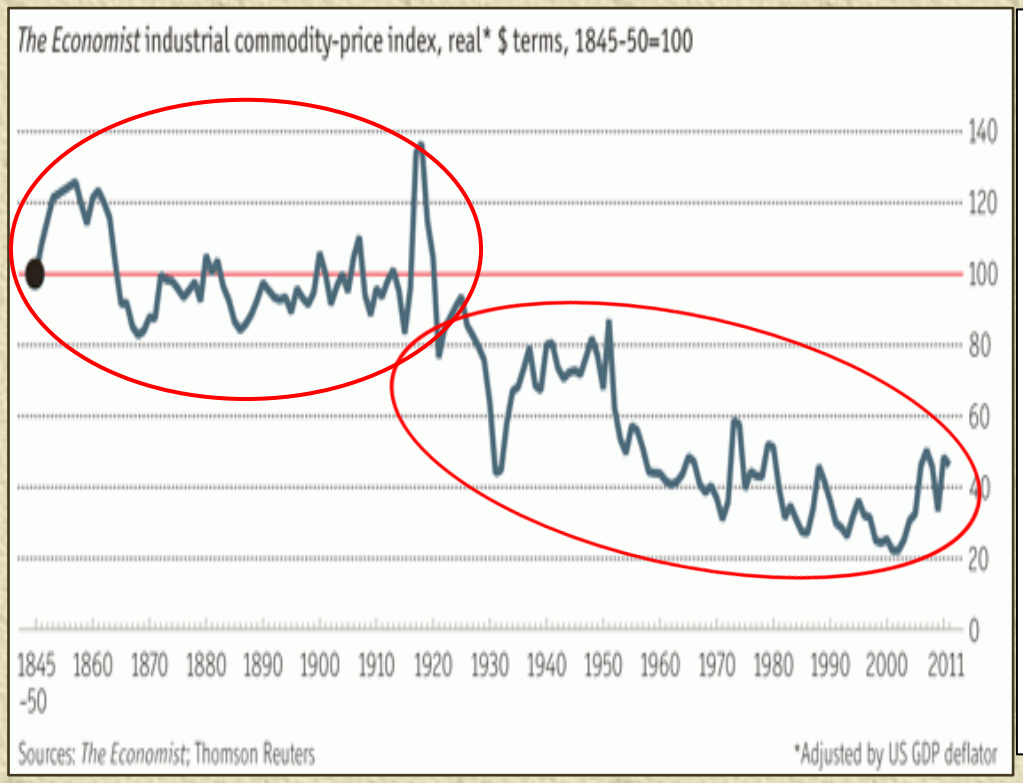
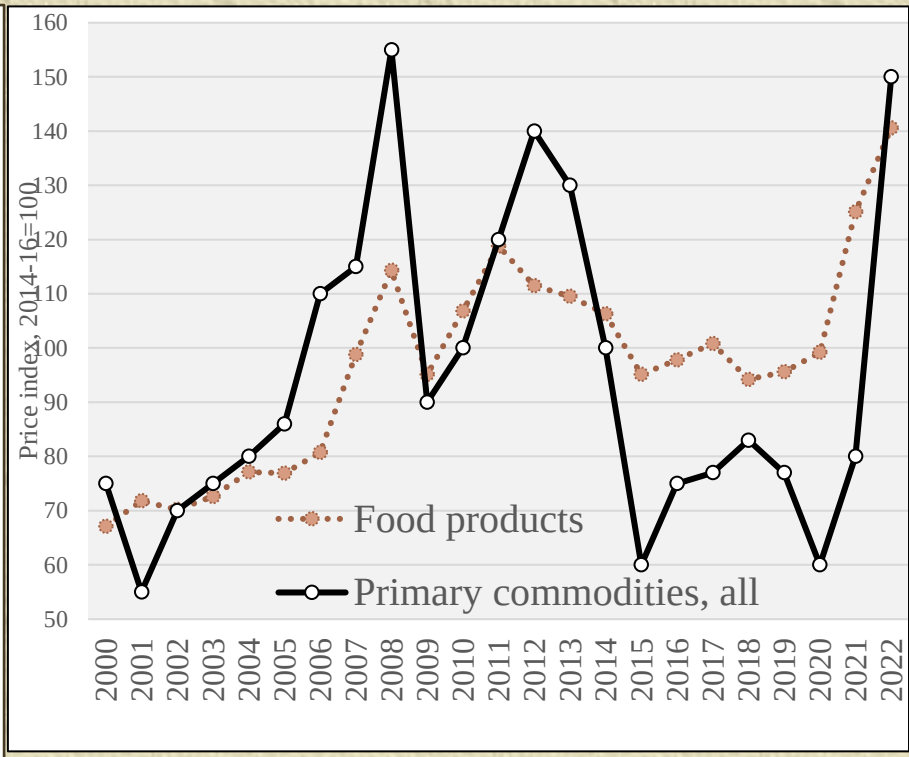
8. Prebisch-Singer: Dependency Theory

8.2 Basic scenario and hypothesis

- Proposition 1. Long-run ↓ P_A (↓ TOT for South)
- Proposition 2. Instability in P_A from world mkt



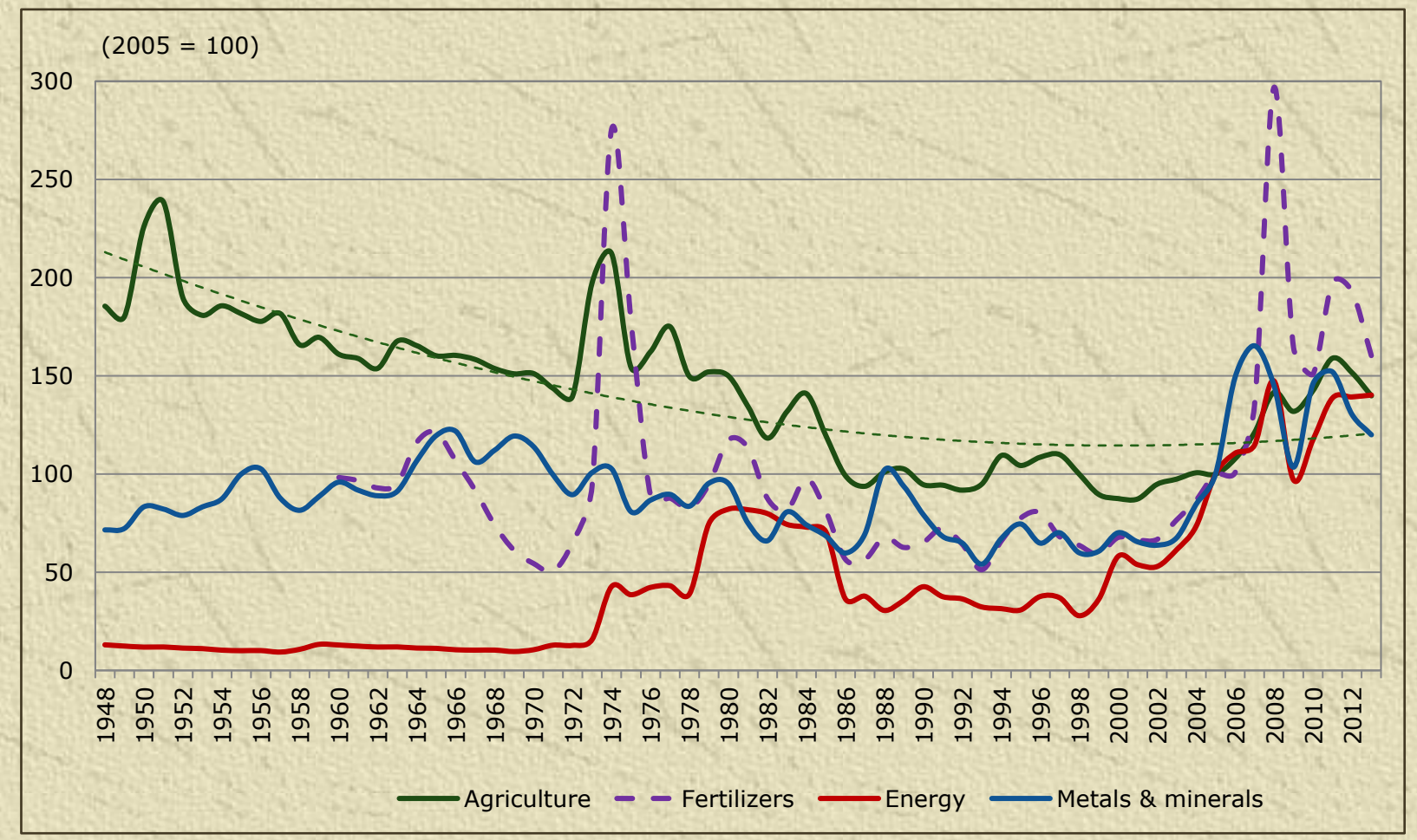


Source: Data from OECD; UN FAO and IMF

Economist, "Commodities: Crowded out", 20-1 Sep 2011.

