Index

accumulation rate 314, 315, 317, 320–24, 325, 326, 335, 337, 338–9
agents 25, 44–54, 171–3
agrarian innovation programmes 239–40, 259, 263–8
agricultural export model 105–7, 110
agricultural initiatives
Argentina 365, 375
Brazil 71, 78, 97
Canada 363–4
Cuba 259, 263–8, 269–71
Latin America 391–2, 395, 399–400
Mexico 53
Peru 186–7
agricultural machinery 120–21, 386–7
agricultural sector
Argentina 109, 112, 124, 351, 386–7
Brazil 80, 84
Albornoz, M. 119, 122, 176, 252
Alzugaray, S. 210, 212
Andersen, A. 2, 16, 39, 179–80, 184, 202, 216
ANII (National Research and
Innovation Agency) 204, 205, 208
ANSPE (National Agency for
Overcoming Extreme Poverty) 143–4, 162
Argentina
changes between periods 318
contribution of investment to GDP growth 314–15
development policy based on factor endowment 342
dynamic balance of trade 316, 319
dynamic transition of economy 299
emergence of development regimes 336–9
entry, exit and net growth of businesses 292
favourable external conditions for ‘catching up’ 302–3
GDP growth, accumulation rate and growth patterns 320–23, 339–40
GDP per capita 282
labour productivity 288
lacking macro-to-micro interventions 302
as ‘lagging behind’ economy 279–80
as led by investment, or in investment/export balance 316
location of, according to contributions 317
macroeconomic variables 284
main drivers for growth 315
patterns of GDP, employment and labour productivity growth 283
rising wages eroding price competitiveness 295
STI profile position 328, 329, 331
turbulence 103–4, 281, 287
vicious cycle 287
virtuous cycles 287, 291, 292–3
welfare indicators 333–5
Argentinean system of innovation 102–4, 128–9
comparison to Canada’s NSI 349–52, 358–9, 374–7
constitution 373
government laboratories 363–5
human capital development 359–63
macroeconomic and monetary policy 371–2
national development bank and venture capital industry 372
political stability 373–4
private sector R&D incentives 365–71
statistical office 373
development theories 352–8
historical perspective 126–8
agricultural export model 105–7
economic liberalism 110–14
industrialisation by import substitution 108–10
post-convertibility 114–16
innovative dynamics of manufacturing companies 116–18
sectoral and local systems of innovation 118–19
aggregate view 119–20
agricultural machinery 120–21
automotive sector 121–2
biotechnology 124–5
software and IT services 125–6
soy and soy derivatives 123
wine sector 122–3
Astorga, R. 295
automotive sector 112, 119, 121–2
Barletta, F. 118, 120, 125
Bazán, M. 177, 179, 180
Bell, D. 24, 26, 27
Bernat, G. 292, 310
Bértola, L. 204, 307, 308, 339
Biomass Cuba 259, 269–71
biotechnology
Argentina 124–5
Brazil 387
Cuba 255, 264
Latin America 387, 397–8, 404
Bisang, R. 108, 109, 110, 111, 123, 386
Bolivia
changes between periods 318–19
contribution of investment to GDP growth 314–15
development policy based on factor endowment 342
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and growth patterns 320–23
investment/export balance without external restriction 316
Brazil
location of, according to contributions 317
STI profile position 327, 329, 330
welfare indicators 333–5
Bortagaray, I. 145, 387
Bolivia
changes between periods 318–19
contribution of investment to GDP growth 314–15
development policy based on factor endowment 342
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and growth patterns 320–23
investment/export balance without external restriction 316
since 1980s
   policy dimension 72–7
   production structure 79–89
   science and technology
     infrastructure 77–9
   social dimension 89–92
   up to 1980s 69–72
bridge organisations 52–3
budgets for S&T
   in Argentina 111, 115, 127–8, 365
   in Brazil 75, 77
   in Canada 363, 364, 368
   in Colombia 141
   in Mexico 46, 48, 54, 55
   in Peru 174, 175
   in Uruguay 208, 210
businesses
   as agent of Mexican system of
     innovation 49–52, 56
   in Argentina 292, 369
   bridging the gap with universities
     388–9
   in Canada 370
   global 399–400, 405
   and innovation 4
Canadian system of innovation
   comparison to Argentinean NSI
     349–52, 358–9, 374–7
   constitution 373
   government laboratories 363–5
   human capital development
     359–63
   macroeconomic and monetary
     policy 371–2
   national development bank and
     venture capital industry
     372
   political stability 373–4
   private sector R&D incentives
     365–71
   statistical office 373
   development theories 352–8
   capitalist knowledge society 27–8
Casas, R. 54, 63, 252
Cassiolato, J.E. 1, 68, 70, 71, 77, 80,
   83, 84, 87, 88, 95, 103, 253, 254,
   308, 388
   centre–periphery system 21–2, 28–9
Chataway, J. 206, 215

