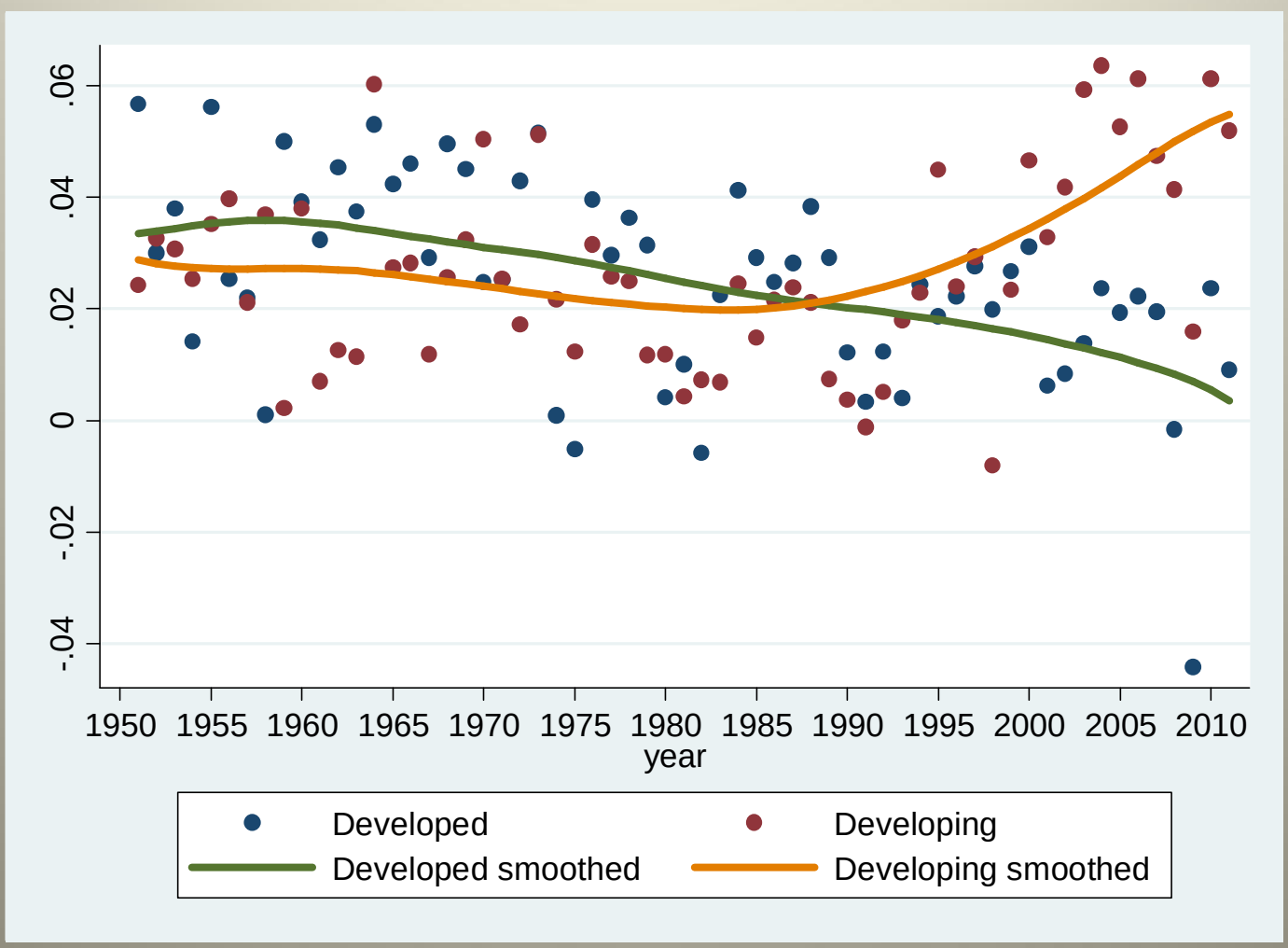
Employment, Structural Change, and Economic Development

