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ABSTRACT

A concise framework of basic concepts and generalizations for teaching economics for K-12 students is presented. The guide summarizes the basic structure and substance of economics and lists and describes economic concepts. Standard guidelines are provided to help school systems integrate economics into their on-going courses of study. Designed to be used by those working with teachers on curriculum development in economic education, the guide can also be used by methods instructors. Six major areas are defined as essential to economic understanding. First, students need to develop an objective, rational approach and be able to organize their thinking as they address economic issues and questions. Second, students need to master basic economic concepts and understand economic institutions, measurement concepts, and concepts for evaluating economic action and policies. Third, students need a simple overview of the American economic system so as to provide a structure for examining specific issues. Fourth, students need to possess the knowledge and skills to recognize the various types of economic issues they are likely to encounter such as market and government action. Fifth, students need to apply their economic understanding to particular issues relevant to their own lives, such as the scarcity of oil or the rising coffee prices. Sixth, students need to form their own judgments on economic issues based on their analysis of the issues, tempered by their own values. (Author/JR)

Part I
A Framework for Teaching Economics: Basic Concepts

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Preface

This document is the first of a two-part publication entitled *Master Curriculum Guide in Economics for the Nation's Schools*. Part I, *A Framework for Teaching Economics: Basic Concepts*, is a crowning achievement for the economic education profession. It is the first time any social science discipline has been presented in a form that not only clarifies its conceptual structure but also specifies the utility of that structure to decision-making. Part II of the Guide, *Strategies for Teaching Economics*, demonstrates how the conceptual *Framework* can be introduced to students at various grade levels.

The Joint Council greatly appreciates the fine cooperation given to us by the American Economic Association's Committee on Economic Education. We are especially indebted to the four economists who drafted this report. Their task was most difficult because it required many hard choices regarding coverage. Thanks are also due to the hundreds of reviewers from the ranks of education, business, labor, agriculture, economics and government for their fine comments. They assisted the Committee by sharing ideas with them and by providing extensive and detailed comments on the many drafts that preceded this final published version.

The entire Master Curriculum Project was made possible by general contributions from all of our many dedicated sponsors. In addition, supplementary grants were received from General Motors, Ford Motor Car Fund, and American Telephone and Telegraph. We appreciate the confidence these sponsors have expressed in the economic education movement. Special commendation should be given to S. Stowell Symmes, Director of Curriculum, who has coordinated the project for the Joint Council from its inception.

We are confident that the *Framework* will provide workable guidelines for all our future efforts with the schools. Furthermore, it will help to shape textbooks, television films, testing instruments, filmstrips and other instructional materials prepared by commercial publishers for many years to come. The Joint Council proudly presents this document to the education community.

M. L. Frankel
President

Foreword

The National Task Force Report on *Economic Education in the Schools*, published in 1961, placed clear emphasis on devoting more time to economics instruction within school programs from primary to senior high school levels. Furthermore, the report stressed the need to view economic education as a way to help young people to examine economic problems in a more rational way. Acquiring the processes of economic analysis and the skills of economic reasoning about phenomena in our world were recognized to be developmental tasks not accomplished by crash programs or simple packaged cures.

The *Framework for Teaching Economics* takes a giant step beyond the 1961 report because the authors have accepted the responsibility of putting down on paper what it is like to *use* economics; that is, how economics becomes functional to thinking and deciding. They clearly do not proscribe *what* the individual should decide. They do identify a selected working body of knowledge and skills from the economics discipline and in so doing give guidance to educators who must decide what ideas are of *most* importance to the economic literacy of their students. These are *not* minimum standards for survival, because, obviously, people do survive on a limited knowledge of economics. Nor are these maximum standards that are unlikely to be achieved. Instead, what the authors have done is to establish an *optimum* framework: one to be reached—one within the grasp of most, if not all our citizens.

The *Framework* spells out what it means to be literate in terms of rational economic decision-making. Everyone who moves symbolically into adulthood at age 18 is required to fulfill many roles, foremost among them the roles of consumer, worker and voting citizen. Each role requires personal economic literacy: to achieve levels of consumer satisfaction from limited income; to make informed decisions about income-earning opportunities which require individuals to understand, improve and maintain their human capabilities; and to participate effectively in public debate on crucial issues such as the best way to spend our national, state or local tax dollars.

The *Framework* is a simple document without being simplistic. The authors explain each idea briefly, yet accurately. They emphasize both the "forest" and the "trees" without overdoing either dimension. We are indebted to them for their superb effort.

S. Stowell Symmes
Director of Curriculum and
Coordinator, Master Curriculum Project

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Introduction

I. Purpose

Our purpose is to develop a concise statement or framework of basic concepts for teaching economics in schools below the college level. This statement summarizes the structure and substance of economics as commonly understood by economists. It also lists and describes those economic concepts we believe are most useful in achieving the larger objectives of educating high school graduates to be responsible citizens and effective decision-makers throughout their lives. This guide is primarily for curriculum resource groups whose task is to spell out the grade placement and most appropriate methods of teaching these concepts in grades K-12. It will also be read by classroom teachers, however, as the first part of the *Master Curriculum Guide.*

This report builds on the 1961 Report of the National Task Force on Economic Education, the continuing work of the Developmental Economic Education Project (DEEP) of the Joint Council on Economic Education, and the efforts of scholars, teachers, and economic educators to specify the essential structure and content of economics that should be learned.

The Task Force Report was the first systematic effort to give direction and shape to economic education. It pointed to the need for more and improved economic instruction in elementary and secondary schools. It stressed the importance of taking a more reasoned approach to economic problems. It outlined what constitutes "the minimal economic understanding for responsible citizenship." And finally, the Report offered a series of recommendations for implementing its conclusions.

The Developmental Economic Education Project, which evolved from the Task Force's work elaborated in operational terms the "minimal economic understanding" for every high school graduate, how this understanding could be introduced, and at what grade level the material might be placed in the curriculum. Although going beyond the Task Force Report in providing guidance, this effort still left a considerable gap. Subsequently, economic educators and teachers tried to fill this gap as they worked to develop effective curriculum materials and to upgrade the capability of teachers to work with these materials.

The continuing efforts of economists, economic educators, and teachers to clarify what should be taught and how to teach it most effectively have produced a general consensus that: Our efforts should be concentrated on achieving a deeper understanding of a more limited set of materials than has been the practice; students need a conceptual framework to help to organize their understanding; knowledge of basic economic concepts is more important than a heavy dose of factual knowledge; and the real payoff in achieving greater economic understanding comes as individuals acquire the ability to apply their knowledge to a wide range of economic issues of the kind they themselves are likely to confront.

The major purpose of the planned Master Curriculum Guide is to build on these past efforts in order to fashion a more effective system for increasing the economic understanding of precollege students. This report provides an overall framework as well as a compilation of basic concepts around which the balance of the Guide will be organized.

II. What Are the Objectives of Economic Education?

We take the objectives of economic education to be responsible citizenship and effective decision-making. But such a broad statement is only a beginning. What do we mean by responsible citizenship and effective decision-making? What kinds of economic issues and questions will high school graduates be most likely to confront as adults? How will their exposure to these issues and questions come about? And how will this shape the kinds of knowledge and skills they require to address these issues and questions?

High school graduates, as well as college graduates, will be exposed continuously over their lifetimes to a wide variety of economic questions. This will occur through their reading of newspapers and newsmagazines, their exposure to radio and television, their involvement in political campaigns and civic issues, and their participation in economic life as employees, employers, consumers, union members, and the like. The conclusions they reach on these issues will be reflected in how they vote; in the actions they take as members of unions, civic organizations and businesses; in their responses to appeals by the President and other public officials; and in economic decisions they make as individual consumers, workers, producers, savers and investors. This means that the quality of individual decision-making is crucial to the effective operation of our social system and to the well-being of the individual.

Our purpose is to help to develop in young people, by the time they graduate from high school, an ability to understand and make reasoned judgments about major economic questions facing society and themselves as members of that society. Only in this way can they be responsible citizens and effective decision-makers.

There are general concerns, such as the role of prices in a market economy, the impact of government, and the unemployment-inflation dilemma. But there is also a need to teach students something about personal economic decision-making—how to earn an income, invest their savings, budget personal expenditures, and the like. We believe that emphasis must be given to preparing young people to grapple with both social and personal issues and questions. To do so, they must, in each case, be familiar with the concepts and approach of economics, and they must be able to apply them in a reasoned way so as to come to informed decisions on specific issues. Although our report is cast largely in terms of the broader economic issues, we recognize that, when properly used, various teaching approaches—such as personal economics—can be useful vehicles for teaching students the basic concepts of economics and their applications.

If the purposes of economic education are to be achieved, individuals must be helped to become intelligent readers of the newspapers, careful watchers and listeners of television and radio, and critical observers of political candidates and issues. This requires a variety of knowledge and skills: developing an ability to identify the economic aspects of particular issues, taking a rational, unemotional approach to these issues, having available a framework for understanding the economic system, knowing the basic economic concepts, and being able to utilize these several elements of economic understanding in addressing a variety of specific questions. If these objectives are achieved, young people should be able to address long-standing economic issues which need resolution as well as new economic issues which require them to move intelligently on less familiar ground.

We are aware of the hurdles that must be overcome in raising the level of economic literacy, particularly through improved education in the schools. There is

only limited time in the school curriculum available to treat economic issues, with the result that whatever knowledge of economics students acquire comes mainly through the introduction of economics in other courses. The often limited understanding of economics by many teachers restricts the effectiveness of whatever teaching of economics does occur. The lack of a wide range of suitable curriculum materials and the ineffectual distribution of already-available materials compounds the difficulties of producing economic literacy. And, finally, the limited basic skills attained by many students inhibit their ability to grasp economic issues. Recent results from the National Assessment of Education, for example, indicate that many 17-year-olds not only exhibit considerable weakness in reading comprehension but also experience difficulty in solving simple arithmetical problems of the kind commonly faced by consumers. These skills are essential if greater economic understanding is to be achieved.

In short, we can only hope to reduce the extent of economic illiteracy. We cannot expect to eliminate it. Nevertheless, we must continue to work vigorously to dismantle the barriers that in the past have proved so difficult to surmount.

III. What Can Economists Contribute?

Economics as a discipline has a long history, going back at least to the writings of Adam Smith. Much has been learned since then, through efforts to systematize our knowledge of the theoretical and conceptual structure of economics, to develop improved systems for measuring and assessing economic activity, and to apply economics to a wide range of problems.

Professional economists continue their efforts to apply existing knowledge, to extend their knowledge, and to communicate this knowledge to students, teachers, the citizenry, and key decision-makers. We see this report as an extension of these activities.

Recent experience makes it clear that economists do not have all the answers to the many and varied economic issues and questions we confront both as individuals and as members of a larger socioeconomic system. Although economists believe they now have the knowledge and tools to prevent, for example, massive economic depressions of the 1930's variety, much remains to be learned about how to moderate inflation while still holding down the rate of unemployment. And though few would deny the need for collective economizing through government action, we must know much more about making governmental activities effective within the context of our "mixed" enterprise system.

There are several reasons why all the answers are not readily-available. Economic systems are complex and defy easy understanding. Moreover, our ability to know exactly how effectively the economy and its components function is often limited by difficulties in obtaining accurate and timely measurements of economic activity. Finally, a variety of unanticipated events affects economic activity, and thereby makes it difficult to predict accurately the results of many specific economic decisions. Unlike the physical sciences, carefully controlled experiments are difficult to undertake in economics.

Even if our understanding of the economy and economic decision-making were further improved, this would still not eliminate all disagreements on economic issues. Certainly, some disagreements will be resolved as our understanding increases; many disagreements will persist, however, because of differences in judgments about the actual or predicted effects of specific decisions; and still others will remain because individual economists, as do most individuals, hold different sets of values. A failure to distinguish between analysis (what is) and value judgments (what ought to be) is the source of much confusion in many discussions of economic issues.

Despite these cautionary comments, economics has much to offer individuals

in giving them a framework for making decisions and also in providing them with a richer and fuller understanding of the world in which they live, study and work.

IV. What Are the Elements of Economic Understanding?

The essence of economic understanding lies in being able to make sense out of the unfolding array of economic issues coming to our attention. This requires that the various elements of economic understanding be combined and blended so as to provide a working knowledge of economics. The key elements of economic understanding are as follows:

- ***Practicing a reasoned approach.*** Students must recognize that economic issues can be analyzed effectively only by replacing emotional judgments with an objective, rational, and systematic approach—a reasoned approach.
- ***Mastering the basic concepts.*** Students must have at their command a set of basic concepts to give them the capacity to think about economic issues in a reasoned way.
- ***Possessing an overview of the economy.*** Students need a simple overview of how the economic system works so as to provide a structure for examining specific issues.
- ***Identifying the issues.*** Students must possess the knowledge and skills to recognize the various types of economic issues they are likely to encounter as consumers, workers, citizens, and employers.
- ***Applying these elements to particular issues.*** Students must be given practice in using the reasoned approach, working with the basic concepts, and identifying the issues, first on simple and then on more complex real-world issues. The ultimate test is their ability to apply these elements to a range of newly emerging issues.
- ***Reaching decisions on economic issues.*** Students must learn how to take the final step of forming their own judgments on economic issues. This requires making decisions based on their analysis of the issues, tempered by their own values. This last step includes knowing when it may be impossible to reach a judgment.

A broad schematic framework of the elements of economic understanding just discussed is presented as Figure 1 (see page 5). We elaborate on each of these elements in the pages that follow.

