

**Dhananjayrao Gadgil Librar**



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**An Introduction to  
ECONOMIC  
ANALYSIS AND POLICY**

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ECONOMIC  
ANALYSIS AND POLICY

By

J. E. MEADE

Fellow of Hertford College

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## PREFACE

**I**N recent years there have been important developments in Economic Theory—notably in the analysis of Money and Unemployment by Mr. Keynes, and in the theory of Imperfect Competition by such writers as Mrs. Robinson and Mr. E. Chamberlin. Many of these new ideas are not yet available to any but the trained economic theorist; for new scientific work must always at first be stated in technical terms. It is the primary object of this book to expound the whole corpus of Economic Theory without taking any knowledge of technical terms for granted and with full use of the more recent developments. I have not shirked any point in which economic analysis is relevant for the determination of economic policy; and for this reason this book is not always easy to read. But I have tried to write in such a way that any one with patience and the power of clear reasoning can understand it.

In this book I have discussed economic theory with direct reference to the economic problems of the modern world. As a teacher of the subject I have often found that men, who come to economics to find an answer to the pressing problems of the moment, cannot see that the formal analysis of the text-book has anything to do with the real world. Such formal analysis is, however, essential for a full understanding of practical problems, and the rigid text-book analysis must be mastered; but in this book I have attempted to supplement that training by combining it with the direct discussion of economic problems. This method has made it necessary to advocate a particular economic policy.

There is nothing original in this work, which is a transcription of the work of many authors; and it is impossible for me to enumerate fully the writers to whom I am indebted. Nearly every economic author, whom I have read, has directly or indirectly affected this book. But there are certain authors whom I must mention specifically, and I hope that I will be

excused if I have failed to acknowledge direct indebtedness to others. Mr. J. M. Keynes's *Treatise on Money* and *General Theory of Employment, Interest and Money* have inspired the whole of Part I of this book, which has also been directly influenced by the work of Mr. R. F. Kahn; and certain passages in Chapters VI and VIII of Part I have been recast after reading Mr. R. F. Harrod's *Trade Cycle*. The suggestion about the Sinking Fund on p. 45 is taken from evidence given by Professor A. L. Bowley to the 'Colwyn Committee', and is to be found on pp. 323 to 328 of the *Report of the Committee on the National Debt and Taxation, 1927*. Part II has been constructed on the foundations of Mrs. Robinson's *Economics of Imperfect Competition*, Mr. E. Chamberlin's *The Theory of Monopolistic Competition*, and Professor Pigou's *Economics of Welfare*, as well as upon articles by Mr. R. F. Harrod and other authors; while pp. 156 to 164 are a transcription of an argument in Mr. R. F. Kahn's article in the *Economic Journal*, for March 1935, entitled 'Some Notes on Ideal Output'. Chapter VIII of Part II has gained much from articles of Mr. M. Dobb, Mr. H. D. Dickinson, and Mr. A. P. Lerner in the *Economic Journal* and the *Review of Economic Studies*. Part III owes much to Dr. Hugh Dalton's *The Inequality of Incomes* and Mr. Wedgwood's *The Economics of Inheritance*, while Chapter IV of this Part is largely based on the works on Public Finance of Dr. Hugh Dalton, Professor Pigou, Sir Josiah Stamp, and others. In Part IV, pp. 278 and 279 are merely a numerical illustration of the proof given by Mr. J. M. Keynes for a proposition of Mr. F. P. Ramsay in his article in the *Economic Journal* for December 1928, entitled 'A Mathematical Theory of Saving'. Part V is based upon many works on the Theory of Money, as well as upon textbooks on International Trade, such as Professor Taussig's *Theory of International Trade* and Mr. R. F. Harrod's *International Economics*.

Mrs. Robinson has read the whole of the manuscript of Parts I to IV, and I am very grateful for the many material

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improvements suggested by so able a professional economist. Dr. N. J. Abercrombie has nobly played the part of the intelligent amateur, and his detailed criticisms have greatly improved the exposition. My sister has done the same for Part I and suggested the insertion of an important section. I have been greatly helped by my wife in revising the book. To all of these I would express my sincere gratitude.

HERTFORD COLLEGE, OXFORD.

J. E. M.

*April 1936.*

PREFACE TO THE SECOND EDITION

IN preparing this edition I have corrected some errors of detail; and I should like to take this opportunity of thanking those who have pointed them out to me. I have also altered the emphasis of the arguments on pp. 211 and 272. This last change I have made as a result of reading Professor A. M. Carr-Saunders's *World Population*. This book has so impressed me with the importance of the present population trend that I have added a note at the end of this book, the main purpose of which is to explain the meaning of Mr. Kuczynski's measure 'the net reproduction rate' and to show its bearing upon the argument of Chapter II of Part IV of this book.

