

# Inequalities in Agricultural Development

Preliminary results and next steps

UN Committee on World Food Security

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# Toward a fresh research agenda

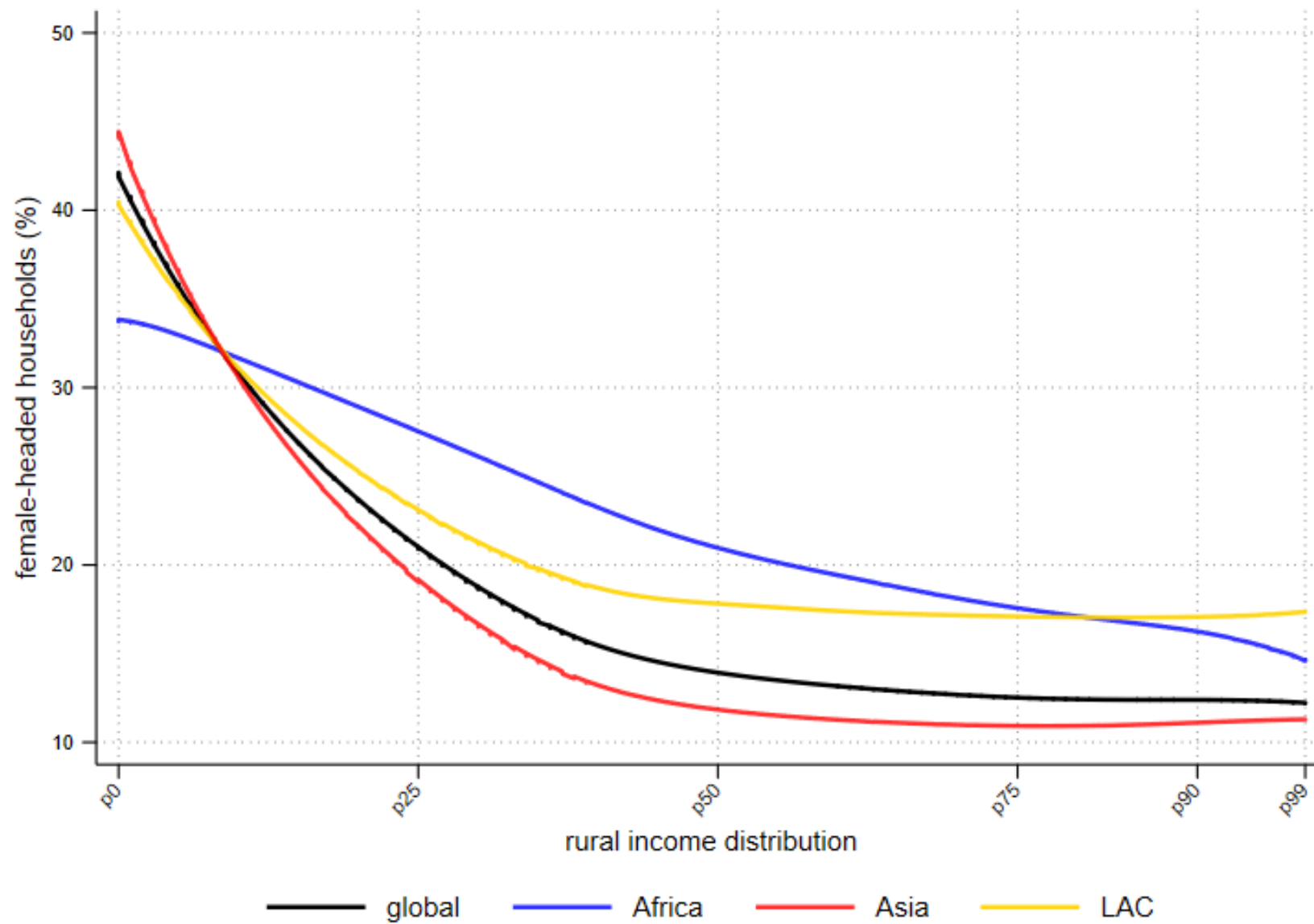
Introduction

Methods and data

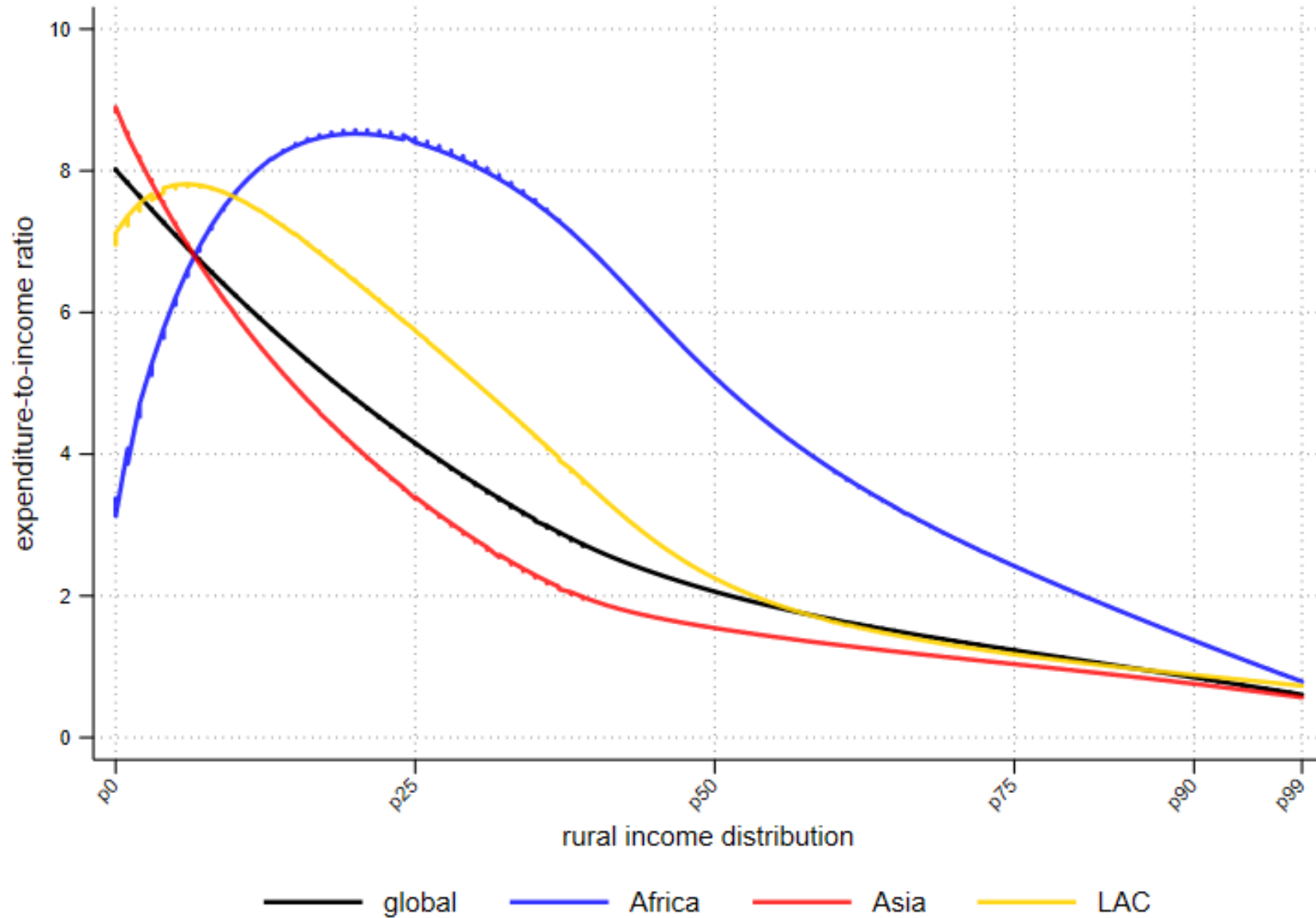
Preliminary results

Discussion and next steps

# Background



# Background



# Literature: review

- Agricultural growth is often inequality-reducing—except where land is concentrated  
(or where production is capital-intensive)
- Structural change out of agriculture can have an ambiguous effect on growth and poverty reduction
- An larger share of the workforce in agriculture is associated with higher levels of poverty
- Rural inequality can be as high as urban inequality (within- comparisons)
- Fiscal policy can help, especially:
  - progressive taxation
  - rural infrastructure
  - social protection expenditure
  - human capital investment
- Highly unequal: South Africa, Namibia, Zambia, Botswana, Angola, Central African Republic
- More egalitarian: Nigeria, Tanzania, Democratic Republic of the Congo

# Literature: unanswered questions

- Do these 'stylized facts' match newer and comprehensive data sources? (micro and macro)
- Under what conditions? With what exceptions?
- Why? What can be done?