Prebisch-Singer: Dependency Theory, continued . . .

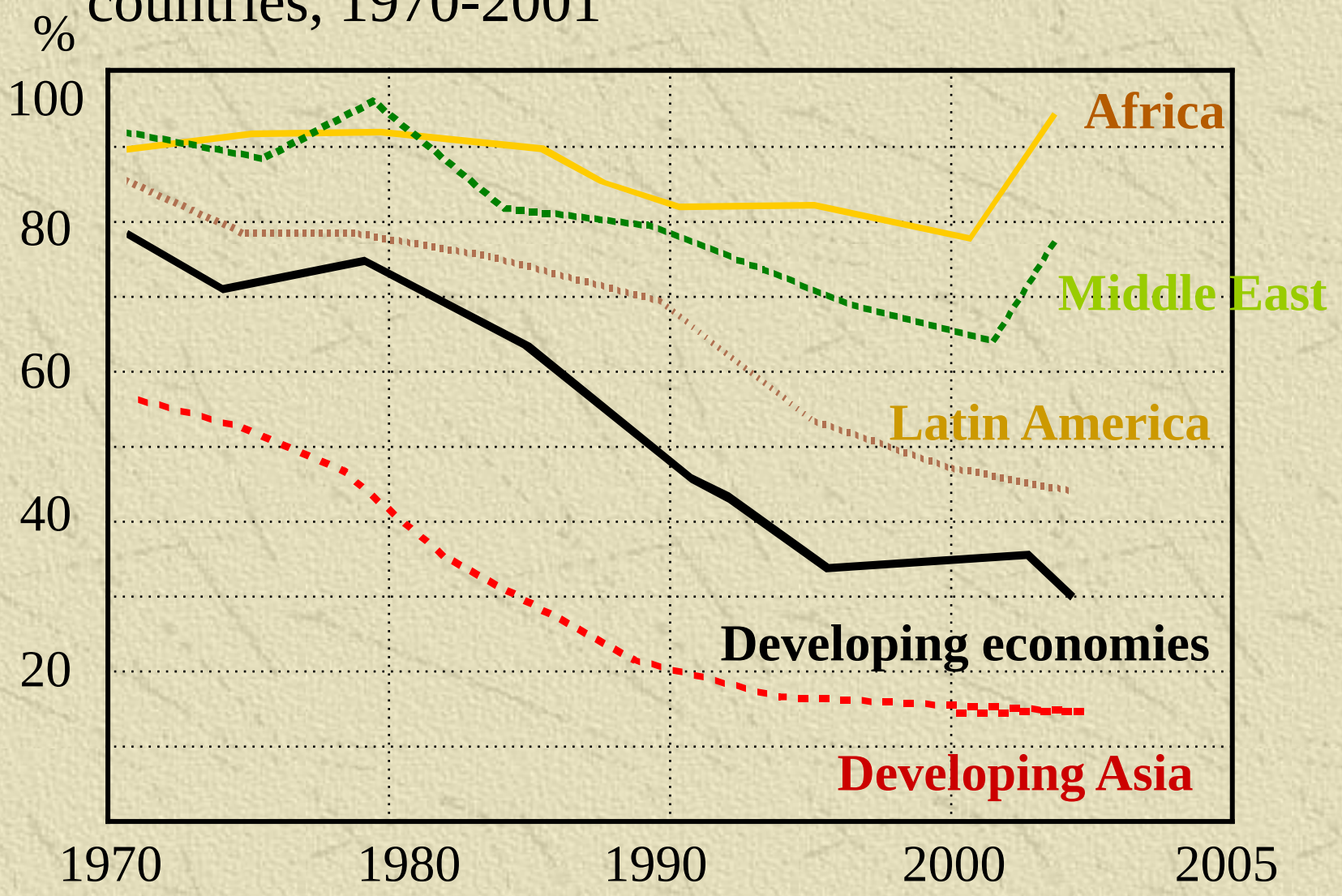
- Trends in agricultural commodity prices, output/input



Source: World Bank

Prebisch-Singer: Dependency Theory, continued . . .

- Share of primary products of exports of developing countries, 1970-2001



Prebisch-Singer: Dependency Theory, continued . . .

- Countries with fastest growth rates: 1980-92

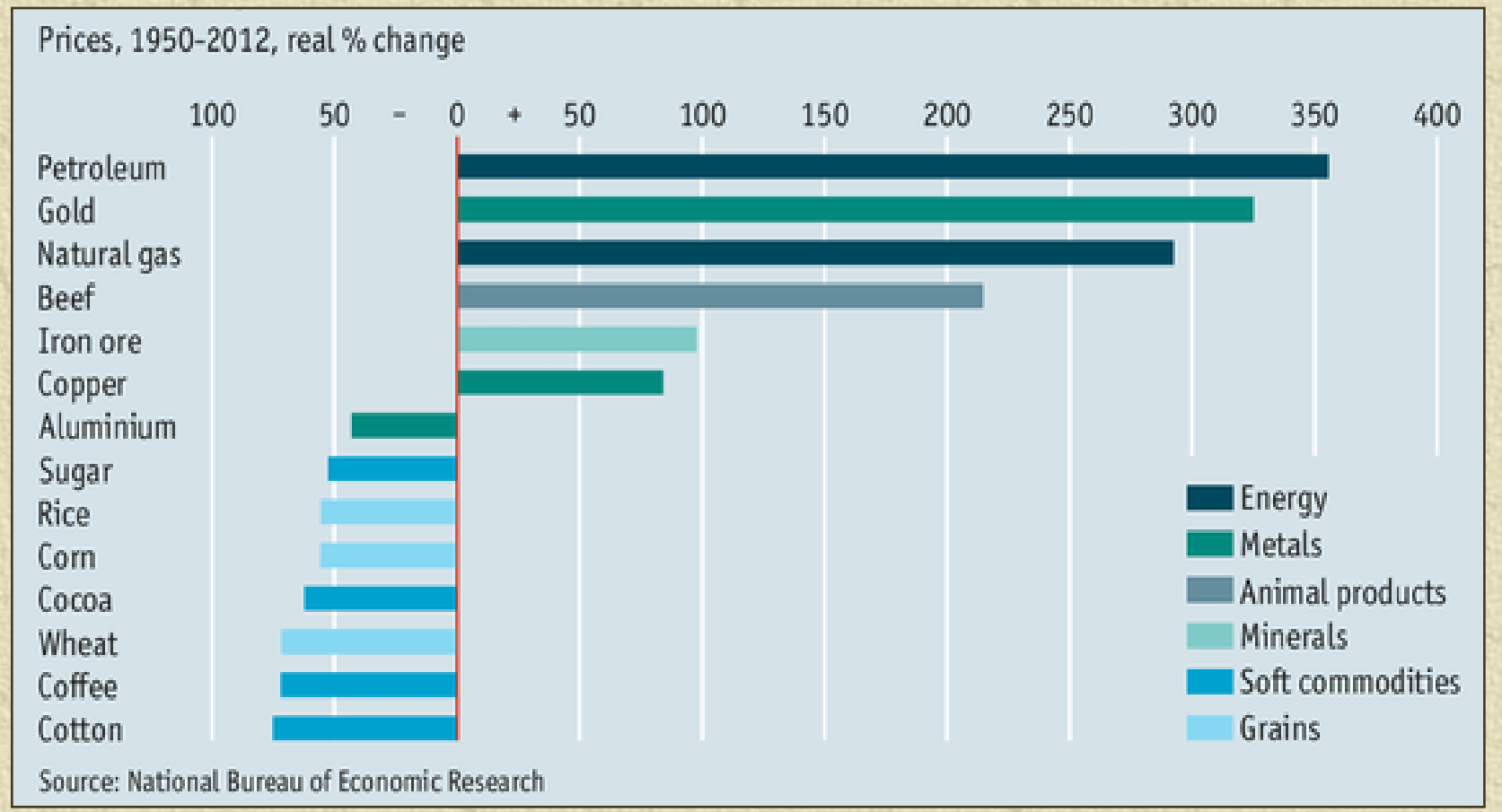
% Δ GDP (annual avg)	Type of exports	X earnings as % of GDP	GDP of developing countries as % of GDP of developed
6.8%	Manu X > 50% value	< 5%	1960: 63%
3.6%	Diversified (A,M)	≈ 10%	
1.4%	Ag X > 50% value	> 25%	1992: 46%

Source: *Economist*, "Economics focus: Poor relations", 16 Apr 1994, p. 76.

