SIXTH EDITION

# BUSINESS CYCLES & FORECASTING

VALENTINE • DAUTEN

SIXTH EDITION

# BUSINESS CYCLES & FORECASTING

VALENTINE ○ DAUTEN


LLOYD M. VALENTINE

Professor of Economics
University of Cincinnati

CARL A. DAUTEN

Late Executive Vice Chancellor
and Professor of Finance
Washington University





ISBN: 0-538-08540-1

Library of Congress Catalog Card Number 81-85866

3 4 5 6 7 8 9 D 0 9 8 7 6 5 4

Printed in the United States of America

Published by

H54 SOUTH-WESTERN PUBLISHING CO.

CINCINNATI WEST CHICAGO, ILL. DALLAS PELHAM MANOR, N.Y. PALO ALTO, CALIF.

# PREFACE

"Nothing endures but change" (Heraclitus). The economy changes; economics changes; and so this textbook changes. This is the sixth edition, and each edition has had to respond to the changing conditions of the economy and to the changing perceptions of these conditions by economists. The text has been written, updated, and reorganized in the expectation that the new edition will better serve the needs of the reader of the 1980s.

This book is intended for senior- or graduate-level courses in business cycles or national income analysis and in forecasting. These courses do not have uniform content or titles, but they are given under such titles as Business Cycles, Business Cycles and Forecasting, Business Conditions Analysis, National Income Analysis, or Forecasting.

Users of earlier editions will find that the placement of chapters and topics has been altered somewhat in this edition, but will find that the underlying intent of the organization remains the same. It reflects the authors' conviction that to be able to intelligently analyze and forecast business conditions (or to simply make sense out of what is going on in the economy), both a historical perspective and a theoretical foundation are necessary. Accordingly, Part I provides that historical background and basic definitions, while Part II develops the theory of macroeconomics both from the supply-side dominated neo-classical viewpoint and the demand-side oriented neo-Keynesian approach. Part III summarizes the major schools of business cycles theories as developed by their leading advocates. This was once virtually the whole content of courses in business cycles, when speculation about economic relationships predominated rigorous theoretical-empirical study. We find study of these earlier theories still rich with valuable insights into the processes of economic activity. Part IV is devoted to forecasting on the aggregate level, the industry level, and on the level of the individual business firm. Here the emphasis is pragmatic. A healthy respect for the pitfalls in forecasting is encouraged. On the other hand, since no action can be taken, whether in business affairs or in government policy, without some forecast, explicit or implicit, the goal should be to make the best forecast with the techniques and information available. Part V considers the issues of public policy for economic stabilization and growth, with the emphasis on monetary and fiscal policy. The faith of the public and of economists themselves in the ability to manage the economy by governmental actions goes through cycles of its own. Our stance has been that economic policy can be very positive, but with all of the uncertainties involved, we should be aware of undesirable consequences, and not promise more than can be delivered.

We have tried to avoid taking a polemical stance in presenting both the theory and the public policy discussions. Instead we have aimed at a balanced presentation, allowing that there is something to be gained from an open-minded look at diverse points of view. We recognize that economists don't have all the answers, but great progress has been made in understanding the economic world.

This book provides the background needed by individuals, economists, and business people to understand the factors that contribute to the level of national income, and to economic growth and stability. This book also surveys the techniques that may be used to analyze current economic conditions to forecast future levels of activity. The authors believe that the factors which affect the level of economic activity and national income and the techniques of forecasting them should be studied as a unit. Prediction of future events in any field of knowledge is possible only when the causal factors that produce changes are fully understood. The factors at work to produce changes in economic activity and in the level of national income are not completely understood in all of their ramifications, but many of the basic factors at work are clear. The business cycle is no longer a completely unsolved riddle, and there exists a large measure of understanding of the factors that promote economic growth and determine the level of national income. As the knowledge of the causal factors at work steadily increases, forecasting will become more accurate.

