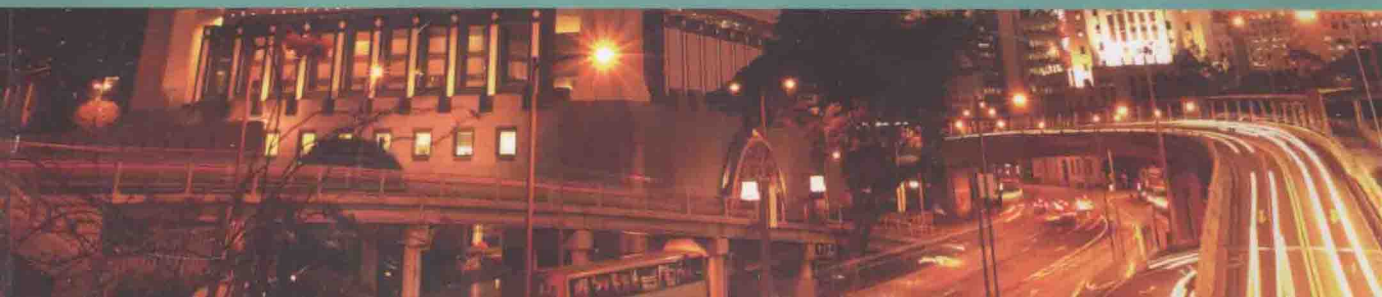


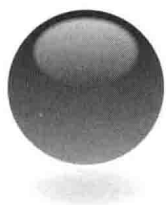
OXFORD

SECOND EDITION

MODERN URBAN AND REGIONAL ECONOMICS

PHILIP McCANN





Modern Urban and Regional Economics

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OXFORD
UNIVERSITY PRESS

OXFORD

UNIVERSITY PRESS

Great Clarendon Street, Oxford, OX2 6DP,
United Kingdom

Oxford University Press is a department of the University of Oxford.
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Impression: 2

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British Library Cataloguing in Publication Data
Data available

ISBN 978-0-19-958200-6

Printed in Great Britain by
Ashford Colour Press Ltd, Gosport, Hampshire

To my parents Kath and Joe, and to my family

About the Author

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Philip McCann is also co-editor of *Papers in Regional Science*, *Spatial Economic Analysis*, and *Review of Urban and Regional Development Studies*.

Acknowledgements

My thanks go to the editorial team at Oxford University Press who have always been supportive and professional in everything they do, making the arduous process of writing a book such as this as straightforward as possible. I am also very grateful for the significant amount of work undertaken by five anonymous reviewers whose detailed insights, comments, and criticisms on each chapter greatly improved the book.

My thanks also go to the numerous scholars and teachers from all over the world who have kindly provided me with excellent ideas and suggestions for this second book, almost all of which I hope I have managed to include.

Finally, I am forever grateful for the many friends and family who have supported me in my work.

Introduction

The logic and organization of the book

The front cover of this book provides a wonderful example of why urban and regional economics is such an exciting and important subject to study. The building featured is the Bank of China Tower building in Hong Kong, and for me it is one of the most elegant modern buildings in the world. The building is the home of various international corporations providing knowledge-based financial services with enormous investments in China. Yet, as a book-cover image, the building succinctly captures the urban and regional transformations evident in the modern global context. Hong Kong is one of the most dynamic cities in the world. Located in the heart of the rapidly expanding global super-region of South and East Asia, less than five decades ago Hong Kong was a centre for low-value-added manufacturing. Hong Kong is now one of the major global centres of finance and trade and in commercial terms it is a meeting point and melting pot of east and west, north and south. The wonderful building therefore is also a symbol of the transformations we have witnessed in the global economy during the last twenty years.