Chile
   changes between periods 318
   contribution of investment to GDP
     growth 314
   development policy based on factor
     endowment 342
   dynamic balance of trade 319
   emergence of development regimes
     336–9
   favourable external conditions for
     ‘catching up’ 302–3
   GDP growth, accumulation rate and
     growth patterns 320–23, 341
   GDP per capita 282
   labour productivity 289
   lacking macro-to-micro
     interventions 302
   as ‘lagging behind’ economy 279–80
   as led by exports without external
     restrictions 316
   macroeconomic variables 284
   new industries and sectoral
     competitive regimes 295
   patterns of GDP, employment and
     labour productivity growth
     283
   real exchange rate 294
   STI profile position 328, 329
   turbulence exception 281, 287, 289
   virtuous cycles 287, 290, 291, 293–5
   welfare indicators 333–5
China
   accelerated economic growth and
     growing inequality 3
   comparison to Mexico 402
   consumers from 400
   conversion of productive structure
     305
   example of development as path
     18–19
   forced to buy opium 353
   foreign capital 87
   increasing importance as importer
     82
   ‘indigenous innovation’ strategy 98
   investment for access to natural
     resources 405
   lowering price of manufacture 383
   major growth leap as challenge to
     Latin America 380
manufacturing processes moved to
public sector 278–9
chronic poverty 181
CIDEM (Centre of Research and
Development of Structures and
Materials) 260–63
Cimoli, M. 1, 227, 307, 308, 330
circumstantial poverty 181
CLIAs (Local Centres for Agrarian
Innovation) 266–7
co-operatives
agrarian 264–6, 267
in coffee sector 231, 232–3, 235
in palm oil sector 222, 238–9,
240–45, 246
coffee sector 221–3, 229–37, 245–6,
385, 391–2, 394
cognitive-cultural exclusion 180, 182,
183
Colciencias 8, 134, 135, 136–8, 141–2,
144
actions developed by 151–3
ideas for change 161–3, 164–5
knowledge dialogue 153–7
knowledge networks 158–61
role of 151, 166
Colombia 133–4, 165–6
changes between periods 318
Colciencias, actions developed by
151–3
ideas for change 161–3, 164–5
knowledge dialogue 153–7
knowledge networks 158–61
contribution of consumption to
GDP growth 313
contribution of investment to GDP
growth 314–15
dynamic balance of trade 319
emergence of development regimes
336–9
GDP growth, accumulation rate
and growth patterns 320–23
as led by exports without external
restrictions 316
location of, according to
contributions 317
National Development Plan 133,
134, 142, 143, 163
national science, technology and
innovation system (SNCTI)
phases of 135–8
structure 138–41
STI
for inclusive development 144–51
policies 141–4
STI profile position 328, 329
welfare indicators 333–5
competitive funds 113, 128
‘complete circuits’ 212, 213–14
components of demand 11, 312–19,
339–40
CONACYT (National Science and
Technology Council) 45, 46, 48,
49, 52, 56, 58
CONCYTEC (National Council
for Science, Technology and
Technological Innovation) 171,
172, 175, 176, 191
CONEVAL (National Council for the
Evaluation of Social Development
Policy) 41–2
CONICET (National Council for
Scientific Research) 108, 111,
365
constitutions (Canada and Argentina)
373, 377
consumerism 19, 23, 68
Coopeagropal 239, 240, 241, 242–3
Costa Rica 221–3
changes between periods 318
coffee sector 221–2, 229–30
co-operatives and access to
income and technological
capabilities 232–3
environmental issues 233–5
institutional framework and
inclusive growth in 230–32
move towards ‘gourmet coffee’
235–7
conceptual framework
inclusive growth 225, 228
innovation and global value chains
229
institutional innovations 228
sustainable development 224–5
systems of innovation 225–7
contribution of consumption to
GDP growth 313
contribution of investment to GDP growth 314–15
development policy based on factor endowment 342
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and growth patterns 320–23
as led by exports without external restrictions 316
location of, according to contributions 317
palm oil sector 222
environmental performance 245
growth with social opportunities 238–40
infrastructure and financial facilities 240–42
lessons for inclusive growth 237–8
networking and challenges 244–5
policies for promoting in co-operatives 242
regional development plan 242–3
strategies for income distribution 243–4
policy implications 245–6
STI profile position 327, 328, 329
welfare indicators 333–5
Cozzens, S.E. 39, 135, 252
cross-country comparative study 276–82
‘catching up’ and ‘lagging behind’ analytical framework 282–90
data 290–99
lessons learned 299–303
Cuba 250–52, 271–3
energy generation in rural contexts 269–71
innovation in S&T policy 252–5
local agrarian innovation programme 263–8
network of eco-materials 260–63
universities
turn towards innovation 255–6
turn towards territory 256–60
Dagnino, R. 39, 135, 252
demand components 11, 312–19, 339–40
’demand pull’ product innovation 393–6
Denmark as ‘catching up’ economy 279, 287, 301
GDP per capita 282
labour productivity 290
macroeconomic variables 284
patterns of GDP, employment and labour productivity growth 283
steady long-term performance 281, 282
virtuous cycles 287, 301
developing countries
duality 7, 17, 128
negotiation strategies 400–401
development compatibility between normative and prospective approaches 22–4
conceptualisation of 24–5
ending, as ‘Place’ 17–20
human 3, 15–16, 17–18, 42, 61, 127, 180, 186, 266
in Latin America 2–3
emergence of development regimes 335–9
policies for 339–44
link with knowledge and innovation 1–2, 34
local 10, 63–4, 74, 151, 256–60
as more than just growth 9
