Maternal Health Care Utilisation in Indonesia: Regional Economic Status and Decomposing the Inequalities

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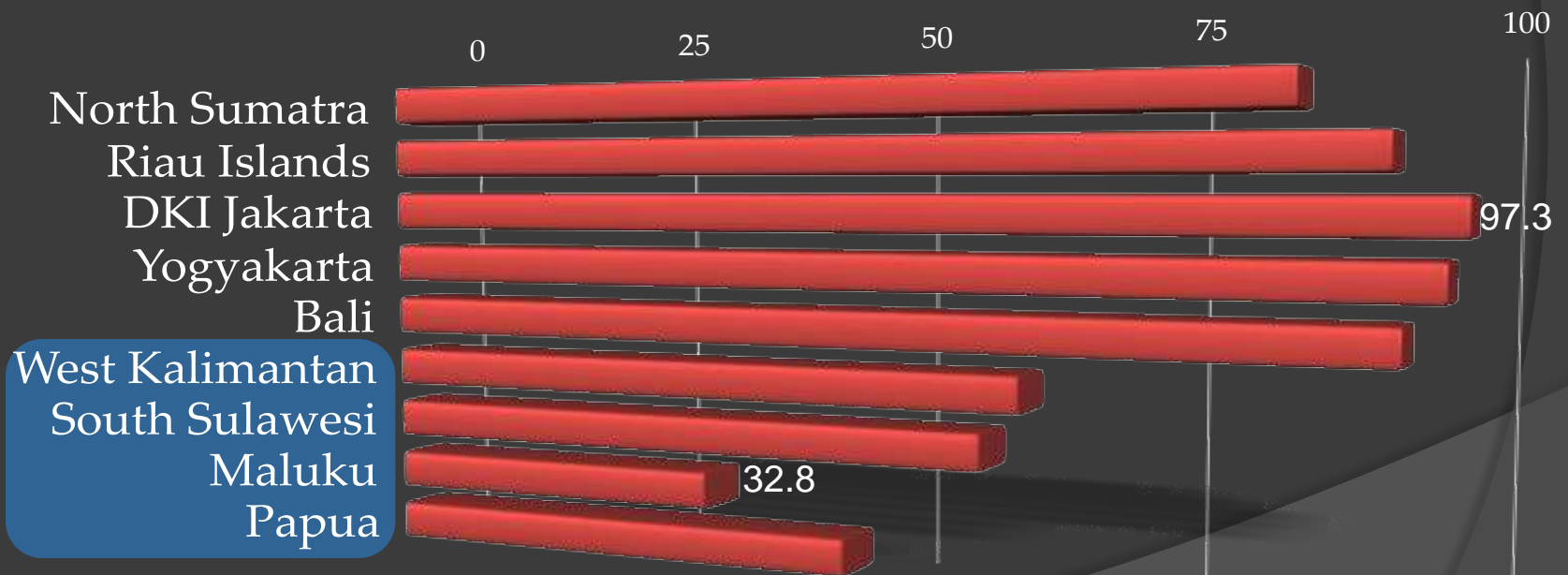Faculty of Medicine – Universitas Gadjah Mada

INDONESIA

Indonesia

Background

High MMR
(228/100,000 live births)

Inequalities
Delivery assisted by skilled birth attendant

North Sumatra
Riau Islands
DKI Jakarta — 97.3
Yogyakarta
Bali
West Kalimantan
South Sulawesi
Maluku — 32.8
Papua

(DHS 2007)

■ percentage delivery assisted by skilled birth attendant

Background

Inequalities

Inequality in maternal health care utilisation

National aggregate does not reflect the true distribution

Who are the most disadvantaged?

External environment:
Region,
Rural vs urban

Predisposing & enabling factors:
Income,
Maternal education,
Maternal occupation,
Media exposure,
Ability to pay,
Women's authority on health
Well being status (HDI)

Supply:
Health resource availability,
Distance to health care,
Availability of female health worker
Health system financial investment/fiscal capacity

Indonesia

Aim of the Study

To explore the inequalities in the utilisation of skilled birth attendant (SBA) in Indonesia

Objectives of the Study

To quantify the extent of the inequalities in SBA utilisation in Indonesia

To identify and quantify the factors contributing to the inequalities

To assess the association between sub-national fiscal capacity and population status of well-being (HDI) with SBA utilisation in Indonesia

Methods (Data)

Demographic Health Survey (DHS)