When the first edition of *Urban and Regional Economics* was published in 2001, we were still little more than a decade on from the fall of the Berlin Wall, the creation of the European Union and its Single Market, seven years from the founding of the North American Free Trade Agreement (NAFTA), and only a decade from creation of the world wide web in its modern sense. The global economic changes wrought by these transformations were still only emerging and as such were still relatively little understood. Today the situation is radically different. Since the Millennium, enormous strides have been made in terms of urban and regional data provision and urban and regional theoretical analysis. These empirical and theoretical developments have significantly increased our awareness and understanding of the role played by cities and regions in the global economy, and, in turn, the impacts of the global economic changes on cities and regions. The debates surrounding cities and regions have nowadays also broadened to include issues such as creativity, institutions, well-being, social capital, and sustainability, and cities and regions are seen to be central to all such discussion. Whereas once urban and regional issues were seen by many economists to be a minor avenue of research, nowadays many of the most important international institutions including the World Bank, the OECD, the European Commission, and the United Nations are all grappling with the economic challenges and possibilities associated with regions and cities.

The novelty and originality of the 2001 edition of this textbook was to treat urban and regional economic issues in an integrated manner, drawing out the links and differences between the various model approaches. The intention was to make the book accessible to economists, geographers, regional planners, business and management students, and also public policy-makers. The book was structured around a series of models presented in a manner which would allow the issues to be taught and applied irrespective of which part of the world the reader inhabited. The fact that the sales of the book have been more or less equally distributed across the globe, as well as being translated into Chinese, Greek, Korean, and Japanese, suggests that it was successful in terms of these objectives.

This new edition of the textbook adopts exactly the same approach as the earlier edition. However, it has been re-titled as *Modern Urban and Regional Economics*, and this is in order to signal the novel features of this new edition, which is quite different to the first book in several key respects. The new

edition aims to achieve two objectives. First, it seeks to update all the traditional analytical discussions in the light of the new thinking, the new models, and the new empirics that have emerged over the last decade. Second, it seeks to position these theoretical and empirical developments in the much broader and transforming global context in which today's cities and regions find themselves. The book comprises ten chapters. Each chapter takes a particular theme and discusses the various ways in which we are able to ask and answer questions related to the topic in question. The discussions operate at different levels, with the first seven chapters discussing the ways in which we analyse the spatial behaviour and urban and regional impacts of firms, people, land markets, inter-firm linkages, and technology. The last three chapters take a much broader historical, geographical, and institutional approach to examine the broader underlying changes that affect cities, regions, and the urban and regional policy challenges faced in the modern economy. Given the different levels at which these groups of chapters operate, the book is split into two parts, entitled *Urban and regional economic models and methods*, and *Globalization: cities, regions, and economic policy*. Part I deals with various aspects of urban and regional economic analysis, while Part II discusses the broader themes relating to the changing context in which regions and cities nowadays find themselves.

Chapter 1 discusses the various theoretical ways we can understand the location behaviour of individual firms. Chapter 2 employs these arguments to explain why groups of firms and activities are often located together in cities, urban agglomerations, and industrial clusters. However, we also know that firms differ greatly in their location patterns and are often found to be distributed across widely different spatial scales. Chapter 3 therefore examines these broader patterns of location and dispersion, allowing for the fact that different firms face different pressures and advantages from being clustered or located apart from each other, and uncovers some regularities and systematic features underpinning the relationships between spatial concentration and dispersion. Where clustering leads to the growth of a city, once an urban area has arisen at a particular location, Chapter 4 explains how the urban land market works and how local land allocations are determined. Chapters 5–7 then adopt a more macro-approach to discussions of various regional economic issues that are generally understood primarily in macroeconomic terms. Chapter 5 discusses multiplier analysis and the ways in which the linkages between firms and activities in a local area affect the overall output of an area. Chapter 6 explains the response of spatial labour markets to local demand and supply changes, and discusses the particular problems associated with local labour market adjustments and interregional migration flows. Chapter 7 then integrates the arguments in each of the previous chapters in order to discuss the various approaches we have to analyse regional growth behaviour. As with Chapters 2–4, Chapters 5–7, which deal with these more macroeconomic issues, are underpinned by explicitly spatial considerations. This allows us to identify the differences between analysis of economic phenomena at the urban or regional level and analysis at the national macroeconomic level.

