

Contents

List of figures	xii
List of tables	xiv
Introduction	xvii

Part I **Urban and Regional Economic Models and Methods**

1	Industrial location: the location of the firm in theory	3
1.1	Introduction	3
1.2	Classical and neoclassical models of location	3
1.2.1	The Weber location-production model	4
1.2.2	The location effect of input transport costs	7
1.2.3	The location effect of output transport costs	8
1.2.4	The location effect of varying factor prices	10
1.2.5	The location effect of new input sources and new markets	14
1.3	The Moses location-production model	16
1.4	Market area analysis: spatial monopoly power	23
1.4.1	The Hotelling model of spatial competition	26
1.4.2	Price competition, quality competition, and product space	29
1.5	Conclusions	36
	Appendix 1.1 The one-dimension location problem	36
	Appendix 1.2 The general solution to the Weber-Moses problem	41
	Appendix 1.3 The logistics-costs location-production model	43
	Appendix 1.4 The Hotelling location game	46
2	Agglomeration and clustering	49
2.1	Introduction	49
2.2	Industrial clustering: returns to scale and geography	50
2.3	Agglomeration economies	51
2.3.1	The sources of agglomeration economies	51
2.3.2	The types of agglomeration economies	54
2.4	Clusters, firm types, and the nature of transactions	59
2.5	People clustering: creativity and urban consumption	64
2.6	Limited information, uncertainty, and the evolution of clusters	66
2.7	Conclusions	71

3	The spatial distribution of activities	73
3.1	Introduction to industrial dispersal	73
3.2	Firm dispersion: price discrimination, market areas, and distance costs	74
3.2.1	Spatial pricing and price discrimination	74
3.2.2	Reilly's law of market areas	75
3.2.3	Linkage analysis and value-weight ratios	76
3.3	Urban hierarchies and classical central place theory	79
3.3.1	The Christaller approach to central places	80
3.3.2	The Lösch approach to central places	82
3.4	New economic geography (NEG)	86
3.5	Empirical regularities of the urban system: the rank-size rule	89
3.6	The structure and interpretation of regional data	94
3.7	Conclusions	96
	Appendix 3.1 Spatial monopoly and price discrimination	96
	Appendix 3.2 The derivation of Reilly's law	99
	Appendix 3.3 The NEG model of the urban-regional economy	100
	Appendix 3.4 The Löschian demand function	104
4	The spatial structure of the urban economy	107
4.1	Introduction	107
4.2	The von Thunen model	108
4.2.1	Land competition in the von Thunen model	112
4.3	The bid-rent model for a firm	113
4.3.1	Land competition in the industry bid-rent model	117
4.4	The bid-rent model for a residential household	120
4.4.1	Land competition in the household bid-rent model	122
4.4.2	The treatment of environment in the household bid-rent model	126
4.5	Alternative models of distance-land price convexity	128
4.6	Critiques of urban economic models	132
4.6.1	Monocentricity	133
4.6.2	Land supply and land ownership	135
4.6.3	The optimal size of a city	137
4.7	Conclusions	138
	Appendix 4.1 The slope of the rent gradient in the von Thunen model	139
	Appendix 4.1.1 Distance to the edge of the von Thunen area of cultivation	141
	Appendix 4.1.2 Distance to a change of land use in the von Thunen model	141
	Appendix 4.2 The slope of the bid-rent curve	142
	Appendix 4.2.1 The relative income elasticities of the demand for land and accessibility in the bid-rent model	145
	Appendix 4.2.2 Environmental changes and bid-rent analysis	146

Appendix 4.3 Property asset appreciation and land price–distance convexity: the role of urban spatial growth	147
Appendix 4.3.1 Property asset appreciation and land price–distance convexity: the role of income growth in a spatially constrained city	149
Appendix 4.4 Optimum trip frequency and rent–gradient convexity	151
5 Regional specialization, trade, and multiplier analysis	154
5.1 Introduction	154
5.2 The economic base model	156
5.3 Identifying the basic and non-basic sectors	160
5.3.1 The assumptions method	160
5.3.2 Location quotients	160
5.3.3 Choosing between the alternative economic base approaches	163
5.4 Keynesian regional multiplier	166
5.5 Comparing the economic base and Keynesian regional multipliers	172
5.6 Impact analysis	173
5.7 Regional input–output analysis	175
5.7.1 Additional comments on regional input–output analysis	178
5.8 Conclusions	180
Appendix 5.1 The simple static and dynamic Keynesian multiplier models	182
Appendix 5.2 The relationship between the alternative forms and uses of location quotients in the construction of regional input–output tables	183
Appendix 5.2.1 Estimating regional trade using location quotients where an updated national input–output table is not available	184
Appendix 5.2.2 Constructing regional input–output tables by adjusting national tables	187
Appendix 5.3 The general solution to the input–output model	190
6 Regional and interregional labour market analysis	193
6.1 Introduction	193
6.2 Wages and labour markets	194
6.2.1 A neoclassical approach	194
6.2.2 A Keynesian approach	198
6.3 Regional labour markets, wage flexibility, and capital utilization	200
6.4 Regional labour market adjustment	203
6.4.1 Regional capital adjustment	205
6.5 Wages and interregional labour migration	209
6.5.1 The disequilibrium model of interregional labour migration	209
6.5.2 The equilibrium model of interregional labour migration	213
6.5.3 The endogenous human-capital model of migration	215
6.5.4 Additional comments on wages and migration	218
6.6 Non-wage-related models of interregional migration	221
6.6.1 The gravity model of migration	221

