Introduction to development economics

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What is development?

- Development as (multidimensional) poverty reduction
- Development is more than growth of GDP (per capita)
- 'Sustainable and inclusive development' as a consensual national and global goal
- Applied here to low- and middle-income countries
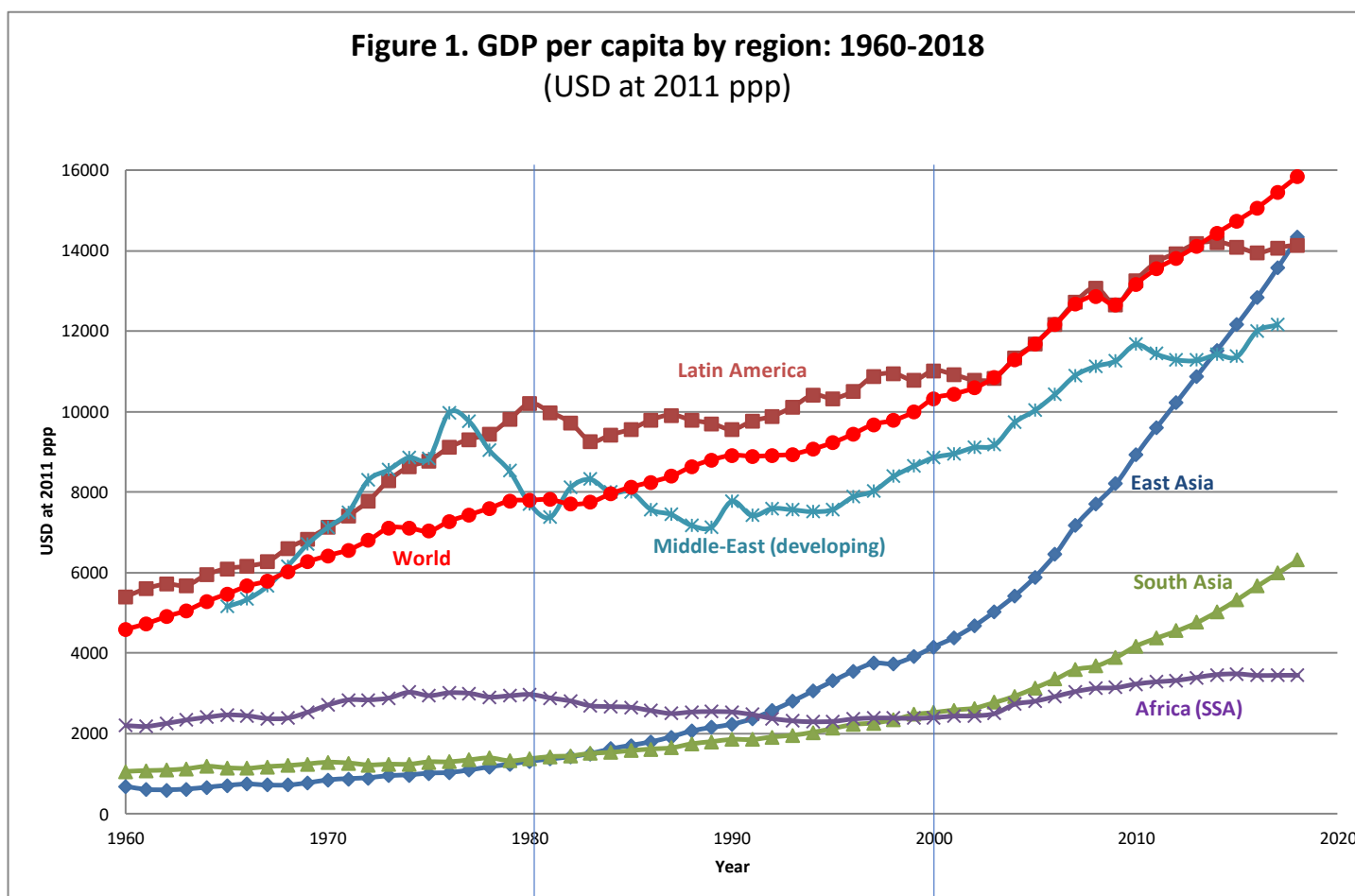
This presentation

(More 'topics in development' than 'formal introduction')

1. Some facts about development

2. Basic models of economic growth:
   – Solow-Swan model of aggregate growth and particular case ('aK')
   – Dualism and the Kuznets-Lewis growth model

3. Foreign trade: the natural resource curse

4. The economics of aid

5. (Why aren't all developing economies following the example of South-Korea?)
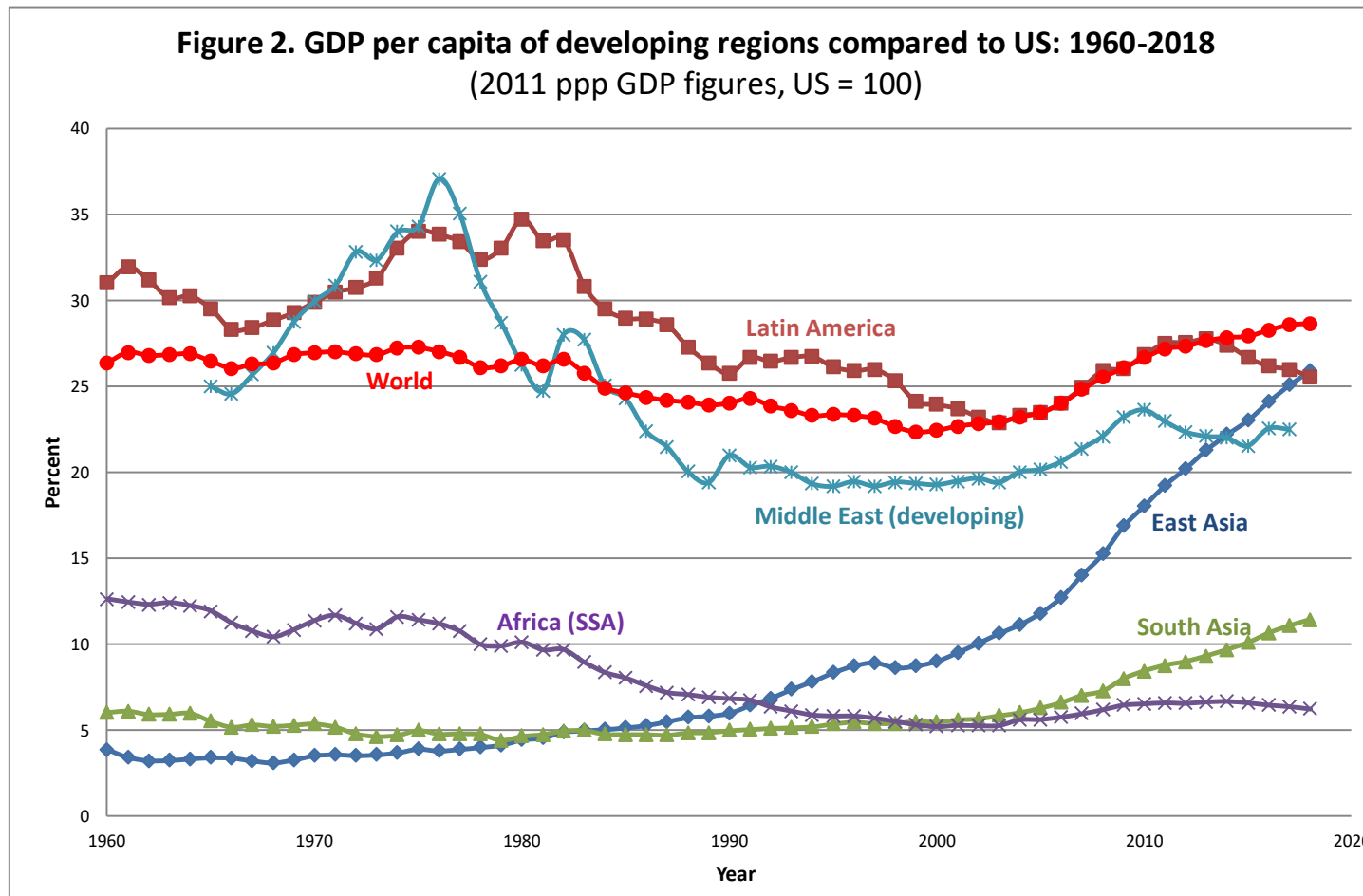
1. Some facts on development

60 years of development: the ppp $ yardstick

Source: Computed from WDI
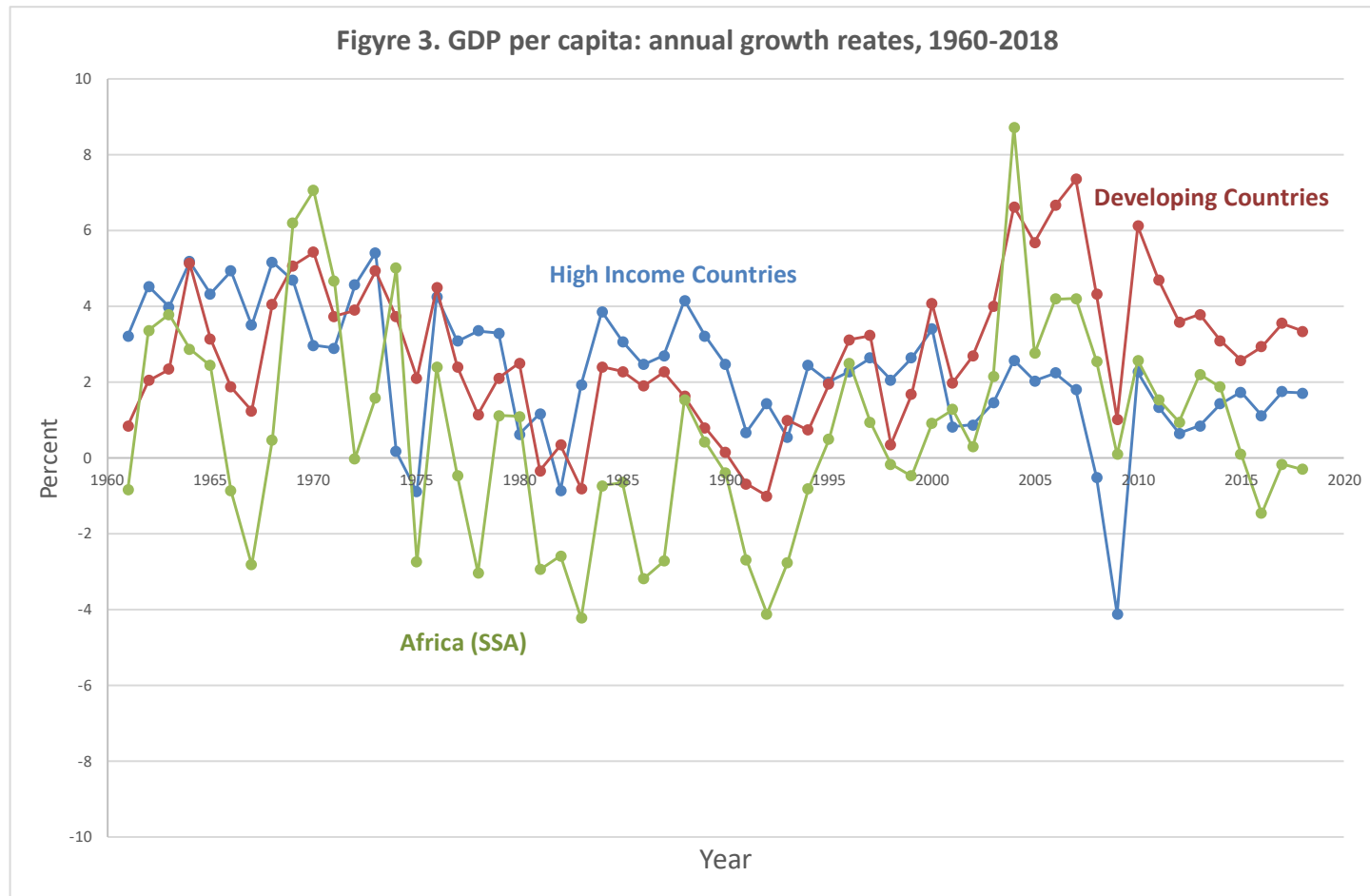

Figure 1. GDP per capita by region: 1960-2018
(USD at 2011 ppp)

