

Index

- Abdul Aziz, 1998
 economic performance of Malaysia 1960 to 1995, 136
 major investments in smallholder agriculture in Malaysia, 137
 tax contribution of smallholder agriculture in Malaysia, 139
- ability to govern
 for the prosperity of all, xxii
 nature of political incentives key. *See de Mesquita and Root, eds., (2000)*
- ABRARE, 206, 295
 Australian Bureau of Agriculture and Resource Economics, 201
- adverse selection
 example in agriculture, 302
- Agenor and El Aynaoui, 2003
 extensive urban youth unemployment in Morocco (2000s), 249
- agricultural development
 chronic underdevelopment of smallholder agriculture. *See* smallholder agriculture
 collectivization essential according to communists, 260
 environmentally sustainable, 5
 evidence on the role of, 5
 jumpstart the process of industrialization, 2
 links to markets critical, 278
 polar views on, xxi
- agricultural policy
 anti-agriculture predominant in developing countries. *See* individual countries
 basic needs, 261
 China used distorted prices to tax agriculture, 110
 chronic neglect of smallholders, 262
 Common Agricultural Policy of the EU (CAP since 1962), 292
 Corn Laws of England, 20
 Integrated Rural Development (IRD, 1970s and 1980s), 261
 OECD farm support hurt exporters in poor countries, 292
 price subsidies in OECD, 4
 price supports and investments in Malaysian smallholder agriculture, 137
 promote capital intensity in dualistic Brazilian agriculture, 153
 pros and cons of subsidies in Indian agriculture, 101
 restriction of private trade and marketing in food grains, 102
 root causes of controversies, 290
 severe taxation of agriculture in Egypt, 240
 transfer efficiency of the CAP low, 297
 US Farm Bill (2008), 292
- agricultural revolution
 concept still controversial in the case of England, 16
 concept still controversial in the case of Korea, 83
 maintain social and political stability, 25
- agricultural subsidies
 Australia leads talks to abolish trade distorting subsidies, 204
 benefit mainly large farmers in India, 102
 continuing subsidies since the New Deal farm programs (1930s) for US farmers, 46
 distributional benefits of OECD price supports controversial, 291
 in favor of industry and urban consumers in China under ISI, 112
 no market-distorting price supports for New Zealand's farmers (since 1984), 207
 public good nature controversial.
 See individual countries
 some real world examples. *See* protection coefficient
- agricultural transformation
 characteristics of process. *See* Timmer, C. Peter
 declining share of agricultural employment, 6
 declining share of agriculture to GDP, 6
 many agricultures fail, 233
 positive growth in productivity, 6
 process requires investment, 189
 public foundations of, 5
 steady income increases, 6
 the "six I s" defined, 259
- agriculture
 adaptation to climate change critical, 302
 broad-based overall growth, 2
 conflict-free or conflict-ridden adaptation to climate change, 299
 contribution to food, fiber, raw materials, labor, financial surplus, 2
 critical public roles, 5
 crop, livestock and forestry, 7
 decentralized decision and knowledge intensive nature, 271

- agriculture (*cont.*)
 extracting agricultural surplus, 14
 highly risky sector, 255
 important contribution defended by Timmer, Valdes, and Foster (2005), 177
 in Lewis model, 3
 insights on what gets agriculture “moving”, 255
 low productivity with widespread poverty in much of the developing world, 259
 low-level equilibrium trap for millions of smallholders, 280
 main messages on scope and limits of its developmental contribution, 185
 multi-functionality of, 5, 217
 multiple natural and man-made uncertainties, 271
 necessary to overall economic transformation, 2
 necessity to invest in, 4
 non-insurable systemic risks, 302
 passive sector with weak linkages (1950s–60s), 3
 Physiocrats in 18th century France, 2
 poor linkages with rest of economy, Hirschman (1958), 260
 prevalence of poverty, 2
 pro-agriculture view, 3
 question is how to not whether to develop, 188
 role in economic development, 1
 surplus for industrialization, 3
 the “farm problem”, 272
 two polar views, 2
 underdeveloped despite one of oldest occupations, 305
- Akiyama and Larson, eds., 2004
 slow growth of agriculture in the Philippines, 244
- Allcott, Lederman and Lopez, 2006
 linking structure of public expenditures and impact on poverty reducing growth, 285
- Alston and Pardey, 1966
 American government expenditures on agricultural research and extension, 47
- American agricultural transformation
 changing farm population and farm size structure, 52
 closer labor market integration key.
 See Gardner, Bruce L
 econometric approach by Gopinath and Roe (1997) to sort out cause and effect, 47
 econometric approach by Huffman and Evenson (1993) to sort out cause and effect, 47
 econometric research yields contradictory results on causality, 47
 greater equality of income distribution despite increasing land concentration, 52
 increasing rural urban integration, 51
 labor market integration key, 54
 mechanical innovations and infrastructural development, 43
 Orden, Paalberg and Roe (1999) skeptical on productivity impact of New Deal programs post-WW II, 49
 overall productivity increase accelerate at about 1940, 49
 productivity increases (into 1990s) despite reduced support, 50
 reduced gap between farm and non-farm wage rates (since 1940s), 51
 Schultz on closer labor market integration beneficial to farm families, 51
 technical progress does not necessarily benefit farmers, 51
 value of \$500 billion dollars (1992 \$) on commodity programs?, 48
 values matter for productivity growth, 56
- American agriculture
 “small” and “large” defined, 53
 acreage in farms and under crops, 55
 agrarian discontent of 1870–1900, 40
 beneficial integration with broader economy, 43
 benefits to the American consumer, 37
 contribution to economic transformation controversial, 37
 contribution to industrialization substantial but not critical (Mundlak), 42
 development nurtured since the founding fathers, 35
 farming population predominant until the 1830s, 36
 Homestead Act (1862), 275
 New Deal farm programs of the 1930s, 46
 reduced poverty among farm households (1990s), 53
 substantial public investment in research and extension, 46
 sustained productivity growth not until earlier part of 20th century, 43
 Anderson and Valdes, eds., 2008, 173, 174, 269

- Anderson et al, 2008
 net taxation of agricultural sector in
 Australia and New Zealand under
 ISI, 195
 nominal rate of assistance for Australia and
 New Zealand agriculture, 295, 195
 anti-agriculture polar view
 China case a decisive refutation of
 view, 123, 184
 India case refutes view, 107
 Indonesia case refutes view, 133
 Prebisch, 3
 refuted in developing countries, 60
 Argentina
 Alfonsín defeats Peronist party, 1983, 236
 Carlos Menem, Peronist president, 1983, 236
 GNI higher than that of United States
 (1900), 234
 GNI per capita USD 7,570 (2009), 234
 hyperinflation, 1960s to 1990s, 235
 Isabel Martínez de Perón, chief of
 state, 1974, 235
 large blocks of public land given to
 individuals and corporations (19th
 century), 275
 long period of instability, from Perón (1946)
 to Kirchner (2003), 235
 long period of military dictatorships, 235
 Prebisch, advocate of ISI and the
 anti-agriculture view, 235
 stability condition largely not fulfilled, 234
 substantial currency overvaluation, 1980s, 235
 Argentina agriculture
 did poorly despite strong comparative
 advantage, 1950s to 2000s, 234
 net taxation substantial. *See* Schnepf,
 Dohman, and Bolling 2001
 strong comparative advantage in
 agriculture, 234
 Ashley and Simon, 2001
 little rationale for investing in agriculture, 4
 asymmetric information
 example in agriculture, 302
 Au Yeung, 2000
 Hong Kong one of the least corrupt
 places in Asia, 301
 audience for this book
 development practitioners, 11
 development professionals, 11
 faculty and students in undergraduate level
 courses in economic development, 11
 general public, 11
 non-governmental organizations, 11
 policy makers and their staff, 11
 Australia
 Aborigines dispossessed by Britain declaring
 “*terra nullius*”, 204
 adopted ISI (1900s to early 1970s), 194
 advocates reform of international agricultural
 markets, 204
 Australian Trade Commission (Austrade)
 offices worldwide, 203
 Federation since January 01, 1901, 201
 GNI per capita USD 43,770 (2009), 200
 leader in Cairns Group coalition of WTO
 members, 204
 price and political stability in 20th
 century, 201
 private property rights for only white
 settlers, 205
 Supermarket to Asia Council (1996), 204
 Australian agriculture
 agro-processing major source of income and
 employment, 205
 Australian Dairy Corporation (ADC), 204
 Australian Meat and Livestock Corporation
 (AMLC), 204
 evolution of government commodity support
 since late 1970s, 203
 export market access of critical
 importance, 202
 export promotion by private and public, 203
 high productivity, main factor in growth, 200
 major contribution of technology transfer to
 productivity growth, 202
 price stabilization by the Australian Wheat
 Board (AWB) until 1989, 203
 public and private sector promote technology
 development and transfer, 201
 public interest dimension of extension
 neglected after privatization, 295
 refrigeration spurred meat exports to United
 Kingdom, 202
 subject to extreme climatic variations, 200
 subsidies to farmers virtually eliminated (by
 2000s), 194
 substantial but declining importance, 200
 substantial importance of farm dependent
 industries, 200
 winners and losers of reduced protection, 295
 Balisacan and Hill, ed., 2003
 economic performance of the
 Philippines, 244