J. E. M.

HERTFORD COLLEGE, OXFORD

*March 1937.*

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## INTRODUCTION

**B**EFORE any economic system can provide the highest possible standard of living, four conditions must be fulfilled.

1. No economic resources, which are willing to work, must stand idle. This problem—the problem of Unemployment or of poverty in the midst of plenty—is discussed in Part I.

2. The available economic resources must be set to work to produce in the greatest possible quantities those products which consumers most desire; this condition will remain unfulfilled, so long as it is possible by producing less of one thing to produce more of another, which consumers desire more urgently. This is the problem of Competition, Monopoly, and Planning, which is the subject of Part II.

3. The income of the community must be distributed among individuals in such a way that the greatest possible satisfaction is obtained from the limited national income. The Distribution of Income is the subject of Part III.

4. The standard of living will not be the highest possible, unless a proper balance between work and leisure is maintained and unless the total population and the total stock of capital are forthcoming in the most appropriate amounts. Part IV discusses this problem of the 'optimum' supply of the factors of production, labour and capital.

If these four conditions are fulfilled, the standard of living will be the highest which it is possible with a given knowledge of industrial technique to obtain from a given supply of natural resources. Parts I to IV are based on the assumption of a self-contained economic system. But in the real world no economy is isolated in this way; for each government must consider the effect of its economic policy upon economic relations with other countries. Part V is therefore devoted to International Economic Problems. This discussion gives rise to no further fundamental economic problem, but shows

merely the international aspects of the four fundamental questions discussed in Parts I to IV.

Some of these problems are more urgent and some are more easily solved than others. The most glaring economic absurdity at present is the existence of unemployed resource in a world in which there are many needs still to be satisfied. For this reason the policy discussed in Part I—together with its international aspects in Part V—is the most pressing and the nearest to 'practical politics'. Fortunately, as we shall see the solution of this problem needs least governmental interference. This problem should certainly be solved before all others; for, as long as there are unemployed resources, it is possible to produce a larger real income and so to improve every one's standards without causing any one to be worse off. The solution of this problem—unlike the problem of redistributing income—requires no change of heart and offends no vested interests; it requires simply a clearer understanding and if the argument of Chapter VIII of Part V is correct, its solution should strengthen the economic foundations of world peace. The problem of Part IV, with the exception of the question of the best balance between work and leisure discussed on pp. 259 to 262, is the most far removed from 'practical politics'; for it involves controlling the size of the population.

Opinions are likely to differ as to whether the problem of Part II or that of Part III should take precedence in any practical economic programme. On the one hand, the redistribution of income involves in its clearest form the problem of 'vested interests', since it is impossible to redistribute income without making some persons worse off than before, whereas the solution of the problems raised in Part II will increase the total national income available for distribution and is therefore theoretically compatible with a rise in every one's standards. On the other hand, as we shall argue in Chapter IV of Part III, income can be safely redistributed by a simple extension of the existing taxing function of government; whereas the problem of Part II cannot be successfully

met without a large measure of government control over industry.

It is not suggested that a definite order of preference can be laid down in any practical economic policy for the solution of the different problems discussed in this book. Different readers will lay the emphasis on different problems; and—as we shall show more than once in the course of this book—there are many reforms which will aid the solution of more than one problem at the same time. But no sound economic policy can tackle every problem at once; and it is, I think, at least certain that the problem of unemployment should immediately receive the greatest emphasis. Beyond this, these introductory remarks may enable the reader to preserve a better balance in his judgement as he moves through the details of the following pages.

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 94, 98, 101, 136-9, 145-48,  
 185, 187, 202, 203, 212-20,  
 223-6, 231, 232, 241, 252, 256,  
 259, 260, 262, 268-71, 311-16,  
 320, 326, 354, 355, 357-9,  
 360-2, 374, 383.  
 War, 54, 382-8.  
 'Work or Maintenance', 78.

### CHART I

A	B	C	D
Output	Average cost	Total cost	Marginal cost
	£ s.	£ s.	£ s.
1	31 5	31 5	31 5
2	29 0	58 0	26 15
3	27 0	81 0	23 0
4	25 5	101 0	20 0
5	23 15	118 15	17 15
6	22 10	135 0	16 5
7	21 10	150 10	15 10
8	20 15	166 0	15 10
9	20 5	182 5	16 5
10	20 0	200 0	17 15
11	20 0	220 0	20 0
12	20 5	243 0	23 0
13	20 15	269 15	26 15
14	21 10	301 0	31 5
15	22 10	337 10	36 10
16	23 15	380 0	42 10
17	25 5	429 5	49 5

TABLE 1. The Cost Conditions of a Single Firm.