Figure 1

A SCHEMATIC FRAMEWORK FOR ECONOMICS

THE MAJOR ELEMENTS

The attainment of economic literacy by students hinges on effectively

Combining the Elements of Economic Understanding in Reaching Decisions

on a variety of real-world problems and questions, as students and later as adults.

Economics is a way of thinking, as reflected by the need for

Practicing a Reasoned Approach.

Acquisition of the essential knowledge to use economics requires

Mastering the Basic Concepts and Facts, and

Possessing an Overview of the Economy.

With a command of the Reasoned Approach and the Essential Knowledge, it becomes possible to explore and understand real-world economic problems by

Identifying the Issues,

Applying the Reasoned Approach and the Essential Knowledge to These Issues, and

Reaching Individual Decisions on Issues.

Increased confidence and aptitude in applying economics comes by

Exercising the Skills of Application.

The Major Elements

V. Practicing a Reasoned Approach

The most important step in acquiring understanding in economics—as in other branches of knowledge—is the replacement of emotional, unreasoned judgments by an objective, rational approach. The essence of the reasoned approach to economic issues comes from the help it provides in assessing the outcomes of alternative actions and policies, recognizing that there are never enough resources to satisfy all human wants. A reasoned approach to economic issues involves in each instance the following steps:

- ***First***, define the problem or issue. What are the important facts? What questions of choice are raised? Where are we in relation to where we want to go?
- ***Second***, identify the personal or broad social goals we want to attain and assign some rough order of priority to them. Which of the goals apply to this problem or issue? What are the relative weights that should be assigned to each goal?
- ***Third***, look for the principal alternate ways of attaining these goals, in view of the limited resources available and other restrictions imposed on our freedom of action. What are the possible solutions? Which of the alternate solutions seem to be most feasible?
- ***Fourth***, identify the pertinent economic concepts needed to understand the problem or issue and then use them to explore the effects of the various alternatives. Which concepts are most useful for grasping the essentials of the problem? Which concepts are most useful in exploring the effect of each of the various alternatives?
- ***Fifth***, analyze with the help of these concepts the consequences of each of the alternatives for the attainment of the various goals. How can the concepts be used to analyze the effects of alternatives? How can they shed light on the attainment of the various goals?
- ***Sixth***, evaluate which alternative is best in the light of its consequences both for the attainment of the various goals and for the importance of the different goals. What are the trade-offs among the different goals? How much has to be given up in the attainment of one goal to increase the attainment of another goal?

The importance of the reasoned approach lies in the systematic set of procedures it establishes to help students to organize their thinking as they address economic issues and questions. Although the approach may seem somewhat mechanical at first, its application comes more naturally with practice.

In proposing the reasoned approach as one of the key elements of economic understanding, several cautions deserve mention. First, the phrase "alternate ways of attaining these goals" in Step 3 does not mean students should consider only new and different ways of doing things. Frequently, no change, or only slight modifications in the existing ways of doing things, is in order. Second, not every question or news report in economics should be forced into the pattern proposed above. As noted in a later section of this report, there is a difference between trying to learn how an economic system or particular market works and trying to decide what position to take on some controversy or on alternate solutions to particular problems. When it is simply a matter of grasping an understanding of what is happening in the economy or some part of it, students should be directed to move

directly to the part of Step 4 which calls for identifying and using the appropriate economic concepts. Finally, in all cases, applying the reasoned approach requires careful practice and restraint so that it does not become a mechanical exercise.

VI. Mastering the Basic Concepts

A major difficulty for elementary and secondary teachers has been deciding which of the many economic concepts are most important in promoting economic understanding among their students. One of our major tasks has been to develop such a list of concepts and to explain the meaning of each of these concepts.

We faced several difficult decisions in selecting this list of concepts. First, in the realistic belief that only a limited number of concepts can be included and taught effectively in the schools, we focused on what we considered the most basic among the many concepts in economics. Arbitrary decisions had to be made. However, nothing prevents teachers who understand and want to incorporate other concepts from doing so.

Second, all of these concepts should be introduced into the K-12 curriculum at some point. We do note, however, that the starred concepts (see Figure 3) are of fundamental importance because they provide a basis for understanding and using the other concepts. We leave it to the curriculum resource groups to indicate the sequencing and grade placement of the various concepts.

Third, rather than limiting ourselves solely to economic concepts, we broadened the list to include several other types of concepts important to achieving economic understanding. Accordingly, we include the concept of economic institutions to reflect the kind of factual knowledge usually required to gain a fuller understanding of economic issues. We also include some statistical concepts which are essential in measuring and explaining economic performance. In addition, we suggest a number of goals or criteria against which to evaluate the performance of the economy and to assess the effects of various economic policies.

Fourth, we found it useful to group these concepts into clusters and subclusters. The broad clusters are labeled: Basic Economic Concepts, Economic Institutions, Measurement Concepts, and Concepts for Evaluating Economic Action and Policies. These clusters and the subclusters are presented in Figure 2.

A detailed list of concepts within the clusters and subclusters is shown in Figure 3. This is followed by a discussion of each of the various concepts. At the conclusion of the section an attempt is made to link the concepts together with the help of Figure 5.

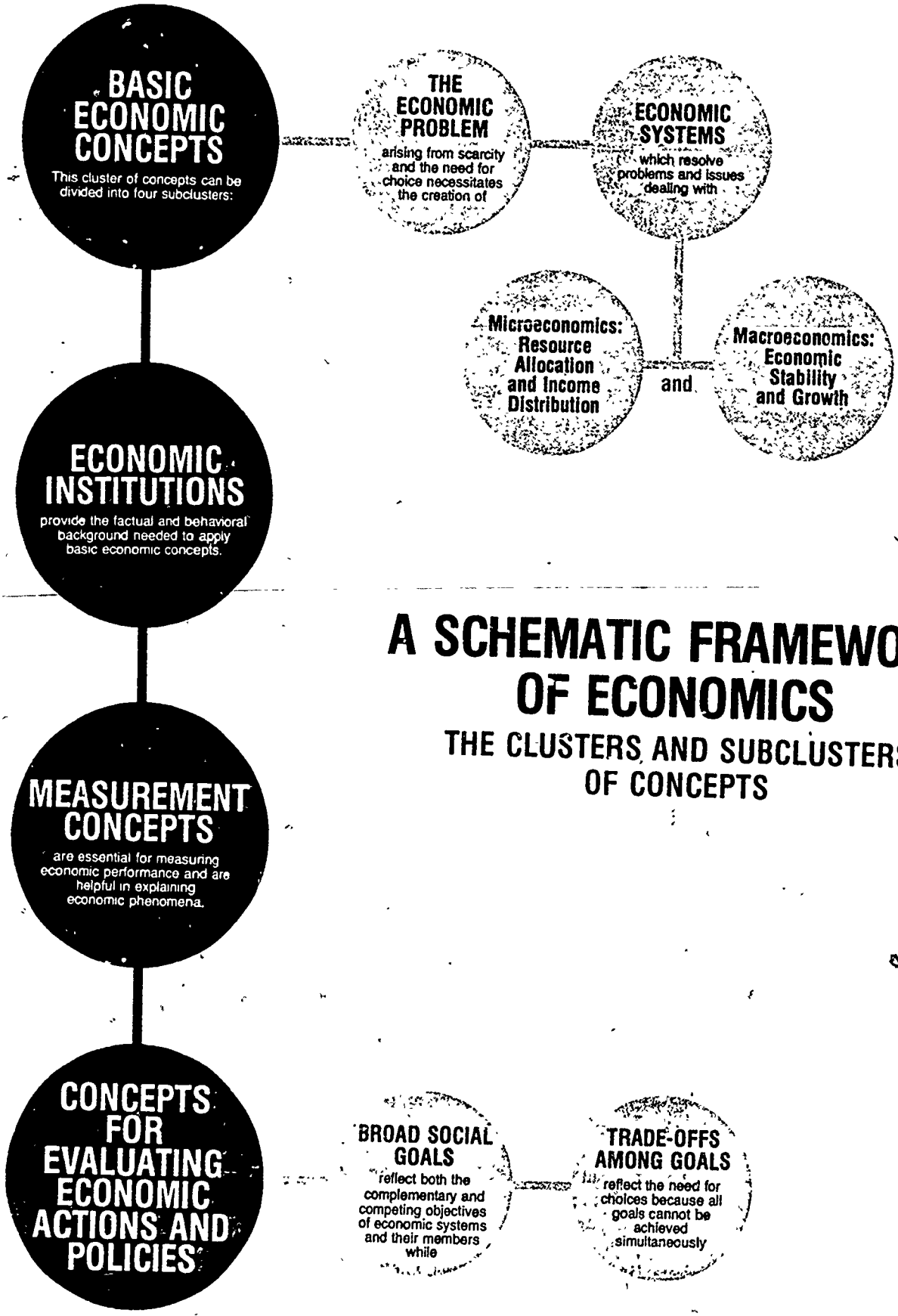
Basic Economic Concepts

The Basic Economic Problem

Economics is that branch of the social sciences which deals with how people use productive *resources* to satisfy their *wants*. The basic economic problem confronting individuals, groups of individuals, and entire societies is that resources are limited relative to their wants. This basic condition of *scarcity* requires them to make *choices* about how to utilize these resources most effectively in satisfying their wants. Were resources available in unlimited quantities, people would be able to produce and consume all they wanted. This would eliminate the need to make many difficult decisions about resource allocation. In the absence of such a world, people must make choices and, to make such choices, they must have a decision-making apparatus, which we call an economic system.

The basic economic problem of *scarcity* that has confronted all societies—ancient and modern, developed and underdeveloped, capitalist or communist—is

Figure 2



A SCHEMATIC FRAMEWORK OF ECONOMICS

THE CLUSTERS AND SUBCLUSTERS OF CONCEPTS

Figure 3

LIST OF CONCEPTS

BASIC ECONOMIC CONCEPTS

THE BASIC ECONOMIC PROBLEM

1. *Economic Wants
2. *Productive Resources
3. *Scarcity and Choices
4. *Opportunity Costs and Trade-Offs
5. Marginalism and Equilibrium

ECONOMIC SYSTEMS

6. Nature and Types of Economic Systems
7. *Economic Incentives
8. *Specialization, Comparative Advantage, and the Division of Labor
9. Voluntary Exchange
10. *Interdependence
11. Government Intervention and Regulation

MICROECONOMICS: RESOURCE ALLOCATION AND INCOME DISTRIBUTION

12. *Markets, Supp'y and Demand
13. *The Price Mechanism
14. Competition and Market Structure
15. "Market Failures": Information Costs, Resource Immobility, Externalities, etc.
16. Income Distribution and Government Redistribution

MACROECONOMICS: ECONOMIC STABILITY AND GROWTH

17. *Aggregate Supply and Productive Capacity
18. *Aggregate Demand: Unemployment and Inflation
19. Price Level Changes
20. Money and Monetary Policy
21. Fiscal Policy: Taxes, Expenditures, and Transfers
22. Economic Growth
23. *Savings, Investment, and Productivity

THE WORLD ECONOMY

24. International Economics (uses the concepts above)

ECONOMIC INSTITUTIONS

MEASUREMENT CONCEPTS

1. Amounts versus Rates
2. Averages and Distribution Around the Average
3. Real versus Nominal
4. Ratios
5. Index Numbers
6. Tables
7. Graphs and Charts

CONCEPTS FOR EVALUATING ECONOMIC ACTIONS AND POLICIES

BROAD SOCIAL GOALS

Freedom, Economic Efficiency, Equity, Full Employment, Price Stability, Security, Growth, Other Goals

TRADE-OFFS AMONG GOALS

SELF-INTEREST AND PERSONAL VALUES

the central problem from which all other economic problems flow. It is the starting point for an understanding of economics.

1. Economic Wants

Satisfying people's wants for goods and services is the main purpose of economic activity. This is what economics is all about. In modern societies people have a wide variety of wants. Some, such as food and shelter, are basic or subsistence wants. Others, such as snowmobiles and entertainment, provide the convenience and pleasant living most people desire. Still others concern the kinds of work people desire and the amount of leisure they seek. Some wants are individual in nature, whereas others, such as a family home, are collective. Most wants are private, but others are public, such as society's provision for highways, education, and national defense.

The process of satisfying wants is called *consumption* and the people whose wants are satisfied are called *consumers*. In addition to goods and services, consumers also want leisure time in which to enjoy consumption. In some cases they also derive certain satisfactions from the work that is necessary to produce goods and services. Thus, we can think of people's wants as having both consumption and production dimensions.

2. Productive Resources

Before goods and services can be consumed, they must be produced. For this to occur, *productive resources* (also called factors of production) are necessary. Productive resources constitute the input to production, while the goods and services produced constitute the output. There are several kinds of productive resources.

Natural resources are the gifts of nature used to produce goods and services. They include land, water, oil and mineral deposits, the fertility of the soil, climates suitable for growing crops, timber, and so on. Some of these resources are used up in the process of production, others renew themselves, while still others can be renewed through the conscious efforts of people.

Human resources are people and their physical and mental capacities. The number of people available for work and the hours they work constitute one dimension of labor input. Another is the quality of the labor skills provided and the motivation of those who provide them. The quality of the labor force reflects past efforts to improve skills and knowledge by means of education and training.

Capital goods are those things created by man's past efforts that are available to produce goods and services in the future. They include machines, tools, and factories. The kinds of capital goods used and how they are used reflect the state of technology which, in turn, is a reflection of scientific knowledge and the resources devoted to acquiring this knowledge.

Two dimensions of productive resources are often important. One is *time* which is required in the production as well as the consumption of goods; time cannot be recaptured, stored, or renewed. All people face the prospect of finite days and of finite lives, thereby forcing them to make decisions about how to allocate their time among various activities. *Space* is also important. The amount of living space available, the density of an area's population, and the distances that must be traveled to carry out economic activities influence economic behavior and are influenced by it.