- Ban, Moon, and Perkins, 1980
 no agricultural revolution preceded Korea's economic transformation, 79
- Baran, 1952
 smallholder development impossible without revolution, 261
- Bates in Eicher and Staatz, eds., 1998
 governments in many developing countries primarily self-serving, 262
- Baumann, 2002
 1987–92 agricultural policy reforms hurt smallholders in Northeast Brazil, 161
- Beesly, Burgess, and Esteve-Volart (2004)
 contradict Ravallion and Datt (1996) results on poverty-reducing importance of primary sector growth in India, 106
- Berkson, 1989
 testability the hall mark of good science according to Popper, 181
- Besancon, 2003
 subjective nature of CPI problematic as measuring rod, 283
- Bhalla, G.S. 1995
 Punjab agricultural and industrial development, 104
- Bielenberg, 2002, 220, 221, 223
 farm structure in Ireland, 219
- Bihar, India
 one of the poorest states. *See* India
- Binswanger and Deininger, 1997
 low potential for collective action by smallholders, 263
- Binswanger, Hans, 1994
 smallholders long considered backward, 259
- Binswanger-Mkhize and McCalla, 2010, 305
 agricultural and rural development in Africa, 234
 increased hunger in Botswana (1990–2005), 281
- black swan
 in Popper's methodology, 10
 successful industrialization of the United States, 10
 title of Taleb's book (2007), 10
- Blake, William
 dark Satanic mills, 22
- Blaug, Mark, 1997
 on Adam Smith's systems of political economy, 298
- Botswana
 corruption low at CPI 5.9 (TI, 2008), 281
 GNI per capita USD 6, 240 (2009), 234
 high growth despite high inequality, 269
 hunger increased between 1990 to 2005, 281
 politically stable Sub-Saharan country, 234
- Brandt, Loren
 increasing labor shortage in Japanese agriculture caused stagnation during 1920–40, 32
- Bravo-Ortega and Lederman, 2005
 conclusion based on elasticities of connection contradicts Timmer's, 180
 estimates of elasticities of connection, 180
- Brazil
 “miracle” years of 1968 to 1973, 150
 Asian financial crisis hits Brazil, 152
 Bolsa Familia, major factor in recent poverty reduction, 149
 brazilwood, origin of Brazil's name, 147
 failed Collor Plan I (1990) to tame inflation, 152
 GNI per capita USD 8, 240 (2009), 146
 high concentration of income and land, 147
 high concentration of rural poor in the Northeast, 147
 high income inequality, 148
 inflation hurt the poor most, 152
 inflation under Lula government low, 152
 introduction of major primary commodities, 147
 introduction of sugar in 12, 147
 investment in basic education, 159
 land reform 1964, 155
 limited achievement under land reform, 155
 Lula government on reducing poverty and inequality, 149
 major producer of sugar cane, orange juice, soybeans, 146
 military government 1964–85, 155
 persistent high inflation after oil price shocks of 1970s, 150, 152
 Plano Real (1993), austerity plan, 152
 poverty reduced though still substantial (2000s), 148
 President Fernando Enrique Cardoso, 147
 President Luiz Inacio Lula da Silva (2003–2010), 148
 priority to equity compared to Malaysia and Tunisia, 162
 recent progress in raising basic literacy, 159
 rich endowment of natural resources, 146
 rule by oligarchs up to revolution of 1930, 148
 sharp regional disparities persist, 147
 subsidized development of sugar-based ethanol, 146, 147
 tumultuous, unstable past, 148

- Unidade Real de Valor* (URV), new
currency, 152
unsuccessful Cruzado Plan I (1986) to tame
inflation, 152
urban bias of policy, 159
- Brazilian agriculture
1987–92 policy reforms promote productivity
but reduce employment, 160
agro-business, a major sub-sector since early
2000s, 154
credit subsidies benefit minority of large
farmers only, 159
criticisms of World Bank approach in Brazil
land reform, 156
dualistic and with low labor
productivity, 153
Estatuto da Terra of 1964, 155
Estatuto do Trabalhador Rural, labor
legislation of 1963, 158
except for subsidized wheat, food production
fell, 154
extensive, low productivity ranches, 157
growth from area expansion not yield
increases, 153
growth only from soybeans and oranges, 153
high capital intensity of large farms, 158
history and policy exacerbate dualism, 158
land reform achievements disputed, 157
latifundia in land reform, 155
liberalizing reforms of 1987–92 159
logging, mining, deforestation, 157
MST criticisms of Lula's land reform
achievements, 157
MST organizes forced expropriations,
157, 275
only 5 percent of GDP in 2007, 152
poorest 40 % own barely 1 % of land, 275
powerful landlord class blocks land
reform, 155
proletarianization of rural labor, 158
quality not just quantity of growth matters
for poverty reduction, 162
short-lived commodity booms, 157
structural roots of dualism, 158
surplus labor exacerbated by high capital
intensity, 153
taxed under ISI until reforms
(1987–92), 159
two agricultures, plantations versus
smallholders, 157
World Bank *Ceara* Rural Poverty
Alleviation Project, 156
World Bank *Cedula da Terra*, 155
- Canada
Dominion Lands Act (1872), 275
for Indians, only collective land on the
reserves, 199
GNI per capita USD 42, 170 (2009), 195
largely stable during 20th century, 196
private property rights for white
settlers only, 198
- Canadian agriculture
Agriculture Canada, agricultural research, 197
bulk of rural income and population
is non-farm, 199
Canada-US Free Trade Agreement 1989, 198
Canadian Agricultural Income Stabilization
Program (CAIS), 198
Canadian Wheat Board from 1919, 198
evolving importance and structure, 196
farming, main source of income only for over
\$ 250, 000 income families, 199
governments intervene to promote market
access, 197
increasingly important agri-food sector, 196
long history of technology transfer, 197
major exporter of raw and processed, 196
national marketing boards, 198
North American Free Trade Agreement
(NAFTA) 1994, 198
price stabilization, 198
subsidized credit from the 1940s, 198
substantial subsidies to farmers (2000s), 194
- Chai, Joseph, C.H., ed. 2000
performance of China's economy, 114
- Chambers and Mingay, 1966
close interaction between England's landed
gentry and urban business
community, 17
protection afforded by the Corn Laws in
England, 20
- Chapman and Tsakok, 1989
Exaction, a policy simulation game, 289
- Chapman, Graham, 1982
Green Revolution Game, a simulation game
for training, 99
- Chile
economic performance since late 1980s, 164
economy started recovery only in 1984, 168
Gini coefficient for income falls from 0.56 to
0.50 (1998), 170
GNI per capita USD 9, 420 (2009), 164
high income inequality, 164
high inequality problematic. *See* Lopez
high protectionism following Great
Depression in 1930s, 167

- Chile (*cont.*)
 inflation and contraction under Allende, 167
 long period of ideological instability until Pinochet, 164
 low corruption at CPI 6.9 by TI (2008), 164, 281
 major socio-economic achievements (since mid 1980s), 169
 positive investment climate, 169
 President Allende (1970–73), 167
 productivity growth major, 169
 restructuring and austerity under Pinochet, 167
 rule of General Augusto Pinochet 1973–89, 167
 social programs reduce income inequality, 170
 socialist land reforms 1962–73, 167
 stable institutional framework, 164
 strong growth performance since mid 1980s, 169
 subsidy on education, key to improvements, 170
 substantial reduction in poverty (1987–2003), 170
 successful economic diversification, 168, 175
 tax structure pro-elite (Lopez and Miller, 2008), 285
- Chilean agriculture
 2007 agricultural census, 173
 Agrarian Reform Law under Frei, 167
 agrarian structure in the late 1990s, 173
 Allende price controls lifted by Pinochet, 171
 contribution to economy, 170
 diversification of income sources critical for increased farm incomes, 174
 employment generating horticulture export growth, 174
 evolution in effective protection for major commodities (1960–84), 171
 growth performance since the Great Depression, 171
 horticulture, wine and fish exports, star performers, 168
 increased contribution to exports, 170
 irrigation key for exports, 171
 mainly domestic oriented and tradeable, 170
 partial reversal of Allende's land reform under Pinochet, 168
 recent increase in corporate farms (2000s), 173
 share of *minifundistas* under Pinochet, 173
 small farms (late 1990s), 173
 tenure security and land distribution under Pinochet, 172
 the 1997 agricultural census, 173
- China, People's Republic of
 “eating from the big pot of the state” undermined efficiency, 110
 adopted ISI, 109, 110
 catching up with the West through ISI, 117
 China and India compared, 108
 closed economy under the Great Leap strategy, 110
 economy leaps forward after 1979 reforms, 115
 food subsidies to urban consumers, 112
 fundamental reforms under leadership of Deng Xiaoping, 109
 Gini coefficient for income similar to that of the US, 121
 GNI per capita USD 3,590 (2009), 108
 Great Leap strategy built on “squeeze” agriculture, 109
 heavy industry priority sector under ISI, 112
 high FDI inflows, 113
 high growth performance after 1979 reforms, 112
 increasing income disparity after 1979 reforms, 120
 liberation of women from feudal yoke, 111
 low GNP per capita, USD 52 to 210 (1952–75), 111
 low production efficiency under Great Leap strategy, 110
 major social achievements pre-1980, 111
 piecemeal and incremental implementation of fundamental reforms, 109
 the Great Leap Forward (1958), 117
 the Great Proletarian Cultural Revolution (1966–76), 117
 thorough implementation of “squeeze agriculture” strategy until 1979, 184
 unlike in Taiwan, China, income inequality increased with high growth, 122
- China's agriculture
 “price scissors” phenomenon, 112
 abolition of agricultural tax since Shang Dynasty (1600–1066 BC), 111
 changing importance and structure, 115
 collective incentive system pre HRS, 113
 complementary supportive policies to the HRS, 117
 dynamic growth of TVE, 119
 free rider problem pervasive pre-HRS reforms (1979), 115

- growth in TFP after 1979 reforms, 116
 high cropping intensities of irrigated land, 116
 Household Responsibility System (HRS), 113
 income inequality fell drastically with land reform, 121
 land- and water-scarce and labor abundant, 116
 mediocre and tumultuous performance pre-1980, 111
 Town and Village Enterprises (TVE), 119
 under ISI, severe taxation to invest in industry, 117
 China-United States Joint Commission for Rural Reconstruction (JCRR)
 effective aid institution 1951–65, 87
 Chu et al, 2000
 tax systems regressive in many developing countries, 283
 Clark, Gregory
 no evidence to counteract Mingay's claims, 23
 real wages of the laboring class rose steadily, 23
 Clarke, Sally
 impact of New Deal farm policy on farmers' investments in tractors, 46
 Cochrane and Ryan, 1976
 income support programs (1930s) key to productivity growth in US agriculture, 46
 Cockcroft, 1998
 extensive malnutrition under Porfirio Diaz (1876–1910), 251
 high rate of rural-urban migration in Mexico, 249
 Coelli and Prasada Rao, 2003
 total factor productivity growth in Australian agriculture, 202
 Collier, 2007, 304
 the bottom billion, 271
 computable general equilibrium (CGE)
 modeling
 definition, 313
 Consultative Group on International Agricultural Research (CGIAR)
 mission statement, 299
 Corkill, 1993, 230, 231
 performance and structure of Portuguese economy, 68
 wealth concentration of Portugal's industry, 227
 corruption
 assessments, CPI by Transparency International (TI, 2008), 281
 Chile not corrupt according to TI, 281
 Corruption Perception Index (CPI), 281
 Haiti very corrupt according to TI, 282
 Hong Kong not corrupt according to TI, 281
 low in Botswana according to TI, 281
 Myanmar very corrupt at CPI 1.3, by TI, 282
 no simple causality between corruption and economic mismanagement, 281
 Singapore not corrupt according to TI, 281
 Somalia very corrupt at CPI 1.0 by TI, 282
 the plundering of nation's resources under patronage politics, 265
 United States a superpower despite former high corruption, 283
 United States highly corrupt between 1870s to 1920, 283
 Cuba
 expropriations of American landholdings under Castro (1958), 275
 land reform (1958–63), 275
 unique in Latin America for land reform, 274
 US trade embargo rooted in land expropriations (1960), 275
 Cuddihy, 1980
 agricultural intervention in Egypt, 240
 De Gorter and Swinnen in Gardner and Rausser, eds. 2002
 on Olson's explanation of US subsidies to farmers in the 1930s, 265
 de Mesquita and Root, eds., 2000
 "How to govern for prosperity ... puzzle of the twenty-first century", 263
 bad economics is good patronage politics, 270
 patronage politics unstable, 271
 Deaton, Angus and Jean Dreze, 2002
 re-assessing official estimates of poverty in India, 329
 Debatisse et al, 1993
 access to futures and options markets, 303
 Deininger, Klaus, 2003
 widespread land tenure insecurity in developing world, 276
 Deng Xiaoping, 109
 fundamentally re-oriented China's economic strategy, 184
 Dethier, 1989, 240, 241
 taxation of Egypt agriculture, 240, 241