Dani Rodrik

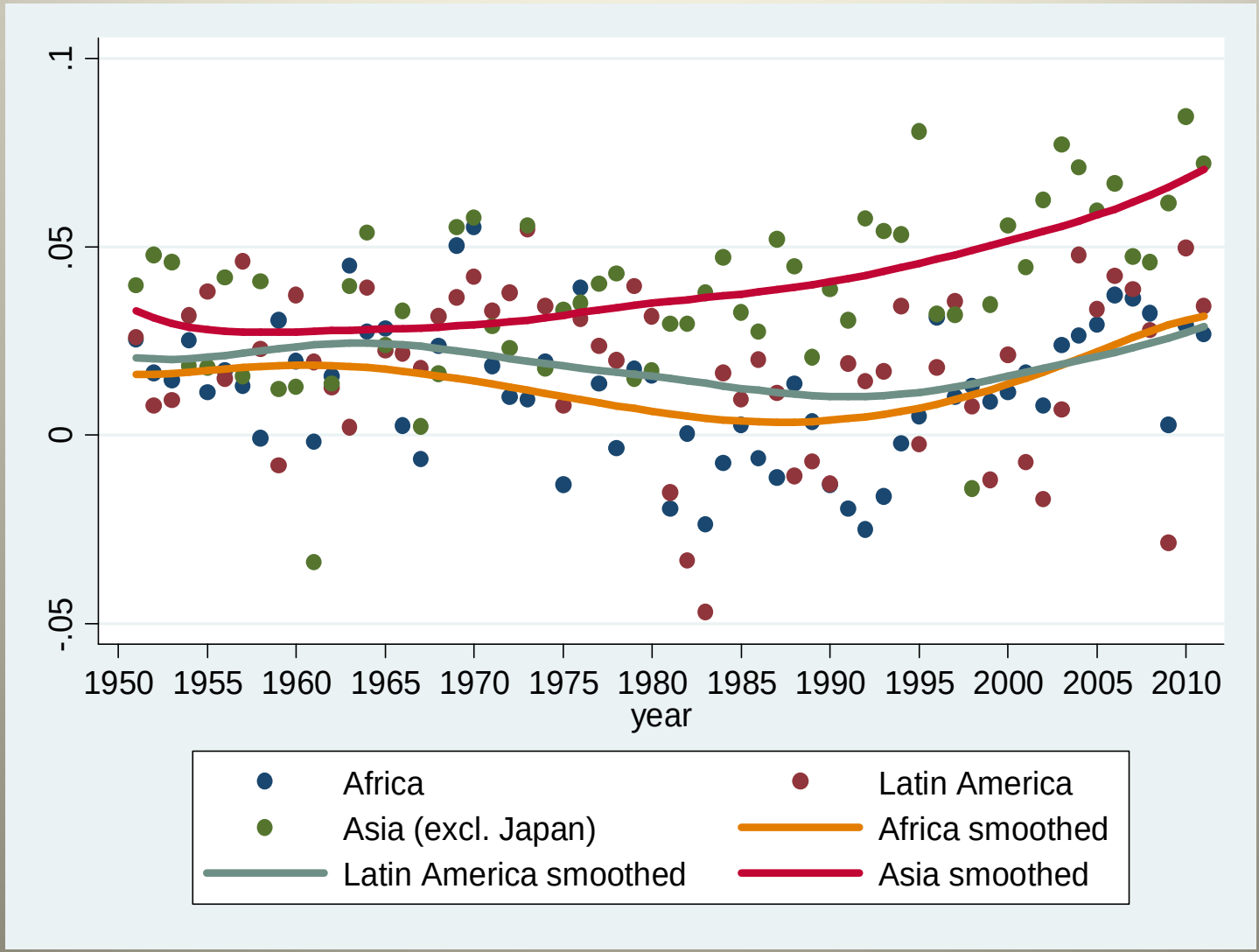
March 15, 2012

A remarkable reversal in fortunes since 1990s



Growth trends in developed and developing countries, 1950-2011

Growth was widespread, for once



Developing country growth trend by region, 1950-2011

Growth has been good for poverty reduction

$1.25 a day

	% of population below $1.25 a day in 2005 PPP									
Region	1981	1984	1987	1990	1993	1996	1999	2002	2005	2008
East Asia and Pacific	77.2	65.0	54.1	56.2	50.7	35.9	35.6	27.6	17.1	14.3
China	84.0	69.4	54.0	60.2	53.7	36.4	35.6	28.4	16.3	13.1
Eastern Europe and Central Asia	1.9	1.6	1.5	1.9	2.9	3.9	3.8	2.3	1.3	0.5
Latin America and the Caribbean	11.9	13.6	12.0	12.2	11.4	11.1	11.9	11.9	8.7	6.5
Middle East and North Africa	9.6	8.0	7.1	5.8	4.8	4.8	5.0	4.2	3.5	2.7
South Asia	61.1	57.4	55.3	53.8	51.7	48.6	45.1	44.3	39.4	36.0
Sub-Saharan Africa	51.5	55.2	54.4	56.5	59.4	58.1	58.0	55.7	52.3	47.5
Total	52.2	47.1	42.3	43.1	40.9	34.8	34.1	30.8	25.1	22.4
Total excl. China	40.5	39.1	38.1	37.2	36.6	34.3	33.6	31.5	27.8	25.2
	Number of people (in millions) below $1.25 a day in 2005 PPP									
Region	1981	1984	1987	1990	1993	1996	1999	2002	2005	2008
East Asia and Pacific	1096.5	970.0	847.6	926.4	870.8	639.7	655.6	523.1	332.1	284.4
China	835.1	719.9	585.7	683.2	632.7	442.8	446.3	363.1	211.9	173.0
Eastern Europe and Central Asia	8.2	6.9	6.8	8.9	13.7	18.2	17.8	10.6	6.3	2.2
Latin America and the Caribbean	43.3	52.9	49.3	53.4	52.5	53.6	60.1	62.7	47.6	36.8
Middle East and North Africa	16.5	15.1	14.6	13.0	11.5	12.3	13.6	12.0	10.5	8.6
South Asia	568.4	573.8	593.0	617.3	631.9	630.8	619.5	640.5	598.3	570.9
Sub-Saharan Africa	204.9	239.1	256.8	289.7	330.0	349.4	376.8	390.4	394.9	386.0
Total	1937.8	1857.7	1768.2	1908.6	1910.3	1704.0	1743.4	1639.3	1389.6	1289.0
Total excl. China	1102.8	1137.8	1182.5	1225.5	1277.6	1261.2	1297.0	1276.2	1177.7	1116.0

Note: Regions with survey coverage less than 50% of the population are highlighted.

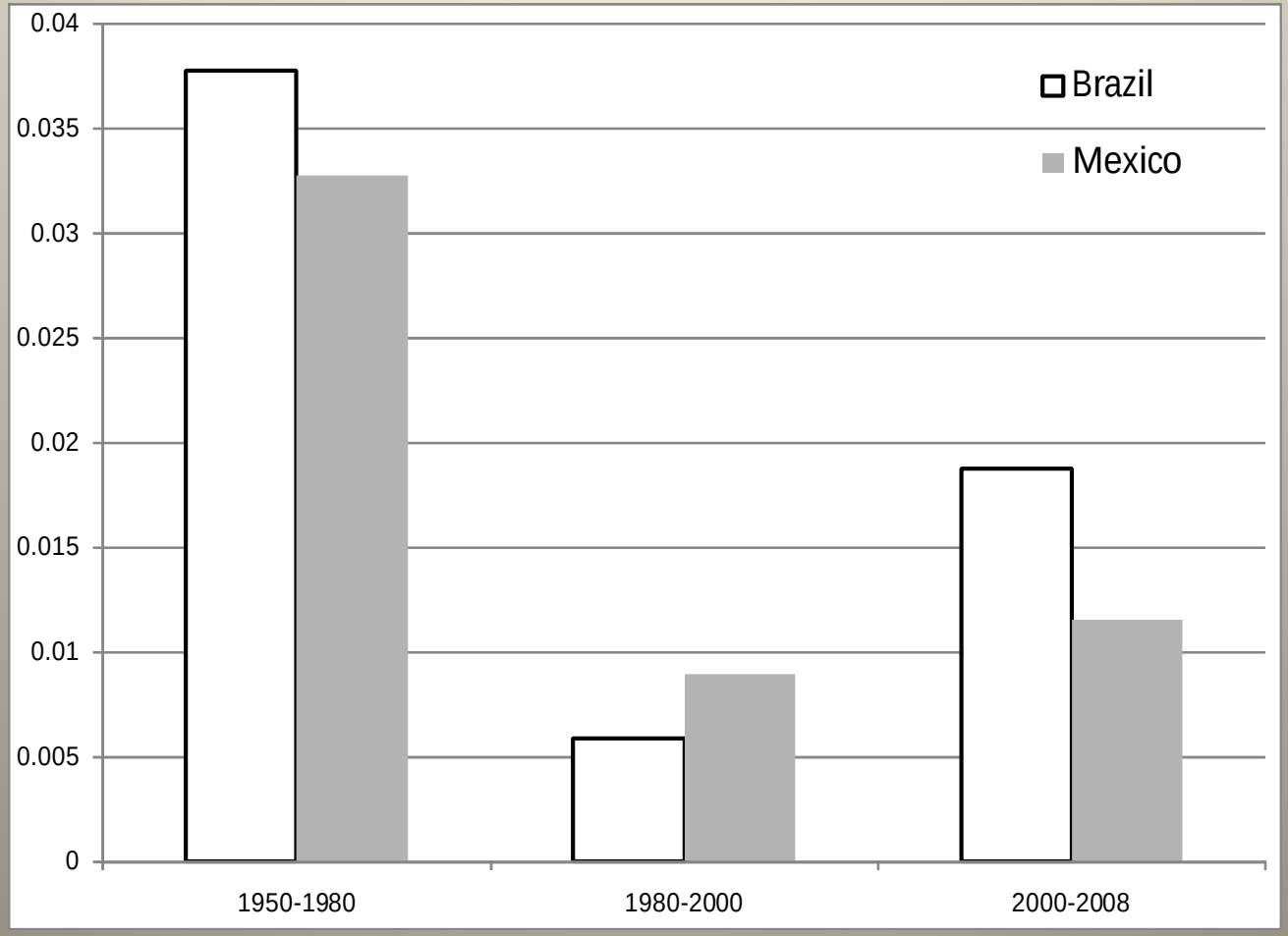
Source: http://siteresources.worldbank.org/INTPOVCALNET/Resources/Global_Poverty_Update_2012_02-29-12.pdf

Two interpretations

- Orthodox view: economic growth is conditional on “good fundamentals”
  - defined in practice in terms of policies such as openness, deregulation, privatization, protection of property rights, contract enforcement, low inflation and budget deficits, ...
- Structuralist view: economic growth is conditional on rapid structural change
  - which requires policies that stimulate employment in manufacturing industries (and modern services), including industrial policies and undervalued currencies