Dr. Carl Dauten's death deprived me of the benefit of his wisdom, knowledge and insights, and his good humor in the preparation of this edition. Nevertheless his influence is felt throughout the book as much of his writing remains, and I have tried to remain faithful to our mutual belief in the approach we have taken as teachers of subject matter we considered to be of vital importance.

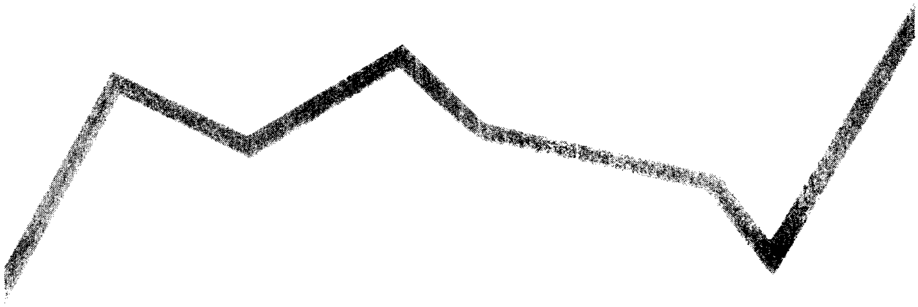
Thanks are due to many colleagues and friends in education, business and government, and to users of earlier editions who offered helpful suggestions for improvements. Our own students provide much of the inspiration needed to persevere in an undertaking such as this. I would like to make special mention of my research assistants over the years, and especially to my current assistant Mr. Bong-Ho Lee who, with enthusiasm, initiative, and knowledge has been of exceptional help to me in this edition.

*Lloyd M. Valentine*

# CONTENTS

# Part 1

# INTRODUCTION TO BUSINESS FLUCTUATIONS



Fluctuations in economic activity are a part of life. At times they are of all-consuming interest and concern to people in their capacities as business decision makers, family breadwinners, budgeters, and wealth managers. Changes are continually taking place in prices, in wages, in the level of employment, and in other economic factors; and these changes affect the fortunes of all of us, not only in our country but in the world. The early pioneers on the frontiers of civilization could largely ignore economic changes since they built their own homes from native timber, raised their own food, and made their own clothes. However, in an economy of interdependence in which almost everyone works for a living and uses the money received to buy goods and services, the state of economic activity is of primary concern to all.

Periods of depressed economic activity, which have occurred from time to time, have caused untold deprivation and suffering for many people. In fact, the argument has been made with some appeal that the free-enterprise system is unacceptable because of such suffering during major periods of depressed economic activity. Those who favor a controlled economy have promised an end to periods of economic depression. Thus, one of the challenges for our society is to cure this problem within the framework of a free society and, at the same time, to continue to raise the standard of living of our people. The struggle for power in our modern world is in part a struggle between two competing economic systems, each claiming that it can raise the standard of living of its people and of those of the rest of the world more rapidly than the other.

This introductory part attempts to set the stage for the later parts that deal with the analysis of the causal factors in economic fluctuations, the forecasting of future economic activities, and policies designed to mitigate the more severe and costly sorts of fluctuations. These first five chapters look at the historical record to encourage a perspective for current viewing of the economy. The patterns of business cycles and their regularities are given considerable study. Chapters 1 through 4 of this part deal with general cycles, that is, cycles in the overall or aggregate economy, while Chapter 5 treats a number of specific cycles, that is, cycles in particular segments of business activity. This discussion provides a review of the background needed to understand what is happening in the economy during cyclical fluctuations. These features of the American economy will be used in the explanation of why the cycle develops as it does. If the economy were changed materially, the cycle would be changed or perhaps even eliminated in the form in which it has occurred.