# Objectives

Scoping paper for a new research agenda on agricultural inequality

- Showcase / test-case for unique possibilities from high-quality agricultural income data
- Integration of micro-survey data with macroeconomic data (esp. national accounts)
- New estimates of macro- and microeconomic inequality dynamics

# Methods and data

## Macro

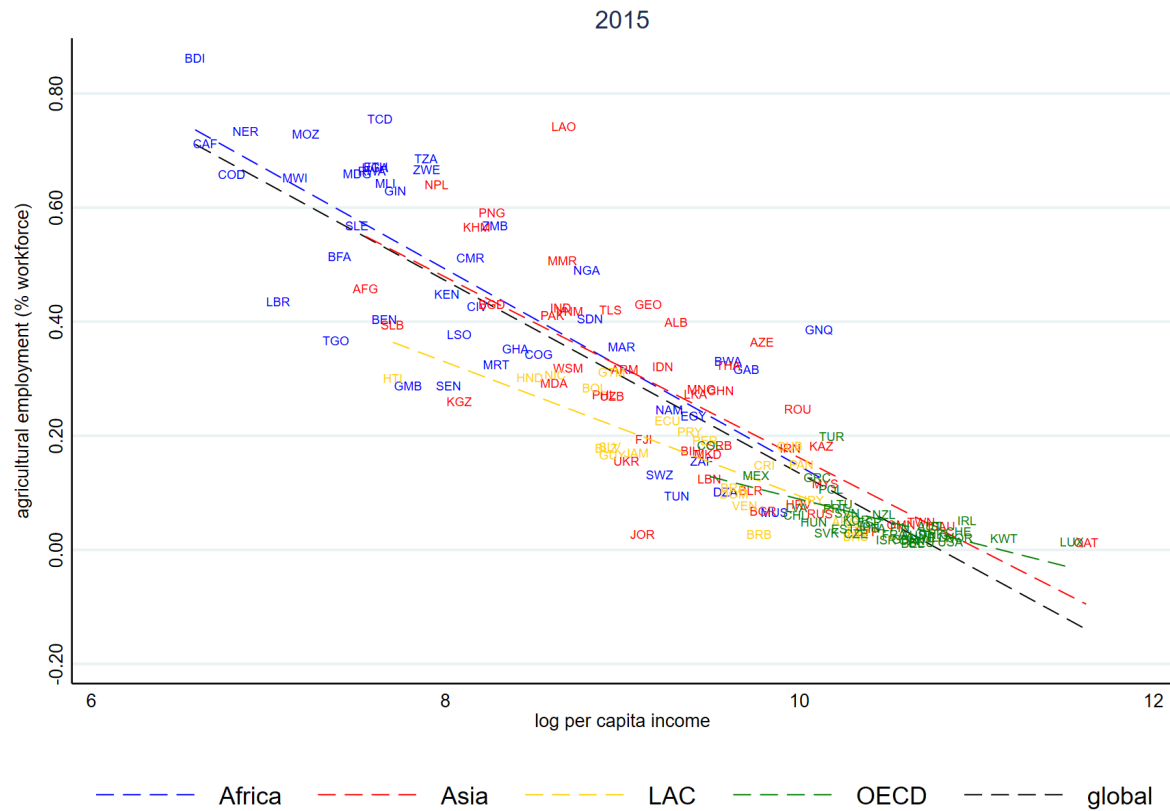
- à la WID, e.g., UN SNA, GGDC, FAOSTAT, macroeconomic aggregates
  - value added and labor share in agriculture
  - land ownership, productivity, price indices, fiscal policy

## Micro

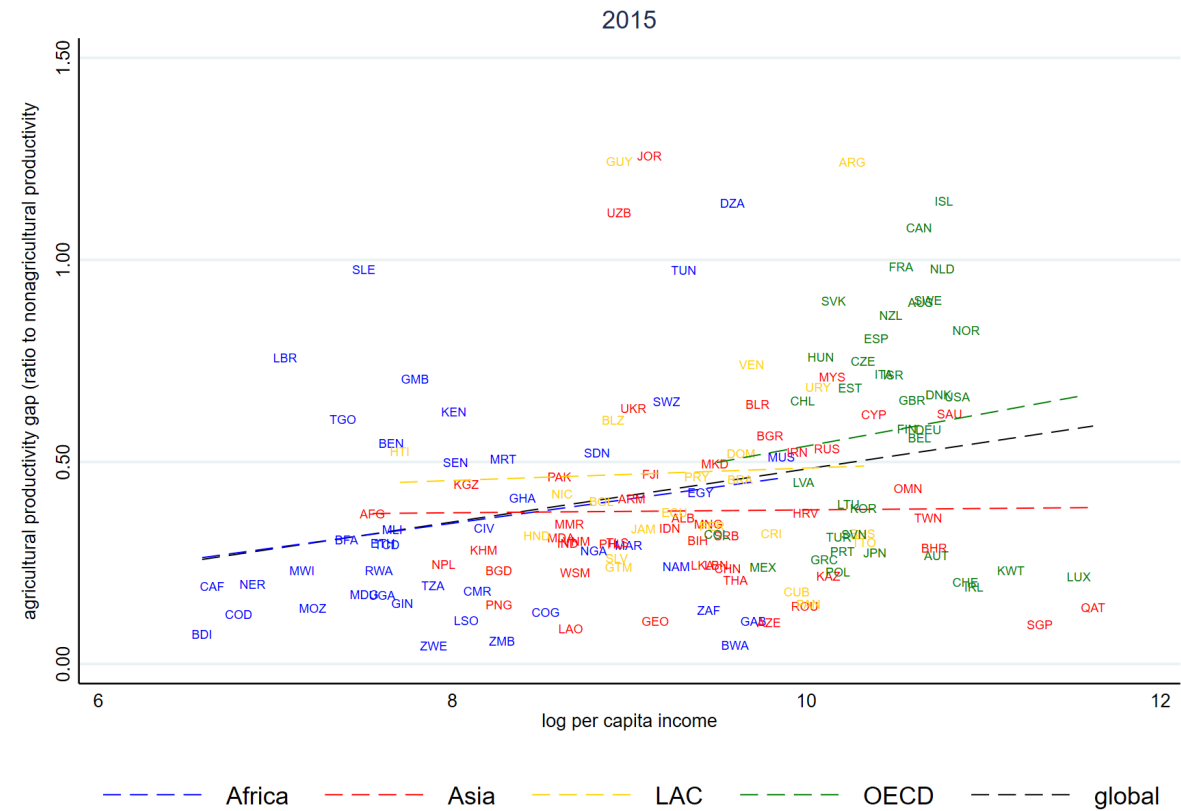
- ILO, RuLIS, World Bank, household survey microdata
  - panel data to ideally follow dynamics of agricultural change
  - emphasize productivity, labor inputs, heterogeneity across vulnerable subpopulations