A	B	C	D
Output	Demand price	Total receipts	Marginal receipts
	£	£	£
1	20	20	20
2	20	40	20
3	20	60	20
4	20	80	20
5	20	100	20
6	20	120	20
7	20	140	20
8	20	160	20
9	20	180	20
10	20	200	20
11	20	220	20
12	20	240	20
13	20	260	20
14	20	280	20
15	20	300	20
16	20	320	20
17	20	340	20

TABLE 2 (a). The Demand for the Output of a Single Firm. Perfect Competition.

A	B	C	D
Output	Demand price	Total receipts	Marginal receipts
	£	£	£
1	29	29	29
2	28	56	27
3	27	81	25
4	26	104	23
5	25	125	21
6	24	144	19
7	23	161	17
8	22	176	15
9	21	189	13
10	20	200	11
11	19	209	9
12	18	216	7
13	17	221	5
14	16	224	3
15	15	225	1
16	14	224	-1
17	13	221	-3

TABLE 2 (b). The Demand for the Output of a Single Firm. Imperfect Competition.

A	B	C	D
Output	Demand price	Total receipts	Marginal receipts
	£	£	£
1	20	20	20
2	20	40	20
3	20	60	20
4	20	80	20
5	20	100	20
6	20	120	20
7	20	140	20
8	20	160	20
9	20	180	20
10	20	200	20
11	19	209	9
12	18	216	7
13	17	221	5
14	16	224	3
15	15	225	1
16	14	224	-1
17	13	221	-3

TABLE 3. The Effect of a Maximum Legal Selling-price on the Demand shown in Table 2 (b).

A	B	C	D	E
Output	Demand price	Total receipts	Marginal receipts	Total value to consumers
	£	£	£	£
1	25	25	25	25
2	24	48	23	49
3	23	69	21	72
4	22	88	19	94
5	21	105	17	115
6	20	120	15	135
7	19	133	13	154
8	18	144	11	172
9	17	153	9	189
10	16	160	7	205
11	15	165	5	220
12	14	168	3	234
13	13	169	1	247
14	12	168	-1	259
15	11	165	-3	270
16	10	160	-5	280
17	9	153	-7	289

TABLE 4. The Demand for the Output of a Commodity, showing its Total Value to Consumers.

A	B	C	D
Output	Demand price	Total receipts	Marginal receipts
	£	£	£
1	17	17	17
2	17	34	17
3	17	51	17
4	17	68	17
5	17	85	17
6	17	102	17
7	17	119	17
8	17	136	17
9	17	153	17
10	16	160	7
11	15	165	5
12	14	168	3
13	13	169	1
14	12	168	-1
15	11	165	-3
16	10	160	-5
17	9	153	-7

TABLE 5. The Effect of a Maximum Legal Selling-price on the Demand shown in Table 4.

Maximum Price of £17 effective.

CHART II

A	B	C	D	E	F	G
Employment	Output	Marginal product	Price of product	Value of marginal product	Total receipts	Marginal value of labour
18	708	..	s.	£ s.	£ s.	£ s.
19	760	52	2	5 4	76 0	5 4
20	810	50	2	5 0	81 0	5 0
21	858	48	2	4 16	85 16	4 16
22	904	46	2	4 12	90 8	4 12
23	948	44	2	4 8	94 16	4 8
24	990	42	2	4 4	99 0	4 4
25	1,030	40	2	4 0	103 0	4 0
26	1,068	38	2	3 16	106 16	3 16
27	1,104	36	2	3 12	110 8	3 12
28	1,138	34	2	3 8	113 16	3 8
29	1,170	32	2	3 4	117 0	3 4
30	1,200	30	2	3 0	120 0	3 0
31	1,228	28	2	2 16	122 16	2 16
32	1,254	26	2	2 12	125 8	2 12

TABLE 6 (a). The Demand for Labour by a Single Firm. Perfect Competition in the Sale of the Product.