- distribution of income
 - concentration of wealth, xxii
 - critical in determining distribution of benefits from agricultural growth, 185
 - egalitarian, xxii
 - highly unequal when only a minority of landlords gain. *See* dualistic agricultures
- Drabble, 2000
 - Malaysian agricultural performance, 137
- dualistic agricultures
 - definition of, 6
 - differential performance of export- and import-oriented farms in Chile, 175
 - dualism persisted despite pro-*Bumiputeras* measures of Malaysian governments, 138
 - excluded from set of successfully transformed, 194
 - export-oriented plantations versus subsistence smallholders in Brazil, 157
 - high income inequality in Mexico, 252
 - highly skewed distribution of land in Morocco, 253
 - highly skewed land distribution in Tunisia, 144
 - induced by extensive Egyptian government intervention, 241
 - low labor productivity in dualistic Brazil agriculture, 153
 - Portugal dualistic (Agricultural Census of 1968), 230
 - rooted in colonial land grants in Brazil, 158
- East Asian “tigers”
 - Japan, 2
 - Taiwan, China, 2
 - the Republic of Korea, 2
- Easterly, William, 2001
 - high inequality breeds social polarization, 267
- Ebel, 1991
 - social expenditures in developing countries slashed under structural adjustment programs (1980s), 284
- efficiency
 - definition, 313
 - dynamic, 313
 - economic or allocative, 313
 - low efficiencies in Indian processing and marketing. *See* Indian agriculture
 - low efficiencies of resource use in China (1952–81), 111
 - productive, 313
 - static, 313
- Egypt
 - GNI per capita USD 1, 800 (2009), 239
 - government cuts back investment in public infrastructure, 242
 - local elites use *schilla* (clientelist) network to thrive, 242
 - market liberalization reforms (1990s) improve market access, 242
 - Nasser adopts ISI and taxes agriculture, 239
 - Sadat’s *Infitah* – Open Door – policy (1974), 241
 - subsidized poultry production thrives, 241
- Egypt agriculture
 - cotton and rice, controlled and highly taxed, 240
 - dynamic growth of non-controlled horticulture, 241
 - effective protection rates for controlled crops negative (1960–85), 241
 - extensive government intervention, 1950s–1980s, 239
 - extensive post-harvest losses due to poor infrastructure, 242
 - horticulture and livestock non-controlled sub-sectors, 241
 - large farmers by-pass web of controls, 240
 - large farmers switch to lucrative non-controlled crops, 240
 - limited access by smallholders to markets, 239
 - low share of higher-value crops among small farmers in UE, 242
 - Lower Egypt (LE), better market access than Upper Egypt (UE), 242
 - membership in cooperatives mandatory under Nasser, 240
 - policy-induced dualism pervasive (2000s), 241
 - smallholders hurt by negative incentives and inadequate infrastructure, 242
 - well endowed with year-round irrigation, 239
- Eicher and Staatz, eds., 1998, 2, 259
- elasticity
 - Armington elasticity, 133
 - definition of concept, 313
 - numerical values and interpretations of, 313
- enclosure movement
 - accelerated between 1790–1820, 16
 - at the expense of small farms, 20
 - continued protection afforded by the Corn Laws, 20
 - reduction of land under common property rights, 16

- with high corn prices strong incentives to enclose, 20
- England
 - agricultural and industrial revolutions support pro-agriculture view, 10
 - agricultural contribution to GDP (1700–1880), 18
 - agriculture in 1700, 18
 - agriculture in the 18th and 19th centuries, 14
 - averted the Malthusian Law of Population, 25
 - experience does not confirm pro-agriculture view, 25
 - first country to industrialize, 185
 - first known case of successful agricultural transformation, 15
 - growth in pauperism, 22
 - massive emigration tightened labor markets, 15
 - unprecedented population growth (1780–1800s), 24
 - virtuous circle of agriculture and non-agriculture growth, 21
- England's agricultural revolution
 - beneficial impact on rural poverty after long lag, 18
 - contribution to industrial revolution and to incomes of the poor, 17
 - "cows and ploughs" concept, 16
 - debate on timing and distinguishing features, 15
 - enclosure movement benefited medium and large farmers. *See* enclosure movement
 - impact on the incomes of poor rural households, 18
 - impact on the structure of the economy, 18
 - increase in cereal yields per acre, 15
 - increases in productivity instead of area expansion, 15
 - institution of agricultural societies, 17
 - institutional changes, 16
 - reduced fallow, 16
 - rural poor suffered real wage decreases, 19
 - security of tenure, 17
 - start-end dates, 17
 - two main concepts, 16
- expansion of markets
 - as different methods of transport improved, 16
 - improvements in systems of market information, 17
 - in favor of competition, 17
- externalities (disexternalities)
 - definition, 318
- faddism
 - donors distracted by. *See* Timmer, C. Peter
 - prevalent in development economics and donor thinking, 182
- Fane and Warr (2003)
 - CGE model on sectoral growth impact on poverty reduction in Indonesia, 132
- Faucette, 2008
 - Maori tribes receive compensation, 208
- Federico, Giovanni, 12, 191
 - "... agriculture is an outstanding success story", 191
- Fei, Ranis, and Kuo, 1979
 - economic performance of Taiwan, China agriculture, 262
- Fei-Ranis, 1964
 - agriculture a passive sector, a resource reservoir, 3
- five sets of conditions
 - are public goods and services, 298
 - common pattern in necessary conditions, 254
 - environment of stability and opportunity, 302
 - for agricultural transformation to materialize, 6, 189
 - seeking instances that could refute them, 8
 - test as necessary – Canada, Australia, and New Zealand, 193
 - test as sufficient – Ireland and Portugal, 213
 - test non-existence of condition of employment-creating non-agricultural sector – Mexico, Morocco, 251
 - test non-existence of condition on market access – Egypt, 239
 - test non-existence of condition on system of ownership and usufruct rights – the Philippines, 244
 - test non-existence of condition on technology transfer – Ghana, 237
 - test non-existence of condition on stability – Argentina, 234
 - test of strong version, 190
 - test of sufficiency of, 190
- Fogel, William Robert
 - biomedical measures needed to supplement income measures, 21
 - disparity between rich and poor in England widened (19th century), 22
 - gap in life expectancy between lower and upper classes widened (19th century), 22

- food grain self-sufficiency
 - low per capita availability in India (2000s), 101
 - major goal and rationale for intervention in Egypt, 239
 - priority objective for China, 108
 - Targeted Public Distribution System (TPDS) in India, 101
 - to achieve goal, Malaysia protects paddy, 138
- food security
 - concept different from food grain self sufficiency, 101
- foreign aid
 - effective US aid to Taiwan, China, 88
 - legion of experts, xxiii
 - no substitute for government commitment, 305
 - substantial US aid (since 1984) ineffective in Haiti, 282
- foreign direct investment (FDI)
 - after 1987 reforms, Ireland major recipient of, 214
 - China major recipient of, 109
 - Malaysian manufacturing successful in attracting, 139
- Fosu, 2002
 - frequency of coups d'état in Sub-Saharan Africa, 270
 - political stability in Sub Saharan Africa, 234
- Frank, 2002
 - extensive idle farmland in Brazil, 155
- Freedman, 1991, 309
 - correlation is not causation, 181
- Furtado, 1976
 - latifundia* and *minifundia* rooted in Latin American history, 275
- Garcia and Gonzalez Martinez, 1999
 - United States major destination for rural migrants from Mexico, 249
- Gardner, Bruce L
 - American agriculture in the 20th century, 35, 57
 - non-farm factors more important than farm factors in determining farm income growth, 57
- General Park Chung Hee (1961–79)
 - New Community Movement (*Saemaul Undong*, 1971), 84
 - rapid development attributed to continued export orientation, 75
 - rapid development started under his leadership, 75
- Ghana
 - continued vulnerability to commodity price shocks, 238
 - GNI per capita USD 700 (2009), 237
 - Jerry Rawlings, Provisional National Defence Council (1981), 237
 - long period of instability from Nkrumah (1966) to Rawlings (1981), 237
 - per capita income same as South Korea's in 1950s, 237
 - prosperous Sub-Saharan African country at independence (1957), 237
 - substantial yield gaps pervasive, 238
 - Tendana*, *Tigatu*, *Totem*, access to land under their control, 277
- Ghana agriculture
 - area expansion, main factor in growth, 237
 - limited level of transformation and diversification, 238
 - multiple factors undermine productivity, 238
 - severe underfunding of research, 237
 - yields remain stagnant (2007), 238
- Gini coefficient
 - developed by Corrado Gini (1912), 314
 - egalitarian distribution of growth income in Taiwan, China at 0.28 (1972), 86
 - fairly equal income distribution in Indonesia at 0.33 (1990s), 288
 - for income, high but falling in Brazil at 0.57 (1981) to 0.56 (2004), 147
 - high income inequality in Malaysia at 0.5 (1990s), 288
 - high income inequality in the Philippines at 0.45 (1990s), 288
 - high income inequality in Turkey at 0.46 (2001), 293
 - highly unequal income distribution in Venezuela 0.5 (1980s–90s), 268
 - highly unequal land distribution in Venezuela, 0.9 (1980s–90s), 268
 - income inequality in Mexico at 0.51 (1992–2002), 252
 - income inequality increased in New Zealand 0.35 (1984) to 0.40 (1996), 296
 - income inequality is reduced in Malaysia from 0.51 (1970) to 0.44 (1999), 134
 - income inequality – comparisons over time and across regions (1980s versus 1990s), 121
 - increased land inequality in the Philippines, 0.53 (1960) to 0.57 (2006), 245
 - land highly unequal in Argentina at 0.85 (1980–90s), 275

