

INDEX

Page numbers followed by “*f*” and “*t*” indicate figures and tables respectively.

- AAI. *See* accelerated access initiative (AAI)
- ABB Group, 217
- Abbot, 78
- Abdullah, H., 102
- accelerated access initiative (AAI), 54
- acceptability of products/services, 50
- accessibility of products/services, 50
- ACHAP. *See* African Comprehensive HIV/AIDS Partnerships (ACHAP)
- active pharmaceutical ingredient (API), 78
- AES. *See* Applied Energy Service (AES) Corporation
- affordability of products/services, 50
- Africa
- Chinese FDIs, 180, 181
 - FDI inflows, 180–181
 - share in global FDI inflows, 180
- African Comprehensive HIV/AIDS Partnerships (ACHAP), 55
- agricultural research system, India, 136–137
- Amadi, B. O., 102
- American Chamber of Commerce of Rio de Janeiro, 215
- Anatomic Therapeutic Chemical (ATC) Classification, 72
- Antiretroviral (ARV) drugs, 54
- API. *See* active pharmaceutical ingredient (API)
- Applied Energy Service (AES) Corporation, 215–217
- Arogya Parivar, 27
- ASEAN countries, employment effects of FDI in, 201
- Asian countries, 226–227
- Austin, J. E., 167
- availability of products/services, 48
- Bacillus thuringiensis*, 133, 137. *See also* Bt cotton
- Bandyopadhyay, K. R., 199
- Barwale, Badrinarayan R., 137–138
- Bayer AG, 85
- Belderbos, R., 20
- bilateral agreements, 152
- Bill & Melinda Gates Foundation, 52
- Blue Skies, Ghana, 25–26
- Bollgard, 138
- BoP. *See* Bottom of the Pyramid (BoP)
- Bottom of the Pyramid (BoP), 4
- market investment, 92–93
- Brazil
- Light for All Program (LfA), 203–220
 - Petrobras, 220
 - pharmaceutical MNEs, 53
 - public–private consortia, 53
 - reasons for low access to electricity in, 207
 - regions, 203
- Bristol-Myers Squibb (BMS), 55
- Bt brinjal, 139
- Bt cotton, 133
- controversy over, 138–139
 - drivers of adoption, 134, 134*t*

- illegal seeds, 139
 - Indian case study, 135–142
 - literature finding, 133–135
 - policy swings, 139
 - post-adoption profit drivers, 135*t*
- Canada, 181
- cancer medicine, 85. *See also* Sorafenib Tosylate
- Caretrace, online traceability system, 25
- CDSCO. *See* Central Drugs Standard Control Organisation (CDSCO)
- Centrais Elétricas Brasileiras SA (Eletrobras), 203
- Central Drugs Standard Control Organisation (CDSCO), 72
- Centre for Monitoring Indian Economy (CMIE), 72
- Child Friendly Companies. *See* Applied Energy Service (AES) Corporation
- China
 - economic growth, 179
 - in Ghana. *See* Chinese MNEs, in Ghana
- China effect, 2
- Chinese MNEs, in Ghana, 174, 183–188
 - cultural and language barriers, 186, 187
 - diffusion of managerial knowledge, 186
 - employees gain skills from, 185*t*
 - employment of locals, 187–188
 - findings, 187
 - learning potential, 186
 - skill development/transfer, 183, 184*t*
 - technologies, 187
- chronic myeloid leukemia (CML), 84
- civil society, 79
- Clarke, R., 21
- clean energy, access to, 3
- clinical trials, 158
- CMIE. *See* Centre for Monitoring Indian Economy (CMIE)
- Cocoa Plan, Nestlé, 27
- Coelce, 217–218
- Collaborating Centre for Drugs Statistics Methodology (WHO), 72
- Commission on Macroeconomics and Health, 61
- competition-based pricing, 161–162
- consumption, globalization of, 229
- controversy, over Bt cotton in India, 138–139
- corporate brand, 169
- corporate social responsibility (CSR), 4, 54, 179–180
 - Ghana, 190–191
 - investment for poverty alleviation, 93–94
 - pharmaceutical companies, 54
- corpus on “Multinational” AND “Poverty”
 - compilation, 94–96
 - databases, 94
 - meta-analysis, 96–102
 - Scopus, 94, 95–96, 107*t*–129*t*
- corruption, 98, 220
- Creating Shared Value (CSV) program, 26–27
- credibility, 168
- Crespo, N., 21
- crowding out, 4
- cryI*Ac gene, 133
- Cry family genes, 137
- CSIR-Science and Technology Policy Research Institute (STEPRI), 182, 183
- CSR. *See* corporate social responsibility (CSR)
- CSV. *See* Creating Shared Value (CSV) program
- DALY. *See* disability-adjusted life-year (DALY)

