Index

agglomeration 11–12, 43, 62, 136, 152, 155, 194, 242, 250–51, 314, 391, 400, 524, 616
benefits 393, 395
cost-agglomeration 148, 150–52
effect of agglomeration 11, 13, 235, 251–3
impact of economic integration in 398–9
industrial 119, 153, 242
knowledge network 360
local 250, 253
of manufacturing activity 74, 76, 78–9
pure 5
sectoral 9
spatial 6
urban 423
agglomeration economies 9, 253, 259–60, 263–5, 268, 276
concept of 260–61
diversity 260, 265–7, 269
externalities 263
regional 268
in FDI 396
microeconomic influence over 263
specialization 260, 262–3, 267, 269
regional 268
aggregation 41–2, 85, 155, 324, 418, 491, 493, 507, 522, 528
age 475
commodity 42
complete 75
cumulative 62
exact 41
geographical 262–3, 515, 520
industrial 119, 262
of commodities 42
regional 262
spatial 500–501, 519–20, 522, 530
spreading 75
agriculture sector 6, 51, 69–70, 114
land 4
Alonso, W. 6
Andrews, Richard B. 216
Annual Survey of Manufactures (1960–92) 93, 100
Annual Survey of Manufactures Geographic Area Series 100
application programming interfaces (APIs) 122
development of 127
Argentina
Buenos Aires 400
Arizona Community Data Set 226
Arrow, Kenneth 41
Augmented Dickey–Fuller test 404
Australia 15, 474, 545, 555, 562, 564–5, 571
‘Caring for Our Country’ program 566–7
government of
Bureau of Rural Sciences 554–5
NRM programs 553
User Guide 555, 558, 562, 564
mining industry of 572, 578
Queensland 578, 587
Victoria
Department of Primary Industries 554
Austria 110
accession to EU (1995) 110
Bayesian model 34
Belgium
Brussels 278
Bennett, C.
hierarchy theory 548
Bing 121
Boolean sociomatrices 349, 351, 353
bottom-up development theory 9
Bourdieu, Pierre 321
Brazil 377, 393, 395
GDP per capita 378
São Paulo 378
Bureau of Economic Analysis 445
Net Stock of Fixed Reproducible Tangible Wealth 439
Cambridge Econometrics 235
Canada 15, 479, 571
British Colombia 205
Queen Charlotte Basin (QCB) 205
economy of 577–8
manufacturing sector of 90
retirement migration in 475
capital 67, 69, 93, 100, 155, 237, 439, 578
accumulation of 237, 241, 245, 440
assets 90
change 92
education 437–8
external 324
financial 273
flows of 469
highway
  elasticity of 437
human 9, 14, 78–9, 217, 228, 241, 273, 437,
  439–40, 444, 447, 452, 454, 465, 467,
  473, 485, 615–17
investments 447
knowledge flows 165
mobility of 75
public spending on 464
skilled 528
intellectual 240–41
intensity 100
national fixed 445
physical 14, 228, 241, 245, 249, 273, 322,
  437, 439–40
  depreciation of 239, 248
private 439, 445
public 439, 444, 466
price of 99
private 449, 454
  positive spillover of 454
productivity 91
public 437–8, 446, 449
impact on income 449
returns to 238
decreasing 245
social 13, 323, 332, 358
  definitions of 321–4, 327–9
  ethnic 326
homogeneity in 324
impacts of 331–2
individual 329
local 13, 324–9, 331–3
measures of 329, 331
position in civil society 327, 332–3
sector-crossing 332–3
stock 93–4, 96, 100, 135
investment in 94
capital goods 7
capital theory 322
Census of Manufactures (1960–92) 93, 100
Census of Manufactures Geographic Area
  Series 100
Central and Eastern European countries
  (CEECs) 396
central business district (CBD) 6, 34
central place theory 5
Centre for Environmental Studies (CES) 492
Chamberlain, E. 6
China 385, 393, 395–6, 398, 403
  National Expressway Network (NEN) 403
taxation system of 386
Christaller, W.
  creator of central place theory 5
Clinton, Bill
  removal of selective availability (2000) 127
closed economy 67
Coalition Theory Network (CTN) 345
Cobb–Douglas production function 14
Coleman, James 321
combinatorics 345
commodities 42–3, 57
  agents 42, 45
  aggregation of 42
  capital-intensive 67–8
  labor-intensive 67
  sale of 42–3
taxing of 63
commodity flows
  interregional 34
computable general equilibrium (CGE)
  analysis 43, 45, 54, 208
agents 51
Armington assumption 51
concept of 41
economies of scale in 57–8
interregional 204
models 41–2, 386
multiregional (spatial) 42–3, 51
nested production functions 386
single-region 51
  spatial 64
  use of Shoven–Whalley model 45–6, 52
computable partial equilibrium (CPE) analysis
  44
constructed regional advantage (CRA) 278–9
construction sector 114
cost function 48
  properties of 49
Cournot model 60–61
shortcomings of 61
Czech Republic 402
Dart, Jessica 551, 553–4
Davies, Rick 551, 553
Debreu, Gérard 41
Denmark 326
  manufacturing employment in 111
DG Research 278
Diamond, Jared
  Guns, Germs, and Steel 342
Dietzenbacher, Erik
  average propagation length (APL) concept
  387
  hypothetical extraction method 387
Distributive Trades EDC
  Models Working Group 492
  ‘Urban Models for Shopping Studies’
  (1970) 492
Dixit–Stiglitz model 60, 71
Dixit–Stiglitz monopolistic competition 392
Dunn, E.S. 6, 11
Dunn model 11