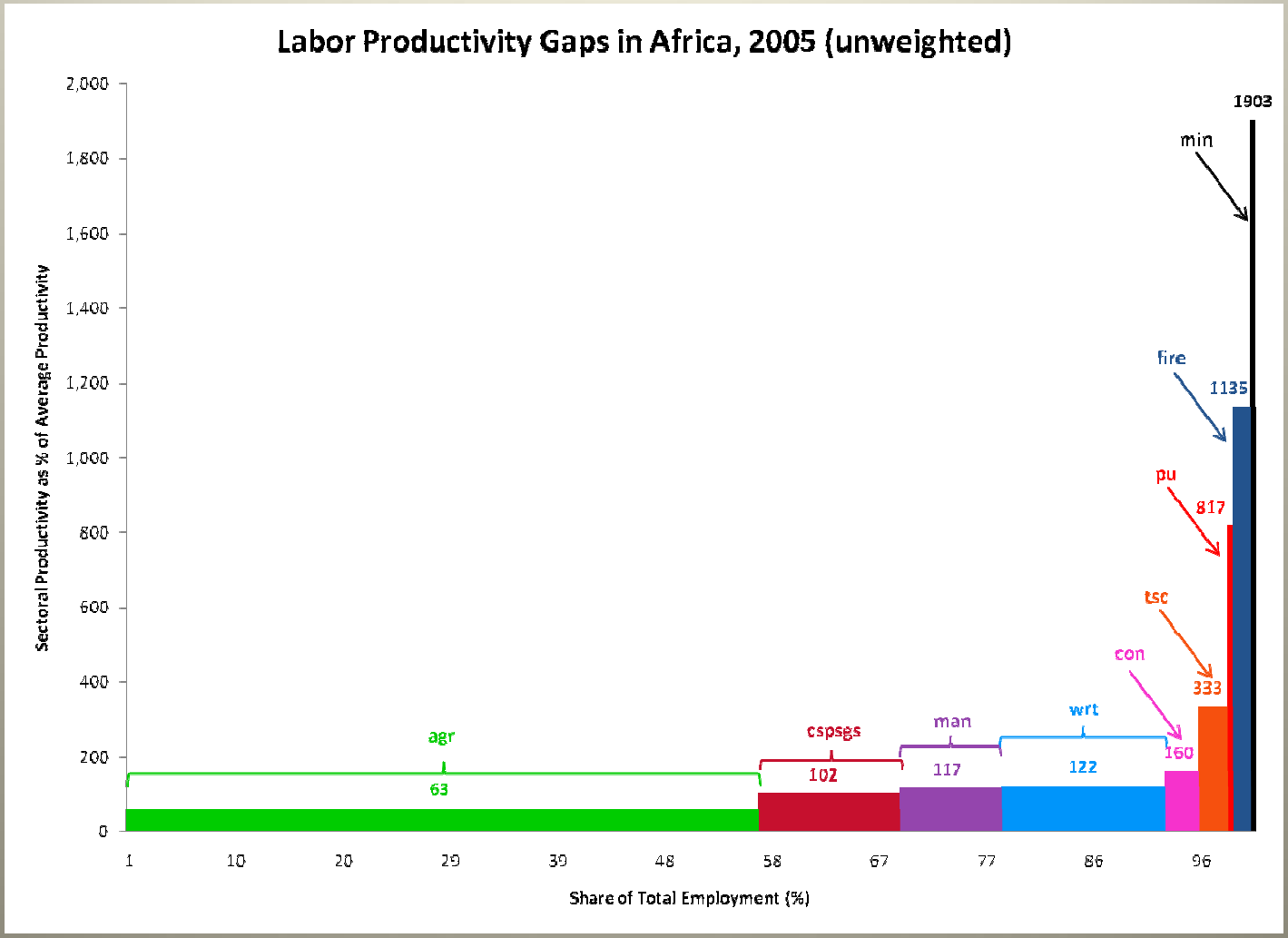
While there is overlap between the two sets of policies, there are also tensions and differing priorities

