



*An Introduction to*

---

# Economics

BY H. LARUE FRAIN, P<sub>H.</sub>D. \* \* \*

*Department of Economics \* University of Pennsylvania*

---

*Houghton Mifflin Company*

BOSTON • NEW YORK • CHICAGO

DALLAS • ATLANTA • SAN FRANCISCO

**The Riverside Press Cambridge**

## PREFACE

IN WRITING *An Introduction to Economics* the author has had in mind the students in his classes in the School of Accounts and Finance of the University of Pennsylvania. Some of these students have had no work in general economics; most of them will take at most only this introductory course followed by a course in problems. They expect to encounter economic phenomena by way of concrete situations and they are interested primarily in a better understanding of the economic forces and circumstances with which they have already had some contact and which they will meet with increasing frequency in the course of their employment.

For such students neither the traditional presentation of economic principles nor the customary presentation of institutional economics has been found satisfactory. The former relies heavily on abstract reasoning, on logical unity within a certain framework of assumptions, and places an unrealistic emphasis on the automatic establishment of economic balances. The latter, on the other hand, tends to place so much emphasis on the dynamic aspects of economic life as to create the impression that there are no broad generalizations which are helpful in explaining and understanding the operation of the economic system. The *Introduction to Economics* employs both approaches, not in an effort to contribute original explanations nor to develop logical unity for the presentation as a whole, but to help students to comprehend more fully the economic system as they may encounter it in daily life. The book attempts also to stimulate a critical attitude on the part of the students toward the operation of that system. The inevitability of change is stressed as is the necessity for meeting new conditions in new ways which are likely to place increasing emphasis on social as

against individual interests and on human as against property interests.

In this introduction to economics the presentation is simplified; abstract concepts and reasoning are avoided wherever possible; concrete illustrations have been used extensively, the existence of defects and maladjustments in the prevailing economic system are noted from time to time, and probable lines of development are indicated in some instances; and occasionally historical perspective is furnished as a means to fuller appreciation of the reasons for existing conditions. While there will be differences of opinion as to the wisdom of omitting some topics and including others, of treating certain subjects in one connection rather than in another, of extensive emphasis on some and meager stress on other points, the selection and organization of material reflects diverse considerations some of which are more or less peculiar to the group of students for which the text has been prepared. Frequent references to points made in preceding chapters are intended partly to impress the student with the interrelation of economic phenomena and partly to provide a basis for incidental review of preceding assignments. Individual chapters are so organized that students can readily prepare brief outlines which, by showing the internal coordination of the chapter, will both indicate the unity of the chapter and serve for quick review prior to class sessions or examinations.

Whatever merit the text may possess reflects the influence of stimulating discussions with various groups, including evening and graduate classes, business executives, labor leaders, and members of the Wharton School faculty, especially those in the Economics Department. I am deeply indebted to my colleague Professor William N. Loucks who gave liberally of his time in reading the entire manuscript and in making many helpful suggestions. Other colleagues to whom my appreciation is specifically extended for criticisms of particular chapters are

Professors Ralph A. Young and Karl Scholz. The generous cooperation of my associates does not commit them to endorsement of views expressed, explanations offered or conclusions reached. Responsibility for sins of both omission and commission is mine alone. My appreciation is also extended to Alice F. Barber for assistance in many ways, including typing the manuscript, preparing many of the charts and caring for numerous details. To my wife, Mary D. Frain, I am indebted for suggestions, assistance in proof-reading and extreme patience with many inconveniences while the manuscript was in course of preparation.

H. L. F.

WHARTON SCHOOL  
UNIVERSITY OF PENNSYLVANIA

# CONTENTS



## *Part One.* ORGANIZATION AND PURPOSE OF BUSINESS

<i>Chapter</i> I. PRIVATE AND GOVERNMENTAL ENTERPRISES	3
1. Private Enterprise	
2. Governmental Enterprises	
<i>Chapter</i> II. BASIC TYPES OF BUSINESS ORGANIZATION	23
1. Individual Proprietorship	
2. Partnership	
3. Corporation	
4. Business Trust	
<i>Chapter</i> III. PRODUCTION	49
1. Meaning of Production	
2. Measurement of Production	
3. Growth of Production	

