Index

Abe, Y. 38
ability rating system 36, 37
adjustment costs 152, 153
adverse growth effect 59, 66, 68–70
age
adjustment 4–5, 11
composition effect xx, 2–7, 8–9, 12
labor participation 27–30, 33–6, 54
mandatory retirement 2, 3, 27, 34
preferred working 27–8, 36, 54
share, unemployment and 8–12
structure, unemployment and xx, 3–8
ageing
elderly care 75–88
employment and 1–22
firms (downsizing) 14–17, 18
immigration/investment policies 91–118
labor force 57–70, 74
macroeconomic approach 1–12
microeconomic approach 12–21
unemployment and 2–12
ageing population
labor market policy and 153–5
problems xvi–xix
trends/patterns xv–xvii, 75–6
agricultural sector 136, 154
altruism 59, 166, 169
Aoki, Masahiko 19
APEC 148
Ariyoshi, Sawako xvi
Asaoka, Hitoshi 25, 34
ASEAN countries 145
Asia 143–53
autarky equilibrium 81–2, 102–4
autarky interest rate 104, 107, 118
baby boom generation 2–3, 12, 25, 123
Baker, M. 159
balance of payments 78, 135
balanced growth path xviii, 61–6
Bank of Japan 97–8
bankruptcy 20, 21
Ben-Akiva, M. 171
bequests 59–60, 62
Bhagwati, J.N. 111
birth rates/births 12, 123
Blau, D.H. 159, 177
blue-collar workers 14, 21
Bogor Declaration 148
Bourguignon, F. 165
brain drain 111, 137
Brecher–Diaz-Alejandro effect xxii, 129–30, 147, 150, 156
Bresnahan, T.F. 160, 163, 164
capital xviii
-abundant countries 125, 138–40
accumulation 93, 106, 107, 110
deepening 57, 59, 66, 69–70
-intensive goods 138–41, 142, 145–7
marginal product of 107, 110
-scarce countries 125, 150
see also foreign direct investment;
human capital; physical capital
capital–labor ratio 66, 81–2, 83, 102–4, 105, 106–12, 117
capital flows (into LDCs) 113–18
capital goods 57
capital markets, world 107–13
capital movement 78, 87, 144
to ease ageing problems 91–118
see also foreign direct investment
Caplan Research Committees 20
careers 20, 45–6
cheaper foreign labor 128–9, 131, 132
Chiappori, P.A. 165, 177
Child-Care Leave Law 26, 50–51
children
care of xx–xxi, 26, 45–9, 50–51, 56
dependency ratio 124
rearing 26, 45–6
China 122, 138–53

183
Chuma, Hiroyuki 20
Cobb–Douglas economy 82–4
Cobb–Douglas production function 67, 82–4, 85, 104, 105, 109
Cobb–Douglas utility function 81–4, 101, 160
compensation (for child care) 45, 56
constant elasticity of substitution economy 84–6
production function 68
utility function 81, 82, 84–5
constant returns to scale production function 81
consumption 59, 63, 65–70, 131, 136
present/future 75, 78, 79–80, 81
contract work/employees 28, 37
cooperative families 159–77, 180–2
corruption 114, 115, 116, 117
costs
adjustment 152, 153
elderly care 75, 76, 77–8, 101
labor 1, 12, 13, 128–9, 131, 132
crime 133–4
Cutler, D.M. 57, 70
Davis, Steven J. 17
demographic shifts 1–12
dependency ratio 122–5, 153
Diamond, Peter 106
Diaz-Alejandro, C.F. 129
see also Brecher–Diaz-Alejandro effect
dispatched workers 48, 49
disposable income 173, 174
double income 29, 30, 54
downsizing (ageing firms) xx, 14–17, 18
dynamic inefficiency 106–7, 110, 111
early retirement 14, 15–16, 17, 19
Norway 159–77, 180–2
East Asia 147–50
economic effect of migration 125–32
economic growth see growth
Economic Planning Agency (EPA) 78
economic welfare 125, 126–7