- land highly unequal in Brazil at 0.85 (1980–90s), 275
- land highly unequal in Mexico at 0.62 (1980–90s), 275
- land highly unequal in Venezuela at 0.90 (1980–90s), 275
- numerical values and interpretations of, 314
- Tunisia income inequality at 0.40 (2000), 141
- Glaeser and Goldin, eds., 2006
- lessons from US on corruption and reform, 283
- governments
 - Adam Smith on the visible hand needed to build the wealth of nations, 297
 - art of combining short- and long-term achievements, 304
 - central role in agricultural transformation, 254
 - committed to achieving prosperity for all?, 305
 - create the environment, xxii
 - development-minded and competent to take charge, xxii
 - essential to establish five sets of conditions, 297
 - farmers hurt by uncertainties created by, 255
 - good governance anchored in vision of just society, 304
 - in the driver's seat, whether “big” or “small”, 290
 - not committed to development for all, 255
 - not the problem but decisive part of solution?, 305
 - patronage politics rife in democratic and communist systems, 280
 - plundering nation's resources for own survival, 265
 - recurrent controversies on agricultural subsidies, 291
 - stay in power by distributing private goods, 264
- Greasley and Oxley, 2005
- farm land ownership in New Zealand, 211
- Grigg, David, 1992
 - higher wheat yields in agricultural revolution of England, 24
- Griliches, Zvi
 - profitability key to adoption of hybrid corn, 45
- gross domestic product (GDP)
 - definition, 314
- gross national product (GNP)
 - definition, 315
- Gujarati, Damodar N., 2003
 - statistical relationship does not imply causation, 317
- Haiti
 - 7.0 earthquake on January 12, 2010, 282
 - devastated by earthquake (2010) and repeated mismanagement, 282
 - Haitian Revolution (1791–1803), 282
 - Jean Bertrand Aristide, in and out of government since 1991, 282
 - one dictator after another, 282
 - rampant corruption for decades, 282
 - Rene Preval (1996–2001, 2006–current), 282
- Hall and Scobie, 2006
 - technology, major contributor to productivity in New Zealand agriculture, 208
- Hardie, Robert S
 - chronic land conflicts breed revolt, 246
 - Philippines land report buried by the US government (1952), 246
- Hartwell et al, 1972
 - the poor in newly industrialized England had to wait (19th century), 23
- Hayami and Ruttan, 1985
 - profitable new technologies, 259
- Hayami, Yujiro, Vernon M Ruttan, Herman M. Southworth, eds., 1979
 - Japan's agricultural growth, 29
- Henzell, 2007
 - Australian agriculture, 200
- Hicks neutral technical change
 - definition, 315
- Hicks, Sir John
 - lag in wages in industrial England needs explanation, 23
- Hirschman, 1958
 - agriculture poorly linked to rest of economy, 3, 260
- Hong Kong, 301
 - GNI per capita USD 31, 420 (2009), 281
 - low corruption at CPI 8.7 (2008), 281
- Iacocca, Lee
 - on post-WW II American agriculture productivity growth, 48
- import-substitution industrialization (ISI)
 - central planning within ISI in pre-1979 reform China, 109
 - Indian planners adopted ISI into the 1980s, 97
 - investing in agriculture is bad strategy, 3
 - popular among developing countries, 3

- income distribution
 - gap between the rich and poor, 1
 - highly unequal development, 4
 - increase in income inequality in China after reforms, 109
 - rural urban income gap in post-WW II
 - Japan thorny political issue, 26
 - skewed where patronage politics prevail. *See* political economy
- India
 - achieving food grain self-sufficiency a priority objective, 97
 - Bihar and Orissa, two of the poorest states, 102
 - comparing agricultural growth and poverty incidence in Punjab versus Bihar and Orissa, 102
 - comparing selected state level poverty incidence, 103
 - complex industrial system and licensing undermine growth, 97
 - complex land distribution and administration issues, 96
 - contribution of the Green Revolution to Punjab's development, 103
 - experience since independence supports pro-agriculture view, 107
 - GNI per capita USD 1, 180 (2009), 95
 - growth performance steady but modest until the 1980s, 97
 - implementation of land reform varied at state level, 97
 - incidence of poverty still substantial, 96
 - inward orientation undermined exports, 97
 - key objectives of India's successive planners, 97
 - liberalizing reforms of the 1990s, 98
 - persistent land conflicts in Bihar despite land reform since 1950, 274
 - poverty decline according to Deaton and Dreze (2002), 329
 - Punjab, one of the richest states where the Green Revolution was launched, 102
 - RIDF least used in Bihar and Orissa, 279
 - Rural Infrastructure Development Fund (RIDF) since 1995–1996, 279
 - substantial progress since independence (1947), 95
 - under British rule 1857 to 1947, 96
 - widespread poverty and illiteracy at independence, 96
- Indian agriculture
 - deceleration in productivity (1990s) attributed to complex causes, 100
 - environmental problems undermine productivity (1990s), 294
 - Green Revolution in the irrigated north, 98
 - growth performance since independence, 108
 - high variability in growth performance, 99
 - irrigated and rainfed states, 98
 - semi-arid tropics of peninsular regions of India, 99
 - significant contribution to employment, 98
 - subsidies to irrigation and power inequitable and unsustainable, 287
- Indonesia
 - adopted the ISI, 126
 - counteracting the Dutch Disease on agriculture, 126
 - development trilogy – growth, stability, equity, 126
 - financial crisis (1997–99), 125, 129
 - General Suharto's Stabilization Program (1966–68), 125
 - GNI per capita USD 2, 230 (2009), 125
 - low and stable urban retail rice prices, 130
 - major socio-economic achievements, 126
 - Myrdal's pessimistic prediction wrong, 124
 - oil exporting but invested in smallholder agriculture, 124
 - pro-smallholder policies under President Suharto (1967–98), 289
 - rice self-sufficiency achieved by 1984, 124
 - substantial poverty reduction, 128
 - sustained high growth, 128
 - tumultuous Sukarno years, 125, 125
 - unique among oil-exporting developing countries, 129
- Indonesian agriculture
 - BULOG, public logistics agency, 130
 - contradictory claims on its poverty reducing impact, 130
 - importance and performance, 129
 - the story of rice, 129
- Intal and Power, 1990
 - small farm sizes predominant in the Philippines, 246
- Ireland
 - 1987 reforms end tough economic times (1980s), 218
 - agricultural institute for research and extension created in 1958, 64
 - conacre and agistment still prevalent, 221
 - contribution of agriculture at independence (1921), 66
 - far-reaching 1987 economic reforms, 214
 - from backward agricultural region of Great Britain to “Celtic Tiger”, 64

- GNI per capita USD 44,310 (2009), 64
 high growth of the 1990s, 66
 key events in Britain dispossessing Irish people of their land, 1150s to 1900s, 219
 lackluster agricultural performance in the 1990s, 67
 Land Act of 1984 to encourage long-term rentals, 221
 Land League to win back “the Land of Ireland for the People of Ireland”, 219
 Land Purchase Acts, 1903 and 1909, 220
 price and political stability in the 1990s, 215
 prolonged periods of instability pre-WW II, 214
 protectionism under Fianna Fail (1932), 217
 slowdown in agricultural growth attributed to MacSharry CAP reforms of 1992, 67
 the 1987 reforms attracted FDI, 65
 the Great Famine (1845–49), a watershed event, 220
 the Irish Land Commission (1881), 220
 Ireland agriculture
 “Options for Farm Families Programme” (2005), new approach to extension, 216
 “productivist era” (1950s to mid 1980s), 216
 accession to the EEC (1973), 218
 age and education of most smallholders not conducive to change, 224
 agistment for grazing livestock, 221
 Agriculture and Food Authority of Ireland Teagasc, 216
 annual labor productivity growth (1990–2003) lower than EU-15 level, 216
 CAP support widen disparities between large and small farms, 224
 conacre on tillage lands, 221
 deficiency payments for British farmers hurt Ireland, 217
 deterioration in terms of trade (1950s), 218
 dominance of owner-operated small holdings (1999), 219
 expanded market access and subsidies with accession (1973), 218
 farm family dependence on off-farm income critical (1990s on), 222
 farm sale low despite high prices (1999), 224
 Free Trade Area Agreement with Britain (AIFTA), 1965, 218
 growth in price supports for farmers (1960–70), 218
 historical roots to strong disincentives to long term tenancies, 219
 improved terms of trade with Britain after AIFTA, 218
 low competitiveness and productivity (2000s), 222
 MacSharry reforms (1992) curtail production, 219
 market access in Britain problematic, 217
 not yet successfully transformed (2000s), 222
 predominance of unviable small holdings, 223
 slowdown in productivity, 223
 strong historical roots to aversion to long-term tenancies, 221
 technology transfer of long standing but of dubious effectiveness at times, 215
 ups and downs in market environment since independence (1921), 217
 wheat, sugar beet, and horticulture protected during WW II, 217
- Japan
 Agricultural Basic Law of 1961, 34
 agriculture since the Meiji Restoration (1868–1912), 14
 basic public institutions under Meiji rule, 28
 education compulsory in the early 1870s, 28
 Meiji period (1868–1912), 27
 Meiji reforms met with strong opposition, 27
 modernization policies by Meiji rulers (1868–1912), 26
 OECD country in the 1960s, 26
 predictable tax rates under Meiji rule, 27
 reform of land tax (1873–76) under Meiji rule, 27
 rural urban income gap major determinant of protectionism (1960s), 26
 stagnation and serfdom under Tokugawa period (1603–1867), 29
 stagnation and unrest of the inter-war years 1920–40, 31
 strong progressive nature of Meiji government, 27
 successful land reform (1946–47), 26
 supportive incentive environment under Meiji rule, 29
 the interwar years (1920–40), 26
 Japan's agricultural transformation
 agriculture's substantial though declining financial contribution, 30
 early rural non-farm growth, 31
 major investments under Meiji rule (1868–1912), 26
 spread of yield-increasing techniques, 29
 substantial growth but income distribution problematic, 33
 surplus funds used for investment in infrastructure, 31

