



POVERTY & LIVELIHOOD MAP OF INDONESIA 2015

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BACKGROUND ON THE ORIGIN OF THE MAP

- Constraints on poverty reduction programs and targeting of social assistance: identifying geographical location of the poor.
- Using Small Area Estimation (SAE) method (Elbers et al, 2003) to estimate poverty at lower levels, e.g. subdistrict and village levels.
- SMERU's effort on poverty map:
 - Pilot Study (2001-2003)
 - Poverty Map of Indonesia (2003-2005)
 - Poverty and Livelihood Map of Indonesia (2012-2014)

BACKGROUND

UPDATING POVERTY MAP

- Small Area Estimation requires survey and census data to correlate to the same year.
- Challenges: poverty is a dynamic nature but census is conducted once in ten years.
- To estimate poverty at lower levels in the interval between censuses?

METHODOLOGY COUNTERFACTUAL

$$\ln y_{h,census}^{cf} = \Psi_{h,census}(X_{h,census}\beta_{now} + u_{h,now}^r)$$

- Betti et al, 2013

COUNTERFACTUAL MODEL

- We estimated the factors that significantly affect current household consumption, then used the predicted coefficients to estimate the census-year household consumption, and weighted it.
- Data sources:
 - Household surveys: Survei Sosial Ekonomi Nasional (Susenas) 2010 and 2015

$$\ln y_{vh} = X_{vh}\beta + n_v + \varepsilon_{vh}$$

- Elbers et al, 2003

■ SMALL AREA ESTIMATION MODEL

- Estimation of household and community characteristics with expenditures per capita based on household survey.
- Simulation of expenditures per capita for the whole households based on population census and estimation of poverty rate for village and subdistrict levels based on national poverty line (GKN) and US\$3.1 PPP (*purchasing power parity*) using provincial urban/rural model (totaled to 65 estimation models).
- Data sources:
 - Counterfactual household consumption from household surveys (Susenas 2010 and 2015)
 - Population census (Sensus Penduduk 2010)
 - Village census (Podes 2014)

RESULTS POVERTY INDICES

Number of observations:

- Village : 75,267
- Subdistrict : 6,599

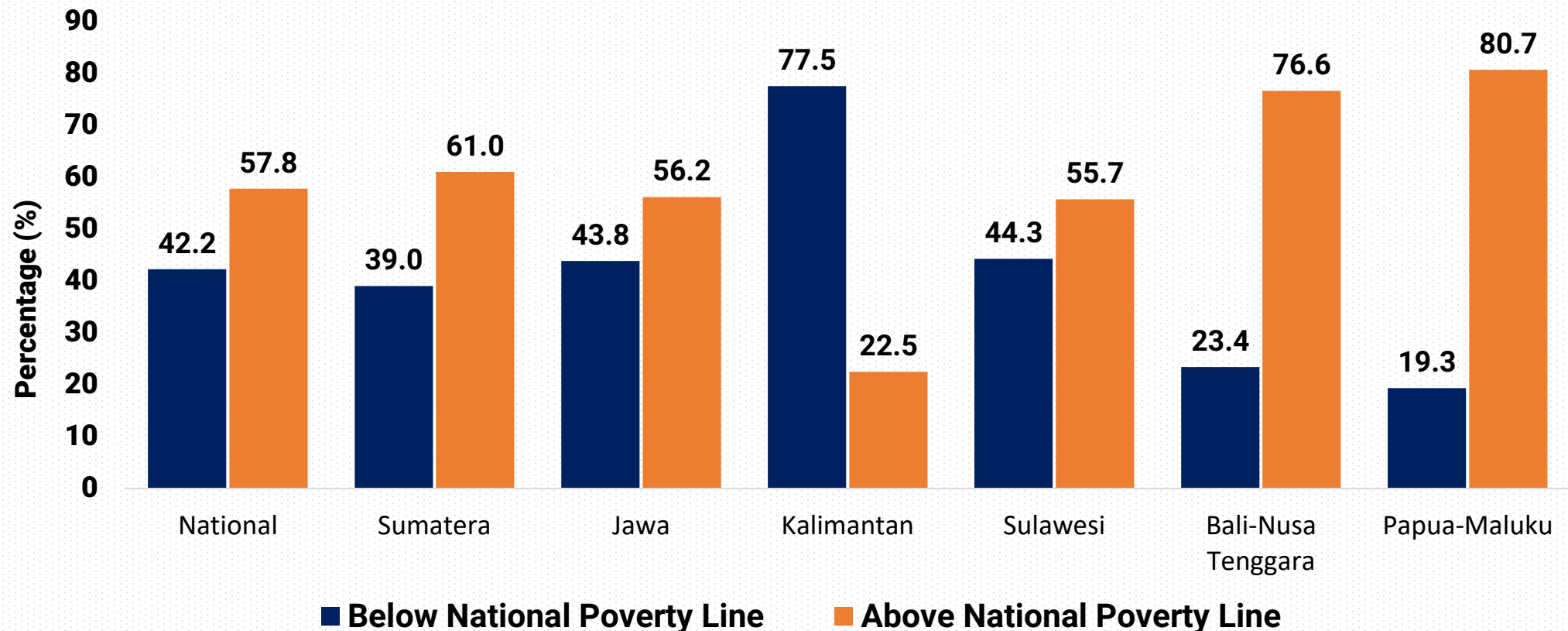
Table:

		Village		Subdistrict	
		Mean	Std. Dev	Mean	Std. Dev
GKN	Poverty Rate	0.1602	0.1042	0.1566	0.1009
	Poverty Gap	0.0371	0.0343	0.0370	0.0340
	Poverty Severity	0.0133	0.0128	0.0135	0.0129
US\$3.1 PPP	Poverty Rate	0.3927	0.2101	0.3810	0.2043
	Poverty Gap	0.1132	0.0958	0.1112	0.0936
	Poverty Severity	0.0464	0.0430	0.0461	0.0426
Inequality	Gini Index	0.2568	0.0162	0.2631	0.0151

RESULTS

VILLAGE POVERTY RATES

Distribution of Village Poverty Rates by Island In Comparison with the National Poverty Rate



RELIABILITY

RELATIVE STANDARD ERROR

Table:

	Village		Subdistrict	
	Poverty Rate (GKN)	Poverty Rate (US\$3.1 PPP)	Poverty Rate (GKN)	Poverty Rate (US\$3.1 PPP)
Mean	0.7972	0.6135	0.7565	0.6000
Std. Dev.	0.3172	0.1763	0.2478	0.1566
Min	0.0718	0.0042	0.1331	0.0182
Max	10.1504	1.0087	3.1091	0.9830
RSE < 0.25	0.24	3.45	0.05	3.33

Notes:

- If $RSE > 0.25$ hence the point estimate should be used with caution

OTHER INDICATOR SUSTAINABLE LIVELIHOOD

- Central to the approach are people's assets (natural, physical, human, financial, and social), the major complementary building blocks for their livelihoods. Poverty is an outcome of people's livelihoods (Erenstein et al, 2009).

Table:

Groups	Indicators
Natural Capital	Disaster experiences, % of households with safe drinking water source.
Financial Capital	Cooperatives, banks, and the availability of credit facilities.
Physical Capital	Village road quality, market availability, having electricity, improved sanitation, and gas or electricity as a source of cooking fuel.
Human Capital	School participation, % of population by employment sectors, coverage of immunisation, dependency ratio.
Social Capital	Mass violence, NGO availability, number of street children gathering location.

OTHER INDICATOR NARRATIVE DESCRIPTION

VILLAGE NARRATIVES

The village-specific information provides additional socioeconomic information about the village in narrative form. The qualitative information includes village history, employment sector, topography, and access to infrastructure.

DATA SOURCES

The data was compiled from SMERU's field reports, researchers' field notes during field research, publications in the news media, and local government websites, for 50 villages selected from SMERU's recent study sites.



THANK YOU

<http://povertymap.smeru.or.id>

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