education 112, 137
NEETs xvii
public expenditure on 114, 117
unemployment and 8–12
work-related 28–30, 33–6, 54
educational attainment 9
labor participation and 28–30, 33–4, 42, 44, 47–8, 54–6
elderly care
ageing population 75–88
costs 75, 76, 77–8, 101
demand for 94–6, 101, 105, 110
elderly workers
intention to work 26, 27–31, 36–7, 54
labor participation xxii, 24–37, 49–50, 54–6
working behavior of 26–37
working conditions 31–7
see also retirement
 employees
senior (encouraged to retire) 17, 19
transfer of xx, 13, 19–20
see also elderly workers; labor; workers
employment
adjustment 12–21
demand side xvii–xviii
effects of ageing on 1–22
growth rates 17, 18
timevi, xvii, xviii, 14
NEETs xvii
supply side xvi–xviii
‘3–D’ jobs 134–5
of young workers 12–14
see also job(s); work
equilibrium
autarky 81–2, 102–4
balanced growth path 61–6
Stackelberg xxiii, 159, 160, 163, 165, 171, 172–6, 177, 180–81
error correction model (ECM) 116
ESRI xv, xix–xx, 44
exports 135–6, 146, 154
family
members who need nursing 46, 48, 56
non-cooperative/cooperative 159–77, 180–82
see also children; husbands; wives
family-friendly systems xx–xxi, 26, 45–9, 50–51
‘family utility’ function 160
fertility rate
economic growth and 57, 58
everly care and 75, 80, 82–5
immigration and 91–4, 100–101, 104, 106, 108–9
labor participation and 24–5, 45
policy options and 121–4, 125
Filipino workers 125–6
firm-specific skills xviii
firms
family-friendly systems xx–xxi, 26, 45–9, 50–51
large 28–9, 30, 34–5, 36
multinationals 144
outplacement businesses 19, 20–21
size 54
transfer of employees xx, 13, 19–20
fiscal expenditure 133
flex-time system 43, 44, 46, 55, 56
flexible work 28–9, 36, 54
foreign direct investment
to ease ageing problems 91–118
to East Asia 149–50
international migration and 86–8
policy alternatives 121–56
foreign exchange earnings 135–6
foreign labor, cheaper 128–9, 131, 132
‘freeter’ xvii
Fuchs, Victor 77
full-time work 25, 28–30, 34–9, 43, 44–5, 47, 49, 54
game theory xix, 171–4
Garber, Alan M. 77
Genda, Yuji xx, 3, 4, 14, 17, 20
gender 54
unemployment and 8–12
see also men; women
generalists 30, 36, 54
generalized Tobit estimators 32
see also Heckit procedures
goods
capital 57
capital-intensive 138–41, 142, 145–7
labor-intensive 138, 144, 147, 154
market 63
public 112
Goto, Junichi 78, 87, 121, 128, 145–6, 149, 155
governance (in host LDCs) 116, 117
government effectiveness 114, 115, 117
graduates 14
group-specific unemployment rate 4, 6, 8
growth
balanced growth effect xviii, 61–6
economic 57–70, 74
effect (adverse) 59, 66, 68–9, 70
guest workers xviii, 88, 93, 112, 118
Gustman, A.L. 159, 173
Haltiwingler, John C. 17
Hamada, Koichi 111
Haugen, F. 162, 168
Hayashi, Fumio 105
health care systems 91, 92, 112
health condition 54
health problems 28–9, 30, 33, 36
Heckit procedures 25, 26, 30, 31–6
Heckman, J.J. 163
Henretta, J.C. 159
Hernæs, Erik 160, 161, 162, 169
Hiedemann, B. 159, 171, 173, 177
Higgins, Mathew 116
Higuchi, Y. 34, 40, 43, 44–5
holiday systems 46, 47, 56
home care nurses 94, 96
home country (effect of emigration) 135–7
Horioka, Charles Yuji 78, 104
Horlacher, David E. 105
Horney, J.M. 177
host country
