

## ECONOMIC GEOGRAPHY

A CONTEMPORARY INTRODUCTION 2ND EDITION

Neil M. Coe ♦ Philip F. Kelly ♦ Henry W.C. Yeung

## **ECONOMIC GEOGRAPHY**

## **ECONOMIC GEOGRAPHY**

## A Contemporary Introduction

**Second Edition** 

Neil M. Coe, Philip F. Kelly and Henry W.C. Yeung



Jay O'Callaghan VP & EXECUTIVE PUBLISHER: EXECUTIVE EDITOR Ryan Flahive Julia Nollen **EDITORIAL ASSISTANT:** Margaret Barrett MARKETING MANAGER: PHOTO EDITOR: Sheena Goldstein DESIGNER: Kenji Ngieng SENIOR PRODUCTION MANAGER: Janis Soo ASSOCIATE PRODUCTION MANAGER: Joyce Poh

COVER PHOTO: Adnan/Age Fotostock America, Inc.

This book was set by Laserwords Private Limited. Cover and text printed and bound by Courier Kendallville.

This book is printed on acid free paper.

Founded in 1807, John Wiley & Sons, Inc. has been a valued source of knowledge and understanding for more than 200 years, helping people around the world meet their needs and fulfill their aspirations. Our company is built on a foundation of principles that include responsibility to the communities we serve and where we live and work. In 2008, we launched a Corporate Citizenship Initiative, a global effort to address the environmental, social, economic, and ethical challenges we face in our business. Among the issues we are addressing are carbon impact, paper specifications and procurement, ethical conduct within our business and among our vendors, and community and charitable support. For more information, please visit our website: www.wiley.com/go/citizenship.

Copyright © 2013, 2007 John Wiley & Sons, Inc. All rights reserved. No part of this publication may be reproduced, stored in a retrieval system or transmitted in any form or by any means, electronic, mechanical, photocopying, recording, scanning or otherwise, except as permitted under Sections 107 or 108 of the 1976 United States Copyright Act, without either the prior written permission of the Publisher, or authorization through payment of the appropriate per-copy fee to the Copyright Clearance Center, Inc. 222 Rosewood Drive, Danvers, MA 01923, website www.copyright.com. Requests to the Publisher for permission should be addressed to the Permissions Department, John Wiley & Sons, Inc., 111 River Street, Hoboken, NJ 07030-5774, (201)748-6011, fax (201)748-6008, website http://www.wiley.com/go/permissions.

Evaluation copies are provided to qualified academics and professionals for review purposes only, for use in their courses during the next academic year. These copies are licensed and may not be sold or transferred to a third party. Upon completion of the review period, please return the evaluation copy to Wiley. Return instructions and a free of charge return mailing label are available at www.wiley.com/go/returnlabel. If you have chosen to adopt this textbook for use in your course, please accept this book as your complimentary desk copy. Outside of the United States, please contact your local sales representative.

#### Library of Congress Cataloging-in-Publication Data

```
Coe, Neil M.

Economic geography: a contemporary introduction / Neil M. Coe,
Philip F. Kelly, Henry W.C. Yeung. – 2nd ed.
p. cm.
Includes index.
ISBN 978-0-470-94338-0 (pbk.)
1. Economic geography. 2. Economic development. I. Kelly, Philip F., 1970-
II. Yeung, Henry Wai-Chung. III. Title.
HF1025.C73 2012
330.9 – dc23
```

20120

Printed in the United States of America

 $10\; 9\; 8\; 7\; 6\; 5\; 4\; 3\; 2\; 1$ 

## **CONTENTS**

List of Figures	xi
List of Tables	XV
List of Boxes	xvii
Preface	XX
Acknowledgements	xxvi
Part I Conceptual Foundations	1
1 Thinking Geographically	3
2 The Economy: What Does It Mean?	27
3 Capitalism In Motion: Why Is Economic Growth So Uneven?	55
Part II Making the (Spatial) Economy	81
4 The State: Who Runs The Economy?	83
5 Environment/Economy: Can Nature Be A Commodity?	123
6 Labor Power: Can Workers Shape Economic Geographies?	154
7 Making Money: Why Has Finance Become So Powerful?	187
Part III Organizing Economic Space	221
8 Commodity Chains: Where Does Your Breakfast Come From?	223
9 Technological Change: Is The World Getting Smaller?	261
10 The Transnational Corporation: How Does The Global Firm Keep It	
All Together?	294
11 Spaces of Calo, How And Whore Do We Shop?	222

vi CONTENTS

Part IV People, Identities, And Economic Life	369
12 Clusters: Why Do Proximity And Place Matter?	371
13 Gendered Economies: Does Gender Shape Economic Lives?	402
14 Ethnic Economies: Do Cultures Have Economies?	432
15 Consumption: You Are What You Buy	466
Part V Conclusion	497
16 Economic Geography: Intellectual Journeys And Future Horizons	499
Index	521

## **DETAILED CONTENTS**

List	of Fi	gures	xi
List	of Ta	ables	XV
List	of Bo	oxes	xvii
Pref	ace		XX
Ack	nowl	edgements	xxvi
Part	ı I	Conceptual Foundations	1
1	Thin	king Geographically	3
	1.1	Introduction	3
	1.2	Location and Distance	6
	1.3	Territory	12
	1.4	Place	14
	1.5	Scale	17
	1.6	Summary	23
2	The	Economy: What Does It Mean?	27
	2.1	Introduction	27
	2.2	The Taken-for-Granted Economy	29
	2.3	A Brief History of "the Economy"	30
	2.4	Basic Economic Processes	38
	2.5	Beyond the Assumptions of Economics	43
	2.6	Summary	50
3	Capi	talism In Motion: Why Is Economic Growth So Uneven?	55
	3.1	Introduction	55
	3.2	Uneven Development - Naturally!	57
	3.3	Fundamentals of the Capitalist System	58
	3.4	Inherent Uneven Geographies of Capitalism	64
	3.5	Placing and Scaling Capitalism	67

	3.6	Going Beyond National Capitalism: A "Global California"?	72
	3.7	Summary	76
Part	: II	Making the (Spatial) Economy	81
4	The	State: Who Runs The Economy?	83
	4.1	Introduction	83
	4.2	The "Globalization Excuse" and the End of the State?	86
	4.3	The State as the Architect of the National Economy	88
	4.4	Varieties of States	100
	4.5	Rescaling the State	108
	4.6	Hollowing-Out the State?	117
	4.7	Summary	119
5	Env	ironment/Economy: Can Nature Be A Commodity?	123
	5.1	Introduction	123
	5.2	How Is Nature Counted in Economic Thought?	126
	5.3	1 0	128
	5.4	Valuing Nature: The Commodification of Environmental	
		Protection	141
	5.5	Human Nature: The Body as Commodity	146
	5.6	Summary	150
6		or Power: Can Workers Shape Economic Geographies?	154
	6.1	Introduction	154
	6.2	Is Labor at the Mercy of Globally Mobile Capital?	157
	6.3	Geographies of Labor: Who Shapes Labor Markets?	159
	6.4	Labor Geographies: Workers as Agents of Change	170
	6.5	Migrant Labor	177
	6.6	Beyond Capital versus Labor: Toward Alternative Ways of Working?	180
	6.7	Summary	183
		·	
7		king Money: Why Has Finance Become So Powerful?	187
	7.1	Introduction	187
	7.2	Is Global Finance Placeless?	191
	7.3	Financing Production: The Evolution of Banking	193
	7.4	The Rise of Global Finance	201
	7.5	Circulating Capital: Financialization	211
	7.6	Summary	216
Part	III	Organizing Economic Space	221
8	Cor	nmodity Chains: Where Does Your Breakfast Come From?	223
	8.1	Introduction	223