3. Scarcity and Choice

The overriding characteristic of all productive resources is that these re-

sources are limited relative to human wants, and that adding to them requires the use of additional resources. Consequently, the goods and services that can be produced with these limited resources are themselves limited. These two conditions require that people must continuously make *choices* about how to use the scarce resources available to them. The fact that people's total economic wants exceed available resources creates the basic economic problem of *scarcity* which confronts *all* societies. Individuals confront scarcity deciding how to allocate their limited money incomes among alternate uses. Societies face scarcity in deciding how to allocate limited productive resources among alternate uses.

The basic economic problem for all socieites is in deciding what goods and services shall be produced, which ones shall be foregone or postponed until later, and when and how productive resources will be transferred from one use to another. Decisions must also be made about how the total output of a society shall be divided among its members—that is, how real income will be distributed.

4. Opportunity Cost and Trade-Offs

Opportunity cost refers to what must be given up when decisions are made to use scarce productive resources to produce particular goods or services. A decision to produce one good means giving up the possibility of producing something else. Thus, the opportunity cost—what could have been produced with the resources instead—is the cost of producing that good. For an individual, the opportunity cost of something purchased is the other things which must be foregone. For a society, it is the alternate uses to which productive resources could have been put.

When a person or a group chooses one good instead of another, they are making a *trade-off*—that is, they are trading off less of one thing for more of something else. Society has to make trade-offs too, e.g., between its need for more energy and its desire to preserve the environment. Essentially this involves comparing the various costs and benefits of each of the alternatives. It also involves determining how these costs and benefits will affect different groups within the economic system.

5. Marginalism and Equilibrium

Rather than viewing choices as an all-or-nothing proposition, many decisions involve small changes—a little more of this or a little less of that. Consumers continuously practice *marginalism* as they consider the effect of purchasing one more or one less unit of a consumption good or service. Producers must decide whether to produce more or fewer units of output or to hire or fire additional workers. Decisions about small changes are made more often than decisions about big changes, and the former are usually easier to assess than the latter.

An examination of the effect of small or marginal changes leads us to the concept of *equilibrium*. Equilibrium is a state of "rest" in which there is no tendency for change. When some change does occur in an economy, this tends to set off a series of reactions whose effects eventually subside, and a new equilibrium occurs, i.e., there is no tendency for further change. If, for example, prices go up, consumers will react by reducing their purchases until they have fully adjusted to the new price—until the level of purchases displays no tendency toward further change. This we call equilibrium. In a rapidly changing world, other events often intervene before equilibrium is reached, setting off a new process of change toward a new equilibrium. The concept of equilibrium is useful, nonetheless, because it enables us to analyze the effects of marginal changes and the direction of change in economic activity, thereby throwing light on the trade-offs among alternative choices.

6. Types of Economic Systems

The way people and societies organize economic life to find answers to the questions posed above is called an *economic system*. An economic system can be described as the collection of institutions, laws, activities, controlling values, and human motivations that collectively govern economic decision-making.

We can identify four major types of economic systems. One is based on *tradition*—that is, people generally repeat the decisions made at an earlier time or by an earlier generation. A second is based on *command*—that is, the decisions are made largely by an authority, such as a feudal lord, a dictator, or a government agency, and then are passed down to the people who must accept them. The third is a system known as a market economy. This is a system of *decentralized* decision-making in which all persons participate by registering their desires in the market, in their varying capacities as consumers, producers, workers, savers, and investors. The market "adds up" these individual desires and creates out of them aggregate forces called demand and supply which in turn determine prices. Prices act as signals to producers, telling them what consumers want, and also act as regulators, allocating productive resources and finished goods and services among members of society.

We have chosen not to use "socialism," "communism" or "capitalism" to describe economic systems because these terms are often misunderstood, mean different things to different people, and are associated with value biases. No real world economy is a pure form of a tradition, command, or decentralized market system. Each economy uses somewhat different allocating mechanisms to answer the basic economic questions and each has somewhat different institutions, controlling values, and motivating forces at work which affect the operation of the economy.

Most societies are, in fact, examples of *mixed economies*—that is, their economic systems embrace more than one of the above-mentioned kinds of decision-making, though usually one dominates. The element of tradition is most evident in the rural areas of the less developed countries of Asia and Africa. The element of authoritarian command, where the individual has little or no input into decision-making, is most evident in the Soviet Union, the People's Republic of China, and other centrally planned economies. The element of decentralized or market decision-making is most evident in the United States, Canada and Western Europe. Among Western democracies, however, there exists a great deal of diversity in the degree of government planning and in types of economic institutions. Even in the United States there is a continuing and as yet unresolved debate concerning the role of government in economic planning.

To understand the nature of an economic system, four basic questions must be asked:

> First, what is the nature of the "mix" of allocating mechanisms? How many economic decisions are left to the market? How many are made by authoritarian command? How many are made by a representative government subject to popular control? How many are tradition-oriented?
>
> Second, what are the most important economic institutions of the society?
>
> Third, what are the controlling values and motivating forces of the society? How well is its economic system performing in the light of its goals? And what kinds of policies are being followed to promote the achievement of the goals?

Fourth, what significant changes appear to be taking place in the economic system?

These four questions offer a systematic "way of thinking" about economic systems.

Finally, it should be noted that people of all societies, regardless of the type of economic system, engage in certain basic economic activities. These include *producing*, *exchanging*, and *consuming* goods and services, as well as *saving* and *investing* so that capital goods can be accumulated to increase future production. These activities take place within different institutional frameworks, depending on the kind of economic system. For example, the pattern of production in a command economy, such as that of the Soviet Union, will be decided by government planners but in a market economy it is decided by the demands emanating from individual choices. The distinguishing characteristics of an economic system are thus not the economic activities carried on but the kinds of economic institutions and the way in which decision-making is organized.

7. Economic Incentives

In mixed market economies perhaps the most important motivating force behind economic behavior is *individual self-interest*. Consumers allocate their limited incomes to increase their total satisfaction. Producers seek to maximize their profit and are pushed by the profit motive to combine productive resources in the most efficient ways to produce the goods and services consumers want to buy. Workers seek to sell their labor where the return in money and working conditions is highest, just as savers search out high interest rates in capital markets; both are motivated by self-interest. Similarly, losses (negative profits) are a signal to move resources elsewhere.

Profits are a particularly important incentive in a market economy. Profit is what remains after the costs of production have been deducted from the revenue derived from the sale of goods. It is the desire for profit that persuades entrepreneurs to establish new businesses and later to change the pattern of production (e.g., from big cars to small cars). It is the profit motive which stimulates managers to make businesses more efficient, to introduce new cost-cutting technologies in production, and to compete more vigorously with other businesses for the consumers' dollars. Realized profits provide an important source of funds for new investment and thereby stimulate future growth. Thus, in a competitive market economy, profit spurs both efficiency and growth.

Not all economic decisions in the U.S. economy are left to individuals. People form themselves into groups and use group pressure, both in the market and through political processes, to achieve their goals. For example, workers form labor unions and engage in collective rather than individual bargaining over wages, and companies use trade associations to lobby in Congress for favorable tax laws. The major motivations here are to serve the interest of individual workers and the owners of individual businesses. Government also plays a major role in the U.S. economy and seeks through its activities to enhance the general welfare of the people. This includes establishing conditions to foster the opportunities for individuals, businesses, and groups to achieve their own interests.

In other economic systems, different motivating forces have been evident. In command countries, for example, much emphasis is placed by people in authority on the contribution individuals and groups can make to the welfare of the state rather than to their own personal interests. In some earlier societies, a major motivation was glorifying the ruler (e.g., building pyramids in Pharoah's Egypt), God (e.g., building cathedrals in medieval Europe), or the state (e.g., Hitler's Germany). Whatever the motivations may be, they will influence the form of the

economic system and the way it functions.

8. Specialization, Comparative Advantage and the Division of Labor

Modern economic systems are based on *specialization* because it permits scarce resources to be used more efficiently. Specialization occurs when an economic unit produces a narrower range of goods and services than it consumes. Specialization can be practiced by an individual, by a business, by a region, or by a country. Regions of countries, for example, normally specialize in the production of those goods and services which they are best fitted to produce, given their particular endowment of productive resources, and they buy the rest of what they need from other regions. Specialization is the basis of both domestic and international trade.

The principle of *comparative advantage* determines which particular goods and services can be produced most efficiently and by which countries. It states that the greatest gain in total output will occur if each country specializes in producing those goods and services which can be produced with the greatest relative efficiency. In fact, however, a complex system of tax incentives, tariffs, quotas and other regulations influences patterns of international trade and investment.

The concept of *division of labor* is closely related to comparative advantage. Productive tasks are divided among workers so as to take advantage of the gains from worker specialization. Because of the division of labor, individuals must purchase many of the goods and services they need from others. This has led to the development of an *exchange economy* and the use of money to facilitate exchange.

9. Voluntary Exchange

When two individuals decide to exchange something (e.g., A buys a radio from B), we know that both A and B are better off in their own minds, for otherwise they would not have traded. Voluntary exchange is an important feature of the American and other market-oriented economies. Individuals, groups and regions specialize in the production of particular goods and in the performance of particular services, producing more of them than they themselves wish to consume. They then exchange the surplus for goods and services produced by others, and all are better off as a result. Since barter is clumsy, *money* has been developed to facilitate exchange. When buyers and sellers come together to engage in exchange, we say a market exists. Markets and prices, as explained below, constitute the principal allocating mechanism of the American economy, determining what goods and services will be produced, how they will be produced, and who will get them. Underlying this mechanism is the concept of voluntary exchange.

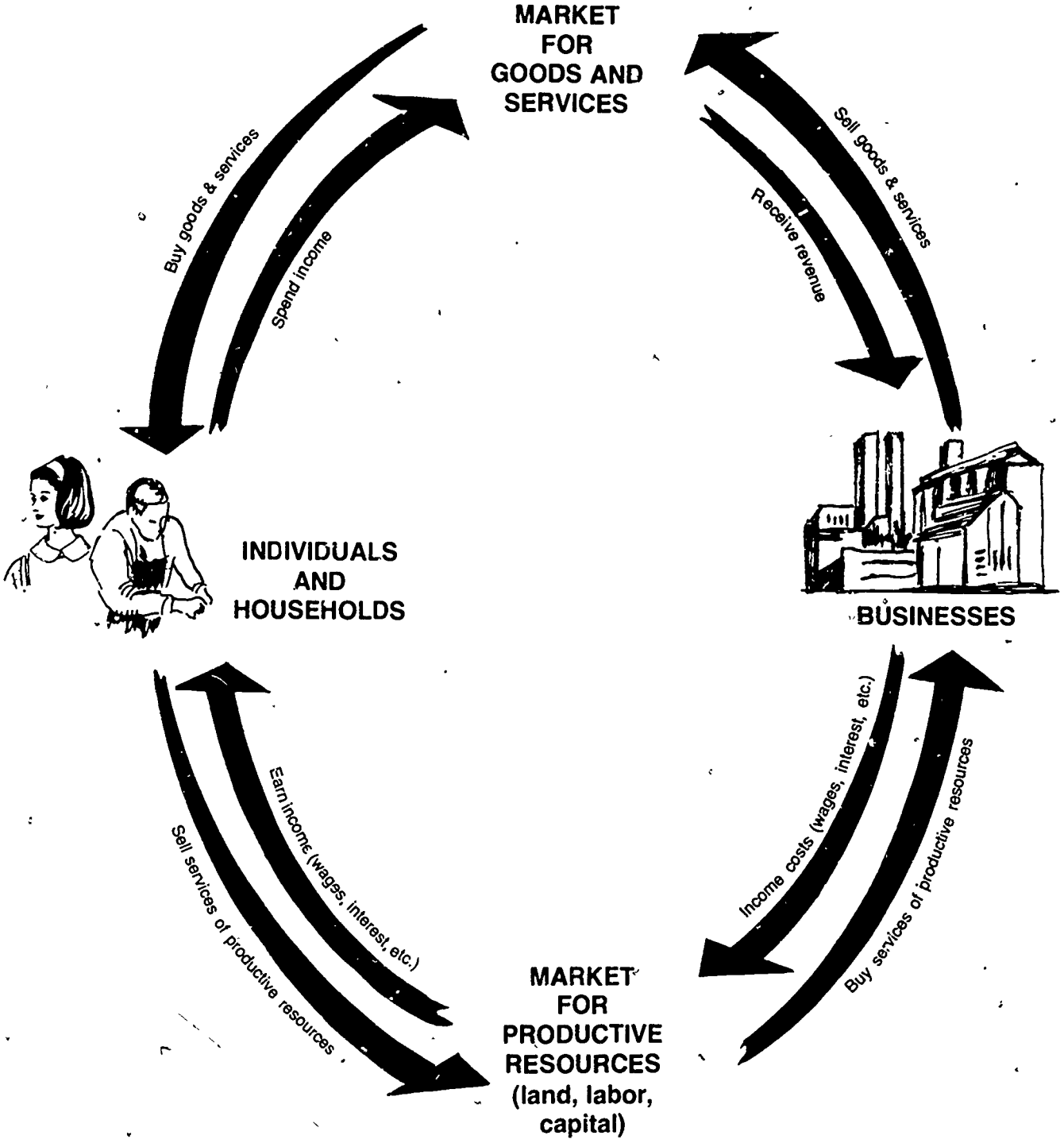
10. Interdependence

When an economy is based on specialization and exchange, as most modern economies are, the people of the economy become *interdependent*. The American economy is characterized by a high degree of interdependence—among individuals, businesses, and regions. One way of demonstrating both interdependence and the overall structure of the economy is through a diagram (see Figure 4) showing the circular flow of finished goods and services, productive services, and money payments.