corruption and poor governance 116, 117
impact of migration 125–35
hours-worked function 32, 35–6, 38, 42
hours of work 28, 54
household
behavior 159–77, 180–2
choice problem 79–81
income 41, 42, 170
savings 101, 104–6
Household Economic Research Institute 38
housing loans 32, 33, 42, 44, 47, 48, 54, 55, 56
human capital 45, 57
accumulation 58, 60, 61
  -based growth model 58–61, 63, 65–6, 68
investment 14, 58, 60, 63, 66, 68
  in LDCs 116–18
Hurd, M.D. 173
husbands
  income 43, 44, 47, 48, 55, 56
  self-employed 42, 44, 55
  utility functions 162–5, 172
immigration xviii, xix
  to ease ageing problem 91–118
  elderly care and 86–8
  social cost of 127, 132–7
imperfect substitutes 58, 59, 61, 68
imports 146
income
  amount one needs 28–9, 54
  creation 135–6, 138
  disposable 173, 174
  double 29, 30, 54
  effect 80, 85, 101
  female earnings function 181–2
  household 41, 42, 170
  of husbands 43, 44, 47, 48, 55, 56
  marginal utility of 168
  national 126–7, 140, 142
  see also pensions; wages
income-adjusting behavior (of females) xx, 25, 38–45, 55
Indonesia 122, 138–53
industrial relations 16
information technology 118, 154
infrastructure 115, 116, 118
intention to work 26, 27–31, 36–7, 54
interest rate 81, 83, 85, 100, 103
  autarky 104, 107, 118
  world equilibrium 107, 108
International Investment Position 95–7
international labor migration 86–8
internationalization 132–3
inverse Mill’s ratio 32, 35–6
investment
  to ease ageing problems 91–118
  see also foreign direct investment
Japan (stylized facts) 94–9
Japan Institute of Labour 48
Jinzai Bank 20
job(s)
  changing 28–9, 33, 34, 54
  creation 17
  destruction 17
  displacement effect 14
  -hunting duration 19–20
  see also employment; work
joint utility 162, 165–8, 174–6, 177
Kageyu spa 86
Kapteyn, A. 165
Karatzas, George 77
Katz, Lawrence F. xx, 1, 4, 5
  keiretsu firms xx
  knowledge 58, 136–7
Kohara, M. 38, 43, 44
Kooreman, P. 160, 163, 164, 165, 171
Korea 122, 138–53
Krueger, Alan B. xx, 1, 4, 5
labor xviii
  -abundant countries 125–6, 138, 141, 150
  cheaper foreign 128–9, 131, 132
  costs 1, 12, 13, 128–9, 131, 132
  creation/saving 155
  demand (decline) 12–21
  -intensive products 138, 144, 147, 154
  migration see migration
  mobility 13, 88, 108
  productivity 57, 111–12, 125–6, 153–4
  -scarce countries 126, 140
  see also capital–labor ratio;
  employees; workers
labor market
  participation see labor participation
  policy, ageing population and 153–5
  world 107–13
Labor Market Study Group xix–xx, 4
labor participation
  elderly xxi, 24–37, 49–50, 54–6
labor shortages 109–10
  alternative policies 121–56
labor supply
  elderly and female 24–51, 54–6
  shifts, unemployment and 1–12
Lane, Philip R. 116
large companies 28–9, 30, 34–5, 36
leisure 166–8, 173, 174, 176
length of service 56
less developed countries 100, 102, 109
capital flows into 113–18
migrant workers from 136–7
life expectancy 99, 104–6, 108–9, 116–17
elderly care and 75, 94, 110
pensions and 91, 92, 100
lifetime employment xvi, xvii, xviii, 14
likelihood functions 32–3, 165
non-differentiability of 180–81
likelihood ratio test 172–3
Lincoln, E. 78
living expenses 28–9, 54