economic base model 213–14, 216–18, 230–31
concept of 213, 219
criticisms of 214–15, 227–9
development of 215–16
economic activity categorization 219–21
assumption method 219
basic sectors 219–20, 226, 228
location quotients (LQ) method 220–22, 225
minimum requirements method 222–5
non-basic sectors 219–20, 222, 226, 228
survey method 220
local multiplier 213–14, 218, 224, 228–30
generation of 218
homogenous linear multiplier 229
regional delimitation 218–19
economic development 1–2, 14, 193, 606
local 119–20, 228
long-run 228
regional 15, 213, 260, 266, 268
urban 268–9
economic geography/geographical economics 1–4, 67, 75, 80, 163, 172, 280, 342–3, 357–8, 391, 423, 491
development of 391–2
key features of 391
market access 392, 395–7, 406
models of 14, 69, 395, 398–9, 406–7
implications of 406
uses of 398–400
new economic geography (NEG) 204, 242, 369, 375, 423–4, 427, 438
wages 392
equation 393

economic integration
EU-based 399–400
impact on agglomeration 398–9
use of geographical economics models in measuring 398–9
role in free trade 399
economies of scale 12–13, 57–8, 259, 261, 425
external 58
in CGE models 57–8
internal 71
plant-level 423
elasticity of substitution 50–51, 57
constant (CES) 48–9, 52, 58, 62, 72, 240, 425
composite 59
price index 56
employment 83, 96, 106, 137, 220–21, 226, 311–13, 379, 381, 577, 631
basic 228, 230
change 90, 92–3
productivity 89
cycles 85
distribution of 137
domestic demand 106
food 71
full-time equivalent (FTE) 217
job creation 292
job growth 431
local 12, 221, 261
manufacturing 84, 93
national 83
non-basic 222, 228
regional 83, 228
self-employment 599–600
service 7
spatially influenced 114
total 7
endogenous growth theory 12, 244, 438
models 240, 513
first-generation 240–41
multi-country 243
NEG 242
open-economy 241–2
second-generation 241
regionalization of 234
entrepreneurship 16, 298, 310–11, 316, 323, 573, 603–4
as production factor 310
concept of 598–9, 600–603
culture of 606–7
employment growth 602–3
high-impact 16, 597–8, 602, 608–10
measurement of 599–600
regional differences in 607–8
knowledge spillover of 601
necessity 608
opportunity costs of 605
positive economic effects of 597, 603
regional differences in 603–4
demand 605–6
institutions 606–7
supply 604–5
role models 314
e-society 132
ESRI Inc. 121–2
EU Commission 278
RHOMOLO model 530
Common Agricultural Policy (CAP) 206–7
economic integration in 399–400
enlargement of 398
Framework 284
intercountry IO data for 375
member states of 109–11, 235–6, 361, 375
NUTS-2 regions of 142
Regional Innovation and Technology
Transfer Strategies (RITTS) 278
Regional Innovation Strategies (RIS) 278
Regional Technology Plan (RTP) 278
rest of (RoEU) 375
S3 programme 136
Evans, A.W. 6
evolutionary economic geography (EEG) 13,
266, 293–4, 299
closest of 291
clustering 136, 148, 155, 164, 235, 264,
293–5, 297, 299
branching phenomenon 297–8
generic 291, 297
industrial 5, 253
proximity paradox 295–6
spatial 294
evolutionary game theory 73
exogenous growth theory 234, 244, 246
classical 234
models 244–5
nonlinear extension 246
neoclassical 241
export-base model 7
exports 106, 227–8
factor markets 46
factor price equalization (FPE) theorem 67–8,
75, 77–80
autarky 80
cones of diversification 69
factor price sensitivity (FPI) 69
Federal Republic of Germany (West Germany)
109, 311–12, 314, 400–401
West Berlin 405
Feldman, Maryann
role in development of RKPF model 515–17
Finland 109–10, 166, 474, 477
accession to EU (1995) 110
firm growth 292
fixed effects model (FEM) 160–61
estimation 160, 163
FEM-3SLS 167
specification 161
LSDV 167
Florida, Richard
role in development of RKPF model 515–17
flows across networks 34
goods
direction of 70
trade 77
international 80
foreign direct investment (FDI) 396, 528
agglomeration economies in 396
inward 165
regional 165
France 111, 165, 360, 477
Freeman, Linton 344
Fujita, M. 6
functional forms
Cobb–Douglas 62
non-nested CES 62
general equilibrium (GE)
analysis 10
modelling 587
tory 41–2
Shoven–Whalley approach 43
generalized least squares (GLS)
estimation 161
generalized method of moments (GMM)
estimation 162, 168
in SEM software 168
system (SGMM) 162–3