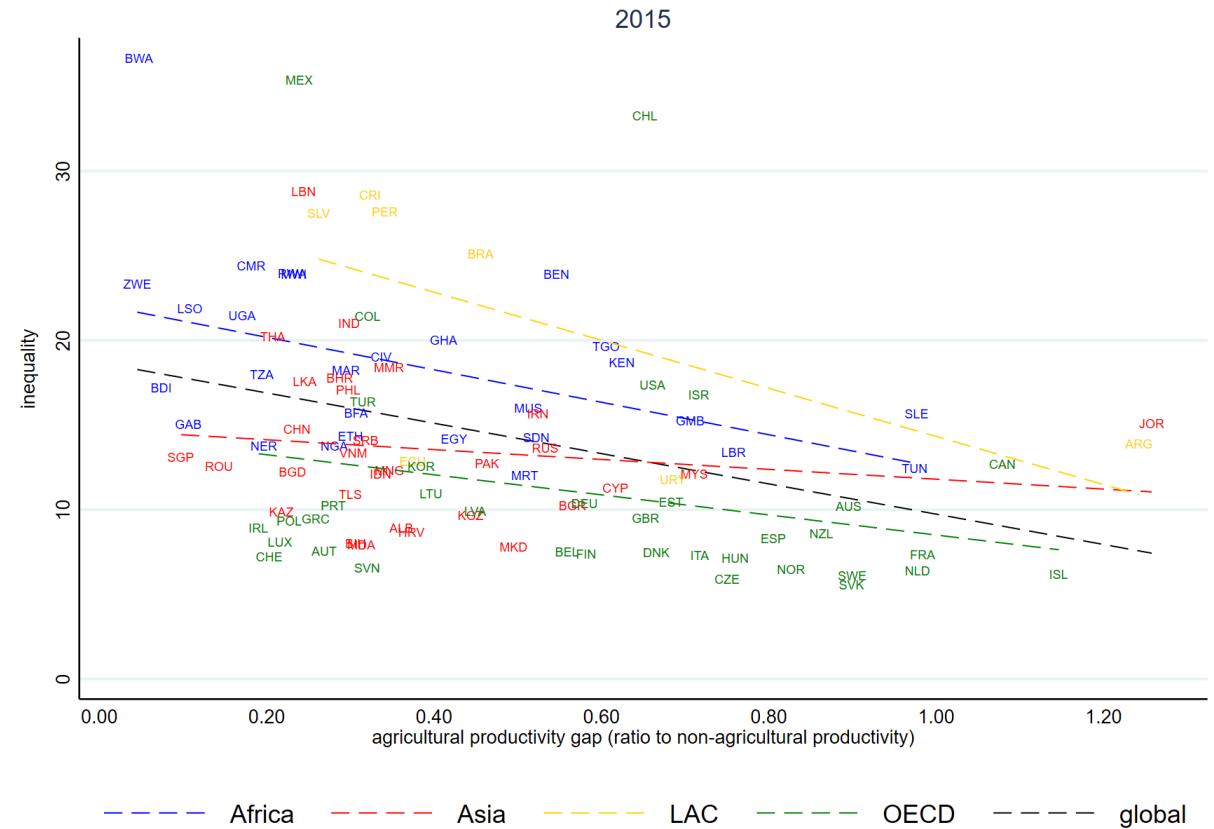
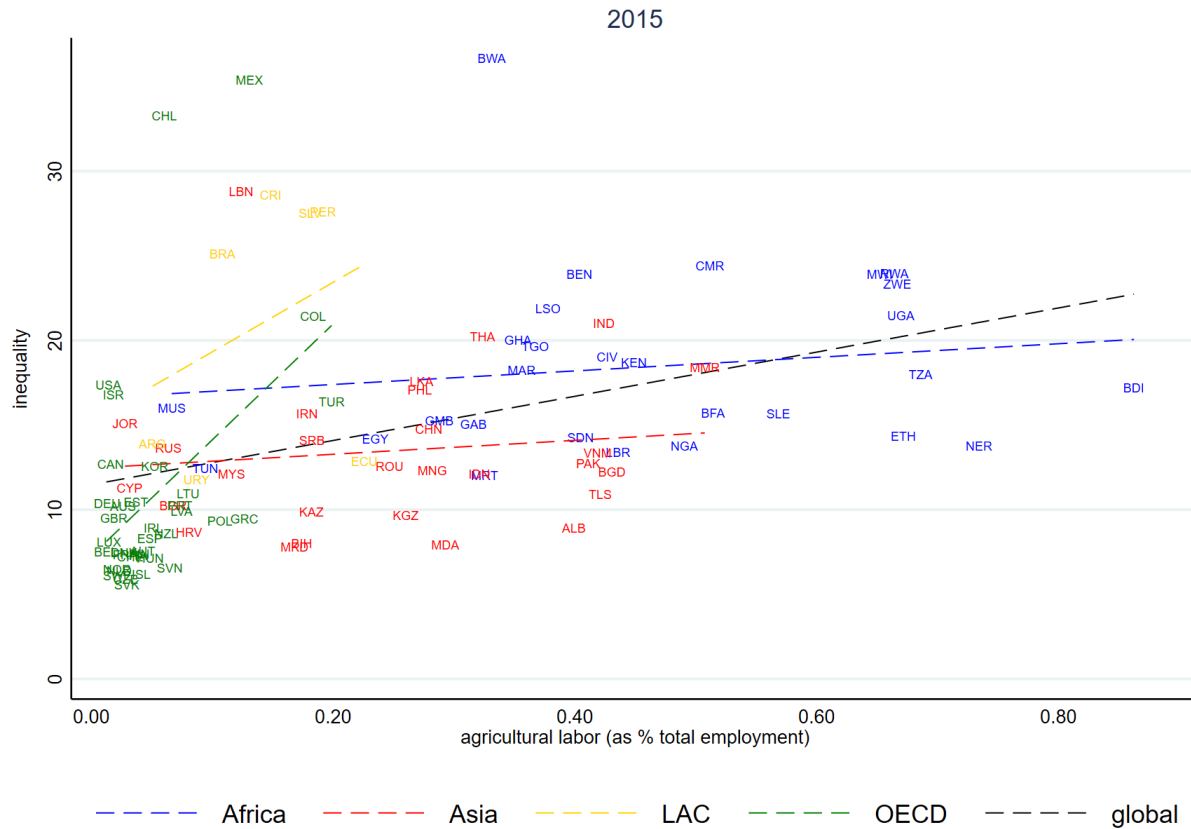
# Preliminary results: macroeconomic aggregates



Sources: UN SNA, ILO.

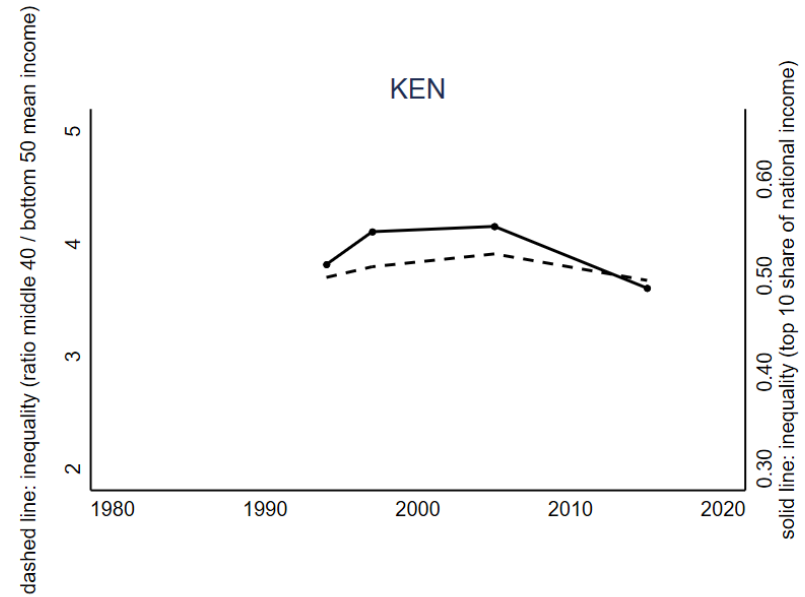
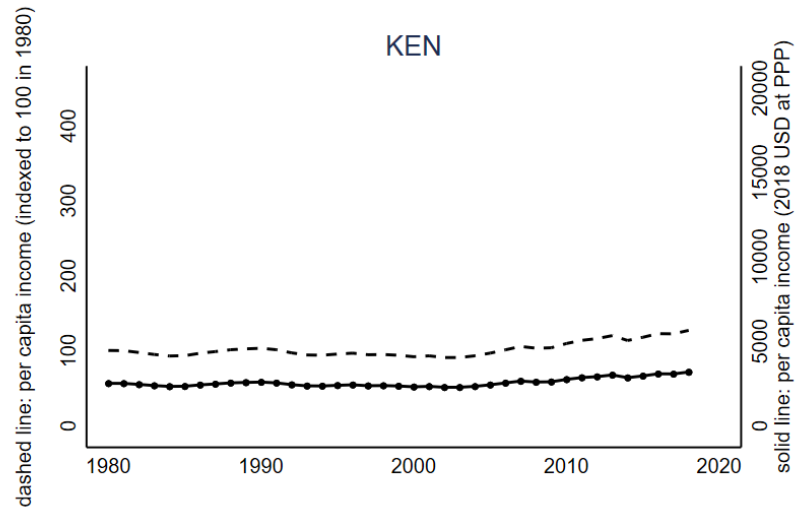
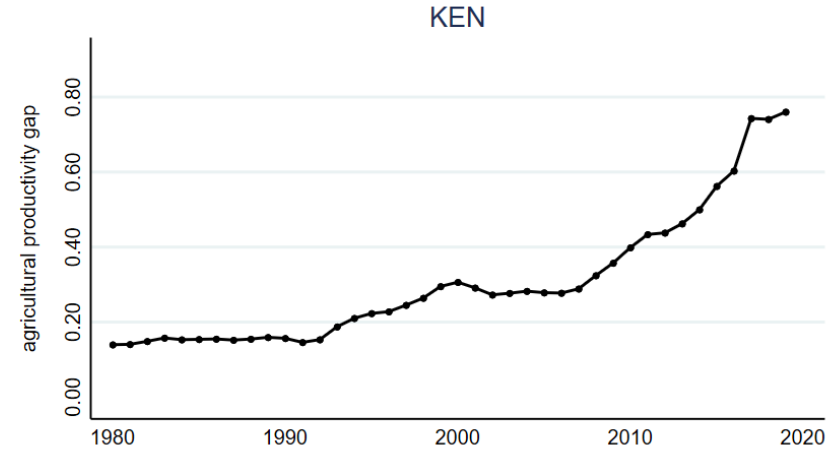
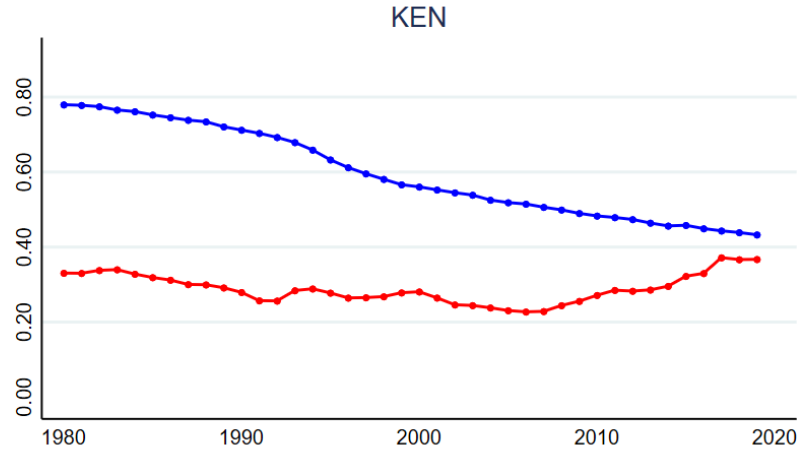


# Preliminary results



Note: inequality is measured here as the ratio of the average incomes of the top 10% to the bottom 50%, in the national income distribution. Sources: UN SNA, ILO, World Inequality Database