	8.2	Capitalism, Commodities, and Consumers	225
	8.3	Linking Producers and Consumers: The Commodity	
		Chain Approach	229
	8.4	Re-regulating Commodity Chains: The World of Standards	244
	8.5	Where Does a Commodity Chain End? From Waste	
		to Commodities Again	255
	8.6	Summary	256
9	Tech	nological Change: Is The World Getting Smaller?	261
	9.1	Introduction	261
	9.2	The Universalization of Technology?	263
	9.3	The Space-Shrinking Technologies	266
	9.4	Product and Process Technologies	278
	9.5	The Uneven Geography of Technology Creation	288
	9.6	Summary	290
10		Transnational Corporation: How Does The Global Firm Keep It	
		ogether?	294
		Introduction	294
		The Myth of Being Everywhere, Effortlessly	296
	10.3	Value Activity and Production Networks: The Basic	
		Building Blocks of TNCs	298
	10.4	Organizing Transnational Economic Activities 1: Intra-firm Relationships	302
	10.5	Organizing Transnational Economic Activities 2:	002
	10.0	Inter-firm Relationships	312
	10.6	Are There Cultural Limits to Global Reach?	324
	10.7		329
11	Space	es of Sale: How And Where Do We Shop?	333
		Introduction	333
	11.2	Explaining Retail Geographies: Central Place	
		Theory and Beyond	335
	11.3	The Shifting Geographies of Retailing	338
	11.4	The Configuration of Retail Spaces	353
	11.5	Constructing Needs and Desires: The Advertising Industry	361
	11.6	Summary	365
Par	t IV	People, Identities, And Economic Life	369
12	Clust	ers: Why Do Proximity And Place Matter?	371
	12.1	Introduction	371
	12.2	Industrial Location Theory	373
	12.3	Binding Clusters Together: Agglomeration Economies	376

	12.4	Untraded Interdependencies and Regional	
		Cultures of Production	380
		Toward a Typology of Clusters?	389
		Rethinking Proximity	391
	12.7	Summary	398
13		ered Economies: Does Gender Shape Economic Lives?	402
	13.1	Introduction	402
	13.2	Seeing Gender in the Economy	404
	13.3	Gendered Patterns of Unpaid Work	406
		Gendering Jobs and Workplaces	410
		Home, Work, and Space in the Labor Market	422
		Entrepreneurship and Livelihood Strategies	423
		Toward a Feminist Economic Geography?	426
	13.8	Summary	428
14	Ethni	c Economies: Do Cultures Have Economies?	432
	14.1	Introduction	432
		"Color Blind" Economics	434
	14.3	Ethnic Sorting in the Workforce	436
	14.4	Ethnic Businesses and Clusters	445
	14.5	The Economic Geographies of Transnationalism	453
	14.6	The Limits to Ethnicity	460
	14.7	Summary	462
15	Cons	umption: You Are What You Buy	466
	15.1	Introduction	466
	15.2	Interpreting the Consumption Process	468
	15.3	The Changing Global Consumption Landscape	471
		Cultures of Consumption, Place, and Identity	476
	15.5	Toward an Ethical Consumption Politics?	484
	15.6	Consuming Places: Travel and Tourism	487
	15.7	Summary	493
Par	t V	Conclusion	497
16	Econo	omic Geography: Intellectual Journeys And Future Horizons	499
	16.1	Introduction	499
	16.2	A Changing Field	501
	16.3	A Changing World	513
	16.4		517
Ind	ex		521

## LIST OF FIGURES

1.1	Facebook – the transcendence of geographical distance?	4
1.2	Von Thünen's idealized model of land use	9
1.3	The Facebook friend map – global intensities of Facebook	
	friend relationships, 2010	13
1.4	Spatial scales	19
1.5	Facebook's data center in Prineville, and an extension facility	
	under construction	20
1.6	The location of Prineville, Oregon	21
1.7	Space, territory, place, and scale	24
2.1	The economy as an organic entity	29
2.2	The components of Gross Domestic Product	31
2.3	Irving Fisher's lecture hall apparatus, simulating the economy,	
	ca 1925	35
2.4	The supply and demand curves	39
2.5	Many consumers, many sellers in the Tsukiji Fish Market,	
	Tokyo – but a perfectly competitive market is hard to find	40
2.6	The circuit of global financial centers in the Islamic	
	banking system	45
2.7	The economic iceberg and the submerged non-economy	47
2.8	Air pollution in China	48
3.1	A landscape of contemporary capitalism: an industrial	
	park in Suzhou, China	64
3.2	Spatial divisions of labor	66
3.3	Waves of industrialization in East, Southeast, and South Asia,	
	1950-present	69
3.4	Industrial restructuring during the 1970s in the United States	70
3.5	Redundant industrial landscape in urban Philadelphia, U.S.	71

3.6	Galleries and apartments now occupy 19th-century industrial	
	infrastructure in Liverpool, England	72
4.1	The border crossing between China's Shenzhen and Hong Kong's	
	Lo Wu	91
4.2		97
4.3	Institutions of global governance?	
	(a) The IMF, 700 19th Street, Washington, D.C.	
	(b) The World Bank, 1818 H Street, Washington, D.C.	109
4.4	Map of the G20 countries	112
4.5	The second G20 leaders' summit, London, April 2009	113
4.6	The expansion of the European Union since 1957	115
5.1	The Deepwater Horizon oil rig, April 2010	124
5.2	The economy as a system of material flows	130
5.3	The Rosia Poieni Copper Mine in Romania	131
5.4	The oil sands of Alberta, Canada	133
5.5	Grain wagons operated by the federal and provincial	
	governments in Canada	134
5.6	Shifting cultivation of glutinous rice in Khammouane	
	Province, Laos	136
5.7	Modes of urban water supply provision	140
6.1	Labor control regimes in Southeast Asia	169
6.2	Worker dormitories in Batam, Indonesia	169
6.3	The Toronto-Windsor corridor of auto assemblers, 2012	172
6.4	The Ford plant in Oakville, Ontario, flying the flags of Canada,	
	Ford, and the CAW	173
7.1	Global finance gone mad in 2007–2008, from Wisconsin	
	and Toronto to Dublin, the Cayman Islands, and Germany	188
7.2	Concentration and consolidation in the U.S. banking	
	sector, 1998–2009	199
7.3	Relative importance of different types of global capital	
	inflows since the 1980s (percent of total)	202
7.4	The global network of financial centers and global cities	208
7.5	The Occupy Wall Street movement in New York City	210
7.6	Global finance and the shifting relationship with local	
	mortgage lending	213
8.1	The jewelry shop window – the start or the end	
	of a complex commodity chain?	228
8.2	Geography is a flavor	229
8.3	The basic commodity chain of our breakfast	229
8.4	The coffee commodity chain: who gains most?	231
8.5	The catfish commodity chain	232
8.6	Producer-driven and buyer-driven commodity chains	235