level equation (LEV-SGMM) 163
godemographics 129
commercialization of 129
Geographic Area Series 100
generic information science (GISciences)
124, 126–7, 129
development of 124
generic information system (GIS) 3, 11,
data blockage 122
development of 120, 420
representations 121
digital 120–21
use of APIs 122
visualization conventions in 123–4
generic market accessibility 412, 423,
427–8, 431
as inverse function of competition 419
as joint accessibility 419–20
as potential of opportunity 416–18
as physical measure 418
as utility 418–19
concept of 416
distance-decay function 418, 421–2
dynamic 420
infrastructure-based measures 424
measurement of 420–21
generic market potential 3, 14, 412, 423–5
closest of 414–15
functional economic region (FER) 427–8
municipalities in 428–9
wage equations 426
Geographical Modelling and Planning Ltd (GMAP) 493
German Democratic Republic (East Germany) 109
Germany 4, 165–6, 360, 404, 407
annualized growth rates in 400, 402–3
Berlin 215, 405
division of (1945–90) 400, 402
Düsseldorf 405
Frankfurt 405
manufacturing employment in 111
reunification of (1990) 109
Soviet Blockade (1948–9) 405
Gini coefficient 137–8
Gini index 137–8
Glaeser, Edward
Papers in Regional Science 1
Global Entrepreneurship Development Index (GEDI) 603
Global Entrepreneurship Monitor (GEM) 308, 600
theory of division of motivations in entrepreneurship 600–601
global network geography 284
Global Positioning System (GPS) 127
globalization 468
relationship with RIS 276, 278
Goodchild, M.F. 128
role in development of GIScience 124
goods 55–6
export 63
flows of
  direction of 70
  intermediate 248
  investment 63
  manufacturing 242
  markets 46, 53
Google, Inc. 552
Google Maps 121
Google Scholar 513, 518
Picasa 121
graph theory 345
  adjacency 348
Graves, Philip 483
gravity equation 54
gravity law 53
gravity models 421
  of spatial interaction 414–15
  regression model 34, 39
Greece 111, 198, 252
Crete 206–7
gross domestic product (GDP) 93, 167
Hägerstrand, T.
  use of space-time geography in theories of 8
Hannerz, Ulf 321
Harris, C.D. 6
definition of distance-decay function 415
market-potential function 392, 396
Harrod–Domar growth model 7
Hausman–Taylor type single-equation estimators (HT-SUR/HT-3SLS) 162
Haynes–Dinc extensions 11
Heckscher–Ohlin model 11
Herfindahl index 61
heterogeneity 9, 14, 160, 260, 307
  firm-level 13, 264, 266, 602
  industrial 235
  institutional 251
  interactive 246
  network 268
  parameter 240
  sectoral 13, 268
  spatial 2, 143, 153–4, 268
taste 406
heteroskedasticity 447
Hicks, J.R. 469
  Hicksian compensation variation 423
  Hicksian separability 42
Higher Education Statistical Agency 474
Hirschman, A.O. 8
homogeneity 239
  in social capital 324
  linear 49
  output 57
  spatial 151
Honda Corporation 386
Hotelling, H.
  Hotelling’s law 5
  Hotelling–Shepard lemma 46–7
household 41–2, 47, 49–56, 61–2, 193, 195–6, 202–3, 206, 218, 228
  aggregate 42
  consumption 63
  expenditure 194
  function 62
  high-income 206
  income 28–31, 206–7
  location behaviour of 4
  privacy-sensitive 132
  rural 205
  services 10
  utility
  470, 485
housing
  demand 12
human capital core–periphery model
factors of production in 78–9
international trade in 78–9
Hungary 402, 530
imports 106
independence 23–4
statistical 24
indigenous potential theory 9
Indonesia 204, 377–8, 393
agglomeration benefits in 395
Eastern Islands 378
Java 378
industrial clustering 5
inequality 140
information and communication technologies
(ICTs)
adoption of 132
diffusion
spatial 8
temporal 8
external 6
interfirm networks 250
process 267, 284
product 267
regional 3, 15
technological 228
input–output (IO) 13, 84, 115, 193, 259, 268, 375, 377–8
interregional 3, 14, 369–70
intersectoral 8
Leontief inverse 381, 387
models 587–8
bi-regional 372
interregional (IRIO) 377–8, 381, 383, 385, 387
Leontief multipliers 371–3
single region 371–2
pairs 177
regional 52, 342
supply-and-use tables (SUTs) 370
international 370
interregional 370–71
supply chain modelling 385–6
tables (IOTs) 193–5, 198, 204, 208, 370–71
instrument variables (IV) 161, 163
estimator 164
intellectual property rights