33 provinces; 32,895 respondents
clustered-, 2-stage sampling

13,891 births

Most recent birth in the last 5-years

Income
Regions and types of residence
Antenatal care
Maternal age
Parity
Health knowledge
Education level
Occupational status
Marital status
Media exposure
Religion
Sub-national fiscal capacity
Well being status (HDI)

Outcome:
Delivery assisted by skilled health professional

Methods (Analysis)

Degree of inequality	▷	**concentration index** $$C = \frac{2}{\mu}\,\mathrm{cov}\left(h,r\right).$$
Multivariate analysis of skilled birth attendant utilisation	▷	**logistic regression** $$\ln\left(\frac{\hat{p}}{1-\hat{p}}\right) = B_0 + B_1 X$$
Decomposing determinants of socioeconomic inequalities	▷	**decomposition analysis** $$C = \sum\nolimits_{k}(\beta_k \bar{x}_k / \mu)C_k + GC_\varepsilon / \mu$$

Methods (Analysis)

Regions of Indonesia:

Java – Bali Urban

Java – Bali Rural

Sumatra Urban

Sumatra Rural
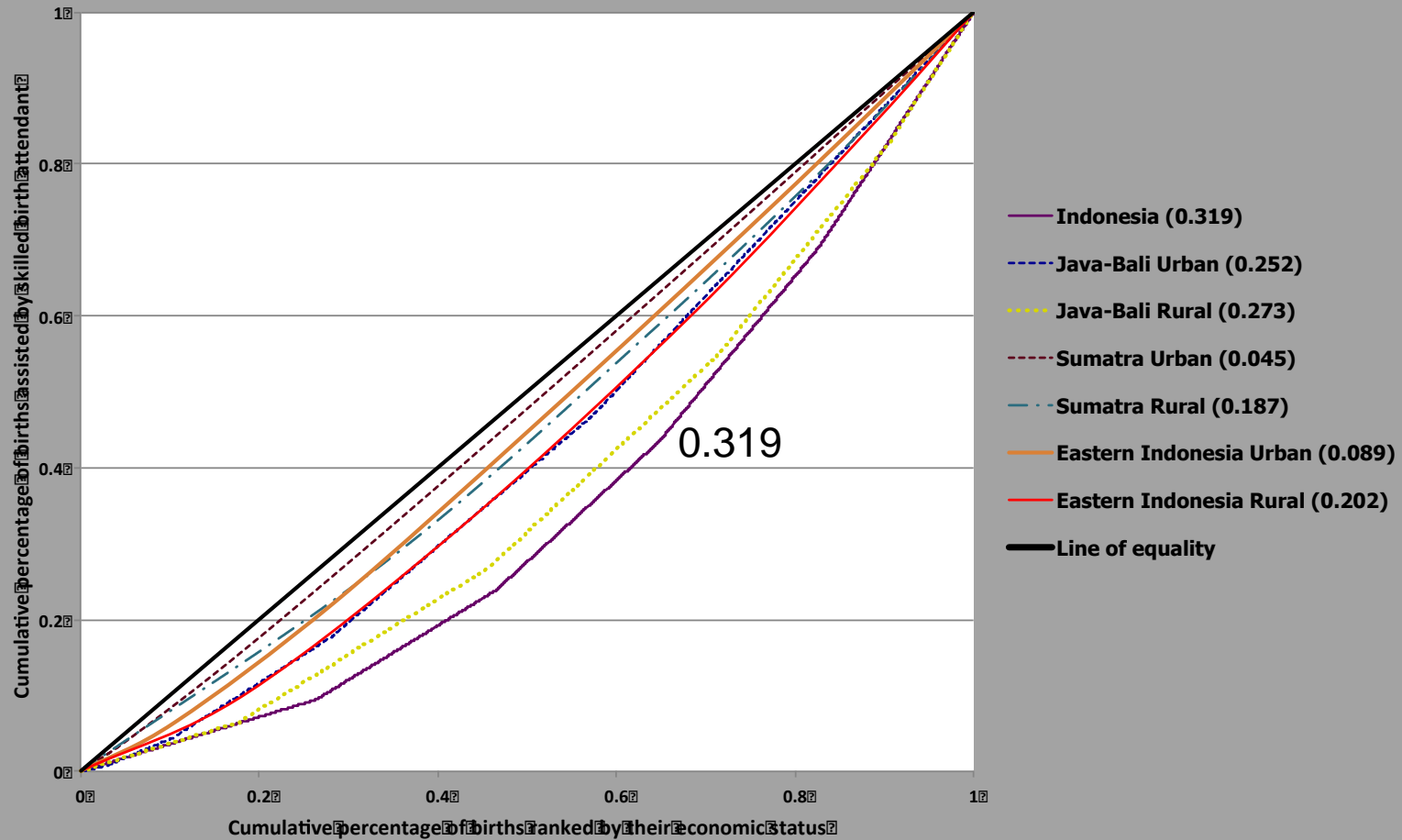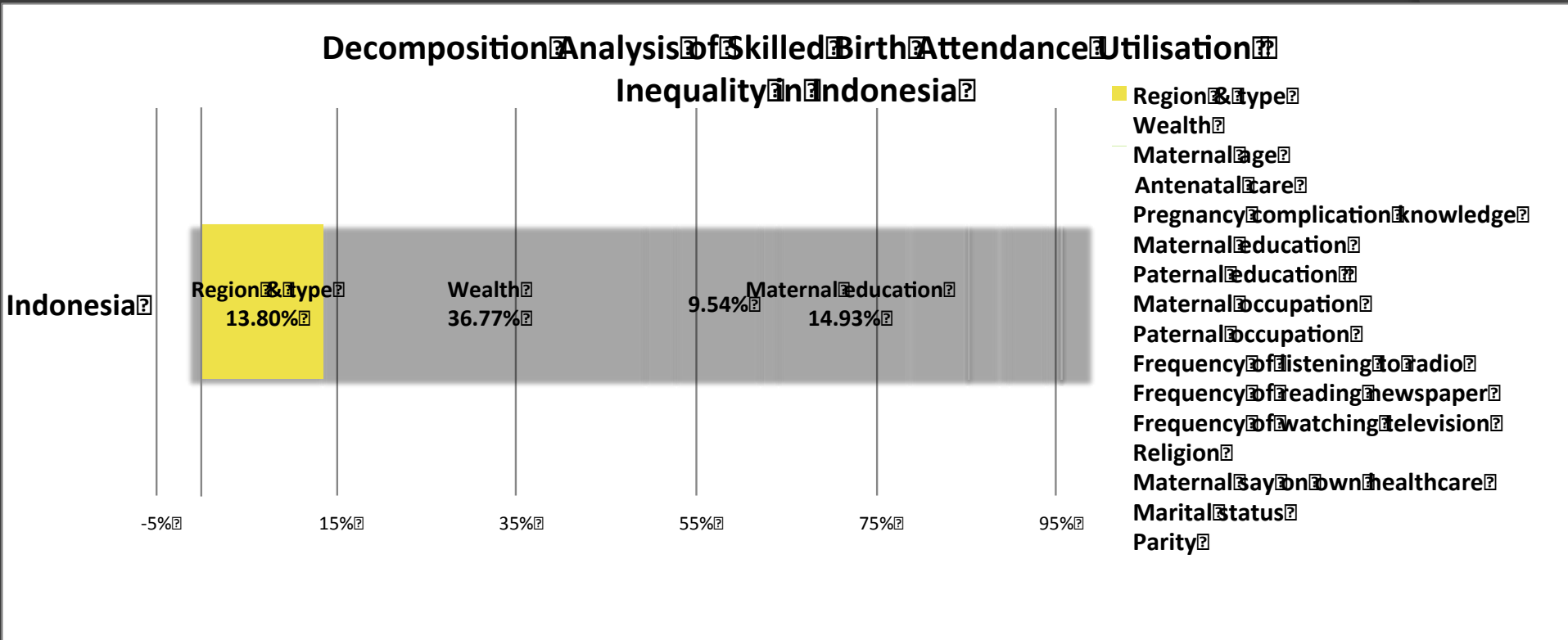
Eastern Indonesia Urban