## *Part Two.* CHARACTERISTICS OF BUSINESS

<i>Chapter</i> IV. SPECIALIZATION IN PRODUCTIVE ACTIVITY	85
1. The Shift from Diversified to Specialized Activity	
2. Types of Specialization	
3. Benefits and Limitations of Specialization	
<i>Chapter</i> V. MONEY	109
1. The Function and Forms of Money	
2. Monetary Standards	
<i>Chapter</i> VI. CREDIT	137
1. The General Credit Structure	
2. Credit-Money	
<i>Chapter</i> VII. UNSTABLE PRICE LEVELS	168
1. Meaning and Types of Price Level	
2. Causes of General Price Level Changes	
3. Consequences of Price Level Fluctuations	

<i>Chapter</i> VIII. UNSTABLE BUSINESS ACTIVITY	194
1. Seasonal Changes	
2. Business Cycles	
<i>Chapter</i> IX. LARGE-SCALE ENTERPRISES	220
1. Meaning of Large-Scale	
2. Development of Large-Scale Enterprises	
<i>Chapter</i> X. COMPETITION, COOPERATION AND MONOPOLY	247
1. Competition	
2. Cooperation	
3. Monopoly	

### *Part Three.* FACTORS CONTROLLING PRODUCTION

<i>Chapter</i> XI. NATURAL RESOURCES	275
1. Types of Resources	
2. Utilization of Natural Resources	
<i>Chapter</i> XII. CAPITAL	299
1. Evolution of Capital	
2. Types of Capital	
3. Formation of Capital	
<i>Chapter</i> XIII. LABOR	322
1. Sources of Labor	
2. Utilization of Labor	
<i>Chapter</i> XIV. MANAGEMENT	343
1. Nature of Management	
2. Private Management	
<i>Chapter</i> XV. REGULATION	364
1. Private Regulation	
2. Governmental Regulation	

### *Part Four.* HOW PRICES ARE DETERMINED

<i>Chapter</i> XVI. DEMAND AND SUPPLY	389
1. Demand	
2. Supply	
<i>Chapter</i> XVII. COSTS OF PRODUCTION	413
1. General Nature of Costs	
2. Types of Costs	

<i>Chapter</i> XVIII. COMPETITIVE PRICES	44 I
1. Market Prices	
2. Relation of Market Price to Cost	
3. Long-Run Price Tendencies	
<i>Chapter</i> XIX. PRIVATELY REGULATED PRICES	465
1. Inflexibility of Prices	
2. Monopoly Prices	
3. Price Discrimination	
<i>Chapter</i> XX. GOVERNMENTALLY REGULATED PRICES	49 I
1. Determination of Fair Value	
2. Aggregate Return	
3. Determination of Service Rates	
 <i>Part Five. NATIONAL INCOME, ITS SOURCES AND DISTRIBUTION</i>	
<i>Chapter</i> XXI. NATIONAL INCOME	519
1. Size of National Income	
2. Distribution of National Income	
3. Reasons for Unequal Incomes	
4. Sharing the Wealth	
<i>Chapter</i> XXII. WAGES	539
1. Determination of Wages	
2. Money and Real Wages	
3. Allied Compensation	
<i>Chapter</i> XXIII. INTEREST	570
1. Reasons for Interest Payments	
2. Rate of Interest	
<i>Chapter</i> XXIV. RENT	596
1. Meaning of Land and Rent	
2. Determination of Rent	
3. Function and Operation of Rent	
<i>Chapter</i> XXV. PROFITS	623
1. Meaning and Nature of Profits	
2. Sources and Disposal of Profits	
<i>Chapter</i> XXVI. TAXES	649
1. General Considerations	
2. Governmental Receipts	
3. Governmental Expenditures	
INDEX	679