Prebisch-Singer: Dependency Theory, continued . . .

8.5 Counter-arguments to Prebisch-Singer

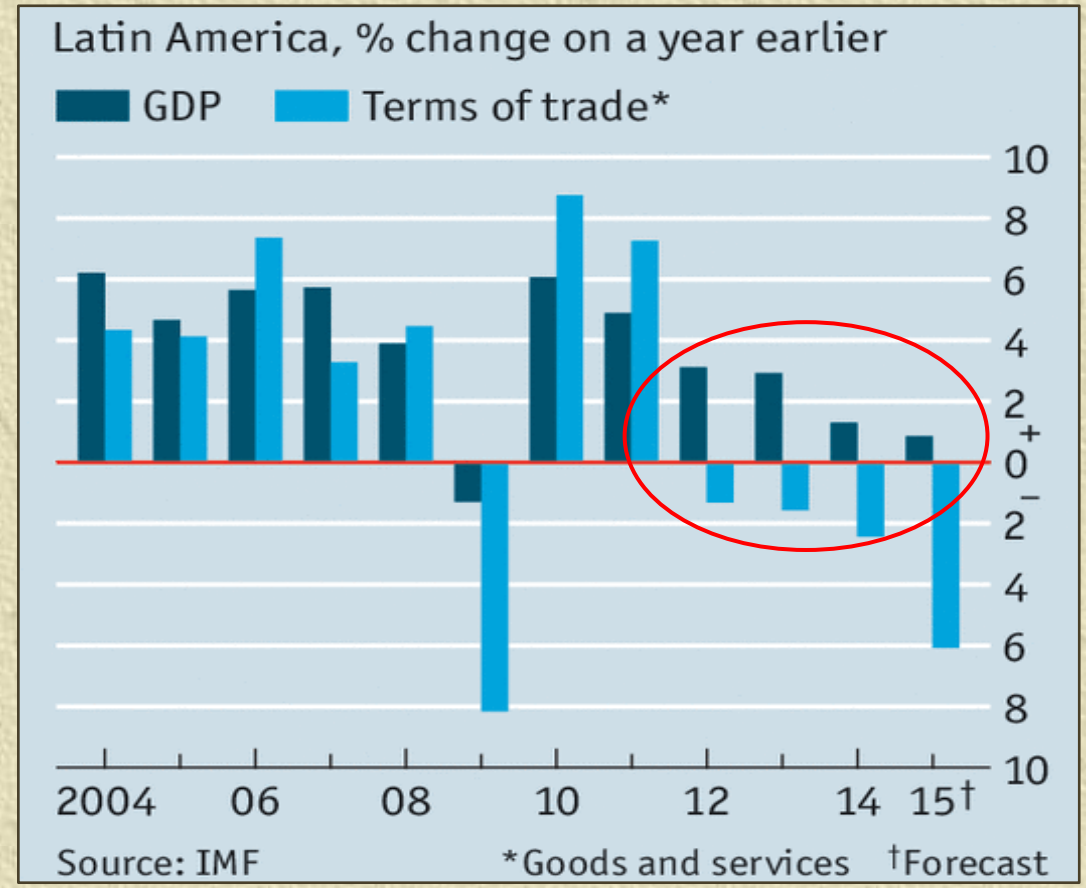
- Aggregation hides details behind TOT



Source: *Economist*, "Free exchange: Shocks and ores", 08 Jun 2013

Prebisch-Singer: Dependency Theory, continued . . .

- Relation between P_A and GDP
  - Immiserizing growth and uneven growth

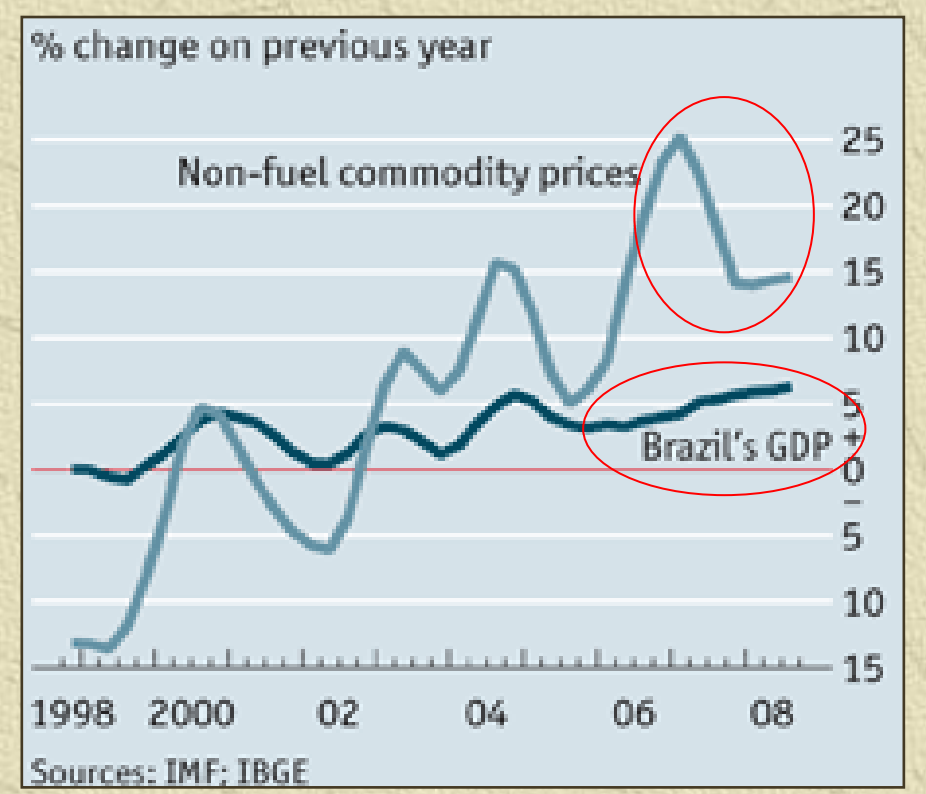


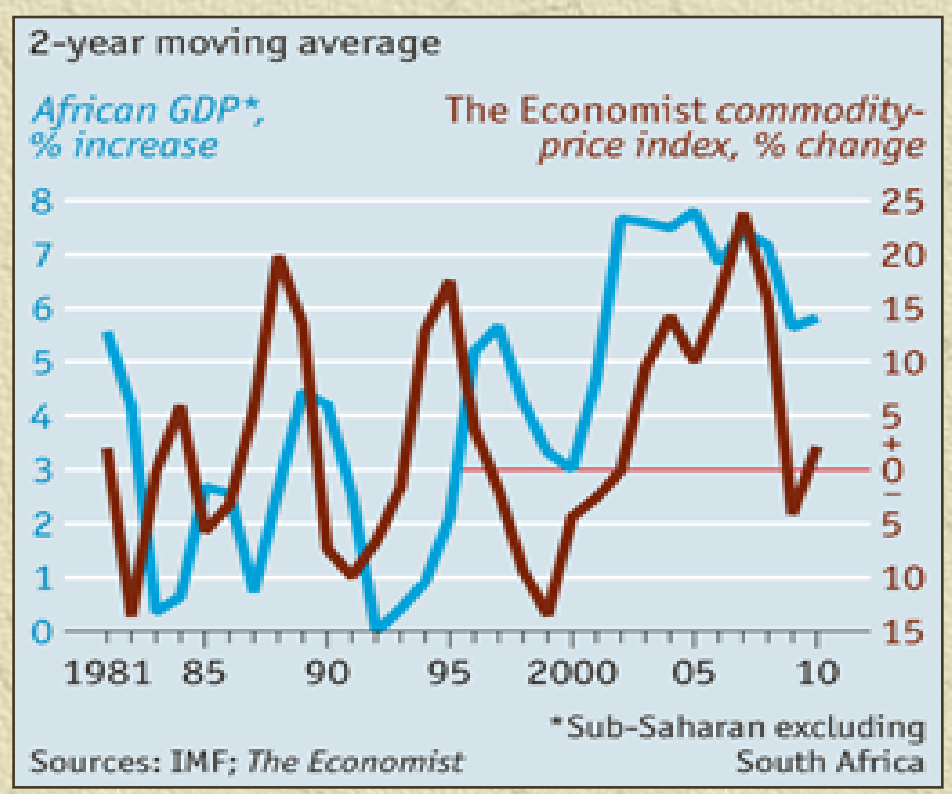
The link between TOT and GDP appears to break in 2012

Source: *Economist*, "Latin America's economies: Learning the lessons of stagnation", 27 Jun 2015, p. 41-3

Prebisch-Singer: Dependency Theory, continued . . .