- Jayne et al, 2003
 land distribution conflicts in East Africa, 274
- Johnston and Mellor, 1961, 7
 agriculture's five potential contributions to
 overall development, 3
- Johnston, Bruce, F., 1970
 "... economic development ... subject that is
 vast and not clearly defined", 311
- Jones, E. L., 1974
 agricultural transformation always precedes
 industrialization, 25
 expansion of English agriculture (19th
 century), 21
- Kanbur, Ravi, 2005
 "... hard questions on growth, inequality and
 poverty", 270
- Kang and Ramachandran
 Korean agricultural revolution under Japanese
 rule, 79
- Kendall and Stuart, 1961
 statistical significance is not causal
 significance, 123
- Kennedy et al, 1988, 217, 223, 224
 research in Ireland's agriculture, 216
- Kennedy, 1998
 Granger-cause is not causality, 176
 statistical significance not economic
 significance, 176
- Kennedy, Giblin, and McHugh, 1988
 Age structure in Irish agriculture not
 conductive to efficient farm
 management, 66
- Krakar and Longtin, 2005, 196
 measures of agricultural protection – selected
 OECD, 194
- Krueger, Schiff and Valdes, eds., 1991, 259
 assessing net incentive impact of policy in 18
 countries, 239
 more impact from indirect than direct
 policies, 291
- Kuo et al, 1981
 agricultural productivity growth in Taiwan,
 China, 91
 growth with equity in Taiwan, China, 87
 land reform in Taiwan, China improves
 equity, 87
- Kuznets, 3, 86, 179
 inverted U relationship between inequality
 and growth, 270
- Kwiecinski and Li, 2002
 taxation and subsidization of food grains in
 China's agriculture, 118
 TVE important in rural China, 119
- labor markets
 massive emigration to the New World.
 See England
 progressive integration of US farm and
 non-farm households critical (since
 1940s), 54
- Lahiff in Binswanger-Mhize et al, eds. 2009
 millions of poverty-stricken rural households
 crowd on poor lands in Zimbabwe, 274
- land distribution
 egalitarian distribution neither necessary nor
 sufficient for equity, 186
 enforcement of property rights generally
 undependable in developing countries,
 300
 England by the 1850s, 20
 equitable distribution after Korean land
 reform 1949–50, 77
 first recorded peasant revolt over land in the
 Philippines (1745), 245
 Gini coefficient 0.41 (East Asian median)
 versus 0.57 (the Philippines, 2006), 245
 Gini coefficient falls dramatically after
 Taiwan, China land reform, 87
 high inequality fertile ground for social
 conflict, 272
 highly inequitable in Brazil, 154
 highly skewed in Meiji Japan, 26
 increasing disparity in U.S. agriculture, 53
 increasing land concentration in American
 agriculture, 52
 inequality increased in the Philippines from
 0.53 (1960) to 0.57 (2006), 245
 Landless Rural Workers Movement (MST)
 of Brazil advocate violence as reform
 method, 155
 major source of conflict and uncertainty the
 world over, 273
 more equal distribution of land rights
 does not guarantee tenure security in
 China, 278
 most land in England controlled and leased
 by landlords (19th century), 20
 no return to feudal *latifundia* in Chile under
 Pinochet, 172
 profound equalizing impact of Japan's land
 reform (1946–47), 33
 promise of land reform determinant in
 Communist success over Kuomintang
 in China, 274
 recurrent land conflicts in the Philippines, 243
 redistributing land and economic
 opportunities in land reform
 of Taiwan, China, 87

- repeated failed attempts at reform by Marcos, Aquino, Ramos, and Macapagal-Aroyo, 246
- sharp inequities destabilizing as in Zimbabwe, 273
- some 43 % of land not cultivated in Brazil (1990s), 154
- stark contrast in approach between Latin America and Anglo-Saxon “New World” (19th century), 275
- transformative impact of land reform in only Japan, South Korea, Taiwan, China, and the People’s Republic of China, 243
- unimodal, 3, 274
- water scarcity increasingly problematic for agricultural land, 273
- World Bank advocates market-based land reform, 155
- land distribution in Brazil
 - continued inflation promote huge land holdings, 158
 - large landowners benefit from agricultural policy, 158
 - less than 2 % of farms occupy 53 % of total, 154
- land tenure
 - complex systems in Morocco breed insecurity, 277
 - English farmers had security even without legal sanction, 17
 - huge backlog in titling in Morocco undermines security, 277
 - Human Rights Watch on land seizures in China, 278
 - insecurity pervasive in agrarian reform sector in Nicaragua, 277
 - Moulkya*, a traditional system in Morocco, 277
 - recurrent conflicts undermine customary systems in Sub-Saharan Africa, 276
 - rights of widows and orphans threatened by AIDS in Sub-Saharan Africa, 276
 - unclear transfer rights to communal land undermine security in Ghana, 276
 - weak administration undermines security, 276
- Langevin and Rosset, 1997
 - land distribution in Brazil, 155
- large country
 - definition in the context of international trade, 318
- leadership matters
 - fundamental and far-reaching reforms in China under Deng Xiaoping, 109
 - Indonesia’s smallholders benefit under General Suharto’s leadership, 288
 - Japan’s transformation started under the far-sighted rule of the Meiji government (1868–1912), 27
 - Korea’s transformation started under General Park Chung Hee (1961–79), 75
 - poverty reducing growth under Indonesia’s General Suharto (1966–97), 128
 - the development of agriculture nurtured by the founding fathers of the United States, 35
 - tumultuous years under Indonesia’s President Sukarno (1958–65), 125
 - Tunisian governments stable in a region in turmoil, 140
- Lele, Uma, ed., 1991
 - aid to African agriculture, 284
- Lewis, 3
- Lin et al, 1996
 - free rider problem in China’s agriculture, 261
- Lin et al, 1999
 - performance of China’s economy, 109
- Lin, Justin Yifu, 2000
 - sources of agricultural growth in China (1978–84), 118
 - widespread adoption of HRS, 113
- Lipton, Michael, 1977
 - urban bias, 238, 260
- local rural associations
 - “peasants have a natural interest in socialism” under Nasser’s Egypt, 240
 - in Meiji Japan researchers work with local farmers’ associations, 27
 - key role of farmers’ associations in Taiwan, China agriculture, 88
 - large farmers in Egypt dominate cooperatives, 240
 - role of irrigation associations and farmers’ cooperatives in Korean agriculture, 84
- Lofgren and Robinson in Fan, ed., 2008
 - analysis of impact using CGE, 313
- Lopez and Galinato, 2007
 - pro-private goods bias of public expenditure in rural Latin America, 285
- Lopez and Miller, 2008
 - high inequality in Chile shifts tax burden from the elite, 271
 - relatively efficient apparatus of Chilean Government, 269
 - structure of Chile’s tax system pro-elite, 285
- Lopez, 2005, 291
 - private goods bias of rural public expenditures in Latin America, 285

- MacSharry and Padraic, 2000
Ireland's "First Golden Age". 1958–72, 215
- MacSharry and White, 2000
performance of Irish agriculture, 65, 66
- Malaysia
a very open economy, 135
eradicator poverty an overarching objective, 134
GNI per capita USD 7, 230 (2009), 134
major reduction in poverty incidence (2004), 136
major trading center for centuries, 135
multiracial with high income inequality, 134
New Economic Policy, NEP (1970),
pro-Malay, the *Bumiputeras*, 134
overarching goals of growth with redistribution, 135
rapid socio-economic transformation, 135, 136
rich endowment of natural resources, 137
substantial lowering of Gini coefficient for income 1970 to 1999, 134
the *Bumiputeras*, Malay majority, 135, 137, 138
the Industrial Master Plan (1986), 138
- Malaysian agriculture
importance and performance over time, 137
major investments in smallholders, 137
New Agricultural Policy (1984), 138
substantial though declining importance, 138
- Malthus, Thomas R, 11
averting catastrophe, 191
diminishing returns in agriculture, 24
Law of Population, multiple editions of (1798 to 1826), 24
- Mandeville, Bernard de (1670–1733)
public mechanism needed to transform private vices into public benefits, 298
- Mauritius, the Republic of
GNI per capita USD 7, 240 (2009), 234
politically stable Sub-Saharan country, 234
- McCalla, Alex F
future increases necessarily from knowledge-based agricultural intensification, 257
global food security a continuing major challenge, 101
the enormous challenges for agriculture in the 21st century, 5, 191
- mean
definition, 315
- median
definition, 315
- Meenakshi, 2008
rural infrastructure development in India, 279
- Mellor, John, 1966
agricultural development key to overall growth, 42
- method of statistical correlations
Nel on conflicting results if used, 270
prevailing method of inference.
See methodology
- methodology
approach of the book, 5, 176
case studies as anecdotes, 307
case studies to test four combinations, 94
causal claims for Indonesia's agriculture are contradictory and invalid, 130
combinations Anti-Ag 1 & 2, 95
combinations Pro-Ag 1 & 2, 95
confirmation-cum-inductive inference approach, 9
confirmations that discriminate between rival testable explanations of same phenomena, 308
contrary positions are confirmed, 176
correlation is not causation, 176, 308
cross-country regression analysis, 307
crucial experiments, 310
current approach of confirmations using regression and CGE, 8
econometric cross-country studies, xxi
focus on potential and actual refutations, 308
general equilibrium or sector-wide modeling, 307
Hume's problem of induction, 307
identifies patterns and regularities, 8
independent tests in Popper's methodology, 94
inductive, 8
logically valid arguments, 308
no independently replicable way to resolve contradictions, 9, 180
poor methodology makes development economics prone to fads, 182
positive correlations, xxi
quantitative defence of agriculture's contribution invalid, 177
Ravallion and Chen (2004) claim on poverty-reducing superiority of agricultural growth in China invalid, 122
relevant aspects of Popper's methodology.
See Popper's methodology

