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Industrialization in developing countries: is it related to poverty reduction?

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1. Manufacturing (re-)naissance in developing countries

- Kruse, Mensah, Sen, de Vries (2021)
- Employment absorption in small-scale manufacturing

2. Industrialization and poverty reduction

- This paper
- Related to: Benfica and Henderson 2021; Christiaensen et al. 2011; Datt and Ravallion 1998; Ligon and Sadoulet 2007; Loayza and Raddatz, 2010



- Why is structural change related to poverty reduction?
 1. Differences in productivity levels across sectors (+)
 2. Average income rises in 'surplus labour' sectors (+)
 3. Frictions that impede poor from relocating (-)



- Why do sectors differ in their impact on poverty?
 1. Benefits if growth occurs in sectors where poor are located
 2. Differences in labour intensity across sectors
 3. Sectoral growth interacts with asset inequality (e.g. land distribution)



$$\Delta P_c = \varphi_c \Delta \ln Q_c \quad (1)$$

φ_c the GDP-per-capita (semi-)elasticity of poverty

$$Q_c = \frac{Y_c L_c}{L_c T_c} \quad (2)$$

split growth in GDP per worker ($\Delta \frac{Y_c}{L_c}$) using Stiroh (2002)

$$\Delta P_c = \alpha + \beta_1 (\sum_i \bar{\theta}_i \Delta \ln y_{ci}) + \gamma_1 R_c + \gamma_2 \Delta \ln \left(\frac{L_c}{T_c} \right) + \omega_x X_c + \varepsilon_c \quad (3)$$



1. Poverty: the World Bank's PovcalNet

\$1.90 PPP Headcount ratio

Poverty spells (Atamanov et al. 2019)

Spell minimum of 4 years

Annualized

119 spells/observations, 42 countries, 1990–2018

2. Gini coefficient from WIID

3. Sector data

GGDC/UNU-WIDER Economic Transformation Database (ETD)

15 July 2021 release



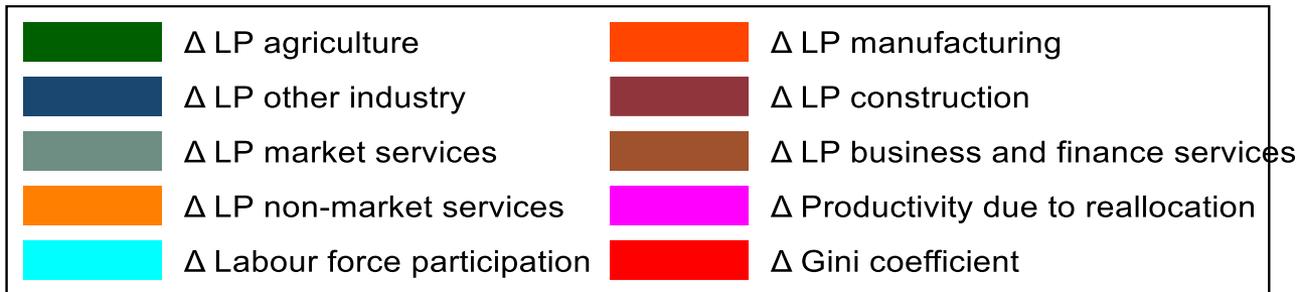
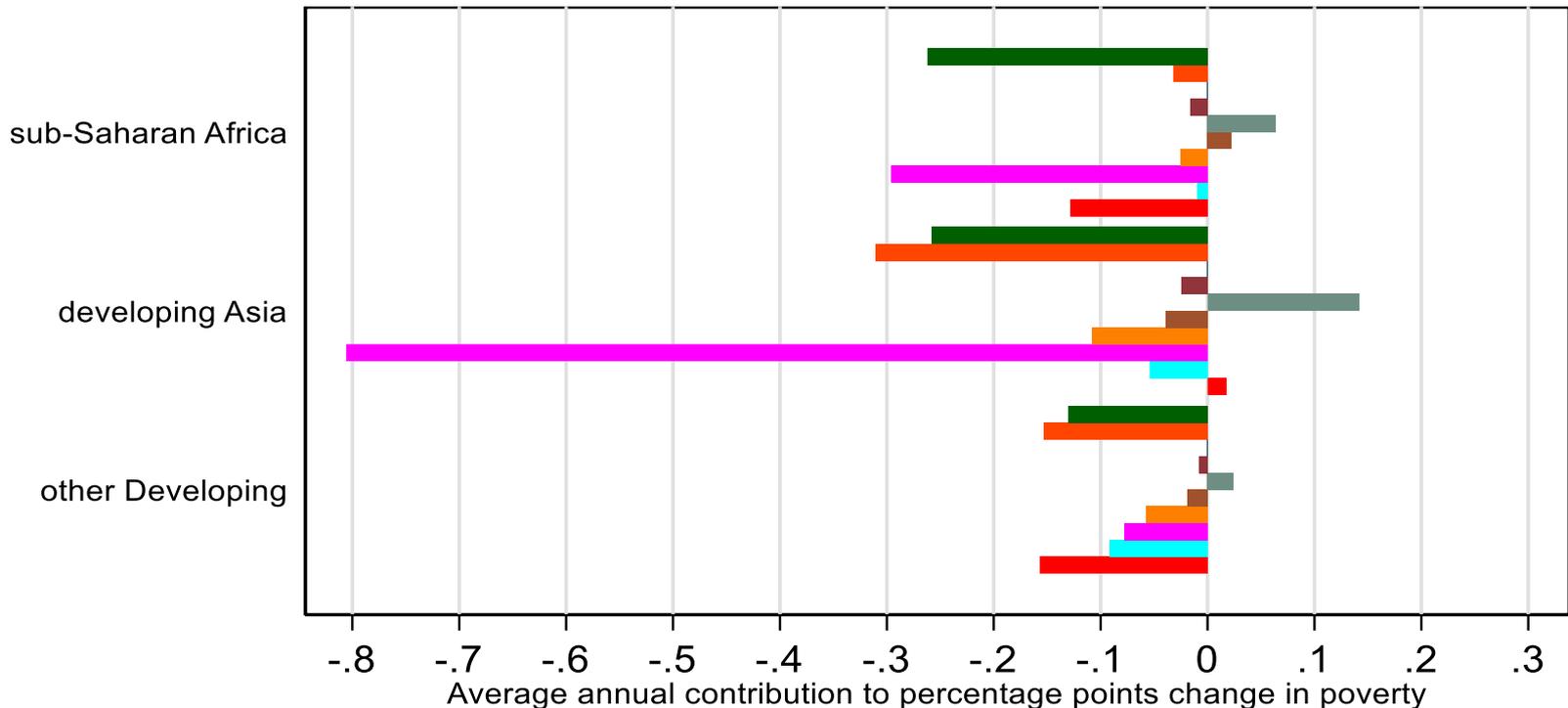
Regression results