- Movement of commodity prices and GDP not uniform
  - Brazil: break in dependence
  - Africa: GDP tied more closely, maybe



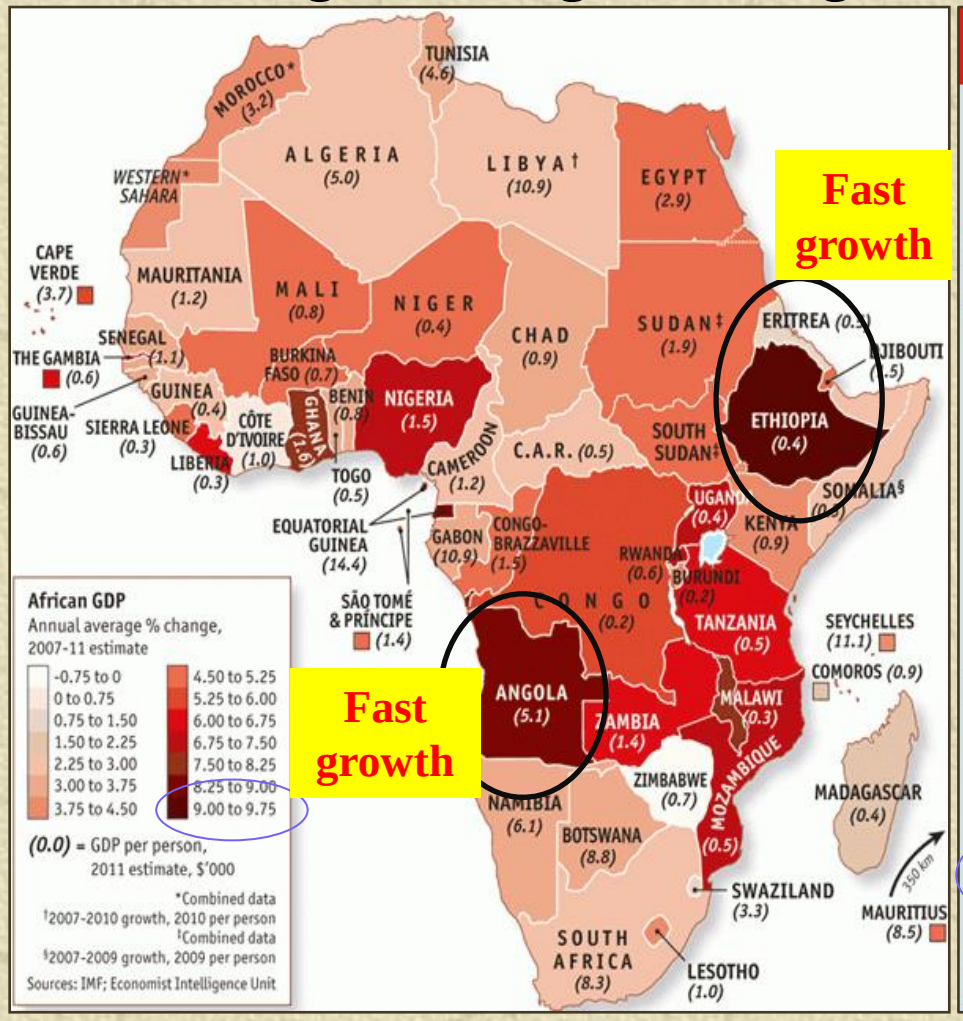


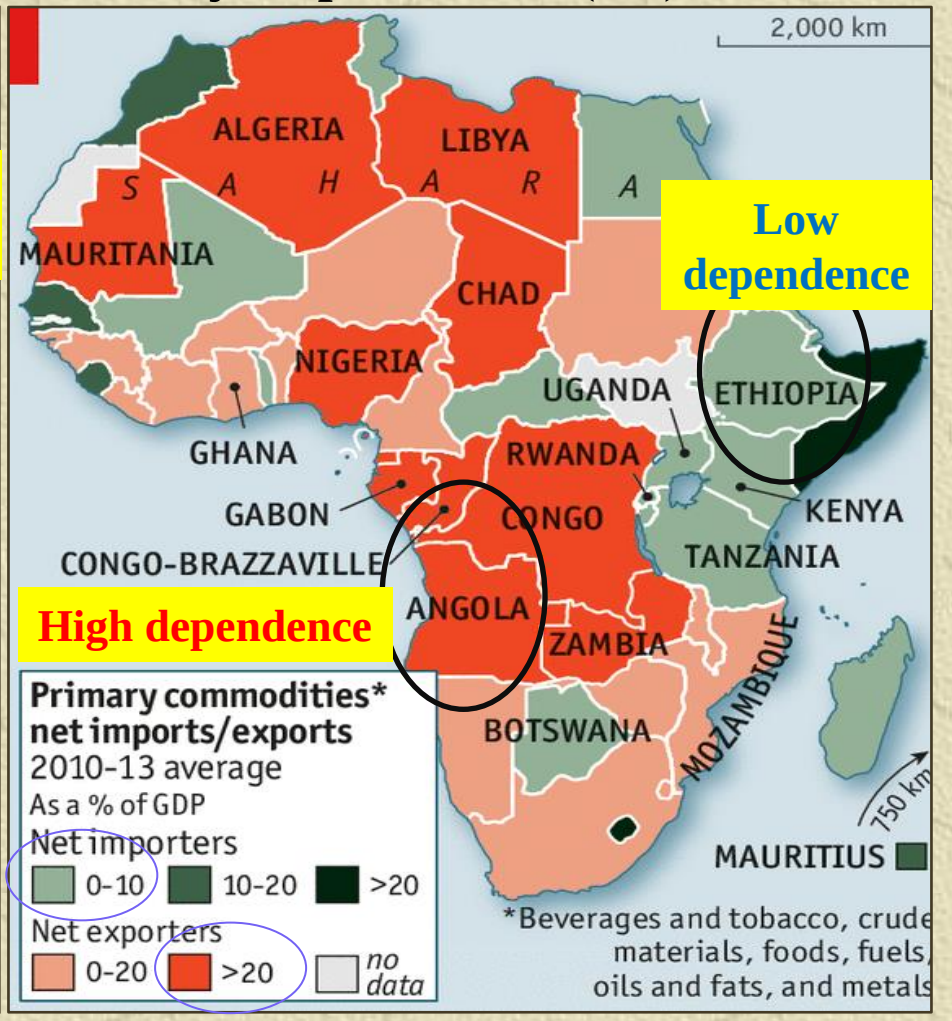
Brazil's industrial output peaked in the 1980s at 46% GDP; 2000-2022 averaged below 20%

Economist, "Special report on business and finance in Brazil", 14 Nov 2009; and "Briefing: Africa's hopeful economies – the sun shines bright, 3 Dec 2011.

Prebisch-Singer: Dependency Theory, continued . . .

- Ethiopia: fast growth, low commodity dependence
- Angola: fast growth, high commodity dependence (oil)





Source: *Economist*, "African economic growth: The twilight of the resource curse?", 10 Jan 2015, p. 31-2.

Prebisch-Singer: Dependency Theory, continued . . .