# 1

# NATURE OF ECONOMIC FLUCTUATIONS AND FORECASTING

The volume of economic activity in America has been increasing since early colonial days. This has been true not only because population and the number of workers have increased but also because our productivity has increased as methods have been developed to turn out more and more goods with a given amount of labor. This growth of economic activity has not taken place, however, at a steady rate. It was very rapid during World War II and the early postwar years and much slower in the 1930s and the late 1970s. Nor has growth taken place without interruption. There have been several periods of minor decreases in economic activity even in the prosperous years since the end of World War II. From time to time there have been much more serious and protracted interruptions in the forward push of economic progress. This happened from 1929 to 1933 and also in several earlier periods in our history.

## NATURE AND SIGNIFICANCE OF ECONOMIC FLUCTUATIONS

Severe fluctuations in production, employment, prices, and other phases of economic activity are of primary importance as economic, social, and political factors. They not only affect the economy and society at large but also the living styles and standards of individuals of all ages and in all walks of life.

Economic problems and their impact on the people exist at all times and in all societies. The economics profession dedicates itself continuously to work on the solutions. Economic fluctuations exacerbate these problems, and to the degree that these fluctuations can be made milder, the problems and suffering can be lessened.

The first observation to make is that business fluctuations happen over time. In other words, the study must be dynamic rather than static. If economic activity could change instantaneously, the statistics of business activity would look different than they do. But, in fact, most activity takes time; time for decisions to be made, time to arrange financing, time to order materials and hire or lay off workers, time to change production rates, and so on. Recognizing time lags of different lengths for different economic processes plays an important role in the understanding of business conditions analysis.

Market economies such as the United States, as opposed to planned economies, have certain characteristics that make them subject to change in their own peculiar fashion. Some of these are desirable, such as the growth arising from technological improvements in products or in production processes. Others are not at all desirable because they can result in periods of unemployment or inflation. In general, planned economies, as we have been able to observe them, are more cumbersome in their ability to change and adapt to new developments. In market economies, the rule is: Change, or suffer the consequences.

## Depression Periods in Economic Activity

It is difficult to comprehend the full effect on the lives of individuals of periods of severe depression in economic activity. Those who are unable to find employment in a period of depression are forced to curtail consumption of goods and services to such an extent that real deprivation often exists. The psychological impact on their lives is more difficult to measure, but it is certainly great. The effect on the attitudes of young people who are just entering the labor force and cannot find employment can be highly detrimental to the social framework of the nation. This is especially true of young people who are members of minority groups since these groups often are hit hardest by unemployment. Older workers who lose their jobs during the decline in business activity on the downswing of the cycle may find it almost impossible to find gainful employment on a regular basis even after the depression ends.

Depression periods have also often been periods of declines in the general level of prices, that is, of deflation. In a period of deflation, debtors find their loans and the interest payments on them more difficult to repay since it takes more purchasing power to do so than it did at the time the loan was made. This creates problems for business people and farmers who mortgaged their property in a period of high prices and must pay off mortgages and meet interest payments in a period of falling prices. The same is true for individuals buying a house on which they have a substantial mortgage. Not only does it take additional real income to repay the loan and interest on it, but problems arise if an individual is forced to move. More dollars may be owed than the house will bring on the market and, as a result, there will still be some debt remaining after the sale, so nothing would remain for a payment on a new home.

Business fluctuations also create problems for society at large. From the economic standpoint, there is the loss of goods that might have been produced during the period of less than full employment. This will amount to billions of dollars even in relatively minor downturns and is staggering in major depressions. There is also a loss of capital equipment that deteriorates faster than it is replaced. As a result, it is more difficult to achieve high levels of production in the ensuing prosperity period, and the nation is permanently poorer than it would have been if capital had been replaced and expanded at more normal levels.

Business failures increase rapidly during periods of depressed business activity, especially in major depressions. This not only involves losses for the owners, but generally also for creditors. Such losses to creditors have been substantial even in minor downturns. Business failures also have an adverse effect on the employees of the concerns that fail and on the communities in which they are located.

