

Index

- Abramovitz, M. 50
Academy of Science Malaysia (ASM) 137
Action Plan for Science, Technology and Innovation (PACTI) 96
Agrarian Reform 19
Ajao, B. F. 157
alliance capitalism 173
all-out-populism 26
Altamirano, T. 27
Anand, S. 90
Andean Pact 20
Argentina software sector
 direct approach application, complementarity tests 118–122
 emerging economy, application 116–123
 industrial policy in 116–118
 sectoral performance, development policies and complementarities 122–123
Argentine Technology Fund (FONTAR) 118
Armenian business climate 58
Arocena, R. 2, 16, 51, 193
Asia-Pacific Economic Forum (APEC) 30
association approach 112

BioNexus status 144
BioNexus status companies 138
Biotechnology Corporation of Malaysia (BiotechCorp) 138
biotechnology, defined 135
Biotechnology Master Plan (BMP) 138
Biotechnology Regional Innovation Centres (BRICs) 132
biotechpole of Sidi Thabet 73
Bolivian University System (SUB) 195

Bramwell, A. 193
Brazilian National Development Bank (BNDES) 96
Brazil Maior Plan 98
Brown, C. 210
Brundenius, C. 192, 193
Bye, B. 62

capitalization of knowledge 193
Carranza, V. 31
Cassiman, B. 118
Cassiolato, J. 17
Castells, M. 173
Cervantes, M. 158
Chamber of Information and Communications of Argentina (CICOMRA) 117
Chamber of Software and Computer Services of Argentina (CESSI) 117
Cho, D. S. 215
civil society organizations 23
commercial liberalization 114
Commonwealth of Independent States (CIS) 56
Community Innovation Survey 123
complementarities, innovation activities
 economies, developing 112–116
 theoretical arguments and empirical studies 110–112
correlation approach 111
Costa, L. 100
creative forgetting 53, 54
creole liberalism 19

De Althaus, J. 19
developmental university 190–203
diaspora 58
Dunning, J. H. 173

- EBRD transition report 57
 Economic and Industrial Health Complex (CEIS) 90
 economic development 1, 15
 economic reconstruction 28
 Edquist, C. 191
 Etzkowitz, H. 193
 ex-ante concept 16, 51
 Executive Group of the Health Industrial Complex (GECIS) 98
- firm-level perspective 3
 focus group discussion (FGD) 135, 136
 forced conscriptions 26
 foreign direct investment attraction 112
 foreign direct investments (FDIs) 28, 29, 56, 58, 68, 73, 78, 81, 151
 foreign technology buying 112
 Freeman, C. 111, 173
 Free Trade Agreements (FTAs) 35
 Fund for Innovation, Science and Technology (FINCYT) 34, 35
 Fund for Research and Development for Competitiveness (FIDECOM) 34
 Fund for the Promotion of the Software Industry (FONSOFT) 117
- Gadelha, C. 100
 geographical proximity 180
 Gerschenkron, A. 206, 208
 Gevorkyan, A. V. 58
 Gläser, J. 214
 Global Competitiveness Index (GCI) 18
 global financial crisis 31, 56
 Global Innovation Index rank 58
 global value chains (GVCs) 9, 16, 29, 62, 210–211, 240, 241
 Globetronics 220
 governance system, Armenia 59
 gradual territorial control 25
 gross domestic expenditure on R&D (GERD) 177
 gross domestic product (GDP) 17, 30, 56, 57, 132
 Growth Acceleration Program (PAC) 96
 Gu, Sh. 52
- health biotechnology (HB), in
 Malaysia
 challenges, firms' perspective 140–148
 economic impact of 132–133
 facts and figures 137–140
 funding issues 144–145
 government policy and regulation 147–148
 human capital issues 145–147
 issues and challenges 131–152
 methodology 135–136
 National Health Innovation System, biotechnology firms 133–135
 Niche areas 147
 product development (PD) chain 150
 sector development, National Innovation Systems 142–144
 STI capabilities 136–137
 study design 135–136
 sustainable HB sector, development 148–152
- Herrera, A. 88
 Higher Education Institutions (HEIs) 181, 182
 Higher Level Personnel Training Coordination (CAPES) 96
 Hobday, M. 215
 Hommen, L. 191
 Human Capital Report 58
 Hungarian small- and medium-sized enterprises 171–186
 innovativeness and networking, economy 176–178
 networking, motivations 182–184
 networks, participation 178–182
 RDI collaboration 173–175
 research methodology and sample 175–176
 hyperinflation 27, 28, 37
- import-substituting industrialization (ISI) 19, 28
 Inari Technology 220–222
 inclusive development, innovation 87
 Industrial Competitiveness Development Fund (ICDF) 73
 Industrial Eco-Technological Parks (PITEs) 36
 informal institutions 4