In the private sector households provide their labor, savings, and property to businesses which use them to produce consumer goods and services; these are then sold to households. This circular flow of productive resources and finished goods and services is paralleled by a reverse flow of money. Producers pay wages, interest, and other forms of income to households who then spend the money buying goods and services from producers.

Figure 4

THE CIRCULAR FLOW OF ECONOMIC ACTIVITY



The presence of the government sector (not shown in Figure 4) results in additional flows of productive services from households and businesses to governments, and of goods and services from governments to households and businesses. The counter flow of money is one of wages, interest, and other forms of income moving from governments to households and businesses, and of money payments, including taxes, moving from households and businesses to governments.

11. Government Intervention and Regulation

In the American economy the questions of what to produce, how to produce it, and how to share it are not left exclusively to free market forces. In our mixed economy, *government* plays a key role. Government influences the allocation of resources in several ways. Control over the *production* of some goods and services (such as national defense, highways and justice) has been removed from the private sector and placed in the public sector where government makes the important decisions. Government also intervenes in many markets with *regulations and controls* with the intent to improve upon the results produced by the free play of market forces. Examples are public utility regulation, tariffs, minimum wage laws, and antipollution and safety requirements. Finally, through its *taxing and spending* activities, government shifts control over resources from private hands to the public, and it also *redistributes* income among individuals through transfer payments. These activities influence what and how much will be produced, how it will be produced, and how it will be shared or used.

Microeconomics: Resource Allocation and Income Distribution

Microeconomics is the study of the behavior of individual households, firms and markets, of how prices and outputs are determined in those markets, and of how the price mechanism allocates resources and distributes income. To understand what goods and services an economy will produce requires that we know how the prices of goods and services are determined, how these prices determine the pattern of production, and how this pattern is influenced both by the structure of markets and by government actions.

12. Markets, Supply and Demand

As already stated, the *market* is a mechanism whereby individual buyers and sellers register their decisions to buy or sell goods and services and productive resources. The market "adds up" these individual decisions and creates out of them aggregate forces known as supply and demand. As a general rule, supply and demand thus constitute the sum total of all the individual decisions to sell and to buy in the market. Interacting with one another, they determine the price of what is bought and sold.

Supply indicates the amounts of anything that will be offered for sale at various possible prices during some period of time. Generally, the higher the price of something, the more of it will be produced and offered for sale—and vice-versa. *Demand* reflects the amounts that consumers will be willing and able to buy at various possible prices during the same time period. As a general rule, the lower the price, the more will be demanded—and vice-versa. The *market* price of something is the price that prevails in the market at a particular time. In competitive markets, it reflects the conditions of supply and demand; in other markets, it may reflect monopoly influences or governmental regulation.

13. The Price Mechanism

Market prices constitute the principal allocating mechanism of the American

economy. Prices act as "signals," flashing information to households, producers, workers, savers, and investors, helping them to decide what are the most rational and profitable decisions to make in the market. The array of prices confronting individuals and households, for example, helps to determine the way they will spend their limited incomes. Wages and salaries (the price of labor) determine the incomes of workers and also allocate labor among different uses. Interest rates (the price of debt capital) determine what kinds of investments will attract money capital. The prices of finished goods relative to costs indicate to producers the most profitable items to produce while the prices of productive resources determine their costs of production. Changes in prices affect the way consumers spend their money, where workers work, how savings are invested, and what producers produce.

Prices also are a rationing device for allocating goods and services among consumers and productive resources among producers. If, for example, a freeze destroys half the Florida orange crop, the reduced supply will lead to higher prices which ration out those who are unwilling or unable to pay the higher price. If a new technological development makes it possible to produce minicalculators more cheaply, the lower prices will enable more consumers to buy them. Buyers bid against one another for scarce resources; sellers compete with one another for customers. The resulting prices reflect the relative scarcity or abundance of goods and determine who gets them and who goes without.

14. Competition and Market Structure

Some knowledge of market structure is essential to understanding how a market economy functions and how prices, costs, and output levels are determined. The term *market structure* refers to the degree of competition prevailing in a particular market and the extent to which the government under various laws intervenes in the market to influence the pricing process and the rate of profit. Some markets are highly competitive in that there are many sellers, none of whom can affect the market price, and entry into and exit from the industry are relatively easy. Other markets are dominated by a small number of sellers whose individual actions can affect and sometimes control prices, where entry is difficult, and where as a consequence substantial market power may rest with a few producers. The continuum of market structures runs from highly competitive to monopolistic. There are many cases between these two extremes. Foreign "cartels" (such as OPEC) represent still another device for altering the effects of competition. The purpose of antitrust laws has been to try to maintain competition so the market economy will function more effectively and serve consumers better.

No effort should be made to introduce precollege students to the various cost curves used by economists to illustrate various detailed market situations. Such students should, however, develop an intuitive understanding of these different kinds of markets and, when confronted by a particular situation, should instinctively think in terms of such things as the number of sellers, the degree of product differentiation, possible barriers to the entry of new firms, possible collusive action among sellers, the role of the government in the market, and the level of profits earned. The important thing for students to realize is that prices, which determine what and how much will be produced, are themselves affected by the competitive structure of various markets.

15. "Market Failures": Lack of Information, Resource Immobility, Externalities

Other factors in addition to supply and demand, market structure, and government intervention to prevent monopoly affect the functioning of the market mechanism.

Lack of knowledge of market conditions on the part of consumers, workers, and managers of small businesses affects the decisions they must make and the efficiency with which the market mechanism affects the allocation of resources. Consumers, for example, are not always well-informed about the quality of the products on sale or of the alternatives they have. Unemployed workers may not know of job opportunities in nearby labor markets. Managers of small businesses may be unfamiliar with the nature and the amount of the demand for their product or with the extent of the competition. The high costs of obtaining accurate information needed for the market mechanism to operate more efficiently have often given rise to public provision of information.

Resource immobility can also result in a less-than-perfect functioning of the market mechanism. Workers, for example, may not be able to move from declining to expanding industries because they lack the specialized skills needed or do not have the money needed to relocate themselves. Various public policies have been developed to deal with these problems. They include consumer education and consumer legislation, manpower training programs, and special information and credit facilities for small business executives. To the extent that these policies succeed, the market mechanism will operate more efficiently. Government intervention, however, does not always work effectively; and sometimes it can militate rather than mitigate market imperfections.

Externalities are side-effects that result when the production or consumption of a good or service in the market directly affects the welfare of others, without being reflected through the price mechanism. Externalities occur in both production and consumption, and they can have positive or negative effects. For example, cigarette smoking is increasingly viewed as having detrimental effects on nonsmokers in close proximity to smokers; on the other hand, more schooling is regarded as improving the well-being not only of the individuals receiving the schooling but also of others through the creation of a better-educated society. Polluting firms along rivers reduce the pleasure derived by people who might swim or fish in the river.

Externalities can be treated in various ways. Positive externalities (resulting from education, for example) can be stimulated by subsidizing those activities which produce them. Negative externalities (resulting from pollution, for example) can be corrected directly by those who produce the externalities, or indirectly by taxing those who produce the externalities, by giving subsidies to help to eliminate the externalities, by compensating those people adversely affected by them, or by direct legal prohibition. If no correction occurs, as often happens, the result is that social welfare is less than it would otherwise be. At the same time, government efforts to correct for externalities are not always successful.

16. Income Distribution and Government Redistribution

The size of a person's money income largely determines his or her share of the total of goods and services produced. Students should have some knowledge of the sources of personal income and how income is distributed in the U.S. Students should also learn how nongovernmental forces (e.g., unions, inflation, business conditions, and unemployment) and governmental policies (e.g., tax and transfer policies) influence this distribution.

Sources of Income. The functional distribution of income focuses on the main sources of personal income: wages and salaries, rent, interest, dividends, the earnings of unincorporated enterprises, and transfer payments. Except for the last source, these are the rewards people receive for contributing their labor, savings, and intellectual and entrepreneurial skill to the productive process. Transfer payments, which have grown rapidly in recent years, are government payments

that require little or no current productive activity in return, although in some cases productive activity may have been performed in the past. The most important transfer payments are social security benefits, welfare payments, food stamps, unemployment compensation, veterans benefits, and old-age assistance.

Income Distribution. The size distribution of income shows the number of families arrayed by different levels of income. The basic force determining the distribution of income is the market which establishes the value of a person's services and compensates him or her accordingly. Other forces are also important. Inherited wealth, the ownership of property, custom and tradition, and the influence of strong organizations such as labor unions, employer associations, and government intervention also play a role in determining the pattern of personal income distribution.

Government Modifications. Government policy, as provided by law, has a major effect on the distribution of income. Taxes take money away from people; government spending and transfers put it in their hands. A progressive income tax takes a larger percentage of income from those with higher incomes. Government spending for the most part is not designed to redistribute income. Transfer payments on the other hand are more frequently redistributive in their effect by being directed to those with low incomes. Not all transfer payments, however, go to people with low incomes.

Nongovernmental Modifications. It is important to understand the role of organized groups such as businesses, unions, and farmers in seeking to alter the distribution of income. An increase in the total income of the nation permits everyone to have a larger share (though not to an unlimited extent). But various business, labor, farm, and other groups, including such groups as the poor, the veterans, and the elderly, seek continuously to expand their share of total income. If these groups together try to obtain too much—the total claims on resources exceed what is available—either inflation or unemployment will result, or others will receive less. Finally, other practices and customs, such as discrimination and tradition, also help to shape the distribution of income. The distribution of income and the extent of redistribution are controversial policy areas, with many decisions made through the political process.

Macroeconomics: Economic Stability and Growth

Macroeconomics is the study of the functioning of the economy as a whole—of the total output of the economy, the total level of employment, and movements in the average level of all prices. The essence of macroeconomics lies in analyzing the determinants of aggregate supply (the total productive capacity of an economic system) and of aggregate demand (the total spending by economic units on the goods and services produced). In the short run, the main problem of macroeconomics is why aggregate demand sometimes exceeds and sometimes falls short of aggregate supply, thus bringing on inflation and/or recession. In the long run, macroeconomics is concerned primarily with economic growth—increases in the productive capacity of the economy and average real income per person.

17. Aggregate Supply and Productive Capacity

Aggregate supply is the total amount of goods and services an economy can produce when all of its resources are fully and efficiently employed. This full-employment productive capacity of the economy is substantially fixed at any moment of time, but it can grow over time with increases in the labor force, improved education and training of workers, more saving and capital investment, discovery of new resources, and technological advances.

18. Aggregate Demand: Unemployment and Inflation

Aggregate demand is the sum of spending on goods and services in any time period by individuals, households, businesses, and governments. When aggregate demand falls seriously short of what the economy is capable of producing at full employment, and wage rates are relatively inflexible, *unemployment* and recession or depression will result. When aggregate demand is greater than aggregate supply at full employment, *inflation* results. Keeping aggregate demand roughly equal to full-employment aggregate supply is one key to maintaining a full-employment economy without serious inflation or unemployment. Thus, in analyzing aggregate demand, it is important to study the basic forces controlling spending by households, business, and governments.

Some unemployment occurs for reasons in addition to inadequate aggregate demand. Some people lack the skills or education to fill jobs even when aggregate demand is high. Other people reside in depressed areas where job opportunities are limited. And some people are the victims of discrimination in employment. This means that a variety of policies is needed to deal with unemployment.

Inflationary pressures can also be generated by the actions of businesses and unions in key industries where they push up wages and prices; this is known as "cost-push inflation." Supply shortages, often of a temporary nature, can push up prices, sometimes enough to affect the overall price level. Again, aggregate demand policies are not always the most appropriate way to restrain inflationary forces.

19. Price Level Changes

The *gross national product*, GNP—the total value of all goods and services produced—and national income accounts measure the total output of an economic system. In using these data, it is important to distinguish between changes in *real* output and changes that merely reflect price increases or decreases; the former we call "real income" or "real GNP," and the latter nominal income or nominal GNP. When inflation occurs, money income rises faster than real income, as the price level (the average of the prices of all goods and services) rises. This forces individuals and businesses to make adjustments both to higher prices and to changes in relative prices of different goods and services. Unemployment brings even greater social losses, in human and nonhuman productive capacity wasted and in the social and economic costs of unemployment to the individuals concerned. When society must face a trade-off between the two, difficult problems of measurement, comparison, and choice are involved.

20. Money and Monetary Policy

The government has two major ways—*monetary policy* and *fiscal policy*—of trying to keep the level of aggregate demand roughly in balance with the growing productive capacity of the nation. Monetary policy seeks to affect the amount of money in existence and its cost (interest rates). This is the responsibility of the Federal Reserve System, a quasi-independent government agency.

Money is generally defined as the sum of currency (cash) and demand deposits (checking accounts) in banks. Currency is printed or coined by the government but the bulk of the nation's money supply, demand deposits, is created by the banking system. The banking system increases the money supply by making loans to individuals, businesses, and the government. This lending creates more demand deposits and thus increases the spending power of the economic units which make up aggregate demand.

Banks are required to hold reserves behind their deposits. The principal but not the only instrument of Federal Reserve monetary policy is control over these

reserves which are held on deposit at Federal Reserve Banks. If the Federal Reserve provides the banks with more reserves, this permits them to lend more to the public, thus making possible an increase in aggregate demand. Conversely, a "tight money" policy, which involves holding down the size of bank reserves, means restraining aggregate demand.