A	B	C	D	E	F	G
Employment	Output	Marginal product	Price of product	Value of marginal product	Total receipts	Marginal value of labour
18	708	..	s. d.	£ s. d.	£ s. d.	£ s. d.
19	760	52	3 0	7 11 8	106 4 0	4 12 8
20	810	50	2 10	7 1 8	114 15 0	3 18 4
21	858	48	2 9	6 12 0	117 19 6	3 4 6
22	904	46	2 8	6 2 8	120 10 8	2 11 2
23	948	44	2 7	5 13 8	122 9 0	1 18 4
24	990	42	2 6	5 5 0	123 15 0	1 6 0
25	1,030	40	2 5	4 16 8	124 9 2	14 2
26	1,068	38	2 4	4 8 8	124 12 0	2 10
27	1,104	36	2 3	4 1 0	124 4 0	8 0
28	1,138	34	2 2	3 13 8	123 5 8	18 4
29	1,170	32	2 1	3 6 8	121 17 6	1 8 2
30	1,200	30	2 0	3 0 0	120 0 0	1 17 6
31	1,228	28	1 11	2 13 8	117 13 8	2 6 4
32	1,254	26	1 10	2 7 8	114 19 0	2 14 8

TABLE 6 (b). The Demand for Labour by a Single Firm. Imperfect Competition in the Sale of the Product.

A	B	C	D
Employment	Wage-rate	Wage-bill	Marginal wage-cost
18	£	£	£
19	3	54	..
20	3	57	3
21	3	60	3
22	3	63	3
23	3	66	3
24	3	69	3
25	3	72	3
26	3	75	3
27	3	78	3
28	3	81	3
29	3	84	3
30	3	87	3
31	3	90	3
32	3	93	3
32	3	96	3

TABLE 7 (a). The Supply of Labour to a Single Firm. Perfect Competition in the Hire of Labour.

A	B	C	D
Employment	Wage-rate	Wage-bill	Marginal wage-cost
18	£ s.	£ s.	£ s.
19	12	10 16	..
20	16	15 4	4 8
21	1 0	20 0	4 16
22	1 4	25 4	5 4
23	1 8	30 16	5 12
24	1 12	36 16	6 0
25	1 16	43 4	6 8
26	2 0	50 0	6 16
27	2 4	57 4	7 4
28	2 8	64 16	7 12
29	2 12	72 16	8 0
30	2 16	81 4	8 8
31	3 0	90 0	8 16
32	3 4	99 4	9 4
32	3 8	108 16	9 12

TABLE 7 (b). The Supply of Labour to a Single Firm. Imperfect Competition in the Hire of Labour.

A	B	C	D	E	F	G
Employment	Output	Marginal product	Price of product	Value of marginal product	Total receipts	Marginal value of labour
18	708	..	s. d.	£ s. d.	£ s. d.	£ s. d.
19	760	52	2 0	5 4 0	76 0 0	5 4 0
20	810	50	2 0	5 0 0	81 0 0	5 0 0
21	858	48	2 0	4 16 0	85 16 0	4 16 0
22	904	46	2 0	4 12 0	90 8 0	4 12 0
23	948	44	2 0	4 8 0	94 16 0	4 8 0
24	990	42	2 0	4 4 0	99 0 0	4 4 0
25	1,030	40	2 0	4 0 0	103 0 0	4 0 0
26	1,068	38	2 0	3 16 0	106 16 0	3 16 0
27	1,104	36	2 0	3 12 0	110 8 0	3 12 0
28	1,138	34	2 0	3 8 0	113 16 0	3 8 0
29	1,170	32	2 0	3 4 0	117 0 0	3 4 0
30	1,200	30	2 0	3 0 0	120 0 0	3 0 0
31	1,228	28	1 11	2 13 8	117 13 8	2 6 4
32	1,254	26	1 10	2 7 8	114 19 0	2 14 8

TABLE 8. The Effect of a Maximum Legal Commodity Price on the Demand for Labour shown in Table 6 (b).

A	B	C	D
Employment	Wage-rate	Wage-bill	Marginal wage-cost
18	£ s.	£ s.	£ s.
19	3 0	54 0	3 0
20	3 0	57 0	3 0
21	3 0	60 0	3 0
22	3 0	63 0	3 0
23	3 0	66 0	3 0
24	3 0	69 0	3 0
25	3 0	72 0	3 0
26	3 0	75 0	3 0
27	3 0	78 0	3 0
28	3 0	81 0	3 0
29	3 0	84 0	3 0
30	3 0	87 0	3 0
31	3 4	90 4	3 0
32	3 8	99 4	9 4
32	3 8	108 16	9 12

TABLE 9. The Effect of a Minimum Legal Wage-rate on the Supply of Labour shown in Table 7 (b).