Part II takes a much broader panoramic approach to understanding the impacts of globalization on cities, regions, and the policy challenges and possibilities associated with these changes. Chapter 8 discusses the historical relationship between urbanization, industrialization, and wealth in the context of four centuries of globalization processes. The intention here is to explain why studying cities and regions is so important for understanding national growth, and how these relationships have changed during different time periods, right up to the present day. What is important here is to understand that the long-term historical trends linking the growth of cities and densely populated regions to the growth of the national economy heavily influence the twentieth-century logic and construction of the models discussed in Chapters 1–7. Yet, in terms of the relationships between cities, regions, and national economies, the twentieth century itself was a period of dramatic twists

and turns, in which many of these relationships were either broken or refashioned in different ways in different parts of the world. Some of these twists and turns now have profound impacts on the ways in which we are able to use the models examined in Chapters 1–7 in the modern economy, because the underlying context in which such models can be applied may differ significantly in different places. In order to investigate these issues, Chapter 9 examines the major urban and regional changes that have arisen during the modern era of globalization which began in the late 1980s, and considers these changes in the light of the long-run trends discussed in Chapter 8. As we will see, the enormous global changes experienced since the late 1980s have fundamentally altered the long-run historical relationships between cities, regions, and nations in ways that we are only now beginning to understand better. An awareness of these changes is essential in order to understand how best to use the models discussed in Chapters 1–7 for analysing contemporary phenomena. At the same time, these changes have also led to new debates and controversies regarding regional and urban policy, debates that are sufficiently profound and influential that they are now taking place at the highest levels of international economic policy-making. These debates are examined in Chapter 10, which discusses in detail the nature of, and the justification for, urban and regional economic policy in the context of modern globalization. Chapter 10 explains how we can use the urban and regional economic models and methods described in Part I of this book in order to understand, predict, and target the impacts of various types of urban and regional policies. These discussions also highlight the limitations of our current understanding, and point out possible directions for further research.

As we will see in Part II of the book, the impacts of modern globalization on cities and regions have been profound, while in turn cities and regions have been in the vanguard of modern globalization processes. The emerging awareness of these relationships over the last decade has shaped entirely new discourses within politics and policy-making the world over. Many of these discussions are valuable, but not all are accurate. A genuine understanding of these processes therefore requires a strong grounding in the theoretical models while at the same time an awareness of the fundamentally changing context in which these models need to be positioned and interpreted. It is hoped that a good awareness of both the models and methods, along with the current global context, will help us best achieve the desired outcomes of public policy initiatives that contain urban and regional elements. This book aims to provide both this theoretical grounding and also a real awareness of the evolving global context. No other textbook dealing with urban or regional issues sets these squarely in today's global context, and no text on globalization deals explicitly with the analytics of cities and regions. This new version of the book is therefore genuinely new.

Why study urban and regional economics?

All economic phenomena take place within geographical space. Economic issues invariably involve either questions concerning the place specificity of particular activities, or alternatively, questions relating to the overcoming of space and geographical distance. For example, all commodities are traded at various market locations. However, in order to reach the appropriate market locations, goods have to be transported and delivered across space. Similarly, service activities take place at particular locations, and the knowledge and information required to carry out the activity must be transmitted or acquired across geographical space. In each case, the costs incurred in these spatial transactions will themselves partly determine the price and cost conditions at each market location. Yet the reasons why particular markets are located at particular places are also economic questions,

and as we will see in this book, the nature and behaviour of markets depend somewhat on their location. Market performance therefore partly depends on geography. At the same time, the economic performance of a particular area also depends on the nature and performance of the various markets located within the area. Acknowledging that geography plays a role in determining economic behaviour, many discussions about the performance of particular local, urban, or regional economies are, in fact, fundamentally questions about the relationships between geography and the economy. Geography and economics are usually interrelated issues.