Eastern Indonesia Urban

Results

Socioeconomic Inequalities in Maternal Health Care Utilisation

Concentration Curve for Skilled Birth Attendant Utilization in Indonesia and Its Regions
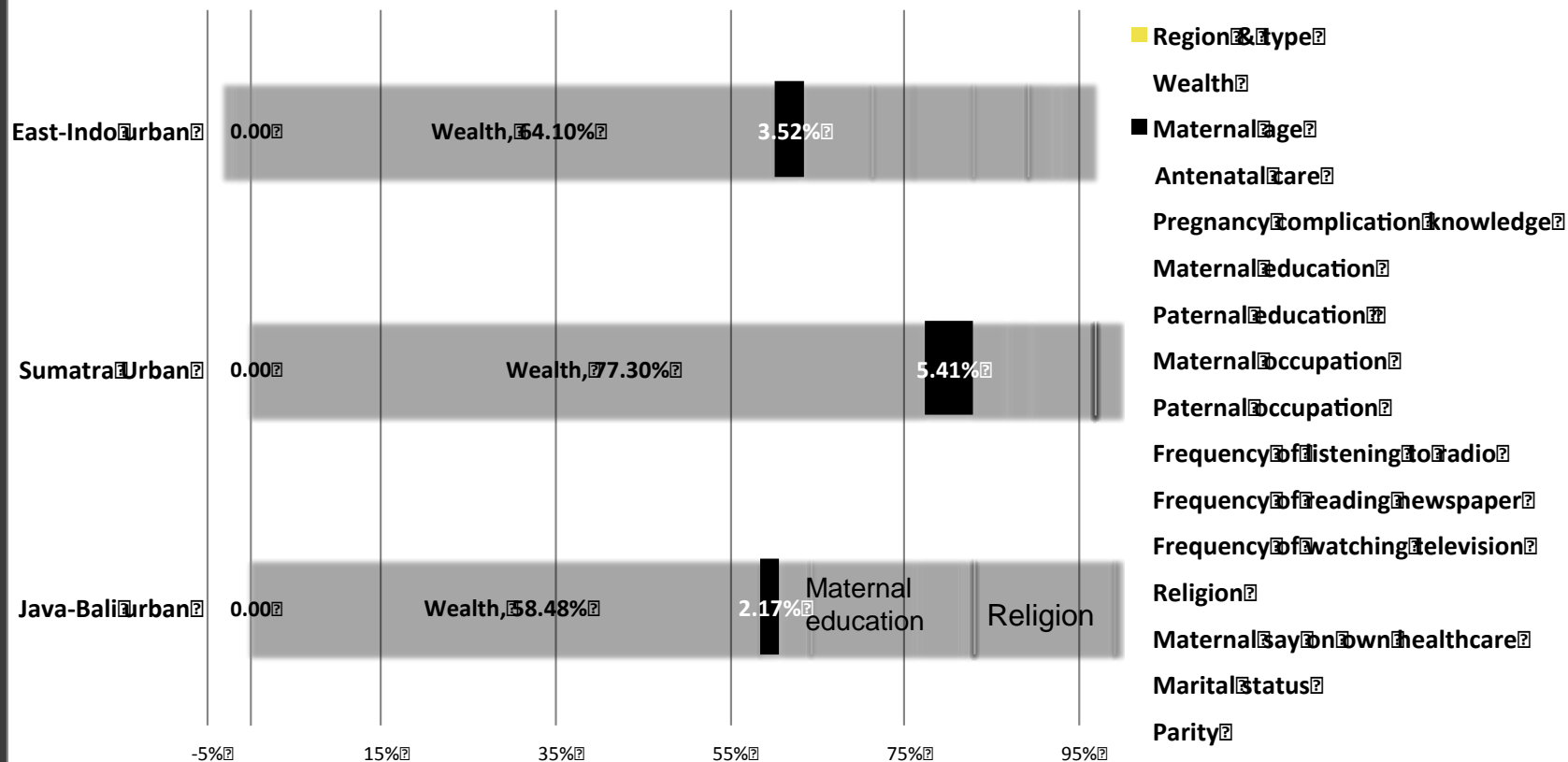
Decomposition Analysis