60 years of development: the relative yardstick

Figure 2. GDP per capita of developing regions compared to US: 1960-2018
(2011 ppp GDP figures, US = 100)

6

"North-South" catching-up

Figure 3. GDP per capita: annual growth reates, 1960-2018

Developing Countries

High Income Countries

Africa (SSA)

Source: Computed from WDI

World population by region and income level

Figure 4b. World population by region or income level, 1960-2018
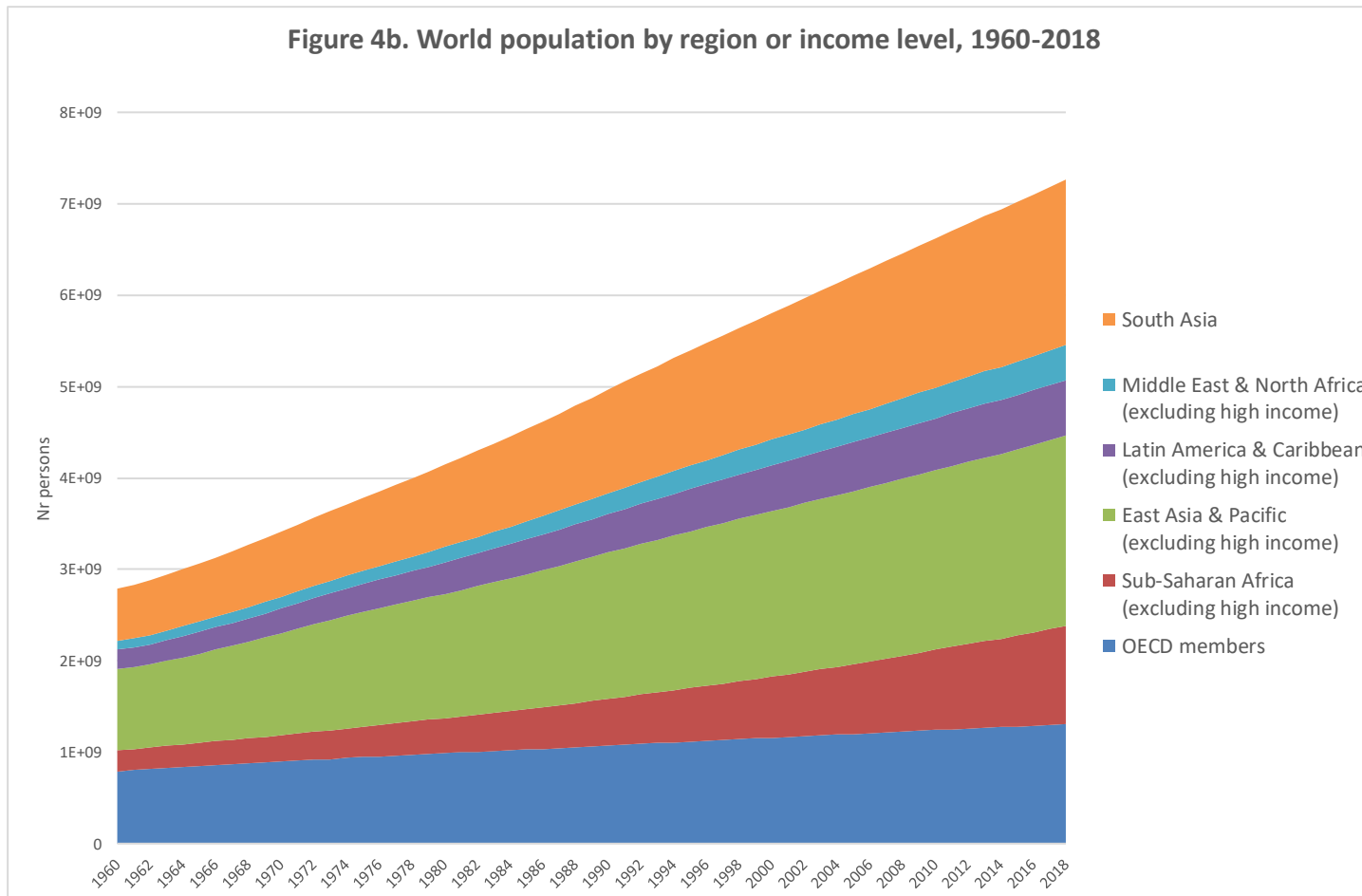
The reversal in the global income distribution

Figure 1. Global income inequality: 1820-2010

Between- vs within country inequality

Figure 5a. Decomposition of global inquality into 'between' and 'within country' components (Theil coefficient) : 1820-2010
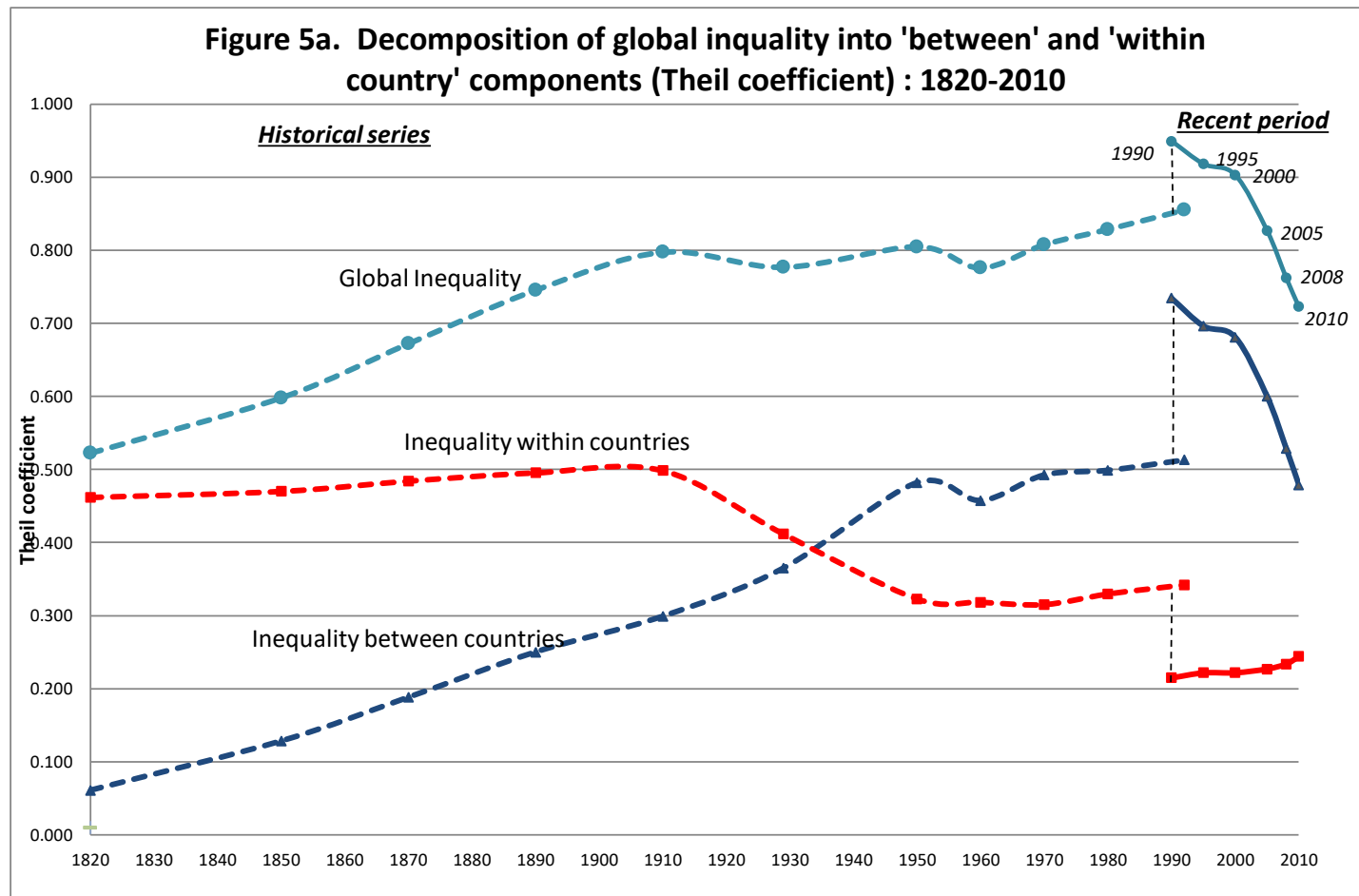
Source: Bourguignon, 2015