	(imports) countries, 2009	242
8.8	The coffee commodity chain: the changing institutional	
	framework	243
8.9	The regulation of the dolphin-safe tuna packaging industry	
	by nongovernmental organizations	247
9.1	Kondratiev long waves and their characteristics	266
9.2	The top 30 cargo airports in 2009	267
9.3	The top 30 container ports in 2009	268
9.4	Interregional internet bandwidth, 2005 and 2010	272
9.5	Dell's global operations, mid-2009	284
9.6	Industrial districts in Italy	286
9.7	Location of Toyota Motors, large-parts suppliers and	
	third-party logistics providers around Toyota City in 2006	287
10.1	Different forms of organizing transnational operations	305
10.2	The BMW headquarter office in Munich, Germany	305
10.3	BMW's global production networks	306
10.4	Geographies of transnational production units	307
10.5	Making a BMW: Munich and beyond	311
10.6	Apple iPhone 3G: its components and key suppliers	313
10.7	The automotive cluster, Rayong Province, southern Thailand	319
10.8	Fast-food chains in the Caribbean	323
10.9	"Chamber of Fear" and the cultural limits to global reach:	
	China's ban on a Nike television commercial in	
	December 2004	328
11.1	Christaller's hexagonal central place theory pattern	336
11.2	The global distribution of Tesco and Wal-Mart stores in 2011	340
	Tesco Lotus in Thailand	343
11.4	The development of Chicago's suburban shopping centers,	
	1949–1974	346
	Britain's largest shopping centers, 2011	348
	Cheshire Oaks outlet mall	349
	Akihabara – Tokyo's electronics shopping district	354
11.8	Different retail streetscapes in Manchester.	
	(a) The Avenue, Spinningfields	
	(b) Market Street	
	(c) The Northern Quarter	355
	Vegetable market in L'Isle sur la Sorgue, Provence, France	359
	WPP group's organizational structure	364
12.1	Venture capitalists on Silicon Valley's Sand Hill Road	372
12.2	Weber's industrial location theory	375
12.3	The Hollywood film production cluster: location of production	
	companies and major studios	378

12.4	Schematic representation of the Hollywood film production	
	agglomeration in Los Angeles	379
12.5	Motorsport Valley in the United Kingdom, late 1990s	383
12.6	Silicon Valley and Route 128 corridor, United States	386
12.7	Fusionopolis and one-north, Singapore	387
12.8	A multifaceted cluster? High-tech business in Silicon Valley,	
	California	391
12.9	Local "buzz" and global pipelines	396
12.10	Temporary clusters?	396
13.1	Main categories of unpaid work in various countries, ranked	
	according to time spent on unpaid work (in minutes per day)	407
13.2	Minutes spent on unpaid work per day in various countries,	
	ranked according to male-female disparity	408
13.3	Female labor force participation in selected countries,	
	1980 and 2009	411
13.4	Women wait for their shift to start at an Indonesian	
	electronics factory	412
13.5	Flight attendants: feminine work that becomes part	
	of the product	418
13.6	Women and children gathering resources in mangrove forest	
	areas of Aklan Province, the Philippines	425
14.1	Population of Urumqi in China's Xinjiang autonomous	
	region by ethnicity and district, 2009	440
14.2	Geography of Chinese immigrants in the San Francisco	
	Consolidated Metropolitan Statistical Area, by type	
	of concentration pattern	443
14.3	Singapore's Little India	445
14.4	Ethnic businesses on San Francisco Street, Bilbao, Spain	446
14.5	How does ethnicity matter in the formation of business	
	clusters and markets?	450
14.6	Chicago's Andersonville	451
14.7	Remittances into the Philippines by top 10 source countries,	
	January-November 2011	456
15.1	A consumption landscape - The Strip, Las Vegas, Nevada	470
15.2	Tata's Nano car	475
15.3	Real (on the left) and fake (on the right) iPhones available	
	in the Chinese market	476
15.4	Hybrid cultures? Bollywood dancing outside the National	
	Gallery, London	482
15.5	Poster for "Buy Nothing Day"	485
15.6	World tourist flows, 2010	489
15.7	Culture-led redevelopment – the waterfront in Bilbao, Spain	491
15.8	Reclaimed industrial heritage - Legoland in Duisburg, Germany	491
15.9	Magical Kenya	493

## LIST OF TABLES

4.1	World's twelve largest sovereign wealth funds in 2010	
	(US\$ billion)	96
4.2	Varieties of states in the global economy	101
4.3	Major regional economic blocs in the global economy	114
6.1	The world's biggest employers, 2010	161
6.2	Different national labor conditions: two ideal types	165
7.1	The changing regimes of financial regulation in the	
	global economy	204
7.2	Shanghai's position in global financial markets, 2008–2009	
	(in US\$ billion)	210
8.1	Characteristics of producer-driven and buyer-driven chains	237
8.2	The world of standards	245
8.3	Certification schemes for sustainable coffee	252
8.4	Regional share of ISO9001:2000/2008 certificates	
	(December 2009)	253
9.1	Expansion of submarine cable capacity, 1979–2005	270
9.2	Leading logistical providers – key facts and figures in 2008	277
9.3	Comparing contemporary production systems	282
	The characteristics of "just-in-case" and "just-in-time" systems	283
10.1	Non-Equity Modes (NEMs) of cross-border activity by	
	TNCs in selected industries, 2010 (in billions of dollars and	
	millions of employees)	314
10.2	Subcontracting of the world's top notebook brand-name	
	companies to Taiwanese firms, 2010	315
10.3	Different forms of organizing transnational operations – costs	
	and benefits	325
11.1	Leading transnational retailers, ranked by sales outside	
	home market, 2010	339

#### LIST OF TABLES

11.2	Top grocery retailers in Poland, 2010	341
11.3	Top grocery retailers in Thailand, 2010	342
11.4	The leading global communications groups and their	
	advertising agencies	363
13.1	Contrasting views on the emancipatory potential of industrial	
	employment for women	413
13.2	Top 10 occupations of women employed in the United States,	
	ages 16 and over, 2010	416
14.1	Distribution of ethno-racial groups in various occupations,	
	Los Angeles, 2009	438
14.2	The two sides of ethnic enterprise	452
14.3	Top twenty remittance-receiving countries in 2010	455
15.1	Asia's burgeoning middle class?	472
15.2	Mass consumption and post-Fordist consumption compared	477
15.3	International tourism receipts and expenditure – top 10	
	countries in 2010	489