	(1)	(2)
Δ In Productivity within sectors	-0.173*** (-3.31)	-0.164*** (-3.33)
<i>Reallocation effects:</i>		
Δ In Productivity due to reallocation	-0.379*** (-3.98)	-0.424*** (-2.95)
Δ In Productivity due to reallocation * Dummy SSA		0.142 (0.72)
Δ In Productivity due to reallocation * Dummy developing Asia		-0.223 (-0.79)
<i>Other variables:</i>		
Δ In Labour force participation	-0.0250 (-0.19)	-0.0197 (-0.15)
Δ Gini coefficient	0.653*** (3.11)	0.637*** (2.93)
<i>Observations</i>	119	119
Test reallocation effect developing Asia is zero (F-value)		7.99***
Test reallocation effect sub-Saharan Africa is zero (F-value)		4.94**
\bar{R}^2	0.210	0.210

Notes: dependent variable is the average annual percentage point change in the \$1.90-a-day headcount ratio during the poverty spell (for poverty spells with a minimum duration of 4 years). GDP per capita, aggregate labour productivity (GDP per worker), and labour force participation are measured in average annual percentage changes. Δ Gini coefficient is the average annual absolute change in the Gini coefficient. Robust t-statistics in parentheses. Standard errors are clustered by country. Bottom row reports the adjusted R-squared. ***, **, and * indicate significance at the 1%, 5%, and 10% level.



Attribution exercise



Note: predicted effects are calculated using the data in combination with the coefficient estimates. For each poverty spell and each variable, we first calculate the predicted relation to poverty reduction; then we take the unweighted average contribution for each variable in each poverty spell by region.



How does the sectoral composition of growth relate to poverty reduction?

Empirical framework

$$\Delta P_c = \varphi_c \Delta \ln Q_c$$

integrate Stiroh (2002)

Data

Poverty headcount ratio

Economic Transformation
Database (ETD)

Results

+ Structural change

+ Productivity within
sectors

Attribution

developing Asia

sub-Saharan Africa