Depressions also create social problems that become especially severe during protracted periods of large-scale unemployment. The crime rate increases, especially among the younger people who have not been firmly established in their jobs and homes or who are just entering the labor force and find it impossible to get jobs. Marriages are postponed and birth rates drop, which intensifies the depression since demand for housing and consumer goods related to homemaking and rearing a family is further reduced.

The political repercussions of business fluctuations are also of great importance. When large numbers of people are unemployed, they are easily swayed by demagogs who promise them food and shelter in exchange for some freedoms. At least part of the rise of communism, and especially fascism, can be traced to such situations in periods of greatly depressed business activity. In democratic nations, there is tremendous pressure on the government during times of subnormal business activity to do something about unemployment and its problems. The result is that the trend toward government regulation and public ownership of business is greatly accelerated.

## Boom Periods in Economic Activity

Problems of a severe nature also occur when demands that are beyond its ability to supply are made on the economy. Increasing output in itself creates no macroeconomic problems, but the effect of demand in excess of the ability to supply leads to an increase in the general level of prices. Prices do not change uniformly but do so at different rates in different sectors of the economy, and this creates problems. It leads to inequities among individuals and groups and thus to a less than optimum allocation of resources.

Inflation creates serious problems for the individual. Debts may become easier to pay off, but problems in planning insurance, investment, and retirement programs increase. The face value of life insurance policies remains unchanged, but the proceeds buy less. The same is true of many pension programs that guarantee a fixed dollar amount. Personal investment also becomes a problem since bonds and savings and loan shares lose purchasing power as prices go up, and the average individual does not have the necessary analytical or financial ability to invest in common stocks in such a way as to keep up with inflation.

Many groups in society suffer a loss in real income during inflationary periods and try to use political pressure to stop it. The pay of government workers, teachers, employees in regulated industries, and others lags behind the rise in prices, and this makes it difficult to recruit and hold good workers. The teaching profession is likely to be hard hit since, when income fails to keep up with prices, fewer students, especially the good ones, plan to become teachers and thus a shortage exists for several years.

In the United States, the desire to avoid the undesirable consequences of economic fluctuations led to the enactment of the Full Employment Act of

1946, which stated that it was the policy of the federal government to plan its activities affecting the economy so as to promote full employment. The government is also under continuing pressure to use its powers and influences to control inflation as well as deflation. Government programs in agriculture have been directed toward stabilizing agricultural income and in housing toward stabilizing overall economic activity.

## TYPES OF VARIATIONS IN ECONOMIC ACTIVITY

Economists recognize different types of variations in economic activity. These are the trend, business cycles, seasonal fluctuations, and irregular or random fluctuations.

### Trend

Even though economic activity does not proceed smoothly but is interrupted by periods of decline followed by increased activity, there is an underlying long-run tendency for economic activity to increase or decrease that is referred to as the trend. *Trend* is the persistent underlying movement that takes place in economic activity in general or in a sector of the economy over a period of years. It is the basic growth or decline that would exist if there were no periods of boom or depression or less pronounced variations in economic activity.

The trend in total economic activity is a linear one; that is, activity has grown at a more or less constant rate over a period of years. This trend in the United States has been upward due to many factors. The development of a new continent was a major factor until around 1900. The rapid increase in population, the increasing stock of capital goods, technological progress, the increased education and skills of the labor force, increased managerial skills, and the discovery of new sources of raw materials have also been significant.

The trend of total economic activity is the combined result of the trends of individual industries and businesses. A successful new industry usually grows rapidly in its early stages. Growth then levels off to a more gradual rate, and after a time the industry becomes integrated with the economy, and its growth is largely governed by the growth in the general economy. The trend of growth of such a new industry is a curvilinear one; that is, it resembles an elongated *S*. As the demand for goods and services changes, some industries may pass their peak and decline. This may be a gradual downward movement, as in the case of coal furnaces, or a rapid decline, as in the case of a product that has become obsolete, such as wagon wheels.