- rival claims on poverty – reducing impact of growth in Indian agriculture are invalid, 107
- search for patterns, 63
- statistically significant coefficients, 9, 309, 317
- test associations and patterns, 94
- test Root's thesis, 256
- testable hypotheses, 8
- testing theories by seeking refutations not confirmations, 8, 176
- tests these conditions, xxi
- various elasticity estimates, 9
- Mexico
 - adopts ISI and capital intensive development, 252
 - communally-owned lands, *ejidos*, 252
 - concentrations of wealth and income during the Porfiriato (1876–1910), 251
 - considered an “economic miracle” (1940–70), 250
 - decline in total factor productivity since 1940s, 250
 - dualistic economy with high income inequality, 252
 - ejidos* in land reform (1917–1992), 252
 - extensive poverty despite high growth under the Porfiriato (1876–1910), 251
 - GNI per capita USD 8,920 (2009), 248, 250
 - high incidence of rural poverty despite upper middle income status, 250
 - high rate of urban under-employment, 249
 - increased tempo of “push” rural migration since the 1940s, 248
 - policies undermine employment generation and promote capital intensity, 252
 - the Mexican Revolution (1910–20), 251
- Mexico agriculture
 - annual TFP growth (1980–2001) less than during (1961–80), 250
 - employment generation inadequate even under high growth (1940–70), 251
 - peasants lost land under Porfirio Diaz (1876–1910), 251
- Migot-Adhola et al, 1991
 - indigenous tenure systems in Sub-Saharan Africa, 277
- Millenium Development Goals (MDGs)
 - widespread poverty. *See* poverty
- Minami, Ryoshin, 1994
 - problematic state-owned enterprises in China, 110
 - promoting technical education in Meiji Japan, 28
- Mingay, G. E.
 - living conditions of laborers, 21
- mode
 - definition, 315
- Monk, 1990
 - on Robert S Hardie's report. *See* Hardie, Robert S
 - the Philippines land grievances, 246
- Monke et al, 1986
 - backwardness of agriculture in Portugal, 227, 228
- moral hazard
 - example in agriculture, 302
- Morocco
 - “excessive” rural-urban migration still a problem (2000s), 252
 - GNI per capita USD 2,790 (2009), 249, 250
 - high rate of open urban unemployment (2000s), 249
 - independence from France (1956), 252
 - low productivity, informal labor extensive, 251
 - no contribution of TFP growth to overall growth for decades, 251
 - reducing chronic underemployment, a major pre-occupation of *Plan Maroc Vert* (2008), 253
 - rural migration from poor regions of long standing, 249
- Morocco agriculture
 - distribution of land highly skewed, 253
 - growth highly volatile and drought vulnerable, 251
 - Land Administration Agency (ANCFCC), 277
 - land insecurity pervasive, 277
 - low productivity employment in rain-fed sector predominates, 252
 - still extensive under-employment, 250
 - still substantial contribution to GDP and employment, 250
- Moshier, Arthur T, 1966, 259
 - “Getting agriculture moving...”, 254
- multiplier
 - definition of concept, 315
- Mundlak, Yair
 - agriculture's quantitative contribution to American growth, 42
- Myanmar
 - category 3 typhoon of May 05, 2008, 282
 - extensive poverty and high vulnerability exposed (typhoon 2008), 282
 - isolated since military coup (1962), 282

- Myrdal, Gunnar
 “no economist holds out any hope for Indonesia” (1968), 288
- Nel, 2003
 cannot infer causality from measures of statistical significance, 270
- net national income (NNI)
 definition, 315
- net national product (NNP)
 definition, 315
- New Zealand
 “Closer Economic Relations” (1983) with Australia, 209
 adopted ISI from 1900s to 1970s, 194
 agriculture still very important, 206
 Britain joins the Common Market (January 01, 1973), 207
 broadening of land ownership after 1890 210, 276
 economy-wide liberalization (1984), 206
 GNI per capita USD 26, 830 (2009), 206
 land monopoly, an issue in the 1890s, 210
 lost control of land by oligarchs in contrast to Uruguay experience, 211
 macro and political stability largely achieved, 207
 Maori tribes receive compensation (1990s), 208
 Maoris demand compensation for land (1970s), 208
 meat exports to United Kingdom boosted by refrigeration (1890s), 206
 multiple free trade agreements since 2001, 209
 need for non-farm incomes sharpened following reforms of 1984, 212
 Ngai Tahu, Maori tribe, 208
Pakekas, white settlers, 210
 Percy Smith, Secretary of Crown Lands (1890s), 211
 private property rights for only white settlers, 211
 rural tourism, a vibrant sector, 212
 Torrens system of land registration (1870), 211
 trade orientation always critical to economy, 209
 tumultuous early years of white settlement, 209
 Waikato-Tainui, Maori tribe, 208
 New Zealand agriculture
 1984 market-oriented reforms, 207
 access to foreign knowledge critical in a small open economy, 208
 agro-business contribution to economy significant, 207
 exporter of high-value foods, 206
 high productivity growth in horticulture, 207
 higher export orientation after reform (1984), 296
 increased income inequality following reform (1984), 296
 increased poverty among children following reform (1984), 296
 long established technology transfer, 208
 lost preferential access to the United Kingdom market (1973), 207
 mainly pastoral, 206
 off farm income increasingly important for farm families, 212
 painful adjustment to reform (1984–90), 296
 price distorting subsidies eliminated (1984), 194
 public interest component of extension neglected under privatization, 296
 sector reform a component of economy-wide reform program (1984), 296
 sharp falls in land values following reforms of 1984, 212
 successfully re-orientes export markets away from United Kingdom, 209
 sustained multi-factor productivity growth, 208
 thriving despite no subsidies, 207
- Nicaragua
 GNI per capita USD 1, 000 (2009), 275
 land reform under the Sandanista revolution (1981–85), 275
 tenure insecurity following *Sandanista* agrarian reform, 277
- nominal protection rate, 239
 definition, 316
 substantially negative in developing countries (1960–84), 239
- North, Douglass C
 opening of markets for agricultural commodities key to growth, 37
- null hypothesis
 contains no theory of causation, 9, 309
 weak in giving guidance, 9, 309
- Nyanteng and Seini, 2000
 access to land problematic in land-abundant Ghana, 276
- Nyberg and Rozelle, 1999

- importance of RNF in rural China, 119
 TFP in China's agriculture after 1979 reforms, 116
- Olson, 1971
 only small groups form powerful lobbies, 262
- Organization for Economic Cooperation and Development (OECD, 2008)
 farm subsidies under the CAP divisive issue at the WTO, 297
 member countries, 294
- Orissa, India
 one of the poorest states. *See* India
- Osava, 2007
 land confrontations organized by MST in Brazil, 275
- Overton, Mark, 17, 19, 20
 agricultural revolution in England, 15
- Pakistan
 abundant aid of little value to the man in the street, 266
 Ali Jinnah, founder (1947–58), 266
 Benazir Bhutto (1988–90 and 1994–97), 266
 civil war with East Pakistan, now Bangladesh (1971), 265
 dualistic, polarized economy, 265
 elite group less than one percent of population, 266
 Field Marshall Ayub Khan (1958–69), 265
 General Pervez Musharraf (1999–2008), 265
 General Zia Ul-Haq (1977–88), 265
 Gini coefficient for land 0.62 (2001–02), 266
 GNI per capita USD 1,020 (2009), 265
 governments undermine the rule of law to stay in power, 266
 growth-inhibiting nature of the politics of high inequality, 266
 Hussain, Ishrat on the stranglehold of the elites, 266
 Islamic fundamentalism, final refuge for law and order for millions, 267
 Nawaz Sharif (1990–93 and 1997–99), 266
 patronage politics the rule, 266
 power elite of 22 families, 266
 routine use of corruption to maintain power, 266
 sharp disparities are destabilizing, 265
 the devastating floods of summer 2010, 267
 third largest recipient of aid since 1960, 266
 use extensive government intervention to extract bribes, 267
- Pardey et al, 2007
 agricultural research and extension as public goods and services, 299
- Patrick and Rosovsky, eds., 1976
 Japan's economy, 33
- Pazvakavambwa and Hungwe in
 Binswanger-Mhize et al, eds. 2009
 land struggles in Southern Rhodesia, 273
- Perkins and Yusuf, 1984
 growth in grain yields in pre-reform (1979) China, 119
- Phelan, Frawley, and Wallace
 importance of non-farm for Irish farm households, 66
- philanthropy
 strong tradition in the United States of America. *See* United States of America
- Plevin, 1999
 World Bank approach to land reform in Brazil "subversive", 156
- polar views
 key strategic and operational difference between, 184
 Korea's experience undermines both views, 84
 rationale for choice of country cases, 185
 too simplistic, 187
 U.S. case undermines both views, 58
- political economy
 characteristics of patronage politics, 271
 controversies rooted in fundamental philosophical differences, 290
 critical factor in governance, 261
 cronyism lifeblood of patronage systems, 264
 important factors in underdevelopment, 255
 leadership matters, 290
 nation doubly robbed under patronage politics, 265
 patronage politics undermine productivity of rich and poor, 265
 politics in command, 304
 pressure to close farm non-farm income differential in Japan, 34
 pro-smallholder despite patronage politics in Indonesia (Suharto, 1967–98), 289
 smallholder underdevelopment a casualty of patronage politics, 264, 271
 substantial poverty reduction despite high inequality in Chile, 269
 vision of a good society important, 290
 weak support for land reform in most developing countries, 261
- Popper's methodology
 advocates bold theorizing and severe testing, 311

- Popper's methodology (*cont.*)
 asymmetry between confirmation and refutation, 10, 308
 black swan, 308
 confirmations cannot establish the truth of a universal claim, 10, 181, 308
 confirmations meaningful only when from crucial tests, 308
 focus on potential and actual refutations, 10, 308
 one black swan can demolish the universal claim that all swans are white, 10
 sharp contrast to the current inductive approach, 10, 308
 theory does not simply emerge out of data, 310
 white swan, 10, 308
- Portugal
 a colonial power for centuries, 225
 army and population against keeping colonies (1974), 227
 backward nature of agriculture in the 1960s, 68
 changing profile of migrants before and after 1960, 231
 considered third world country (1960s), 225
 decades of instability (1907–26), 225
 end of Salazar's dictatorship by the Carnation Revolution (1974), 227
 GNI per capita USD 20, 940 (2009), 68, 225
 impact of accession policies on agriculture, 71
 integration of agriculture in wider expanding economy, 73
 joined EC 12 (1986), 225
 long dictatorship of Salazar (1933–74), 226
 military rule and dictatorship (1926–33), 226
 return of instability (1975–85), 227
 stability under Salazar's *Estado Novo* (New State), 226
 substantial clandestine emigration under Salazar dictatorship (1933–74), 231
 the Carnation Revolution (1974), watershed event, 227
 years of crisis (1974–85), 69
- Portugal agriculture
 1977 clarifications to land reform of 1974, 230
 absentee landlords of the *latifundia* of the South, 230
 de facto land reform (1974), 230
 differential market access for large and small farms, 228
 dualistic – Agricultural Census of 1968, 230
 good market access for large farms under Salazar, 228
 insufficient rural non-farm employment growth for youth in northern areas (2000s), 231
 labor productivity low relative to EU average, 71
 legislation (after 1974 revolution) favoring tenants undermine long-term investments, 230
 low productivity of *minifundia*, 230
 not yet successfully transformed (2000s), 232
 owner-operated *minifundia* of the North, 230
 poor market access by small farms of Northern region, 229
 profound continuing adjustment after EC accession (1986), 232
Programa Especifico de Desenvolvimento da Agricultura Portuguesa (PEDAP), 230
 small and fragmented farms of Trás os Montes largely neglected, 227
 subsidies to privileged groups pre accession (1986), 227
 technology transfer underdeveloped pre EC accession (1986), 227
 uncertainties generated by 1974 land reform undermine investments, 230
 unsustainable subsidies during socialist period under Soares (1974–86), 229
 virtually stagnant (1953/55–73/75), 228
- poverty
 contribution of successful agricultural transformation to reduction of, 1
 has no borders in globalized world, 304
 incidence still high in India but substantial progress since independence (1947), 95
 majority are subsistence farmers, 1
 primarily rural in the developing world.
See smallholder agriculture
 substantial in China despite major reduction since 1979 reforms, 120
 substantial in Indonesia despite major progress, 128
 substantial reduction in Tunisia, 141
- poverty line
 China's at USD 0.66 per day, 120
 international at one USD per day, 120
 international at two USD per day, 1
 Prebisch–Singer thesis, 1950
 declining secular terms of trade against primary exports, 182, 260
 the dependency theorists, 260
 private goods and services

