

Contents

1	Introduction	1
1.1	The Basic Problem: “The Economics of Time and Ignorance”	2
1.2	Knowledge: How Much Do We Know; How Confident Should We Be?	3
1.3	Notes on the “Confusion” of the Language	5
	References	7
2	The First Class: Subjective Value and Time Preference	9
2.1	The Meaning of Words	9
2.2	Economic Calculation and Action	10
2.3	An Economy Study Process	10
2.4	The Uncertainty of Predictions	11
	References	12
3	A Few Basic Concepts: Setting the Stage	13
3.1	The Most Important Equation	13
3.2	The Components of the Course	13
3.3	Perspective of the Course	14
3.4	The Crucial Lesson	15
3.5	The Coordination Problem	15
	References	16
4	Price and Cost	17
4.1	Human Action	17
4.2	Value Theory	18
4.3	Information Transfer	18
4.4	On the Origin of Money	19
4.5	Preference and Action	20
4.6	Some Categories of Cost	21
4.7	Interest and Interest Rates	22

4.8	An Introductory Investment Decision	23
4.9	A Brief Introduction to Banking, Money, and Credit	24
	References	25
5	Equivalence	27
5.1	A Simple Decision Problem.	28
5.2	An Example Application: Creating a Retirement Account	30
5.3	Equivalence with Working Capital.	31
5.4	Summary of Principles of Equivalence	32
	Reference.	32
6	Inflation	33
6.1	Austrian Explanation	33
6.2	Introductory Examples	34
6.3	The Language of Inflation	35
6.4	Methods and Episodes of Devaluation.	36
6.5	Estimating Devaluation Effects	38
6.6	Accounting for Inflation in Two Domains	40
	References	40
7	Information: Interfering with Price Signals	43
7.1	Information Theory and the Market.	43
7.2	The Evolution of Social Institutions	44
7.3	Interference by Inflation.	44
7.4	Interference by Taxation.	46
7.5	Interference by Price Control.	46
	7.5.1 Minimum Price Control	47
	7.5.2 Maximum Price Control.	47
7.6	Summary	48
	References	48
8	Public Projects (Benefit–Cost Analysis)	51
8.1	“Philosophical” Introduction	51
8.2	Government Incentives and Functions	52
8.3	Limitations to Government Activities	53
8.4	The Method of <i>B/C</i> Analysis	55
8.5	A Typical Five-Step Procedure for Incremental <i>B/C</i> Analysis.	55
8.6	Choice of Interest Rate for <i>B/C</i> Analysis	56
8.7	A Numerical <i>B/C</i> Example.	57
8.8	Gaming the Basic Example	58
	References	59
9	Effects of Taxation on Cash Flows	61
9.1	Why Consider Taxes?	61
9.2	Depreciation Accounting for Capital Preservation.	62

9.3	Estimating the Effects of Taxation	63
9.4	Summary of Effects of Inflation.	64
9.5	How Inflation and Taxes Affect Capital Values	65
9.6	Summary for Students	65
	References	66
10	An Example “Retirement” Planning Calculation	67
10.1	Account for Devaluation of Money	67
10.2	Account for Taxation	69
10.3	Estimate Combined Effect of Devaluation and Taxation	69
10.4	Concluding Remarks	70
	References	70
11	Costs of Regulation	71
11.1	Risk Evaluations and Perceptions	71
11.2	Wage Control and Lifespan	73
11.3	Examples of Regulatory Effects.	74
11.3.1	Transcontinental Railroad Subsidies	75
11.3.2	Water Pollution Control	76
11.3.3	Land-Use Regulations	79
	References	79
12	Sustainability Concerns	83
12.1	Defining Sustainability.	83
12.2	What Is the Objective?.	84
12.3	A Question of Prices and Uncertainty	84
12.4	A Dissenting View	85
12.5	Differing Perspectives: Environmental Science Vs. Civil Engineering Students	86
	References	87
	Appendix A: Elements of Austrian School Economics	89
	Appendix B: Example Learning Objectives	95
	Index	99



<http://www.springer.com/978-3-319-18847-8>

Purposeful Engineering Economics

Chadderton, R.A.

2015, XV, 100 p., Hardcover

ISBN: 978-3-319-18847-8