regulations 530
interest
variables of 10–11
intermediate goods model
<table>
<thead>
<tr>
<th>Term</th>
<th>Page(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>knowledge economy</td>
<td>278</td>
</tr>
<tr>
<td>knowledge exchange</td>
<td>323</td>
</tr>
<tr>
<td>knowledge flows</td>
<td>34, 159, 268, 276, 284, 520, 522, 528</td>
</tr>
<tr>
<td>extraregional</td>
<td>528</td>
</tr>
<tr>
<td>human capital</td>
<td>165</td>
</tr>
<tr>
<td>interregional</td>
<td>522, 528, 530</td>
</tr>
<tr>
<td>intraregional</td>
<td>528</td>
</tr>
<tr>
<td>localized</td>
<td>520</td>
</tr>
<tr>
<td>state-level</td>
<td>517</td>
</tr>
<tr>
<td>universities</td>
<td>517–18</td>
</tr>
<tr>
<td>knowledge-intensive business services (KIBS)</td>
<td>431</td>
</tr>
<tr>
<td>knowledge spillover</td>
<td>5, 9, 153, 234, 250, 252–3</td>
</tr>
<tr>
<td>interregional</td>
<td>241–2, 244</td>
</tr>
<tr>
<td>local</td>
<td>251</td>
</tr>
<tr>
<td>localized</td>
<td>360</td>
</tr>
<tr>
<td>universities</td>
<td>515–16</td>
</tr>
<tr>
<td>of entrepreneurship</td>
<td>601</td>
</tr>
<tr>
<td>knowledge transfer</td>
<td>260, 360</td>
</tr>
<tr>
<td>Kohlhase, Janet</td>
<td></td>
</tr>
<tr>
<td>Papers in Regional Science</td>
<td>1</td>
</tr>
<tr>
<td>Krugman, Paul</td>
<td>391, 423</td>
</tr>
<tr>
<td>core-periphery model</td>
<td>69, 71, 75, 77</td>
</tr>
<tr>
<td>criticisms of 75</td>
<td>77</td>
</tr>
<tr>
<td>factors of production in 77</td>
<td></td>
</tr>
<tr>
<td>new trade theory of 375</td>
<td></td>
</tr>
<tr>
<td>new economic geography extension of 375</td>
<td></td>
</tr>
<tr>
<td>spatial concentration model 136–7, 141</td>
<td></td>
</tr>
<tr>
<td>labor</td>
<td>67, 69, 73, 78–9, 90, 96, 100, 106, 217, 237, 425, 439, 444</td>
</tr>
<tr>
<td>demand</td>
<td>228</td>
</tr>
<tr>
<td>flows of 383–4</td>
<td></td>
</tr>
<tr>
<td>force</td>
<td>74–5, 217</td>
</tr>
<tr>
<td>market 4</td>
<td>228, 308, 614</td>
</tr>
<tr>
<td>functioning</td>
<td>119</td>
</tr>
<tr>
<td>local</td>
<td>229</td>
</tr>
<tr>
<td>regional</td>
<td>16</td>
</tr>
<tr>
<td>mobility 73–5</td>
<td></td>
</tr>
<tr>
<td>interregional</td>
<td>77</td>
</tr>
<tr>
<td>intersectional</td>
<td>76–9</td>
</tr>
<tr>
<td>intraregional</td>
<td>228</td>
</tr>
<tr>
<td>price of 99</td>
<td></td>
</tr>
<tr>
<td>productivity 89–92</td>
<td></td>
</tr>
<tr>
<td>raw 78–9</td>
<td></td>
</tr>
<tr>
<td>supply 10</td>
<td>228</td>
</tr>
<tr>
<td>unskilled 165</td>
<td></td>
</tr>
<tr>
<td>land rents</td>
<td>6</td>
</tr>
<tr>
<td>Launhardt, Wilhelm</td>
<td></td>
</tr>
<tr>
<td>creator of network location theory 4</td>
<td></td>
</tr>
<tr>
<td>least square dummy variable (LSDV)</td>
<td></td>
</tr>
<tr>
<td>of FEM model 167</td>
<td></td>
</tr>
<tr>
<td>Leontief, Wassily 42, 62</td>
<td></td>
</tr>
<tr>
<td>input–output (IO) table 193–5, 198, 208</td>
<td></td>
</tr>
<tr>
<td>interregional</td>
<td>195–6, 204</td>
</tr>
<tr>
<td>multi-regional (MRO) model 195</td>
<td></td>
</tr>
<tr>
<td>single-region model 195</td>
<td></td>
</tr>
<tr>
<td>lifestyle surveys</td>
<td>129–31</td>
</tr>
<tr>
<td>linear expenditure system (LES) 62</td>
<td></td>
</tr>
<tr>
<td>local indicators of spatial association (LISA) dynamic 254</td>
<td></td>
</tr>
<tr>
<td>local resource development 571, 573–5, 579–81</td>
<td></td>
</tr>
<tr>
<td>assessment 580–81, 585, 588–9</td>
<td></td>
</tr>
<tr>
<td>SEIA methods 585–7</td>
<td></td>
</tr>
<tr>
<td>SMART indicators 580</td>
<td></td>
</tr>
<tr>
<td>business cycles 576–7</td>
<td></td>
</tr>
<tr>
<td>global value chains (GVCs) 572</td>
<td></td>
</tr>
<tr>
<td>implementation 573</td>
<td></td>
</tr>
<tr>
<td>linking strategies 579–80</td>
<td></td>
</tr>
<tr>
<td>local benefits via supplier linkages 572</td>
<td></td>
</tr>
<tr>
<td>SME linkage programmes 574</td>
<td></td>
</tr>
<tr>
<td>use of key performance indicators (KPIs)</td>
<td>576</td>
</tr>
<tr>
<td>'localised industrial systems' theory 9</td>
<td></td>
</tr>
<tr>
<td>localization economies 292–3, 413</td>
<td></td>
</tr>
<tr>
<td>localization theory 5</td>
<td></td>
</tr>
<tr>
<td>location quotients (LQ) 220–22, 225, 371</td>
<td></td>
</tr>
<tr>
