Index

Abrenica, M. 41
absorptive capacity 74
Accelerated Industrial Innovative Development Program, Kazakhstan 2010–14 163–4
Accountable Government Initiative, US 66–7
Acemoglu, D. 198
active employment strategy 309
advanced battery sector, US 232–3
advanced economies and industrial policy 10–11
Advanced Technology Program, US 231
Agosin, M. 167
agricultural sector
   Australia 285–6
   EU 355
Aiginger, K. 350
Akamatsu, K. 129, 130, 132
Alavi, R. 336
Alba, E.M. 143
Amsden, A. 75
Anderson, P. 80
apprenticeships, Australia 310–11
appropriability problems 98–104
ASEAN and Malaysian automotive sector 336–7
Australia 279–312
   as catch-up target for Kazakhstan 147–53
economy 280–90
   exchange rates 302–7
   immigration policy 307
   industrial policy development 290–96
   infrastructure projects 299–301
   public sector role 311–12
   sector selection 296–8
   structural transformation 149–53
   training and education 308–11
automobile industry
   Australia 295–6
   Malaysia 334–9
   Automotive Industry Authority, Australia 295
   avant-garde SMEs 261–2
Bank of Korea 251, 259
banks
   Kazakhstan 163
   and SME finance, Korea 251–59
Bayh–Dole Act 1980 230
Beath, J. 365
Beijing–Seoul–Tokyo consensus 70
Bell Trade Act 41
BeST (Beijing–Seoul–Tokyo consensus) 70
Blundell-Wignall, A. 303
Boehm, E.A. 49
Bonvillian, W. 229
Bozeman, B. 221, 230
brain drain, Malaysia 333–4
Brazil
   export structure 168, 172–3
   telecommunications industry 78
Breschi, S. 372
broadband network, Australia 300–301
Bumiputera 325, 326–7, 336
Button Car Plan 295
capabilities 3, 4, 33–4
capability building 70–81
   Asia 119–23
   see also organizational capabilities
capital intensity, PRC 211–15
Carron, A. 302
Catapult centres of excellence, UK 369
catching up 110–12, 127–57
Australia as target country for Kazakhstan 147–53
identifying target countries 144–7
Japan 132–4
PRC as target for Asian countries 154–5
strategies 135–41
Central Intelligence Agency, venture capital fund 235
Chandra, V. 139, 287
Chang, H.-J. 9
China, see People’s Republic of China
Chu, W. 75
Chung, M.Y. 75
Cimoli, M. 9
CIP (Competitiveness and Innovation Framework Programme) 362, 394
cluster policies, EU countries 368–9
codevelopment 75–9, 89
Cohen, W.M. 74
Cohesion Fund 393–4
collateralization bond obligation programs, Korea 275–6
commodity exports, Australia 286–90
comparative advantage 129, 130–31, 166–7
measurement 143–4
comparative advantage defying industries 132
competitiveness
and effort levels 117–18
and industrial policy, EU 348–69
competitiveness curve 113–14
Competitiveness and Innovation Framework Programme (CIP) 362, 394
concentration index 201–2
contracting failures 94–6
and discovery of profitable activities 103–4
and innovation 101–3
investment in formal skills 98–101
in technology acquisition 96–8
coordination failures 6–7, 105–7
Costa Rica 168
export composition 171
Crawford Report 294
credit, Malaysia 331–2
credit guarantee programs, Republic of Korea 64, 266–70
Crow, M. 221, 230
currency floating, Australia 303–5
Cusmano, L. 372
Customs Tariff Act 1901, Australia 293
D’Alpuget, B. 296
DARPA (Defense Advanced Research Projects Agency) 228–9
Davis, G.F. 227
decentralization
PRC 200
and risk evaluation 234–7
Defense Advanced Research Projects Agency (DARPA) 228–9
demand-side innovation policy, US 231–4
development, see stage of development
discovery of profitable activities 103–4
diversification 135–7, 165–8
and economic development 197–8
and education 51–9
Kazakhstan 168–88
Malaysia 320–42
measurement 201–3
PRC 201–16
Product Space theory 179–87
Downes, P. 284–5, 292
Dutch disease, Australia 306
dynamic comparative advantage 199
economic development 3–4
and industrial diversification 197–8
economic diversification, see diversification
economic geography and sectoral concentration 198
Economic Transformation Plan, Malaysia 64, 321, 322–3, 327
education
Australia 308–11
and economic diversification 51–9
EU 363–4
Malaysia 328–9
Republic of Korea 53–5, 74, 75
effort levels and learning success 117–19
Index