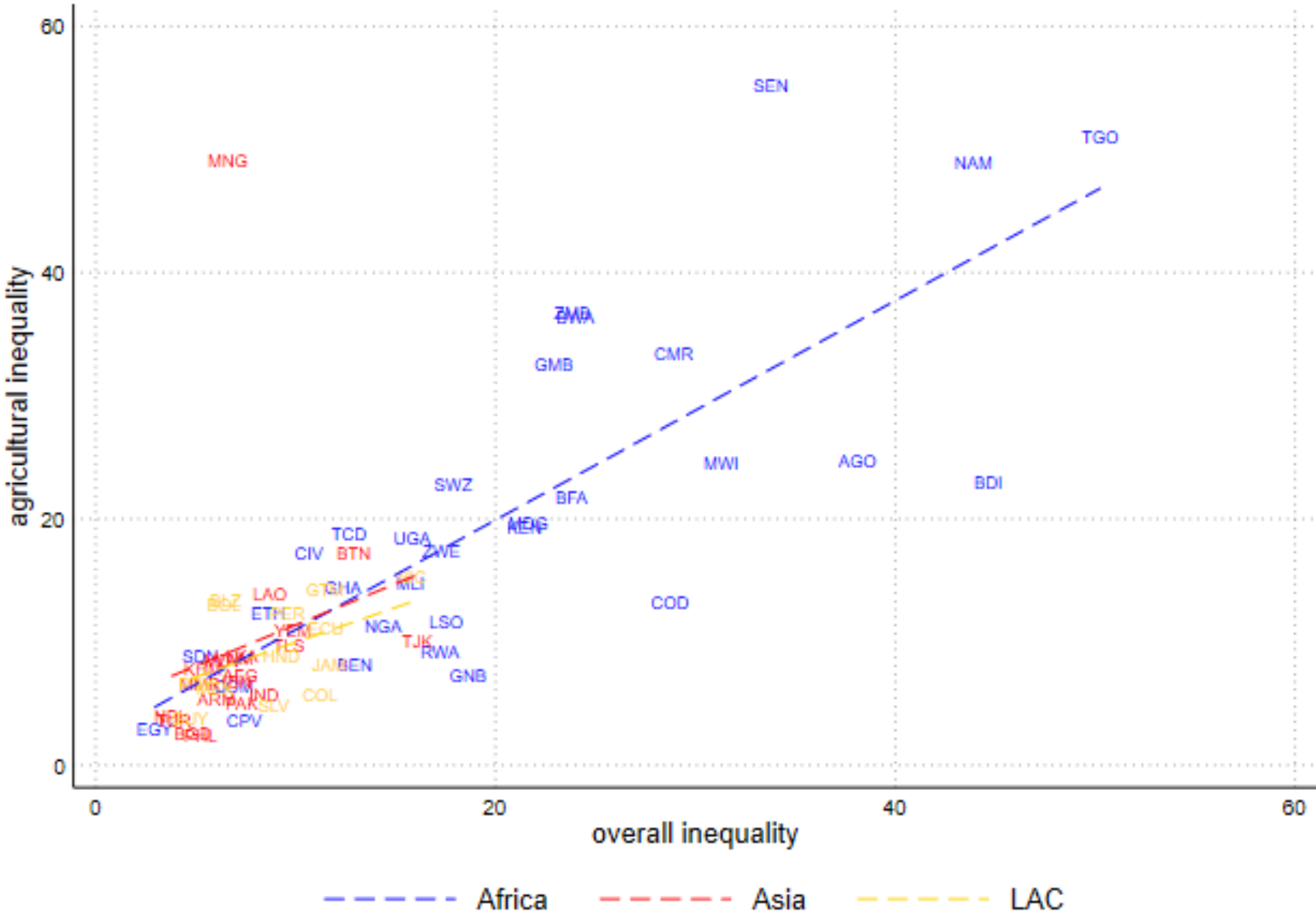
# Preliminary results: cases to study further



—●— agricultural value added (as % of total value added)

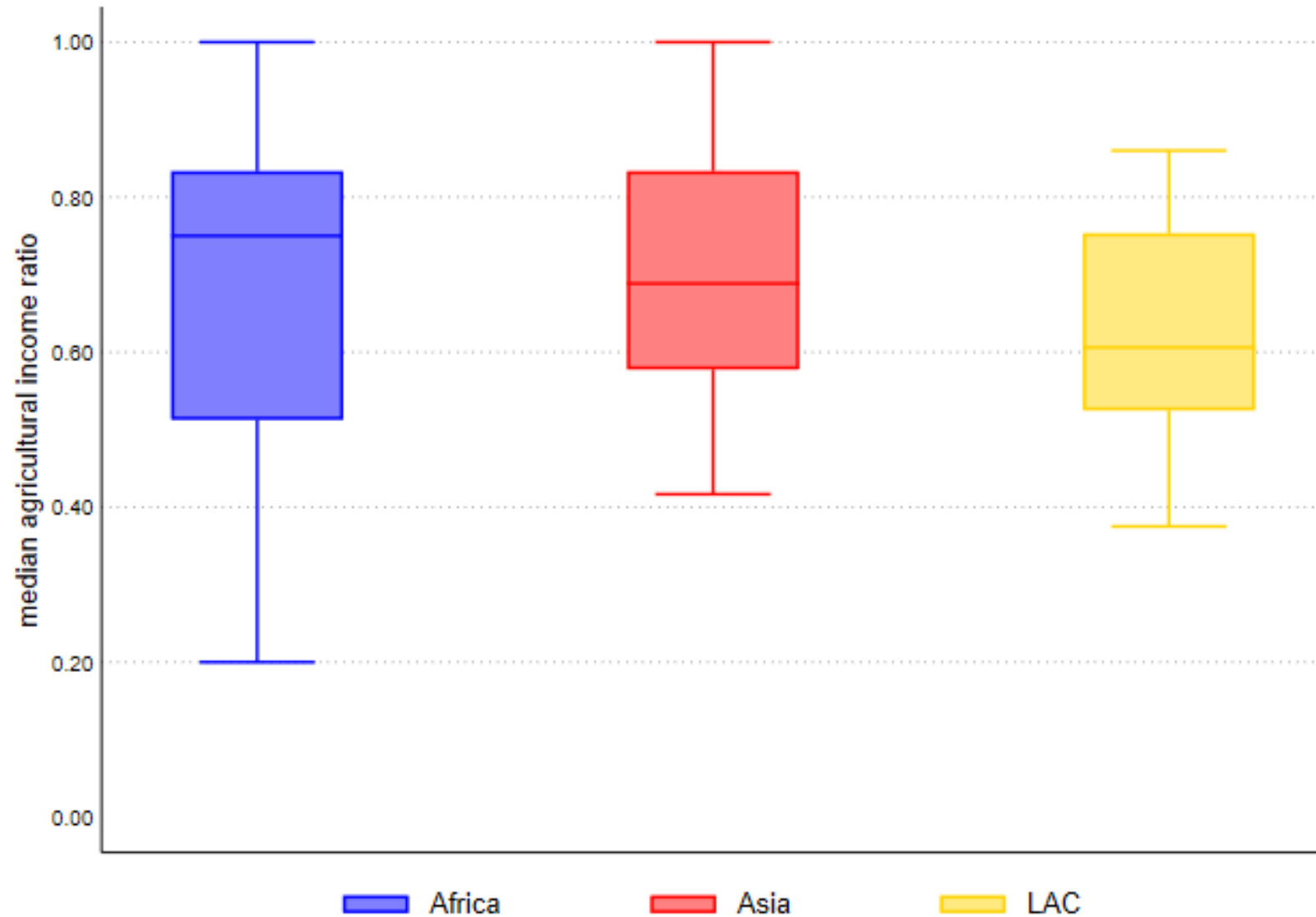
—●— agricultural workforce (as % of total workforce)