- demonstration effect, 176–177. *See also* managerial knowledge spillovers
- Department of Biotechnology (DBT), 138
- Department of Health and Family Welfare, India, 78
- Department of Industrial Policy and Promotion (DIPP), Government of India, 72, 78
- Development Assistance Committee (DAC), 152
- diffusion of management practices, 177. *See also* managerial knowledge spillovers
- DIPP. *See* Department of Industrial Policy and Promotion (DIPP), Government of India
- disability-adjusted life-year (DALY), 52, 58, 62n1
- diseases
 identified, 58*t*–59*t*
 noncommunicable, 59*t*
- DNDI. *See* Drugs for Neglected Diseases Initiative (DNDI)
- Doh, J. P., 179
- Driffield, N., 21
- Driffield, N. L., 200
- Drug Controller General of India (DCGI), 72
- Drugs@FDA, 72
- Drugs for Neglected Diseases Initiative (DNDI), 58
- Dunning, J. H., 179, 200
- electricity, 3. *See also* Light for All Program (Lfa), Brazil
 government intervention, 196, 199
 low carbon sources, 196
 poverty and, 196
 renewable sources, 196–197
 supply, 196
 WEO-2016 on, 196
- electrification, 3
 demand for, 196
 environmental regulations, 201
 government regulation and incentives, 200–201
 grid expansion, 199
 income generation activity, 196
 infrastructure, 199–200
 off-grid solutions, 199–200
 sourcing resources, 199
- Eletrobras. *See* Centrais Elétricas Brasileiras SA (Eletrobras)
- Elkington, 141
- employment effects of MNEs, 201–202
- energy policies, 198–199
- essential medicines, access to, 42–43
 pharmaceutical industry in, 46
 pricing, 161–162
- Ethical Criteria for Medical Drug Promotion, 160
- European International Business Academy (EIBA) Conference 2014–2016, 7
- European MNEs, in Ghana, 174, 183–186
 educational background employment, 188
 employees gain skills from, 185*t*
 findings, 188
 gender sensitivity, 188–189
 learning potential, 186, 188
 skill development/transfer, 183, 184*t*
- Fatima, S. T., 200
- Feenstra, R., 201
- Ferrara, I., 201
- Firth, R., 4–5, 200
- Fontoura, M. P., 21
- Foreign Capital Census in Brazil, 217
- foreign direct investments (FDI), 2
 in Africa and Ghana, 180–181
 economic incentives, 4
 emerging countries, 4