Global inequality 1990-2015

Global inequality. Household survey mean income scaled up by National Accounts' Household Expenditures (USD at international prices of 2011, World Development Indicators)
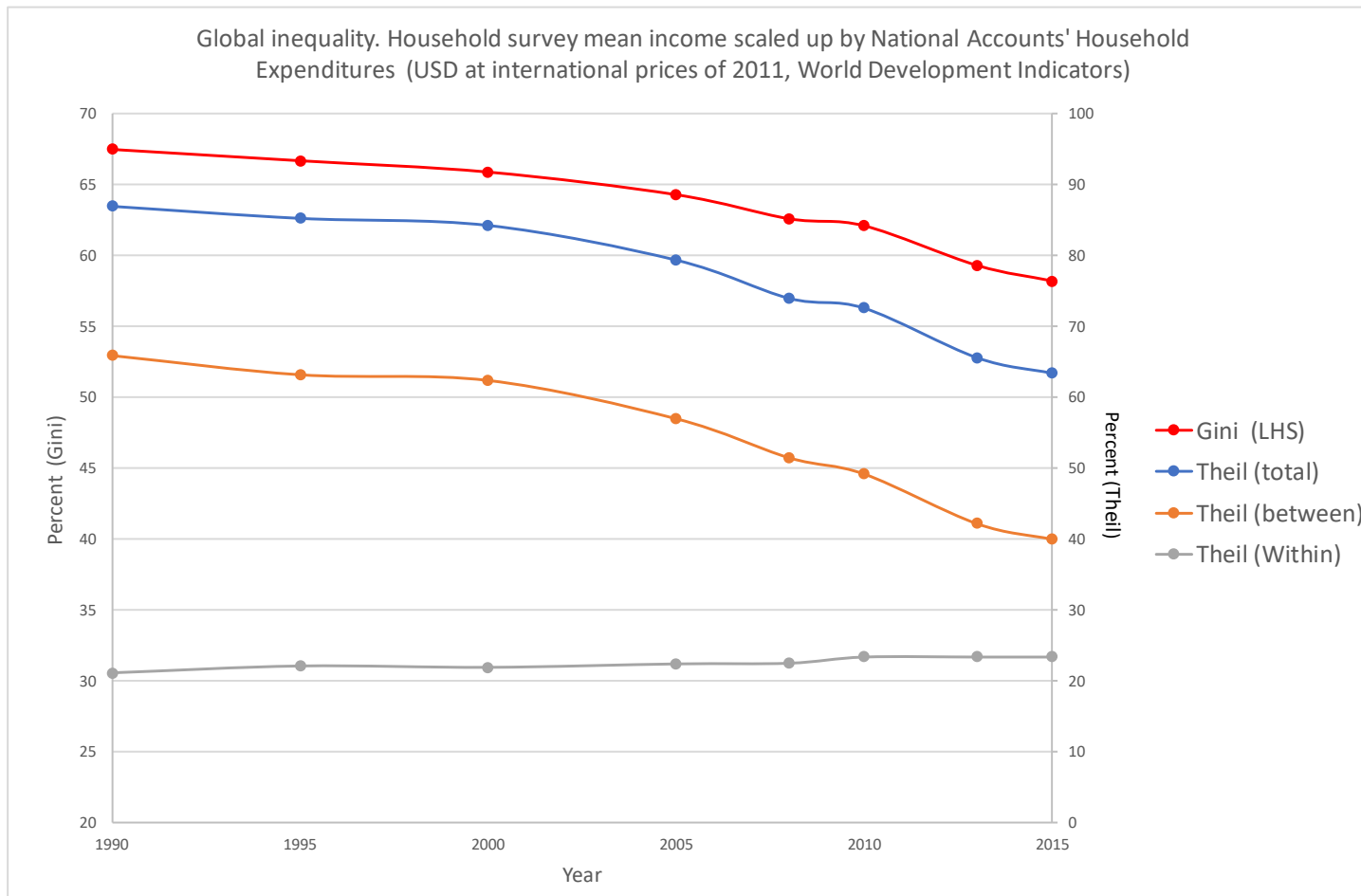
The drop in global extreme poverty

Source: World Bank, Povcal

Figure 3. Poverty in thee world and by developing regions, 1980-2015
Population above 1,9 USD (2011 ppp) per person and per day
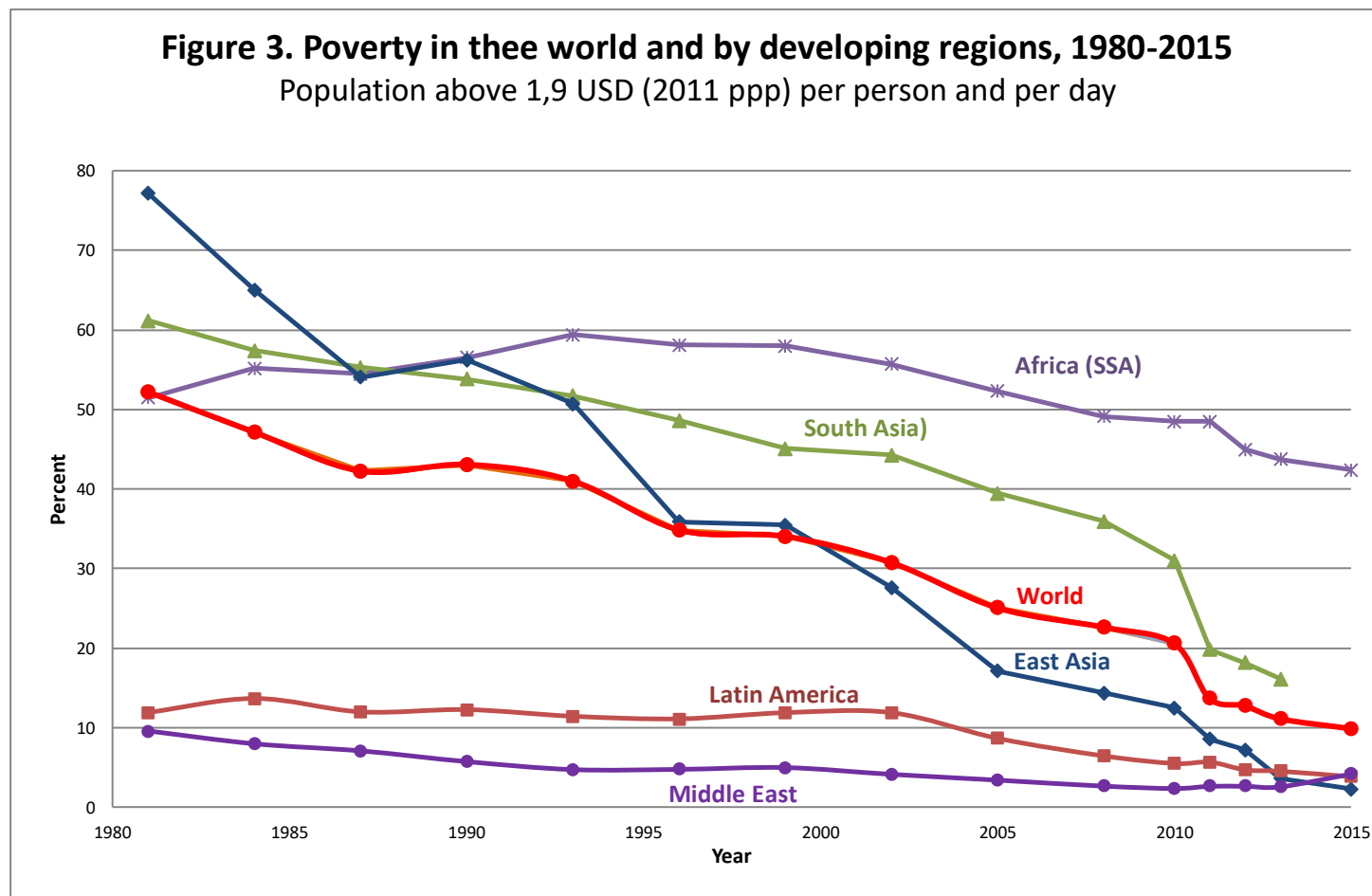
2a. Basic models of economic growth:

i) A simple representation of growth: difference between advanced and developing countries

Good 2

The *production possibility frontier*
The frontier shifts outward because of accumulation + total factor productivity gain

Growth is less constrained in developing counries

Efficient economy (Advanced)

Inefficient economy (Developing)

Good 1
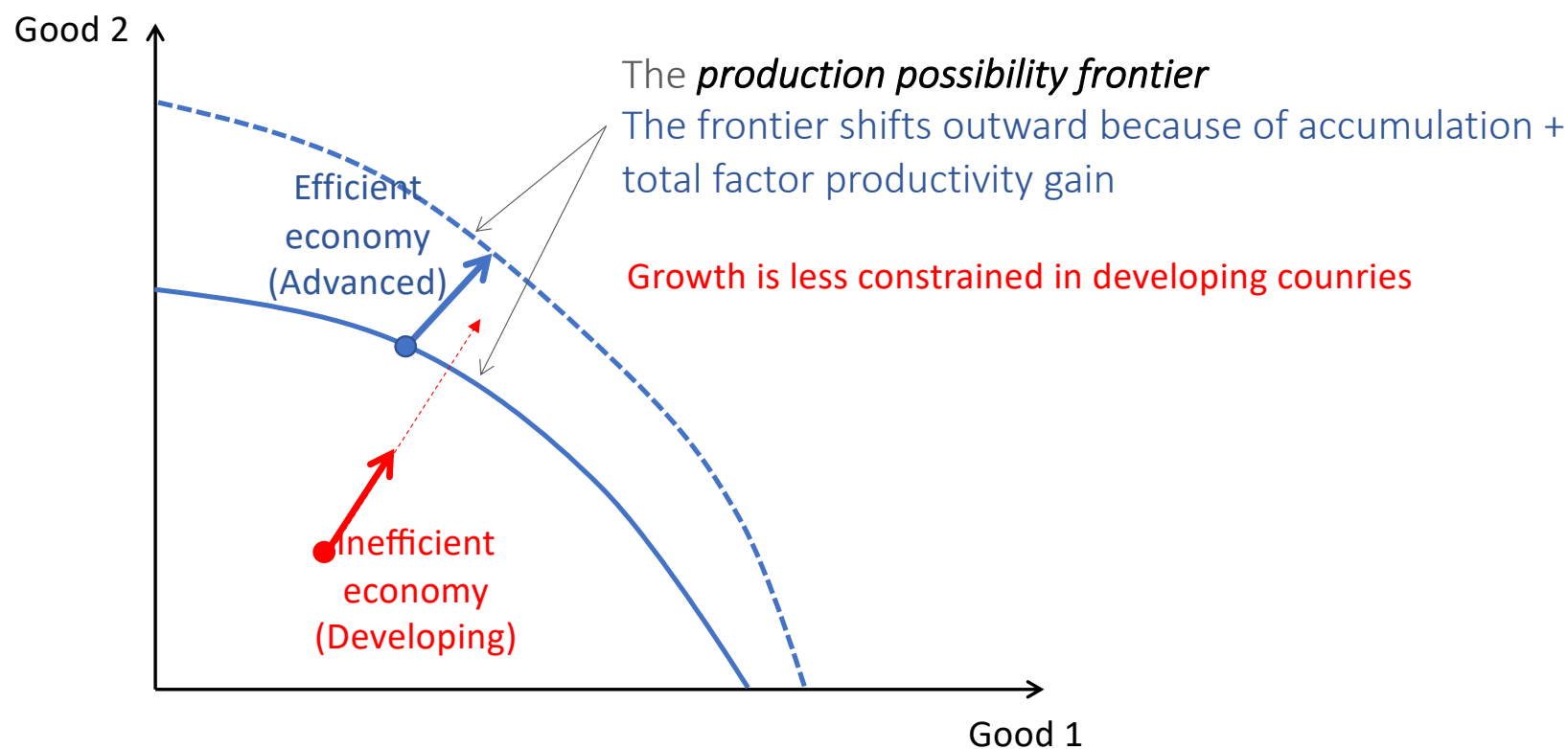
ii) Solow-Swan model of aggregate growth and particular case ('aK')

The Solow-Swan model

- Y = Output (GDP); K = Capital stock (equipment) ; L = Labor (or a fixed percentage of population) assumed to grow at rate n