Decomposition Analysis of Skilled Birth Attendance Utilisation Inequality in Indonesia
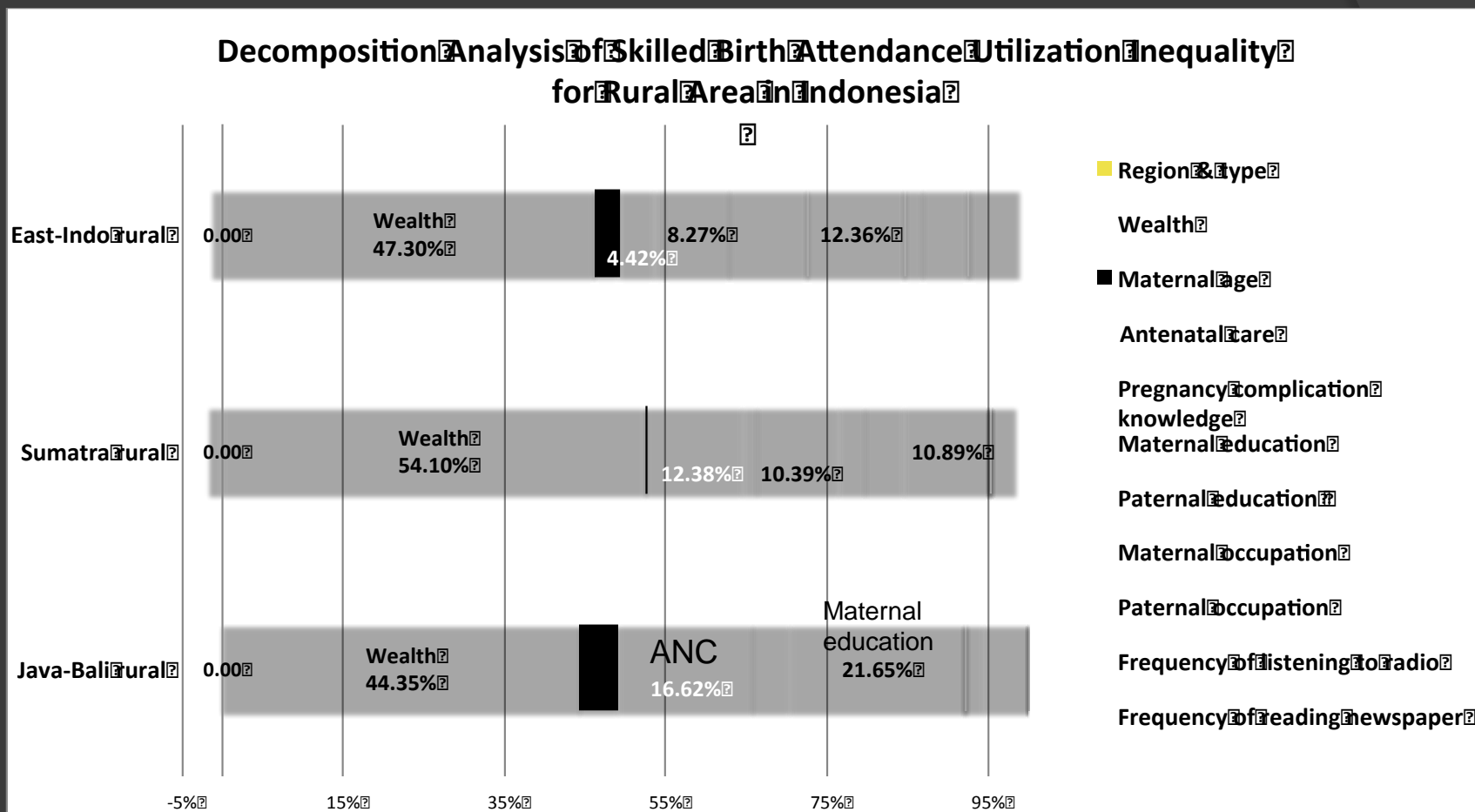
Decomposition Analysis

Decomposition Analysis of Skilled Birth Attendance Utilization Inequality for Urban Area in Indonesia

wealth: poorest (ref), maternal age: 25-35 (ref), ANC: <4 ANC visit (ref), pregnancy knowledge: no knowledge of pregnancy complications (ref), maternal/paternal education: primary school or less (ref), maternal/paternal occupation: unemployed (ref), frequency of media exposure: never exposed (ref), religion: Islam (ref), say on own health care: have no say (ref), marital status: currently married (ref), parity: 2-children or less (ref).

Decomposition Analysis

Decomposition Analysis of Skilled Birth Attendance Utilization Inequality for Rural Area in Indonesia

wealth: poorest (ref), maternal age: 25-35 (ref), ANC: <4 ANC visit (ref), pregnancy knowledge: no knowledge of pregnancy complications (ref), maternal/paternal education: primary school or less (ref), maternal/paternal occupation: unemployed (ref), frequency of media exposure: never exposed (ref), religion: Islam (ref), say on own health care: have no say (ref), marital status: currently married (ref), parity: 2-children or less (ref).

Regional economic status & HDI

Dependent variable: Skilled birth attendant utilisation
linear regression

	Coef.	95% Confidence Interval	P-value
Fiscal capacity	0.802	(2.60) – 4.20	0.634
HDI	3.928	2.31 – 5.55	<0.001

Conclusion

- Inequality in skilled birth attendant utilisation in Indonesia
- Different levels of inequalities among regions
- Contributions by socioeconomic level varies
- Wealth as major contributor to SBA utilisation inequality
- Other important determinants: maternal education, antenatal care
- Increasing human well-being for better health care utilisation
- The use of fiscal space is not always for health investment

Implications

- Improve people's daily living conditions
- Distribution of resources, targeting poorer population
- Improve other socioeconomic status: education, occupational status, cross-sectoral approach
- Different levels of inequality and SES contribution - need for region-specific interventions
- In the light of decentralization, better investment on health at sub-national level

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Thank You