- in Indian pharmaceutical sector, 74, 76, 77–79
- knowledge spillovers, 175, 200
- local capability building and, 175
- managerial knowledge transfer and, 176–177
- negative effects of, 197
- positive effect of, 3
- poverty alleviation and, 6, 14–15, 203
- preconditions for benefits from, 198
- reverse spillover effects, 200
- Fortanier, F., 200
- France, 181
- Free Zone Enclave, Ghana, 26
- Fresenius Kabi, 29, 80
- Fu, X., 179
- Gaz de France and Suez (GDF SUEZ), 215
- GEAC. *See* Genetic Engineering Approval Committee (GEAC)
- gender inequality, 202
- Gene Campaign, 138
- generic medicines, 156
 - branded, 156
 - corporate brand vs. product brand, 169
 - at low cost, 156
 - quality assurance, 159
- genetically modified plant varieties (GMV), 132–133
 - collaborating local actors in innovation, 142
 - commercialization, product and business legitimacy for, 141
 - outreach to farmers, 141–142
 - value to farmers, 141
- Genetic Engineering Approval Committee (GEAC), 138–139
- G-Finder Report, 52
- Ghana
 - Blue Skies, 25–26
 - Chinese MNEs in, 174, 183–188, 184*t*–185*t*
 - CSR, 190–191
 - economic development trends in, 178
 - education, 190
 - European MNEs in, 174, 183–186, 184*t*–185*t*, 188–189
 - FDI inflows, 180–181
 - GSGDA, 177–178
 - Industrial Policy, 178, 179, 190
 - Nestlé, 26–27
 - per capita income, 177
 - performance of key economic sectors, 178, 179*f*
 - policy implications, 189–191
 - tax rebates and concessions, 190
- Ghana Investment Promotion Centre (GIPC), 179, 180
- Ghana Shared Growth and Development Agenda (GSGDA), 177–178
- Ghana Statistical Service, 183
- Ghauri, P. N., 4–5, 21, 200
- Gilead licenses, 79
- GIPC. *See* Ghana Investment Promotion Centre (GIPC)
- GlaxoSmithKline, 56
- globalization, 152–153, 229
- GMV. *See* genetically modified plant varieties (GMV)
- Grains Quality Improvement Programme, 27
- Green Peace-India, 138
- Green Revolution, 132
- GSGDA. *See* Ghana Shared Growth and Development Agenda (GSGDA)
- Gujarat, India, 138
- HAL. *See* Hindustan Antibiotics Ltd. (HAL)
- Hall, D., 102
- Hanson, G., 201
- health and economic development, 43–44, 46*f*

- behavioral changes, 44
- demographic transition, 43
- human capital accumulation, 44, 45*t*
- labor productivity, 44, 45*t*
- healthcare infrastructure, in rural areas, 161
- health outcomes. *See also*
 - pharmaceutical MNEs
 - health expenditure, 45
 - pharmaceutical products and, 45–47
- health promotion, pharmaceutical industry in, 48–60
 - areas of contribution, 48–50, 49*t*, 50*f*, 51*t*
 - strategies, 51–56
- high electric bill, 207
- Hindustan Antibiotics Ltd. (HAL), 72
- HIV/AIDS, 50, 51, 55, 57, 58, 61
- Hoechst GmbH, 28
- host country government, in poverty alleviation, 32
- HRES. *See* hybrid renewable energy systems (HRES)
- human capital accumulation, health and, 44, 45*t*
- Human Development Atlas, 203
- Human Development Index (HDI), 203
- Hussein, A., 162
- hybrid renewable energy systems (HRES), 214–215
- hydroelectricity, Brazil, 210, 211–212
 - drawbacks, 212
- Hymer, S. H., 227
- ICAR. *See* Indian Council of Agricultural Research (ICAR)
- IDPL. *See* Indian Drugs and Pharmaceuticals Ltd. (IDPL)
- IFPMA. *See* International Federation of Pharmaceutical Manufacturers and Associations (IFPMA)
- ILO. *See* International Labor Organization (ILO)
- Imatinib Mesylate, 84
- IMS Health, 71, 72, 73
- India, 181
 - access to medicine, 164
 - agricultural research system, 136–137
 - Bt brinjal, 139
 - Bt cotton in, 135–142
 - GEAC, 138–139
 - industrial sector's contribution to GDP, 178–179
 - Mahyco, 137–139
 - new chemical entities (NCE), 69, 70, 72, 81, 83
- Indian Council of Agricultural Research (ICAR), 138
- Indian Drugs and Pharmaceuticals Ltd. (IDPL), 72
- Indian Patent Act, 70, 73, 83–84
- Indian pharmaceutical sector, MNEs in, 69–86
 - approvals of, as compare to United States, 82*t*
 - balancing public health and trade, 85–86
 - civil society, 79
 - contribution of, 74*f*
 - FDI in, 74, 76, 77–79
 - Imatinib Mesylate, 84
 - Indian Patent Act, 70, 73, 83–84
 - intellectual property, 83–85
 - methods of research, 71–73
 - new biological entities (NBE), 69, 70, 72, 81, 83, 83*t*
 - overview, 70–71
 - research and development, 72, 79–81, 80*t*
 - research questions, 71
 - sales values, 73, 74*t*, 75*t*–76*t*, 77*f*
 - Sorafenib Tosylate, 85
- intellectual property rights (IPR), 70, 86, 164
 - India, 83–85
 - overcoming barriers of, 56