Disappointments of orthodox policy reform

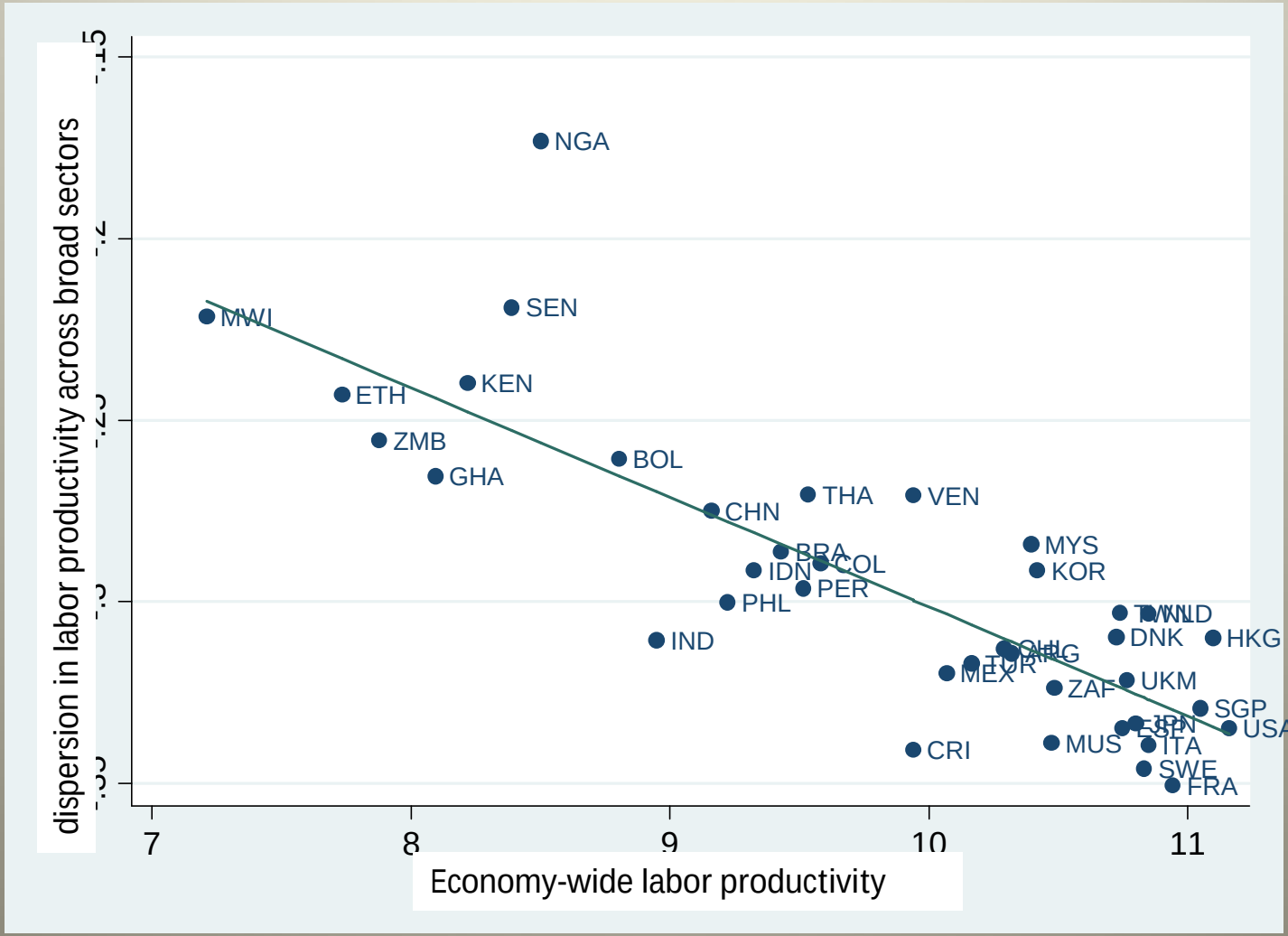


Growth rates of Brazil and Mexico by period

Why structure of employment matters: Large productivity gaps …

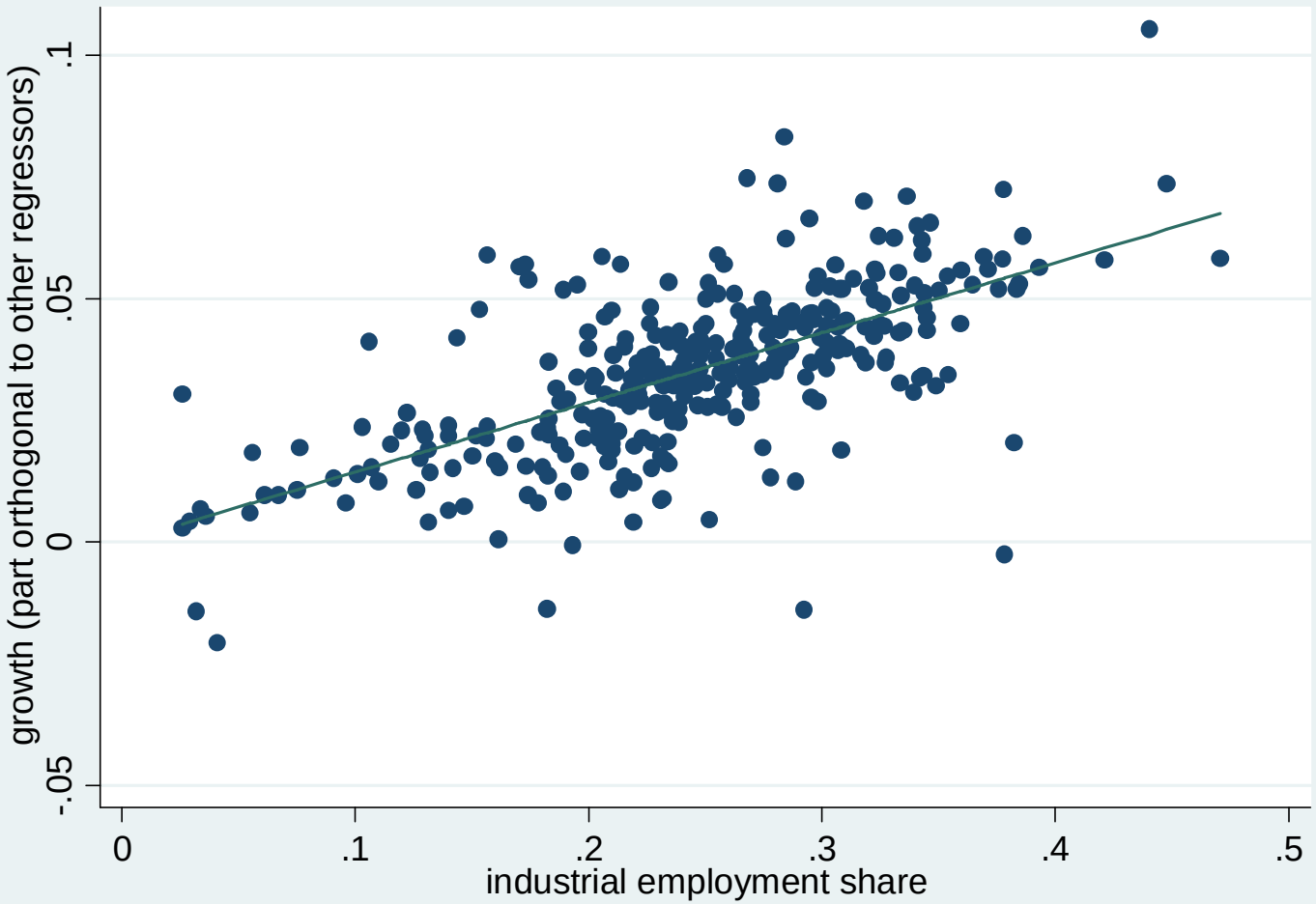


... which tend to diminish over the course of development



Relationship between inter-sectoral productivity gaps and income levels

Some sectors are special: industrial employment and growth

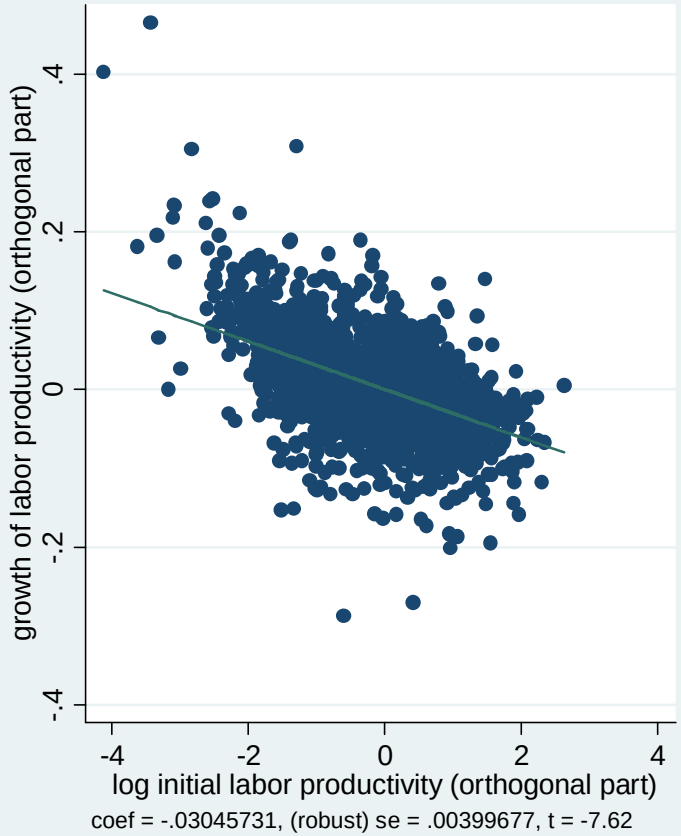


Each observation is a country over a 5-year period. Initial income and country and time fixed-effects are included.

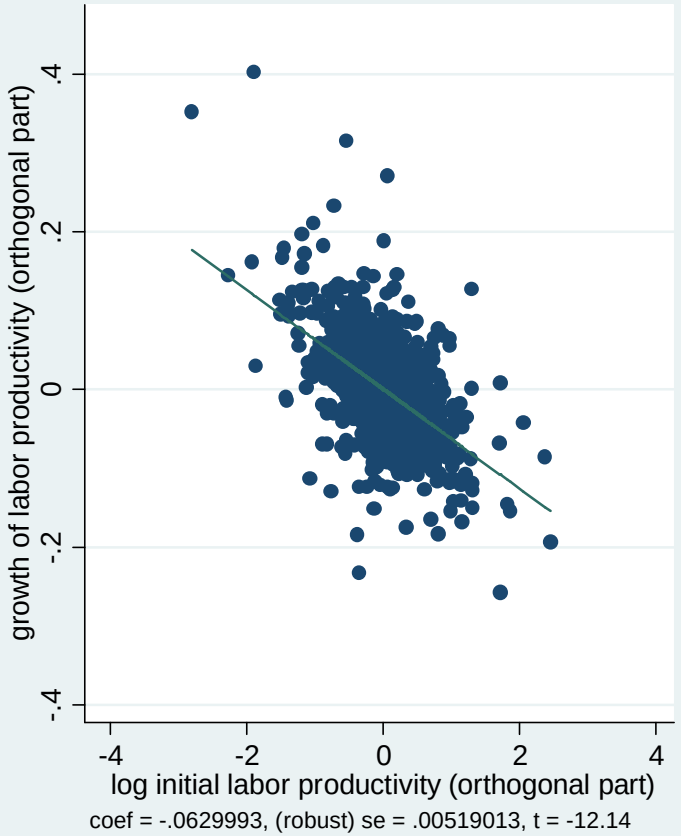
Some sectors are special: unconditional convergence in manufacturing

Pooled decadal industry convergence regressions, 1990-2007

unconditional (left panel) and conditional (right panel)