EIB Risk-Sharing Finance Facility 361–2, 394
electronics sector Malaysia 332–4
Electronics and Telecommunications Research Institute, Korea 56, 57
employment
Australia 284–5, 290–91, 309–10
China 211
Employment Retirement Income Security Act, US 231
Energy Act, US 231
Engineering Research Centers, US 231
entropy measure of industrial diversification 202
ERA (European Research Area) 359–60
Ethiopia, Huajian Shoe Factory 156
Europe 2020 353–4, 363–4
European Investment Fund 37–9
European Regional Development Fund 393
European Research Area (ERA) 359–60
European Social Fund 393
European Technology Platforms 364
European Union 346–83
budget and industrial policy 378–9
industrial policy development 352–3
industrial policy objectives 353–4
monitoring and evaluation 65–6, 373–7
Multiannual Program for Enterprises and Entrepreneurship 37
policy tools 355–72
political economy 347–52
state aid 380
evaluation, see monitoring and evaluation
exchange rates and industrial policy 302–7
Expanded Public Works Program, South Africa 297
expenditure
and industrial policy, EU 378–9
regional policies, EU 359
state aid, EU 380
see also government finance; R&D investment
export concentration, Australia 287–8
export diversification 167–8
Brazil 168, 172–3
Kazakhstan 168–79
and Product Space theory 179–87
export facilitation scheme, Australia 295
export promotion, Malaysia 323
Fane, G. 303
FDI, see foreign direct investment
Federal Credit Reform Act 49
Feldenkirchen, W. 366
Felipe, J. 1, 14, 52
finance
capability development 94–5, 119–23
for innovation, Malaysia 331–2
SMEs, Republic of Korea 47, 247–77
and stage dependence of industrial policies 26
see also expenditure; government finance; R&D investment
financial crisis and industrial policy, EU 377
financial markets and indirect industrial policy 36–40
financial mechanisms as policy instruments
Australia 318
EU 393–4
Fioretos, O. 365
fiscal decentralization, PRC 200
fiscal incentives
Australia 315
EU 366–7, 388–90
Malaysia 45
Republic of Korea 45
Fisman, R. 212
flying geese pattern of economic development 130
East Asia 138–9
Fong, C.O. 333
footwear industry, Ethiopia 156
foreign direct investment 12
Malaysia 57–8, 323, 329–30, 340–41
foreign equity ownership, Malaysia 340–41
Development and modern industrial policy in practice