### Business Cycles

Changes in the level of economic activity caused by the trend are overshadowed by continually recurring variations in total economic activity. Several years of expansion in total economic activity are followed by a period of slower growth or of contraction in such activity. These fluctuations occur in total economic activity, not just in a particular industry or sector of the economy. Such expansions and contractions in the level of activity occur at about the same time in most sectors of the economy. This sequence of fluctuations is a recurring one, but it is not periodic; that is, such variations do not occur at regular time intervals and do not last for the same periods of time. The amplitude of movement from the low point of activity to the high point of activity is not the same. These fluctuations have become known as *business cycles*. Any connotation of a high degree of regularity, however, that the term "cycles" may give is not warranted by serious study of the data on total economic activity, production, employment, prices, or any other major economic series. On the other hand, the recurrence of ups and downs in business is more regular than would be expected if it were a random process.

### Seasonal Fluctuations

*Seasonal fluctuations* are changes in economic activity during the course of a year that occur in a more or less regular pattern from year to year. Such changes are related to the changing seasons of the year, to holidays, or to the calendar. The canning or freezing of fruit, for example, must take place during that season of the year when the fresh fruit is available. Other seasonal patterns are related to customs in our society, such as sales arising out of Christmas gift purchases and the Easter parade. The changing date of Easter leads to a changing seasonal pattern in those sectors of economic activity that are affected. Other seasonal variations occur because of the unequal number of days in the month in our calendar and the unequal distribution of holidays that are generally observed.

### Irregular or Random Fluctuations

Economic activity in various sectors of the economy, and to some degree in the total economy, is also affected from time to time by such exogenous factors as a widespread drought, a major flood, or a political disturbance. It may also be affected by a major strike. Some minor variations in economic activity are due to more or less unpredictable factors, such as unusual absenteeism resulting from a flu epidemic. Others may be due to purely random factors, such as a technological breakthrough in production or a sudden change in fashions or fads. These various factors are known as *irregular* or *random fluctuations*.

## PRICE LEVEL CHANGES

The changes in economic activity involved in the trend, the business cycle, seasonal factors, and irregular or random fluctuations affect the general level of prices. For example, there is some tendency for prices to rise during the upswing of a business cycle as the demand for goods and services grows faster than the ability of the economy to provide goods and services; there is also some tendency for prices to decline during the downswing of the cycle. Changes in the price level from time to time may also be primarily related to changes in the money supply or the money standard, rather than to real changes in the level of economic activity. For example, during the Vietnam

War, the money supply was increased greatly by the methods used to finance the war, and prices rose until the supplies of money and goods were in balance. At other times (although not in recent years) the basic movement of prices has been downward. This was true in the 1870s and 1880s because economic activity was expanding and the money supply was more or less fixed.

## FORECASTING AND ECONOMIC FLUCTUATIONS

When making decisions about the future course of a business, management must take into consideration all of the factors that are likely to affect it, both external and internal. Business fluctuations are among the major external factors that affect a business and are therefore of prime importance in making management decisions.

### The Relationship of Economic Changes to Business Management

The primary function of management in a business is to determine the objectives of the business in the long run and short run. Then management must make plans to carry out these objectives, organize human and material resources to put the plans into action, implement the plans, and control the activities of the business to be sure that all is going according to plan. Economic analysis and forecasting are involved in all of these steps in management, but primarily in determining objectives and in developing long-range and short-range plans to carry out these objectives.

In determining its objectives, each business must decide on the commodities it plans to produce and sell, the price range of its products or services, the geographic region in which it plans to sell, the potential market for the products, the share of the market it can realistically hope to get, the prospective return on capital, and the like. Such objectives can only be realistic and well-balanced if management has analyzed trends in the economy and has forecast the demand for its products over time, the prices at which it will sell, the cost of the factors of production, and so on. Thus, an analysis of trends and current developments in the economy and a forecast of such trends and current developments is basic to establishing sound business objectives and in developing long-range and short-range plans to carry out such objectives.

