

Index

A

- Accession migrants, 129–130
- Account
 - based model, 29
 - movement, 31, 74
- Accounting
 - equations, 29, 36–37, 44–46, 73, 76, 79, 82–83
 - framework, 29, 66
- Active ageing, 168–170, 177, 179, 190–191
 - scenario, 168, 177, 179, 190–191
- Adjustment, 55–56, 61, 63, 67, 85–87, 89, 127, 135, 137
- Age
 - profiles, 5, 67, 69, 71, 85–87, 91, 93–94, 142–143, 168
 - sex profiles, 90, 92
 - time, 63–65, 72, 74, 144
 - plans, 63–65, 72, 144
- Agent-based modelling (ABM), 193, 201–203, 205
- Annual Population Survey (APS), 120–121, 131
- Area profile, 128, 135
- Attractiveness factor, 218–220
- Aussiedler, 52
- Auto-Regressive Moving Average (ARIMA) method, 5

B

- Behavioural models, 200–203
- Benefits, 52, 85, 94, 118, 122, 133, 145, 165, 167, 170–171, 174–177, 179–182, 185–186, 189–190, 194, 200, 204–205, 210
- Best-fit model, 217
- Bi-regional model, 74
- Births, 5, 7, 12, 19, 21, 23, 29–38, 44–48, 51, 64–66, 69, 71, 73–79, 82–83,

- 87–88, 99–100, 102–103, 117, 133–134, 145–146, 151, 153, 161, 165, 169, 171–172, 175, 180, 182, 187–188, 199, 201–202, 211

- Body mass index (BMI), 14–15, 184
- British Household Panel Study (BHPS), 16, 196–197, 199, 203

C

- Centre for Interaction Data Estimation and Research (CIDER), 116, 138
- Child
 - dependency ratio, 23
 - mortality, 100–102, 104
- Chronic migrants, 145
- Clusters, 108–111, 154–155, 161, 203
- Cohort-component model, 1, 117
- Compression of morbidity, 170, 183
- Courgeau's *k*, 141–162
- Cross-national comparison, 142–148, 153–158

D

- Data collection, 48, 119, 126, 145
- Deaths, 15, 17, 19, 29, 31–38, 43, 45, 48, 65–66, 69, 71, 73–75, 77, 79, 82–84, 87–88, 99–100, 117, 133, 135, 175, 182–184, 199, 211
- Delaunay triangulation, 215
- Dementia, 184
- DEMIFER, 42, 57, 116, 133, 136, 138
- Demographic
 - accounts, 29–32, 36–39, 193, 199
 - analysis, 1–2, 205
 - experts, 5, 10
 - momentum, 7, 21, 23
 - processes, 85
 - structure, 53

Demographic (*cont.*)

- transition, 2, 7–12, 20–25, 99–102, 166, 198
- trends, 69, 108, 110, 112, 133, 167
- Demography, 61, 82, 168, 177, 180, 190
- Deprivation, 15–18, 102, 105–110, 187
- Disability-free life expectancy, 16, 169, 172–173
- Disaggregation, 50, 62–64, 67, 147, 153, 156–157, 194–195, 203, 218–219
- Disease-free life expectancy, 172–173
- DNA, 209, 212–213, 222
- Drinking, 185, 187
- Dynamic microsimulation, 198

E

- ECPOP, 41–43
- Elderly population, 6, 47, 53–55
- Emigration, 22–23, 31, 45, 47, 49–50, 55, 57, 63, 67, 73, 75, 77, 80–82, 84, 117, 119–121, 127, 136
- rates, 22–23, 45, 49, 57, 73, 75, 77, 80
- Error, 5, 47–50, 55–57, 87, 94, 132, 135, 145, 204, 217
- Ethnic
 - group, 10–12, 19–24, 69, 103, 123, 125, 129
 - population estimates, 11, 19
 - population projections, 39
- Ethnicity, 19, 105–110, 112, 196–197, 202
- European Demographic Databank (EDD), 116, 133–136, 193, 205
- European Spatial Planning Observation Network (ESPON), 42, 116, 133, 138
- Event-based modelling, 199–200
- Evolution, 57, 160, 202, 209–222
- Exogenous constraints, 63, 65–66, 73, 99, 211–213, 222
- Expectation-maximization (EM), 29–30, 36–39
- Expected life, 171, 174