foreign exchange deregulation, Australia 302–3
foreign technology, see technology acquisition
Foresight Programme, UK 367
framework industrial policy, EU 347
Framework Programmes for Research and Technological Development, EU 359–63
France 350, 367
cluster policy 368–9, 395
SME finance 394
Frankel, J.A. 137
Freeman, C. 80
Frenzel, A. 373
full employment, Australia 290–91, 309–10
Full Employment in Australia 291–2
Fund of Funds, Republic of Korea 272–3
GDP
Australia 280–81
and sectoral concentration 207–10
German Development Bank (KfW) 39–40
Germany 350, 365–6
biotechnology programme 395
cluster policy 369
fiscal incentives 389
industrial revolution 131
investment policy 366
science, technology and innovation 367, 368
SME promotion 370
training 308
Gershenkron, A. 129–30
Ghana, resource-for-infrastructure 143
Gospel, H. 311
Government Accountability Office, US 67
government finance 109
EU state aid 356–7, 376–7, 380
for innovative SMEs, Korea 263–70
US 221
government role in coordination 105–6
in industrial policy 26–7
in innovation development, US 223–6
new sector identification 104
Government Transformation Plan, Malaysia 321
Gregory, R.G. 303
‘Growth, competitiveness, employment’ (EC White Paper) 353
Australia as target for Kazakhstan 147–53
Growth Technology Program, Republic of Korea 274
Hall, P. 219, 222
Hasan, S. 336
Hausmann, R. 72, 135, 137, 202, 215, 226
Hawke, Bob 296
He, X. 76
Heavy and Chemical Industrialization Program, Republic of Korea 87
Heckscher–Ohlin model 166–7, 197
Herfindahl Index, Australia 287–8
Hidalgo, C. 31, 33, 35
high-value sectors, entering 73–81
higher education
EU 363
Malaysia 328
Horizon 2020 362
horizontal policies 5–6
EU 347, 349, 350–51
Huajian Shoe Factory, Ethiopia 156
human capital development 12, 51–60
EU 363–4
Malaysia 328–9, 333
Republic of Korea 74–5
US 58–9
see also education
Hyundai Motors 76
Imbs, J. 197, 198, 207–8
immigration policy, Australia 307
impact assessment, EU 65, 373–4
import substitution, Malaysia 323
In-Q-Tel 235
incentives for industries 147; see also fiscal incentives
income level and sectoral concentration 207–10
income per capita, Australia 280
India, automobile sector 120–22
indigenous people, Malaysia 325, 326–7, 336
indirect industrial policy 11, 36–40
industrial diversification, see diversification
industrial high schools, Republic of Korea 53–4
Industrial Master Plans, Malaysia 321, 322, 323, 327
industrial parks 147, 156
industrial policy 5–8
Australia 292–6
design and implementation challenges 91–124
EU 346–83
Malaysia 321–6
objectives 35–6, 353–4
Republic of Korea 27–9, 40–44
UK 350, 365
industrial policy instruments 44–8
Australia 315–19
EU 365–72, 388–95
Malaysia 45–6, 323–5
Republic of Korea 45–8
and stages of development 71–3
industrial proximity 202–3
industrial restructuring schemes
Australia 319
EU 395
Republic of Korea 46
industrial revolutions 131–5
Industries Assistance Commission (IAC) 294
Industries Commission 294, 295
infrastructure development, Australia 299–301
infrastructure support
Australia 316
EU 390–91
Malaysia 46
Republic of Korea 46
Inno-biz certification, Republic of Korea 262
Innovation Alliances, Germany 368
innovation policy
Malaysia 329–32
US 225–6
innovative SMEs 259–62
financing 248–9, 251–9, 264–74
Republic of Korea 247–9, 262–4
innovators and appropriability problems 101–3
input productivities 112
intellectual property rights 101–2
inter-sectoral upgrading and diversification 81–2, 83–4
International Trade and Industry, Ministry of, Malaysia 326–7
intra-sector upgrading and diversification 81–3
investment attraction programmes
Australia 315–16
Malaysia 46
Republic of Korea 45–6
investment policy, EU 355–7, 366–7
Ireland
fiscal incentives 366, 390
picking winners 145
Iskandar Malaysia 46, 325
Japan
industrialization 132–4
and Malaysian automotive sector 337
Japan–Malaysia Economic Partnership Agreement 337
Joint Technology Initiatives, EU 364–5
Jomo, K.S. 5, 10
Jung, M. 72
Kari, F. 336
Kazakhstan 160–88
Australia as catch-up target 147–53
export composition 170
export structure 168–79
industrial policy 161–5
product space 179–87
Kazakhstan 2030 Strategy 161–4
Key Enabling Technologies 363
KfW (German Development Bank) 39–40
Kibo Technology Rating System 269
Kim, B.-Y. 72
Index