productive 16, 75
theoretical-factual approach 24–9
theories of 352–8
towards a propositional approach 29–32
see also economic development; inclusive development; sustainable development; underdevelopment
dictatorship 30, 102, 109–11, 127, 354
Dominican Republic changes between periods 318
contribution of consumption to GDP growth 313
contribution of investment to GDP growth 314–15
development policy based on factor endowment 342
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and
growth patterns 320–23
as led by exports with external
restriction 316
location of, according to
contributions 317
STI profile position 328
welfare indicators 333–5
duality 7, 17, 109, 128, 305
Dutch disease 295, 342, 382, 407
Dutrénit, G. 1, 11, 48, 54, 56, 57, 94,
103, 308, 324, 330
ECLAC (Economic Commission for
Latin America and the Caribbean)
4, 21, 36, 299, 341
eco-materials network 260–63, 272
economic development 10–11
barrier to 128
basic meaning of 276
cross-country comparative study
276–303
debates on 353, 358
objective of 39
schematic understanding of 30
and social development 62, 64, 135
economic exclusion 8, 180, 182, 183,
193, 194
economic growth
conception of difference aspects of
2–3, 307–9
for development 17–18
disconnection with well-being 134
and environmental degradation
18–19
and ethical problem 23
and free markets 352
indicators 308–9
innovation
and structural change 324–7
and welfare 341
and international trade, in Argentina
107–8, 110, 126
in Latin America 2–3, 304–44
in least developed countries 39
low, in Mexico 40–41, 43–4, 57–9
as part of economic development 30
patterns 311–12, 339–40
contribution of components of
demand to GDP growth 312–19
GDP growth and accumulation
rate 320–24
and NSI profiles 327–31
requirements for 143
with social opportunities 238–40
and social problem 23, 145
STI, for greater 191, 195, 199, 217,
307
strong, in Peru 169, 176
sustaining, in Peru 194
technological change at heart of
384
economic liberalism 110–14
Ecuador
changes between periods 318
contribution of consumption to
GDP growth 313
contribution of investment to GDP
growth 314–15
development policy based on factor
endowment 342
dynamic balance of trade 319
emergence of development regimes
336–9
GDP growth, accumulation rate and
growth patterns 320–23
as led by exports without external
restrictions 316
location of, according to
contributions 317
STI profile position 328, 329
welfare indicators 333–5
Edquist, C. 37, 53, 103, 118, 226, 227,
228, 301, 352
education in Argentina and Canada
359–63
Ekboir, J. 386, 389, 392
El Salvador
changes between periods 318
contribution of investment to GDP
growth 314
development policy based on factor
endowment 342
dynamic balance of trade 319
emergence of development regimes
336–9
GDP growth, accumulation rate and growth patterns 320–23
as led by exports with external restriction 316
location of, according to contributions 317
STI profile position 327, 328–9
welfare indicators 333–5
Embrapa 71, 72, 78, 83, 84
endemic poverty 181
energy generation in rural contexts 269–71
environmental issues
in coffee sector 233–5
and economic growth 18–19
exclusion 180–81, 182
and globalisation 398–9
opportunities opened by 401–3
in palm oil sector 245
taking risk seriously 406–7
evolutionary economic theory 354–8, 374, 380, 384
exclusion
concept of 38, 179
innovations for reducing 184–6
interaction with poverty 182
in Mexico 40–43
typology 180–81
FEST (federal expenditure in science and technology) 57–8
financial crises 310–11, 342, 351, 402
financial system as agent of Mexican system of innovation 53–4
financing STI
in Argentina 108–9, 111, 112, 113
in Brazil 70–71, 73
in Colombia 136, 137, 138, 141, 154–7
financial effort in STI as percentage of GDP 57, 75–6, 330–31
in Latin America 308
in palm oil sector 240–42, 243
in Peru 174, 176–9, 185–6, 187, 189–90, 191
in Uruguay 211
Finland
as ‘catching up’ economy 279, 287, 301
dynamic transition of economy 297–8
GDP per capita 282
labour productivity 290
macroeconomic variables 284
patterns of GDP, employment and labour productivity growth 283
steady long-term performance 281, 282
virtuous cycles 287, 290, 301
‘flying geese’ perspective 358
Freeman, C. 1, 36, 37, 83, 102, 103, 352, 388
Frenkel, R. 286, 296, 307
Fressoli, M. 64, 261
Garcia, G. 120, 387
GDP growth
accumulation rate, and growth patterns 320–24
Argentina 106, 108, 110–11, 114, 115, 128
Argentina and Canada 368–9, 373, 375, 376
Argentina, Brazil, Chile and Mexico 279–80, 282–5, 288–9, 295–6
Brazil, by sector 80
contribution of components of demand to 312–19
FEST/GDP 57–8, 75–6
GERD/GDP 57–8, 327, 328, 329–31, 356, 369
patterns 327–31
GERD (gross expenditure in research and experimental development) 57–8, 327, 328, 329–31, 356, 369
Gereffi, G. 229, 388
global corporations 399–400
success of 405
global value chains 223, 229, 246, 385, 388
globalisation
about incorporating new consumers 383
and the environment 398–9
highly skewed patterns of 401
induced by capitalist knowledge society 24–9
Globelics (Global Network for the Economics of Learning, Innovation and Competence Building Systems) 39, 147
Golup, R. 172, 179
governance of Mexican system of innovation 54–6, 60
government laboratories 363–5
government organisations 45–8
Guatemala
changes between periods 318–19
contribution of consumption to GDP growth 313
contribution of investment to GDP growth 314–15
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and growth patterns 320–23
as led by investment, or in investment/export balance 316
location of, according to contributions 317
STI profile position 327, 328–9
welfare indicators 333–5