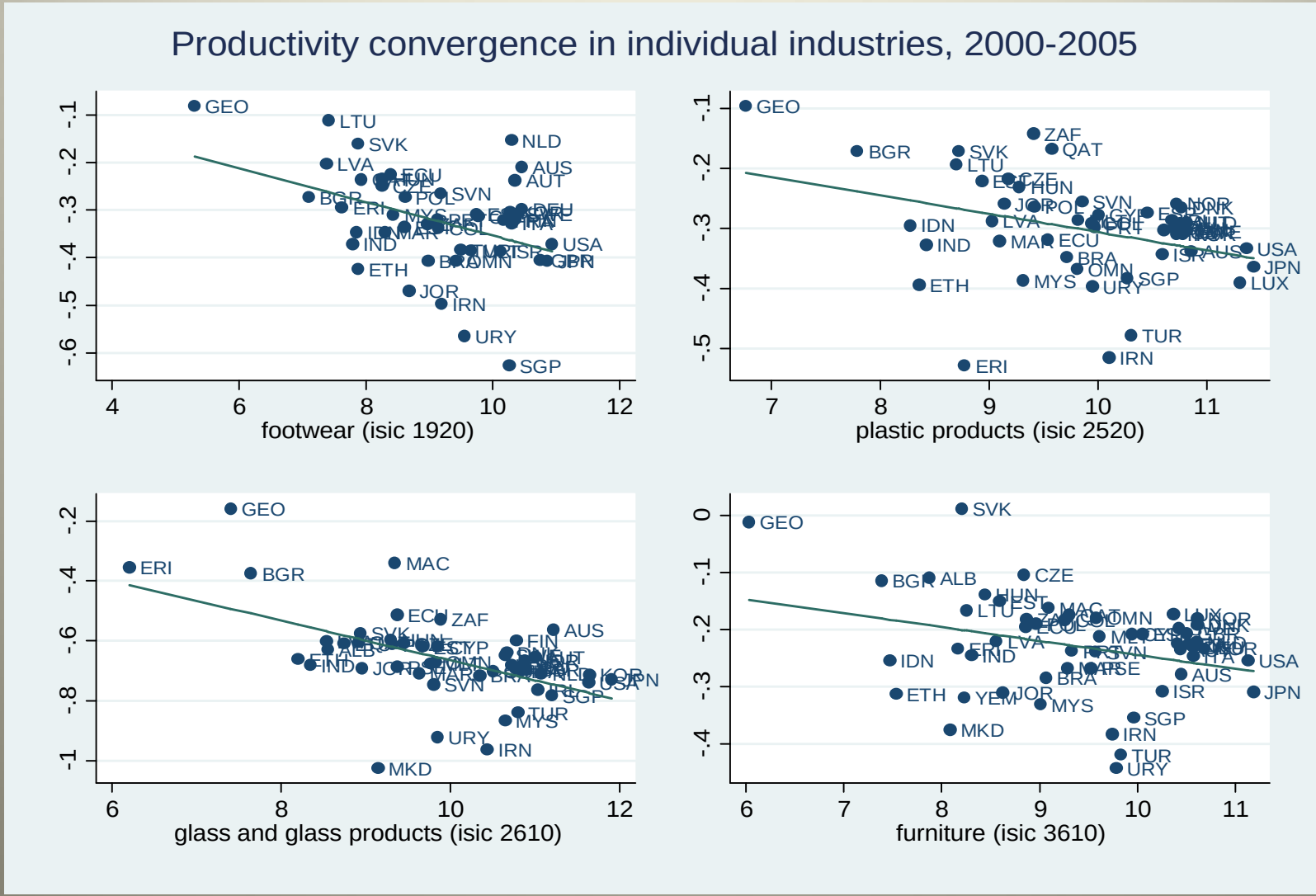
coef = -.03045731, (robust) se = .00399677, t = -7.62



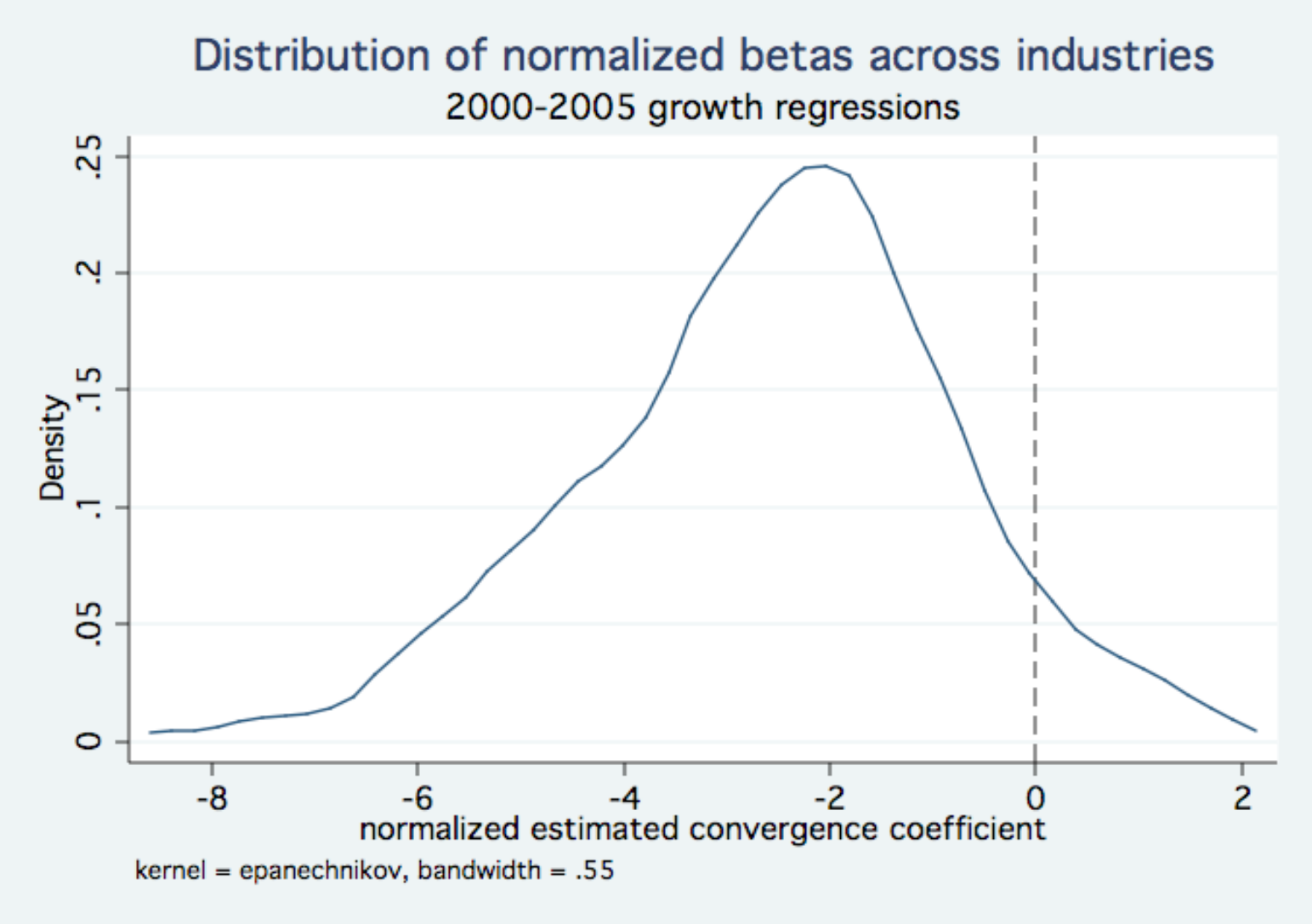
coef = -.0629993, (robust) se = .00519013, t = -12.14

Each observation corresponds to a 4-digit manufacturing industry in a specific country. Right panel includes country dummies.