- Not one growth model
  - Not all fast-growing economies are semi-industrialized
  - Commodity dependent countries can have sustained growth

World's ten fastest-growing economies*
Annual average GDP growth, %

2001-2010†		2011-2015‡	
Angola	**11.1**	China	9.5
China	10.5	India	8.2
Myanmar	10.3	**Ethiopia**	**8.1**
Nigeria	**8.9**	**Mozambique**	**7.7**
Ethiopia	**8.4**	**Tanzania**	**7.2**
Kazakhstan	8.2	Vietnam	7.2
Chad	**7.9**	**Congo**	**7.0**
Mozambique	**7.9**	**Ghana**	**7.0**
Cambodia	7.7	**Zambia**	**6.9**
Rwanda	**7.6**	**Nigeria**	**6.8**

*Excluding countries with less than 10m population and Iraq and Afghanistan
†2010 estimate ‡IMF forecast
Sources: *The Economist;* IMF

Source: *Economist*, "A more hopeful continent: The lion kings", 8 Jan 2011.

Prebisch-Singer: Dependency Theory, continued . . .

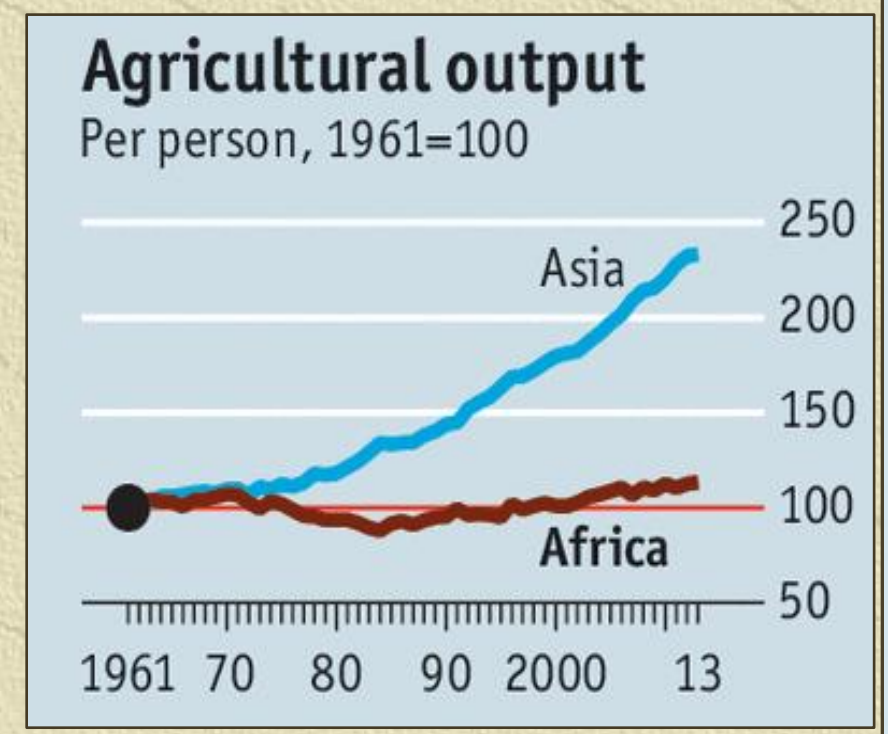
- Open economies grow faster, 1970s-80s
  - Specialization and trade openness → faster growth
  - Closing economy does not make P_A less unstable

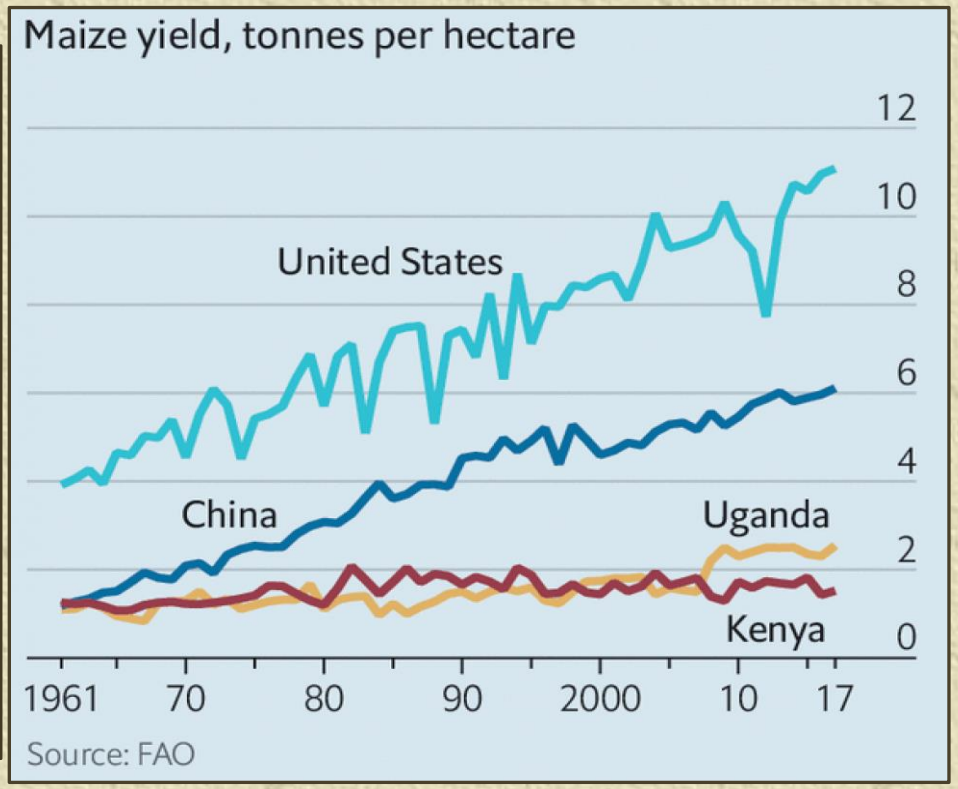
Growth rates in:	Open economies	Closed economies
Developing countries	4.5%	0.7%
Developed countries	2.3%	0.7%

Source: *Economist*, "The never-ending question", 1 Jul 1999, p. 80.

Prebisch-Singer: Dependency Theory, continued . . .

- How/when to diversify from ag to manu sector?
  - Role of productivity
    - Did fast growing Asia abandon the ag sector?
    - What role does specialization play?





Source: *Economist*, "Farming in Africa: Miracle grow",
12 Mar 2016, p. 12, and "Agriculture in Africa: The underground revolution", 28 Sep 2019, p. 36-7 .

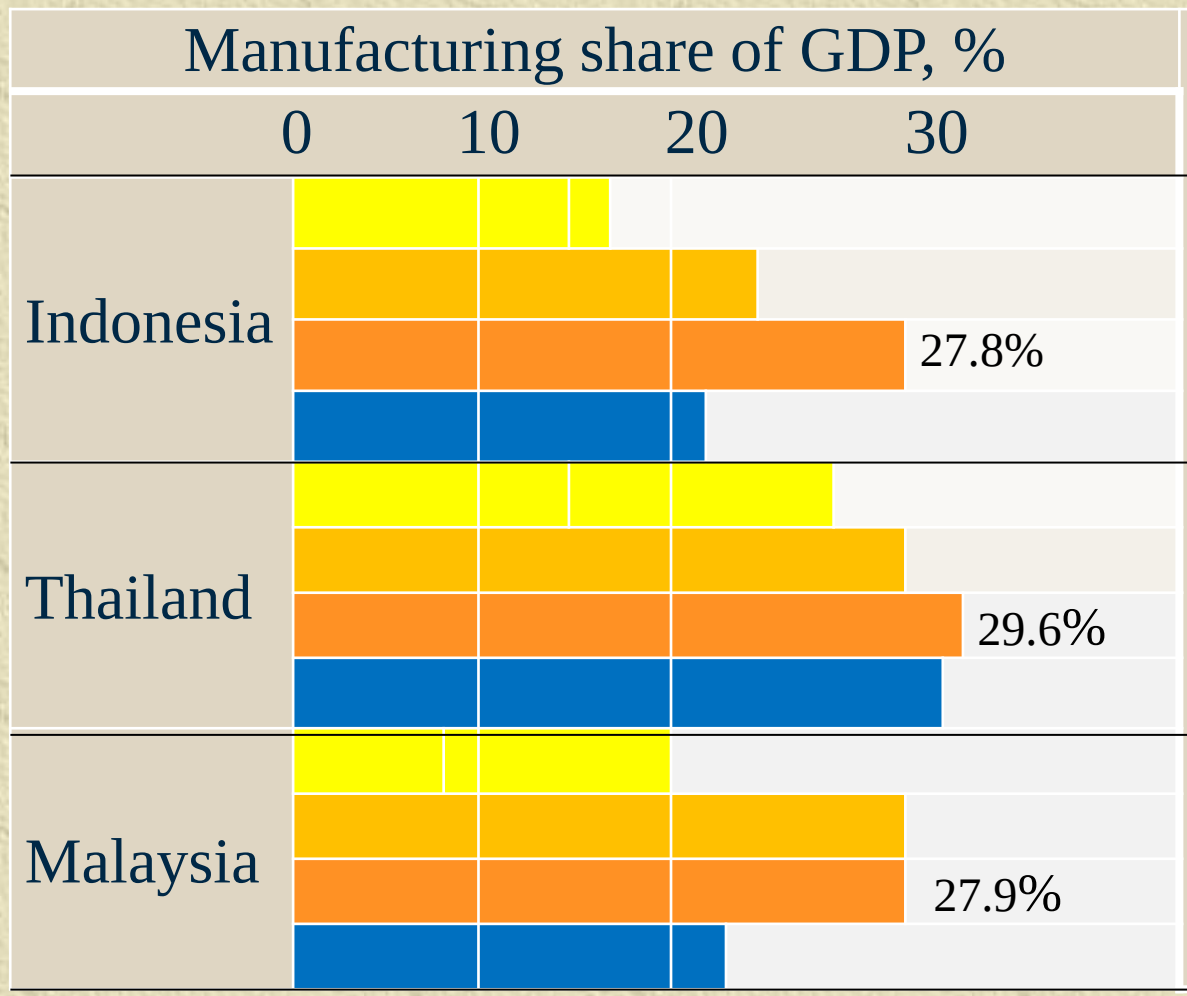
Prebisch-Singer: Dependency Theory, continued . . .