<td>location theory 4</td>
<td></td>
</tr>
<tr>
<td>log transformation 35</td>
<td></td>
</tr>
<tr>
<td>Lorentz curve 137</td>
<td></td>
</tr>
<tr>
<td>Los, Bart</td>
<td></td>
</tr>
<tr>
<td>hypothetical extraction method 387</td>
<td></td>
</tr>
<tr>
<td>Lösch, A. 5</td>
<td></td>
</tr>
<tr>
<td>Luxembourg 109</td>
<td></td>
</tr>
<tr>
<td>macroeconomics 423–4, 581</td>
<td></td>
</tr>
<tr>
<td>Malaysia 204</td>
<td></td>
</tr>
<tr>
<td>Malthus, Thomas</td>
<td>260</td>
</tr>
<tr>
<td>Management Horizons Europe</td>
<td></td>
</tr>
<tr>
<td>Retail Shopping Index (MHE Index) 496, 498–9</td>
<td></td>
</tr>
<tr>
<td>Mankiw–Romer–Weil (MRW) model 14, 436–9, 444–6</td>
<td></td>
</tr>
<tr>
<td>steady-state equation 443</td>
<td></td>
</tr>
<tr>
<td>steady-state levels 449–51</td>
<td></td>
</tr>
<tr>
<td>testing of 446–8</td>
<td></td>
</tr>
<tr>
<td>AIC test 447, 452</td>
<td></td>
</tr>
<tr>
<td>Breusch–Pagan test 447</td>
<td></td>
</tr>
<tr>
<td>Jarque Bera test 447</td>
<td></td>
</tr>
<tr>
<td>LR test 447, 451</td>
<td></td>
</tr>
<tr>
<td>SC test 447, 452</td>
<td></td>
</tr>
<tr>
<td>manufacturing sectors 69–71, 73, 94, 96, 100–101, 109, 111, 147</td>
<td></td>
</tr>
<tr>
<td>capital intensity of 51</td>
<td></td>
</tr>
<tr>
<td>employment 84, 93–4, 101, 111</td>
<td></td>
</tr>
<tr>
<td>output 165</td>
<td></td>
</tr>
<tr>
<td>production</td>
<td></td>
</tr>
<tr>
<td>agglomeration of 75–6</td>
<td></td>
</tr>
<tr>
<td>function 165</td>
<td></td>
</tr>
</tbody>
</table>
productivity 111
start-ups 313
TFP of 94
wages 71–3
workforce 71–4, 77–8, 83
Marshall, Alfred 4, 9, 252–3, 259
local agglomeration force categorization 250–51
Principles of Economics 260–61
Marshall–Arrow–Romer (MAR) externalities 9, 514
Massachusetts Institute of Technology (MIT) Group Networks Laboratory 359
matrix/vector notation 37
maximum likelihood coefficient estimation 29
Mayne, John 553
McKenzie, Lionel 41
mesoeconomic 11, 135–6
metropolitan statistical area (MSA) 517–19
Mexico 400
micro consistent matrix (MCM) 42, 47–8, 52–3, 56, 59
microeconomics 5, 41, 54
influence over agglomeration economies 263
point-pattern analysis 135
spatial 11, 135, 142
welfare effects 423
migration 480, 485
elasticity 475
elderly/retirement 475
ethnicity 477–8
gender-specific 476
graduate 474
internal 469, 475–6
international 476
interregional 3, 14–15, 469, 471, 482
flows 469
investment 474
job-related 477
models 484–5
neoclassical disequilibrium 479–80
previous 478–9
private monetary cost of 471
regional rate of 480
regional variables
quality of life 482–4
unemployment 479–81
short-distance 484
spatial equilibrium model 469–71
willingness to migrate (WTM) 477
Mills, E. 6
Monte Carlo simulation 144, 163
Muth, R. F. 6
Myrdal, G. 8
national innovation system (NIS) 273–4
natural resource management (NRM) programs 554
neighbourhood effects 234, 245
neighbourhoods
household income 29–30
housing values 30
neoclassical growth model 8, 250
neoclassical trade models 80
theory 67
neogeography
concept of 127–8
Netherlands 16, 206, 373, 407, 474, 480, 619, 633
Amsterdam 293
aviation industry of 295
labor market of 614–15, 618–21, 632
hours worked in 618, 622–3, 626, 632
job characteristics 618, 625–6, 631
NACE 619–20
residential context 617–18, 625, 631
social economic characteristics 615–16, 623, 625, 630–31
manufacturing employment in 111
Municipality Base Registry (MBR) 618–19
Rotterdam 373
SSB-Jobs 618–19
Survey of Employment and Wages (SEW) 619, 622–3, 626
network architecture
concept of 173–4
network location theory 4
network training 190
neural networks 172–3, 177, 188
error functions 177–85
backpropagation 185–6
batch optimization 182–4
cross-entropy 180
on-line optimization 182–4
sum-of-squares 178
feedforward 172–4, 180–81, 188, 190–91
approximation capabilities of 175–6
local minimization procedures 181–2
model selection 189–91
regularization 188–9
neural spatial interaction modelling 173
new business formation 303, 306–7
displacement effects 304–5
job turnover 307
relationship with regional development 303–4, 307–8, 315–17
entrepreneurship 310–11, 316
indirect effects 311–14
measurement of 308–10
Index 643