- y and k = Output and capital per worker (or per capita) $(Y/L, K/L)$

- Production relationship:

$$y = ak^\alpha \quad \text{with } 0 < \alpha < 1$$

- Saving/investment behavior (t = time)

$$\dot{k} = \frac{1}{k}\frac{dk}{dt} = \frac{1}{k}[sy - (n+\delta)k] = \frac{net\ savings/investment\ per\ capita}{capital}$$
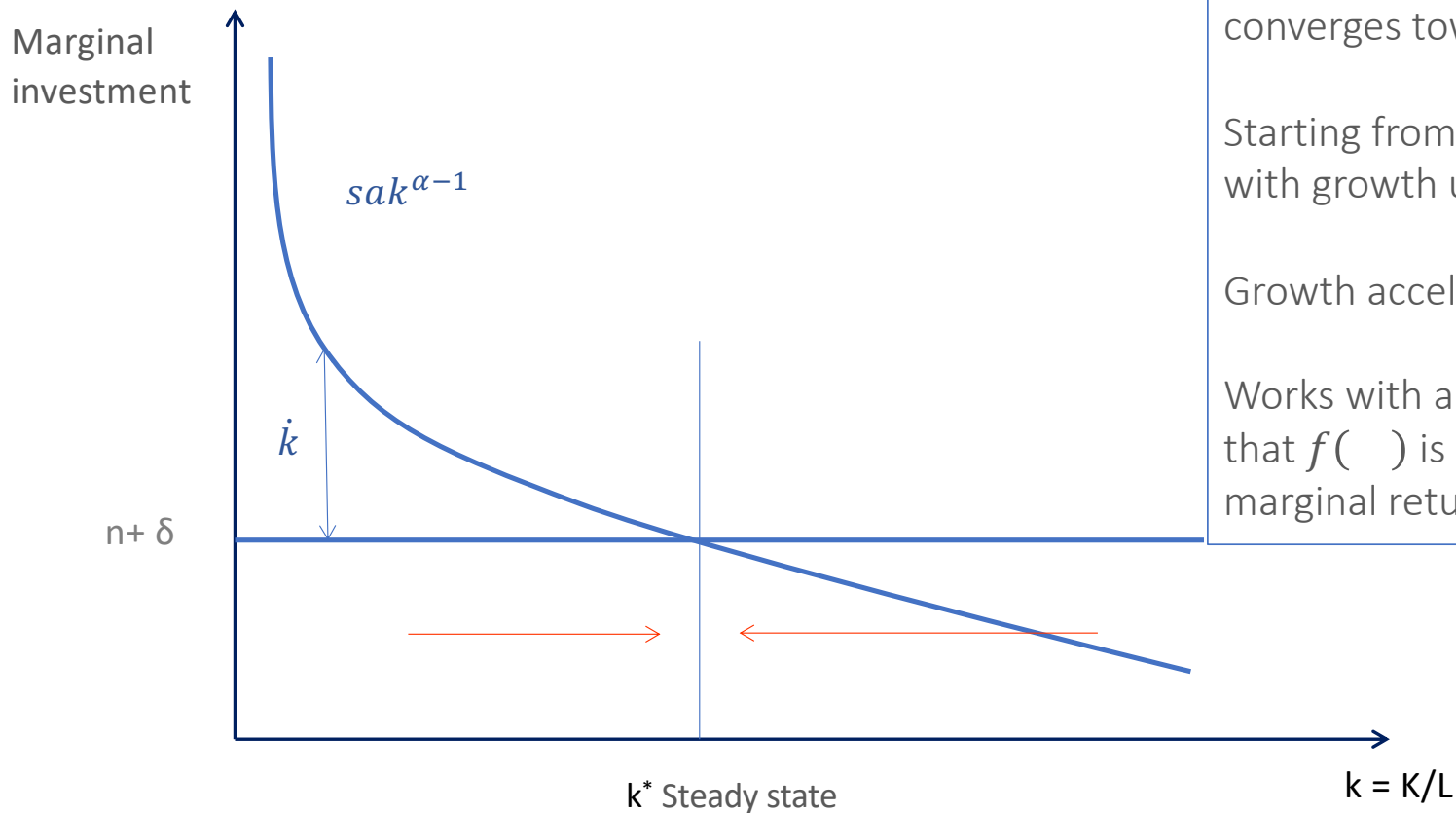
with s= saving/investment rate, δ = rate of depreciation of capital, n = population growth rate

- Dynamics of the economy:

$$\dot{k} = sak^{\alpha-1} - (n+\delta)$$

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Graphical representation of the Solow-Swan model

Marginal investment

$sak^{\alpha-1}$

$\dot{k}$

n+ δ

k* Steady state

k = K/L

$$\dot{y} = \alpha\dot{k}$$

Capital per worker and output per worker converges towards steady state: $k^*, y^{*.}$

Starting from low y, growth rate slows down with growth until it becomes nil

Growth accelerates with s and a (and α)

Works with any function $y = f(k)$ provided that $f(\quad)$ is increasing and concave (declining marginal returns of factors of production)

Remarks on the Solow-Swan model

- Steady state property seems quite unrealistic: may be replaced by exogenous increase in productivity of labor

$$\tilde{L} = L e^{gt} = \text{effective labor}; \tilde{y} = Y/\tilde{L}; \tilde{k} = K/\tilde{L}; \tilde{y} = a\tilde{k}^\alpha$$

No change : n replaced by $n + g$; both k and y growing at g at 'steady state'

- Solow-Swan model as an 'exogenous growth' model
  - exogenous at the steady state, ..
  - ... but development may precisely be the path towards the steady state
  - Then growth is endogenous and depends on savings/investment behavior, s, total productivity a, demographic growth ,n , (and exogenous labor productivity growth, g)
  - s, a, n, g essentially country (and period) specific

- Extension: 'endogenous growth models'
  - Example: 'aK' model = Solow-Swan with $\alpha = 1$ (Romer, 1986)
  - More adapted to developing countries because presumes labor is not constraining (?)

iii) The growth-development structural model of Kuznets-Lewis

The basic assumptions of the model

- Two sectors:

    – modern (formal) sector, employing modern technology and salaried workers under labor contract and labor legislation;

    – traditional (informal) sector, based on self-employment, micro and small enterprises with no formal labor contract, traditional technology (example = traditional farms, retail shops, repair workshops, …)

- Growth and accumulation is taking place in the *'modern sector'* where *the wage rate is fixed above the opportunity cost of labor*, i.e earnings in the **'traditional sector'**.

- The labor market thus is imperfectly competitive (unlike in the Solow-Swan model, i.e. full-employment)

- Everything is as if there were an *'unlimited supply of labor'* to the modern sector, located in an 'informal' or 'traditional' sector (Marx's reserve army)

The dynamics of the model

- With capital accumulation in the modern sector and a fixed wage, labor demand increases
- Labor migrates from the traditional sector, which eventually causes the level of earnings to rise
- Ideally, this goes on until labor earnings are equalized, a stage beyond which the one-sector model applies
- Total product per worker increases over time because:
  - Workers move from low to high productivity sectors (structural change)
  - Marginal productivity increases in traditional sector
  - Total productivity increases in modern sector (capital accumulation)
- But, a steady state in the dualist regime of the economy is possible

The mechanics of development in the Kuznets-Lewis model

Marginal product of labor in modern sector

Marginal labor product curve shifts upward because of accumulation of capital

Average product of labor in traditional sector

Wage rate in modern sector

Equilibrium

Earnings in the informal ector

Employment in modern sector

Employment in traditional sector

Total labor force
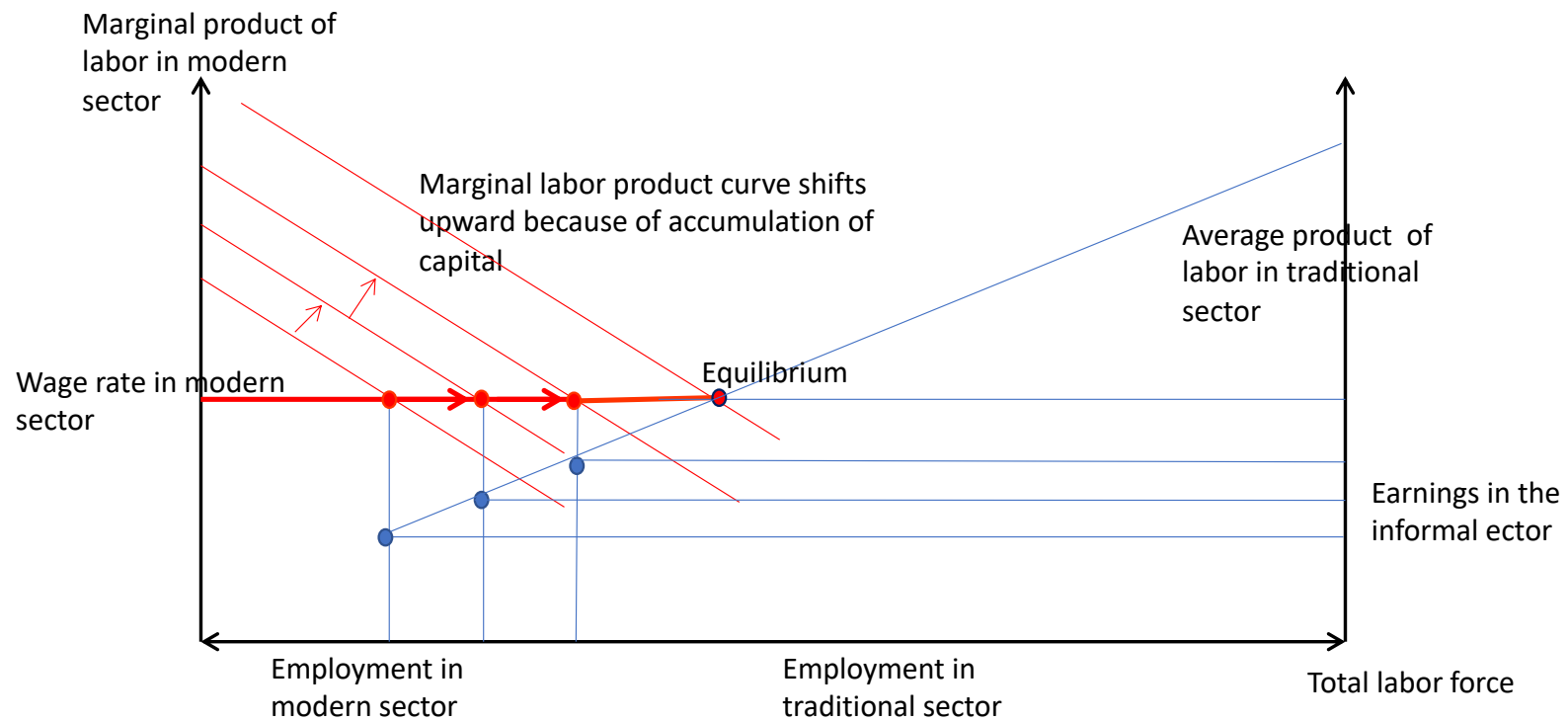
… dual model of growth

- This model fits rather well early stages of development:

  - traditional sector: subsistance agriculture, handycraft or petty trade,

  - modern sector: modern manufaturing and service firms

- China, India, Sub-Saharan Africa, … are good examples of it

- Note that the economy can get stuck in dualist stage because:

  – slow pace of accumulation in modern sector and fast demographic growth

  – technical progress biased against labor

    - the modern sector expands without absorbing enough labor from traditional sector

  – Informality may also be voluntary at a later stage of development (avoiding taxes or regulations in modern sector (Case of Latin America, Mexico, Colombia)

- Model can be generalized in various directions

A key question in the dual model

What determines the level of wage in the modern sector ?