## LIST OF BOXES

1.1	J. von Thünen, land use, and bid-rent curves	8
1.2	Paul Krugman and geographical economics	10
1.3	Why Prineville?	20
2.1	Metaphors of economy	34
2.2	Divisions of labor	42
2.3	The place of markets	51
3.1	Regulation theory	63
3.2	Sustaining the global capitalist system: geopolitics and domination	74
4.1	Unpacking the state	85
4.2	BHP Billiton's failed bid to buy PotashCorp	93
4.3	National business systems	99
4.4	Neoliberalism	102
4.5	Graduated sovereignty?	106
4.6	Shock therapy	110
5.1	Evaluating nature through the ecosystem services approach	129
5.2	Primitive accumulation and accumulation by dispossession	138
5.3	A global land grab?	139
5.4	Actor-Network Theory (ANT)	147
5.5	Selling cells	149
6.1	Chicago's prisons as labor market institutions	162
6.2	The temporary staffing industry	163
6.3	Lean production	166
6.4	Local labor control regimes	167
6.5	The Mondragon Cooperative Corporation	182
7.1	A glossary of common financial terms	189
7.2	Why did Citi expand beyond the United States?	196

#### LIST OF BOXES

7.3	Global cities	207	
7.4	The Cayman Islands as an Offshore Financial Center (OFC)	212	
7.5	Subprime and the crisis of global finance in 2008/2009		
8.1	Coffee, Cafés, and Connections	226	
8.2	Upgrading strategies in global commodity chains	233	
8.3	Trading giants - the Japanese Sogo Shosha	238	
8.4	Environmental certification of the dolphin-safe tuna		
	commodity chain	246	
8.5	The limits to standards?	254	
9.1	The Box	269	
9.2	Offshore Services in India	274	
9.3	Fordism – More than a Production System?	281	
9.4	Production Process Innovation: The Case of Dell Computer	284	
10.1	From commodity chains to Global Production		
	Networks (GPNs)?	298	
10.2	Corporate cultures	302	
10.3	Transnational production in the maquiladoras of		
	northern Mexico	309	
10.4	Transnational corporations and the new international		
	division of labor	317	
10.5	Global production networks and macro-regional integration		
	in Southeast Asia	319	
10.6	Transnational corporations and anti-globalization movements	326	
11.1	Success and failure in global retailing	344	
11.2	Asos – online clothing retailer	352	
11.3	Geographies of branding	362	
12.1	The creative class and spatial clustering	381	
12.2	High-tech clusters in Asia	387	
12.3	Clusters – the mesmerizing mantra?	392	
12.4	Project working	395	
13.1	Patriarchy	409	
13.2	Devaluing the third world woman	414	
13.3	Theories of labor market segmentation	417	
13.4	Redundant masculinities	421	
13.5	A queer Economic Geography?	427	
14.1	What is Ethnicity?	436	
14.2	Ontario's South Korean convenience stores	447	
14.3	Transnationalism	454	
14.4	Ethnic Turks in Germany	458	
15.1	Viva Las Vegas!	469	
15.2	Bottom of Pyramid markets	474	

	LIST OF BOXES	xix
15.3	Consumption work	478
15.4	Bourdieu's cultural capital	480
15.5	McDonald's in Asia	483
15.6	The world's biggest industry?	488
16.1	Ontology, Epistemology, and Methodology	502
16.2	The "Cultural Turn" in Economic Geography	507
16.3	What is discourse?	509
16.4	Economic Geography beyond the Anglosphere	511

#### **PREFACE**

When the first edition of this book was published in 2007, there was a dearth of material available for students that reflected the contemporary state of economic geography. Since then, some excellent volumes have appeared, but we believe that the model developed for this textbook remains distinctive in several ways and we have retained these features in this second edition:

- First, the book is structured on the basis of topical issues that are tackled using
  a geographical perspective, rather than on the basis of intellectual history or
  academic debates. We believe this is still the best way to engage students,
  many of whom come to our courses with a curiosity about the world around
  them, but not necessarily a commitment to Geography as a discipline, or any
  prior knowledge of the field.
- Second, the book is written in what we hope is a clear and engaging style. For many students Economic Geography is not a field with a great deal of immediate appeal, but we have tried to present it in an accessible and interesting way. To avoid overcrowding the text and reading, we use only sufficient data and facts to support our arguments and explanations.
- Third, although this is not a book about the global economy *per se*, we have made a deliberate effort to ensure that it addresses the major issues confronting the global economy today and it draws examples from around the world, reflecting the varied contexts in which the book is used. As such, we make no distinction between Economic Geography and the often-separate subfield of 'Development Geography'.
- Fourth, the book reflects the range of topical and theoretical approaches that exist in contemporary Economic Geography. Instructors will recognize that political–economic and institutional approaches underpin much of the book, but at the same time post-structural thinking and efforts to explore the economic implications of culture and identity are also taken seriously.

PREFACE xxi

In short, this book aims to present a conceptually rich and yet readable introduction to the field of Economic Geography that showcases the different ways through which economic geographers understand economic processes. It is designed to appeal to students who are coming to Economic Geography for the first time, while also offering depth to those more familiar with the field.

#### Changes in the second edition

In writing the first edition, we were conscious of the need to avoid publishing a book that was 'of the moment' – in other words, a compendium of contemporary economic patterns that would be outdated as soon as it was published. We opted instead for a pedagogical model that was based on developing geographical arguments about the empirical issues at hand. These were substantiated with data, but the arguments, we believed, would outlast the data. Eventually, however, the ongoing dynamic of change in economic processes, and the shifting directions of scholarship in Economic Geography, mean that both topics and arguments need to be revisited. In this second edition we have made a number of changes to reflect our changing times.