### The Need for Forecasting in Business

Some business people and economists still feel that forecasting is impossible in their businesses or at best is so indefinite as to be hazardous as a basis for business decisions. The statement is frequently made that forecasting may have succeeded well for others but "our business is different." The fact remains, however, that in any business in which raw materials must be purchased before orders are received or in which substantial capital equipment is used, some form of forecasting is being done, even if unwittingly.

If a business plans to continue to operate at present levels, the forecast implicitly made is that present levels of business are predicted for the future.

For most businesses this is not true for any period of time since they are continually affected by changing business conditions. Another frequent basis for business decisions is that past trends will continue. If, for example, business has been increasing at a rate of about 5 percent a year, that rate of increase is expected to continue for the next year or several years. This can be a hazardous assumption because growth does not continue at the same rate indefinitely in a dynamic economy.

In many concerns in which the top officials feel that forecasting cannot be done, someone is actually doing the forecasting. For example, a manufacturer of appliances used in home construction felt that the level of business could not be forecast successfully. The manufacturer believed that current orders were the only real guide to follow in planning production. Since orders usually were received several weeks ahead of the requested delivery date and since the appliances could be assembled in several days, this looked like a reasonable procedure. Some of the raw materials, however, had to be ordered as much as five months in advance to allow for delivery and fabrication. Since no one would venture a forecast, not even the purchasing agent, the clerk who did the ordering had to decide when to order materials. The clerk tried to follow production but, of course, got behind on an upswing owing to the time required to obtain materials. As pressure increased for raw materials when business increased, the clerk ordered faster. As business turned down, the firm received large stocks when they were no longer needed.

What was happening in effect was that the order clerk was forecasting. The clerk knew little about the prospects of the business and acted in response to pressure from superiors to either obtain materials in a hurry or reduce excess stocks. The manufacturer finally called in outside consultants for advice on reorganizing the purchasing department and was surprised when told that top management was to blame because no forecast existed.

## Nature of Forecasting

Business has no alternative to some type of forecasting, since aimless drifting is unthinkable in a well-managed organization. The basic question really concerns the approach that is to be used in forecasting. It can be done in a mechanical way as, for example, predicting a 5 percent increase in sales since this has been the average experience over the last few years. Or it can be done by relying on one of several series that have generally led to changes in business activity in the past, such as changes in stock prices. On a somewhat more sophisticated level, it can be done by studying the economic and business situation and then intuitively deciding what will happen.

The scientific approach in this field is the same as in any field. It involves a knowledge and understanding of what has happened in the past, what is currently happening in the economy, and why it is happening. Only when phenomena are understood is it possible to predict with any degree of accuracy what will happen, and take the proper action in the light of such predictions.

Our knowledge of the causal factors at work in business fluctuations is not comprehensive enough to make it possible to forecast with complete accuracy. But it is advanced enough to make possible more reliable indicators of future events than can be done with unscientific approaches. The forecasts that can be made more than justify the time and money spent on them. As knowledge increases in this field, better and better results will be forthcoming.

## Benefits from a Forecasting Program

The only thing certain about any specific forecast is that it will be wrong, at least to a degree or in some particular area. With the present knowledge of business fluctuations it is impossible to gauge all variables exactly. As a rule, however, it should be possible in most businesses to forecast total sales for a quarter of a year ahead within a range of 5 percent above or below the actual figure, and for a year ahead within a range of 10 percent. Such results are usually accurate enough to be of real aid in managing a business, even if sales and production forecasts of individual products are off somewhat more. Such forecasting is a valuable managerial tool for business planning.

**Consideration of Every Contingency.** A forecasting program should help a business to meet almost any eventuality. A good forecast considers all factors that might influence a business, including remote possibilities. If management studies the forecasts carefully, it will at least not be caught unaware when the unexpected happens. It is impracticable to prepare in advance for every contingency, but knowing what can happen and spotting unusual situations early will go a long way toward preventing serious difficulties.