- Efficiency wage theory
  - Better paid workers are more productive: what matters thus is the cost of an 'efficiency unit of labor'

- Barganing between workers and employers on sharing value-added (role of unions)

- Minimum wage legislation enforceable only in the modern sector

- Arbitrarily high wage in public sector (clientelism) spills over to private sector

- Note that the modern sector wage might well increase within the process of development

Example of structural change and development in dualistic model : Tanzania, 2006-2014

Table 3. Sectoral structure of employment and GDP and decomposition of overall labour productivity growth : 2006-2014							
	Employment and GDP structure (%)				Productivity change decomposition		
(%)	2006		2014		2006-2014 (%)		
	Employment	GDP	Employment	GDP	Structural change	Productivity	Total
Agriculture	76.5	30.9	66.9	24.8	-4.9	8.4	3.5
Mining	0.5	3.9	1.1	3.7	2.7	-1.5	1.2
Manufacturing	2.6	7.8	3.1	8.2	1.8	1.8	3.6
Utilities	0.1	2	0.2	1.7	0.9	-0.5	0.4
Construction	1.1	8.5	2.1	10.9	7.4	-0.8	6.6
Trade	7.6	10.8	12.7	11.4	6.3	-1.3	5.0
Hotels and restaurants	2.0	2.1	3.9	1.6	1.1	-1.0	0.1
Transport, storage and communication	1.5	9.5	2.8	11.8	7.6	-0.8	6.9
Financial	0.1	2.9	0.3	4.6	4.2	-0.7	3.5
All other services	8.1	21.6	7.0	21.3	-4.5	12.4	7.9
Total	100	100	100	100	22.6	16.1	38.7
Annualised rate					2.6	1.9	4.2

Source: author's calculation based on Integrated Labor Force Survey (ILFS, 2006 and 2014) and National Accounts (Bank of Tanzania Annual report)

Example of structural change and development in dualistic model : South Korea 1965-1985

Table 1. South-Korea. Growth, employment, productivity and structural transformation, 1955-1985														
Year	1955		1960		1965		1970		1975		1980		1985	
GDP at factor cost (1970=100)	33.0		40.3		57.4		100.0		160.8		242.6		381.0	
5-year average growth rate			4.1		7.3		11.8		10.0		8.6		9.4	
Population	69.9		79.5		90.7		100.0		109.8		118.6		128.1	
GNI per capita at constant factor cost (1970=100)	47.1		50.7		63.3		100.0		146.4		204.5		297.4	
5-year average growth rate			1.5		4.5		9.6		7.9		6.9		7.8	
Sector structure of GDP (market prices) (%)	curr.	const.	curr.	const.	curr.	const.	curr.	const.	curr.	const.	curr.	const.	curr.	const.
(current price and constant 2015 prices)														
Agriculture	42.3	31.7	38.6	27.6	34.4	26.8	27.1	17.2	23.0	13.9	15.0	8.7	10.4	7.8
Manufacturing	10.9	3.3	11.9	4.5	16.7	5.9	16.7	8.3	21.4	11.9	21.8	15.2	25.4	16.6
Other	46.8	65.0	49.5	68.0	48.9	67.3	56.2	74.5	55.6	74.2	63.2	76.1	64.2	75.5
Total employment					82.2		100.0		121.1		140.6		153.6	
Sectoral structure of employment (%)					59.4		50.4		45.8		33.9		24.9	
Agriculture					9.2		13.2		18.6		21.6		23.4	
Manufacturing					31.4		36.4		35.6		44.5		51.7	
Other														
Overall labour productivity (1970=100)					69.8		100.0		132.8		172.5		248.0	
Labour productivity by sector (1970 overall productivity = 100)					31.5		34.2		40.3		44.3		77.8	
Agriculture					45.0		62.9		85.3		121.5		176.4	
Manufacturing					149.2		204.6		276.7		295.0		362.4	
Other														
Decomposition of overall productivity gain														
Productivity gain							30.2		32.8		39.7		75.5	
Of which: - structural change							8.0		0.4		23.5		20.9	
- autonomous gain							22.2		32.5		16.2		54.6	

3. Foreign trade in development: is there a natural resource curse ?

Trade in commodities: the natural resource curse[a]

- Many developing countries are primary commodity exporters (oil, minerals, raw agricultural products)

- This 'specialization' is thought to prevent industrialization and therefore development

- Hence the hypothesis of a 'natural resource curse': the presence of natural resources in a country contributes to slow down or even to impair growth

- To what extent is it true? How could it be avoided?
  - Democratic Republic of Congo or Venezuela vs. Botswana or Chile

a) Based on Frankel (2010)

Long-run trends in world commodity prices

- The hypothesis of a declining secular trend in commodity prices (Prebisch-Singer in the 1950s)
  - Led to the (1960-70) import substitution industrialization strategy in Latin America

- Evidence (Real) commodity prices have been subject to long cycles but no secular trend:
  - Oil: 1875-1925 (up), 1925-1973 (down), 1973-1984 (up), 1985-1997 (down), 1998– (up)
  - Non-oil: 1875-1918 (up), 1920-1950 (strong fluctuations), 1950-1992 (down, except for 1975 spike), 1995-2015 (up)

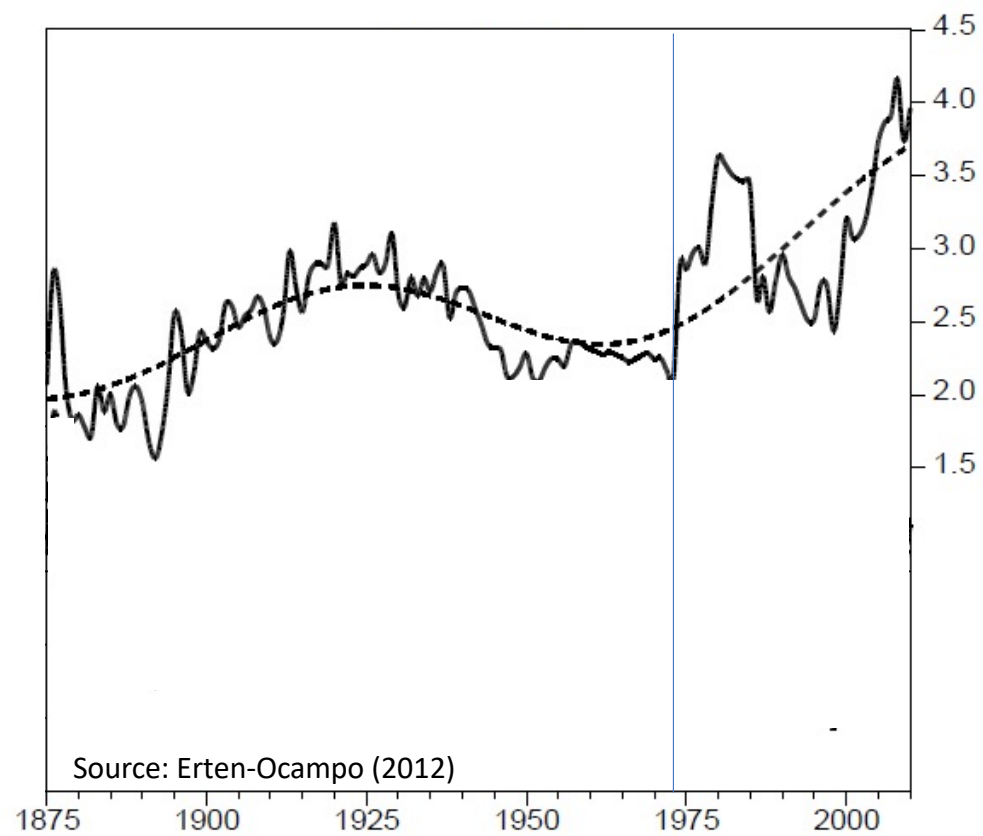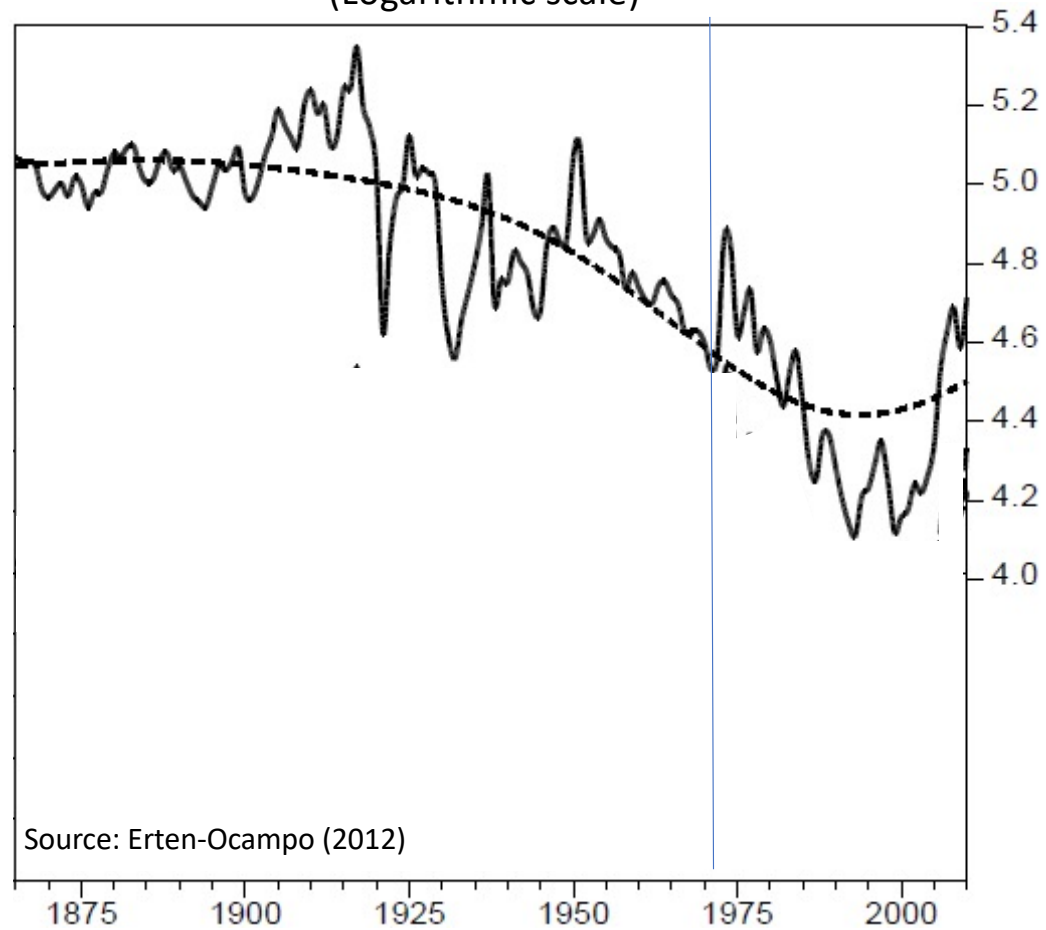Figure 4. Real price of oil: 1875-2010
(Logarithmic scale)