Labor productivity convergence in specific industries



Distribution of convergence coefficients, by 4-digit industry (normalized by standard error)



How employment structure determines growth: an accounting decomposition

$$\hat{y}_j = -\sum_{i \in C} \beta_i \alpha_{ij} \theta_{ij} \, ln y_{ij} \qquad \text{(1) pure convergence}$$

$$+\sum_{i \in C} \beta_i \alpha_{ij} \theta_{ij} \, ln y_i^* \qquad \text{(2) average distance to frontier}$$

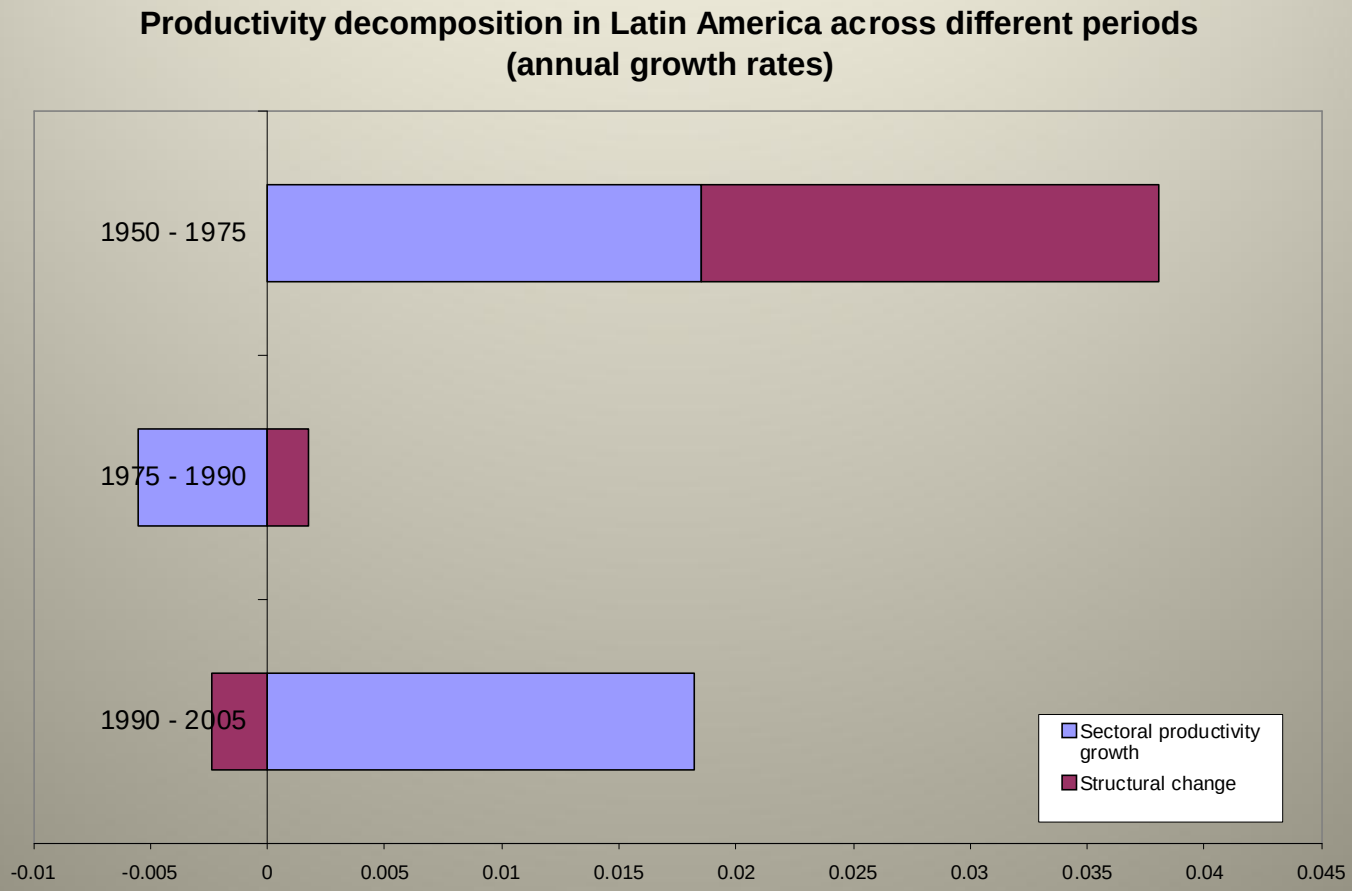
$$+\sum_{i \in NC} \alpha_{ij} \theta_{ij} g_{ij} \qquad \text{(3) production structure effect}$$

$$+\sum_{i} \theta_{ij} \, d\alpha_{ij} \qquad \text{(4) re-allocation effect}$$

beta = convergence coefficient
alpha = employment share
theta = relative productivity within country
g = exogenous growth rates in non-C sectors

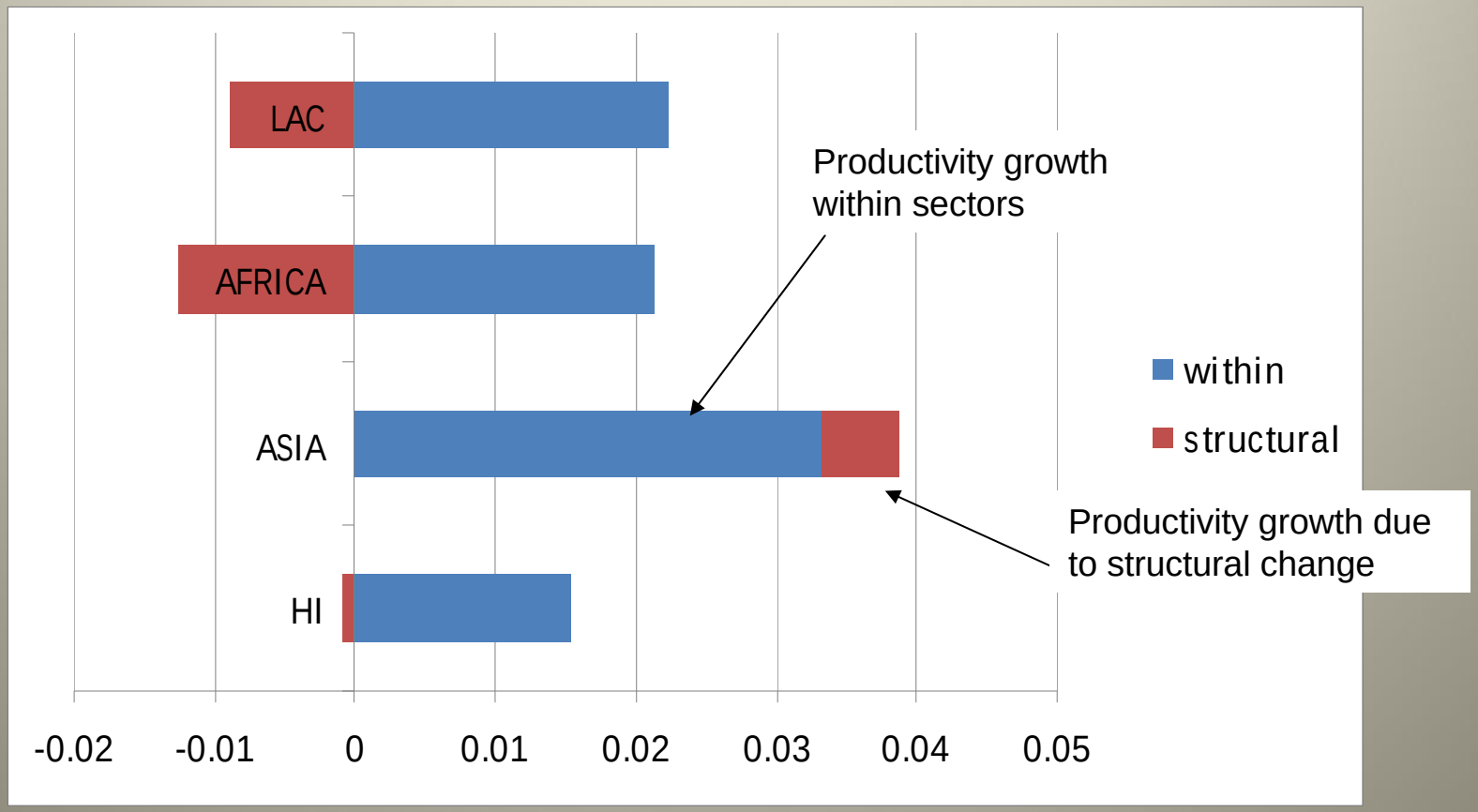
y = labor productivity
y* = frontier labor productivity
i industries; j countries;
C : set of “escalator industries”