- An entirely new chapter on finance has been added. Although we have consciously avoided structuring the book around a list of economic sectors, we believe that the global financial system today represents not just a sector in its own right but also an essential input to all other economic activities. As the financial crisis of 2007–09 demonstrated for North American and European economies (and the earlier crisis of 1997–98 demonstrated for East Asia), a clearer understanding of how the financial system works and how it is integrated with the rest of the economy must now be central to the study of Economic Geography.
- Four new chapters replace parts of chapters in the first edition. The new chapters relate to Technology, Retail, Clusters, and Consumption. This allows us: (a) to tackle influential ideas concerning innovation and economic clusters in far more detail; (b) to examine closely the changing geographies of retail activity that now account for such a large proportion of employment and value-added in many economies; and (c) to explore issues of consumption in more detail, including the consumption of places through tourism a sector that was largely missing in the first edition.
- Chapter 1 introduces geographical concepts of location, territory, place, and scale in an entirely new way, and using an example that is literally at the fingertips of every student: Facebook.
- The first edition of the book was vigorous in its critique of approaches in Economics, which were sometimes presented in rather caricatured form. In this edition, we have avoided adversarial confrontation of this kind, preferring instead to focus on the positive appeal of a geographical approach. At the same

xxii PREFACE

- time, we have sought in Chapter 2 to provide more coverage of fundamental economic concepts so that students will be equipped with the vocabulary necessary to understand the different approaches offered by Geography and Economics.
- Although, as noted above, we generally avoid mapping out disciplinary issues, this edition features a new concluding chapter that will help students understand how the material they have read fits into the context of Economic Geography as an academic field. This is targeted especially at those intending to pursue higher-level studies in the field and who want to know how approaches in Economic Geography correspond with wider intellectual trends in Geography as a whole.
- Finally, data, examples, and references have been extensively updated throughout. In both developed and developing countries the last five years have seen turbulent economic upheavals and structural shifts of various kinds. It is, in some respects, a different economic world. Where relevant, we have reflected this in the data and examples presented. Economic Geography has also moved ahead intellectually, and we have tried to incorporate this as well.

#### Audience

The book is designed for introductory courses on Economic Geography in an undergraduate degree programme. The text is written in an accessible way, but some of the processes and ideas that it discusses are inevitably complicated. The ways in which the text is used will therefore depend on instructors' assessments of their students' background and preparation. Students who already have some familiarity with the concepts and arguments presented in this book could likely use the chapters as their starting point for further exploration of a given topic through articles from the research literature in Economic Geography, including those suggested in the reading notes for each chapter. But for those with little background in Geography, or even in the social sciences in general, the chapters in this book might be better approached through an initial reading pitched at a popular audience, from a news magazine or website. In other words, the chapters in this book may be the starting point or the end point, depending on the students involved. The book is designed so that it could serve either purpose.

While the pitch of this book is intended for a particular audience, it is also worth noting that a specific conception of what constitutes Economic Geography is implicit in our selection and treatment of topics. The text is therefore targeted to those instructors who share, or wish to adopt, this approach. A few points are worth making in this regard:

First, this is a book that explores the multiple scales of economic processes
and is not, therefore, focused exclusively on larger processes at global or
national scales. For example, we believe that Economic Geography has as
much to contribute in thinking about how gender roles in the household play

PREFACE xxiii

out within the spaces of the urban labour market, as it does in understanding the globalizing organizational forms of transnational corporations (and so we cover both).

- Second, ours is a largely qualitative vision of the field, in the sense that we do not emphasize formal analytical techniques in the book. Rather than providing exercises in quantitative analysis, we focus instead on stimulating students with critical perspectives and arguments. For example, in thinking about ethnically-structured labour markets, we are more interested in inviting students to think about the processes that lie behind such phenomena than in explaining how to demonstrate statistically that such patterns exist. That said, statistical exercises can, of course, be used as supplementary assignments alongside this text.
- Third, we focus on what we see as some of the best of recent scholarship in Economic Geography. Although classic models and approaches are covered, our goal is to expose students to the insights that *contemporary* Economic Geography can provide in making sense of the world around them. We tend, therefore, to cover locational analysis and other classical approaches in detailed boxes rather than the main text.
- Fourth, we do not seek to establish impervious boundaries between Economic Geography and other cognate fields concerned with social, cultural and political processes. Our vision of the discipline is a porous one and we take seriously the need to view the economy as embedded in other spheres of life. For example, we see consumption not 'just' as an economic act, but also a political engagement through fair trade and other certified products, and as a component of identity formation. In this sense, the book is very much in tune with what geographers have called the 'new economic geography' (not to be confused with the approaches in Economics that are often given the same label). The audience for this book is, then, among those who share this ecumenical vision of Economic Geography.

#### Organization of the book

This book takes the form of a series of linked chapters on topical issues and contemporary debates that draw upon, and showcase, some of the best research in Economic Geography. These issues are drawn from contemporary economic life, which is increasingly constituted at a global scale – from uneven development, space-shrinking technologies, and environmental degradation, to powerful global corporations, organized labour, and ethnic economies. We see each of these as issues rather than just phenomena, i.e. they are processes to be debated rather than factual realities to be described. Each chapter thus seeks to answer a significant contemporary question that a curious and well-informed reader might reasonably be expected to ask about the world around them.

This, then, is not a conventional text: our aim is to develop well-grounded arguments from an economic geography perspective, not necessarily to present simplifications of multiple viewpoints or collections of facts and data. We are,

xxiv PREFACE

however, trying to develop these arguments in straightforward and accessible ways.

The book is organized into four parts:

Part 1: Conceptual Foundations – This section introduces the basic building blocks of geographical analysis and our understanding of the economy. These are brought together in a geographical understanding of the dynamics of the capitalist system. Chapter 1 examines location, territory, place, and scale as core geographical concepts, while Chapter 2 explores where the idea of 'the economy' comes from historically and some of the common concepts used in economic analysis such as demand, supply, production, markets, and firms. Chapter 3 then mobilizes these geographical and economic concepts into a dynamic and structural account of uneven development in a capitalist economy.

Part 2: Making the (Spatial) Economy – having explained the dynamics of capitalism, here we introduce the inputs and actors, besides capitalists, that make the system work: the state, nature, labour, and finance capital. Chapter 4 discusses the state in its varied manifestations and the ways in which it shapes economic activity. Nature is examined, in Chapter 5, as an input to the economy through processes of commodification. Chapter 6 considers labour as a factor of production, but more particularly as an active agent in shaping the economic landscape. Chapter 7 looks at the financial system both as a source of productive capital and an economic sector in its own right.

Part 3: Organizing Economic Space – here we explore the ways in which economic relationships across space are established, organized and maintained. Chapter 8 introduces the commodity chain concept, which provides the overall framework for this part of the book, and we will ask how we might seek to regulate and control the production processes behind the commodities we consume. The commodity chain is fundamentally shaped by technologies of movement, communication and product innovation that are examined in Chapter 9. The role of transnational corporations in organizing global production networks is explored in Chapter 10, while Chapter 11 focuses on restructuring in the retail business as the end point of the commodity chain.

Part 4: People, Identities, and Economic Life – The final part of the book explores the blurred line between economic processes and the social and cultural contexts in which they are embedded. Chapter 12 highlights the very social process of economic cluster formation, and the benefits of learning and innovation that result. Chapter 13 examines the role that gender plays in economic life, in reproductive work, in waged workplaces, and in entrepreneurship. Ethnicity is the focus of Chapter 14, which explores how labour markets are 'colour coded', how ethnic entrepreneurship works, and how transnational economies result from migration. Chapter 15 then examines the intersections between who we are and what we consume, i.e. how identity is tied up with consumption and how places themselves become consumable through tourism. In concluding the book, Chapter 16 opens up two broader issues for students interested

PREFACE xxv

in pursuing the subject further: understanding the intellectual development of Economic Geography as an academic discipline, and thinking about how future economic trends may present new challenges to the field.