Source: Erten-Ocampo (2012)

Figure 6. Real price of non-oil commodities: 1865-2010

(Logarithmic scale)

Source: Erten-Ocampo (2012)

Volatility of commodity prices

- High short-run volatility due to low short-run demand and supply elasticities

- Lags in response likely to produce some cycles

- Possibly enhanced by speculative behavior (inventories)

- More flexibility in the medium-run, i.e. adjustment to high oil prices in the 1980s

- Price volatility may be detrimental to growth in countries with limited access to international capital market to smoothen stochastic fluctuations

Why commodity specialization may be detrimental to growth

- Positive industrialization externalities lost

- Civil conflict for the control of mineral riches

- Natural resources contribute negatively to institutions
  - Internal political fight for controlling the rent from natural resources, corruption, lack of accountability of governments (retards democracy)

- Dutch disease
  - Upward swing in export commodity prices produces: a) a real appreciation of the currency; b) an increase in relative price of non-traded goods; c) a shift of labor (and capital) towards non-traded goods; d) an increase in public spending;
  - Downward swing: factor allocation and fiscal policy inefficient when terms of trade go down again, possibility of a crisis and slowing down of accumulation

- Strong procyclicality of capital flows triggered by commodity price fluctuations

Evidence on the natural resource curse

- Very heterogeneous growth performances of commodity exporters
    - Well-performing commodity exporters: Botswana, Malaysia, Indonesia, Chile
    - Low-growth high-income Gulf oil exporters: Bahrain, Saudi Arabia, UAE, Kuwait
    - Badly perfoming commodity exporters: Nigeria, Chad, Niger, Algeria, Cote d'Ivoire, Zambia, Angola, …

- Clearly different models:
    - Counter-cyclical fiscal policies in the first case –essentially middle income countries- stabilize the real exchange rate, avoiding Dutch disease
    - Huge Sovereign Funds in the second case lead to the same result (plus small national population and flexible immigration)
    - Real problems arise in the third group of countries (e.g. the recent commodity price cycle in Sub-Saharan Africa and Latin America)

Institutions to make domestic savings procyclical

- Budget deficit rules: Chile, budget deficit above target if recession or copper price below its 10-year average

- Sovereign (Commodity) Funds: Norway, Chile, Gulf countries, China, …

- Reserve accumulation in Central Banks

- Controlling net private capital inflows (Chile)

- External checks (the bad experience of Chad)

Note, however, that for all these policies, the government can break the rule at any moment except if checks and balances are strong enough.
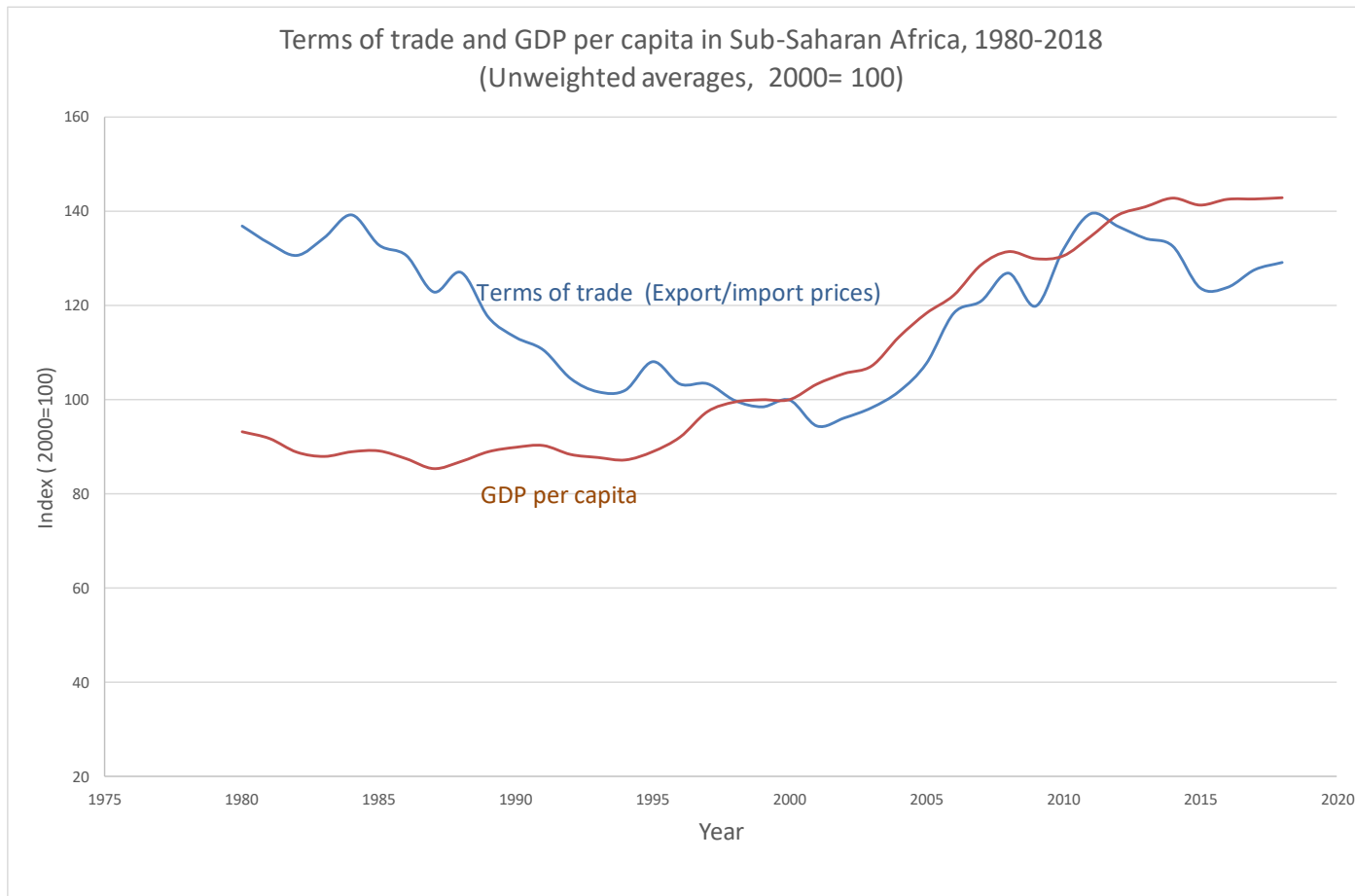
Moreover, it may be difficult not to do so in some circumstances . Example of Chad at the time of the conflict with Sudan).

From that point of view, political institutions are as important as economic institutions.

The need for diversification of tradable good production in Sub-Saharan Africa
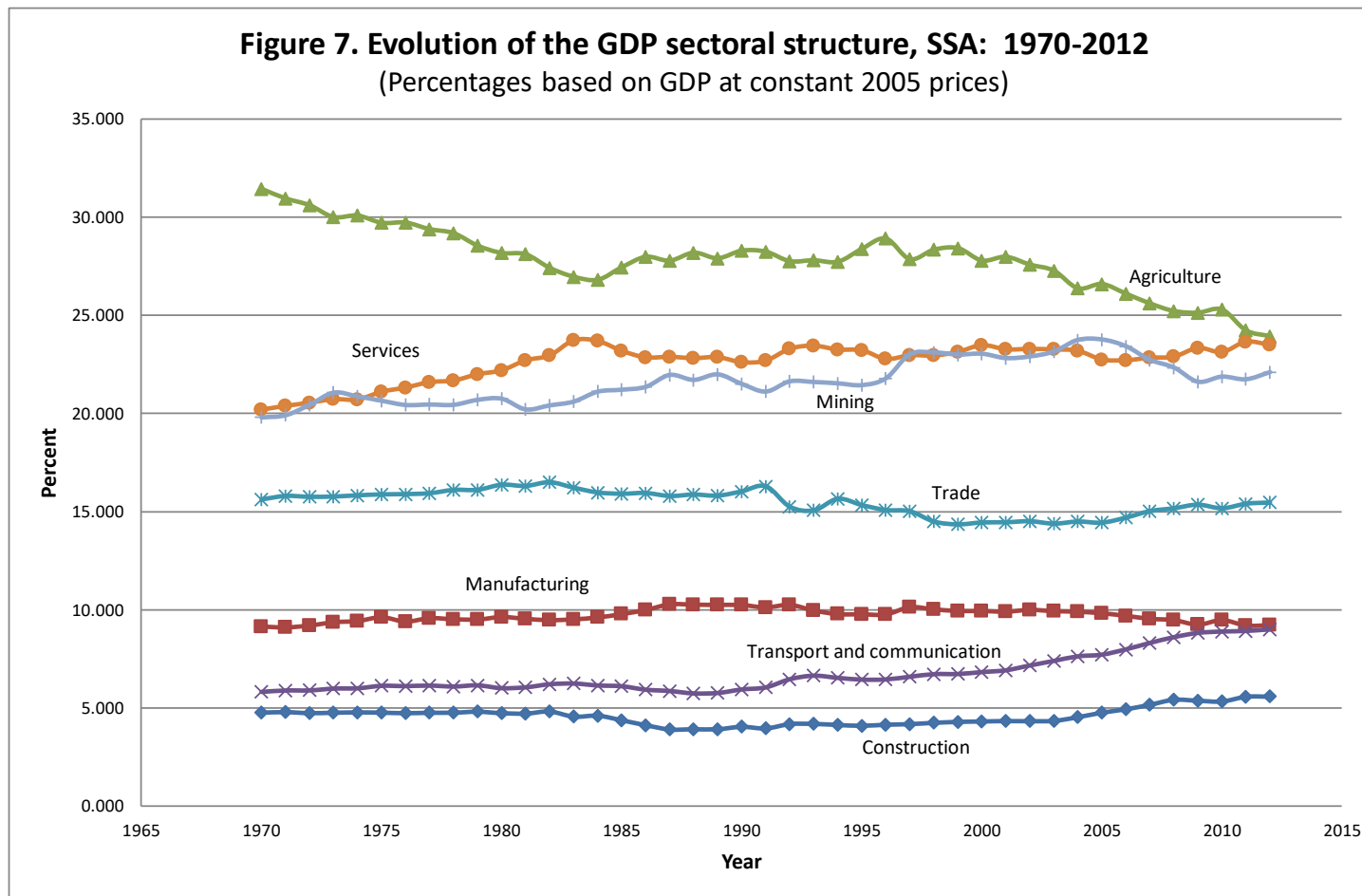
- Can SSA countries relying on little diversified commodity exports grow faster than the rest of the world in the long-run? Probably not!

