

Efficiency, Market Dynamics and Industry Growth

Jati Sengupta

and

Phillip Fanchon

palgrave
macmillan

Contents

<i>List of Tables and Figures</i>	vii
<i>Preface</i>	ix
Chapter 1 Technology, Efficiency and Market Structure	1
1. Introduction	1
2. Technology creation and diffusion	2
3. Efficiency models of industry growth	11
4. Industry growth in Cournot-Nash framework	21
5. Concluding remarks	28
Chapter 2 Efficiency Models of Industry Growth	31
1. Introduction	31
2. Production and cost dynamics	32
3. Adjustment cost dynamics	34
4. Scale economies and learning by doing	36
5. Pareto efficiency frontier: DEA approach	39
6. Industry growth and optimal investment	47
7. Concluding remarks	56
Chapter 3 Growth of High-Tech Industries: Computers and Pharmaceuticals	58
1. Introduction	58
2. Measuring production efficiency and growth	59
3. Stochastic frontier analysis	60
4. DEA models	64
5. Efficiency in the computer industry	65
6. Efficiency in the pharmaceutical industry	75
7. Concluding remarks	83
Chapter 4 Pricing Strategies Under Innovation	85
1. Introduction	85
2. R&D and market structure	86
3. Strategies of a dominant firm	91
4. Limit pricing with technological change and internal finance	94
5. Appendix	107

Chapter 5	Dynamic Models of Productivity and Efficiency	114
1.	Introduction	114
2.	Dynamic DEA models	114
3.	Growth and technology	118
4.	Industry evolution and innovation	120
5.	Hypercompetitive market structures	123
Chapter 6	Efficiency and Growth of the Telecom Industry	138
1.	Introduction	138
2.	Efficiency and innovation	138
3.	Measuring efficiency	146
4.	Concluding remarks	158
	<i>Index</i>	161