For many years before the 1990s, spatial questions were all too often ignored by economists and economic policy-makers. This is partly a problem of education. In most textbook discussions, the whole economic system is assumed to take place on a pinhead (Isard 1965). While for a long time there have been many urban economists, regional scientists, and economic geographers who have been explicitly concerned with spatial economic phenomena, for many years the majority of geographical issues were subsumed by Ricardian theories of comparative advantage and international trade. In the post-war Bretton Woods world of relatively closed economies and currency convertibility restrictions, such assumptions may have appeared to many economists to be acceptable. However, in the modern era of free trade areas such as the North American Free Trade Agreement (NAFTA), new information and communications technologies, currency convertibility, the EU Single Market and the euro, rapidly increasing capital and labour mobility, and the enormous city-region growth of the newly emerging BRIICS countries of Brazil, Russia, India, Indonesia, China and South Africa, many of these traditional assumptions can no longer be justified. These recent developments have highlighted the fact that competition between regions is often more important and more complex than competition between individual countries. Indeed, much international competition is actually dominated by competition between particular regions in different countries, rather than between whole countries. In each of these cases, the nature of the sub-national and super-national competitive relationships between various regions depends on the spatial distribution of industrial activities. Geography is an essential element of the economic system, and the economics of urban and regional behaviour are just as important as that of national behaviour. The role of geography in the economy and the importance of the regional economic behaviour provide the motivation and justification for studying urban and regional economics.

Since the early 1990s there has been an enormous increase in interest in spatial economic questions within the world of academic research and public policy-making. Testament to this comes from highly influential work on urban and regional issues undertaken during recent years by the World Bank, the OECD, the European Commission, and the United Nations, as well as the major changes in policy-thinking in many countries regarding the critical role in growth played by cities and regions. In part, this has been because of the new institutional and technological developments mentioned above, which have highlighted the need for explicit considerations of space in economic discussions. The writings of Paul Krugman and Michael Porter, among others, have also brought the importance of spatial economic issues to the attention of wider audiences within the international economics, business and management fields. The work of these authors has led to significant developments in our understanding of the relationships between space and the economy. However, there is a long and broad tradition of spatial economic analysis, the origins of which pre-date both of these authors. Building on the original seminal works of authors discussed in this book, a huge number of authors have subsequently provided many fundamental insights into the complex nature of the relationships between geography and space. A consideration of these insights and the analytical techniques thereby

developed is essential in order to provide a comprehensive understanding of the nature and workings of the modern spatial economy.

Traditionally spatial economic analysis has broadly been split into two sub-fields, namely urban economics and regional economics. These are by no means mutually exclusive categories and many analyses will fall into both categories. The distinction between these two categories has arisen as a result of asking slightly different questions. Urban economics, by definition, is generally concerned with asking questions about the nature and workings of the economy of the city. As such, the models and techniques developed within this field are primarily designed to analyse phenomena that are confined within the limits of a single city. Regional economics, on the other hand, tends to ask questions related to larger spatial areas than single cities, and the models and analytical techniques developed generally reflect this broader spatial perspective. In essence, urban economics tends to emphasize issues or relationships operating primarily at a place, whereas regional economics tends to emphasize issues or relationships operating primarily between places. Moreover, the central questions of regional economics therefore focus on the reasons why individual spatial parts of the same country or of groups of adjacent countries behave differently to one another, whereas the central questions in urban economics tend to ignore areas which are primarily rural or primarily a mixture of smaller urban and rural localities. However, as we will see in this book, there are many issues which can be analysed within either field, such as questions relating to the locations of cities, the location of firms, or the migration behaviour of labour. In each urban or regional case, the choice of the appropriate analytical approach to adopt or the techniques to employ will in part be determined by the particular real-world context we are considering and the data that are available.