Nathan Report 332
national broadband network, Australia 300–301
National Research Laboratories, US 229–30
National Science Foundation, US 67
natural resources, see resources
Nazarbayev, Nursultan 161, 162, 164
Netherlands
fiscal incentives 366, 388–9
policy evaluation 376
R&D incentives 368
network failures 8, 227–8
network partners, US 29–30
New Economic Model, Malaysia 321
New Structural Economics 15, 31, 72, 128, 135
Nokia 141

Office of Management and Budget, US 67
Okamoto, Y. 331
oligarchic core, EU industrial policy 372–3
on-lending 39–40, 258
1Malaysia 321
organizational capabilities 7–8, 107–10
Asia 119–23
and competitiveness 110–13

Patent Box, UK 368
path dependence 1–2
pegged currency 303
Pelkmans, J. 347
PEMUDAH 331
Penang electronics cluster 332–4
People’s Republic of China (PRC) 197–216
as catch-up target for Asian countries 154–5
diversification 199–201
diversification 203–10
and Ethiopian footwear industry 156
income level and sectoral concentration 208–10
industrial growth 210–15
intra-sector upgrading 82–3
and low-income countries 139–41
manufacturing growth 137–8
Perez, C. 73, 80
pharmaceutical industry, US 223–4
Philippines 41–4
Pitchford, J. 303, 304
Pohang Steel Corporation (POSCO) 84–8, 90
Poles of Competitiveness, France 368–9, 395
policy tools, see industrial policy instruments
political economy and industrial policy 10, 26
EU 347–52
POSCO (Pohang Steel Corporation) 84–8, 90
PRC, see People’s Republic of China
Prince, Y. 376
Product Development with Option to Purchase program, Korea 274
Product Space theory 31, 33–5, 179–87
productive capabilities, see capabilities
productive knowledge 136
Productivity Commission, Australia 294–5, 298–9
productivity sources 112–13
Program Assessment Rating Tool, US 66
protectionism, Australia 293–4
PROTON cars 334–6, 338
public–private partnerships
EU 364–5
R&D consortia 55–7, 73–4, 77–9, 89
US 230–31
public procurement
Australia 317
EU 357, 392–3
Malaysia 46
Republic of Korea 46
public sector
and sector selection 25–7
skills development, Australia 311–12
public sector finance, see government finance
Development and modern industrial policy in practice