How structural factors explain growth slowdown in Latin America



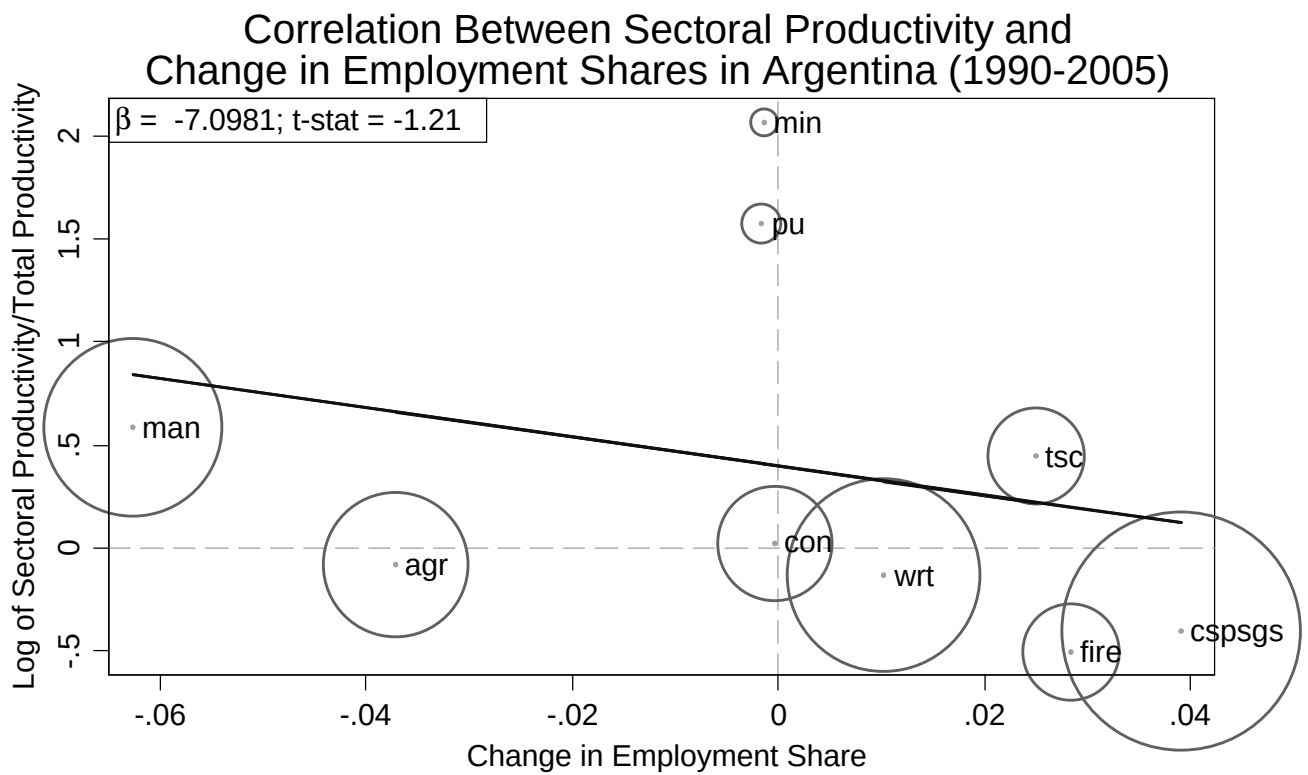
Data from Pages, Carmen ed., The Age of Productivity, Inter-American Development Bank, Washington, D.C., 2010.