GUCID (Ministry of Higher Education directives in the University Management of Knowledge and Innovation for Development Research programme) 257, 258
Gutman, G. 120, 124, 387
Herrera, A. 39, 62, 76, 95, 203
higher education (HE)
higher education (HE) institutes
Brazil 78
Cuba 9–10, 252, 269, 271–3
Mexico 45, 48, 52
see also universities
Hirschman, A. 4, 20, 22, 24, 382
Honduras
changes between periods 318–19
contribution of investment to GDP growth 314
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and growth patterns 320–23
as led by investment, or in investment/export balance 316
location of, according to contributions 317
STI profile position 327, 328–9
welfare indicators 333–5
housing project 260–63, 272
human capital development 355, 359–63
human development 3, 15–16, 17–18, 42, 61, 127, 180, 186, 266
Humphrey, J. 229, 388, 401
ICAFE (Institute of Coffee) 230, 233, 234, 235
ICT
changes brought about by 382–3, 384, 385, 386, 393–4, 404
Finland 297
innovation opportunities based on 396–8
as instrument for inclusion 193
IDA (Institute for Agrarian Development) 239, 244
‘Ideas for Change’ contest 161–3, 164–5
IDECAFE (Institute for the Defence of Coffee) 232, 233
illiteracy 42, 79, 107, 359
import substitution 43, 108–10, 117, 126–7, 264, 280, 296, 300, 305, 349
INCA (National Institute of Agricultural Sciences) 263–8, 272–3
inclusive development
challenges
Brazil well positioned to address 69
to guide MSI towards innovation for 59–64
of innovation policy for 194–5
in Peru 179–83
of STI policy towards 202–16
in coffee sector 222, 229–37, 245–6
definition 38, 201–2
infrastructure and financial facilities for 240–42
and innovation 35–43, 59–64
examples of 186–9
as mechanism for 183–9
for reducing exclusion 184–6
and institutional innovations 228
international limits to 235–7
and knowledge 15–16, 29, 208–10, 233
in palm oil sector 222, 237–46
PIAL as driver of processes 267–8
political importance 4
Sen’s view on 3
and social dimension of sustainability 225
with social opportunities 238–40
STI for 137–8, 144–51, 189–94, 201–2
structural change 4
through employment generation 183–4
towards a research and innovation system for 216–18
UNDP approach to 3
see also Uruguayan inclusive development
inclusive growth see inclusive development
inclusive innovation 147–50
inclusiveness 2
income distribution 44, 72, 243–4, 308–9, 332–5, 342, 343
increasing demand volume 391–3
Indio Hatuey 269–71, 272–3
industrialisation
Argentina 108–10, 126–7, 349–50
Brazil 70–72
‘flying geese’ perspective 358
Latin America 305, 353–4
Mexico 50
Western 21
inequality 18
in Brazil 68, 70–71, 75, 89–92, 97–8
increasing with economic growth 23
innovation generating greater 145
in Latin America 331–8, 340, 341, 343
and Matthew effect 28–9
in Mexico 40–41, 44, 57, 58–9
overcoming 302, 304–5, 406
seeking causes 308
social exclusion 180
and technological innovations 146, 179, 185
innovation
Argentinean manufacturing companies 116–18
concept of 37–8
as exacerbating inequalities 4
and global value chains 229
having a negative impact on society 146–7
and inclusive development 35–43, 59–64, 183–9, 194–5
institutional 228
in Latin American NSIs 324–7
link with knowledge and development 1–2, 34
local agrarian innovation programme 263–8
opportunities in natural resource-based networks 389–403
policy 194–5, 339–44
in S&T policy 252–5
social and inclusive 147–50
social dimension of 145–7
systems of 225–7
sectoral and local 118–26
turning towards, in Cuban universities 255–6
see also national systems of innovation (NSI); science, technology and innovation (STI)
institutional change
in Latin America 309–11
in STI policy 204–5, 208–10
institutional development theory 353, 354–8
institutional framework
in coffee sector 230–32
of STI activities 46, 172–3
institutional innovations 182–3, 186, 229–46, 256, 266
institutional structures 55–6, 308
intermediate institutions see bridge organisations
Ireland
as ‘catching up’ economy 279, 301
dynamic transition of economy 298
GDP per capita 282
labour productivity 291
macroeconomic variables 284
patterns of GDP, employment and labour productivity growth 283
steady long-term performance 281, 282
virtuous cycles 287, 290, 301
ISI (industrialisation by import substitution) 108–9, 110, 117, 120, 127, 349–51, 353–4

