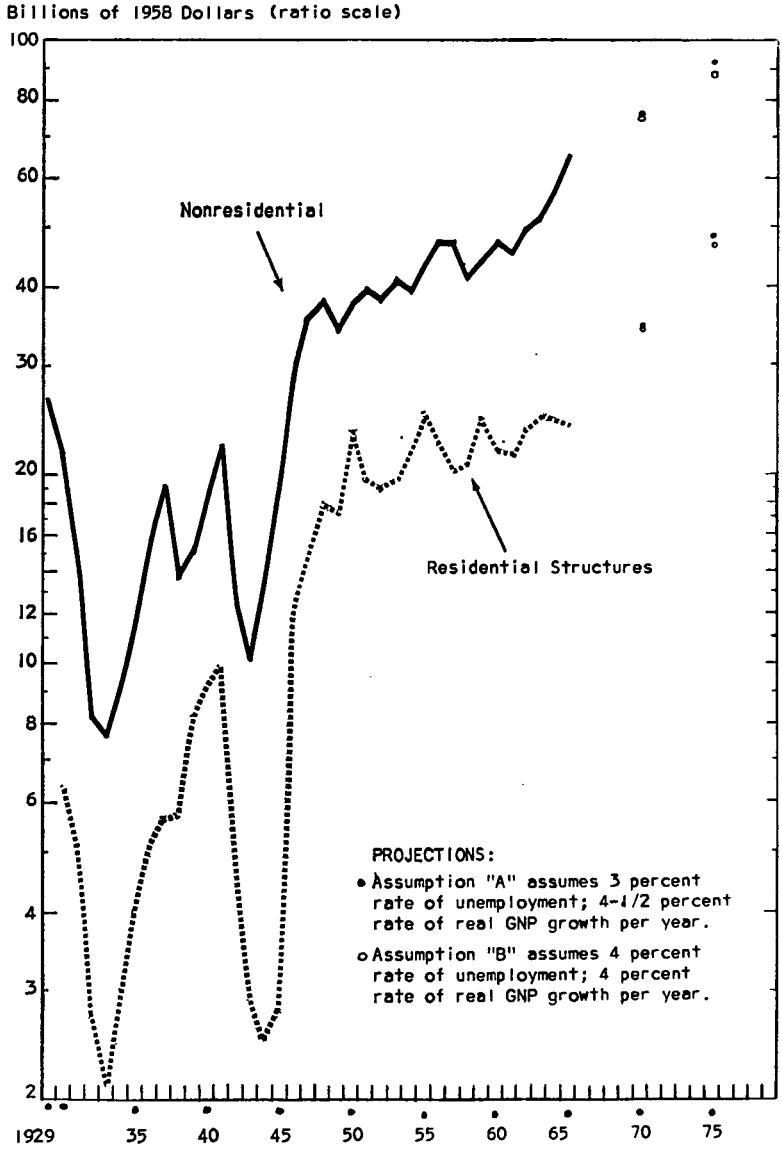

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CHART VI.—REAL NONRESIDENTIAL FIXED INVESTMENT RELATED TO REAL GNP, 1929–65, AND PROJECTIONS FOR 1970 AND 1975