**Study of Past Record.** Forecasting forces a business to study its past record carefully. This must be done to determine past trends and the most likely pattern in the future. A study of the past is also necessary to determine if any regular seasonal pattern exists. Furthermore, an analysis of past cyclical movements should be made in developing data for future forecasting. The determination of the trend, cycle, and seasonal pattern requires the recognition of all sporadic or unusual factors. An analysis of these compared with a study of the past policies of the business will often reveal both good and bad courses taken by management. Such study can provide the basis for avoiding the same mistakes in the future and for continuing the policies that have proved successful.

**Study of Outside Factors.** Another important benefit of forecasting is that it forces management to look at all the outside factors affecting the business. In this way executives are kept informed of the governmental and social environment in which they make decisions. Favorable trends may be discerned and developed, or action may be taken to combat unfavorable aspects of a situation before they develop too far. Such awareness of the social and governmental milieu in which business operates is important for the preservation of free private enterprise in a democratic system.

## Limitations and Problems of a Forecasting Program

Several problems are likely to be encountered in a forecasting program. One problem is that top management may expect a greater degree of accuracy from a forecast than is possible with the present knowledge of business and economic factors. Many top executives, especially in smaller concerns, feel that a forecast made once a year should be accurate enough to use as a basis for planning a year ahead with no further review or change. Such accuracy is seldom possible, however, since the numerous factors affecting business are changing constantly. Forecasting must be a continuous process.

Another problem is to obtain cooperation among various groups that participate in developing and using the forecast. At times sales departments are inclined to be overpessimistic when sales are bad. Other departments may argue for levels of production that are too high, in order to make per unit costs look more favorable. This emphasizes the need for an independent forecasting group rather than one under the direction of sales or production planning departments.

Small businesses have a special problem in the forecasting area. Their forecasting problems may not keep one trained person occupied, and they cannot afford to pay for the required background and experience. They are also at a disadvantage in finding a good forecaster since the number of persons qualified in this area is small. A possible solution is to have forecasting services set up locally, serving clients in a manner similar to law offices or tax consulting services.

## The Need for Forecasting in Government

The many activities of the federal government and its widespread obligations in the economic sphere cannot be carried on without an analysis of current economic activity and a forecast of future economic activity. This has to be done to carry out governmental responsibilities under the Full Employment Act, and the Council of Economic Advisers has been established for this purpose. The level of economic activity must also be forecast to develop the annual budget of the federal government. To estimate receipts of the federal government, which come to a large degree from personal and corporate income taxes, it is necessary to forecast personal income and corporate profits. This, of course, cannot be done without forecasting the level of total economic activity and the level of prices.

The Department of Agriculture must forecast the prospective supply of farm products, the level of farm prices in general, and the supply and prices of particular commodities to plan its crop control and price support programs. The Board of Governors of the Federal Reserve System must forecast the demand for money and credit and the basic supply and demand factors at work in the economy to develop and carry out its monetary policies.

The various housing agencies must forecast supply and demand in developing their programs. In fact, every agency that deals with economic matters must analyze the factors at work in the economy and forecast future economic conditions. State and local governments, too, are finding that forecasting is an absolute necessity. Forecasting has become one of the important activities of government, and the skill and accuracy with which it is done are major factors in the success or failure of government programs.

## MAJOR CHARACTERISTICS OF THE ECONOMY

We now wish to review some of the general characteristics of the economic environment that are relevant to an understanding of the causes of instability. The economies of the world differ in greater or lesser degree with respect to these characteristics, and any economy that is not stagnant will find them changing over time, sometimes in a subtle and sometimes in a dramatic fashion. Such changes can be very important in the analysis of economic fluctuations. Accordingly, one needs some understanding of the institutions and historical forces at work in the economy being studied.