regional differences 314–15

time lags 309–10

new economic geography and growth (NEGG) models

concept of 242

Newton, Isaac 413, 415

North American Free Trade Agreement (NAFTA) 83

Norton, D. theory of regional life cycles 8

Ohlin, Bertil 5–6

open data 122
dissemination of 128

OpenStreetMap 122
coverage of UK 128

ordinary least squares (OLS) estimation 161

regression 229, 516, 623, 632

Organisation for Economic Co-operation and Development (OECD) 393, 580, 614

members of 309, 316

OECD Statistical Compendium CD 1997 109
‘Science, Technology and Competitiveness’ 272

panel analysis of non-stationarity in idiosyncratic and common components (PANIC) 167

patents 360

plant location
Launhardt model 4
Poisson modelling 475

Poisson process
homogenous 144
polarization 136, 138–9

high 139

Porter, M.E. 279

concept of ‘clusters’ 266, 279

externalities 9, 251

Portugal
Lisbon 279

manufacturing employment in 111
price elasticity of demand 60–61
price-taking behaviour 41
principal components analysis 129
product cycles 9, 267
regional 8

production 1, 73
cultural 282
factors of 68, 77, 106
food 71
productivity of 90
regional structure of 431
specialization 7

production function 3, 46, 165, 195, 249, 322, 420
aggregate 240

CGE nested 386

aggregate 244

entrepreneurship as 310
linear 406
per capita 440, 442
regional 438
regional knowledge (RKPF) 15

Solow 439

productivity 304, 309, 316
capital 91
change 89
labor 89–92

manufacturing sector 111

do of production 90

d of R&D 243, 248, 528, 530
regional 403

TFP view of 90

purchasing power 12

Putnam, Robert 321, 326
definition of social capital 321, 323

qualitative methods 564–7

Collaborative Outcomes Reporting (COR) 551–3, 562
development of 550–51
Most Significant Change (MSC) Technique 551–3, 555, 562
story-based 552, 566
Performance Story Reporting (PSR) 551–3, 555, 562, 564–6
use in regional program evaluation 544–6

random effects model (REM) 160–61
estimation 160–61

specification 168

Rees, J.
theory of regional life cycles 8

regional development 8, 10, 303–6, 544, 571
crowding-out 304

economic 432

neo-Marshallian 9

potential 9

programmes 15

relationship with new business formation 303–4, 307–8, 315–17
indirect effects 311–12
measurement of 308–10
regional differences 314–15
time lags 309–10