- internal communication systems, 177
- International Energy Agency, 3
- International Federation of
Pharmaceutical Manufacturers
and Associations (IFPMA), 55
- International Labor Organization
(ILO), 201
- IPR. *See* Intellectual Property Rights
(IPR)
- job security, 4, 202
- Jstor, 94
- Kachwamba, M., 162
- Karnataka Rajya Raitha Sangha
(KRRS), 138
- Kathuria, V., 200
- Kenya, 180
- Knowledge Ecology International and
Act Up Paris, 56
- knowledge spillovers, 175, 200
managerial, 176–177
- KRRS. *See* Karnataka Rajya Raitha
Sangha (KRRS)
- Krugman, P., 228
- Kuznets, S., 90
- labor legislation, 202
- labor productivity, 44, 45*t*
- Law of Increasing Firm Size, 227
- Law of Uneven Economic Development,
227
- laws of development, 227
- Levin, T., 200
- Lieberthal, K., 230
- life expectancy, 44
- Light for All Program (LfA), Brazil,
203–220
features of, 204
impact of, 207–220
MNEs contribution, 214–220
overview, 203–207
performance of, 204–206, 206*t*
qualitative interview, 212–214
quantitative assessment, 209–210
sources of electricity, 210–212
- living standards, 2
- Lobina, E., 102
- local firms, poverty alleviation and,
29–30
- London Declaration on Neglected
Tropical Diseases, 62*n*3
- lower middle-income countries, 2
- Lundan S. M., 179
- M&A. *See* mergers and acquisitions
(M&As)
- Mahyco, 137–139
- managerial knowledge spillovers,
176–177
demonstration effect, 176–177
diffusion of management practices, 177
internal communication systems, 177
movement of labor, 176
- market-based pricing, 161–162, 165
- MDG. *See* Millennium Development
Goals (MDG)
- Médecins Sans Frontières (MSF), 56
- medicine, 2, 3
access to, 42–43
consumption of, 45
costs of, 45
expenditure on, 42, 46–47, 47*f*
new, prescription of, 46
nonmarket efforts improving access
to, 54–55
OECD countries, 42, 46–47
pricing, 53–54, 161–162
- Medicines for Malaria Venture, 53
- Medicines Patent Pool (MPP), 56
- Merck & Co., 55
- mergers and acquisitions (M&As), 78
- meta-analysis
of abstracts, 96–102
defined, 96
steps, 96