- information and communication technologies (ICT) 68
- information technology (IT) sector 60
- Innovation and Competitiveness Programme for Peruvian Agriculture (INCAGRO) 30
- innovation system research, developing countries 156–157
- innovation via imitation process 76
- innovative biotechnology firms 131
- Innovative Economy Development: An Initial Strategy 59
- Institute for Industrial Technology and Technical Norms (ITINTEC) 20, 23
- Institute of Agricultural Innovation (INIA) 31
- intellectual property rights (IPR) 59
- International Monetary Fund 114
- interventionism 19, 26
- Isola, O. O. 158
- Jegade, O. O. 157, 159
- Johnson, B. 53
- Kamien, M. I. 207
- Kitanovic, J. 63
- Kitanovic's model 55
- knowledge exchange (KE) 53, 70
- knowledge generators 193
- Korean Samsung 206
- Koubaa, K. 76
- Laboratory for Social and Solidarity Economy (LabESS) 79
- Lai, Y. W. 215
- large-scale privatization 53
- latecomer strategic typology 206–233
- Laudel, G. 214
- learning, Armenia 61–64
 - through foreign actors 63–64
 - through local networks 62–63
- learning economy 52
- liberated zones 30
- Linden, G. 210
- List, F. 50
- low-end forgetting process 53
- low-skilled labor 54
- Lundvall, B.-Å. 51, 53, 191
- Malaysian Institute of Microelectronic Systems (MIMOS) 207, 215, 216
- market liberalization 37, 53, 54
- market–multinational enterprises (MNEs) 240
- Maskus, K. E. 194
- Mathews, J. 210–212, 215, 224
- micro–macro effect 114
- Millennium Development Goals 6
- Ministry of International Trade and Industry (MITI) 142
- Ministry of Production (PRODUCE) 34, 35, 38, 40, 41, 238
- Ministry of Science, Technology and Innovation (MOSTI) 142
- Mohnen, P. 111
- Morel, C. 103
- Morero, H. A. 119
- multilateral organizations 26
- Narayanan, S. 215
- National Agenda of Priorities in Healthcare Research (ANPPS) 95, 96
- National Biotechnology Policy (NBP) 138
- National Competitiveness Report 61
- National Council of Science and Technology (CONCYTEC) 25–27, 29, 30, 34–36, 38, 40, 41, 238
- National Fund of Science and Technology (FONDECYT) 25
- National Innovation System, of Armenia 49–65
 - components 58–61
 - determinants, actors and networks 54–61
 - governance system 59
 - learning and 61–64
 - macro environment 56–58
 - in transition countries 50–54
- National Innovation Systems (NISs) 1–4, 16, 17, 37, 236–237
 - macroeconomic and political stability 238
 - in Armenia 49–65
 - in Bolivia 191–2
 - in Nigeria 158–159

- in Peru 15–48
- in transition countries 50–54
- National Plan for Productive Diversification (PNPD) 35–36
- national programme of research and innovation (NPRI) 78
- National Research Council (CONI) 20, 23, 37
- National Sectoral Innovation System (NSIS) 69
- national STI/H policy (PNCTIS) 95
- National Strategic Plan of Science, Technology and Innovation (PENCTI) 34, 38
- National Superintendency of Education (SUNEDU) 36
- National System of Agricultural Innovation (SNIA) 34
- National System of Science and Technology (NSST) 20, 23, 27, 30
- National System of Science, Technology and Technological Innovation (SINACYT) 17, 34–38, 40, 42
- National University of San Marcos (UNMSM) 28
- Nelson, R. 207
- Newly Industrialized Economies (NIEs) 206
- Nigerian mining industry 156–167
 - collaboration on innovation, impact 165–166
 - linkage of actors in 163–165
 - methodology 159–161
 - model specification and statistical analysis 160–161
 - prevalent types of innovation 161–163
 - sampling 159
 - study variables and measurement 159–160
- Niosi, J. 134
- Nussbaum, M. 90
- Ohmae, K. 173
- ordered probit estimation 119
- Organisation for Economic Co-operation and Development (OECD) 51, 131
- organizational innovation 160, 162–163
- organizational learning 53
- Oslo Manual 159
- Oyebisi, T. O. 158
- Oyewale, A. A. 158
- Partnerships for Productive Development (PDPs) 97
- Perry, M. 61
- Peru's policy transitions 17
- Peruvian economy 16
- Peruvian National System of Science and Technology 17–37
 - failed industrialization 19–24
 - lost decade, 1981–90 25–27
 - National Innovation Systems 31–37
 - organizational and institutional foundations, resetting 27–31
 - Public Funding Bonanza 31–37
 - state interventionism limits 19–24
- Plan Inca 20
- planning system legacy 54
- political violence 28
- power asymmetries 15
- private investment 26, 29
- privatization 52, 54
- process innovation 162, 166
- Productive Development Policy 97
- protectionism 26
- Radosevic, S. 65
- Rasiah, R. 215
- Regional Innovation System (RIS) 50
- research, development and innovation (RDI) 171, 184–186
- resource-based view (RBV) approach 110
- Röller, L.-H. 111
- Roolah, T. 61
- Sagasti, F. 25, 27, 31
- Scandinavian Institute of Competitiveness and Development (SICD) 196
- Schumpeterian Mark I industry 208
- Schumpeterian Mark II industry 208
- Schumpeter, J. A. 50
- Schwachula, A. 87
- Schwartz, N. L. 207
- science development 59
- science push innovation 61