... and the difference between slow and rapidly growing regions



Decomposition of productivity growth by country group, 1990-2005

Growth-reducing structural change: Argentina

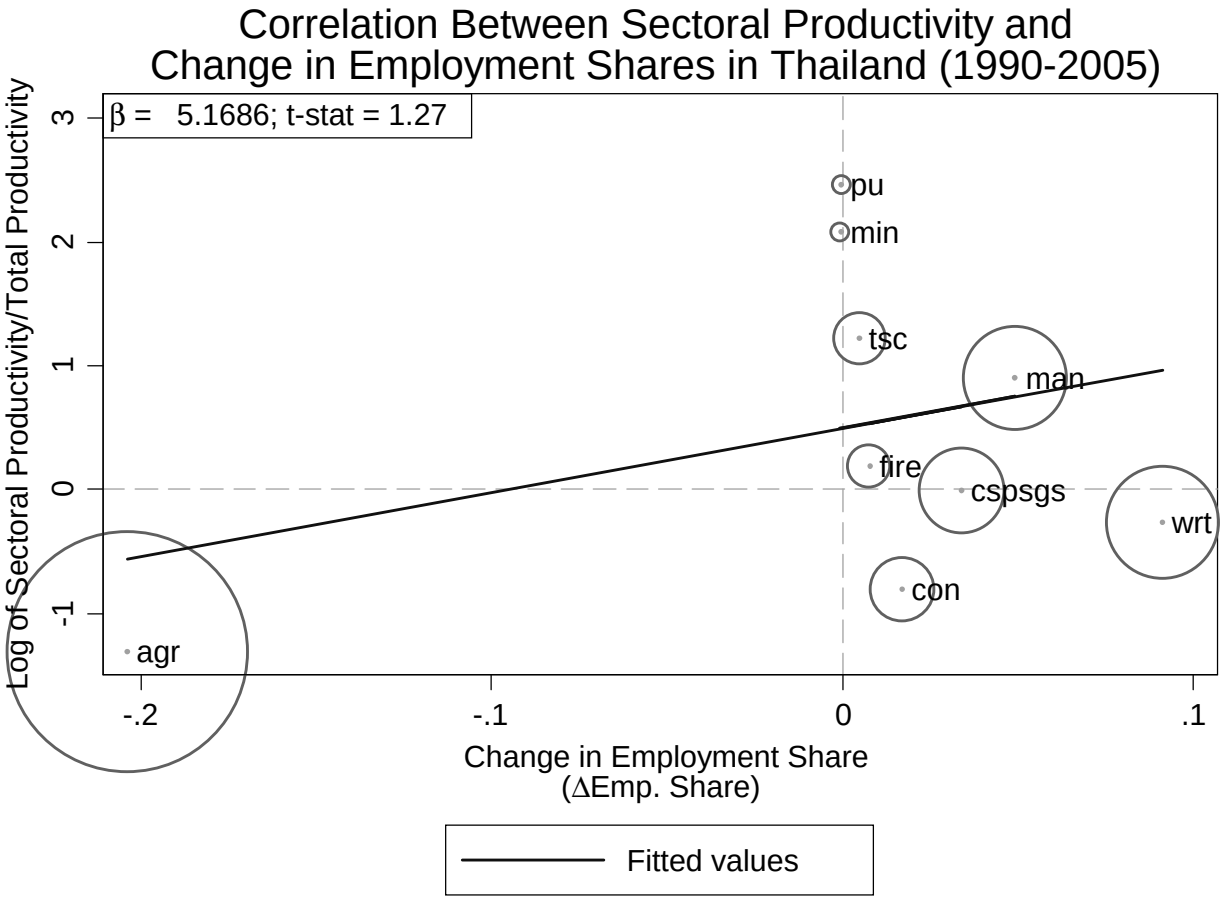


*Note: Size of circle represents employment share in 1990

**Note: β denotes coeff. of independent variable in regression equation:
$\ln(p/P) = \alpha + \beta \Delta$Emp. Share

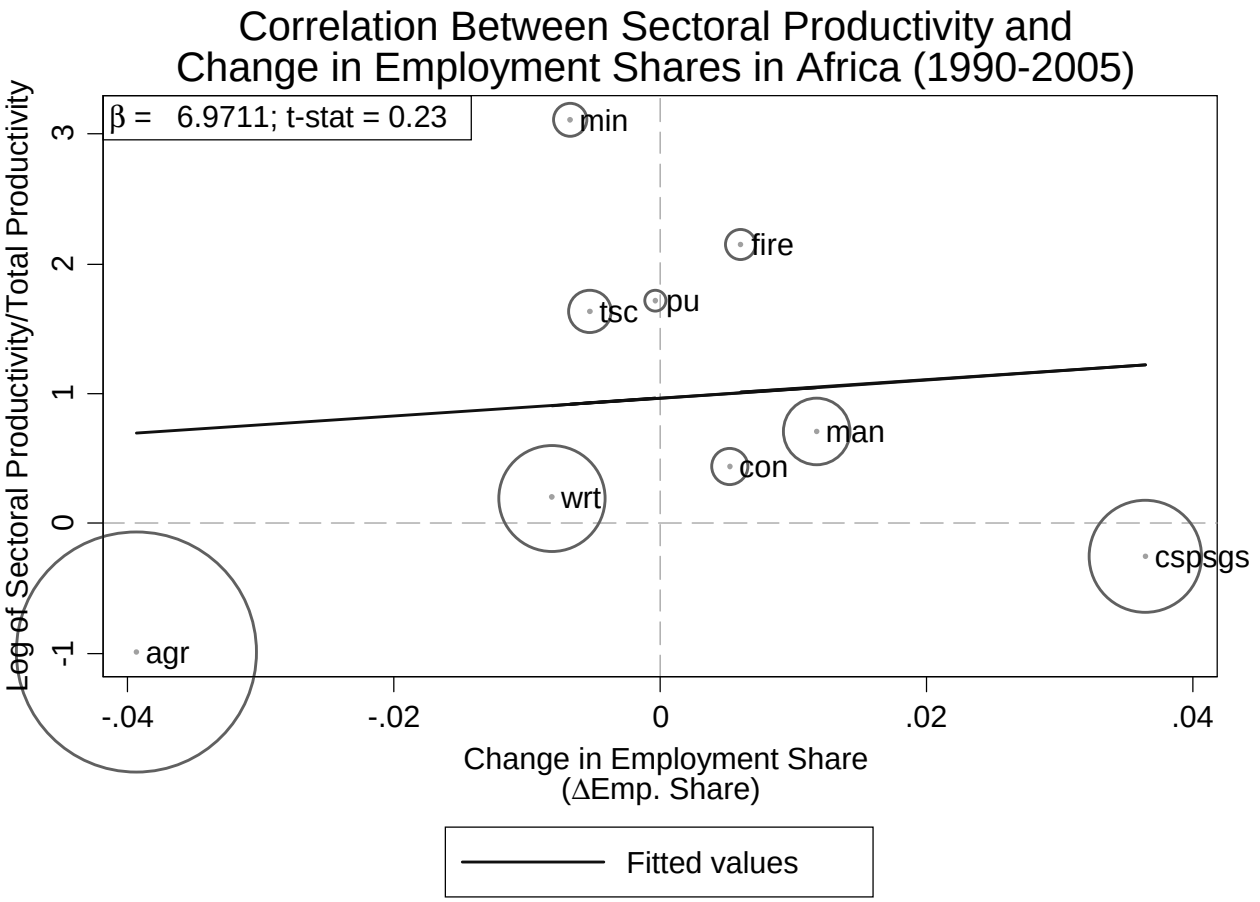
Source: Authors' calculations with data from Timmer and de Vries (2009)

Growth-increasing structural change: Thailand



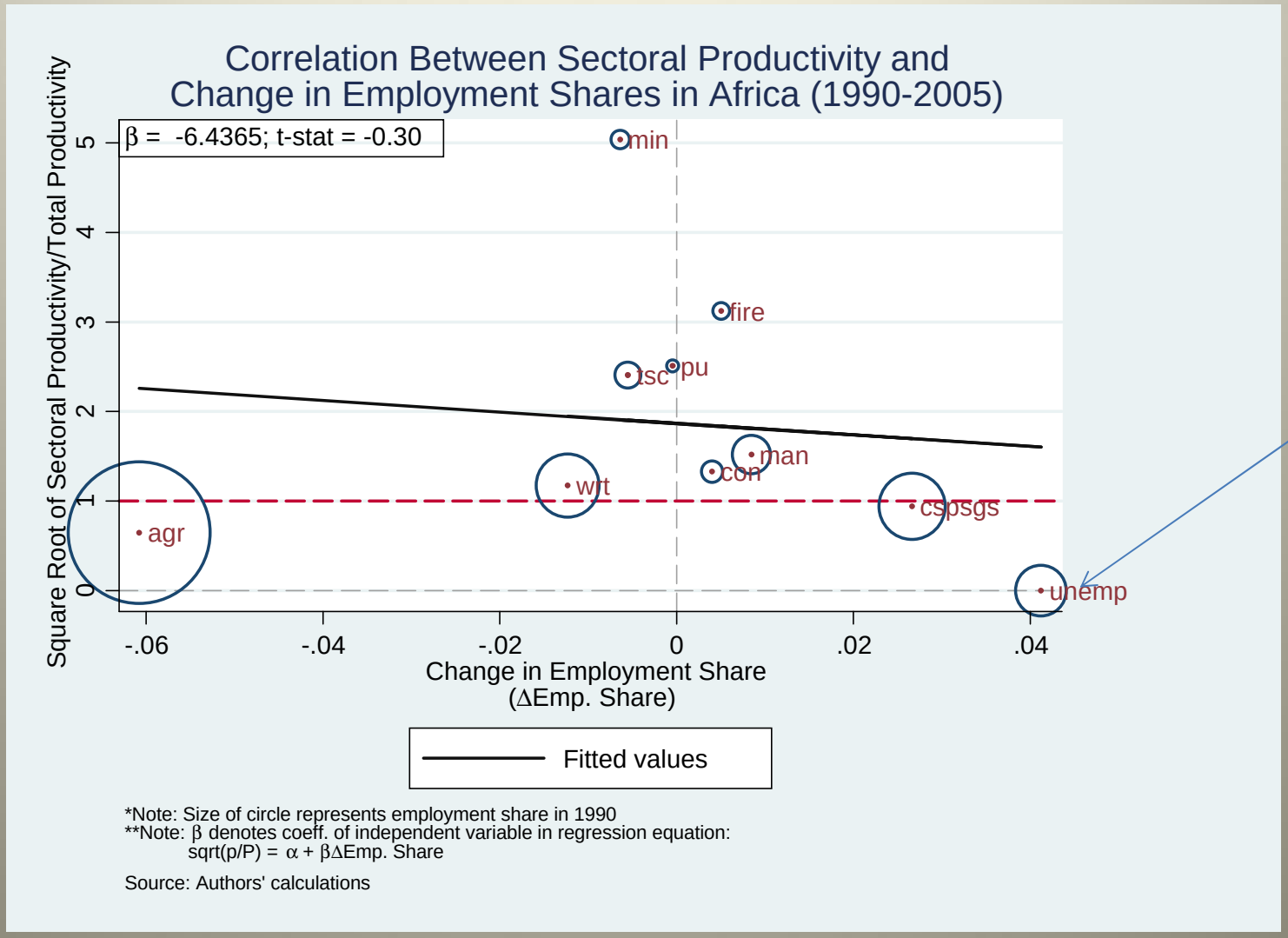
*Note: Size of circle represents employment share in 1990
**Note: β denotes coeff. of independent variable in regression equation:
ln(p/P) = α + βΔEmp. Share
Source: Authors' calculations with data from Timmer and de Vries (2009)

Structural change in Africa...



Weighted average of nine African countries: ETH, GHA, KEN, MUS, MWI, NGA, SEN, ZAF, ZMB.

... and with unemployment included



Weighted average of nine African countries: ETH, GHA, KEN, MUS, MWI, NGA, SEN, ZAF, ZMB.

What has worked: “productivist” policies

- Sound “fundamentals”
  - Market-friendly policies
  - Macro stability
- But also:
  - Industrial policies in support of new economic activities
  - A certain degree of repression of finance, to enable:
    - Development banking
    - Subsidized credit
    - Undervaluation
  - Undervalued currencies to promote tradables
    - The more a country relies on industrial policies, the less the need for currency undervaluation, and vice versa

Will this time be different? Prognosis

- Policies are much better in conventional sense
  - Macro stability and low inflation
  - Openness to world economy
  - Improved governance
- But these tend to increase resilience without necessarily igniting or sustaining growth
- Growth requires diversification and structural change, which is not automatic
- It necessitates pragmatic, experimental policies that support new industries
  - These are often unconventional policies, difficult to employ effectively
  - And they require a supportive external environment
    - Will WTO/IMF, advanced countries condone such policies?