# Preliminary results: ILO big microdata (labor force surveys)



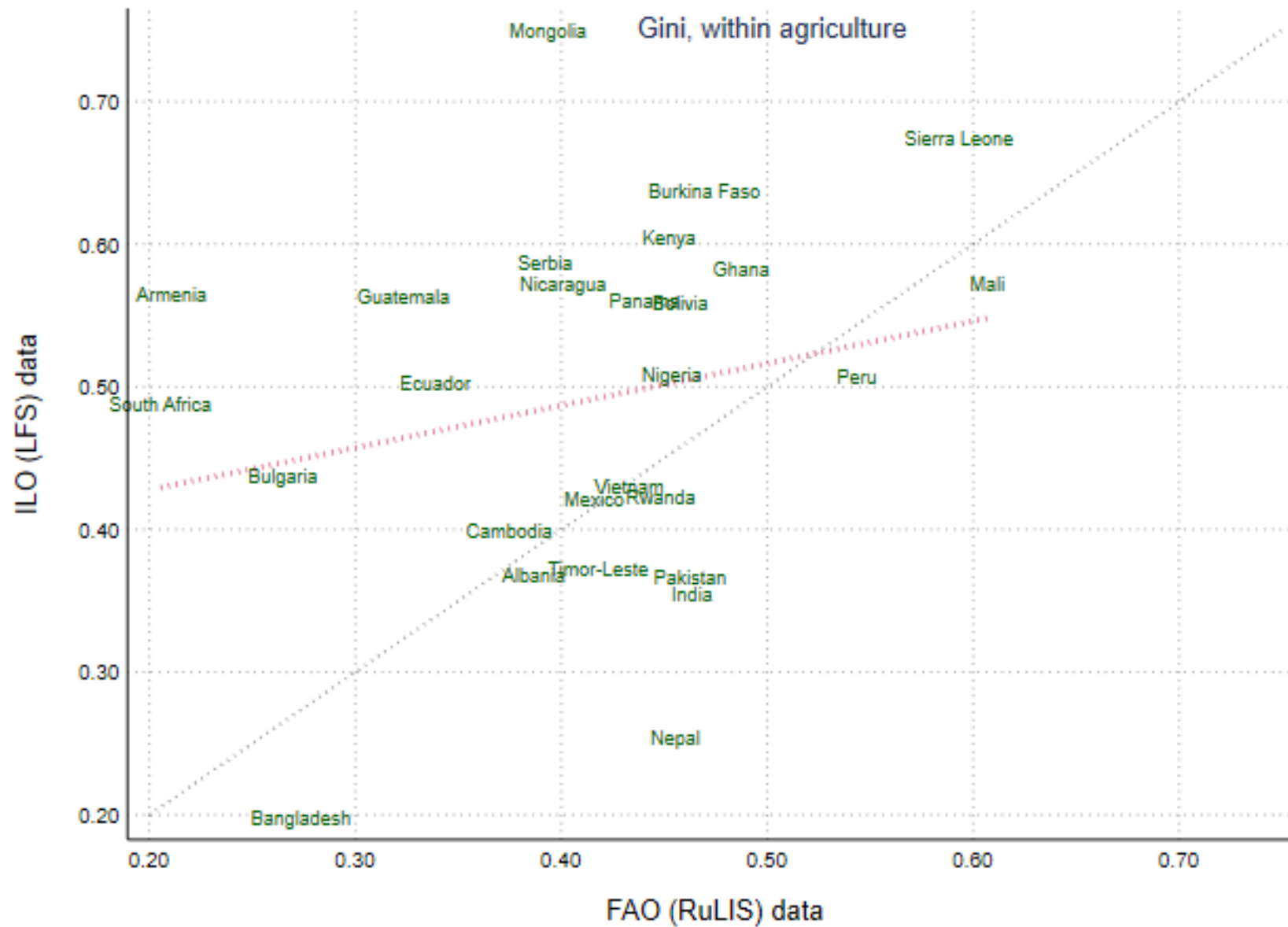
Note: inequality is measured here as the ratio of the average incomes of the top 10% to the bottom 50% in the income distribution.

# Preliminary results

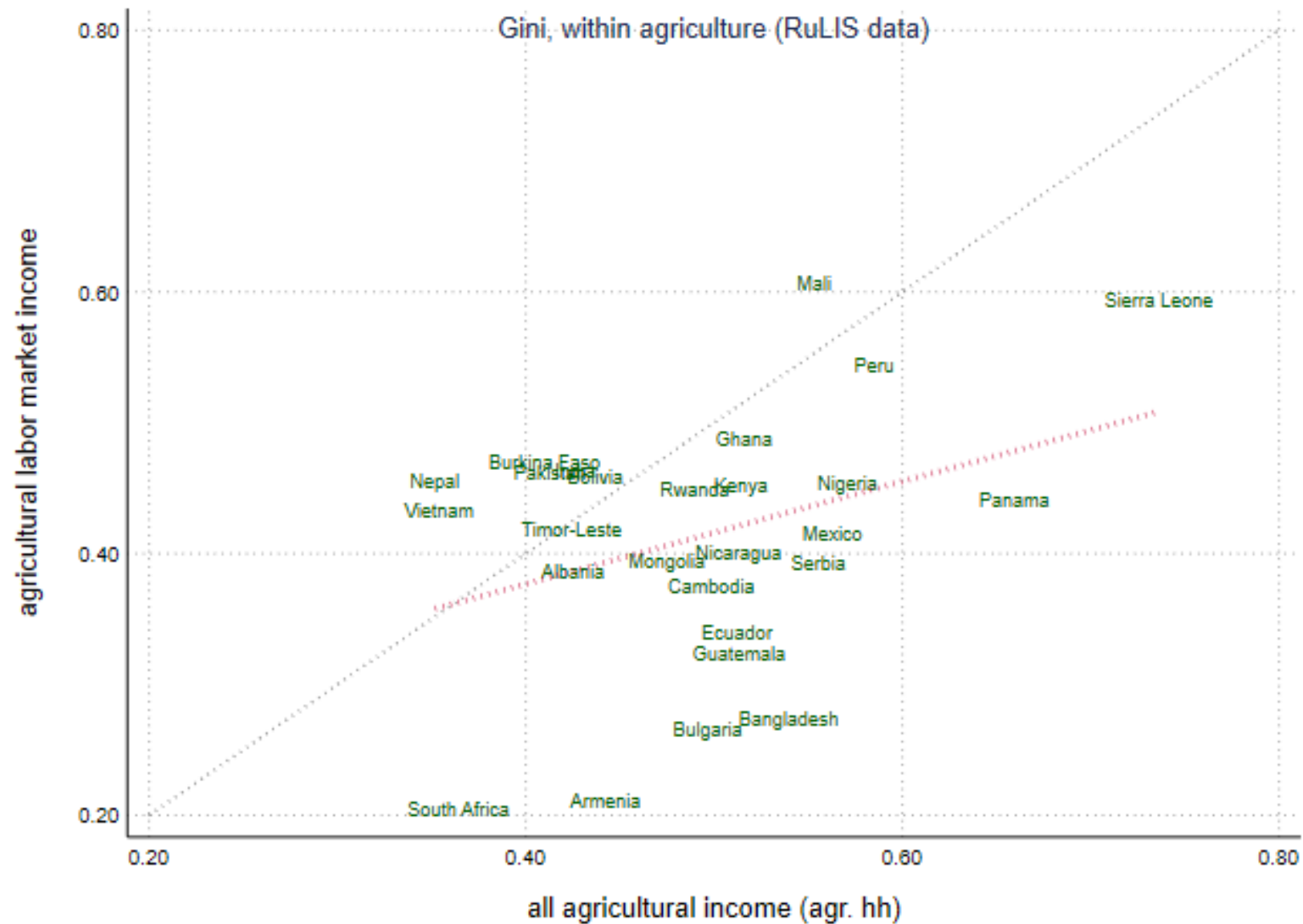


Note: Ratio of the median agricultural income, to the median income overall, in the latest country-year for which ILO survey data is available.