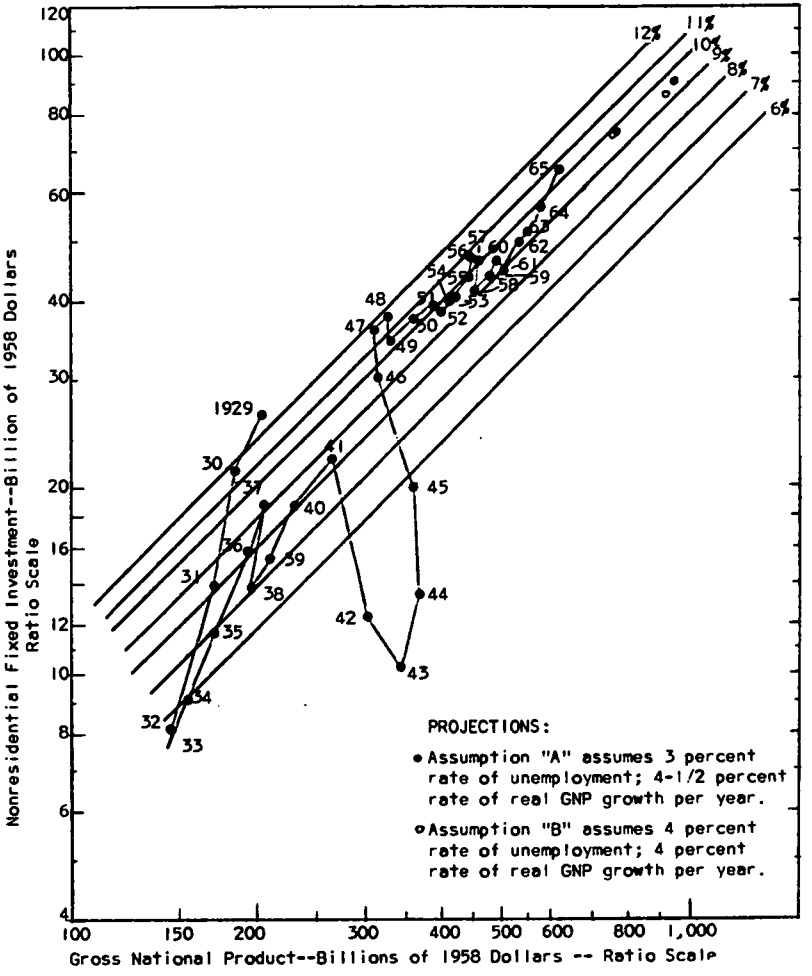

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CHART VII.—GOVERNMENT PURCHASES OF GOODS AND SERVICES, 1929–65, AND PROJECTIONS FOR 1970 AND 1975

