

# Table of Contents

<b>Foreword .....</b>	III
What is Economics?.....	III
Who this book is for.....	IV
Book Structure .....	IV
A few words of advice.....	IV
<b>Acknowledgments .....</b>	VII
<b>Chapter 1</b>	
<b>Gains from trade .....</b>	1
Introduction .....	2
Utility and valuation .....	2
The concept of utility .....	2
Valuation .....	3
One buyer, one seller: the sale of one item.....	4
The buyer's point of view.....	4
The seller's point of view .....	4
The trade of a single item.....	5
One buyer, one seller: the sale of many identical items .....	6
The buyer's point of view .....	6
Marginal valuation.....	7
The seller's point of view .....	11
Gains from trade.....	13
Efficiency.....	15
Discussions.....	17
Trade vs barter.....	17
Valuation vs value.....	19
Conclusion.....	19
Appendix: from utility to valuation .....	20
Utility level curves, a.k.a. indifference curves.....	20
Expressing tradeoffs: the marginal rate of substitution.....	21
Marginal valuation = marginal rate of substitution for money .....	23
Exercises .....	24
<b>Chapter 2</b>	
<b>Demand.....</b>	31
Introduction .....	32
Individual demand .....	32
A note on representation: tables, equations and graphs .....	32
Rock, paper, scissors .....	33
Consumer behavior.....	34
Consumer surplus.....	35
From marginal valuation to individual demand .....	37

Market demand .....	38
The demand function.....	41
Factors affecting demand .....	42
Shifts in the demand curve .....	43
Elasticities.....	44
The price elasticity of demand.....	44
Elasticity depends on where you are.....	45
Special cases .....	48
Other elasticities .....	49
Conclusion.....	50
Exercises .....	52
 <b>Chapter 3</b>	
<b>Firms, costs, and profit .....</b>	<b>57</b>
Introduction .....	58
Firms.....	58
The production process.....	58
The objective of the firm .....	59
Revenue .....	59
Costs .....	61
What costs to consider.....	62
Cost structure .....	64
Cost curves.....	69
The time factor: short-run vs long-run costs.....	73
Profit maximization .....	76
Economic profit versus accounting profit.....	76
Profit maximization .....	78
Conclusion.....	79
Exercises .....	80
 <b>Chapter 4</b>	
<b>Competitive supply .....</b>	<b>85</b>
Introduction .....	86
Perfect competition .....	86
Conditions for perfect competition .....	87
Profit maximization in a competitive market .....	89
The output decision.....	89
Shutdown decision and supply in the short-run.....	92
The short-run shutdown decision.....	93
The firm's short-run supply curve .....	96
The short-run market supply curve .....	97
Elasticity of supply.....	98
Shutdown decision and supply in the long-run .....	98
The long-run shutdown decision .....	98
The firm's long-run supply curve .....	99

The long-run market supply curve.....	100
Discussion: Zero profit in the long-run.....	101
Conclusion.....	102
Appendix: The shutdown decision in the medium run, where some fixed costs are retrievable .....	103
Should you shut down your business in the medium run (between one and ten months)? .....	104
Exercises .....	106
<b>Chapter 5</b>	
<b>Market equilibrium .....</b>	<b>111</b>
Introduction .....	112
Market equilibrium .....	112
Market forces .....	112
Definition and derivation of the market equilibrium .....	115
Shocking the equilibrium.....	117
Demand shocks .....	118
Supply shocks .....	122
Simultaneous shocks to supply and demand .....	123
Market regulation.....	125
Welfare considerations.....	127
Consumer surplus.....	127
Competitive equilibrium and optimal allocation .....	134
Conclusion.....	136
Exercises .....	138
<b>Chapter 6</b>	
<b>Monopoly and market power .....</b>	<b>141</b>
Introduction .....	142
Monopoly .....	142
Sources of market power .....	143
Profit maximization: a trade-off between price margin and volume of sales .....	145
The monopolist's optimal decision .....	147
Elasticity and market power .....	150
Measuring market power .....	150
The role of elasticity of the demand .....	150
Welfare considerations and the inefficiency of monopolies.....	151
Natural monopoly and regulation .....	153
Market power and monopolistic competition.....	154
Conclusion.....	156
Exercises .....	158

<b>Chapter 7</b>	
Pricing strategies and price discrimination .....	161
Introduction .....	162
Price Discrimination.....	162
Perfect discrimination: capturing all consumer surplus.....	163
Conditions for price discrimination .....	166
Explicit market segmentation: 3 <sup>rd</sup> degree price discrimination.....	167
Implicit market segmentation: 2 <sup>nd</sup> degree price discrimination.....	170
Examples of non-linear pricing.....	172
A two-part tariff example .....	172
An example of block pricing.....	173
Tying and bundling .....	174
Conclusion.....	175
Exercises .....	176
<b>Chapter 8</b>	
Uncertainty and the value of information.....	181
Introduction .....	182
Attitudes toward risk .....	182
Risk aversion .....	182
Other risk attitudes: risk-neutral and risk-seeking agents.....	188
Reducing exposure to risk.....	189
Diversification.....	193
Investing under uncertainty .....	193
Investment decision using decision trees .....	193
The value of information .....	196
The expected value of perfect information.....	197
The expected value of imperfect information.....	199
Conclusion.....	203
Exercises .....	204
<b>Chapter 9</b>	
Game theory and strategic interactions .....	209
Introduction .....	210
Game theory: thinking strategically .....	210
The prisoner's dilemma.....	213
Other simultaneous-move games.....	215
Applications of the prisoner's dilemma.....	215
Other simultaneous-move games .....	218
Sequential games .....	220
Conclusion.....	225
Exercises .....	227

<b>Chapter 10</b>	
Oligopoly .....	233
Introduction .....	234
What is an oligopoly?.....	234
How to determine if a market is oligopolistic.....	235
Optimal behavior in oligopolies .....	235
Pricing game example .....	235
Cournot duopoly .....	236
The first mover advantage – the Stackelberg model.....	242
Collusion and cartels .....	244
Conclusion.....	245
Exercises .....	247
<b>Chapter 11</b>	
Asymmetric information.....	251
Introduction .....	252
Adverse selection .....	253
Markets with adverse selection: the market for lemons .....	254
Perfect information.....	255
Symmetric incomplete information – total ignorance .....	256
Asymmetric information .....	256
Signaling through a costly inspection.....	257
Other examples of markets with adverse selection.....	258
Solutions to the problem of adverse selection .....	259
Certification .....	259
Brands and reputation.....	260
Signaling and screening.....	260
Conclusion.....	261
Exercises .....	262
<b>Chapter 12</b>	
Moral hazard and contracts .....	267
Introduction .....	268
Moral hazard and the principal-agent relationship .....	268
How to design incentives and contracts .....	269
A simple example .....	269
Incentives in practice.....	274
The perverse effects of incentives .....	275
Conclusion.....	277
Exercises .....	278
Index.....	281