#### Pedagogical Strategies

Each chapter in this book follows a similar structure. In most cases the chapter title is worded as a fairly intuitive question, reflecting our attempt to engage with questions that students might have of their own economic worlds. Although the topic for each chapter also lends itself to coverage of a defined field within Economic Geography, we have deliberately avoided framing chapters in disciplinary terms in this way.

The chapters open with what we call the 'hook', i.e. a (hopefully engaging) contemporary example or issue used to introduce the key theme of the chapter. In the second section we tackle a commonly held myth or misapprehension about the topic at hand (e.g. the nation state is dead, or transnational corporations are all-powerful) and illustrate how these myths often rest, in large part, on a non-geographical understanding of the world around us. The main body of each chapter then serves to illustrate the necessity and effectiveness of taking an explicitly geographical approach for understanding different aspects of the economy.

Our aim is to make these arguments in a clearly understandable, lightly referenced, jargon-free manner, drawing on a wide range of examples from across different sectors of the economy, and from around the world. Boxes within the text are labelled as 'key concepts', 'case studies', and 'further thinking', and they offer more detailed elaborations on specific ideas or examples.

The penultimate section of the chapter is designed to add a 'twist' to the arguments that have preceded it; or, in other words, to probe somewhat more deeply into the complexity of contemporary economic geographies. Additional nuances and insights are offered in these twists to encourage students to avoid simplistic views of economic activity. Each chapter then concludes with a short summary of the main themes covered.

What lies after the summary is also important. First, for ease of use, the reference list is included on a chapter by chapter basis. Second, the reading notes in each chapter guide the student towards what we identify as the most engaging and accessible literature on the topic. Some of these readings identify the sources of well-known case studies we have drawn from the geographical literature, enabling students to 'flesh out' the brief summaries offered in the chapter. We also identify up to five online resources per chapter that can also be used to supplement the chapters. In most cases, these include web resources that can be consulted for updated examples and data.

Overall, our intention is to offer an exploration of Economic Geography rich in examples and case studies that can, on the one hand, expose students to economic life and practices in various parts of the world, and, at the same time, introduce concepts that can be 'put to work' in their own local contexts. Hence the text can be used alongside local literature and case studies wherever the book is adapted.

## **ACKNOWLEDGEMENTS**

This second edition has been a long time in the making! Throughout the writing process, however, we have been sustained by the positive feedback and encouragement of users and readers of the first edition. We hope that this new edition meets their expectations. At the start of the process, we benefited tremendously from the input of Yuko Aoyama, Geoff Mann, Sam Scheuth, Eric Sheppard and Dick Walker, who provided close and critical readings of the first edition. Their detailed and thoughtful comments were crucial in shaping how we approached this book. Our plans for the second edition were in turn sharpened by the insights of eight proposal reviewers, while the final version itself has benefitted greatly from the feedback of the ten reviewers who looked at various draft chapters. We thank all these commentators for the time and care taken in helping us to make this a better book. At the same time, this edition still benefits from the wise advice that shaped the first edition, and for that we are grateful to Trevor Barnes, Gavin Bridge and Tim Bunnell. Above all, Peter Dicken remains our collective primary inspiration in striving to improve the accessibility and visibility of Economic Geography.

At John Wiley, our editor Ryan Flahive has been patient and supportive as this project has slowly and steadily moved towards completion. We are very grateful for his ongoing encouragement and confidence in our project, and for the excellent editorial assistance of Julia Nollen and Joyce Poh. Clive Agnew, Keith Barney, Martin Hess, George Lin and Claire Major gave us permission to reproduce their photos in the book. Adam Lukasiewicz did an excellent job of preparing the web-based materials for this edition. Finally, we offer a huge thanks to Graham Bowden at the University of Manchester, who once again has done a superb job in designing and producing all the graphics for the book, while remaining calm and assured despite the erratic workflow we have thrown at him! His contribution is absolutely central to the look and feel of this volume.

On an individual level, we all would like to thank our respective colleagues, friends and families for their support and understanding. Neil's contributions

were completed before his move to the National University of Singapore in August 2012. As such he would like to thank his University of Manchester Economic Geography colleagues – Gavin Bridge, Noel Castree, Martin Hess, Erik Swyngedouw and Kevin Ward – for their collegiality and for making Manchester such a great environment in which to 'do' Economic Geography. The golf gang – Tim Allott, Martin Evans and Chris Perkins – again deserve thanks for providing increasingly sporadic but much needed distraction. More broadly, he is extremely grateful for the ongoing support offered by Trevor Barnes, Meric Gertler, Jamie Peck, Jessie Poon, Roger Lee, Anders Malmberg, John Pickles, Adam Tickell and Neil Wrigley. Thanks are also due to the Yeung family for their fantastic hospitality during book meetings in Singapore. Closer to home, Laura and Adam were very excited to see their names in the first edition and they once again deserve recognition in print! They are a constant source of joy and inspiration, as is Emma, whose calm and unflagging support is invaluable and much appreciated.

Philip is grateful to colleagues in Toronto and elsewhere who have supported this endeavour, knowingly or unknowingly, along the way. Graduate students have played a key role as colleagues, collaborators, and teaching assistants in Economic Geography: Jean-Paul Addie, Keith Barney, Simon Chilvers, Nel Coloma-Moya, Anne-Marie Debbané, Conely de Leon, Veronica Javier, Adam Lukasiewicz, Julia Mais, Claire Major, Elliot Siemiatycki, Ritika Shrimali, and Junjia Ye. Departmental colleagues in Economic Geography at York have provided a wonderfully collegial environment that has influenced this book in a variety of ways: Ranu Basu, Raju Das, Steve Tufts, Jennifer Hyndman, Lucia Lo, Glen Norcliffe, Valerie Preston and Peter Vandergeest. I also appreciate the help of Alicia Filipowich and Yvonne Yim, who have always been happy to show a brazen disregard for their job descriptions. I am grateful for grant funding provided by Wiley-Blackwell, which allowed me to travel to work with Neil and Henry on this project; and thanks to the Coe and Yeung families who provided hospitality that funding just can't buy! Finally, and for everything else: Hayley, Alexander, Jack and Theo.