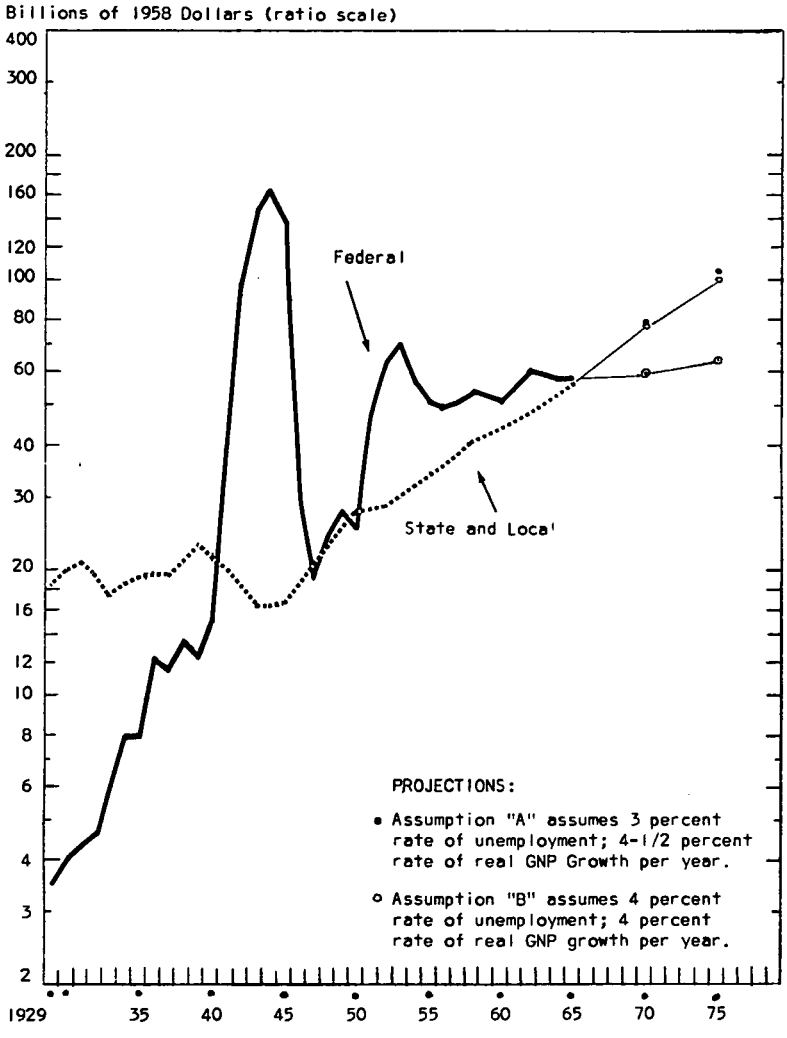

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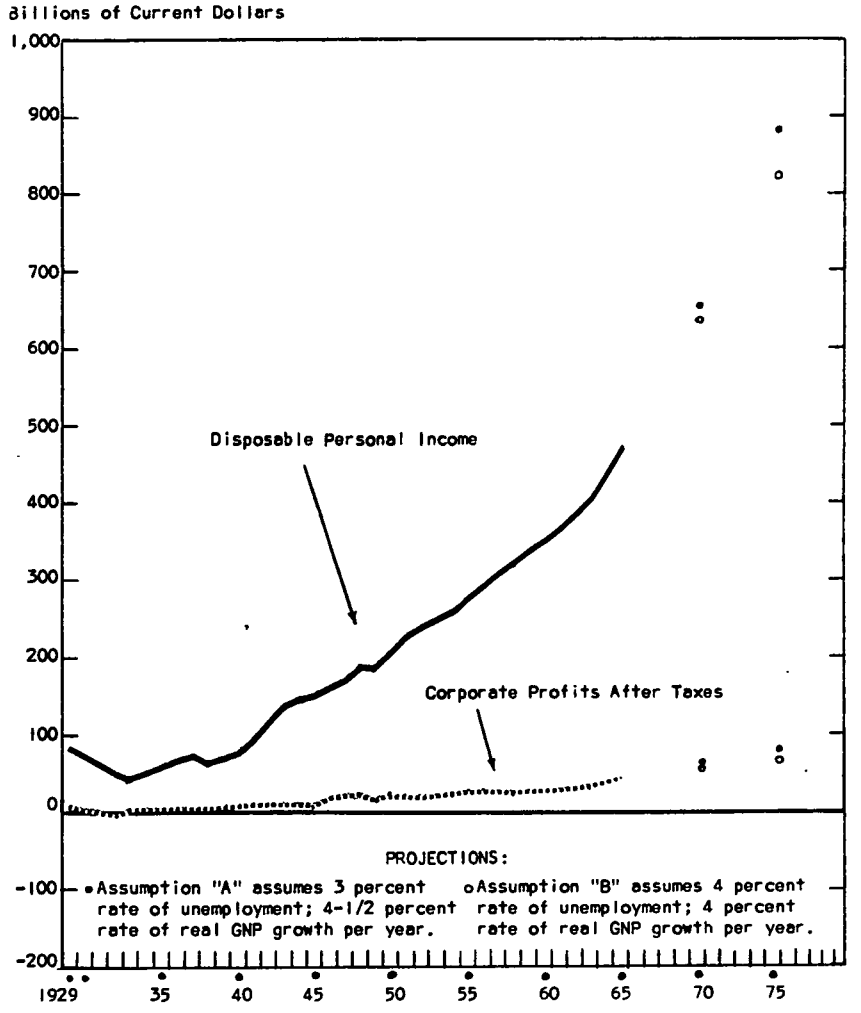
CHART VIII.—CONSUMER AND BUSINESS INCOME, 1929–65, AND PROJECTIONS FOR 1970 AND 1975