Johnson, B. 2, 16, 39, 179–80, 184, 202, 216

Kaplinsky, R. 229, 383, 392, 404
Katz, J. 1, 71, 103, 110, 227, 292, 294, 308, 310, 352
knowledge 208–10
capitalist knowledge society 27–8
co-production of 3
collective nature of 62
concept of 61–4
in Cuba 257–9, 265, 270, 273
democratisation of 5–6, 29–32
dialogue 153–7
and inclusive development 15–16, 208–10
link with innovation and development 1–2, 34, 36
market demand for 29
Matthew effect 28–9
networks 158–61
policies for inclusive development in Uruguay 199–216
as a resource 29
for solution of social problems and for social inclusion 205–6
and structural change 4–5
supply, in Argentina 111–12
transversal systems in Argentina 124–6
use of, in Brazil 92–3, 97, 98

Korea
as capitalist country 276–7
as ‘catching up’ economy 279, 287, 293, 301
dynamic transition of economy 298
GDP per capita 282
labour productivity 291
macroeconomic variables 284

patterns of GDP, employment and labour productivity growth 283
steady long-term performance 281, 282
virtuous cycles 287, 290, 301
Kosakoff, B. 110, 112, 118
Kuramoto, J. 170, 182, 184
Lastres, H.M.M. 75, 88, 92, 94, 95, 96, 103, 253, 254
Latin America 304–7
conception of economic evaluation and indicators 307–9
distribution of income 308–9
emergence of development regimes 335–9
growth pattern identification 311–12
contribution of components of demand to GDP growth 312–19
GDP growth, accumulation rate and growth patterns 320–24
innovation and development policies 339–44
as most unequal region of world 2
natural resource-based networks 380–408

NSI profiles and capabilities
growth patterns and profiles 327–31
innovation, growth and structural change 324–7
periods of study, institutional changes and comparative hypotheses 309–11
relationships between welfare indicators 331–5

Lavarello, P. 120, 124
Lemarchand, G. 1, 36, 330
linking agencies 52–3
local development 10, 63–4, 74, 151, 256–60
local systems of innovation 118–26
López, A. 1, 109, 114, 116
Lugones, G. 104, 116, 118, 330
Lula government 73–4, 79, 91, 296
Lundvall, B.A. 1, 30, 36, 37, 50, 102, 103, 170, 217, 226, 227, 253, 301, 307, 352, 356, 357, 388
Index