# ILLUSTRATIONS



PHYSICAL PRODUCTION AND POPULATION GROWTH	71
GROWTH IN MAJOR BRANCHES OF PHYSICAL PRODUCTION AND IN POPULATION	73
RELATIVE VOLUME OF PHYSICAL PRODUCTION IN MAJOR BRANCHES OF INDUSTRY	75
THE UNITED STATES AND WORLD PRODUCTION	76
GROWTH IN RAILWAY FREIGHT TRAFFIC AND PHYSICAL PRO- DUCTION	77
GROWTH IN BUSINESS ACTIVITY AND POPULATION	79
MAJOR DIVISIONS OF INDUSTRIAL SPECIALIZATION	98
RELATIVE WORLD PRODUCTION OF GOLD AND SILVER	114
COMMERCIAL VALUE OF SILVER TO GOLD	133
MONETARY CREDIT AND WHO CREATES IT	153
BANK DEPOSITS AND LOANS (ALL ACTIVE BANKS)	156
USES OF BANK FUNDS (ALL ACTIVE BANKS)	158
USES OF FEDERAL RESERVE BANK CREDIT	161
PRICE UPHEAVALS IN THE UNITED STATES	168
GENERAL AND WHOLE COMMODITY PRICES	172
UNITED STATES AND WORLD PRICE LEVELS	173
RATE OF TURNOVER OF DEMAND DEPOSITS IN PRINCIPAL CITIES	176
BANK DEPOSITS AND THEIR VELOCITY	177
WORLD GOLD STOCK AND PRODUCTION OF BASIC COMMODITIES	181
PRICES AND GOLD: WORLD WHOLESALE PRICES AND RELATIVE STOCK OF GOLD MONEY	182
PRICES AND CREDIT	183
GENERAL PRICE LEVEL AND PURCHASING POWER OF MONEY	185
TRADE AND PRICES	190
BUSINESS CYCLES	199
BUSINESS CYCLES AT HOME AND ABROAD	204
SIZE OF ENTERPRISES IN CEMENT INDUSTRY	220
ILLUSTRATION OF RELATION BETWEEN INPUT AND OUTPUT	282
ILLUSTRATION OF RELATION BETWEEN DIMINISHING RE- TURNS AND INCREASING COST	283
EMPLOYMENT AND HORSE POWER	301
SECURITY ISSUES FLOATED, 1929-35	314

DISTRIBUTION OF WORLD POPULATION AMONG LEADING COUNTRIES	323
POPULATION GROWTH OF UNITED STATES AND WORLD	324
PAST AND ESTIMATED FUTURE GROWTH OF UNITED STATES POPULATION	325
IMMIGRATION TO THE UNITED STATES	327
UNEMPLOYMENT BY INDUSTRIES	331
CHARACTERISTICS OF THE GAINFULLY EMPLOYED POPULATION	333
ILLUSTRATION OF CONTROL OVER OPERATING COMPANIES BY DEVICE OF PYRAMIDING HOLDING COMPANIES	356
ELEMENTS INCLUDED IN DEMAND	390
DEMAND SCHEDULE FOR POTATOES	393
ELASTIC AND INELASTIC DEMAND AS ILLUSTRATED BY WHOLESALE DEMAND FOR MILK IN NEW YORK CITY	396
ILLUSTRATION OF CHANGES IN DEMAND SCHEDULE	402
ELEMENTS INCLUDED IN SUPPLY	404
SUPPLY SCHEDULE FOR HATS	405
ELASTIC AND INELASTIC SUPPLY ILLUSTRATED	406
ILLUSTRATION OF CHANGES IN SUPPLY SCHEDULE	410
AGGREGATE AND PER UNIT COSTS OF OUTPUT REPRESENTING DIFFERENT PERCENTAGES OF CAPACITY	419
SEPARATION OF AGGREGATE COSTS INTO FIXED AND VARIABLE ITEMS	421
TOTAL AND DIFFERENTIAL COSTS PER UNIT	429
DETERMINATION OF COMPETITIVE PRICE WHEN FIXED QUANTITY OF GOODS IS OFFERED AT UNRESERVED PRICES WITH A GIVEN DEMAND	443
DETERMINATION OF COMPETITIVE PRICE WHEN GOODS ARE OFFERED AT RESERVED PRICES WITH A GIVEN DEMAND	444
COMPETITIVE PRICE WITH CHANGE IN DEMAND BUT NO CHANGE IN SUPPLY	446
COMPETITIVE PRICE WITH CHANGE IN SUPPLY BUT NO CHANGE IN DEMAND	447
COMPETITIVE PRICE REMAINING CONSTANT WHEN DEMAND AND SUPPLY BOTH CHANGE	448
COMPETITIVE PRICE CHANGING WHEN DEMAND AND SUPPLY BOTH CHANGE	449
COST PER BUSHEL AND YIELD PER ACRE IN PRODUCTION OF CORN	452
COST PER TON OF SUGAR FOR INDIVIDUAL FACTORIES IN THE BEET-SUGAR INDUSTRY	455