- also have public goods aspects, 292
- definition, 291
- should not receive public financing, 291
- subsidies allocated from public budgets
 - substantial, 291
- pro-agriculture polar view
 - Chile case refutes view, 174
 - China case supports but qualifies view, 123
 - dualistic Brazil case refutes view, 161
 - India case supports view, 107
 - Indonesia case supports view, 133
 - Ireland's experience refutes view, 67
 - Japan's experience supports but qualifies view, 35
 - Korean experience refutes view, 85
 - limitations given unique features of Tunisia case, 145
 - major investments by private and public sectors, 13
 - Malaysia case supports but qualifies view, 139
 - Portugal experience a refutation, 72
 - selected state level comparisons in India support view, 103
 - Taiwan, China case a qualified support for view, 92
 - Tunisia case does not support view, 145
- Producer Subsidy Equivalent
 - for Canada (2004), 194
 - for EU 15 (2004), 194
 - for the United States (2004), 194
- productivity in agriculture
 - causes and consequences of, 5
 - growth in Canada averaged 3 percent (1997–2003) higher than in industry, 196
 - growth in post-WW II Korean agriculture, 79
 - growth in total factor productivity (TFP) in Indian agriculture, 100
 - high annual growth in Australia averaging 2.3, percent (1980–2005), 200
 - high growth at 4 percent per year in New Zealand after 1984 reforms, 207
 - impact of accession to the EC on Irish productivity, 67
 - impressive growth of total factor productivity growth in Australian agriculture, 202
 - increase in TFP in China after 1979 reforms, 116
 - indispensable basis for modern economic growth (Kuznets), 3
 - labor and TFP growth in Taiwan, China agriculture, 91
 - low growth at 1.5, percent per year in Mexico (1980–2001), 250
 - low productivity in large parts of Indian agriculture, 100
 - low productivity in Portuguese agriculture, 70
 - no trend increase in Tunisia (1990s), 144
 - stagnant in the Philippines (1980–2000), 244
 - stagnation at 0.2 percent per year in the Philippines (1980–2000), 244
 - stagnation in Korean agriculture during 1918–41 a puzzle, 79
- protection coefficient
 - aggregate measure of support (AMS), 316
 - definition of concept, 316
 - effective protection rate (EPR)
 - definition, 241
 - effective protection rates substantially negative in Egypt agriculture (1960–85), 241
 - nominal protection rate (NPR). *See* nominal protection rate
 - nominal rates of assistance for Australia and New Zealand (2005–07), 294
 - producer (consumer) subsidy equivalent (PSE, CSE), 316
 - producer support estimate for Australia, 194
 - PSE for Canada and US (2004), 194
 - relative rates of assistance (RRA) for Australia and New Zealand, 195
- public expenditures in developing countries
 - bias against social expenditures in rural Latin America (1985–2000), 285
- controversial public-private split in India's rural expenditures, 286
- high allocation to agriculture and rural development in India, 286
- key considerations when interpreting allocations, 284
- pros and cons of subsidies in agriculture and rural sector in India, 287
- substantial allocation to social expenditures in Indonesia despite crony capitalism, 288
- public goods and services
 - access to lucrative markets, xxi, 300
- agricultural research and extension, xxi, 257, 299
- China to invest in these for continued rural development, 124
- concept dependent on social values and technology development, 258
- concept of “public” and “private” controversial at times, 256

- public goods and services (*cont.*)
 cutback in government investment under
 structural programs (1980–1990s), 261
 stability, deep roots in people's aspirations for
 a good life, 299
 education, xxiii
 employment-creating non-agricultural
 sectors, xxii
 everyday examples of, 256
 free-rider problem undermines private
 financing of, 256
 global, 257
 heavy investment in Japan by Meiji rulers
 (1868–1912), 27
 inadequacy widespread in rural Asia, 279
 increasingly important in globalizing
 world, 257
 macroeconomic and political stability, xxi
 major investments in rural areas by
 Indonesian government, 126
 marketing infrastructure, xxiii
 poverty reduction a public good and
 service, 258
 private sector can operate actual
 delivery of, 300
 pure concept defined, 256
 quasi-public goods and services in the “real
 world”, 257
 rural Sub-Saharan Africa particularly
 disadvantaged, 279
 social equity a public good and service, 299
 sustained investment in, absolutely
 necessary, 254
 sustained public investment required, 190
 system of ownership and usufruct
 rights, xxi
 ugly face of poverty, a public bad, 258
 under-investment in rural Latin America
 hurt the poor, 285
 under-supply if only privately funded, 256
 Punjab, India
 one of the richest states. *See* India
 purchasing power parity (PPP)
 actual measurement controversial, 317
 definition of concept, 317
 quintile
 definition, 316
 Ranis, 1996
 economic management in Taiwan, China, 89
 Ravallion and Chen (2004)
 growth in China's primary sector more
 poverty-reducing than other sectors, 133
 Ravallion and Datt (1996)
 primary sector growth in India more
 poverty reducing than secondary
 sector growth, 106
 Reardon, 2006
 supermarket revolution, 300
 regression analysis and coefficients
 statistically significant coefficients.
 See methodology
 use and abuse of, 317
 Root, Hilton L, 2006
 “...how countries get rich.”, 255
 elite capture of institutions complete in
 Pakistan, 266
 financing gap not the critical issue, 255
 patronage politics rife in democratic
 India, 280
 sharp disparities inimical to broad-based
 growth, 265
 sharp socio-economic inequality divisive, 263
 small group of supporters, the “winning
 coalition”, 264
 thesis on how countries get rich, 255
 transforming uncertainties into calculable
 risks critical, 255
 Rozelle and Sumner, eds. 2003
 TFP in China's agriculture post reforms, 116
 rural, 7
 concept varies, 7
 definition in Argentina (2000s), 236
 definition in the US, 54
 demarcation of rural versus urban arbitrary, 8
 multi-dimensional concept, 8
 rural non-farm sector
 access to employment important for incomes
 of farm families in China, 186
 access to increasingly important to farm
 families in New Zealand (2000s), 212
 critical in reducing poverty in rural
 Chile, 174
 growing importance shown in 1960
 agricultural census in Taiwan, China, 90
 important in Japan's agricultural
 transformation since the early years, 31
 increasing importance for American farm
 households since the 1940s, 54
 increasing importance for Irish farm
 families, 66
 main source of income for farm families in
 Canada, 199

- the rise of TVEs in rural China post 1979 reforms, 119
- rural poverty
 - adjusted versus official estimates in India, 329
 - Bihar, high poverty incidence, 102
 - bulk of the poor in the Philippines (2000s), 244
 - most of India's poor are still rural (2003), 96
 - most of the poor. *See* poverty
 - Northeast Brazil has majority of, 147
 - Orissa high incidence of poverty, 103
 - primarily rural and in remote regions of China, 120
 - substantially declined in Malaysia, 137
- Scaniello and Porcille, 2006
 - caudillos* and land conflicts in Uruguay, 211
- Schnepf, Dollman, and Bolling, 2001
 - net taxation of Argentina agriculture, 235
- Schultz, 1964, 257
 - "farmers will turn sand into gold", 258
 - public investment in human capital of farmers essential, 257
 - transformation of agriculture an investment problem, 258
- Schwartzman, 2000
 - World Bank market-based land reform in Brazil, 156
- Sen
 - development as freedom, 6
- Sheehy, 1992
 - substantial poverty among Irish farmers, 224
- Shen, 1970
 - agricultural development in Taiwan, China, 263
- Singapore
 - broke off from Malaysian Federation in 1965, 135
 - food secure but not food grain self-sufficient, 101
 - GNI per capita USD 37, 220 (2009), 281
 - good governance a strategic issue of national development, 301
 - low corruption at CPI 9.2 (TI), 281
- Skogstad, 2007
 - performance and structure of Canadian agriculture, 196
- Slayton and Timmer, 2008
 - world food price crisis (2007–08), 4
- Slicher Van Bath
 - highest wheat yields in England and the Low Countries (19th century), 23
- small country
 - definition in the context of international trade, 318
- smallholder agriculture
 - chronic neglect of, 262
 - collective action problematic for smallholders to organize, 263
 - development requires a revolution (Baran, 1952), 261
 - heavy investments in, by President Suharto (1967–98), 289
 - how to benefit from the supermarket revolution, 300
 - limited access to markets in Egypt, 239
 - low level equilibrium trap due to non-existent public investment in, 280
 - poor market access for smallholders in Northern Portugal, 229
 - small owner-operated holdings prevail in Ireland, 219
 - substantial government investment in Malaysia, 137
 - though oil-exporting, Indonesia invests heavily in, 124
 - too few long-term tenancies in Ireland, 223
 - undermined by inadequate market infrastructure in Upper Egypt, 242
 - unviable holdings predominate in Ireland, 223
- Smith, Adam
 - "systems of political economy" necessary, 298
 - "three duties of great importance" for a government, 297
 - did not advocate *laissez faire*, 297
 - The Wealth of Nations (1776), 17
- social equity or justice
 - definition of concept, 313
 - disagreement over what are concrete manifestations of, 313
- Somalia
 - independence (1960), 282
 - overthrow of President Mohammed Siad Barre (1991), 282
 - piracy rampant in failed state, 282
 - torn by conflict and corruption for decades, 282
- spillover effects
 - definition, 318
- Spooner, 2005
 - confrontations and corruption over land ownership in Australia, 205