Monetary policy today is an area of considerable controversy with economists divided on what Federal Reserve policy ought to be. We still have much to learn about how to manage the money supply so as to achieve economic stability.

21. Fiscal Policy: Taxes, Expenditures, and Transfers

Fiscal policy consists of changes in taxes, government expenditures on goods and services, and transfer payments to control the level of aggregate demand. Generally, when the government increases spending on goods and services or on transfer payments but does not correspondingly increase tax receipts, total aggregate demand will be stimulated and push the economy toward more employment or inflation. Conversely, when government reduces expenditures without reducing tax receipts, aggregate demand will be reduced and push the economy toward less employment or less inflation. Similar effects can be obtained by cutting or increasing tax receipts, with government expenditures being held constant.

Students should have a rough idea of the magnitude of government expenditures and taxes, and should know something about the practical problems of increasing or decreasing taxes and expenditures flexibly. They should see the difference between government purchases of goods and services, which provide jobs directly; and transfer payments (unemployment insurance, social security payments, and the like), which change recipients' incomes but do not directly provide jobs or use up productive resources. As with monetary policy, we still have much to learn about fiscal policy and how to use it to achieve stable economic growth. It is important to understand both its potentialities and its limitations.

22. Economic Growth

Economic growth is generally defined as the increase over an extended period of the total production of the economy and output per person. If a growing population is to be able to consume more goods and services, more must be produced. Economic growth also creates jobs for our growing labor force. Finally, there are many claims on our economy's output—for more consumer goods and capital goods provided through the private sector as well as more national defense, mass transit, and other social programs provided through the public sector. If the economy does not grow, then one person or group can have more only if another person or group receives less. Such a situation generates both inflationary pressures and social tensions.

In recent years, the national desire for growth has been qualified by a concern over some of its adverse side-effects—air and water pollution, urban congestion, destruction of the natural beauties of the environment by strip-mining, urban sprawl, etc. Hence, the quality of growth is also important. This issue can be understood by using the tools of economic analysis already developed. For example, air and water pollution are examples of negative externalities; we face opportunity costs and trade-offs as we seek to expand our energy supplies and also protect the environment. Preserving the quality of life will require acceptance of a slightly slower rate of growth as some productive resources are diverted into social and environmental projects that will offset some of the negative effects of economic growth.

23. Saving, Investment, and Productivity

Economic analysis gives us a framework for understanding the growth proc-

ess: why some countries grow faster than others, and why growth rates vary over the years.

Increasing the supply of inputs—natural resources, labor, and capital—leads to an increase in output. Over the years some of the nation's economic growth has resulted from increases in the size of the labor force and the stock of capital. Another main source of growth is increased productivity, meaning that resources are used more efficiently so that there is increased output per unit of input.

Saving and investing is the heart of the growth process since an increased stock of capital contributes to both increased production and increased productivity. *Saving* occurs when individuals, businesses, and the economy as a whole do not consume all of current income or output. *Investment* occurs when these savings are used to increase the economy's productive capacity by developing new technology and by building new factories, machines and the like. Or savings may be invested in human beings through education and training or in research and development. From an individual standpoint savings represent income not spent but placed in financial institutions, such as banks, savings and loan associations, and pension funds, which transfer them to those who wish to buy capital goods. In a real sense, saving and investing represents a diversion of productive resources from consumption into the creation of capital goods which make growth possible.

Government actions and policies may have both positive and negative effects on *productivity*. Historically government has encouraged growth and productivity increases by its investments in transportation, education, and agricultural research. Government has also provided a framework of law and political stability. On the other hand, growth and productivity increases are sometimes hampered by government actions, such as rules which serve particular groups rather than the general welfare, tax policies which adversely affect saving and investment, and regulated prices which prevent resources from moving into other more productive uses.

The World Economy

24. International Economics

Finally, economists are concerned with economic relations among nation-states, including *international trade* and investment and international monetary relationships.

In general, economists use the same tools of analysis to understand the world economy as they do to understand a national economy. The principles underlying international trade are the same as those underlying domestic trade. Goods and services are sold in international markets at prices determined by demand and supply. However, special problems arise in international analysis because of the existence of national boundaries and different monetary systems. Moreover, the free functioning of market forces is modified in many international markets by government intervention in the form of *tariffs*, quotas, subsidies, state trading, and cartel action (e.g., oil).

The principle of comparative advantage explains why countries specialize in producing particular goods and services. *Exchange rates* indicate the relative prices of different currencies and indirectly the relative prices at which these goods and services are traded. Exchange rates are determined by the forces of supply and demand in foreign exchange markets with varying degrees of government intervention influencing the actual rate.

Economic growth is a universal concern but is particularly important to the developing nations which need to increase productivity to raise living standards. International investment and technology transfers are two important processes for

promoting the growth of nations. These may be transmitted from one country to another either through private channels (private business investments, including those of multinational corporations) or through public channels (foreign aid, loans by international organizations). Inflation and recession are also international phenomena, being transmitted from one country to another by changes in incomes, prices, international trade, and capital movements.

ECONOMIC INSTITUTIONS

The institutions of an economy are of several kinds. There are formal organizations, such as households, corporations, government agencies, banks, labor unions, and cooperatives. There are also the customary ways of doing things, such as the use of money and of collective bargaining. And there are common prevailing sets of beliefs which pervade an economic system. The nature of economic institutions varies depending on the kind of economic system, although some institutions are common to almost all systems.

In the United States the household is the typical unit of consumption, the private firm (which can take various legal forms, such as the corporation or the partnership) is the typical unit of production, workers organize into labor unions to further their interests, government agencies play an important regulatory role in our economy, and some state-owned enterprises (such as the Tennessee Valley Authority, the Post Office, and municipal bus lines) produce goods and services. Students should know that other economic systems use different institutions. For example, China carries on agricultural production through communes and the Soviet Union through collective farms. Israel has its kibbutzim where people work voluntarily on collective farms. In Sweden and Finland cooperatives are important. Banks flourish in almost every country.

We also have institutions which reflect customary ways of doing things. Students should know that almost all societies—except for some primitive tribes—use money as a medium of exchange and a measure of value. All societies have some system of property ownership. In some, such as the United States, private ownership of property is emphasized. In others. such as China, public ownership is the rule (although this does not necessarily mean that there is public input into decision-making). Government planning is highly centralized and comprehensive in the Soviet Union, more decentralized in Yugoslavia, and nondirective ("indicative") in France. Some institutions are limited to certain types of economic systems, such as collective bargaining in democratic industrial countries.

Cultural traditions of societies also influence the pattern of economic behavior. Examples are the highly visible "work ethic" of the Japanese, the nonmaterialistic philosophy of certain Buddhist countries, and the monthly pattern of retail sales in the United States with buying peaks in the spring and just before Christmas.

The performance of these economic units varies across time and place, in part because economic institutions reflect the interplay of individuals pursuing somewhat different goals and objectives. Moreover, these goals and objectives are constantly evolving in response to the way these institutions affect economic performance. Some economic units or groups possess greater power than others and, consequently have greater potential for affecting the institutional framework within which economic activity occurs. Because economic institutions play such a central role in every economic system, an understanding of them is essential to interpreting how market forces operate to allocate scarce resources among competing wants.

MEASUREMENT CONCEPTS

A number of measurement concepts can help in explaining economic developments and assessing economic performance. These concepts are not unique to economics nor are they limited in their use to the social sciences. Many of these concepts might be incorporated into the mathematics curriculum but taught with an emphasis on their applicability and usefulness in understanding economics.

1. Averages and Distributions Around the Average

Students should be able to distinguish, for example, between the total Gross National Product and per capita or average GNP. They should also understand that an average tells nothing about the distribution of values around the average. Per capita income, for example, provides no information about how income is distributed. Instead, an array of the number or percentage of income recipients by levels of income is required to show how income is distributed.

2. Amounts versus Rates

Students should be able to distinguish between, for example, the amount of unemployment (the number of unemployed workers) and the simple percentage unemployment rate (unemployment expressed as a percentage of the labor force), or between the amount of Gross National Product and its rate of growth (percent per year increase in GNP).

3. Index Numbers

Index numbers are useful statistical devices for measuring average changes in such things as consumer prices and industrial production. Students should know that, for example, the Consumer Price Index measures the average change from some earlier base year in the prices paid by urban blue-collar and clerical workers for the collection of goods and services they usually purchase.

4. Real versus Nominal

Students should be able to distinguish between nominal or money GNP which is measured at current prices, and real GNP which is money GNP adjusted to take account of price changes. If prices increase, for example, the amount of real GNP, as measured in last year's prices, will be less than nominal or money GNP.

5. Ratios

Ratios express the relationship of one numerical value to another. An example would be the roughly 2:1 ratio of unemployed black youths to unemployed white youths.

6. Tables

Tables are used to display numbers in a concise fashion and to reveal particular relationships among quantitative data. A tax table, for example, shows the amounts of tax to be paid for each different income level.

7. Graphs and Charts

Graphs are used to plot the relationships among different data. One example would be demand and supply curves which plot the relationship between price and the amounts of a good offered for sale and demanded in the market. Other examples would be bar charts comparing, say, the percentage unemployment rates of different subgroups of the population, or "pie" charts showing, for example, the way tax revenues are spent.

CONCEPTS FOR EVALUATING ECONOMIC ACTIONS AND POLICIES

Broad Social Goals

The heart of economics is decision-making—choosing among alternatives. Economic decisions are not made in a vacuum. Rather, they are made in the light of a set of goals. These goals vary from one society to another, and they vary among groups and individuals within societies. The goals most evident in the modern world, and particularly in American society are: freedom, economic efficiency, equity, security, stability (full employment and the absence of inflation), and growth.

These goals or criteria provide means for evaluating the performance of economic systems and parts of them, as well as the desirability of existing programs and newly proposed policies.

1. Freedom

Economic freedoms are those of the marketplace—the freedom of consumers to decide how they wish to allocate their spending among various goods and services, the freedom of workers to choose to change their job, to join a union, and to go on strike, the freedom to establish a business and to decide what to produce and when to change the pattern of production, the freedom of savers and investors to decide how much to save and where to invest their savings.

Economists are concerned about the freedom of individuals and groups, especially insofar as particular actions open up or restrict freedom in the market place and affect the other goals of economic efficiency, equity, stability, growth, and security. Some argue that more governmental regulation limits the freedom of people to make individual choices. At the same time, however, such policies may free other people to take greater advantage of the opportunities provided in a market economy. In short, it is essential to define the kinds of freedom under discussion and whose behavior is most likely to be affected.

2. Economic Efficiency

There are several dimensions to efficiency. The first is technical efficiency which concerns using the least amount of resource inputs to obtain a given output, or obtaining the largest output with a given amount of resource input. This does not necessarily indicate the most appropriate choice, however, because it fails to consider the different costs of various inputs or the different benefits of various outputs. Economic efficiency goes beyond technical efficiency and considers the total costs and total benefits of various decisions. Economic efficiency means getting the most out of available resources. Actions should be undertaken if the benefits exceed the costs; they should not be undertaken if the costs exceed the benefits. The concept of economic efficiency is central in economics, and it should receive heavy emphasis in both individual and social decision-making.

3. Equity

Equity is an elusive concept. There is little agreement on what is equitable; people differ in their conception of what represents equity or fairness. In evaluating economic performance, the concept serves as a reminder to investigate who or what kinds of people are made better or worse off as a result, for example, of a change in prices or the implementation of a new government program. Though two actions might appear to be equally efficient from an economic standpoint, one might, for example, benefit the rich and another the poor, one might benefit consumers and another producers, and so on. Many people would not be indifferent as to the results, since they harbor some concept of what is more or less equitable. Ultimately, the concept of equity manifests itself in the distribution of income and

wealth. A more neutral way of dealing with this concept is simply to talk about the income distribution effects of economic actions: Who gains and who loses?

4. Full Employment

Full employment means that all of an economy's resources are fully utilized. In practice, an unemployment rate which reflects normal frictional unemployment has come to be viewed as the operational measure of full employment, with continuing debate as to what rate in the 3-5 percent range is indicative of full employment. The goal of full employment recognizes the heavy costs in lost output that accompany higher rates of unemployment, as well as the costs to individuals through economic hardship.

5. Price Stability

Price stability—the absence of inflation—is also a goal. While reasonable price stability might involve an upward creep of prices (perhaps 2 percent per year) substantial rates of increase often require individuals and businesses to make costly adjustments to offset the effects of rising prices.

6. Security

The goal of economic security concerns the desire of people for protection against economic risks, such as unemployment, destitution in old age, business failures, bank failures, and precipitous price declines for one's product. The desire for security has led to a variety of public programs and policies including unemployment compensation, social security, federal bank deposit insurance, farm price supports, and FHA-guaranteed housing loans. Economic security also results from private efforts, such as saving and insurance purchases, as well as from the growth of the economy which provides the mass of the people with more material wealth. Nations also engage in the quest for economic security by seeking through international agreements to assure themselves of access to key resources (e.g., the Soviet-American grain agreement) or of adequate prices for their exports (e.g., international tin agreement).

7. Growth

"What effect will this policy or program have on economic growth?" is a frequently asked question. Though this criterion is most frequently discussed in thinking about a nation's economic growth, individuals and firms also take account of how their actions and those of others will affect their own future economic well-being, as reflected in higher incomes and increased profits. Growth is a long-run goal, to be thought of in years and decades. Whereas growth has typically been viewed as producing a broad range of benefits, attention has recently been called to the various costs that accompany economic growth. Consequently, growth is a less universally accepted goal today than it was a decade ago.

