

# ESSAYS ON INEQUALITY AND POLARIZATION

Empirical Studies in Developing Asia

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- 'Inequality for All' documentary movie (Robert Reich, 2013): Income/wealth gap, middle income class.
- Reduce income inequality within and among countries (SDGs).
- The decline of middle-income class and income polarization.
- Polarization: The sense of belonging within group and heterogeneity across groups.
- Polarization and social problems.

- 1 Micro-econometrics approach
  - Micro-level data should be incorporated (Bourguignon-Ferreira-Leite, 2005).
  - Cross-country differences in inequality are less common.
  - Cross-country  $>$  changes overtime.
  - Developing countries.
- 2 Household complexity
  - Not common as individual level (Bourguignon-Ferreira-Leite, 2008).
- 3 The pattern of polarization

# Research Questions

- To what extent do structural determinants affect the **differences in welfare distribution** between India and Indonesia? (Ch 3)
- What is the relationship between the **informal sector** and **inequality** at individual and household levels in Indonesia? (Ch 4)
- To what extent is **EU tax-benefit microsimulation** (EUROMOD) applicable in Indonesia? (Ch 5)
- What is the effect of **indirect taxation** on welfare distribution in Indonesia? (Ch 6)
- To what extent do structural determinants affect the **differences in welfare polarization** between China, India, and Indonesia? (Ch 7)
- What is the relationship between **ethnicity** and **earnings polarization** in Indonesia? (Ch 8)

## General method: Microsimulation and decomposition techniques

- Heterogeneity of population (socio-demographic, ethnicity, labor market, region, etc).

## Data

- China Household Income Project (CHIP).
- India National Sample Survey (NSS).
- Indonesian Family Life Survey (IFLS).

## HOW?

- Data harmonization across developing countries.
- Welfare generation model.
- Microsimulation and regression-based decomposition.

## Main results

- Differences in expenditure structure and demographic characteristics (mainly education) are the greatest contributor to the inequality gap. Differences in labor market structure are less important (Ch 3).
- China's expenditure structure tends to increase polarization (Ch 7).
- Differences in demographic characteristics can rise or decline the polarization gap, depend on the countries (Ch 7).

## HOW?

- Re-centered influence function (RIF) for Gini index.
- Individual and household levels.

## Main results

- The informal sector tends to increase individual earnings inequality.
- But, the informal sector does not have significant effect at household level.
- Redistributive effect within the household can decrease inequality.

## HOW?

- Feasibility study, including review tax-benefit system and data assessment in Indonesia (Ch 5).
- Simulation of expenditure module in household survey (Ch 6).
- Focus on VAT and excise tax (Ch 6).

## Main results

- EU tax-benefit microsimulation (EUROMOD) can be applied to developing Asia (Ch 5).
- Providing the direction of indirect taxes reform, f.i., tax rates on recreational/leisure activities could be safely increased (Ch 6).



## HOW?

- Re-centered influence function (RIF) for Duclos-Esteban-Ray (DER) polarization index.

## Main results

- Regional characteristics are more relevant than ethnicity itself.
- Strong correlation between ethnic group and regional characteristics.

# Conclusion

- Contribution to micro-econometrics studies, including data harmonization and cross countries analysis.
- Contribution to micro-econometrics studies, by incorporating household complexity.
- Enriching empirical studies in polarization.
- The extension of tax-benefit microsimulation in developing countries.
- Policy implication.

# Thank You