6.6.2 The life-cycle model of migration	223
6.7 Conclusions	223
Appendix 6.1 The Roback (1982)–Tiebout (1954) model of consumption	225
Appendix 6.2 The model of human capital	227
Appendix 6.3 The Roy (1951) model of migration	229
7 Regional growth, factor allocation, and balance of payments	234
7.1 Introduction	234
7.2 Neoclassical regional growth	235
7.2.1 The one-sector model of regional factor allocation and migration	235
7.2.2 The two-sector model of regional factor allocation and migration	240
7.2.3 The relationship between the one-sector and the two-sector regional models	243
7.3 Regional growth accounting and production function analysis	247
7.4 Keynesian perspectives on regional growth and balance of payments	254
7.4.1 The balance of payments approach to regional growth	255
7.4.2 The Verdoorn law and cumulative causation	262
7.5 Convergent growth or divergent growth?	265
7.5.1 Innovation and technological change	266
7.5.2 Alternative notions of capital	268
7.5.3 Institutions and social capital	269
7.6 Conclusions	271
Appendix 7.1 The Cobb–Douglas production function and growth accounting	272
Appendix 7.2 Proof of the relationship between wage growth and labour productivity growth in the Cobb–Douglas framework	274

Part II **Globalization: Cities, Regions, and Economic Policy**

8 Economic geography and economic history	279
8.1 Introduction to urbanization, industrialization, and globalization	279
8.2 Globalization, urbanization, industrialization: the sixteenth to the nineteenth century	282
8.3 Globalization, urbanization, and industrialization in the twentieth century	290
8.4 Recent features of urbanization and globalization	295
8.5 Modern globalization: global firms, global regions, and global cities	298
8.6 Conclusions	301
9 Cities and regions in the modern global economy	303
9.1 Introduction	303
9.2 Different types of spatial transactions costs	304
9.2.1 Falling spatial transactions costs	305
9.2.2 Rising spatial transactions costs	306

9.3	Economic geography is spiky and uneven	310
9.3.1	Spatial equilibrium and geographical variations in productivity	313
9.4	The economic performance of today's cities and regions	315
9.4.1	Scale and productivity in capital and dominant cities	317
9.4.2	Connectivity in capital and dominant cities	319
9.5	Non-core regions, intermediate regions, and peripheral regions	322
9.6	Conclusions	325
	Appendix 9.1 Interpreting convergence–divergence considering the spatial units	326
	Appendix 9.2 Interpreting cumulative regional growth patterns	327
10	Modern urban and regional economic policy analysis	330
10.1	Introduction to the modern urban and regional policy context	330
10.2	Urban economic policy	332
10.2.1	Urban zoning policies	333
10.2.2	Urban regeneration policies	336
10.2.3	Greenbelts	342
10.3	Regional economic policy	344
10.3.1	Traditional regional policies	345
10.3.2	The project-based welfare effects of regional policy	348
10.3.3	The macroeconomic effects of regional policy	351
10.4	New debates in regional policy	354
10.4.1	The space-blind approach	356
10.4.2	The place-based approach	359
10.5	The differences between space-blind and place-based approaches	363
10.5.1	The interactions between geography and institutions	363
10.5.2	The nature of long-term development processes	364
10.5.3	The nature of national–regional decision-making processes	364
10.5.4	The intentions versus the outcomes of policies	365
10.5.5	Insights into the nature of regional and national development challenges	366
10.5.5.1	Different views regarding institutions and geography	366
10.5.5.2	Different views regarding historical urbanization–development processes	368
10.5.5.3	Different views regarding welfare provision and labour mobility	368
10.6	Conclusions	369
	Appendix 10.1 The value and (mis)pricing of places	371
	Appendix 10.2 Space-blind approaches and the provision of welfare payments	374
	Bibliography	376
	Index	398