- Productivity improvements: within and between sectors

Source: *Economist*, "Emerging markets: Not just a first world problem", 18 Jan 2020, p. 67-9.

Prebisch-Singer: Dependency Theory, continued . . .

- Manufacturing as % GDP and growth in GDP per capita,
  - Emerging Asia : ↑ manufacturing share until 2010

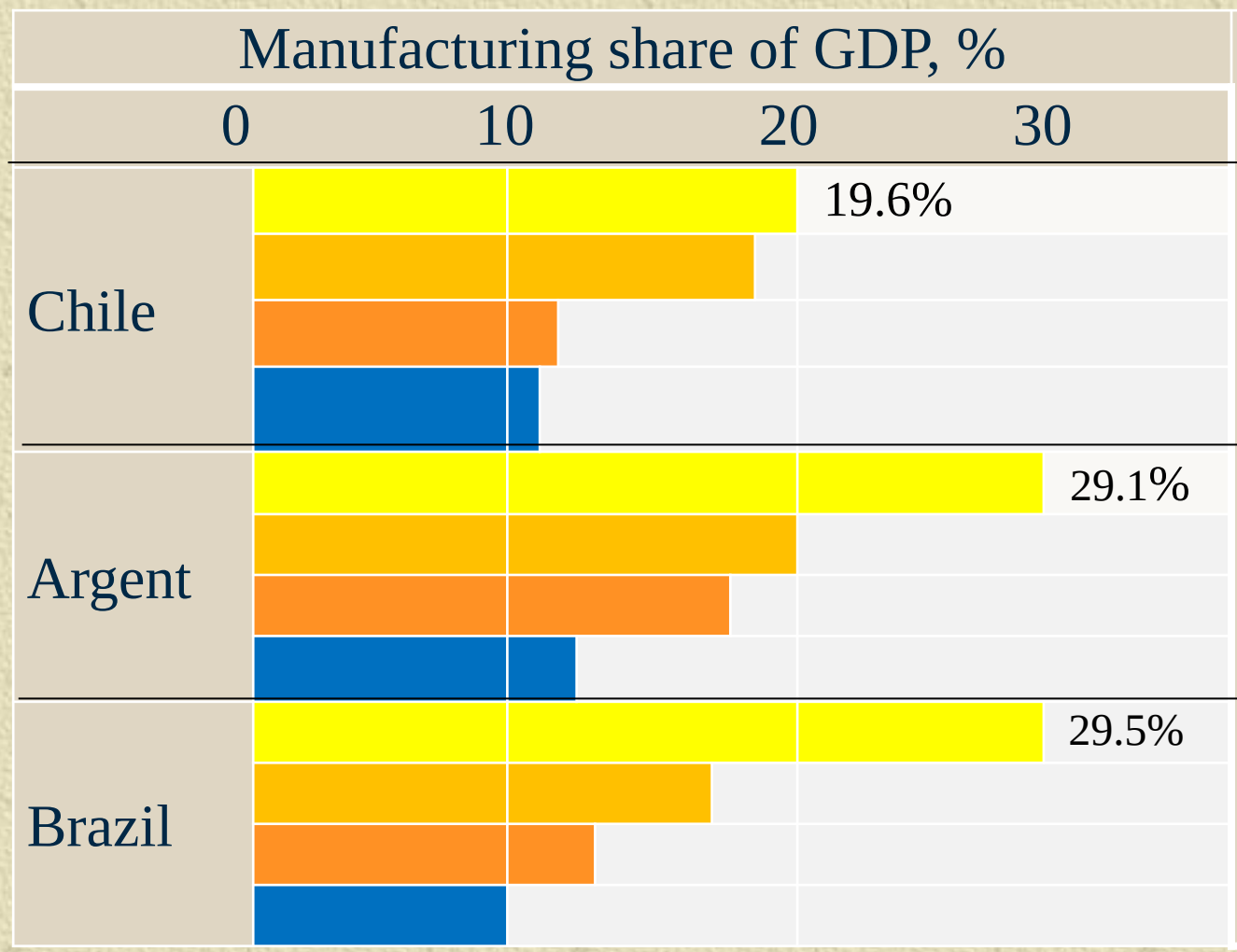


%Δ GDP per capita	
1980s	3.5
1990s	2.7
2000s	3.7
2010-18	4.1
1980s	5.3
1990s	4.1
2000s	3.6
2010-18	3.3
1980s	3.1
1990s	4.5
2000s	2.7
2010-18	3.9

Source: World Bank data, worldbank.org

Prebisch-Singer: Dependency Theory, continued . . .

- Emerging Latin America: ↓ share of manufacturing



	%Δ GDP per capita
Chile 1980s	3.3
Chile 1990s	4.5
Chile 2000s	3.1
Chile 2010-18	2.4
Argent 1980s	-1.9
Argent 1990s	2.7
Argent 2000s	1.5
Argent 2010-18	0.7
Brazil 1980s	0.8
Brazil 1990s	0.2
Brazil 2000s	2.2
Brazil 2010-18	0.5

Source: World Bank data, worldbank.org

Prebisch-Singer: Dependency Theory, continued . . .

- Comparison of Malaysia and Chile, selected statistics

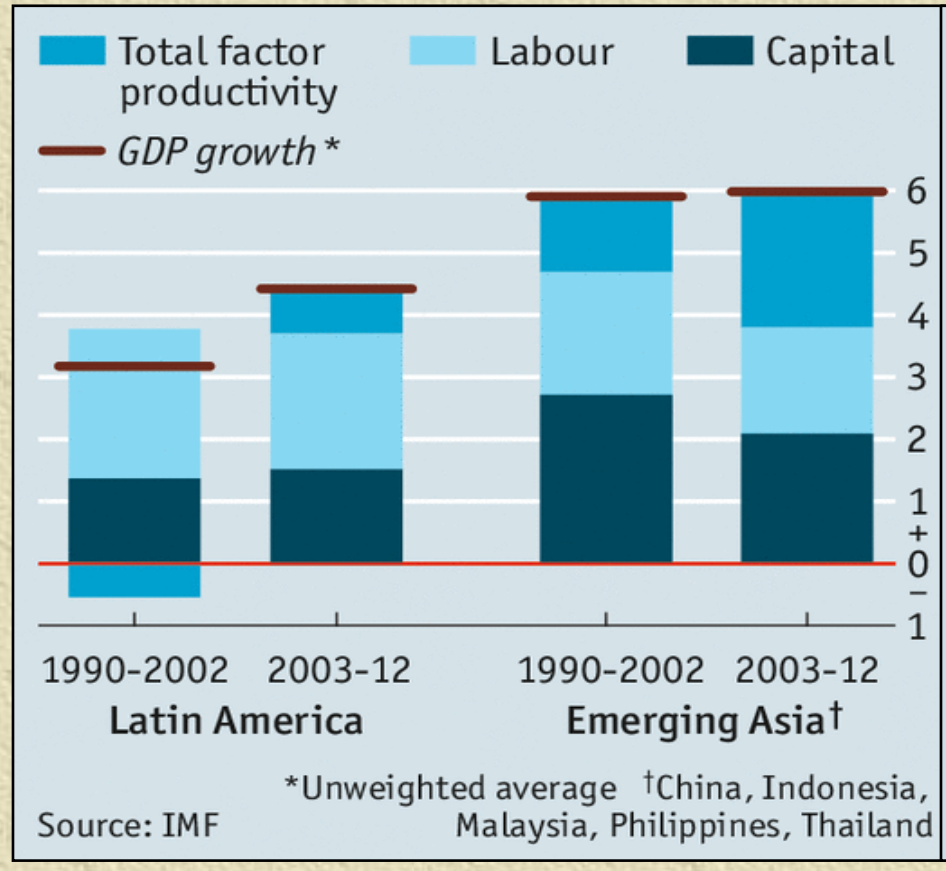
	Manu share of GDP, %		Agriculture share of GDP, %	
	Malay	Chile	Malay	Chile
1980s	20.6	19.6	20.5	7.5
1990s	27.0	18.0	13.1	7.1
2000s	27.9	14.6	9.0	4.2
2010-18	22.8	11.0	9.2	3.7