Henry has used the first edition as the primary text in his GE2202 Economy and Space class for over four years. Over this period, several hundred students on this course have delved deep into the text for inspiration and, just as often in the hot tropical climate, perspiration! He is most grateful for their candid and positive feedback on what the text can offer. This tangible impact on the "final consumer" makes the writing immensely satisfying. Meanwhile, his colleagues in the Department of Geography, National University of Singapore, have been most engaging and encouraging, particularly those in the Politics, Economies, And Space (PEAS) group. Special thanks go to Godfrey Yeung, Zhang Jun, Karen Lai, James Sidaway, Liu Yi, and Chen Rui for their ongoing contributions to this book's preparation. During the past four years, the three of us gathered in Glossop and Singapore several times to work on the proposal and book manuscript. Henry

would like to thank Neil's family, Emma, Laura, and Adam, for their forbearance of the noisy and demanding visitor from Singapore! Valerie and Peter Dicken always make him very at ease in his Manchester "second home" and their English breakfast is simply THE best. Back in Singapore, his family has come to terms with the sustainability of this text and thus seeing another volume (with the same title!) added to the shelf area in the living room. Weiyu has been a great spouse who supports every aspect of this project. Kay and Lucas have grown up with the first edition and, hopefully, learnt a thing or two about/from Uncle Neil and Uncle Phil! Henry would like to dedicate this edition to their continual learning journey to become better students (of Economic Geography??).

NC, PK and HY Glossop, Toronto and Singapore June 2012

# PART I CONCEPTUAL FOUNDATIONS

#### CHAPTER 1

## THINKING GEOGRAPHICALLY

#### Goals of this chapter

- To understand the distinctive elements of a geographical mode of thinking
- To elaborate on key concepts such as location, distance, territory, place, and scale
- To apply these concepts to economic phenomena

#### 1.1 Introduction

In February 2004, while still a 19-year-old undergraduate student at Harvard, Mark Zuckerberg created a social networking website called Facebook. Six months later, his company had established itself in California's Silicon Valley, just outside the campus of Stanford University. By the end of 2010, *Time* magazine had lauded Zuckerberg as its Person of the Year, a critically-acclaimed movie had told the story of the company's creation, and by 2012 around 850 million people worldwide were Facebook subscribers. In other words, more than one-tenth of the world's population had an account. When Facebook shares were floated in 2012, the company was valued at US\$80–100 billion – more than many long-established media corporations, like News Corporation or Time Warner, and more than many of the iconic corporate entities of a previous generation, such as Sony or General Motors.

Facebook's value was not, however, based on its income, assets, or profits. In 2011, its profits amounted to about \$1 billion, largely generated through advertising revenue. Rather, the price tag reflected recognition of the potential value attached to its 850 million subscribers and its dominance in terms of web traffic (*The Economist*, 2012). In 2010, Facebook accounted for 8.9% of all

web visits in the United States (even exceeding Google's 7.2%). Subscribers to Facebook spent about 700 billion minutes interacting with its site every month (an average of almost 17 hours per month for each user) (Facebook, 2011). This amounts to a huge potential for earnings, through advertising, linked applications, and online games.

Facebook might seem an odd example to use in introducing the field of Economic Geography. To most of its users, after all, Facebook is primarily a venue for social networking, for staying in touch with friends and sharing photographs, thoughts, invitations, and so on, rather than engaging in economic activity. Its product is free to use and does not require any economic transactions on the part of users, beyond their prior purchase of a computer or mobile phone and a contract with an internet service provider. Furthermore, communications on Facebook seldom concern "work-related" activities, as many employers are acutely aware!

In addition to being apparently noneconomic, Facebook might also seem to make geography itself irrelevant. Time spent on Facebook appears to involve no interaction with the earth's physical systems, and the company's product is, to its users, weightless and virtual. Facebook would also seem to eradicate the impediments created by geographical space. Its own home page depicts a graphic of social linkages transcending a map of the globe (see Figure 1.1). Distances, places, borders, and other markers of geographical space appear to offer little hindrance to the spread of an individual's network of friends through the site, and the possibilities for communication. Users can stay in touch with a network of friends almost regardless of where on earth they are located, and the difference in connection times between various locations is almost imperceptible. Perhaps more than any other business, then, Facebook would seem to exemplify the end of geographical space.



Figure 1.1 Facebook – the transcendence of geographical distance?

If we look a little closer, though, Facebook and its business operations provide both an economic and a geographical story. Clearly Facebook is an economic phenomenon. As a business itself, Facebook employed around 3,000 people in 2011 and generated sales of nearly US\$4 billion. But its product also represents an economic tool used by many other businesses to reach and connect with clients and customers, both as a networking device in its own right and as a venue for advertising that might once have appeared in newspapers or magazines. Facebook also represents a platform on which developers are creating software applications, thereby generating economic activity well beyond the company itself. Facebook estimates that entrepreneurs and software developers in 190 countries work with its platform. Looked at from a different angle, Facebook and the internet more generally provide channels through which networks of solidarity and struggle might be created between workers around the world (a theme we will return to in Chapter 6).

Facebook is also a profoundly geographical story. Here we take "geographical" to mean the patterning of activities (in this case, economic activities) on the earth's surface. The central questions asked by economic geographers are how economic patterns across space are configured, and why things happen where they do. But space itself is not a straightforward idea, as it is more than just the canvas on which such patterns are imprinted. If that were the limit of our interest in space, then we would simply be describing patterns rather than trying to explain them. Rather, space is an active part of explaining geographical patterns, meaning that economic activities are shaped by spatial relations – space is not just *where* things happen, it is also *why* things happen where they do. Seeing space as an explanatory factor in this way involves thinking carefully about what we mean by space. In this chapter we develop four conceptions of space and illustrate their meaning with reference to the Facebook example.

The first concept is location (Section 1.2), which involves the positioning of people and objects relative to each other. A key variable here is distance. Overcoming distance requires time and money and so it determines a great deal about how the economic landscape is configured. This is true whether we are thinking about traded goods being moved, people commuting to work, or shoppers traveling to retail outlets. We will examine, in particular, some of the classic models that economic geographers have used to demonstrate how the cost of distance (sometimes called the "friction of distance") affects location in space.

A second geographical conception of space is territory (Section 1.3). If location and distance are about coordinates on a map and the physical space that separates them, then territory is about carving out defined portions of space and exercising power over them. The primary form of territorial power is exercised by governments, who can affect both economic activities within their territories and economic flows across their borders.

Third, we consider the concept of place (Section 1.4). Places are formed when space takes on certain unique characteristics that are meaningful to the people who interact with them. Places may have cultural or political significance, but they also shape economic patterns in important ways. Economic places do not, however, just create themselves internally – rather they are the product of various flows across space that intersect differently in different places to generate one-of-a-kind outcomes. It is the uniqueness of those outcomes that plays a part in determining where economic activities will "take place."

Finally, we will think about scale (Section 1.5). Both territories and places are defined areas of space, but they might represent a range of different scales – state territories vary widely in size, and while a house is a place, so too is Beijing or South Wales. This might seem a rather straightforward idea, but scale becomes complicated when we are thinking about space in economic life. Which scale should we focus our attention upon? How do different scales relate to each other?

#### 1.2 Location and Distance

Perhaps the most basic way of thinking about space is as a grid of points that we can describe using a system of coordinates. Detailed maps do this quite effectively using longitude and latitude. The lecture hall where your class takes place could easily be described in these terms. It could be given precise global coordinates and you could then also describe your own location in that classroom through a regular pattern of rows and seats (3rd row, 4th seat from the end, etc.). This conception of space, based on some kind of definable measure of position, is often referred to as absolute space. It is the space of geometry and mathematics, and allows the specification of point locations, lines, and areas. Space in this instance is simply a grid for defining an absolute position.