8. Other Goals

At times there are other goals important in the consideration of specific problems or questions. This listing simply reminds readers that they should consider other possible goals that fit the issue.

Trade-Offs Among Goals

These criteria for judging the performance of the economy and the multitude of actions occurring in it are most useful when discussing policy decisions inasmuch as policy actions and proposals are presumably directed toward the achievement of

some goal(s). However, many of the goals conflict and therefore difficult trade-offs have to be made. Examples are farm price supports, which promote security for farmers but may reduce efficiency and raise prices for consumers; minimum wage laws, which can be thought of as equitable (in trying to raise wages of lower-paid workers) but may increase unemployment; and wage-price controls, which may temporarily restrain inflation but at the same time reduce efficiency and freedom. Economic analysis does not make value judgments on policy questions such as these. It can help people to understand the nature of the trade-offs and thereby form their own judgments in the light of their own values. Economic analysis encourages a reasoned approach to controversial economic issues, and this is perhaps the single most important reason for wanting citizens to have increased economic understanding.

Self-Interest and Personal Values

The concept of self-interest differs from the goals listed above. Self-interest reflects the concern of individuals for their own well-being and personal values, whereas the other goals noted reflect broader social concerns. Often the achievement of social goals will come at the expense of particular individuals or groups of individuals. Those individuals or groups adversely affected are likely to oppose actions proposed to promote attainment of these broad social goals. This means that the positions people ultimately take on economic issues will reflect the result of applying the reasoned approach and their own self-interest and values. It is important for people to try to separate these factors in understanding why they ultimately decide what they do on economic issues.

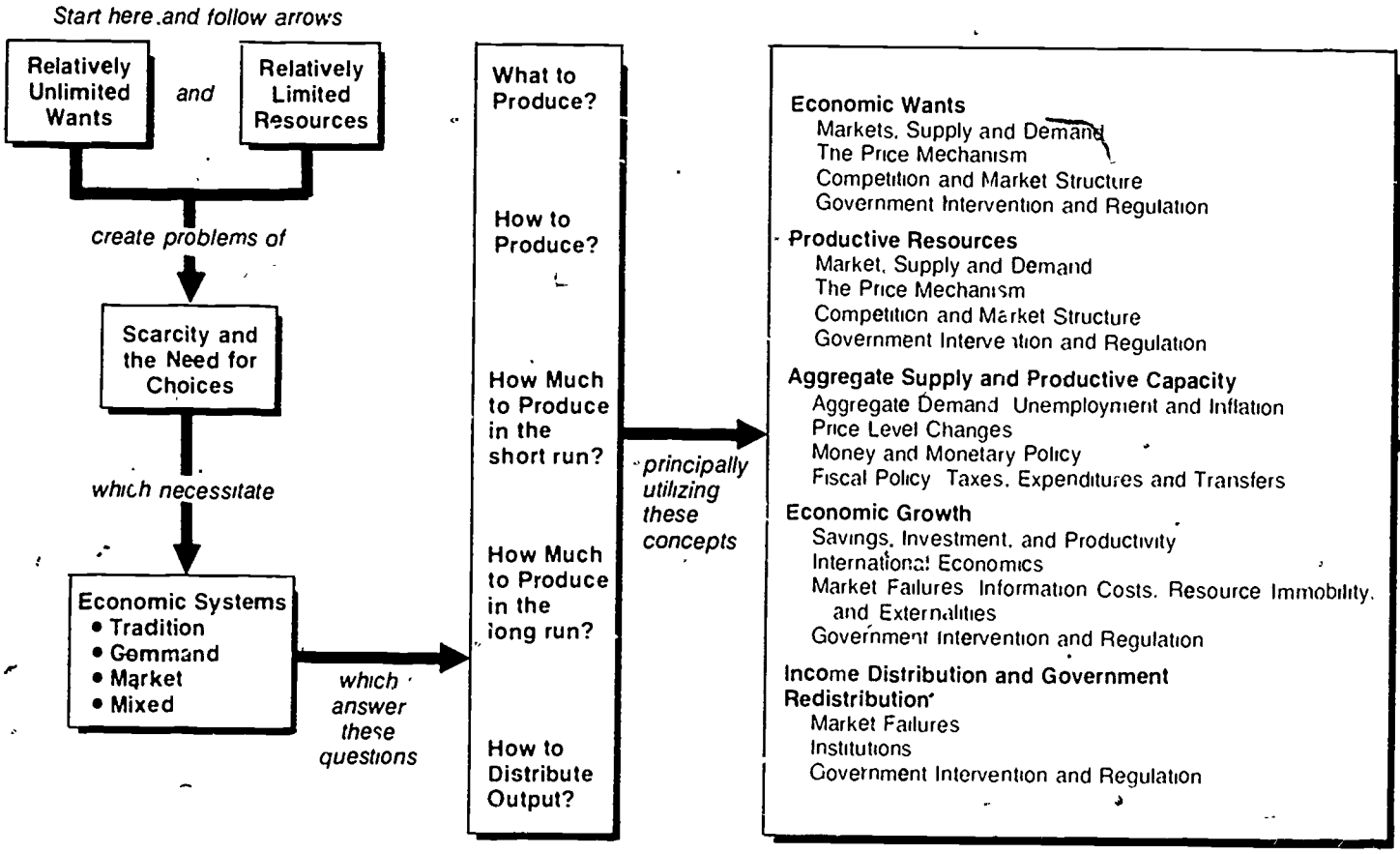
* * *

One way of linking these concepts is through the schematic in Figure 5 which tries to show how the various concepts are systematically related and how they can be used in answering the five basic questions about an economy.

VII. Possessing an Overview of the Economy

Another way of linking these concepts together is through an overview of the economic system. We attempt to provide a simple overview which reflects the kind of broad understanding needed to help to identify economic issues and to apply the elements of economic understanding. The concepts have already been explained. The purpose here is to present their interrelationships as a functioning system in the United States. (Readers who are already knowledgeable about the U.S. economy may want to move on immediately to Part VIII.)

In our largely private enterprise economy (leaving government aside for the moment), consumers' money demands largely determine what is produced. Businesses, in striving to make profits, try to produce those goods and services which consumers want, and try to do so at the lowest possible cost, in some cases also seeking to influence consumer demands through advertising and other selling activities. Businesses, in trying to maximize profits, draw productive resources (such as labor, land and machinery) into those occupations where they will contribute most to meeting consumer demands; and businesses simultaneously pay out incomes to workers, landowners, and other suppliers of productive services who are also trying to maximize their economic returns. These incomes, in turn, make it possible for income-receivers to bid for the goods they want. Thus, markets in which prices rise and fall in response to changing demands and supplies provide the links which mesh together consumers and businesses, all of whom seek to make the



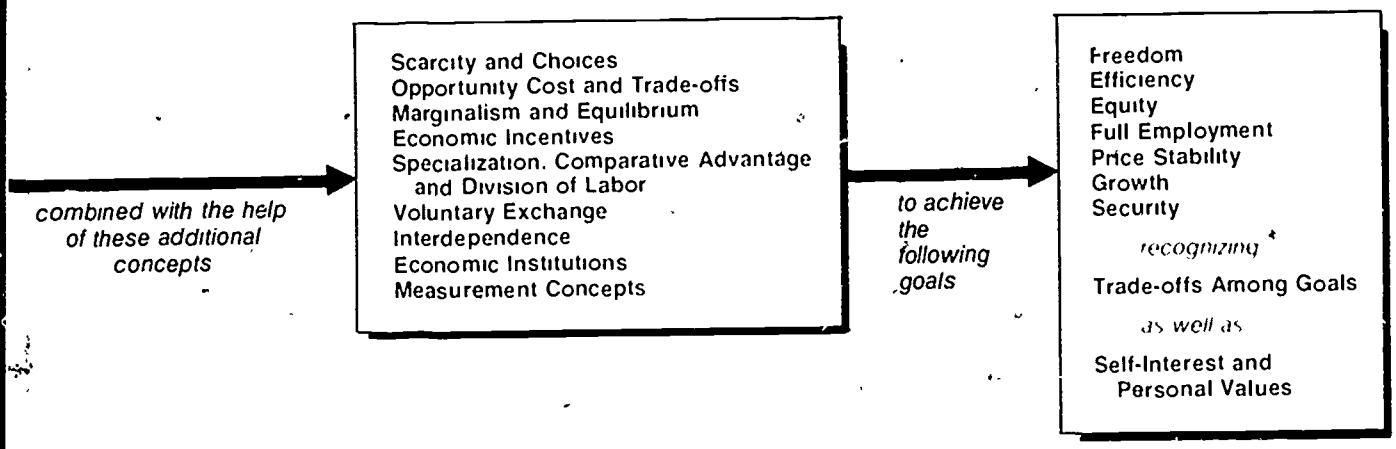
best of their own position and abilities, into a working system. When individuals and businesses save part of their income and make these savings available for investment in new productive facilities or in the education and training of human beings, this increases society's capacity to produce in future years.

Individual freedom of choice is central to the way the largely decentralized, market-directed American economy defines its goals and allocates its limited resources. But these individual freedoms, of the consumer, wage-earner, investor, and business executive, are limited by laws and by social and moral pressures, for the protection of the individual and society. Thus, markets and prices, reflecting shifting demand and supply conditions, are the main regulators of the allocation of scarce resources in the production of the most desired goods and services; but governments set and enforce the rules under which competition takes place, sometimes participating actively in the processes of production and distribution.

In summary, working within this overview, students need to possess knowledge of a few simple analytical concepts, a few major economic institutions, and a few basic economic relationships—not an elaborate set of technical terms, abstract theory, or detailed masses of factual information. Two broad areas of understanding seem to us essential.

Figure 5

A SCHEMATIC FRAMEWORK OF ECONOMICS
AN APPROACH TO LINKING THE CONCEPTS



Microeconomics: Resource Allocation and Income Distribution. The main framework of the market system, in which consumer demands largely determine what is produced through the interaction of supply, demand, and prices in markets, was outlined above. In this system a crucial role is played by profits, both as an incentive to business people to produce most efficiently what consumers want and as a source of funds for business investment. But the benefits from individual and business economic self-interest accrue to society as a whole only when reasonably active competition prevails. When monopolistic practices occur, serious problems may arise in a market-directed economy.

People receive incomes mainly as payments for the productive services they render in producing goods and services which consumers demand. These incomes are paid both for personal services and for the use of accumulated (sometimes inherited) capital. Thus, high American wages rest fundamentally on the high productivity of American labor, which arises both from the activities of workers themselves and from the accumulation of capital and technological and managerial advance. Individual incomes vary widely, and struggles over income shares through labor unions and through government programs (including those which fight discrimination) are a vigorous and continuing feature of the economy.

Governments directly control how we use a substantial portion of our productive resources. This is done by collecting taxes and using the funds to provide highways, schools, national defense, and many other services. Some of these funds seek to alter the distribution of income by increasing the level and variety of transfer payments. In addition, governments establish many of the "rules of the game" within which the private sector of the economy operates. How much the government should do in all these capacities is a continuing issue in the modern American economy.

In today's world, international trade is of major importance. Students should understand that the basic case for division of labor and exchange of the resulting products is the same internationally as within the nation—that with specialization and exchange a larger total quantity of goods and services can be produced with any given supply of productive resources. The fact that different nations use different monetary units—dollars, pounds, francs—and sometimes place special taxes (tariffs) and quotas on foreign goods and services, however, does add a special dimension to international specialization and exchange.

Macroeconomics: Economic Growth and Stability. The standard of living in an economy depends mainly on its current production. Economic growth reflects an increase in a nation's (total or per capita) productive capacity. The upper limit to an economy's real output at any time (its productive capacity or maximum aggregate supply) is set by its stock of productive resources and the technology for using those resources. But its actual output depends also upon the amount of total spending (aggregate demand) in our profit-motivated system, and this total spending sometimes exceeds and sometimes falls short of the level needed for stable economic growth. Inadequate aggregate demand at existing prices and wages leads to recessions and unemployment. Too much aggregate demand results in inflation. Inflationary pressures may also be caused by increases brought about by powerful sellers, including businesses and unions, as well as the OPEC oil cartel, whose pricing policies generate cost-push pressures. Consumers, business firms, and government (reflecting the collective choices of individuals) are the three major groups of spenders in our economy; their decisions thus immediately determine aggregate demand. These decisions are affected by many factors, including incomes received, profit expectations, tax rates, the stock of money, and interest rates.

Government fiscal policy (taxes and expenditures) also affects total spending. Barring other offsetting forces, aggregate demand generally rises when government increases its spending or reduces tax collections. Increases or decreases in the nation's money supply, and changes in interest rates and the availability of credit, can also affect total spending, output, employment, and prices in the economy. The money supply depends mainly on the lending and investing operations of commercial banks, which in turn are primarily controlled by monetary policies. Determining the appropriate mix of government fiscal and monetary policy is a never-ending task, and is one about which there will always be considerable dispute.

Social policy vis-à-vis economic growth is also complicated. Insufficient investment in both physical and human capital will slow the growth of the productive resource base of an economy and will in turn slow the growth of future income. At the same time both economic growth and population growth may have undesirable side effects, for example, overcrowding and pollution. Balancing these costs against the benefits of economic growth forces difficult choices in all types of economic systems.

VIII. Identifying Issues

The vast array of questions and issues raised in newspapers, television, political campaigns, and our involvement in economic life, can be grouped into a few broad categories which we identify below.