R&D investment 76–9

public–private consortia 55–7, 73–4, 77–9, 89

Republic of Korea 273–4

R&D policies

EU 359–63 367–8
Malaysia 329–32

Rattigan Report 294

Ray, J. 310, 311

regional policy, EU 357–8

rent-seeking activity 5

rents for learning 115

Republic of Korea 2, 297

absorptive capacity 74

capability development financing 119, 120

education 53–5, 74, 75

foreign joint ventures 76

industrial policy 27–9, 40–44

inter-sector upgrading and diversification 83–4

KONEX stock market 276–7

leapfrogging strategy 80

monitoring and evaluation mechanisms 61–3, 64

policy tools 45–8, 72–3

securitization 275–6

SMEs 247–77

telecommunications industry 55–7, 73–4

venture capital investment 270–73

Research and Development Points System, Republic of Korea 274

resources

resource curse 137

resource-for-infrastructure 143

resource intensity and diversification 182–7

resource-rich countries 141–4

risk-adjusted industrial policy 48–9

risk capital for innovative SMEs 265–6

risk management 11–12

in decentralized system 234–7

Malaysia 328

Risk-Sharing Finance Facility, EU 361–2, 394

Robertson, P.L. 149, 151, 153

Rodrik, D. 6, 71, 72, 199, 215, 293, 302

Rosli, M. 336

Rostow, W.W. 129

Sabel, C. 236–7

Samel, H.M. 333

Samsung 76, 83

SBC (Small and Medium Business Corporation), Republic of Korea 249, 257–8

SBIR program 231

Scandinavian countries 142

Schumpeterian rents 101

science and technology policies

EU 359–63, 367–8
Malaysia 330–32

sector promotion 44–8

sector selection 6, 24–44, 296–8

sectoral concentration and income level 207–10

securitization, Republic of Korea 275–6

Semiconductor Trade Agreement 352

service sector, Malaysia 339–41

Shin, H. 72

Sieber, S. 350

Sieper, E. 303

Simon, Herbert 118

Simon, W.H. 236–7

Singapore 2

skills investment

appropriability problems 98–101

Australia 308–12

Slovakia, state aid evaluation 376

Small and Medium Business Administration (SMBA) 249

Small and Medium Business Corporation (SBC) 249, 257–8

small and medium enterprises, see SMEs

smart regulation, EU 373

smart specialization 354

SMEs

EU member countries 369–70

and knowledge economy 259–62

Republic of Korea 247–77

Smith, Adam 197

Snowy Mountain Hydro-Electric Scheme 299–300

social cohesion, EU 351

social services, Australia 291–2
Index

Soet, L. 73, 80, 360
Soskice, D. 219, 222
South Africa, Expanded Public Works Program 297
special economic zones, Malaysia 325
spending, see expenditure
stage of development
and industrial policy 10–12, 25–9
and policy tools 11, 71–3
state aid
EU 356–7, 376–7, 380
see also government finance;
incentives for industries
State Program on Accelerated Industrial Innovative Development, Kazakhstan 2010–14 163–4
Stenzel, T. 373
Stevenson–Wylder Act 1980 229
Stigler, G. 197
stock market for venture businesses,
Republic of Korea 276–7
Stoeckel, A. 284–5, 292
Strategy 2030, Kazakhstan 161–4
Strategy 2050, Kazakhstan 164–5
Strategy of Industrial Innovation Development for 2003–15, Kazakhstan 161–2, 163
structural change, EU 348
Structural Funds, EU 351–2, 356, 390–91, 393
structural transformation 3, 127–31
catch-up strategies 135–41
Growth Identification and Facilitation Framework 144–7
industrial revolutions 131–5
resource-rich countries 141–7
see also diversification
Suárez, F.F. 82
subsidies 115
Sunshine Loan Guarantee 270
Sutton, J. 7
Suzuki 121
Szirmai, A. 9
tacit knowledge 107
tacit productive capabilities 94, 108–9
Taipei, China, laptop industry 78–9
Tan, K.W. 5, 10
tariffs
Australia 284, 293–4, 296
EU 355
Tatung 83
tax incentives, see fiscal incentives
technological capabilities 107
technology acquisition 74–5
contracting failures 96–8
Malaysia 329–30
Technology Innovation Development program, Republic of Korea 273
Technology Innovation Program, US 231
Technology Park Malaysia 325
technology rents 101
Technopolos France and European
Policy Evaluation Consortium 65–6
telecommunications industry 55–7, 73–4, 78
Tenth Malaysia Plan 321
Tham, S.Y. 333
30 Corporate Leaders of Kazakhstan program 162–3
Top Cluster Competition, Germany 369
trade measures
Australia 317
EU 391–2
Republic of Korea 46
see also tariffs
trade policy, EU 355
training policies
Australia 308–11, 316
Malaysia 46
Republic of Korea 46
Trans-Pacific Partnership Agreement 337–8
Turkey 168
export composition 171
Product Space 179–82
Tushman, M. 80
unfairness of industrial policy 26
United Kingdom
cluster policy 369
fiscal incentives 366, 368, 370, 388
industrial policy 350, 365
industrial revolution 131
science, technology and innovation policies 367, 368
SME promotion 370
United States 219–38
evaluation programme 66–8
human and organizational capital 58–9
industrial revolution 131
network partners 29–30
risk management in credit programs 48–9
University–Industry Cooperative Research Centers program, US 230
Utterback, J.M. 82

Vallas, S.P. 223
Venezuela 168
export composition 170
venture capital funds
Central Intelligence Agency 235
Republic of Korea 270–74
venture companies, Korea 262
vertical industrial policy 6
EU 347, 349
Wacziarg, R. 197, 198, 207–8
welfare state, Australia 291–2
Zilibotti, F. 198