sustainable 581, 594
regional growth 6–8, 10
   analysis 235, 238–40, 243–4, 251–2
   linear and nonlinear Solow model 238–40
   balance of payments 7
regional income imbalances 237–8
   conditional density function 236
   state-space intra-distribution dynamics (IDD) 235–6
regional innovation system (RIS) 13, 272–3, 275–6, 279–81, 285–7
   analysis 277
   concept of 273–4
   governance of 277–8
   relationship with globalization 276, 278
regional knowledge production function (RKPF) 15, 513–14, 518–19, 528, 530–31
   core model 515, 519–20, 524
   focus on interregional knowledge flows 522
   development of 514–17, 524, 531
   extensions 516–18
regional program evaluation 544–6, 548–50
   Appreciative Inquiry 549
   Outcomes Mapping 549
   Participatory Action Research 549
   Rapid Rural Appraisal 549
   rural development programs 551
   use of qualitative methods 544–6, 548–53, 555, 562, 564
regional social network analysis 13–14
regression models 29
   gravity model 34, 39
   non-spatial 31
   spatial 27–9, 38
   probit 39
   Tobit 39
Reilly’s Law
   concept of 413
Republic of Ireland 111
research and development (R&D) 6, 9, 243, 247, 252–3, 273, 306, 608
   academic 522
   accessibility to 429
   accumulation of 248
   applied 282
   company 431
   cooperation 284
   cost of 242
   economies of 294
   industry 516, 522
   intensity 247, 250, 279, 282–5
   investment in 10, 237, 241, 249
   firm-level 515
   offshoring 284
   private 517
   productivity-adjusted 247
   productivity of 243, 248, 253, 528, 530
   vertical 247
Research Opinion Poll (ROP) 498–9
   retail 51, 120, 128–30, 213, 224, 384, 413, 415, 429, 494–6, 498, 500
   goods 383
   impact assessment 491–3, 507–8
   location models 492
   shopping models 493
   trade patterns 15, 491
   travel 427
Ricardo, David 260
Riemann, Bernhard 283
Rigby–Anderson extensions 11
Ripley, B.D.
   K-function 142–4, 147–8, 152, 154–5
   bivariate 148–9
Romero, Isidoro
   average propagation length (APL) concept 387
Rosenstein-Rodan, P.N.
   ‘big push’ theory 8
Sainsbury’s 491
   retail shopping model of 493
   salary benchmarking 33
Schumpeter, J. 8, 242, 273, 598–9
   concept of ‘creative destruction’ 241
   growth model 234, 241–2, 247, 249–50, 252
   view of innovation 298
Second World War (1939–45) 359, 400, 402, 405, 484
   atomic bombing of Hiroshima and Nagasaki (1945) 403
   bombing campaigns of 403–4
Sen, Amartya 140
Shapley, Lloyd 344
shift-share analysis/method 83–4, 92, 110–11
   components of
      differential shift 83
      productivity 107
      proportionality shift 83
      reference area 83
Dinc–Haynes international trade model 84, 101, 106–8
   Dunn model 83–5, 87–8, 115
   influence of Jones partitioning technique on 86–7
   Haynes–Dinc model 84, 96, 108, 115
   use of TFP in 88, 90–91
   Haynes–Dinc–Paelinck model 84, 96, 98
limitations of 85
probabilistic methods 84
Rigby–Anderson model 84, 89–90, 96
spatial shift-share extension 84, 88, 114–15
trade-related 107
shocks 41, 64, 229
immigration 45
random 246
simulations of 51
structural 167
temporary 403, 405
simultaneous equation models (SEMs) 12,
158–60, 165
development of 158
dynamic (DSEM) 159, 162, 168
structural 164, 166, 168
estimation 12, 158, 161–2
software 167–8
GMM estimation 168
spatial 158
specification of 159–60
Single European Act (1986) 109–10
Slovakia 402
Slovenia 402
small and medium-sized enterprises (SMEs)
572, 576, 597
linkage programmes 574
small and medium-sized metropolitan areas
(SMSAs) 224, 226
Smith, Adam 215
social accounting analysis 193
social accounting matrices/models (SAM) 12,
42, 194–5, 198, 200–205, 371
aggregate interregional multiplier matrix
196
bi-regional 202–5, 207
output multiplier 203
rural–urban 204
concept of 193–4
fiscal 205
interregional 194–8, 200, 205–7
interregional multiplier matrix 197–8
closed loop 197
open loop 197
Leontief inverse matrix 199
interregional 200
own-region output multiplier 203
rural–urban 205, 207
shortcomings of 194–5, 207–8
technical coefficients 201
three-region 207
transition matrix 199
social and economic impact assessment (SEIA)
15, 577, 589, 594
concept of 585–6
potential use in local resource development
assessment 586–7
process 585–6
social and economic impact management plan
(SEIMP) 586
social-area analysis 129–30
social network analysis (SNA) 286, 342–3,
345–6, 348–50, 358, 362
adjacency in 348–9
connectivity 350–51
development of 343
digraph 348
graph-theoretic 349
nodes (entities) 345, 349, 351
regional-level 344, 362
relations
dichotomous 346
directional 346
non-directional 346
valued 346
Shapley value 344
subgroup clustering 352–3
coefficients 353
social network theory 342, 344, 358–9
hypothesis of 359–60
social networks 322, 345, 359
bridges 358–9
centrality 354–6
chain 355–6
circle 356–7
community 357–8
components 356–7
local 331
online 344
road 357
small-world 357
star 355–6
sociology 359
Solow, R.M. 245–6, 248, 273
conditional convergence model 450
growth equation 240
growth model 239
multi-region 249
nonlinear 240
production function 439
Sombart, Werner 215
space-time diffusion 37–8
space-time impulse response functions (STIRs)
167
Spain 111, 252, 297–8, 360, 393, 407
Barcelona 279
spatial analysis
development of 5–6
spatial autoregressive (SAR) extension 35
model 26–8, 31–3, 37–8
as standard regression model 26
spatial completion theory 5
spatial concentration and dispersion 135–6, 139, 141–3, 155–6
concept of 137
independence 149–51
measures of 139, 141
modifiable areal unit problem (MAUP) 135, 142
origin points of 152–3
patterns of 140–41
random labelling 149–51
spatial correlation 139–40
maximum 141
negative 139
positive 139
zero 139
spatial dependence 23, 25–7, 35–6, 147
absence of 153–4
definitions of 34
spatial disaggregation 500
spatial Durbin error model (SDEM) 30–31
spatial Durbin model (SDM) 30–31, 33
spatial econometrics 38, 159, 244, 253–4, 361, 447
spatial economics 57
concept of 23–4
spatial inequality 2, 155
spatial interaction
models 491–3, 495–6, 499–500, 505–6
aggregate 499–500, 502–4
concept of 494–5
disaggregated 505–8
gravity model of 414–15
square root of mean square error (SRMSE) 494–5, 502, 507–8
spatial lag of $X$ (SLX) model 31–2
spatial polarization 12
spatial regression 25–6, 31
cross-sectional 30
models of 27–9, 38
spatial spillover 30, 38, 438
global 31, 35
local 31
spatial vector error correction (SpVECM)
models 166–7
spatial weight matrix 444
Standard Industrial Classification (SIC)
scheme 101, 266
Stata (software program) 167–8
SPPACK 28
Statistical Register of Active Enterprises (ASIA) 144
Stewart, J.Q. 413–14
Stone, Richard 193
suburbanization 30
Sweden 110–11, 219, 292, 313, 326, 426, 428, 474, 484
accession to EU (1995) 110
KIBS in 431
municipalities in 428–9, 431
Stockholm 332, 428
taxation 43–4, 63, 228
of commodities 63
rates of 63
revenue 43, 45
schedules 63
technological knowledge 240, 245, 248
foreign 252
technology 3, 8, 43
ageing 8
regional absorption of 9
-related infrastructure 9
technology transfer 234, 238, 243–5, 247, 445
Tesco 491
retail shopping model of 493
Thailand
floods (2011) 369
Thirlwall, A.P.
Thirlwall’s law 7
three-stage least squares (3SLS) 161–2
FEM-3SLS 167
regression 516
Thünen, J.H. von 6
creator of location theory 4
time dependence 36
Tobler’s First Law of Geography 131
Tomahawk diagram 74–5, 77, 79
total entrepreneurial activity (TEA) 308
total factor productivity (TFP) 88, 115, 238
growth 237
in manufacturing 94
use in Haynes–Dinc shift-share model 88, 90–91
view of productivity 90
Toyota Motor Corporation 386
trade 5, 7, 41, 53–4, 73, 80, 194, 196, 218, 241, 345, 375, 377–8, 392, 412, 415, 493, 581
associations 261, 581
balance 7, 371
bilateral 197
costs 3, 14, 54, 57, 79, 393, 395, 406
iceberg trade costs 55–6
external 387
flows 77, 79, 204
interregional 382
free 67, 73–4
role of economic integration in 399
Index

