

Contents

1	Introduction	1
Part I Theory of Economic Growth		
2	Neoclassical Growth Theory and Standard Models	9
2.1	From Classical to Neoclassical Growth Theory	9
2.2	The Basic Outline of Neoclassical Growth Models	12
2.3	The Solution with Technological Progress and a Cobb-Douglas Production Function	15
2.4	Human Capital as an Additional Factor of Production	18
3	Growth Models with Spatial Externalities	23
3.1	A Neoclassical Growth Model with Identical Steady States	23
3.2	A Neoclassical Growth Model with Different Steady States	25
4	Convergence: Theory and Evidence	29
4.1	Convergence and Disparities of National Economies	30
4.2	The Formal Derivation of a Convergence Equation	34
4.3	Empirical Tests of Convergence, Conclusions and Unsolved Questions	38
Part II A Model of Regional Growth		
5	Remarks on Regional Growth	45
5.1	Agglomeration Effects, Increasing Returns and Polarisation	45
5.2	Reconsidering Saving and Gross Investment	48
5.3	Foreign Capital, Its Mobility and the Role of Human Capital	50
6	Structure of the Model	53
6.1	Definitions and Assumptions	53
6.2	The Production Function	55
6.3	Changes of Inputs to Production	59
7	Evolution of Factors and Output	65
7.1	Steady States	65

7.2	Simulation Results	68
7.3	Formal Derivations	75
8	Implications for Output Growth	79
8.1	Taylor Approximation	79
8.2	Solution for Output Growth	82
8.3	Summary and Outlook	85
 Part III Empirics		
9	Regions, Variables and Data	91
9.1	Observation Units, Observation Period and Distance Measures	91
9.2	Variables	94
9.3	An Illustration of Recent Developments	98
10	Spatial Econometric Specification and Estimation	105
10.1	Spatial Econometric Models	105
10.2	The Model Specification	107
10.3	Maximum Likelihood Estimation	109
11	Testing the Theoretical Model	111
11.1	Results	111
11.2	Interpretation and Concluding Remarks	114
12	Summary	117
Appendices		121
Appendix 1: Regions of the Observation Area		121
Appendix 2: Supplementary Econometric Results		125
Appendix 3: Intra-state Developments 1995 to 2004		127
Appendix 4: List of Symbols		131
References		135