### Consumer Freedom of Choice

Consumer sovereignty is a fundamental principle of democratic capitalism. By and large, freedom of the individual to make economic choices is characteristic of the economy of the United States. Consumers are free to spend their income as they see fit. Choices are made among various types of goods and services, and the timing of the purchases is left to the consumer. If the individual elects not to spend on commodities in the immediate period, a further decision must be made as to the form in which the increased wealth will be held: money, bonds, insurance, equity securities, and so on, or the reduction of debt. While this kind of freedom is priceless, it is also one of the factors that gives the economic system some of its unstable characteristics.

When consumers, businesses, peoples of other countries, and governments are free to determine their purchases, total spending can sometimes be inadequate to employ all the resources that are available for use, or sometimes total spending is more than the value of the goods that can be produced. Consumers are vital in determining the rate of economic growth of the system since capital expansion, which is the essence of growth, is limited by the amount of saving.

Classical economists admitted to some temporary difficulties as consumer preferences shifted from certain goods to other goods, but believed that flexible prices and mobility of the factors of production would eliminate them. It was inconceivable, however, to Ricardo and later classicists that less total spending by consumers could result in any excess of labor or other resources. Their way of phrasing this proposition was that a general glut was impossible. The reasoning was that the interest rate would fall, causing investors to increase their demand for resources and leading households to revise their spending plans upward so that total resources would be employed but with a lower percentage of them devoted to present or consumption goods. This line of analysis, known as Say's law, has played such an important role in the development of the understanding of how economic systems work that we shall come back to it again and again. In particular, Chapter 7 is devoted to an exposition of the classical model of the aggregate economy.

## Profit Motive

In our system most production is done for the market. Most business firms cannot wait until the orders come in to produce precisely the amount needed. Instead, they try to estimate what the demand will be when the goods are ready for the market, and what the costs will be when they are actually incurred in the production process. The possibility of error is great. Both revenue and cost forecasts can be wrong so that undesired inventory accumulation or attrition, or conversely, serious price changes, may easily arise. Unexpected outcomes provoke responses by the business community that cause further changes in the important variables of the economy. The problems arise because production takes time. If output could be created instantaneously, no inventories would be maintained, and no possibility of error in expectations would exist.

Sometimes government officials and other observers admonish business people to make decisions "for the good of the nation" rather than on the self-interest principle or profit motive. During depressions business is asked to expand; and when inflation appears to be the problem, restraint is in order. In general, if there is a conflict between the larger good and self-interest, business decision makers are well advised to ignore and, in fact, do ignore such admonitions. By relying on the profit motive, we get into difficulties, but it is not clear that any alternative criterion would be superior or as good.

Business decisions concerning prices, production, investment, and so on may be made upon the basis of careful, rational appraisals of all factors in the business situation. But, they may also be influenced by psychological factors: waves of optimism or pessimism; the desire to follow in the footsteps of competitors; or fear of the future outlook because of international uncertainties, governmental policies, and the like.

The bases on which decisions are made have changed somewhat as the economy has developed so that the role of business decisions in the cycle is not necessarily the same today as it was a generation ago. More and more firms are taking a longer range point of view, realizing that it is better to maximize long-run profits than short-run profits. This often means that in the short run, prices are set at a lower level than the market will bear in order to maximize long-run profits. This tends to narrow the range of price fluctuations over the cycle in those fields where such a policy is followed and thus to change the characteristics of the cycle to this extent.

In many cases modern management decides inventory policies, working capital policies, and the timing and amount of investment in new plants and equipment on the basis of careful studies of the long-range demand for its product. As such actions reach sizable proportions, it eliminates excessive accumulation of inventory and the building of unnecessary plants and equipment and thus, by reducing activity somewhat during the boom, changes some of the characteristics of the cycle.

## The Industrial Structure

Elements of great importance in the analysis of business fluctuations are the degree of price flexibility and output responsiveness to changing condi-