MARGINAL AND BULK-LINE PRICE	456
FLEXIBLE AND INFLEXIBLE PRICES AS ILLUSTRATED BY PRICES OF STEEL BEAMS AND RAILS	466
TYPES OF INCOME	519
NATIONAL INCOME PRODUCED	521
NATIONAL INCOME PRODUCED AND DISTRIBUTED	523
DISTRIBUTORS OF NATIONAL INCOME AND THEIR RELATIVE IMPORTANCE	524
FUNCTIONAL DISTRIBUTION OF INCOME IN 1929	525
FUNCTIONAL DISTRIBUTION OF INCOME, 1900-35	526
PERSONAL DISTRIBUTION OF INCOME IN 1929	527
NATIONAL WEALTH AND INCOME	533
DETERMINATION OF COMPETITIVE WAGE RATES	547
WAGES AND COST OF LIVING	559
PRIVATE AND GOVERNMENTAL SECURITY ISSUES	573
DETERMINATION OF COMPETITIVE INTEREST RATES	589
DETERMINATION OF RENT WITH A FIXED QUANTITY OF AVAIL- ABLE LAND	601
ILLUSTRATION OF SIMULTANEOUS UTILIZATION OF LAND INTENSIVELY AND EXTENSIVELY TO THE POINT WHERE ADDITIONAL YIELD AND ALSO UNIT COST ARE THE SAME ON ALL GRADES EMPLOYED	603
ILLUSTRATION OF DIFFERENT GRADES OF LAND CONTRIBUT- ING TO AGGREGATE PRODUCTION AT THE SAME UNIT COSTS FOR ADDITIONAL OUTPUT	604
HIGHLY FLUCTUATING CHARACTER OF BUSINESS PROFITS AS COMPARED WITH WAGES AND INTEREST	628
BUSINESS ACTIVITY AND BUSINESS PROFITS	629
EARNINGS AND DIVIDENDS PER COMMON SHARE OF UNITED STATES STEEL CORPORATION STOCK	630
RATE OF BUSINESS PROFIT FOR SPECIFIED GROUPS OF INDUS- TRIAL CORPORATIONS, 1935	632
NET INCOME BEFORE AND AFTER TAXES, 1935	643
DEBTS OF FEDERAL, STATE, AND LOCAL GOVERNMENTS	663
TAXES, GOVERNMENT EXPENDITURES, AND NATIONAL IN- COME	665
SOURCES OF FEDERAL GOVERNMENT RECEIPTS	666
DISTRIBUTION OF GOVERNMENTAL EXPENDITURES BY FEDERAL, STATE, AND LOCAL AGENCIES, 1929 AND 1934	669
CHANNELS OF FEDERAL GOVERNMENT EXPENDITURES	672



I. IMPORTANCE OF CORPORATIONS IN SOME OF THE LARGER MANUFACTURING INDUSTRIES	34
2. POTATO PRODUCTION	68
3. SHIFT IN PRODUCTION FROM COMMODITIES TO SERVICES	78
4. INDUSTRIAL SUBDIVISIONS (1929)	99
5. DISTRIBUTION OF NET INCOME	222
6. "BILLION DOLLAR CLUB"	223
7. EXPERIMENTAL LAYOUT OF LAND	281
8. BASIC HOURS PER WEEK IN MANUFACTURING INDUSTRIES	334
9. OUTPUT AND COSTS	428
10. FLEXIBLE AND INFLEXIBLE PRICES	467
11. PRODUCTION AND PRICES, 1929-1933	468
12. DEMAND SCHEDULE	480
13. PROFITS OF MANUFACTURING CORPORATIONS, 1924 AND 1928	639

## PART ONE

# *Organization and Purpose of Business*



## CHAPTER I

### PRIVATE AND GOVERNMENTAL ENTERPRISES

ACCORDING to Biblical lore man has had to obtain his bread by the sweat of his brow since he was driven from the Garden of Eden. However literally one accepts this version of man's start on his journey of toil, it is obviously true that in most countries man has for centuries had to work to obtain his living. His activities have been many and varied as he struggled with nature for even the basic necessities of life. He has been both a beast of burden and the monarch of great political and industrial empires, and in the course of time there has developed through his activities a complex assortment of business enterprises.