F

- Fertility
 - level, 2, 4, 8, 103, 105
 - rate, 4, 6–10, 12, 46–47, 52, 57, 63–65, 69, 74–77, 82, 88, 99–100, 102–112, 135, 162, 200
 - regime, 8, 112
 - trends, 7–12, 100, 102–103, 110
- Five-year migration, 150, 154
- Flag 4 GP registrations, 121

G

- Geodemographics, 196, 203
- Gini coefficient, 171
- Gross Domestic Product (GDP), 19, 117, 168, 170–171, 173–174, 176–181, 185, 188, 190, 200

H

- Health
 - care, 2, 19, 165, 170, 172, 175, 195, 205
 - deterioration, 176, 179, 186
 - improvements, 167, 176, 179–180, 185–186
 - inequalities, 15–16
 - policy, 102, 180–181
- Health adjusted life expectancy (HALE), 169, 171
- Healthy
 - ageing, 165–191
 - life expectancy, 167–169
- HIV/AIDS, 14, 202
- Hoffenheim effect, 17
- Household dynamics, 193–194, 197–200

I

- Immigration, 2, 5, 9–10, 21–22, 31, 46, 50, 52, 57, 63–64, 67, 73, 75, 78, 80, 88, 103, 117–122, 125, 127, 129–133, 136
- Improving Migration and Population Statistics (IMPS), 118
- Infant mortality, 51, 99–112
- rate, 99–100, 102–111
- Information systems, 115–139
- Integrated Public Use Microdata Series (IPUMS), 142, 148–151, 162
- Intermediate geography, 132
- Internal migration
 - intensity, 161
 - model, 63, 66–67
- International migration, 1, 21–23, 41–58, 69, 115–139, 141
- rate, 23, 124–125, 131, 133, 136
- International Passenger Survey (IPS), 116, 118, 120–121, 127, 131–132, 137
- Inter-regional migration, 44–45, 47, 74, 121, 160
- Iterative
 - calculation, 63, 68
 - proportional fitting (IPF), 66, 80–81, 85, 195–196

L

- Labour Force Survey (LFS), 11–12, 120–121, 132, 177, 185, 187
- Lagrangian multipliers, 210
- Less developed regions (LDR), 6–7, 10, 13
- Life
 - table, 1, 16, 20, 64, 88
 - expectancy, 2–3, 5, 12–17, 19–21, 47, 51, 57, 64, 69, 71, 88, 117, 162, 165, 167–174, 176–177, 179, 181–188, 190, 203
- Lifetime migration, 143–145, 151–152, 155–160
- Local area projection, 81–85
- Local migration indicator system, 131
- Longer working, 23
- Longevity, 3, 137, 165–191

M

- Macrosimulation, 63, 65, 72–73, 202
- Microsimulation, 63, 65, 69, 193–205, 193–205
 - model (MSM), 65, 69, 193–205
- Mid-Year Estimates (MYE), 112, 117, 129, 132, 135
- Migration
 - intensity, 67, 142–143, 146–148, 151–154, 156–160
 - interval, 143, 145, 147–149, 155, 160
 - monitoring, 115–139
 - probabilities, 73, 75, 84, 93
 - statistics, 50, 116–120, 122, 127, 132–133, 144
- Migration Statistics Improvement Programme (MSIP), 118, 131
- Modifiable Areal Unit Problem (MAUP), 146–147, 162
- Morbidity, 16, 167, 172–173, 183–184, 189
- More developed regions (MDR), 6–7, 10, 12–13
- Mortality
 - inequalities, 14–20
 - rates, 7, 13–14, 51, 57, 83, 88, 94, 99, 102–112, 198
 - trends, 2, 12–15, 100, 111
- Mover, 119
- MULTIPOLES, 41–58
- Multiregional model, 41–58, 64, 66–67, 73–74, 77–79
- Multistate
 - demographic accounts, 29–32
 - population, 30–31, 42–47
 - model, 42–47