- Millennium Development Goals (MDG), 2, 90
- Millennium Summit in September 2000, 2
- Ministry of Health and Family Welfare (MoHFW), Government of India, 72
- Ministry of Health of Brazil, 55
- Ministry of Trade and Industry (MOTI), 178
- MNEmerge project, 5–7
 - activities, 6
 - consortium, 5
 - geographical partners, 5
 - objectives, 5–6
- Monsanto, 137–142. *See also* Bt cotton
- Morck, R., 188
- Morrissey, O., 201
- MPP. *See* Medicines Patent Pool (MPP)
- MSF. *See* Médecins Sans Frontières (MSF)
- multilateral agreements, 152
- multinational enterprises (MNE),
 - 2. *See also* Indian pharmaceutical sector, MNEs in; pharmaceutical MNEs; poverty alleviation, MNEs in
 - BoP population, 4
 - CSR and, 4, 179–180
 - employment effects, 201–202
 - engagement, 4–5
 - gender inequality, 202
 - important role, 4
 - internal communication systems, 177
 - job security, 4, 202
 - local firms and, 200
 - policy implications for, 231–233
 - renewable energy supply, 214–218
 - technological spillovers, 4
 - workplaces created by, 3–4
- Munday, M., 21
- Nagarajan, L., 137
- Natco, 85
- National Development Planning Commission (NDPC), 177
- National Interconnected System, Brazil, 207, 210
- Navbharat Seeds, 138
- NBE. *See* new biological entities (NBE)
- NCE. *See* new chemical entities (NCE)
- NDPC. *See* National Development Planning Commission (NDPC)
- Nestlé, Ghana, 26–27
- new biological entities (NBE), 69, 70, 72, 81, 83, 83*t*
- new chemical entities (NCE), 69, 70, 72, 81, 83
- new development paradigm (NDP), 200
- Nexavar. *See* Sorafenib Tosylate
- Niger Delta region, 102
- Nigeria, 180
- nongovernmental organizations (NGO),
 - 54, 229
 - poverty alleviation, 31–32
- Noor, H. M., 21
- Novartis, India, 27
- OECD. *See* Organization for Economic Co-operation and Development (OECD)
- OPPI. *See* Organisation of Pharmaceutical Producers of India (OPPI)
- Organisation of Pharmaceutical Producers of India (OPPI), 72
- Organization for Economic Co-operation and Development (OECD), 42
- Ozgediz, D., 161
- Palit, D., 199
- Paris Climate Conference (COP21, 2015), 196
- Park, B. I., 21

- Parliamentary Standing Committee
Reports on GM crops,
India, 139
- PATH. *See* Programme for Appropriate
Technology in Health (PATH)
- Penrose, E.T., 227
- Petrobras, 220
- Petroleum Local Content and Local
Participation Regulation of
2013, 189–190
- Pfizer, 56, 78
- pharmaceutical MNEs, 151–170. *See also* Indian pharmaceutical
sector, MNEs in
acceptability, 50
affordability, 50
contribution to health, 48–51, 49*t*, 51*t*
distribution for penetration, 160–161
engaging local firms in innovation,
157–158
focus of, 58
geographical accessibility, 50
in Ghana, 154
greenfield *vs.* brownfield
investments, 157
initiatives for sustainable
development, 154
investments, 157
market- and competition-based
pricing, 161–162
marketing, 158, 160
as part of complex system, 56–58
physical availability, 48
public–private partnerships, 161
quality assurance, 159
R&D-based, 154, 157–158, 160
recovery, branding for, 159–160
social development initiatives,
163–170
strategies of, 51–56, 155–156
- PHFI. *See* Public Health Foundation of
India (PHFI)
- Pirmal Healthcare, 78
- policy makers, in poverty alleviation,
30–31
- policy swings, on GM crops in India, 139
- Pool for Open Innovation against
Neglected Tropical Diseases, 56
- poverty alleviation, MNEs in, 2,
13–27, 225–233. *See also*
pharmaceutical MNEs
BoP market investment, 92–93
case studies, 25–29
conceptual framework, 22–24, 91–93
corpus. *See* corpus on
“Multinational” AND
“Poverty”
CSR investment, 93–94
employment, 17
FDI effect on, 6, 14–15, 203
findings, 29–35
future, 229–230
host country government role, 32
limitations, 233
local firms, 29–30
methodology, 24–29
NGOs’ role, 31–32
overview, 14–16
past, 227
policy implications, 231–233
policy makers role in, 30–31
present, 228–229
research question, 16–18
spillover effects, 30
theoretical background, 18–22
- PPP. *See* public-private partnership (PPP)
- Prahalad, C. D., 230
- Pray, C. E., 137
- PricewaterhouseCoopers (PwC), 152
- pricing of medicine, 53–54, 161–162
- private health sector, 153
- product brand, 169
- production, globalization of, 229
- products/services, pharmaceutical MNEs
acceptability, 50
accessibility, 50