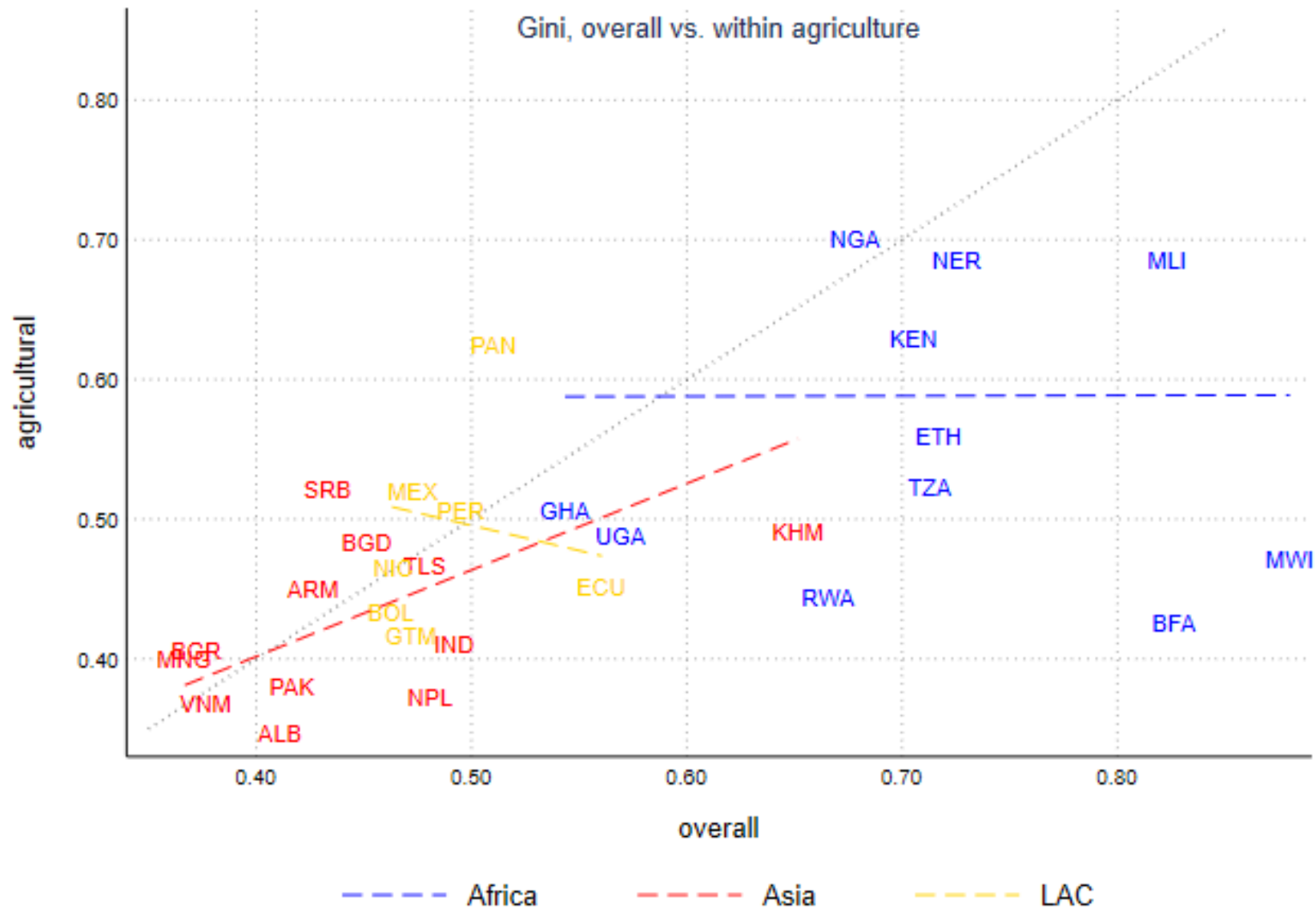
# Caveats



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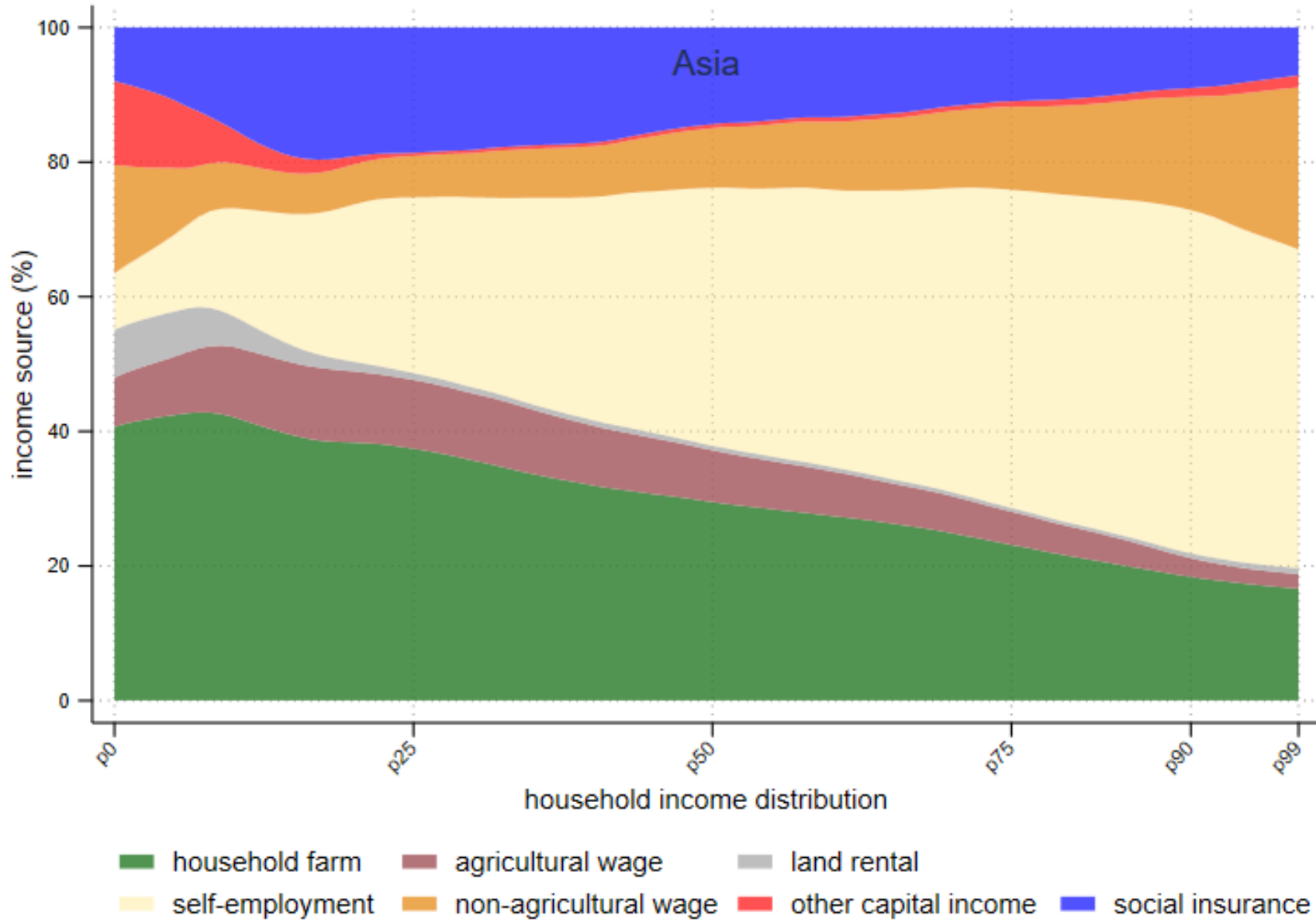