- Experience of SSA over the last decades:
  - High commodity prices: high absorption favors non-tradable sectors as demand for tradable goods met by imports
  - Lack of competitiveness in non-commodity tradable sectors

- As non-tradable production only reacts to demand, SSA economy grows at the same rate as that of the global demand for the exported commodity, i.e. 3-4% a year

- With population growth between 2-3%, development necessarily slow in the long-run

- A key point: growth drivers in small open economies are in tradable sectors, hence the need for export diversification (competitive import substitution) to foster growth

Illustration, the terms of trade/growth relationship in Sub-Saharan Africa

Terms of trade and GDP per capita in Sub-Saharan Africa, 1980-2018
(Unweighted averages, 2000= 100)

Source: UNCTAD, World Bank

Illustration, the non-industrialization of SSA

Figure 7. Evolution of the GDP sectoral structure, SSA: 1970-2012
(Percentages based on GDP at constant 2005 prices)

Source: UN, National Account database, arithmetic avegarges across SSA countries

4. The economics of aid

Introduction

- The basic issue: *J. Sachs vs. W. Easterly (+ A. Deaton)*

- Jeff Sachs: *poverty trap* argument in favor of massive (temporary ?) aid

- William Easterly: aid is *essentially ineffective*
  - "2500 billion USD of aid have not reduced poverty!"
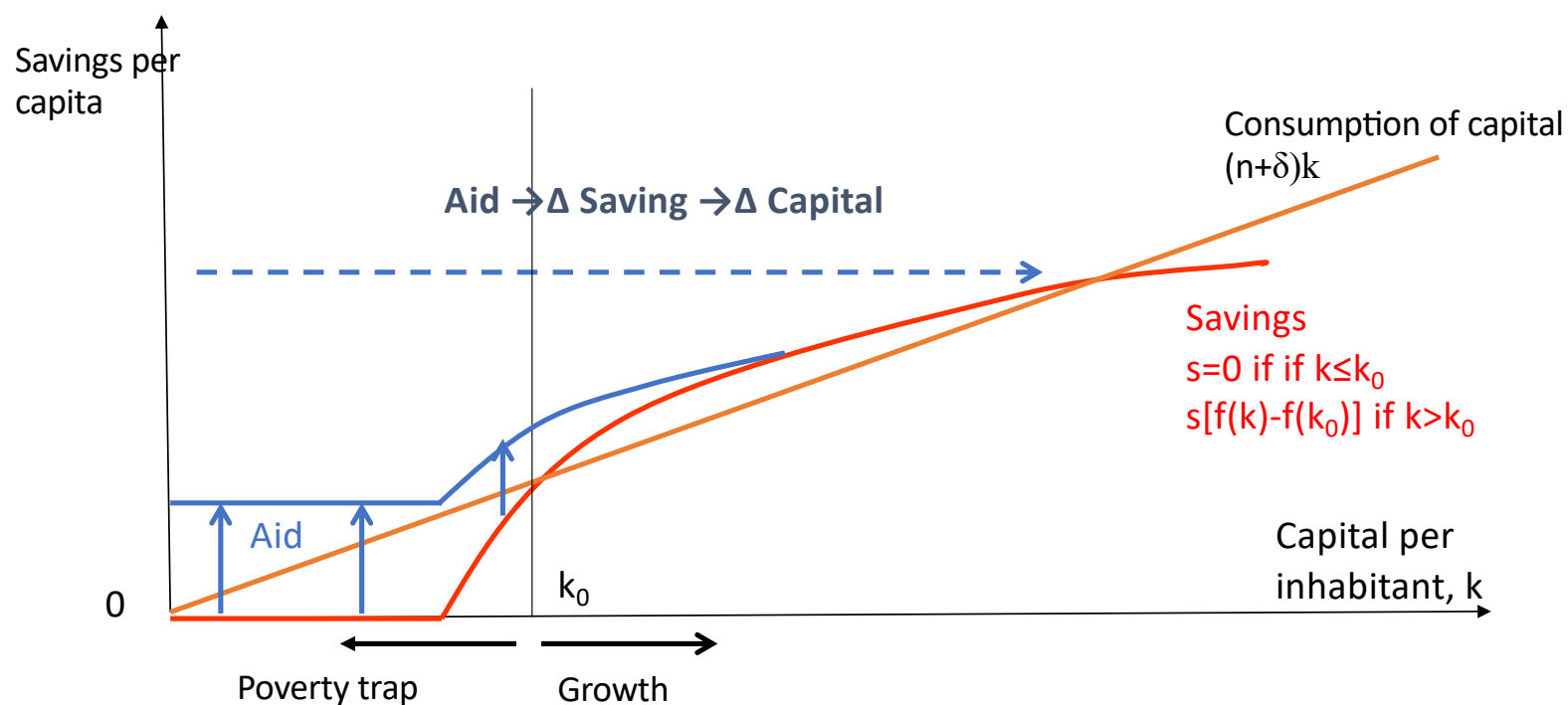 - Poverty has been reduced where there was little aid (e.g. China)

What to think about aid? Can it be effective? How to best manage it?

Outline

.

a) The poverty trap argument

b) The aid effectiveness problem

c) Conditionality: a basic principal-agent model

d) The long-lasting debate on the effectiveness of aid

e) The present practice of foreign aid

f) Evolution of aid flows

a) The *poverty trap* argument for aid in the neoclassical model of growth

Savings per capita

Consumption of capital $(n+\delta)k$

Aid $\rightarrow \Delta$ Saving $\rightarrow \Delta$ Capital

Savings
s=0 if if $k \leq k_0$
$s[f(k)-f(k_0)]$ if $k>k_0$

Aid

Capital per inhabitant, k

0

k_0

Poverty trap

Growth

b) The aid effectiveness problem

- Can we be sure that aid will raise savings and investments dollar for dollar?

- Or can we be sure that aid will be used to reduce poverty dollar for dollar?

- Leakages:
  - Crowding out of savings and investments
  - Aid is given to the sovereign: no guarantee that the government of the recipient country will use all of the aid inflow for development
  - Aid fungibility: how to distinguish between projects financed by aid and projects that would have been undertaken without aid
  - Economic distortions: Dutch disease
  - Negative impact on domestic institutions (i.e. accountability)

c) Conditionality : a basic principal-agent model

- Principal = donor

Objective = Aid to reduce poverty and/or accelerate growth through adequate use of aid funds

- Agent = recipient country's government

Objective = Optimize some combination of the welfare of the elite and that of the poor

- Donor's and recipient country government's objectives differ, and donor cannot force government to implement the donor-optimal policy

- Conditionality: Amount of aid determined in an 'aid contract' by observed results, e.g. Poverty reduction, school enrolment, infant mortality, ..

- Question: what is the optimal contract? Is it implementable?

... the problem of credibility

Optimal contract (from the donor's point of view and taking into account agent's response)

$$A(id) = m + p.R(esult)$$ where m and p are positive parameters

– In period 1, donor announces the conditionality rule and concludes the contract (A^0, R^0) with $A^0 = m + p.R^0$

– In period 2, donor checks results and observes R^1

   • If $R^1 < R^0$, it should revise the volume of aid since the government did not hold on R^0

   • The new volume of aid should thus be $A^1 = m + p.R^1 < A^0$

– Is a drop in aid credible?

   • The leadership in the recipient country will complain that the donor increases poverty and the constituency in the donor country may oppose the lowering of aid ('Samaritan dilemma')

   • If so, the recipient country should rationally ignore the conditionality in period 1!

In a nutshell, this is all the problem of aid effectiveness

d) The long lasting empirical debate on aid effectiveness

Huge literature:

- 1960s (Rosenstein-Rodan, Chenery): Neo-classical growth model with aid as full increment to domestic savings
- 1970s Domestic saving crowded out by aid: aid has little impact on growth. First cross-country regression controversies on aid-GDP growth and saving-aid relationships
- 1980s: debate on aid endogeneity (what if aid depends on GDP growth), looking for 'instrumental variables'
- 1990s: Boone (1996): "zero effect of aid on growth" + micro-macro paradox (aggregation of effective micro project does not produce an acceleration of growth)
- 2000s: conditional approach (country heterogeneity) or unconditional approach showing a concave aid/growth relationship (Arndt et al., 2010)
- 2010s: meta-analysis(Mekasha & Tarp, 2018)

Of special relevance is the debate about the role of "policy" and "institutions"

- In the conditional strand, Burnside and Dollar (2000) claim that *"aid is effective to accelerate growth in countries with good policies"*

  - Data: 56 countries over 2 to 6 4-year periods between 70-93

  - Dependent variable = growth of GDPpc

  - Independent variables = aid/GDP, policy (weighted average of various indicators like budget deficit, inflation, …)

  - Other exogenous variables: initial income, geographical area, *Franc zone*, ethnic fragmentation, assasinations, *population size*, *arm imports/imports*

(In italics variables used only in instrumentation of aid)

TABLE 5—GROWTH REGRESSIONS: USING LOWER-INCOME COUNTRIES AND THE POLICY INDEX

	(6)		(7)		(8)	
Estimation method	OLS	2SLS	OLS	2SLS	OLS	2SLS
Initial GDP	−0.74	−0.74	−0.60	−0.58	−0.72	−0.83
	(0.80)	(0.78)	(0.79)	(0.78)	(0.81)	(0.77)
Ethnic fractionalization	−0.78	−0.78	−0.56	−0.45	−0.58	−0.67
	(0.81)	(0.83)	(0.80)	(0.95)	(0.80)	(0.84)
Assassinations	−0.75*	−0.75*	−0.84*	−0.90**	−0.79*	−0.76*
	(0.46)	(0.45)	(0.43)	(0.45)	(0.44)	(0.44)
Ethnic fractionalization × assassinations	0.95	0.95	0.88	0.85	0.69	0.63
	(0.89)	(0.89)	(0.90)	(0.90)	(0.91)	(0.90)
Institutional quality	0.77**	0.77**	0.80**	0.81**	0.84**	0.84**
	(0.19)	(0.19)	(0.20)	(0.21)	(0.20)	(0.19)
M2/GDP (lagged)	0.028*	0.028*	0.031*	0.035*	0.024	0.025
	(0.016)	(0.016)	(0.017)	(0.019)	(0.017)	(0.017)
Sub-Saharan Africa	−1.86**	−1.85**	−2.20**	−2.35**	−2.24**	−2.11**
	(0.65)	(0.67)	(0.67)	(0.91)	(0.67)	(0.73)
East Asia	0.70	0.69	1.33*	1.63	1.54**	1.46**
	(0.56)	(0.56)	(0.71)	(1.21)	(0.67)	(0.71)
Policy index	1.14**	1.14**	0.74**	0.55	0.56*	0.59
	(0.19)	(0.19)	(0.35)	(0.76)	(0.31)	(0.38)
Aid/GDP	−0.033	−0.034	−0.013	−0.010	−0.18	−0.24
	(0.13)	(0.16)	(0.13)	(0.17)	(0.17)	(0.26)
(Aid/GDP) × policy	—		0.27**	0.43	0.26**	0.25**
			(0.12)	(0.49)	(0.08)	(0.12)
(Aid/GDP)^2 × policy	—		−0.024**	−0.041	—	—
			(0.0093)	(0.047)		
Observations	189	189	189	189	184	184
$\bar{R}^2$	0.42	0.42	0.42	0.42	0.42	0.42

Source: Burnside and Dollar

Critiques to Burnside-Dollar

- Disregards the heterogeneity across countries and periods with respect to aid (e.g. cold war motivated aid appropriated by leaders, aid conditionality with 'structural adjustment')

- Effects of aid on growth may depend on the way aid is being spent – and conditionality imposed by donors (Structural adjustment, Washington consensus)

- Fragility of results (Easterly et al. , 2004)

- Growth model already weak, not surprising that model extended to aid is fragile too

- Instruments limited and possibly not satisfactory

- Usual limitations of cross-country reduced form regressions

Should we conclude that aid is indeed ineffective?