Two types of queries are embedded in this compilation. One concerns questions of fact or prediction: *What is* known about economic behavior? Or, if we undertake some action, what will be its predicted effects? The other concerns questions of value judgments: *What ought to be* done to alter economic behavior? Should we undertake a particular policy or not, given that various people and groups may be differently affected? Failure to distinguish between questions of *what is* and *what ought to* be is the cause of considerable confusion.

The Market and Government Action. One major set of issues concerns the relative role of private market forces and collective governmental actions. On these issues we are interested in knowing

What happens, or what is likely to happen, in response to changes in demand for, supplies of, and prices of individual goods and services? To changes in the supply and demand for labor and capital? To new developments in technology? These questions call for a description of how the economic system or parts of it behave under conditions of both competition and monopoly.

But another, related set of questions arises:

What ought to be done when people don't like the higher prices they must pay for individual products (e.g., oil, gasoline)? This involves thinking about whether to rely on the operation of market forces or on government actions, such as price ceilings, rationing, special taxes, regulation, and the like. Another way of phrasing the question is: When *should* collective action be used to allocate resources differently from the way the price system would allocate them? For example, should local government operate the local bus system? Should the federal government act to allocate energy sources, such as oil or gas? Should government continue to subsidize shipbuilding, farmers, and railroads? Most of these questions concern economic efficiency. But other questions of collective action relate closely to income distribution which is discussed below. As an example, should government raise gasoline taxes or use a direct quota rationing system to allocate relatively limited gasoline supplies? The former means that people with lower incomes will be made relatively worse off while the latter provides equal amounts of gasoline to everyone, irrespective of their ability to pay. All of these "ought" or "should" questions can be explored by asking what effects the proposed change would produce. Only after assessing the effects is one in a position to reach a judgment.

Macroeconomics. Another important set of queries relates to the economy's overall performance, as reflected by the rates of inflation, unemployment and economic growth:

What *causes* inflation? What *causes* unemployment? What *causes* growth? How do individuals and collective actions affect inflation? Who *is* hurt and who *is* helped by inflation? By unemployment? What are some of the benefits and costs of economic growth? What *is* the long-run relationship between economic growth and resources? Between economic growth, population, and employment? Between economic growth and environment? What *should be done* about inflation or unemployment? What policies should be employed when unemployment and inflation exist simultaneously? How much economic growth *should* we seek to have? *Should* we attempt to speed or slow economic growth? What is the best way of doing this?

Income Distribution. Another set of major issues concerns the distribution of income produced by the operation of market forces and the redistributive effects of government action. Again, it is important to separate issues of "what is" from "what should be":

> What *is* the current distribution of income? What produces this distribution? To what extent does this distribution perpetuate itself? What is the effect of existing and of proposed government policies on income distribution? *Should* policies be adopted that are designed explicitly to change the distribution of income or economic well-being? Should the tax structure be made more or less progressive? Should schools continue to be financed largely by property taxes? Should policies designed to improve economic efficiency be adopted if they widen or narrow the distribution of income? Should government subsidize the housing of elderly and low-income renters? These issues, either openly or submerged just below the surface, appear to be critical to virtually all the questions posed above. They come up in any evaluation of how the market system works, in determining whether collective decisions alter individual economic decisions, and in assessing the extent to which inflation, unemployment and growth affect the general well-being of the population. Who gains and who loses, and who should gain and who should lose, best summarizes what is at stake here.

These questions are designed to give the flavor of some dominant economic issues discovered in our search, although the space allotted to each type of issue should not necessarily be viewed as a measure of its importance in contributing to the development of responsible citizens and effective decision-makers.

Identifying the substance of economic issues is important but students may need additional guidance if they are to make sense of the variety of news reports they encounter in their daily lives. This suggests the usefulness of distinguishing the ways in which economic news is presented. Three major types of presentations are found. The first includes reports which are largely descriptive, explaining how the economy or sections of it operate and adjust to change. The second embraces reports which emphasize conflicts and disagreements among different individuals and groups, reflecting differing interpretations of how the system operates and adjusts to change, as well as differing value judgments about how the system should operate. The third includes reports which propose either alternative ways of organizing resources or "solutions" to conflicts and disagreements about how the economic system does or should operate.

Because every economic issue evolves over time, a classification scheme must take this into account. Within each of the three categories listed above, we can further categorize news reports. First, there are reports of events or changes that are likely to have future economic consequences. Second, there are reports of immediate and short-run economic effects, both direct and indirect, of these events or changes. Third are reports of the longer-run economic effects of these events or changes. Finally, there are what might be termed background reports on the characteristics of markets or on situations in which these changes occur.

The flavor of this classification scheme can be illustrated by a selection of newspaper headlines. The headlines selected pertain to the market for coffee, and they are reproduced in the following three pages. The first page contains descriptive reports of the 1975 freeze in Brazil—which destroyed a substantial proportion of its coffee trees—and its aftermath. The second page reveals some of the disagreements about how the coffee market should operate by reflecting various reactions to the continued price increases for coffee. The third page traces the progress toward negotiating a new world coffee agreement, which took effect in 1976.

DESCRIPTIVE REPORTS

On Changes Likely to Have Economic Consequences

Frost in Brazil Said to Ruin Half Of Coffee Crop and Peril Herds

The New York Times, July 24, 1975

On Immediate Effects of These Changes

Frost in Brazil Sending Coffee Prices Up

The New York Times, August 4, 1975

On Short-Run Effects of These Changes

Retail Coffee Prices Are Still Rising With No Break Seen in Near Future

The Wall Street Journal, March 4, 1976

Coffee Price Spiral May Be Facing Rising Resistance from Consumers

The Wall Street Journal, August 8, 1976

On Longer-Run Effects of These Changes

High Coffee Prices Bring New Hope To Impoverished Latin Peasants

The New York Times, February 23, 1977

On Characteristics of Markets in Which These Changes Take Place

Disasters in Coffee Nations Boost Prices To Highs, Squeezing Industry, Consumer

The Wall Street Journal, February 23, 1976

REPORTS OF CONFLICT AND DISAGREEMENT

On Changes Likely to Have Economic Consequences

Coffee Price Spiral May Be Facing Rising Resistance from Consumers

The Wall Street Journal, August 8, 1976

On Short-Run Effects of These Changes

Coffee Prices Spur Boycott To Cut Use by 50%

The New York Times, December 28, 1976

Richmond Charges Major Coffee Producers Exploit Shortage and Calls for Investigation by Congress

The New York Times, January 5, 1977

Brazil's Coffee Rip-Off

The New York Times, January 13, 1977

Price Inquiry Is Set Into Coffee Market By Government Unit

The New York Times, February 3, 1977

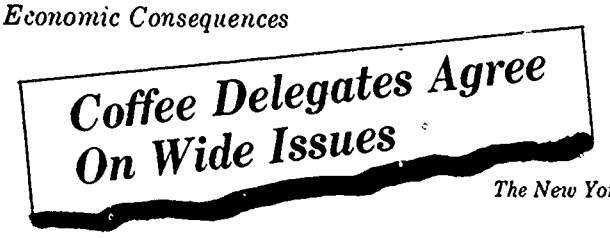
On Longer-Run Effects of These Changes

Soaring Prices of Coffee Inspires Protesters and A Wave of Thefts

The New York Times, March 6, 1977

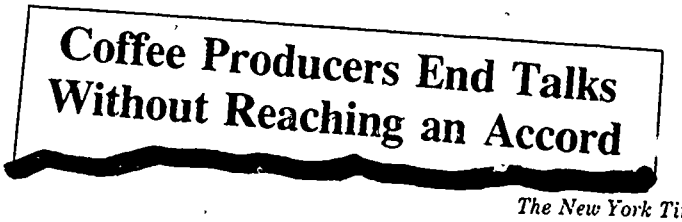
REPORTS OF PROPOSED SOLUTIONS

On Changes Likely to Have Economic Consequences

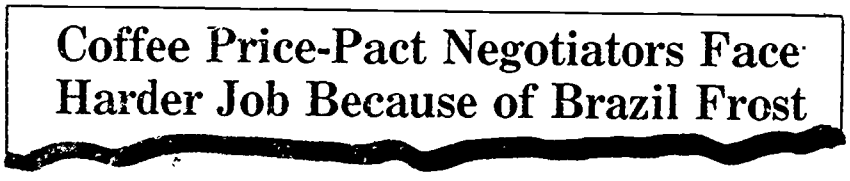


The New York Times, February 1, 1975

On Short-Run Effects of These Changes



The New York Times, April 26, 1975

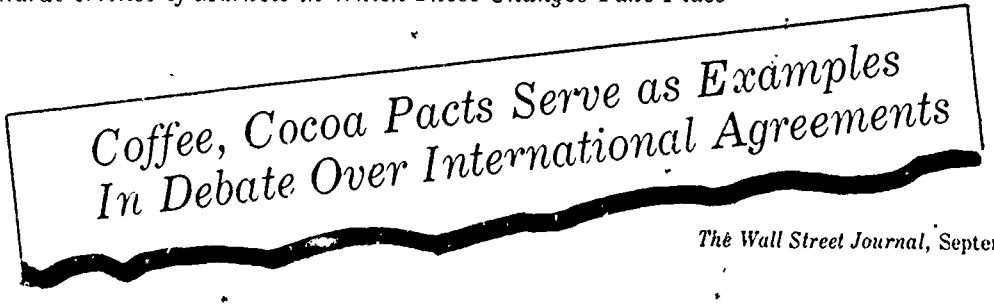


The Wall Street Journal, November 7, 1975

On Longer-Run Effects of These Changes

The New York Times, February 21, 1976

On Characteristics of Markets in Which These Changes Take Place



The Wall Street Journal, September 27, 1976

The pattern of headlines for coffee could be repeated for other topics, from both microeconomics and macroeconomics. The sugar market, for example, would provide a parallel series of stories. News reports of local efforts to ban the use of disposable containers, of local strikes and their settlement, and of other issues could be collected. At the macroeconomics level, headlines following the rise of unemployment from 1973 to 1975 would provide a useful collection for this classification scheme; so would the consideration and passage of the 1976 tax reform legislation.

The importance of this classification scheme is that it can help students to appreciate the richness, variety, and evolving nature of economic events and issues. Moreover, it should aid them in deciding not only what concepts are most likely to be important but also how best to apply the reasoned approach.

IX. Applying the Basic Economic Elements to Particular Issues

A few selected examples are presented here to demonstrate how the various elements of economic understanding can be used to illuminate particular economic issues. Additional examples will be found in Part II of the Guide, *Strategies for Teaching Economics*.

The first example is a relatively straight-forward one, dealing with scarce oil. The example is self-contained, and it has both a microeconomic and a macroeconomic dimension; it ignores, for the sake of brevity, important considerations such as national security. The example follows:

The Case of Scarce Oil

The current oil situation, with the threat of shortages and higher prices resulting from the actions of the foreign oil cartel, constitutes an interesting case study in the application of economic concepts and analysis to a problem important to all citizens.

Basic Facts

The use of oil (1. Economic Wants) in the world has been growing rapidly over the years. Its supply is limited (3. Scarcity) and increasingly concentrated within a few foreign countries. The oil producers have formed a cartel (14. Competition and Market Structure) to enable them to raise the price of this essential mineral (12. Markets, Supply, and Demand). As the U.S. is required to pay more to ensure an adequate supply of energy, its growth (22. Economic Growth) could slow down and consumers of oil and oil products will be required to adapt to these higher prices (10. Interdependence).

Consequences of the Oil Price Rise

The immediate consequences of the oil price rise were three:

- It contributed to the deepening of the recession of 1973-74 (18. Aggregate Demand: Unemployment and Inflation) and the temporary cessation of economic growth (22. Economic Growth) by transferring income from Americans to foreign oil producers and thus reducing the demand for goods and services.
- It contributed to the inflation which reached double-digit proportions in 1974 by exerting an upward pressure on costs of production (18. Aggregate Demand: Unemployment and Inflation).
- It helped produce a trade deficit—an excess of imports over exports (24. International Economics).

Two Alternatives and an Analysis of Their Effects

Two major issues then faced the nation with each one embracing a series of

subissues. The two major issues were: How should the scarcer supply of oil be divided up among the consumers and industries that wanted it? (6. Nature and Types of Economic System.) What could be done in the long run to develop new supplies of energy and make the nation less dependent on the foreign cartel? (10. Interdependence.)

Let us consider first how to allocate the scarce supply. Several alternatives present themselves.

- The first is to let the market price be pushed up by the forces of demand and supply (13. The Price Mechanism). This would cause consumers to consume less, i.e., people would drive less and keep their thermostats turned down because gasoline and fuel oil cost more, and producers would be forced to use oil more sparingly.
- The second is for the government to raise the price by imposing higher taxes on gasoline and other oil products (11. Government Intervention and Regulation). Gasoline, for example, in most European countries costs two to three times as much as in the United States because of higher taxes which curb its use.
- The third approach is for the government to hold prices down and institute formal rationing of the kind the nation had during World War II with users (consumers and businesses) receiving ration stamps or allotments which entitle them to a certain number of gallons of gasoline or oil each month (11. Government Intervention and Regulation).
- A fourth approach is for the government to "freeze" the price of oil and oil products to protect the users against a sharp price rise—but to take no other action. This could result in long lines at gasoline stations, with the limited supply of gasoline going to those at the head of the line and the latecomers going without.
- Still another approach is to encourage the voluntary conservation of scarce oil, as was done in response to the OPEC price increases.

Next, let us consider how to develop new energy supplies.