macroeconomic policy 286–90, 295–7, 302, 371–2
Malerba, F. 37, 103, 118–19, 226, 227, 352, 356
Mann, M. 25–6
Marin, A. 399
market requirements 390, 393–6
market volume 390–93
Matthew effect 28–9
Mexican system of innovation (MSI) 34–5
caracterisation of 43–4
agents of 44–5
bridging organisations 52–3
businesses 49–52
financial system 53–4
governance of 54–6, 60
government organisations and institutions 45–8
higher education (HE) institutes 48
orientations of MSI 57–9
public research centres and institutes 48–9
inclusive development 35–40, 59–64
innovation 35–7
concept of 37–8
for inclusive development and social innovation 38–40, 59–64
opportunities and challenges 59–64
social exclusion 40–43
Mexico
changes between periods 318
contribution of consumption to GDP growth 313
contribution of investment to GDP growth 314–15
development policy based on factor endowment 342
dynamic balance of trade 315, 319
emergence of development regimes 336–9
favourable external conditions for ‘catching up’ 302–3
GDP growth, accumulation rate and growth patterns 320–23, 339
GDP per capita 282
labour productivity 289
lacking macro-to-micro interventions 302
as ‘lagging behind’ economy 279–80
as led by exports without external restrictions 316
location of, according to contributions 317
macroeconomic variables 284
main drivers for growth 315
patterns of GDP, employment and labour productivity growth 283
STI profile position 327, 329, 330
turbulence 281, 287
welfare indicators 333–5
Milesi, D. 116, 118
Millennium Objectives (ODM) 185
Ministerial Office for Innovation (GMI) 204, 207
monetary policy 371–2
Montalvo, L. 251, 255
Moreno-Brid, J.C. 307, 342
MUC (Municipal University Council) 258–9
Mulgan, G. 148, 151
national development banks 372
national systems of innovation (NSI) approach 1–2, 37–8, 118, 354, 357–8
defined 356
emergence of development regimes 335–9
growth patterns and profiles 327–31
innovation, growth and structural change 324–7
policies possible for 339–44
underlying theory of analysis 30–31
and welfare indicators 331–5
see also individual countries
natural resource-based networks 380–81
focus on networks 383–9
historical case against natural resources in development 381–3
new forces creating innovation opportunities 389–91
changing global corporations 399–400
‘demand pull’ product innovation 393–6
environmental concerns 401–3
globalisation and environment 398–9
growing demand 391–3
ICT and S&T advances 396–8
negotiation strategies of
developing countries 400–401
as platform for development 403–5
future technological revolution 407–8
overcoming social inequality 406
overcoming traditional obstacles 407
risk of missing opportunity 408
success in a global context 405
taking environmental risk seriously 406–7
Navas-Alemán, L. 388
negotiation strategies 400–401
Nelson, R. 1, 37, 102, 103, 227, 228, 301, 307, 324, 339, 352, 353, 354, 357
neoclassical theory 11, 276, 277, 351, 352–3, 357
networking 244–5
networks see natural resource-based
Nicaragua
changes between periods 318–19
contribution of consumption to
GDP growth 313
contribution of investment to GDP
growth 314–15
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and
growth patterns 320–23
as led by investment, or in
investment/export balance 316
location of, according to contributions 317
STI profile position 328
welfare indicators 333–5
Níosí, J. 170, 195, 352, 356, 357, 358, 366
normative approach to development 6, 19–20, 22–4
Nuñez, J. 251, 253, 255, 256
OECD (Organisation for Economic
Co-operation and Development) 36, 41, 42, 60, 82–3, 86, 97, 134, 146, 175, 326, 330, 357, 361, 364, 368–9
Orozco, J. 225, 228, 229, 233, 234, 237, 241
Oslo Manual 145–6, 357
Ostrom, E. 3, 63, 215
palm oil sector 222, 237–46
Panama
changes between periods 318–19
contribution of consumption to
GDP growth 313
contribution of investment to GDP
growth 314–15
with dissimilar characteristics 323–4
dynamic balance of trade 319, 341
emergence of development regimes 336–9
GDP growth, accumulation rate and
growth patterns 320–23
as led by exports with external
restriction 316
location of, according to contributions 317
STI profile position 330
welfare indicators 333–5
Paraguay
changes between periods 318
contribution of consumption to
GDP growth 313
contribution of investment to GDP
growth 314–15
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and
growth patterns 320–23
as led by exports without external
restrictions 316
location of, according to contributions 317
STI profile position 327, 328–9
welfare indicators 333–5
PECITI (Special Science, Technology
and Innovation Programme) 46, 58
PENCTI (National Strategic Plan for Science, Technology and Innovation) 199, 200, 204, 205, 207, 208, 216–17
Pérez, C. 384, 403, 405, 406
Peru
changes between periods 318
conditions as window of opportunity 195
contribution of investment to GDP growth 314
dynamic balance of trade 319
emergence of development regimes 336–9
GDP growth, accumulation rate and growth patterns 320–23
investment/export balance without external restriction 316
islands of excellence 178
location of, according to contributions 317
STI profile position 328, 329
welfare indicators 333–5
Peru system of innovation 169
emerging 170–79
inclusion
challenges for innovation policy 194–5
challenges of 179–83
examples of innovation for 186–9
innovation to reduce exclusion 184–6
policies for 189–94
through employment generation 183–4
STI
investment in 176–9
policies for inclusion 189–94
policy formulation and implementation 174–6
Petrobras 71, 78, 84, 372
PIAL (Programme to Strengthen the Local Agrarian Innovation)
266–8, 272
‘place’ of development 17–20
policy
dimensions, in Brazil 72–7, 97
implications for Canada and Argentina 374–7
for coffee and palm oil 245–6
of NSI approach 357–8
for innovation and development 339–44
innovation for inclusive development 194–5
macroeconomic and monetary 371–2
for promoting palm oil activities 242
S&T, innovation in 252–5
STI
advancing, in Brazil 92–6
formulation and implementation of 174–6
for inclusive development 150–51, 189–94, 202–18
recent, in Colombia 141–4
political exclusion 180, 182, 183
political stability 373–4
Porta, F. 104, 330
post-convertibility 114–16
poverty
in Argentina 127
in Brazil 70, 89–91
concept of 41
and economic growth 39
inclusive development for reducing 38, 60
interaction with exclusion 182
in Mexico 40–43, 59
in mid-twentieth century 21–2
STI for alleviation of 60, 61, 133, 204
typology 181
see also exclusion; inequality
power 26
Prebisch, R. 342, 349, 353, 381, 383
private sector investment 174, 178, 193, 244
private sector R&D incentives 113, 365–71
production structure
Argentina 113, 119, 128
Brazil 70, 75–6, 79–89, 97
in cross-country comparison 286, 287, 289, 291–2, 294, 295, 296, 299, 302
Peru 189
productivity approach to STI 207
propositional approach to development 6, 20, 24, 29–32