Reasons for aid-ineffectiveness

Objective reasons why aid may be "GDP-growth ineffective"

- What motivation for aid? Poverty or hunger relief, education, health (AIDS), natural disaster relief, .. (aid effectiveness by type of aid, Clemens & Radelet, 2004)

- Aid effectiveness should not necessarily be measured with growth as the only metric

- How is aid being spent within the country: the issue of corruption and governance (is it what Burnside & Dollar measure?)

- Limits to absorptive capacity: Dutch disease, institution weakening

- The possible illusion of 'policy conditionality' :

  – Fungibility of aid, the difficulty of checking whether conditionality holds, the 'failure' (?) of structural adjustment (and Washington consensus)

e) The MDG model of foreign aid:
The Monterey compact and the performance-based allocation (PBA)

- Financing the Millenium Development Goals: *the Monterey compact* between donors and developing countries
  - No externally imposed conditionality but commitment of the recipient country to a fully-owned MDG strategy – the Poverty Reduction Strategy Papers
  - Regular checking of achievements (3 years)
  - New aid delivered by donors based on achievements (but Samaritan dilemma)

- The compact was never really applied as such.

- Instead, multilateral donors relied more heavily on the Performance Based Allocation (PBA) system in use to allocate aid among recipient countries

  - PBA = Principal-Agent model with imperfect information

- The shift to *Sustainable Development Goals* has not really modified this model, even though there are doubts about its effectiveness

The IDA (World Bank) PBA aid allocation formula

Aid going to country i

$$A_i = k.CPA_i^4.(GNI_i/N_i)^{-.125}N_i$$

$$CPA_i = .26\,CPIA_i + .58\,GR_i + .16\,PPA_i$$

CPA = Country Performance Assessment

CPIA= Country Policy and Institution Assessment (5 clusters)

GR =   Pure governance component of the CPIA index

PPA = Portfolio performance assessment

N =   Population size

k =   Scaling factor (so that country flows add to total)
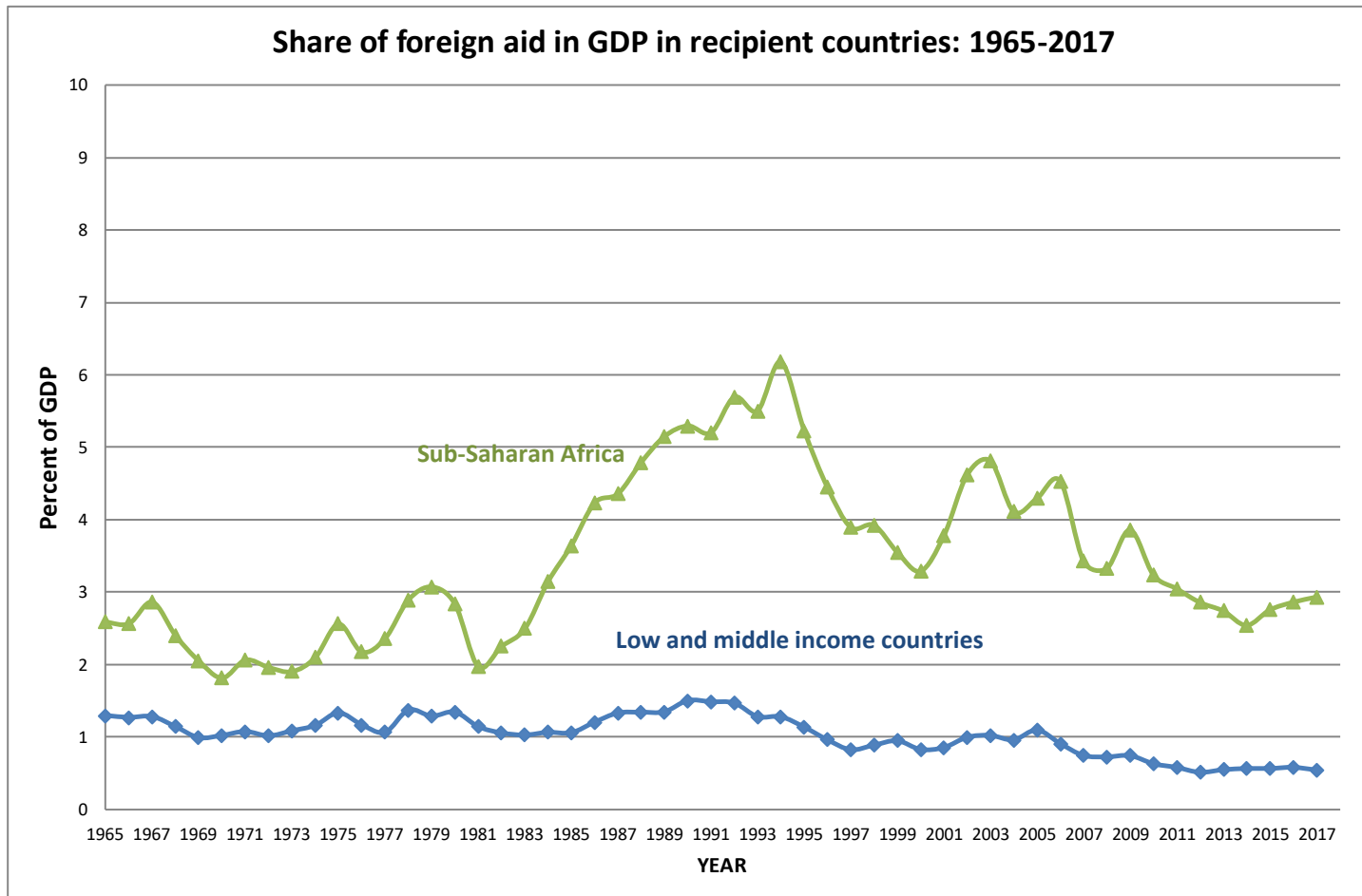
Strengths and weaknesses of the PBA

- Prominent role of governance :
  - But countries with poor governance (fragile countries) may be the ones most in need of aid!
  - Aid 'darlings' and aid 'orphans' (fragile countries)
- Rather direct application of the Burnside-Dollar approach
- Problem of measurement: CPIA imprecise and possibly endogenous
- A rather 'credible' commitment by donors to 'aid for result' principal-agent model – i.e. role of the mathematical formula
- Credibility enhanced by competition among recipients but possibly limited by competition among donors –if they don't coordinate
- A special modus operandi is needed for the 'fragile countries': possibly more involvement of donor within aid program

f) Evolution of aid flows (DAC/OECD)

Flow of foreign aid from donors' angle (OECD countries): 1965-2017
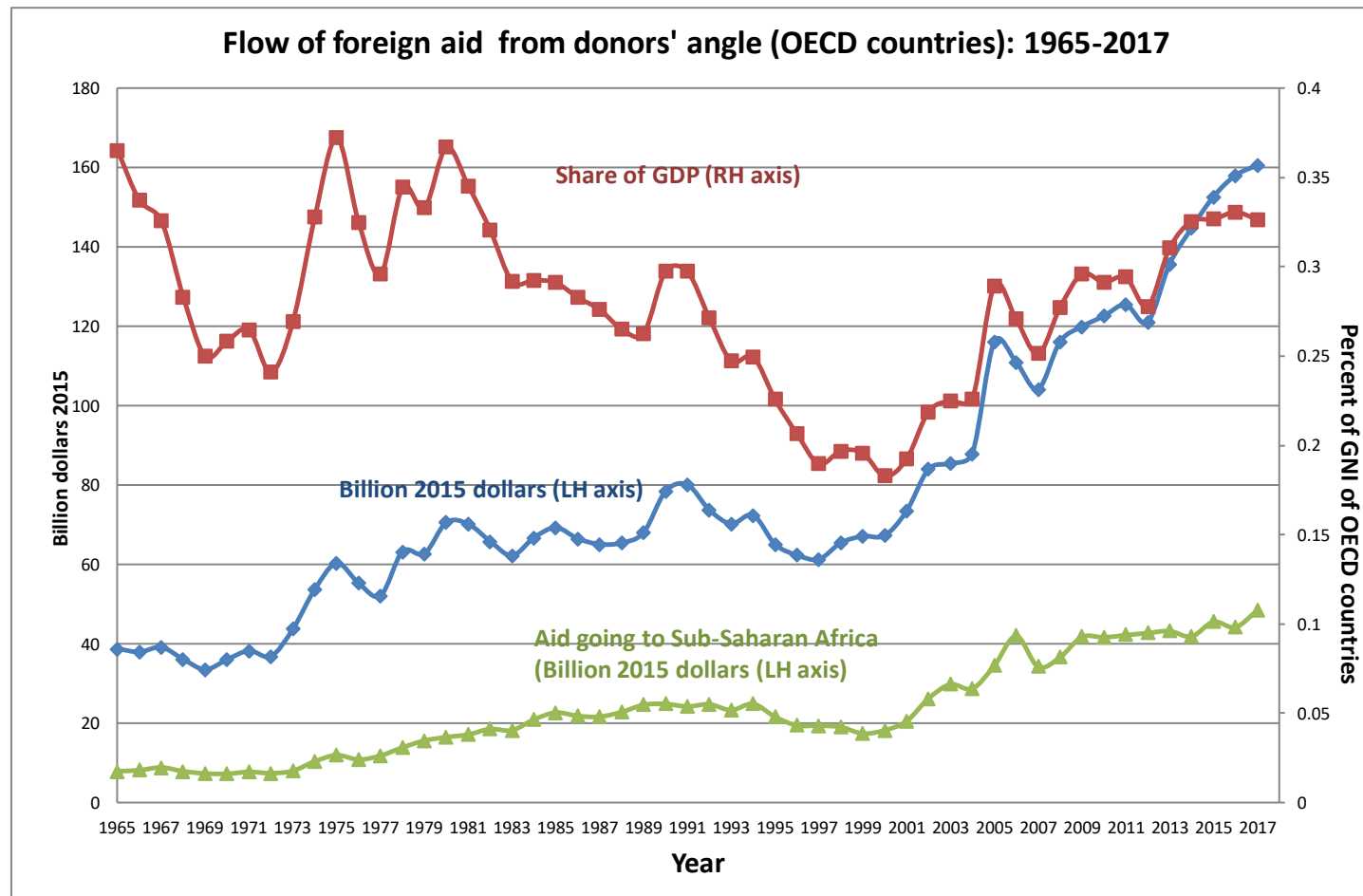
Source: From WDI

The importance of aid for recipient countries

Share of foreign aid in GDP in recipient countries: 1965-2017

Conclusion

- Difficult to believe aid is completely ineffective or even detrimental to development

- But it certainly creates weaknesses: avoiding the quest for foreign currencies (through export or import substitution), reducing the need for tax revenues, making the country more 'dependent' on foreign experts

- Need to reform aid, making it more effective
  - Through conditionality (is it possible?)
  - Selectivity (on governance)
  - But what about 'fragile' countries

- Aid compensating for several adverse development factors and adverse policies by developed countries (trade, IPR, FDI, …)

- The negative impact of aid on domestic institutions

- Aid as the only global redistribution mechanism