- affordability, 50
- availability of, 48
- Programme for Appropriate Technology in Health (PATH), 52
- Projeto Solar Água Vermelha, 217
- public health and trade, 85–86
- Public Health Foundation of India (PHFI), 163–164
- public-private partnership (PPP), 5, 52–53, 55, 161
- PwC. *See* PricewaterhouseCoopers (PwC)
- Rajagopala Ayyangar Commission, India, 73
- raltegravir, 55
- Ranbaxy, 78
- “Recycle More, Pay Less,” 216
- remote rural areas, 3
- renewable energy, 196–197
- renewable energy supply, 214–218
- renewable sources of electricity, 196
- Riviello, R., 161
- Roberts, A., 21
- Royal Dutch Shell, 102
- Rugman, A. M., 167, 179
- sanitation, 2, 3
- Sanofi India, 28–29, 78
- Sass, 98
- Science Direct, 94
- Scopus, corpus obtained from, 94, 95–96, 107*t*–129*t*
- Seguino, S., 202
- Seitanidi, M. M., 167
- Shell Petroleum Developing Company, 102
- SINDELETRO, 217–218
- social development initiatives, 153
- social development initiatives, by pharmaceutical MNEs, 163–170
 - analysis, 164–166
 - direct returns on, 168–169
 - indirect returns, 167–168
 - recommendations, 169–170
- Sofosbuvir, 79
- Sorafenib Tosylate, 85
- South Africa, 180
- South Korea, 180, 181
- spillover effects, poverty alleviation, 30
- STEPRI. *See* CSIR-Science and Technology Policy Research Institute (STEPRI)
- strategies, of pharmaceutical MNEs, 51–56, 155–156
 - health outcomes through R&D, 51–52
 - intellectual property rights, overcoming barriers of, 56
 - licensing agreements, 55–56
 - nonmarket efforts, 54–55
 - PPPs, 52–53, 55
 - pricing, 53–54
 - technology transfer, 55–56
- Streeten, P., 227
- subcontracting local firms, 4
- Sub Saharan Africa (SSA), 153
 - Chinese FDI in, 180
- Sumner, A., 203
- Supreme Court, India, 139
- sustainable development
 - defined, 90
- sustainable development agenda, 2–5
- Sustainable Development Goals (SDG), 2
 - PPP and, 5
 - SDG1 (goal 1), 89–105
 - SDG3 (goal 3), 151–170
 - SDG8 (goal 8), 174
 - SDG9 (goal 9), 173–174
- TB Drug Development, 53
- technological spillovers, 4
- Technology and Management Centre for Development (TMCD), 182, 183

- technology transfer, 3, 4
- Te Velde, D. W., 201–202
- Thomas, V. M., 200
- Thuringia, Germany, 137
- Tractebel Energy, 215
- trade, public health and, 85–86
- Trade-Related Aspects of Intellectual Property Rights (TRIPS), 159, 162
- Indian Patent Act and, 84
- transfer pricing, 161–162
- “Transforming Our World: The 2030 Agenda for Sustainable Development,” 2
- TRIPS. *See* Trade-Related Aspects of Intellectual Property Rights (TRIPS)
- UNIDO. *See* United Nations Industrial Development organization (UNIDO)
- Unilever, 196
- United Kingdom, 181
- United Nations, 90
- United Nations Industrial Development organization (UNIDO), 7
- United Nations Millennium Declaration, 2
- United States, 180
- UN Sustainable Development Agenda, 2–5
- USFDA. *See* U.S. Food and Drug Administration (USFDA)
- U.S. Food and Drug Administration (USFDA), 72
- VHAG. *See* Voluntary Health Association of Goa (VHAG)
- Volta River Authority (VRA), 190
- Voluntary Health Association of Goa (VHAG), 29
- VRA. *See* Volta River Authority (VRA)
- Welch, D. E., 187
- Welch, L. S., 187
- WHO. *See* World Health Organization (WHO)
- women, MNEs and, 202
- World Energy Outlook for 2016 (WEO-2016), 196
- World Health Organization (WHO), 153, 154
- Anatomic Therapeutic Chemical (ATC) Classification, 72
- Collaborating Centre for Drugs Statistics Methodology, 72
- Commission on Macroeconomics and Health, 61
- Ethical Criteria for Medical Drug Promotion, 160
- medicine pricing, 161–162
- World Investment Report 2015, 180
- World Trade Organization (WTO), 154, 227
- Xenogiani, T., 202