Gabriela Dutrénit and Judith Sutz - 9781782548683
Downloaded from Elgar Online at 05/06/2019 09:30:44PM via free access
prospective approach to development 6, 19–20, 22–4
public bureaucracies 359
public research centres and institutes (PRCs) 36, 40, 48–9, 52, 56, 60, 61
Puchet, M. 11, 304, 342
R&D
in Argentina 113, 115–16, 117, 124, 125, 359, 364–5, 369–71, 376
in Brazil 71, 73, 74, 75–7, 78, 83, 84–7, 92–3, 97, 330
in Colombia 365–8, 373, 374
in Finland 297
and human capital 355
in Mexico 49, 50, 331
NSI approach 357
in Peru 171, 176–7, 178
private sector incentives 113, 365–71
Ramos, C. 94, 330
RAMP-Peru Project 188–9
Rapetti, M. 280, 286, 296, 307
regional systems of innovation 356
Republic of Korea see Korea
research agendas 206–7
research and innovation programme 210–11
achievements 211–12
difficulties 212–14
building demand 214–15
call to researchers 215
demand–researcher link 215
implementation 216
problem recognition 214
production 215
transformation, in calls for projects 211
S&T (science and technology)
advances in 396–8
Argentina 127–8
innovation in policy 252–5
see also budgets for S&T
Sagasti, F. 170, 172, 178, 179, 180, 184
Salazar, M. 135, 138
Samper, M. 231, 232
Saviotti, P. 119, 324, 356
Schmitz, H. 229, 388
Schumpeter, J. 183, 307
Schumpeterian creative destruction 126, 129, 183, 280
science, technology and innovation (STI)
economic dynamism 307–8
for greater economic growth 191, 195, 199, 217, 307
for inclusive development 137–8, 144–51, 201–2
infrastructure in Brazil 77–9, 97
institutional framework of activities 46
investment in 307, 311
as indicator 309
national regulations for 204–5
policy
advancing, in Brazil 92–6
definitions relating to 148–9
formulation and implementation 174–6
for inclusive development 150–51, 189–94, 202–18
institutional change in 204–5, 208–10
public 190
recent, in Colombia 141–4
for poverty alleviation 60, 61, 133, 204
problems inhibiting formation of 172, 174
productivity approach to 207
see also financing STI
sectoral systems of innovation 118–26, 356
Sen, A. 3, 16, 20, 21, 23, 25, 41, 201
Sierra Productiva 186–7
SINACYT (National Science, Technology and Technological Innovation System) 171–2, 175
Singer, H. 206, 353, 381–2, 383, 399, 404
SNCTI (National Science, Technology and Innovation System) 134
and STI policies in Colombia 135–8
structure 138–41, 154, 158, 163
Soares, M.C. 68, 89
social dimension
Brazil 89–92, 97–8
of exclusion 180, 182
of innovation 75, 76, 145–7
of sustainability 225
social exclusion in Mexico 40–43
social inclusion
concept of 39
knowledge for 205–6
research and innovation programme for 210–16
social inequality see inequality
social innovation
actions for 151–63, 165–6
defining 133, 163–4
high level of uncertainty 151
and inclusive innovation 147–50
innovation for 38–40
on international agenda 133–4
promotion of 143–4
social opportunities, growth with 238–40
social power, sources of 25–6, 30–31
software and IT services 125–6
soy and soy derivatives 123
stable and competitive real exchange rate (SCRER) 280–81, 285–6, 287, 290, 293, 294, 295, 300
statistical offices 373
‘stop and go’ model 109
structural change
in Chile 293, 295
in development patterns 286
in Latin American NSIs 324–7, 342–3
relating to inclusive development 4–5, 16, 179, 201–2
structuralist economics theory 353–4
Stubrin, L. 124, 125
Suárez, D. 104, 118
sustainable development
barriers to 38
bottom-up solutions for 149, 165, 184
concept of 16, 224–5, 245–6
debate on 9, 40
link with systems of innovation 226
and palm oil 245
problems of 18
social dimension of 225
technologies oriented to 39
Sutz, J. 2, 27, 29, 30, 35, 38, 96, 97, 103, 170, 202, 204, 206, 209, 214, 225, 250, 252–3, 308, 387, 388
technological innovation
capability 62
disparities caused by 146
forerunner of innovation studies 37
impact on employment 183–4
and innovative behaviour 51
investment in Peru 178
in natural resources 391–3
role in responding to social challenges 185
technologies
capabilities in coffee sector 232–3
future revolution 407–8
new, radical 396–8
territory, turning towards, in Cuban universities 256–60
theoretical-factual approach to development 6, 19–20
capitalist knowledge society 27–8
conceptual framework outline 24–7
generalised Matthew effect 28–9
Thomas, H. 37, 39, 40, 64, 256, 261, 270
Torres, A. 49
trend scenario 23–4
tuberculosis diagnosis 187–8
‘tunnel effect’ 4
underdevelopment 4, 20–22, 23, 25, 29, 39, 62, 209, 352
UNESCO (United Nations Educational, Scientific and Cultural Organization) 36, 61
United Nations Development Programme (UNDP)
human development approach 15
inclusive development approach 3, 38
Universidad Peruana Cayetano Heredia 187–8
universities
Argentinean 107, 108–9, 113, 119, 360–61, 362, 375
Brazilian 71, 73, 77–9, 87, 97
Canadian 362–3, 365–6, 373, 374, 375
Chilean 294
Costa Rican 234, 246