These business activities by which man makes his living may be directed in either of two major ways. Individuals may direct their own activity as they see fit, or their activities may be subject to the direction of a central authority. This central authority may be chosen by the people, or it may be forced upon them. It may be a single individual, such as an absolute monarch or dictator, or it may be a group of individuals which forms a governing council. The purpose of the control may be to benefit the people as a whole, or merely to exploit the masses for the benefit of the ruling group. In any event, the central authority, usually the government, decides how business activities shall be conducted.

This central authority may adopt any of several policies with respect to business activity. Individuals may be given virtually free rein in organizing and directing their own activities and those of the persons voluntarily associated with them. This is generally known as private enterprise. Or the government itself may engage in conducting business activities in so far as it sees fit. In this case there is governmental enter-

## 4 PRIVATE AND GOVERNMENTAL ENTERPRISES

prise either in general or in particular kinds of business. Or the governmental policy toward business may be that of making rules from time to time as conditions require and allowing individuals economic freedom within the limits set by the rules. Such a policy is known as private enterprise with government regulation; it will be considered in a later chapter.

### I. PRIVATE ENTERPRISE

#### A. LAISSEZ FAIRE AS A GOVERNMENTAL POLICY

In this country the traditional policy of the government has been to rely upon the initiative of individuals to carry on productive activity. This policy has been known as *laissez faire* or "let alone." Under it the government itself refrained from engaging in business and did not attempt either to determine or furnish what the population needed or wanted. Individuals were free to decide, as consumers, what they wanted and, as producers, what was to be furnished and how. Trade was carried on between individuals on the basis of voluntary contracts. Such a policy of economic freedom stimulated "rugged individualism."

While the original adoption of the *laissez-faire* policy was encouraged by the unfavorable reaction to British interference with Colonial trade, the policy itself rested on certain definite assumptions as to the interests of individuals and of society as a whole. On the basis of these assumptions the policy was expected to weave the self-interest of individuals into a fabric of mutual benefit.

*Knowledge of Self-Interest.* The first assumption was that each mature person knew his own needs, desires, abilities, and interests better than anyone else. Therefore he, as producer or as consumer, was best able to decide what would be most advantageous to him. It was recognized that as consumers most individuals want more than their incomes will buy. Since all their wants cannot be satisfied, there must be a choice, and it was thought that each individual could decide for himself how his income should be spent to his own greatest advan-



tage. It was felt, moreover, that individuals, as producers, knew their own abilities better than anyone else and could best decide the kind of work for which they were best qualified and in which they would be most successful.

*Attainment of Self-Interest.* Not only was it assumed that individuals knew their own interests best, but also that they knew how to attain them. If an individual decided he wanted a pair of shoes, he was supposed to know whether it would be more advantageous to make them himself or to buy them. If he wanted to buy them, then he could decide better than anyone else the kind and quality which suited his purpose and also the reasonableness of the price. Thus, as a consumer, he knew how to get the most for his money. As a producer, he knew best how to conduct his own affairs. He knew how much capital to use and how much labor to employ; whether it would be advantageous for him to pay high or low wages and to work his employees long or short hours; whether he would gain more by selling on credit or only for cash; whether he would acquire more by charging high or low prices.

*Harmony of Interests.* Finally, according to the *laissez-faire* policy, it was assumed that individuals would be compelled, through their own self-interest, to do the things which best served society. Those who served best were expected to profit most. Producers could not compel consumers to buy from them. Consumers must be won by being furnished the things they wanted at prices that would attract them. Only by such service to the public could producers hope to derive profits and benefit from their activity. As they improved their service, their business would increase and their profits would grow. Thus service and profits were presumably tied together. Consumers, in seeking the most for their money, not only served themselves but society likewise, for by insisting upon high quality and low prices they directed business away from high cost and inefficient producers to low cost and efficient ones.

In short, under a policy of *laissez faire*, it was expected that the self-interest of producers and consumers would automatically guide business activity into both profitable and