# Revised picture

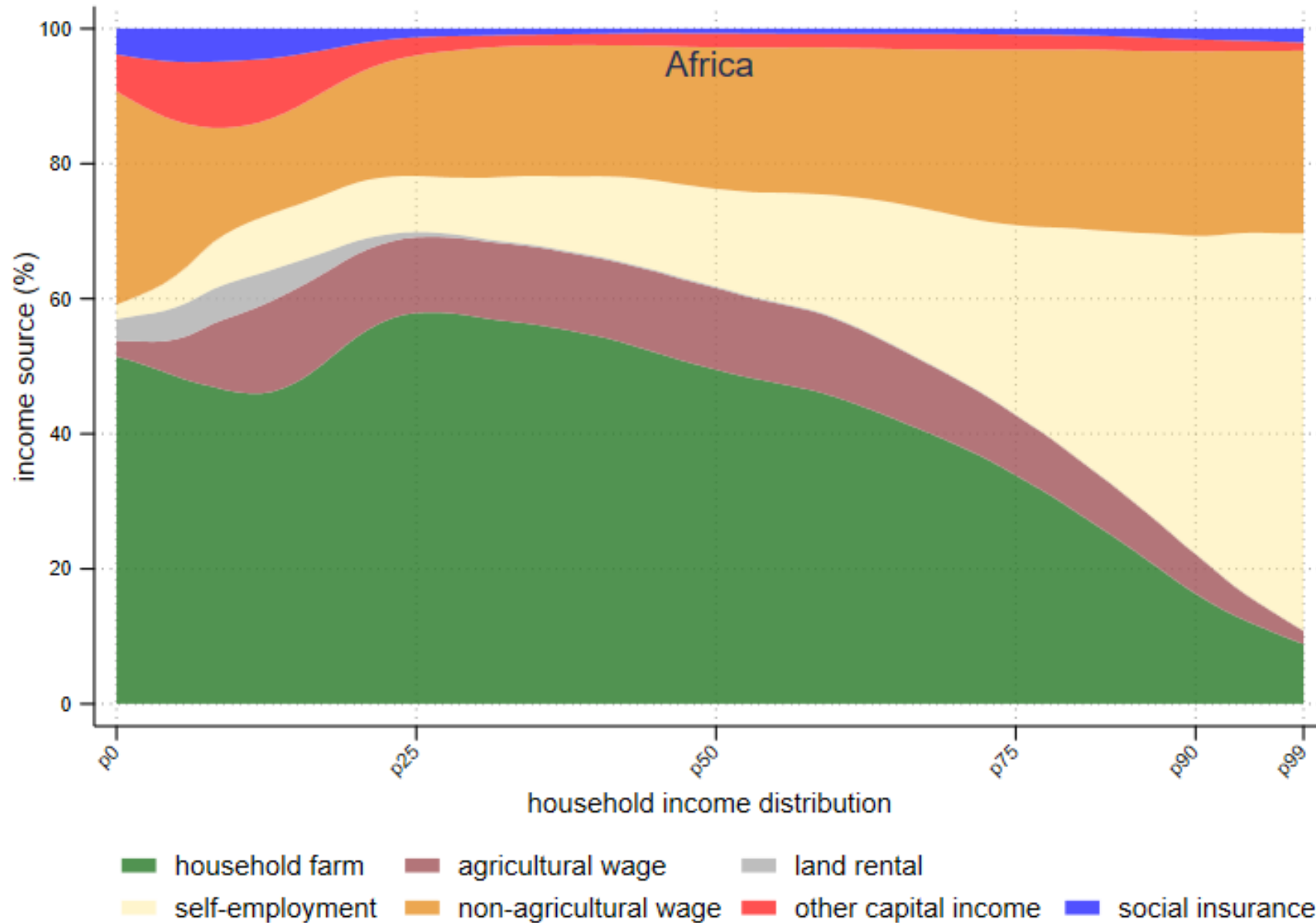




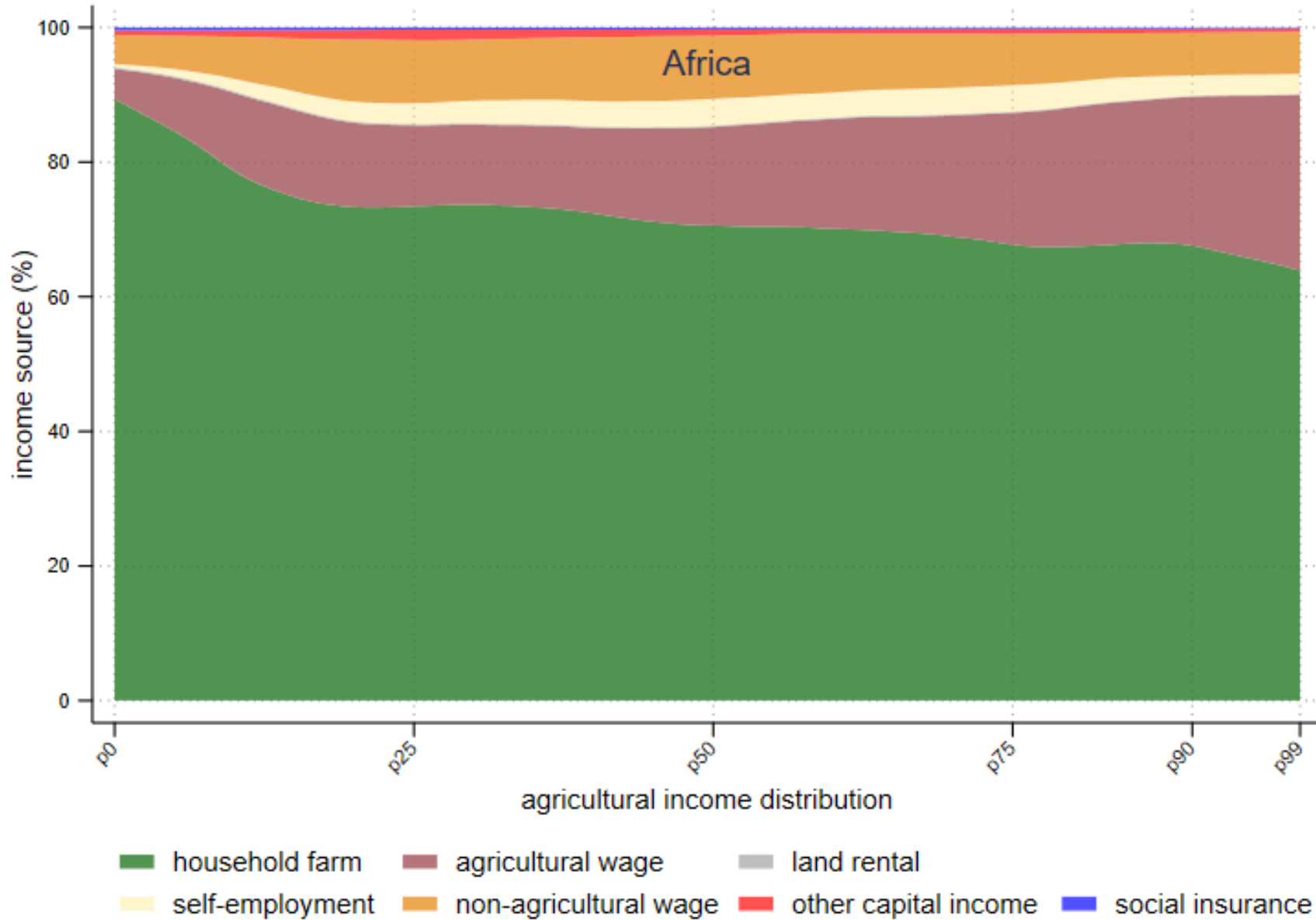
# To fix ideas



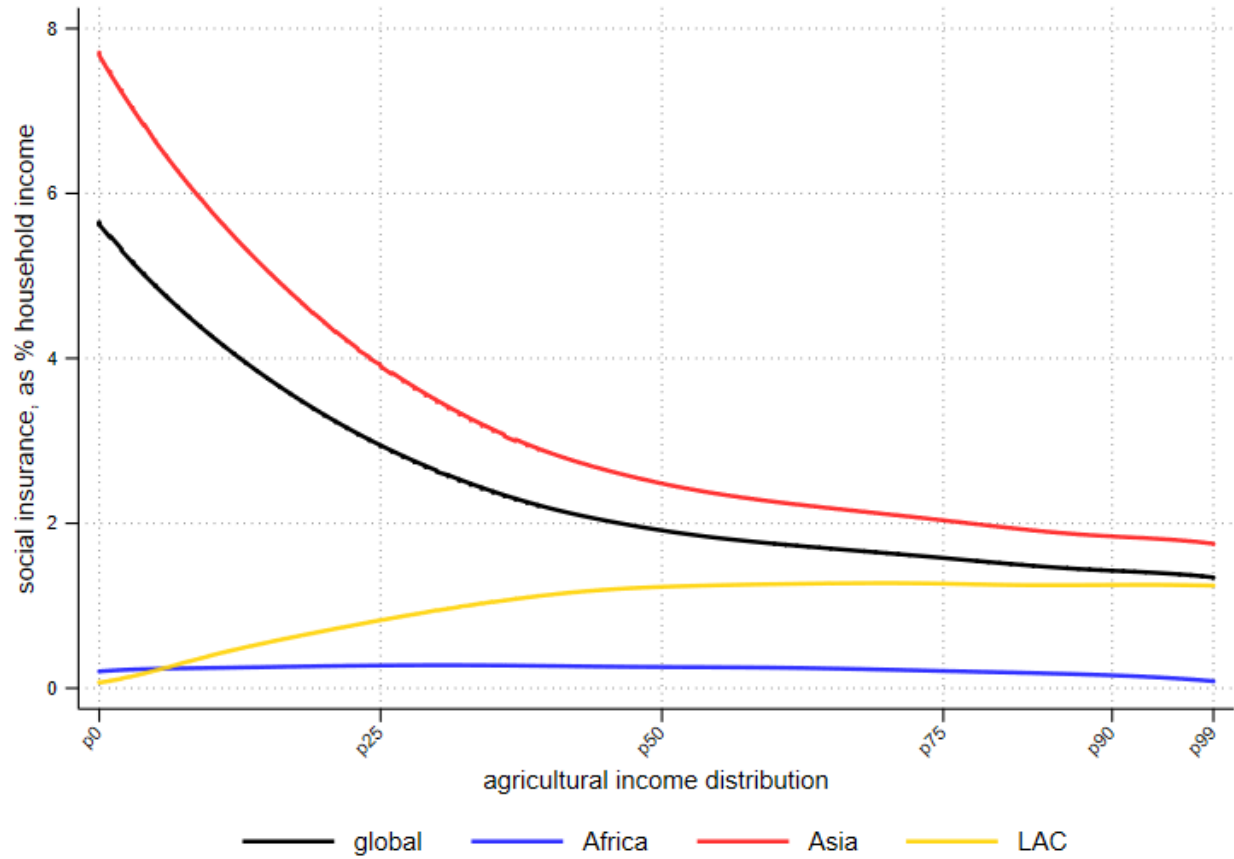
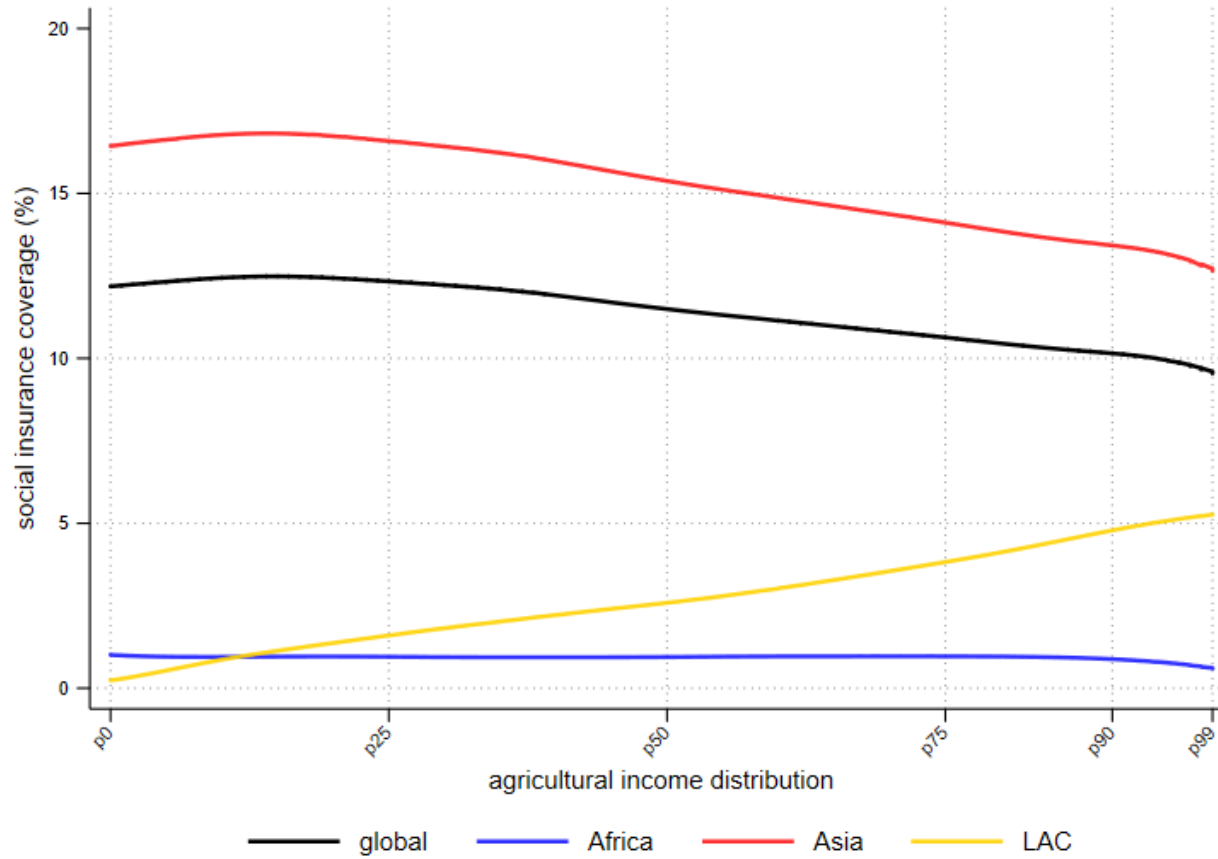
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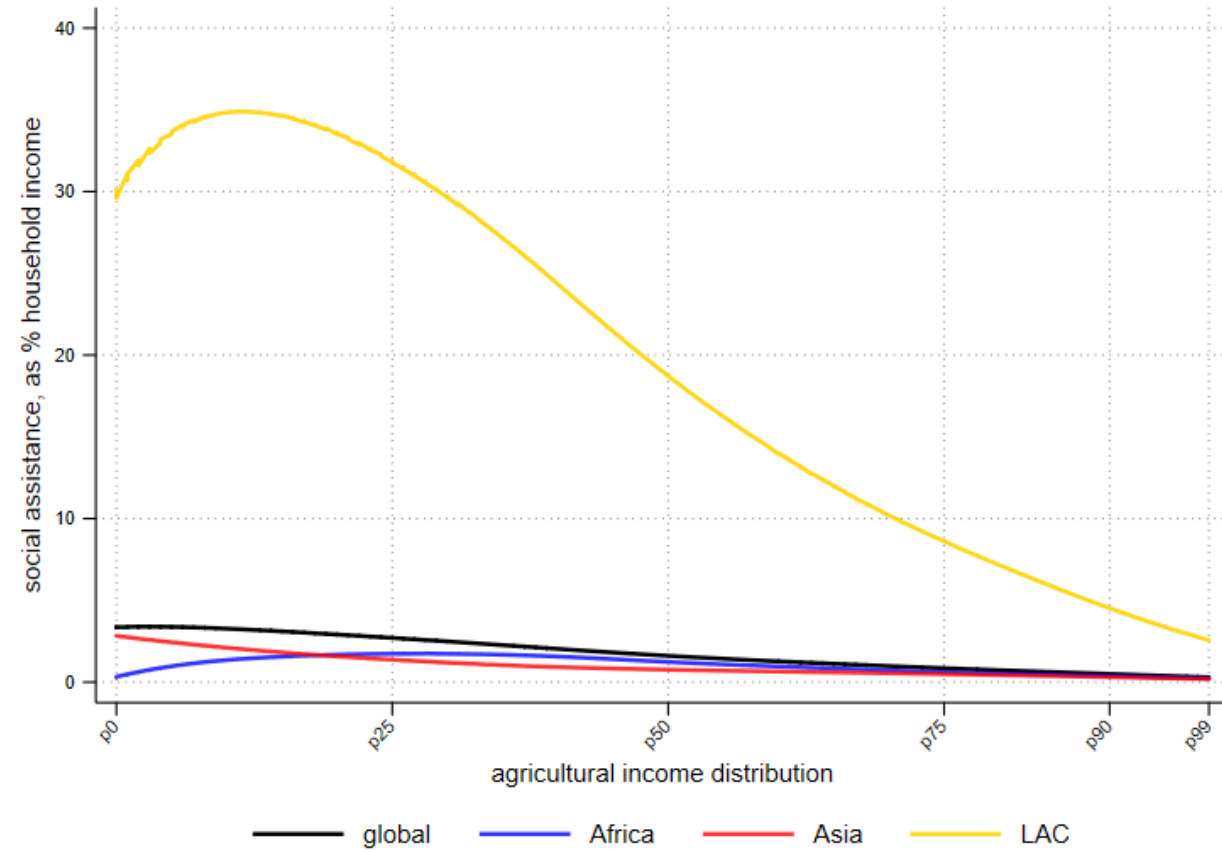
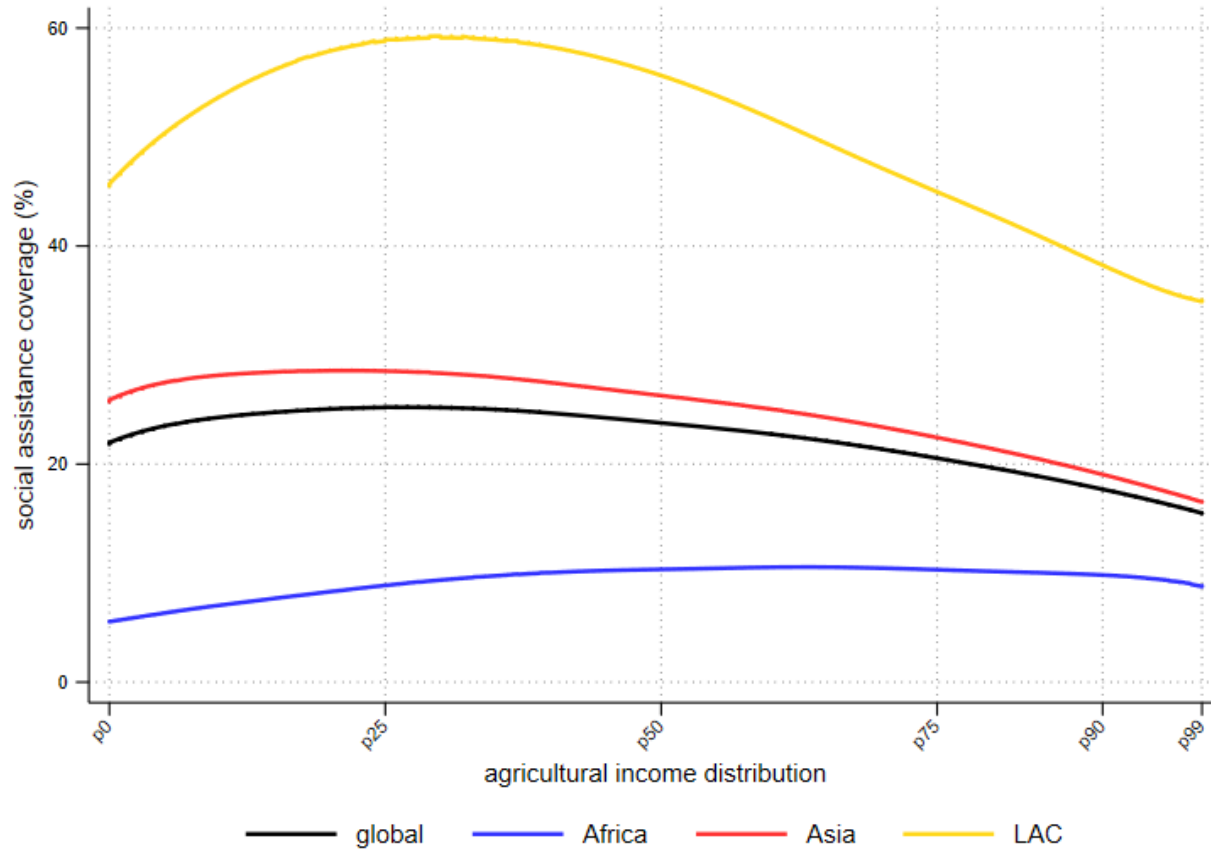
# To fix ideas



# Closing thoughts: social protection



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# Further research

Specific country-year case studies from highest-quality survey microdata

Merge and harmonize widest variety of macroeconomic datasets

Between vs. within contribution of inequality

Typology of agricultural structural transformation

Specific questions on vulnerable populations and timely questions: youth, gender, indigenous, migrant populations; COVID; humanitarian crises

Examination of fiscal policies

Thank you

# Appendix

$$\frac{Y_L}{Y} = \sum \frac{\vartheta_i Y_{Li}}{Y_i}$$