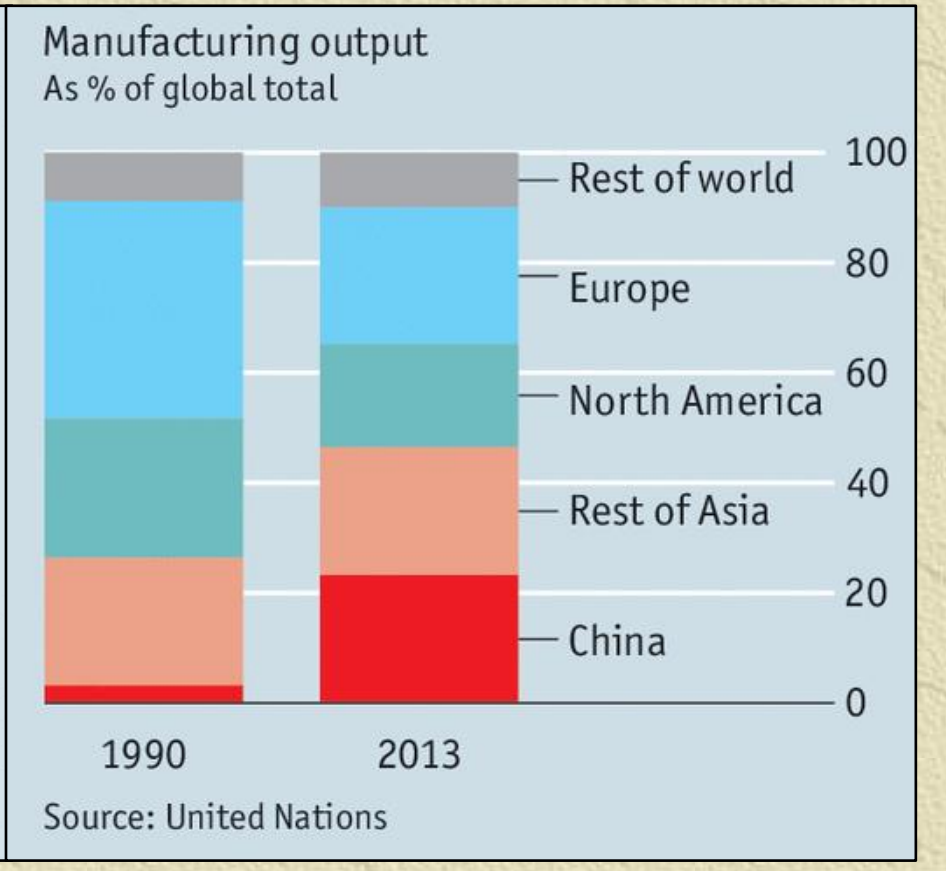
	Ag export share of total, %		Trade share of GDP, (X+M/GDP), %		% Δ GDP per capita	
	Malay	Chile	Malay	Chile	Malay	Chile
1980s	23.0	9.4	113.3	50.0	3.1	3.3
1990s	7.3	9.7	178.1	55.7	4.5	4.5
2000s	2.4	7.3	196.6	69.0	2.7	3.1
2010-18	2.1	6.0	141.3	63.1	3.9	2.4

Source: World Bank data, worldbank.org

Prebisch-Singer: Dependency Theory, continued . . .

- Total factor productivity and growth in manufacturing
  - Portion of Q not explain by amount of input used in Q
  - Contribution of GDP growth, annual avg %





Source: *Economist*, "Future of factory Asia: A tightening grip", 14 Mar 2015, p. 61-2.

Prebisch-Singer: Dependency Theory, continued . . .

- China's change in total factor productivity

Source: *Economist*, "Fortified but not enriched", Briefing on China's place in the world economy, 28 May 2022, p. 13-5.

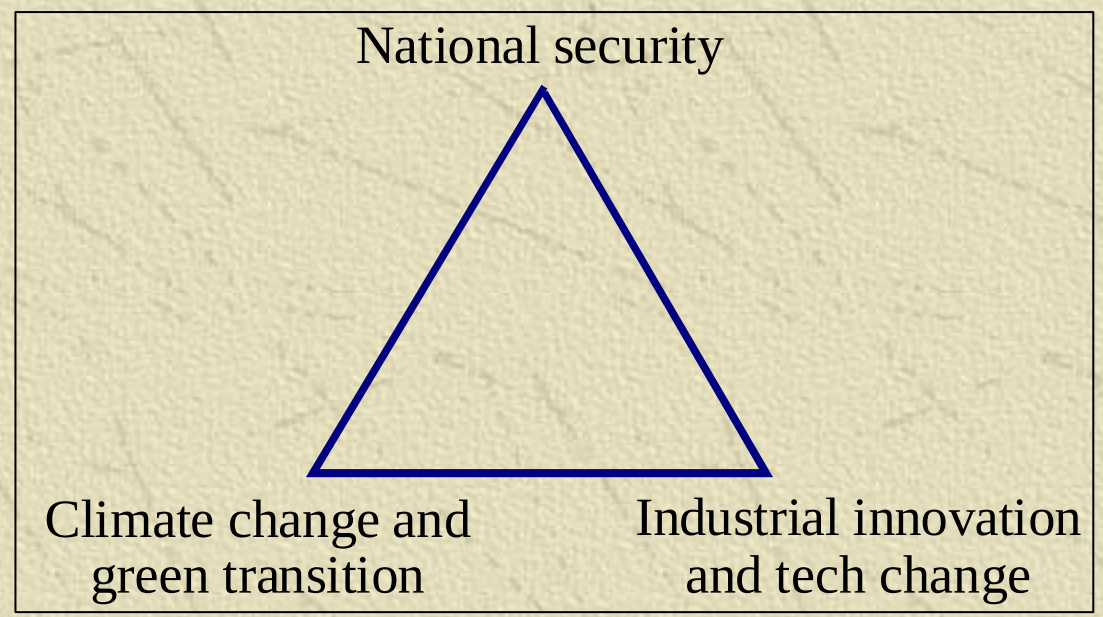
Prebisch-Singer: Dependency Theory, continued . . .

- Serious consequences of commodity dependence
  - Natural resource "curse"
    - Dutch disease
    - Corrosive effect on GDP, export earnings and political institutions
  - Non-renewable commodities vs renewables
  - Volatility of P_A is real – risk management strategies

- Role of gov't
  - Improve markets' functioning
  - Improve institutions' functioning
  - Strategy
    - Export promotion and free trade negotiations
    - Import substitution industrialization

Prebisch-Singer: Dependency Theory, continued . . .

- Challenges in the global economy



  - Climate change and green transition
    - Self-sufficiency in ag
      - Food security
      - Food production closer to home
    - Green transition subsidies
    - Race to access critical commodities

Prebisch-Singer: Dependency Theory, continued . . .