log-likelihood functions 171, 173–4
Lucas, Robert E., Jr. 65, 67
Lumsdaine, R.L. 159
McElroy, M.B. 177
macroeconomic approach 1–12
Maddala, G.S. 163
Maeda, N. 45
Malaysia 122, 138–53
male breadwinner model 25
managers 32, 34, 54
mandatory retirement 2, 3, 27, 34
manufacturing sector 118
marginal product of capital 107, 110
marginal productivity of labor 126
marginal propensity to consume 136
marginal utility of disposable income 173, 174
marginal utility of income 168
marginal utility of leisure 168, 173, 174
marginal value product of labor 128–9
market wage 32, 34–5, 36
married women see working women, married
maternity leave 45
maximum likelihood method 171
medical care 75, 77–86, 94, 95
Meiji Restoration 154
men 28–9, 33
leisure 168, 173, 174
unemployment (age composition) 2–3
see also husbands
microeconomic approach 12–21
migration xviii
economic effect of 125–32
impact 125–37
international labor 86–8
policy alternatives 121, 122–56
policy implications 150–53
social cost of 127, 132–7
Milesi-Ferretti, Gian Maria 116
Millennium Project (ESRI) xv
Ministry of Health, Labor and Welfare 13, 16, 44, 94–5
Ministry of Health and Welfare 96
Ministry of Labour 38
Ministry of Public Management, Home Affairs, Posts and Telecommunications 94–5
Ministry of Welfare 76
Mitchell, O.S. 159
Miura, Fumio 75, 76
moral hazards (in health care) 77, 78
mortality rates 57, 94
mothers/mothers-in-law 47, 48, 56
Murata, Sujiro 116
multinational corporations 144
Nash bargaining game/model 165, 177
national income 126–7, 140, 142
National Institute of Population and Social Security Research 24, 67
NEETs (not in education, employment or training) xvii
negative externalities 152
negative income effect 131
Nikkeijin Kyokai 137
Noguchi, Yukio 78
non-adjusting females 40–42
non-cooperative families 159–77, 180–82
non-differentiability of likelihood functions 180–81
non-tariff barriers 144, 146, 148
non-tradable-good-effect 128, 130–31
Norway (retirement) 159–77, 180–82
nursing care 75, 76–88, 94–5, 96, 101, 105, 110

observed proportions 174–5
Obstfeld, M. 116
OECD countries 91–3, 94, 100, 104, 109–11, 113, 114, 118
Ohkusa, Y. 45
Ohta, Souichi 14
Ohtake, F. 38
old population ratio 122–5, 153
on-the-job training xviii, 14, 61
one or two family-friendly systems 47, 48, 49, 56
open economy
  ageing problems 91–118
  elderly care 75–88
O’Rand, A.M. 159
ordered probit models 25, 26, 27–31, 36
Organization for Stability of Industry and Employment 20
outplacement companies 19, 20–21
overlapping generations models 59–61, 75, 78–86, 91, 93, 99–107
‘parasite singles’ xvi–xvii, xx
Pareto optimality 110, 165
part-time work 25, 28, 37–8, 43–5, 48–9
pay-off matrix 163–4
pensions
  labor participation and 29–30, 33, 34, 54
  pay-as-you-go 91, 92, 100, 159
  taxation 92, 169, 170, 175, 176
per capita income 114, 117
perfect competition 122, 128
perfect substitutes 67–8
Philippines 122, 125–6, 137, 138–53
physical capital 57, 59, 61–2, 65, 67
political stability 114, 115, 117
population growth
  economic growth and 57–8, 65–9
gross 58, 66–8, 74
  policy and 92–3, 110, 114, 116–17
population pyramid (changes) 94
portfolio foreign investment 97
positive consumption effect 131