$$V(Y) = \sum \theta_i V(Y_i) + V(\bar{Y}_i)$$

$$y_{ict} = \beta X_{ict} + \alpha_c + \gamma_t + \varepsilon_{ict}$$

where:

income  $Y$ , labor income  $Y_L$

share of workforce  $\theta$  or value-added  $\vartheta$

sector  $i$ , country  $c$ , year  $t$

exogenous shocks and policy variables  $X$ , outcomes  $y$



# Appendix

Country	Bottom 50%	Middle 40%	Top 10%	Gini index
India (2012)	1,2%	28,2%	70,6%	0,82
Bangladesh (2015)	0,0%	31,5%	68,5%	0,84
Pakistan (2010)	1,4%	32,2%	66,4%	0,80
China (2012)	10,0%	38,4%	51,5%	0,64
Vietnam (2014)	7,0%	41,1%	51,9%	0,68
Ecuador (2014)	1,1%	28,6%	70,3%	0,82
Guatemala (2000)	0,0%	22,7%	77,3%	0,88
Ethiopia (2015)	0,4%	28,4%	71,2%	0,83
Gambia (2015)	2,8%	42,5%	54,7%	0,73
Malawi (2016)	5,3%	37,3%	57,4%	0,72
Niger (2014)	0,3%	44,6%	55,2%	0,75
Nigeria (2015)	5,3%	39,1%	55,6%	0,71
Tanzania (2015)	3,3%	32,3%	64,4%	0,77

Source: Bauluz et al (2022)