- One way of developing new energy supplies is to let the price rise. If, for example, the government were to decontrol the price of natural gas (an issue which has been hotly debated), the price would rise and producers would have a greater incentive to look for and develop new sources of supply (7. Economic Incentives; 13. The Price Mechanism).
- A second way of encouraging new energy technologies is to relax environmental protection legislation which acts to discourage strip-mining, offshore oil-drilling, and the building of new nuclear power plants (11. Government Intervention and Regulation).
- A third is for the government to subsidize private business, either through direct money subsidies or by granting tax concessions to stimulate the development of new technologies, e.g., solar energy or shale-oil processing (7. Economic Incentives).
- A fourth possibility is for the government to go into the energy business itself and use tax money to build breeder reactors, solar energy installations, and so forth (11. Government Intervention and Regulation).

Evaluating the Alternatives

All these alternative approaches need to be evaluated against the various economic goals of our society. Fundamental here is recognition of the fact that each alternative involves both benefits and costs, that we cannot achieve 100 percent of all our goals simultaneously, and that trade-offs must be made (4. Opportunity Costs and Trade-Offs).

Allowing a rising price to allocate the scarce oil is one approach to solving the problem of scarcity; in fact, this is what has happened. This approach brings up in some people's minds the question of equity: People with lower incomes will be less able to pay the higher prices.

Raising the price of gasoline by a tax of, say, 30¢ a gallon poses the question of whether or not the removal of billions of dollars of purchasing power from the economy might not so depress aggregate demand that the nation would move into a recession. The government could maintain aggregate demand by spending the tax receipts on other programs or perhaps by cutting taxes in other areas so that the demand for gasoline would not increase (21. Fiscal Policy: Taxes, Expenditures, and Transfers).

The imposition of coupon rationing would raise questions of both efficiency and freedom. Experiences with coupon rationing in World War II suggest that it leads to the creation of a large and not very efficient government bureaucracy and also to illegal "black markets."

Using the "long lines," first-come-first-served method to ration scarce gasoline would appear to be neither efficient nor equitable. However, it is compatible with freedom.

Encouraging voluntary conservation may succeed in the short run but is unlikely to provide a long-run solution.

Stimulating the development of new energy supplies by allowing oil prices to rise also raises difficult questions. Would not oil companies make larger profits? Would they invest these profits in new energy technologies or in other more profitable nonenergy enterprises? Would the government tax these additional profits and use the proceeds to subsidize public transportation? Would it be "fair" to consumers to allow prices to rise?

If we seek to encourage new energy production by relaxing environmental protection controls, will not society pay a high price through increased air and water pollution, and decreased quality of the environment (15. "Market Failures": Information Costs, Resource Immobility, Externalities, etc.)? But, if we allow environmental controls to obstruct energy production, will we not pay a high price through slower growth and lost jobs?

Conclusion

Even a brief look at the complex energy issue shows the importance of the reasoned approach—of using economic concepts and analysis to think one's way through the issue, to consider the various alternatives, and to evaluate these alternatives in the light of society's goals so that one can reach a rational conclusion which reflects one's own values and self-interest.

The Case of Expensive Coffee

The next example uses several newspaper articles on the coffee market to show how to apply the framework. The focus is on microeconomic issues. Circled portions indicate the most important content for analysis.

EXAMPLE 1

The New York Times, July 24, 1975

An understanding of this news article calls for the concept of Markets, Supply and Demand (12), and particularly a knowledge of the determinants of supply. The effect of the frost will be to reduce supply available in the future. Given an understanding of the relationship between price and quantity demanded, the reader should predict an increase in coffee prices in the near future.

EXAMPLE 2

The New York Times, August 4, 1975

This article describing the short-run effects of the frost requires the concept of Markets, Supply and Demand (12) as well as the Price System (11). The supply shift noted above did indeed lead to a price increase. This increase sends out a signal to consumers, sellers, and producers that will in time generate longer-run responses to the price increase.

EXAMPLE 3

With coffee prices soaring, North American Systems Inc., manufacturer of the Mr. Coffee automatic brewer, is introducing a model that can brew as little as two cups at a time. Called the Coffee Saver, it works on the same principle as the Mr. Coffee machine that makes 10 to 12 cups but cannot be regulated for lesser amounts. The machine will be introduced at the Chicago Housewares Show this month. Coffee Saver will receive $10 million in advertising support with most of the funds going toward network TV. As with the company's earlier models, Joe DiMaggio, the former baseball star, will serve as pitchman for the product.

Business Week, July 26, 1976
Reprinted with permission.

To understand this news article, we need several additional concepts, such a Economic Incentives (7), Productive Resources (2), and Interdependence (10). The higher price of coffee makes the use of large coffee-makers less attractive to consumers and is likely to reduce sales. Producers respond to the reduced demand by shifting resources to the production of smaller coffee-makers, hoping thereby to maintain their profit rates on the manufacture and sale of this appliance. The effects observed here indicate that different markets are closely linked, with the result that a change in one market will in due time give rise to changes in other related markets.

EXAMPLE 4

The Wall Street Journal, February 23, 1976

The final descriptive news article recounts recent developments in the coffee market, and it also describes some of the characteristics (and facts about) that market (Economic Institutions). In addition to the concepts already noted, other concepts can be brought into play here. Included are Specialization, Comparative Advantage, and Division of Labor (8) in explaining why it is that coffee production is concentrated in Brazil, Colombia, Angola, and the Ivory Coast. The concept of International Economics (24) provides a basis for understanding the policy of coffee-producing countries to withhold coffee from the world market. The concept of Government Intervention and Regulation (11) explains how it is that the policies of coffee-supplying nations tend to be what they are. The concepts of Inflation (18) and Price Level Increases (19) can also be used to explain the rising costs of producing and getting coffee to consumers.

The next set of two articles highlights conflicts and disagreements.

EXAMPLE 5

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The New York Times, June 25, 1975

This article offers a brief explanation of the fact that a new coffee agreement has been reached that should have effects on prices and perhaps other effects as well. The details are limited but the picture obtained by the reader is that supply and price will be controlled so as to prevent large price fluctuations of the kind experienced recently. The fact that other solutions had been proposed and rejected indicates that various alternatives had been under consideration. The article says little about the effectiveness of the new agreement in meeting the various goals of either importing or producing countries, except that both groups of countries presumably achieved at least some of their objectives through the long process of negotiating the treaty. Students could examine the effect of this agreement on economic efficiency for the United States, for example, and for economic efficiency in the producing countries, and for the distribution of income between the two groups of countries.

EXAMPLE 6

The Wall Street Journal, August 19, 1976
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This article highlights a dispute between the government (through the Federal Trade Commission) and General Foods Corporation over the effect of the firm's pricing policy in coffee The concepts useful in analyzing this report include Markets, Supply and Demand (12), The Price System (13), Competition and Market Structure (14), Government Intervention and Regulation (11), and finally Economic Institutions which provide background and perspective on the role of government in regulating competition. The rationale for government action against monopoly would be provided through concept 15, Market Failures. The analysis of this dispute can be enriched by considering the economic goals implicit in the behavior of the FTC and General Foods Corporation.

These examples may be sufficient to show how newspaper articles can be understood by drawing on the basic concepts presented earlier in the report. Most attention was given to descriptive reports because they are less complicated to analyze. They require utilizing only a portion of the reasoned approach.

Reports dealing with proposed solutions, and to a considerable degree those dealing with conflict and disagreement, require use of all steps in the reasoned approach. Students can usually obtain from the article the broad outlines of a proposal, the contending groups (if there are any), and some indication of the expected effects of the solutions. Seldom, however, are the reports complete enough to give what might be considered a full presentation of the issue. This makes it all the more important for students to have a procedure—the reasoned approach—which they can use to help in developing a fuller understanding for themselves.

Application of the reasoned approach to the world coffee agreement before its acceptance can be illustrated with the next article (Example 7) which was written after acceptance of the agreement. Not only does the article describe the characteristics of the agreement but it also highlights the conflict between producing and consuming nations.

What is the issue? At issue is the maintenance of high and stable prices of coffee for the producer countries and the maintenance of low and stable prices for the consumer nations.

What are the alternatives? The alternatives involve reverting to the free market situation which antedated the first coffee agreement in 1962 or entering into a new pact. This new pact will, through the exchange of information, help to reduce price fluctuations. Output quotas as well as incentives to produce coffee are provided for in the agreement. Other alternatives considered but subsequently rejected included the provision of a price floor as well as a ceiling on the rate of price increases.

What concepts are needed? The concepts required to analyze the effects of the new arrangement are encompassed by the concepts already mentioned, such as Markets, Demand and Supply; The Price System; Government Intervention and Regulation; and International Economics. In addition, goals are needed to help in evaluating the effects of these alternatives.

What goals are important? The goal of economic efficiency focuses on how the agreement will promote the fuller use of resources. The goal of equity or fairness indicates how the agreement will make some groups within both the producing and consuming countries better and others worse off. In addition, stability for the producer countries is important in making the best use of their resources; freedom touches upon the role of government in limiting the extent to which market forces are allowed to operate; and self-interest captures the advantages seen by the participants in the negotiations.

What is the nature of the analysis and evaluation? The effects of controls on output, price floors, and price ceilings can be analyzed and then evaluated against the various goals outlined above.

What is the decision? This leaves the student with the task of making a decision on what should be recommended.

The Case of Airport Congestion

Another and more complete application of the reasoned approach is provided in the policy case on airport congestion written by Fels and Uhler.* This case is excellent for its completeness.

*From Rendigs Fels and Robert G. Uhler, *Casebook of Economic Proolems and Policies: Practice in Thinking*, 1976-77 edition (West, 1976). Reprinted by permission.

X. Reaching Decisions on Economic Issues

The process of reaching decisions is emphasized to make students aware that economic understanding is important and that it can and does lead somewhere—namely, to a conclusion and indeed a position for the student on an economic issue. The process of reaching that decision is laid out in the presentation of the reasoned approach and is illustrated in the case on airport congestion.

We want to emphasize several cautions for both students and teachers. First, as pointed out earlier, some news reports are descriptive and do not call for a decision, except perhaps a declaration from the student that he or she understands the situation. Second, frequently all the information needed to make a decision is not available, and this requires that any decision be put off until more information has been gathered. It is true that we never have full information on which to make decisions; at the same time it is important to recognize when deficiencies in the available information make it futile to try to reach a decision. Third, even though sufficient information may be available to students, and even though they may arrive at identical rankings of the alternatives for each of the goals, their conclusions may still differ. What practitioners of the reasoned approach sometimes fail to realize is that personal goals of self-interest ultimately have to be taken into account and they will color, and sometimes overwhelm, judgments reached on the evaluation against broad economic goals. For example, while tariffs may not be in the interests of the entire population, students whose parents are employed in an industry protected by tariffs may oppose the removal of tariffs. In short, personal self-interest must be recognized in the evaluation process as students reach their decisions about economic issues. Fourth, if students use the reasoned approach in arriving at conclusions with which others disagree, these decisions should not be judged as either right or wrong, good or bad. These decisions reflect the end result of a process by which students can reach decisions. This process is designed to encourage them to think in a systematic way and to develop their own powers of reasoning. This does not mean, of course, that students should not be encouraged to debate their positions and be persuaded to change their minds. Nor does it mean that they should not be corrected if they use economic concepts inappropriately. But it does require that no attempt be made to force all students to accept the same conclusion.

We conclude by emphasizing the importance of orderly, objective decision-

making and the care that must be taken to ensure creation of the proper environment for achieving this final step in the reasoned approach.

XI. Exercising the Skills of Application

The ability to use the elements of economic understanding already described requires not only good models but also extensive practice. Unfortunately, the number of good models—in the form of existing materials—is limited, particularly those suitable for elementary and secondary students. And how to provide the extensive practice students need may not always be apparent to teachers. Because of this, it is important to indicate how these two gaps can be filled.

What kinds of teaching materials are most useful? First, they must illustrate the use of different concepts, they must offer opportunities for analysis, and they should require an evaluation. In other words, the material must be rich enough in detail, but not so rich as to overwhelm, so that both teachers and students can grapple with it. Second, the material should be such that two rational individuals with different values could reach different conclusions about the issue posed. This is important because students need to be impressed with the idea that there is not always one "correct" answer to be searched out. However, this does not necessarily mean that there will be differences in the analysis; the difference will come largely in the importance attached to different goals.

There are three sources of material. One is textbooks which increasingly offer examples and "cases" ranging from the simple to the complex. Another is Part II of this Guide, *Strategies for Teaching Economics*, which suggests appropriate teaching materials, for the various grade levels and topics studied in them. A third source is newspapers and news magazines which contain a wide variety of reports on current economic issues. Local news on issues such as rent control, strikes, disputes over zoning, how to provide needed local services, and the like, offer marvelous possibilities for capturing student interest. National issues, though usually more remote to students, also receive great attention in the press.

Because many teachers have not had much experience in using current news reports, the Master Curriculum Guide should advise teachers on how to select and use this material. Tips must be developed for teachers on how to present cases in the classroom, how to involve students in the discussion of them, and how to ensure that the important concepts are mastered. In addition to the usual printed materials for teachers, and in the absence of training workshops that would cover many of the cases, the production of videocassettes can be a valuable aid, especially to teachers who feel somewhat unsure about their own knowledge. Ideally, these tapes would show actual classroom presentations, followed by some commentary on how the discussion proceeded.

In conclusion, the purpose of examples and cases is to give students a chance to practice the kind of reasoning educated people must employ in the "real" world. This practice, which builds on a knowledge of all the elements of economic understanding can make learning economics interesting and challenging, and in the long run it is likely to have more lasting value for students. Ultimately, students must reason for themselves. Therefore, the more practice they obtain and the more effective that practice can be made through the availability of good materials and well-trained teachers, the more likely it is that students can better understand how the economy operates and how their decisions affect it and themselves.