For the purposes of this book, an urban area is defined as a single continuous and contiguous area of urban development and built environment. The central questions of urban economics therefore focus on the workings of the individual city. The definition of a region is rather more complex, because areas can be defined as individual regions in terms of their topography, climate, economy, culture, or administrative structure. For the purposes of this book we define regions in terms of spatial units. A region is defined here as a spatial area that is larger than a single urban area, but that is different the spatial definition of a single nation. In general, we assume that regions are smaller than individual countries, but in this book we also explore the many cases where regions are larger than nations. For example, the spatial classifications of urban and regional areas adopted here are by no means definitive. For example, some individual urban areas such as Los Angeles and Tokyo can be regarded as major regions in their own right. At the same time, some regional areas cut across national boundaries. For example, the economy of Detroit and some parts of Western Ontario are largely the same regional economy. Similarly, the economy of Seattle can be considered to be broadly part of the same regional economy as Vancouver, British Columbia. Meanwhile, in Europe, the southern part of Netherlands can be regarded as being largely part of the same regional economy as parts of northern and eastern Belgium and the Nordrhein-Westfalen area of Germany. Furthermore, regions can also vary enormously either in geographical or population size. For example, the south-west region of the USA is the spatial size of the whole of Western Europe, while the Tokyo-Kanto regional population is larger than the whole population of Scandinavia.

Although many spatial economic topics can be analysed within either an urban or a regional economics framework, this is not to say that the spatial unit of analysis, whether it is a single city or a multi-city region, is an arbitrary choice. Some economic phenomena primarily affect localized individual urban areas, whereas the impacts of certain other economic phenomena are generally

felt over much larger regional areas. The appropriate geographical area of analysis will therefore depend on the nature and spatial extent of the economic phenomena. At the same time, regions and cities are both valid areas for economic analysis because economic policy is often implemented at these levels. Individual urban metropolitan governments have a role to play in determining transportation and land-use policies within the confines of the individual city, and some of the financing of such policies will be raised by local city taxation. The analysis of the impacts of such schemes must be made at the level of the individual urban area. Similarly, inter-urban transportation and land-use policies will have impacts on all the cities within a region. As such, the regions comprising the groups of cities become the appropriate areas of analysis, as the effects of such schemes may be rather different between the individual cities. As we will see in this book, the choice of the area of analysis will determine the models we employ and also how the results we generate are to be interpreted.

For analytical simplicity, in Chapters 1–7 of this book, which develop the various urban and regional economic models, we will therefore initially adopt the convention that regions are smaller than individual countries and larger than individual urban areas, with the additional assumption that a country is an area with a common currency and free internal capital and labour mobility. We then relax this assumption in Chapters 8–10 and allow for regions spanning national borders when we discuss the role of cities and regions in the modern era of globalization.

Aims and objectives of the book

The object of this book is to provide an integrated approach to urban and regional economics, such that students are able to understand the broad range of relationships between economics and geography. Through an appreciation of these relationships, students will come to understand the location-specific nature of many urban and regional economics issues. An understanding of the relationships between economics and geography will also better inform us of the long-run impacts of continuing economic integration across nations. This understanding will, in turn, it is hoped, encourage our future economic policy-makers to make explicit consideration of the geographical aspects of economic policies, irrespective of whether they are government or corporate decision-makers. In the modern era of rapid communications technologies, decreasing trade barriers, increasing international labour mobility and currency convergence, geography and economics must be discussed together. By adopting such an integrated approach, this book is somewhat different to many of the urban and regional economics undergraduate textbooks currently available. Urban economics books often tend to focus their discussions at the level of the individual urban area, with the object of their analysis being the urban land market. The explicitly spatial economic analysis generally takes place within the context of the individual urban area, and the analysis tends to be entirely microeconomic. The implications of the local urban economic phenomena for other cities and areas are often ignored. Regional economics texts, on the other hand, often tend to underplay the spatial aspects of economic behaviour, and instead adopt more of a macroeconomic approach to regional behaviour. Yet this approach ignores both the spatial microeconomic foundations of regional behaviour, and also the effects of urban economic behaviour on the wider regional economies. The logic of this book is therefore to overcome many of the limitations of existing textbooks by adopting both microeconomic and macroeconomic approaches to the discussions of both urban and regional economies, within an explicitly spatial framework.