Gabriela Dutrénit and Judith Sutz - 9781782548683
Downloaded from Elgar Online at 05/06/2019 09:30:44PM via free access
starting with STI 201–2
towards research and innovation
system for 216–18
UdelaR (University of the Republic)
200, 208–9, 210, 213

value chains, global 223, 229, 246, 385, 388
value creation and extraction 128–9
Van den Bergh, J. 224, 246

Venezuela
changes between periods 318
contribution of consumption to
GDP growth 313
contribution of investment to GDP
growth 314–15
development policy based on factor
endowment 342
with dissimilar characteristics 324
dynamic balance of trade 319, 341
emergence of development regimes
336–9
GDP growth, accumulation rate and
growth patterns 320–23
investment/export balance without
external restriction 316
location of, according to
contributions 317
STI profile position 330
welfare indicators 333–5

venture capital industry 52, 53, 193,
372, 373
vertical labour 182
Villarán, F. 172, 179

Washington Consensus 2, 12, 43,
110–14, 127, 277–8, 302, 309,
310
Weber, M. 2
welfare indicators 309, 331–5, 336,
337–8, 341
wine sector 122–3, 385–6, 394
Yoguel, G. 83, 118, 119, 122

Uruguay
changes between periods 318–19
contribution of investment to GDP
growth 314
development policy based on factor
dynamic balance of trade 319
emergence of development regimes
336–9
GDP growth, accumulation rate and
growth patterns 320–23
as led by investment, or in
investment/export balance 316
location of, according to
contributions 317
STI profile position 327, 329, 330
welfare indicators 333–5

Uruguayan inclusive development
199–201
challenges of STI policy 202–3
knowledge for social dimension
205–6
limited budget 208
Ministerial Office for Innovation
207
national regulations 204–5
programme for research and
innovation 210–16
research agendas 206–7
university reform, policies of
knowledge and inclusive
development 208–10
recommendations for STI policy for
216–18

Uruguay
turning towards innovation 255–6
turning towards territory 256–60
Mexican 45, 48, 52, 53
Peruvian 171, 173, 176, 177, 178,
190, 194
reform 208–10
Uruguayan 200, 203, 208–10, 213,
216–17, 218

value chains, global 223, 229, 246, 385,
388
value creation and extraction 128–9

Van den Bergh, J. 224, 246