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Summary

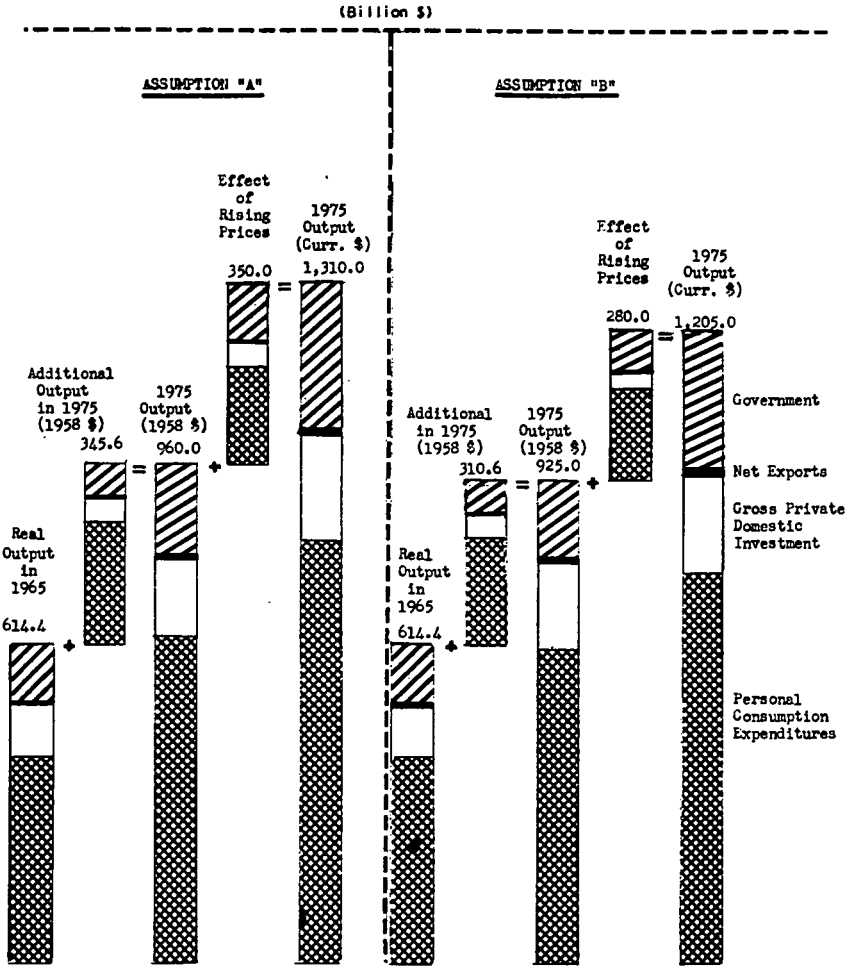
The foregoing projections were dependent first on an assumed supply of manpower and capital stock to produce a relatively high rate of economic growth, i.e., of real output of goods and services. On the demand side, it was assumed in the first set of estimates that projections of Government expenditures and receipts would conform with existing programs and tax rates. These yielded unsustainable rates of business investment, when the other sources of demand were projected in accordance with historical relations for periods of high rates of economic activity. Also, the Federal surplus generated under these conditions would be so large that imbalances would occur, thus preventing the realization of the assumed rates of growth and unemployment.

The second set of estimates (tables 19 and following) was developed to provide an example of projections in the private sector which would be sustainable and in line with past experience by the use of Federal fiscal action. This model is thus more realistic than the first model in that the Federal surplus is more reasonable in relation to the high GNP and income, and investment is at a rate high enough to support the additional output needed and is in line with the long-term declining tendency of the ratio of real investment to output.

Obviously, other methods for distributing the "excess" Federal surplus could be used, but it appears that a realistic combination of Federal fiscal actions, designed to lessen the burden of investment in the maintenance of a high rate of GNP growth, would yield results not too significantly different from those obtained in the illustrative model presented in table 19 and following.

It may be useful to readers to summarize our illustrative projections to 1975 by showing what part of the increase in each of the major components represents the increase in real output and what part reflects the effect of the modest rise in prices which we have assumed. To do this we have prepared chart IX. For example, under assumption A, the fast growth estimates with 3-percent unemployment on the average, there would be additions to real output by 1975 amounting to $345.6 billion (in 1958 prices), on top of which there would be a further addition of about $350 billion to reflect the change in prices from 1958 to 1965. In the cases of the slower growing estimates (assumption B) with a 4-percent unemployment rate on the average, the additions in real terms to the GNP would total about $310.6 billion (in 1958 prices), while the effect of rising prices from 1958 to 1975 would add $280 billion to the GNP as it stood in 1965. Relative changes in each of the components are illustrated by the hatchings on the chart.

CHART IX.—PROJECTIONS OF GROSS NATIONAL PRODUCT FOR 1975 IN CURRENT AND CONSTANT DOLLARS



Note.- Assumption "A" — based on 4.5% annual rate of growth for real GNP and 3.0% unemployment
Assumption "B" — based on 4.0% annual rate of growth for real GNP and 4.0% unemployment

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