This book is aimed specifically at intermediate-level students, such as third- or fourth-year undergraduates or first-year postgraduates. The book is also written as a textbook which is accessible to a wide range of students from economics, business and management, urban planning or geography. The only requirement in order for a student to read this book comfortably is that he/she must have taken introductory micro- and macroeconomics classes. All the material in the book is explained with the aid of numerous diagrams and tables, and each of the topics can be understood simply by reading the main text alone and following the diagrams carefully. For more advanced students, mathematical appendices to each chapter provide formal proofs of the key conclusions of each chapter. These appendices will be particularly appropriate for economics students or for postgraduate students of all disciplines studying urban and regional economics for the first time. The overall intention of this book is therefore to introduce the study of urban and regional economics to a wide range of students. Those students who continue on to postgraduate work will subsequently be equipped to read more advanced material. Alternatively, those students who progress into employment positions that involve economic analysis and decision-making will be better able to understand the spatial impacts of their decisions.

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 |

List of figures

| | | |
|----------------|---|----|
| 1.1 | Weber location-production triangle | 5 |
| 1.2 | Relative input transport costs and location | 8 |
| 1.3 | Relative output transport costs and location | 9 |
| 1.4 | Isodapane analysis | 10 |
| 1.5 | Distance-isodapane equilibrium labour prices | 12 |
| 1.6 | Interregional equilibrium wage gradient | 13 |
| 1.7 | New suppliers and new markets | 14 |
| 1.8 | Weber-Moses triangle | 17 |
| 1.9 | Budget constraints at the end points <i>I</i> and <i>J</i> | 17 |
| 1.10 | The envelope budget constraint | 18 |
| 1.11 | Location-production optimum | 19 |
| 1.12 | A change in the location-production optimum | 20 |
| 1.13 | Output changes and location-production behaviour | 21 |
| 1.14 | The independent of output optimum location solution | 22 |
| 1.15 | Spatial market areas: a one-dimensional model with equal transport rates | 24 |
| 1.16 | Spatial market areas: one-dimensional models with varying transport rates and production costs | 26 |
| 1.17 | The Hotelling location game | 27 |
| 1.18 | The welfare implications of the Hotelling result | 28 |
| 1.19 | The effect of price competition on the Hotelling result | 29 |
| 1.20 | Monopoly region Salop model | 33 |
| 1.21 | Competitive region Salop model | 33 |
| A.1.1.1 | One-dimensional location problem with constant transport rates | 37 |
| A.1.1.2 | One-dimensional location problem with increasing transport rates | 39 |
| A.1.1.3 | One-dimensional location problem with decreasing transport rates | 39 |
| A.1.1.4 | One-dimensional location problems with terminal costs and linear transport rates | 40 |
| A.1.1.5 | One-dimensional location problems with terminal costs and falling transport rates | 40 |
| A.1.1.6 | One-dimensional location problems with terminal costs and increasing and decreasing transport rates | 41 |
| A.1.3.1 | Logistics-costs optimum location and value-added by the firm | 45 |
| A.1.3.2 | Interregional equilibrium wage gradient associated with logistics costs | 46 |
| A.1.4.1 | The Hotelling spatial framework | 47 |
| 2.1 | Profit maximizing, revenue maximizing, and profit satisficing | 67 |
| 2.2 | Spatial cost and revenue curves | 68 |
| 3.1 | The spatial and hierarchical organization of the urban system | 80 |
| 3.2 | The Christaller model of the urban system | 81 |
| 3.3 | The firm's demand schedule in the Löschian framework | 83 |
| 3.4 | The firm's market area in the Löschian framework | 83 |
| 3.5 | The firm's market area with spatial competition | 84 |
| 3.6 | The spatial distribution of the markets of identical firms | 84 |