- science, technology, and innovation in health (STI/H) 87
 inclusive development 90–92
- science, technology and innovation (STI) 2, 6, 18, 34, 37, 38, 41, 86, 111
 inclusive development 88–90
- Sectoral Mining Innovation System 156
- Sectoral Public Research Institutes (SPRIs) 20, 25, 27, 29, 38
- sectoral system of innovations (SSI) 209
- Sheahan, J. 28
- SilTerra 217–219
- Sirius 54
- Siyabola, W. O. 158
- small and medium enterprises (SMEs) 31, 73
- social capital concept 51
- social programmes 29
- social science research 124
- Soete, L. 173
- Sölvell, Ö. 200
- soviet heritage 52
- state-owned enterprises (SOEs) 56
- state policies 55
- STI Framework Fund (FOMITEC) 35
- STI/H, in Brazil 92–102
 historical background 92–93
 Ministry of Healthcare, 2004–07 95–97
 Ministry of Healthcare reinforcement, 2012–14 98–99
 policy trajectories synthesis, interactions and priority setting 99–102
 policy trajectory, 2002–14 93–99
 promotion of, 2002–03 93–95
 strengthening of interactions, production sub-systems 97–98
- S&T indicators 30
- structural economic reforms 37
- structural reforms 28
- structural support policy, TPIS 72–74
 financial mechanisms, R&D 73–74
 human capital policy, KE 74
 innovation centres and collaborative incentives 72–73
- 1st Silicon (X-Fab Sarawak) 219–220
- Sutz, J. 2, 16, 51, 191
- Synopsys 61
- Taiwan Semiconductor Manufacturing Corporation (TSMC) 206, 224, 230–232
- Technological and Foreign Trade Policy (PITCE) 96
- technological catch-up of Malaysian semiconductor firms 206–235
 analytical framework 212
 data collection and analysis 212–214
 firm-level catch-up strategies, global value chains 210–211
 government level catch-up strategies 208–210
 industrial innovation patterns 207–208
 industry conditions, firm-level strategies and institutions, analysis 222–224
 latecomer strategies, typology 224–231
 Malaysian IC firms, case studies 217–222
 Malaysian Integrated Circuit Industry 215–217
 research methodology 212–214
- technological catch-up process 2, 206–233
- technological innovation 240
- Technological Innovation Centers (CITEs) 36–38, 41
- Technology-Based Enterprise Incubator (EMBATE) 201
- Teece, D. J. 110
- terrorism 28, 37, 78
- Tiffin, S. 157
- TPIS, after Jasmine Revolution 78–80
 human capital skills dilemma 79–80
 institutional background change, revolution 78–79
 obstacles to innovation catch-up, pharmaceutical companies 80
- TPIS, before Jasmine Revolution 69–78
 conjunctural support policy 70–72
 efficiency, firm level analysis 74–78
 firm-level innovation survey 75
 firm-level R&D, structure and practices 77–78

- strengths and weaknesses, firm-level perspectives 75–77
- structural policy instruments 70
- structural support policy 72–74
- Trade-Related Intellectual Property Rights (TRIPS) agreements 73
- transition economies 52
- Triple Helix model 191, 202
- Trojer, L. 197
- tropical infectious diseases 148
- Tunisian Guarantee Company (TGC) 73
- Tunisian Investment Incentive Code (IIC) 70
- Tunisian pharmaceutical innovation system (TPIS) 69
- Tunisian pharmaceutical market 70, 76
- United Nations Economic Commission for Europe (UNECE) report 60
- Universidad Mayor de San Simón (UMSS), Bolivia 190, 241, 242
 - context of study 194–195
 - mode 2 and innovation culture, research community 201–202
- National Innovation Systems 191–192
 - research activities background 195–196
 - systemic interaction approach, cluster development 198–201
 - theoretical framework 191–194
 - universities, NISs 192–194
 - university technology transfer unit and activities 196–198
 - university technology transfer unit (UTT) 190, 197–199, 203
- Vaccarezza, L. S. 192
- VCyT report 194
- Veblen, T. 206, 208
- Very-Large-Scale-Integration (VLSI) Technologies 216, 217
- Veugelers, R. 118
- Wahab, S. A. 194
- Wald test 119
- weak institutions 2
- Whittaker, H. 15
- Winter, S. 207
- Wolfe, D. A. 193
- World Bank 114
- World Economic Forum report 80
- Yacoub, L. 81
- Yacoub, N. 75, 81