positive externalities 133, 152, 153
predicted probabilities/proportion 174–5
preferred working age 27–8, 36, 54
price discrimination 142–3
private capital flow 114, 115, 116, 117
probit estimation 33
problem-solving skills 14
production function
  Cobb–Douglas 67, 82–4, 85, 104, 105, 109
  constant elasticity of substitution 68
  constant returns to scale 81
productivity 57, 111–12, 125–6, 153–4
profit maximization 139, 141
‘Projection of Japanese Population’ 24
Public Employment Service Agency 19, 20
public goods 112
‘pure effects’ of ageing 8
Ramaswamy, V.K. 110
Raut, Lakshmi K. 87
re-employment system 46, 56
recruitment policies 15, 16
Reiss, P.C. 160, 163, 164
remittances (from emigrants) 121, 135–6
rental rate 79, 80–84, 86, 107–8
‘replacement migration’ 93
reservation wage 32
retirement
  age of 36, 161
  early 14–16, 17, 19, 159–77, 180–82
  experience 29, 30, 33, 34–5, 54
  mandatory 2, 3, 27, 34
  non-cooperative/cooperative families 159–77, 180–82
  senior employees 17, 19
Robinson, James A. 66
Røgeberg, Ole J. 170
Rogoff, K. 116
rule of law 114, 115, 117
rural–urban migration 136
Sakai, Hirotsugu 25, 34
Sala-i-Martin, Xavier 66
Samuelson, Paul 106
Sato, Yuko 77, 92
Sato-Oishi, A. 78
Sauvy, Alfred 57–8
savings xviii–xix
  elderly care and 75, 78, 80, 82, 84–7, 92
Index

household 101, 104–6
investment gap 116
Schiﬀ, Maurice 128
Schuh, Scott 17
self-employment 42, 44, 49, 55
senior employees (encouraged to retire) 17, 19
seniority wage system xviii, 1, 12
separate utility functions (non-cooperative households) 162–5
sex see gender
Shigeno, Y. 45
sickness history 168, 170, 173
Simon, Julian 57
‘single child per family’ rule xix
skilled workers 59, 61, 65, 112–13, 118, 137
skills xvii, 146
firm-speciﬁc xviii
transfer 136–7
social capital 128
social effect of migration 132–5
social security
eﬀect on married women xxi, 25, 37–45
expenditure (trends) 94, 95
systems xviii, 91, 92, 100, 104–5
tax rate 100–101, 105, 112
see also pensions
social utility function 138–9, 141, 145
Special Survey of the Labor Force 10–11
specialists 28–30, 33, 34–7, 54
spouses
allowance 40, 42, 43, 44, 55
retirement 159–77, 180–82
tax treatment 38, 40, 44
Srinivasan, T.N. 66, 87, 111
Stackelberg equilibrium xxiii, 159, 160, 163, 165, 171–6, 177, 180–81
Statistics Bureau 2, 94–5
Steinmeier, T. 159, 173
Strom, Steinar 161, 162, 169
substitution
constant elasticity of 68, 81–2, 84–6
eﬀect 80, 85, 101
Summary of Vital Statistics 96
support ratio 58, 67, 70, 74, 92–3
survival probability 100, 101
Swait, J. 171
system to telecommute 43, 44, 46, 55, 56
Taiwan 122, 138–53
tariffs 130, 140, 142–4, 146–8
taxation 160, 162
eﬀect on married working women xx, xxi, 25, 37–45
exemption for spouses 38, 40, 41, 44
of foreign workers 110–11
pensions and 92, 169, 170, 175, 176
social security 100–101, 105, 112
technological progress 57, 78
technology
in health care 75, 76, 77, 78, 87
in less developed countries 115
transfer 136, 150
telecommunications 114, 115, 117, 118
see also system to telecommute
teleworking 28, 43, 44, 46, 55
temporary work/employees 28, 37
Teruyama, Hiroshi 17
Thailand 122, 138–53
‘3–D’ jobs 134–5