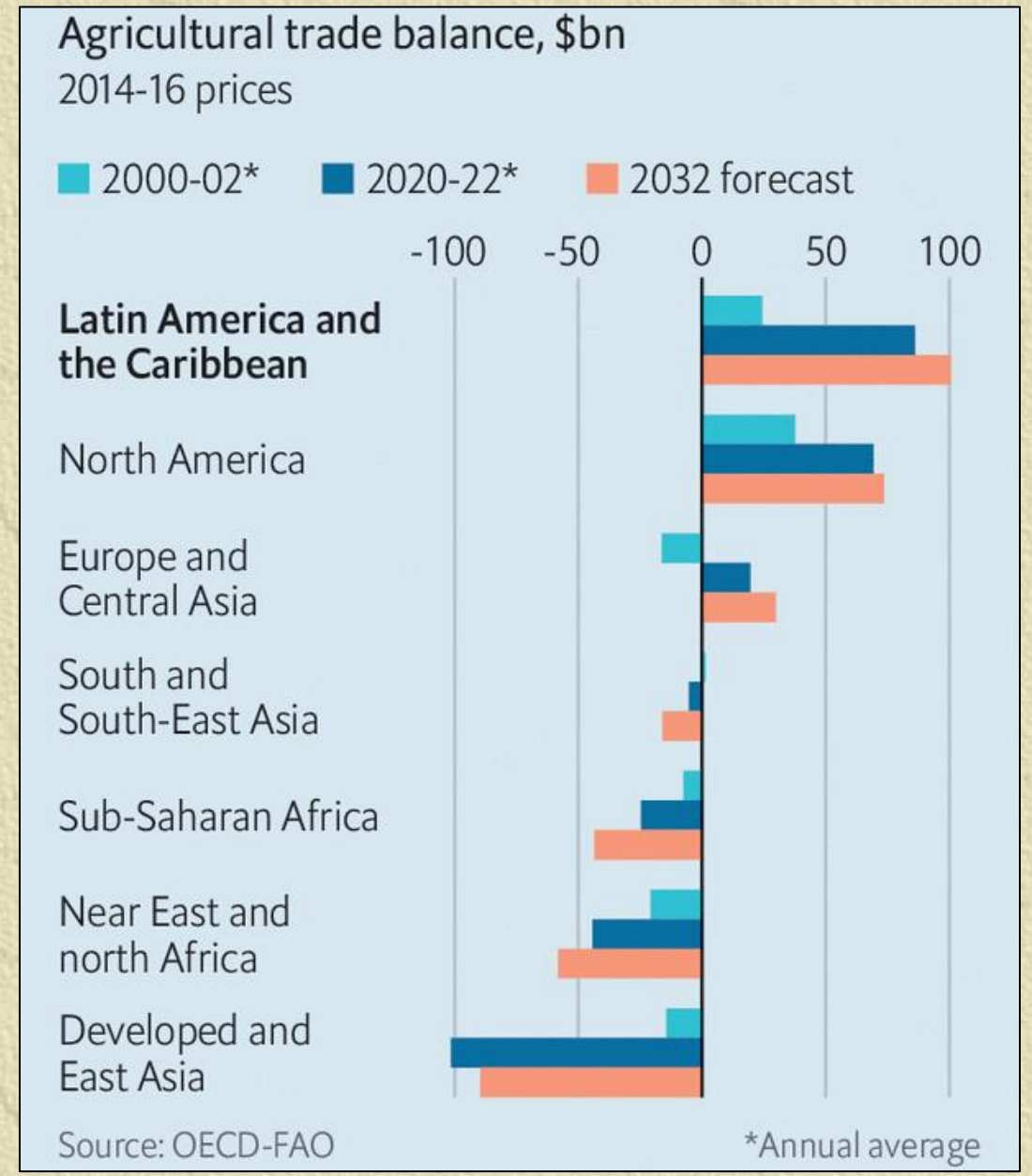
- Latin America's 21st century commodity boom: minerals, food
  - Positive
    - Green transition: ↑D for metals and minerals
      - Region has large supply
      - Renewable energy to process them
    - Abundant fertile land to produce grain, livestock, etc
    - Geopolitical tensions favor the region
  - Negative
    - 21 of the 33 countries: > 50% of export revenue from commodities
    - For all 12 South American countries: > 60%
  - Previous commodity cycle
    - 2000s: China industrialized → boom in oil, coal, steel and ag
    - 2010s: China's slowdown → commodity bust

Prebisch-Singer: Dependency Theory, continued . . .

- Green transition is global and long term
  - Chile/Peru: 30% of world's exploitable reserves of copper
  - Region has 60% of known lithium
  - 60% of traded soybeans, 30% of maize, beef, poultry and sugar
  - 70 bn barrels of oil discovered since 2010s

Prebisch-Singer: Dependency Theory, continued . . .

- Agricultural trade

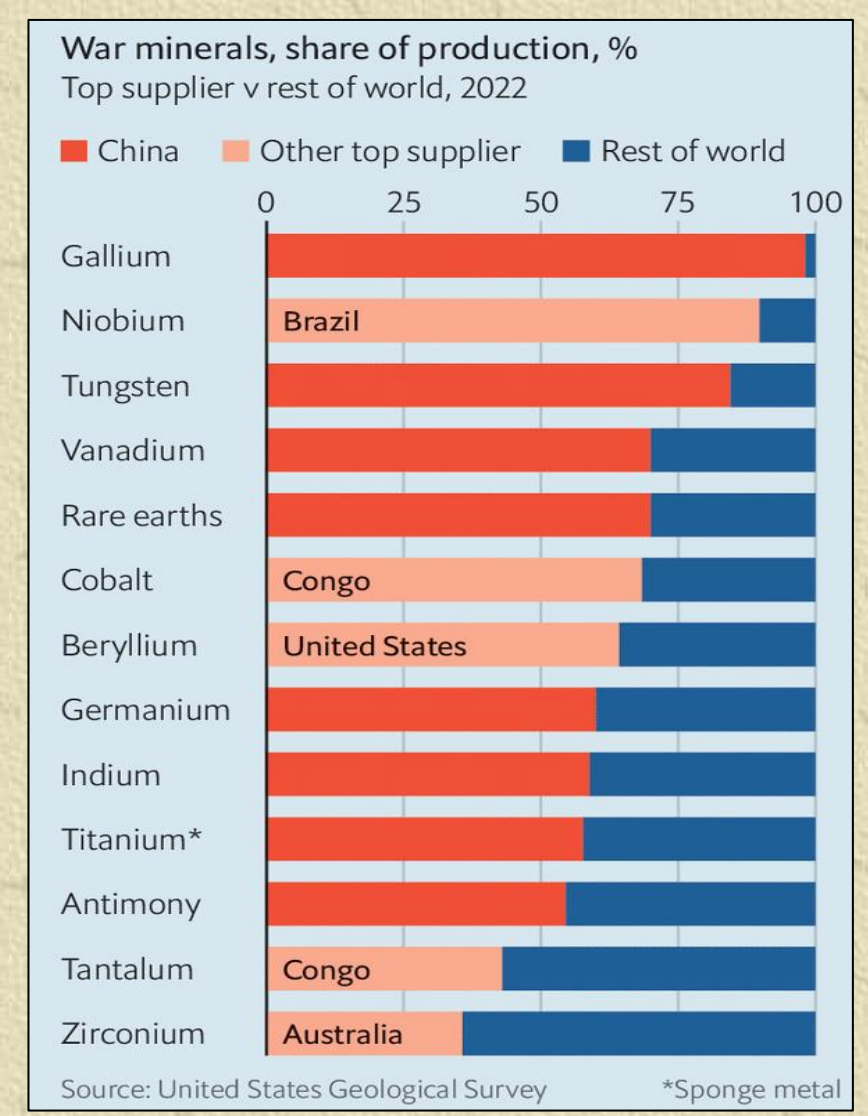


Economist, "Commodities in the 21st century: Raw potential", 12 Aug 2023, p. 36-8.

Prebisch-Singer: Dependency Theory, continued . . .

- Race for commodities
  - Gallium: input into chipsets of communication systems, fibre-optic networks and avionic sensors
  - Germanium: input into night vision goggles
  - Rare earths: input into high-performance magnets
  - Niobium: makes steel stronger
  - Titanium: strong as steel but 45% lighter
  - Cobalt: input into batteries, resistant to high temperatures

Production is costly, technical, energy-intensive and polluting and the market is small (crucial for military equipment)



Economist, "War supplies: Mission-critical", 15 Jul 2023, p. 58.