N

- National e-Infrastructure for Social Simulation (NeISS), 204
- National Insurance Number (NINo) statistics, 120–121, 127, 129, 131–132
- Nelson-Aalen estimator, 38
- Net migration, 3, 43, 45, 47–50, 57, 63, 67, 71, 73, 77, 82, 87–89, 93, 99, 123–126, 129, 211
- NEWDSS, 61–94
- New Migrant Databank (NMD), 116, 126–133, 137–138
- NHS Central Register (NHSCR), 117, 120–122, 125–127, 134, 137, 198
- Notation, 44–45, 74–76

O

- Obesity, 14, 183–184, 187, 195, 197, 201
- Occurrence-exposure rate, 34, 38
- Old age dependency ratio (ODR), 23, 53–54, 57
- Overseas migration model, 67, 73

P

- Passive ageing, 168, 176, 179
 - scenario, 168, 176, 179
- Patient Register Data System (PRDS), 117, 120–121, 125–126, 134, 137
- Physical disability, 167
- Poisson model, 38
- Population
 - account table, 35–37
 - accounts, 29–39, 42, 44, 70, 82, 93, 99
 - ageing, 2, 5, 13, 20, 23–25, 54–55, 89, 165, 191
 - change, 1, 4, 7, 29, 51–53, 82, 87, 91, 93, 99, 103, 112, 117, 133–134, 141, 211
 - forecasting, 4, 41, 56
 - growth rate, 2
 - projection model, 13, 41, 65, 67–69
 - projections, 1, 3, 5, 10, 13, 21–22, 41–42, 47, 61–94, 117, 129, 181
 - projection system, 61–71
 - reconstruction, 193, 195–197, 200
 - at risk, 22, 32–33, 36, 43, 45, 82, 84, 135, 147
 - stocks, 29–30, 34, 48, 50, 55, 70
 - structure, 7, 24–25, 53, 88–89, 91, 117, 133, 166
- Probabilistic projections, 4, 63
- Projection
 - assumptions, 22, 69–71, 77, 82, 85, 87–89
 - equations, 46–47, 68
 - outputs, 62–64, 69–72, 74, 79, 85, 93

Q

Quality adjusted life years (QALY), 182

R

Railway lines, 213, 217, 222

Regional projection model, 79–81, 84–85

Regression, 100, 104–109, 147, 154,
161–162, 196

Replacement fertility, 2, 7–9

Retail model, 209–211

S

Scenario, 1, 4, 10, 14, 23, 42, 47, 51–53, 57,
76, 133, 167–168, 173, 176–181

Sex ratios, 70–71, 77, 79, 81, 85–87, 94

Short-term migration, 117–118

Simulated annealing, 196–197

Smoking, 14, 183, 187, 189, 195, 201

Social policy, 180–188

Socioeconomic influences, 106–109, 136

Spatial

interaction model, 162, 195, 210

microsimulation, 193–205

model (SMSM), 193–195, 199–200,
203, 205

Special Migration Statistics (SMS), 120,
122, 124

Spider network, 211, 214–216

State pension age (SPA), 5, 166–168, 174, 176,
185–187, 189–190

Static ageing, 198

Stochastic population projections, 1

Sub-national population projections (SNPP),
117, 128–129

System of cities, 209–222

T

Taxes, 166–168, 170, 173–180, 190

Time, 2, 12, 16–17, 22–23, 30–34, 38–39,
44–46, 64–66, 72, 74–77, 87,
100–105, 112, 122, 134, 144

Total fertility rate (TFR), 3–4, 6–10, 12, 22,
47, 52, 57, 69, 71, 75–76, 82, 88,
103–109, 135, 162

Total International Migration (TIM), 117, 122,
127, 129–132

Total support ratio (TSR), 166

Townsend index, 17, 108

Transition

accounts, 31, 42, 74, 81, 83–85, 93

accounts-based model, 74, 81, 83–85

-based modelling, 198

Transport system dynamics, 218, 222

U

Uncertainty, 9, 49–50, 70

V

Validation, 203–205

W

Wages, 166–167, 173–181, 186, 190

Web-based Interface to Census Interaction
Data (WICID), 116, 122–126,
137–138

Work, 1–2, 4, 9, 23, 49, 88, 100, 116–122,
127, 137–138, 141–144, 146, 162,
166–167, 170, 174–177, 180–182,
184–187, 189–190, 193–195,
197–198, 202–203, 218

Worker Registration Scheme (WRS), 120, 122,
129–131

Working life expectancy, 168–173, 185–187,
190

World population growth, 2–5