three or more family-friendly systems 47, 48, 49, 56
Todaro, M.P. 136
Tokyo Round 148
total factor productivity 87–8
trade barrier eﬀect 128–9, 131–2, 156
non-tariff barriers 144, 146, 148
tariffs 130, 140, 142–4, 146–8
see also Brecher–Diaz-Alejandro eﬀect
trade liberalization
alternative policies 121, 122–56
eﬀect of 148–9
policy implications 150–53
training 146
NEETs xvii
on-the-job (OJT) xviii, 14, 61
skills acquisition (by emigrants) 137
work-related 28–30, 33, 34–5, 36, 54
transfer of employees (between firms) xx, 13, 19–20
uncertainty 99
under-employment 136

Index
unemployment
ageing and xx, 1, 2–12
alleviation of domestic 136
male, age composition and 2–3
propensity (effects) 9, 11
US comparison 3–8
United Nations 92, 93, 95, 124, 135
unskilled workers 59, 61, 65, 112–13, 137
urban unemployment 136
Uruguay Round 131, 148
USA
age structure and unemployment 3–8
elderly health care 77
immigration policy xviii, xix
utility functions
Cobb–Douglas 81, 82–4, 101, 160
constant elasticity of substitution 81, 82, 84–5
economic attributes and 166–8
family 160
joint 162, 165–8, 174–6, 177
separate 162–5, 166–8, 172
social 138–9, 141, 145
utility maximization 138–9, 141, 160,
162, 163–4, 166
Uzawa effect xxii, 147
see also Brecher–Diaz-Alejandro effect
voice accountability 114, 115, 117
voluntary retirement systems 17, 19
Vuong, Q.H. 172
wage-rental rate 79–80, 81–4, 104
frontier 86, 107–8
wagefit 32, 35, 36
wages 87, 111, 117, 118, 126, 137
cheaper foreign labor 128–9, 131, 132
female earnings function 181–2
hourly 41, 42
market 32, 34–5, 36
profile 59, 63, 65–6
reservation 32
seniority system xviii, 1, 12
wealth 168
Weekly Diamond 16
welfare 106
economic, migration and 125, 126–7
effect 80–81, 131
impact of foreign direct investment 149–50
impact of migration 147–8, 150–53
impact of trade liberalization 148–53
white-collar workers 14, 21
wives
utility functions 162–5, 172
working see working women, married
within-age-group effect (unemployment) 6
women
effect of tax/social security xx, xxi, 25, 37–45
female earnings function 181–2
income-adjusting behavior 42–5
labor participation xx–xxi, 24–6, 37–50, 51, 54–6, 121, 125, 154
leisure 173, 174
non-adjusting females 40–42
see also working women, married
work
flexible 28–9, 36, 54
full-time see full-time work
hours of 28, 38, 54
intention to 26, 27–31, 36–7, 54
old 29, 30–31, 54
part-time see part-time work
see also employment; job(s)
work-related education/training 28–9, 30, 33, 34–5, 36, 54
workers
aged over 45 12–13, 16–17
dispatched 48, 49
guest xviii, 88, 93, 112, 118
women see working women, married
young (decline in hiring) 12–14
see also employees; labor
working behavior (of elderly) 26–37
working conditions (of elderly) 26, 31–7
working women, married
effect of family-friendly systems 45–9
effect of social security xxi, 25, 37–45
effect of taxation xx, xxi, 25
Index

World Bank 115, 118, 135
world capital and labor markets 107–13
World Development Indicators 118
world market clearance 132

Yamada, Masahiro xvi
Yashirio, N. 78

young/older work ratio 58, 66–8, 70, 74
young people decline in hiring 12–14
‘freeters’ xvii
NEETs xvii
‘parasite singles’ xvi–xvii, xx

Zweimüller, Josef 177