- Stiglitz et al, 1999
 global public goods, 258
- Sturzenegger and Mosquera, 1990
 recurrent instability and taxation
 undermining Argentine agriculture, 236
- success in agricultural transformation
 definition, 6, 185, 193
 sustained government commitment
 absolutely essential, 255
- successful agricultural transformation
 distributional component crucial, 6
 efficiency and distributional dimensions, 7
 integration in the wider national and
 international economies, 13
 patterns identified in, 6
 requires a long-term approach, 304
 requires holistic approach, 303
 role of, 4
 transforms lives for millions, 303
 virtuous circle of growth and
 transformation, 13
- Sumarto and Suryadi, 2003
 poverty reduction in Indonesia, 130
- Taiwan, China
 a colony of Japan 1895–1945, 86
 aid drew upon expertise and local
 knowledge, 88
 case of two-way causality between agriculture
 and industrial transformation, 92
 contribution of agricultural surplus to
 industrialization, 91
 equity improved with growth, 86
 FDI main source of foreign exchange by the
 1970s not U.S. aid, 89
 Gini coefficient for income 0.28 (1972), 86
 GNI per capita USD 17, 294 (2007), 86
 incentives to achieve results not maximize
 volume of aid, 88
 Joint Commission for Rural Reconstruction
 (JCRR), 87
 land reform 1949–53, 87
 local bodies work closely with JCRR, 88
 performance and importance of agriculture
 1950s to 1970s, 90
 productivity improvements in sugar cane and
 rice seed varieties, 87
 rural non-farm promoted via Accelerated Rural
 Development Program (ARDP), 91
 strong development minded government not
 laissez-faire capitalism, 88
 substantial investments in agriculture under
 Japanese rule, 86
 substantial local contribution in all aid
 projects, 88
 switches to export orientation (1960s) after
 ISI fails, 88
 U.S. aid invests heavily in public
 infrastructure, 88
 within a generation, economic transformation
 after WW II, 86
- Taleb, Nassim Nicholas
 “Black Swan” different from use of “Black
 Swan” in Popper’s methodology, 10
 dressing up intellectual fraud with
 mathematics, 10
 low probability black swans have high
 impact, 10
 Popper’s falsificationism, 10
- Tang Zhong, 2002
 greater access to RNF major cause of
 increasing income disparity, 120
- tax systems in developing countries
 expenditures on public services generally
 poorly targeted, 284
 generally a weak tool to improve equity, 283
 social expenditures severely cut back under
 structural adjustment programs, 284
 tax evasion and corruption widespread, 283
- terms of trade
 agriculture faces secularly declining, 3
 secular decline in real cereals prices, 4
- the Philippines
 GNI per capita USD 1, 790 (2009), 244
 land reform stark contrast to transformative
 East Asia’s, 243
 low growth of per capita agricultural output
 (1960–90s), 244
 one of the highest incomes per capita (1950s),
 244
 persistent land conflicts despite land reform
 for decades, 274
 poverty incidence, using different poverty
 levels, 244
 United States colonial administration
 (1898–1946), 245
- the Philippines agriculture
 disappointing growth performance, 244
 export sector dominated by two multi-
 nationals, 245
 Gini coefficient for land 0.53 (1960) to 0.57
 (2006), 245
 land reform successfully undermined by
 landed oligarchy, 246
 limited land reform achievements undermine
 high productivity growth, 247

- opportunities for large-scale land grabbing under Spanish and American rule, 245
- peasant uprisings over land of long standing, 245
- skewed land distribution since Spanish colonial times (1596–1896), 244
- Spanish land registration (1880 and 1894), 245
- stagnant productivity growth (1980–2000), 244
- the *pacto de retroventa*, system of loans secured by land, 245
- Torrens land registration (1913) under U.S. rule, 245
- the Republic of Korea
 - agriculture a highly protected sector since the 1970s, 78
 - agriculture important in the 1950s, 74
 - agriculture under Japanese rule 1910–45, 78
 - broad-based socio-economic improvements, 75
 - contribution of agricultural labor and financial resources to rest of the economy, 82
 - debate on what constitutes “an agricultural revolution”, 83
 - development minded and interventionist governments, 74
 - economic transformation in less than two generations, 74
 - economies of North and South Korea compared, 74
 - from feudal to a capitalistic agriculture under Japanese rule, 83
 - GNI per capita USD 19,830 (2009), 73
 - high rate of farm labor emigration, 77
 - land reform 1949–50, 76
 - one of the fastest post-WW II growing economies, 73
 - priorities of development strategies, 75
 - researchers disagree on role of agriculture in Korea’s economic transformation, 79
 - substantial investments in agriculture prior to industrialization, 84
 - substantial U.S. aid 1946–61, 76, 85
 - sustained export orientation, 75
- Thompson and Shah, 2005
 - subjectivity of Corruption Perception Index problematic, 283
- Timmer in Chenery and Srinivasan, eds., 1988
 - characteristics of agricultural decision making, 271
- Timmer, C. Peter, 3, 4, 288, 304
 - “... no great secret to agricultural development”, 259
 - agricultural growth greatest impact on reducing poverty, 130
 - characteristics of a successful process of agricultural transformation, 6
 - development faddism dominate donor thinking, 182
 - elasticities of connection, 179
 - hotly contested empirical “truths” trivialize development economics, 182
 - on food security, 101
 - personalities and values matter, 290
 - using GCE model for Indonesia, Fane and Warr (2003) contradict Timmer’s claim, 132
 - using regression analysis, Warr (2002) contradicts Timmer’s claim, 131
- Tomich, Kilby, and Johnston, 28, 29, 30
 - governments to invest in the “six Is”, 258
 - revolts under the Meiji rule, 27
 - structural turning point defined, 43
 - structural turning point in American agriculture, 1910, 43
 - the structural turning point in Taiwan, China. 1964, 90
 - unimodal land distribution defined, 315
- total factor productivity (TFP)
 - best proxies thereof, 7
 - concrete examples. *See* productivity in agriculture
 - definition of TFP growth, 319
 - growth in China’s agriculture after the 1979 reforms, 116
- Toynbee, Arnold
 - improvements in the condition of working classes since 1846, 22
 - tightening of labor markets through emigration, 21
- Tsakok and Gardner, 2007
 - methodology of research guiding this book, 181
 - Popperian approach. *See* Popper’s methodology
- Tsakok, 1990
 - agricultural policy and tools for analysis and measurement, 239
- Tunisia
 - achieving food self-sufficiency a major goal, 143
 - adopted ISI, 140
 - Association Agreement with the EU (1996–2008), 141

Tunisia (*cont.*)

- financial crises of 1980s a turning point, 141
- GNI per capita USD 3, 720 (2009), 140
- independence from France in 1956, 140
- major socio-economic achievements, 141
- opted for a *dirigiste* system, 140
- short term conflict between growth and rural poverty reduction, 145
- stable in a tumultuous region, 140
- state trading companies monopolies in many basic commodities, 141
- structural adjustment programs, 141
- substantial poverty reduction despite high inequality, 141
- tariffs still high despite trade agreements, 141
- women's right to vote, 143

Tunisian agriculture

- high coefficient of variation of cereal production, 144
- highly protected in the name of food self-sufficiency, 144
- horticulture highly competitive, 144
- importance and structure, 143
- low competitiveness for smallholder cereals, beef, and milk, 144
- primarily arid and semi-arid, 144
- protection costly to economy, 144
- rainfed and drought-vulnerable, 144
- stagnant labor productivity, 144

Turkey

- GNI per capita USD 8, 730 (2009), 293
- high income inequality, 293

Turkey agriculture

- agricultural productivity low despite substantial price supports, 293
- Direct Income Support (DIS, 2000), 293
- highly unequal land distribution at 0.6 (1980s), 293
- improved economic performance after reduced agricultural protection (2002–06), 294
- rural poverty substantial (at national poverty line, 2000s), 293
- subsidies fiscally unsustainable and destabilizing, 293

uncertainty and risk

- gain monetarily from risk taking, xxi
- governments' inability to transform uncertainty into calculable risks, 264
- non-insurable risks due to covariance and information asymmetries in agriculture, 302

- uncertainties in marketing heightened by poor infrastructure, 278

unimodal

- definition, 315

United States of America

- American value system basis for sustained growth, 43
- contribution of agriculture significant but not crucial, 58
- Country with Abundant Rural Labor (CARL) in 1861–65, 35
- economic transformation started after the Civil War 1861–65, 38
- from the mid 19th to the 20th century, 14
- graph on sustained GDP growth per capita 1800–2000, 39
- Homestead act 1862, 39
- increasing integration of farm and non-farm capital markets, 56
- investment in modern infrastructure pivotal in expanding agricultural markets, 40
- strong tradition of philanthropy, 304
- two-way synergistic causal interaction between agriculture and non-agriculture, 59

Valdes and Foster, 2005, 2010

- quantify the contribution of agricultural growth in Latin America using Granger-causality test, 179

Valdes et al, 1990, 170, 171, 172

- Chile's economic performance, 168

value added

- definition of concept, 319

Van den Brink et al, 2006

- land tenure insecurity in Sub-Saharan Africa, 276

Venezuela

- "poster child for high inequality" (Easterly, 2001), 267
- coups, banking crisis, corruption charges – the tumultuous 1990s, 268
- dualistic, polarized economy, 265
- Gini coefficient for income 0.5 (1980–1990s), 268
- GNI per capita USD 10, 150 (2009), 267
- incidence of poverty increased (2000–2004), 268
- President Hugo Chavez (1999–current), 268
- recurrent episodes of instability since the declaration of its independence from Spain July 05, 1811, 268

- redistribution under the Bolivarian socialism of Chavez, 269
- stabilization cum adjustment, *El Gran Viraje* (1989–92), 268
- Vincent and Ali, 1997
 - Malaysian governments invests in basic public goods and services, 139
- Warr (2002)
 - sectoral economic growth and relative impact on poverty reduction, 131
- Western Europe
 - fundamental structural changes following the agricultural revolution, 25
- Wolfensohn, James D
 - “Government is in the driver’s seat”, 191
 - ninth president of the World Bank (1995–2005), 191
- World Trade Organization (WTO), 297
- Yamada and Hayami, 1979
 - rural urban migration in Japan, 34
- Zhou and Bourguignon in Binswanger-Mhize et al, eds. 2009
 - conflicts over farmland expropriations in China, 278
 - promise of land reform decisive in victory of Communists over the Kuomintang, 274
- Zimbabwe
 - British and Dutch settlers expropriated best lands (1880s–1980), 273
 - formerly Southern Rhodesia, independent in 1980, 273
 - GNI per capita USD 350 (2005), 273
 - land distribution an explosive issue, 273