Taking space as a grid of coordinates also allows us to go one stage further. We can examine the location of people and things in space in terms of their position in relation to each other. This is, in fact, far more important than simply knowing the coordinates of something on a map, as it allows us to start thinking about patterns in economic space – what kinds of things are happening where, and why this might be so. The absolute space of distance helps us with this explanation because overcoming distance requires time and money and so is nearly always a factor in determining the location of economic activities. As raw materials and finished goods are transported for longer distances, for example, the more expensive they become or the more they deteriorate in quality. As people decide where to shop, they must factor in the costs in time and money of traveling to retail outlets at varying distances away. In an urban center, a labor market can usually only be created out of those people who are close enough to commute to work at the beginning and end of the work day. This means that most cities have a labor market represented by areas within 1–2 hours of commuting time.

It is also important to note that the distance between points on a map is not necessarily the most significant factor in determining the effect of location on economic activities. It may, for example, be quicker to get from New York to Amsterdam than to get from Green Bay, Wisconsin, to Austin, Texas, even though the trans-Atlantic journey is much longer in terms of absolute distance. Likewise, it may be less expensive to ship large quantities of manufactured goods from China to California than it is to move them from California to urban centers across the United States. What matters, then, is not absolute distance measured on a map, but rather *relative* distance, measured in freight/transport costs or travel time. This is, in turn, dependent on the configuration of transportation modes and intersections. Relative space is, then, frequently more important in economic terms than absolute space.

For many years, absolute and relative locations were the key conceptions of space used by economic geographers as they sought to understand how the "friction of distance" affected the spatial pattern of economic activities. A classic early version of this idea was provided in the early 19th century by Johann von Thünen, who examined the way distance affected agricultural land use patterns (see Box 1.1). Another German theorist, Walter Christaller, applied a similar style of thinking to the patterns of cities, towns, and villages that develop across economic space (to be discussed further in Chapter 11).

The key point to note in both von Thünen's and Christaller's ideas was that they saw space in terms of relative location – between producers and marketplaces, and between marketplaces and consumers. By establishing certain assumptions and by analyzing how distance affected relationships, they were able to develop models that could predict how economic activities might be arranged in space. This was a powerful way of thinking and inspired a great deal of subsequent research in Economic Geography, much of it developing a more sophisticated mathematical version of the analyses produced in these early models. Such approaches are often labeled "locational analysis" or "spatial science," indicating their ambition to find principles that underpin the arrangement of economic activities in space. The effects of distance and transport costs on patterns in economic space also formed the basis for studies by economists developing what they term "the new economic geography" (see Box 1.2).

If we return to the example of Facebook, we might at first imagine that the study of location and distance has little to offer. It is certainly true that relative space has been greatly disrupted by the networks created through internet connectivity. It is, for example, just as easy to connect on Facebook whether a person is in New York, New Delhi, or New Zealand. And to a certain extent, the internet allows real economic transactions to take place without any "friction of distance." Buying applications, music/video downloads, or software are all possible regardless of where the consumer, or the business selling those products, is located. Other kinds of production may also be facilitated by the internet. Even physical products, like this book, can be created using the internet to overcome distance (for example, as draft chapters are circulated by email between authors located in the U.K., Canada, and Singapore, and publishers in the U.S.).

#### **KEY CONCEPT**

#### Box 1.1 J. von Thünen, land use, and bid-rent curves

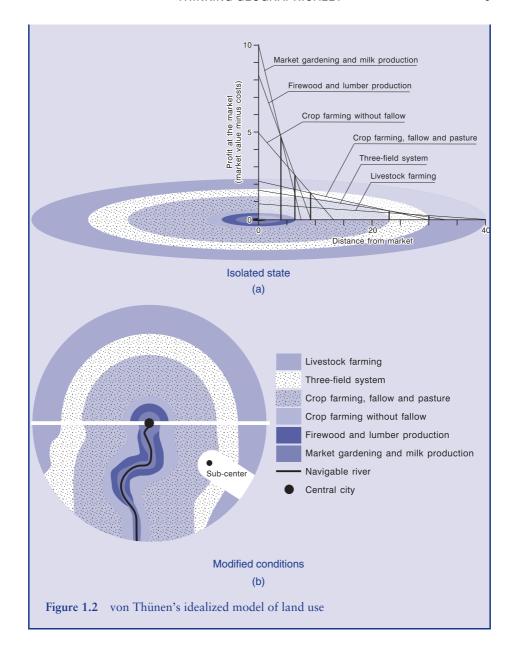
One of the earliest examples of an attempt to analyze the effect of distance on patterns of land use was developed by a German landowner almost 200 years ago. Johann-Heinrich von Thünen (1783–1850) was trying to find a logical way of understanding how to use land on his estate in order to maximize economic benefits. Using a very simple model he showed that the different value and transportation costs of various crops meant that they would "bid" for the use of a particular parcel of land at different rates as distance from a market town increased. The result was a pattern of rings around a town in which distance dictated agricultural land use. Some land uses, such as dairy cows, produced a commodity that was heavy to transport, easily perished, and needed on a daily basis.

Under these circumstances this land use would "bid" a high price for land close to the market center, but this would rapidly fall away since beyond a certain distance it would not be possible to transport the milk to the market without it spoiling.

Agricultural crops, on the other hand, yielded less daily income from a given area of land, and would only require seasonal transportation. They would thus bid less for land near the center, but could continue at much greater distances (described by a "bid-rent curve," Figure 1.2a). Once a variety of products were assessed in this way, von Thünen showed that a pattern of concentric land use rings would result around the market center, all calculated based on the transport cost of the products (Figure 1.2a). This model made a variety of assumptions – for example, that transport costs were directly proportional to distance, that the landscape, soil fertility, etc. were uniform in all directions, and that there was only one market center for agricultural products.

Obviously, the pattern would begin to get more complicated once these assumptions were relaxed (Figure 1.2b). If we think about contemporary food systems, in which for example Eastern Canada is supplied with fresh salad from California, Mexico, and other places, von Thünen's scheme begins to look very dated. Nevertheless, the model does capture the essence of how the costs associated with distance can affect the spatial structure of economic activity.

Although our technological ability to overcome some of these distances greatly expands the size of the "circles," a similar calculation is still being made. Another context in which bid-rent curves have been applied is in the urban setting, where prices and land use patterns (e.g., of office, commercial, residential, or industrial activities) are often directly related to their distance from a central business district.



Nevertheless, location is still surprisingly important even for internet applications, and several examples illustrate this point. First, Facebook's business is based on selling advertising space. This advertising is targeted, including by geographical area, so that the ads that users see on their Facebook pages will generally be those that relate to services or products in their immediate geographical area.