imbalances 573
international 55, 69, 77–9, 88, 106, 109–10, 362, 375, 413
flows 35, 38, 369, 391, 407
free 68
interregional 52, 57, 62, 101, 106, 115, 370, 381–2
coefficients 381
interstate 375, 379
intra-industry 371, 378–9
intra-metropolitan 383
liberalization 399, 406
use of geographical economics models in measuring impact of 400–401
margins 52
neoclassical
models 11
theory 67
retail 224, 413
patterns 15, 491
wholesale 51
trade theory 67
neoclassical 67–8
transport/transportation 51
air 1
changes 424
container 1
costs 1, 71–2, 375, 396
infinite 74
investment in 419
technological advances of 468
Turner, A.
theory of ‘neogeography’ 127–8
Tweed Economic Development Corporation
Tweed and Northern Rivers Input Output Economic Analysis Model (2002) 588
two-stage least squares (2SLS) 161, 164
EC2SLS 168
unemployment 6, 469, 481, 485, 581, 609
influence on migration 479–81
personal 480
United Kingdom (UK) 4, 111, 128, 165, 292, 326, 360, 371, 407, 469, 478–82, 491, 508
automobile industry of 293
Bristol 130
British Labour Force Survey (LFS) 476, 480
British Social Attitudes Survey (BSAS) 477
government of
Index of Multiple Deprivation 132
Haydock 492
Household Panel Survey 473
industrial distribution in 83
internal migration in 475–6
job-related migration in 477
Liverpool 492
London 470
Manchester 492
Office for National Statistics (ONS)
UK Family Spending and Family Expenditure Surveys 499
Ordinance Survey GB 128
public sector of 15
Scotland
Falkirk 495, 500
General Register Office 498
Glasgow 495, 498, 500, 507
Grampian 205
Kilmarnock 495, 500
Motherwell 495, 500
Paisley 495, 498, 500
Silverburn 495–6, 498–9, 507
United Nations (UN)
Conference on Trade and Development (UNCTAD) 573
Industrial Development Organization (UNIDO) 573
international trade data of 362
Agency for International Development 464, 466
Aid to Families with Dependent Children (AFDC) 33
Appalachia Regional Commission 464, 466
automobile industry of 293–4
Boston, MA 515
Catalog of Federal Domestic Assistance 444
Census Bureau 444, 466, 468
Annual Surveys of State and Local Government Finances 466
Consolidated Federal Fund Report (CFFR) 464, 466
Census of Population 129, 473–4, 478, 495
Chicago, IL 382
Cleveland, OH 226
Columbus, OH 28
Department of Agriculture (USDA) 464, 466
Department of Commerce 464, 466
Department of Defense 464, 466
Department of Energy 464, 466
Department of Health and Human Services 464, 466
Department of Homeland Security 464, 466
Department of Housing 464, 466
Department of Interior 464, 466
Department of Transportation 464, 466

Charlie Karlsson, Martin Andersson and Therese Norman - 9780857932679
Downloaded from Elgar Online at 04/12/2019 01:51:57AM
via free access
Detroit, MI 294
education system of 444–5, 464
elderly migration in 475
Environmental Protection Agency (EPA) 464, 466
Federal Emergency Management Agency 464, 466
Food Stamp program 33
gender-specific migration 476
GDP per capita 378
Los Angeles, CA 221–2
Mankato, MN 119
manufacturing sector of 94, 96, 101
employment in 83, 93–4, 101
Nuclear Regulatory Commission
 Office of the Chief Information Officer 464, 466
Oskaloosa, IA 220
regional rate of migration 480–81
San Francisco, CA 129
semiconductor industry of 293
Silicon Valley 515, 580
Tucson, AZ 228
urban economics 6
urbanization 5–6, 620
economies 6, 413
US Small Business Administration 516
US University Consortium for Geographic Information Science 124

Varenius project 124
vector autoregressive (VAR) models 164, 166, 168, 222
analysis 229
estimation of 168
panel framework 165–7
spatial (SpVAR) 166–7
structural 164
Venables, A. 75–6, 78
Vernon, R.
 international product cycle theory 8
Vietnam
 War (1955–75) 404
wage–rental ratio 68–9
wages 45, 70–73, 78–9, 119, 216–18, 220, 228, 391, 393, 402, 406, 423–7, 481–2, 619, 630
industrial 398, 407
local 67
nominal 78
production 93
real 73–5, 77–8, 80, 393, 395–7, 399, 407, 470
spatial disparities 264
spatial variation 392
spillover 165
wage equation 392–3, 395, 399, 403
Walras's law
 concept of 48
World Bank 400
World Trade Organization (WTO) 573
Agreement on Trade-Related Investment Measures (TRIMS) 572–3
World Value Survey (WVS) 329
Zipf, G.K. 414
 Principle of Least Effort 413