IMPROVING RURAL ACCESSIBILITY IN INDONESIA: FUEL SUBSIDY VERSUS INFRASTRUCTURE DEVELOPMENT

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OUTLINE

INTRODUCTION

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INTRODUCTION
RESEARCH QUESTION

- infrastructure $\uparrow \Rightarrow$ cost $\uparrow$ Hartojo et al. (2022)
- This paper builds on literature on rural development and fossil fuel subsidy in Indonesia. Related literature has indicated that both subsidizing fuel and inter-government transfer has contributed to improving accessibility in rural areas.
- This research measures the magnitude of these mechanisms and tests whether they are complementary or supplementary. From a political economy perspective, infrastructure development is managed by the government directly, while the fuel subsidy is managed through the National Oil Company (NOC) as a delivery agent Ichsan, Lockwood, and Ramadhani (2022). This research exercises the cost-benefit of the options to substantially inform decision-makers.

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INSTITUTIONAL CONTEXT AND CONCEPTUAL FRAMEWORK
TRANSPORTATION STRUCTURE IN RURAL AREA

► Developing countries have been focusing on decentralization and local government reform with the belief that they are **more efficient** in bringing local development (Martinez-Vazquez, Lago-Peñas, and Sacchi (2017))

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INSTITUTIONAL CONTEXT AND CONCEPTUAL FRAMEWORK
FOSSIL FUEL SUBSIDY REGIME

This frame has a custom title and a custom subtitle.[1]

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[1] This is a footnote. See also Hartojo et al. (2022).

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INSTITUTIONAL CONTEXT AND CONCEPTUAL FRAMEWORK
DECENTRALIZATION OF DEVELOPMENT

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[2]This is a footnote. See also (Hartojo et al. 2022).

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INSTITUTIONAL CONTEXT AND CONCEPTUAL FRAMEWORK

DECENTRALIZATION OF DEVELOPMENT

(a) Village status in 2014

(b) Village status in 2018

Figure 1. Indonesia's VDI's status

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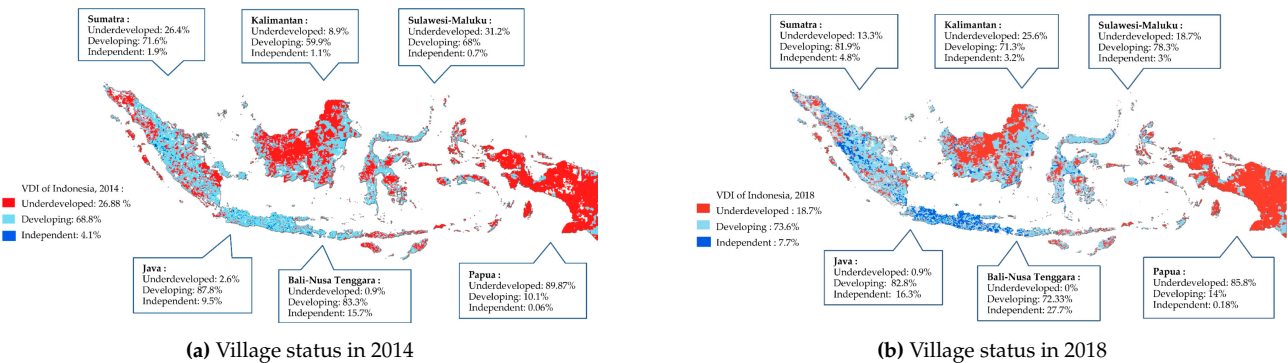References

DATA
DATA DESCRIPTION

▶ I obtained the **Village Potential Statistics** data for the year 2014 and 2018 from Indonesia's Central Bureau of Statistics complemented with village fund transfer data form Ministry of Village Development.

▶ I measure rural accessibility using the **unit transportation cost** (in Rp/km) of each individual village. [3]

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[3]I define unit transportation cost, y_{it}, as the **transportation cost** from the village office to the sub-district office (in thousands Rp), c_{it}, divided by the **distance** from the village office to the sub-district office (in km), d_{it}.

$$y_{it} = \frac{d_{it}}{c_{it}} \tag{1}$$

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SUMMARY STATISTICS

Table 1. Summary statistics of main variables.

	2014 Mean	S.D.	Min	Max	Obs.	2018 Mean	S.D.	Min	Max	Obs.
Transportation Cost										
Unit transportation cost in 000s Rp./km	3.02	20.75	0.00	1000.00	64935	2.99	8.09	0.00	800.00	64952
Natural Disaster										
Landfall occurence average per year	0.10	0.50	0.00	9.00	64935	0.14	0.61	0.00	9.00	64952
Earthquake occurence average per year	0.05	0.40	0.00	9.00	64935	0.21	0.92	0.00	9.00	64952
Infrastructure										
Number of PLN electricity user household	679.78	868.28	0.00	19714.00	64935	769.43	984.14	0.00	23755.00	64952
Number of Junior High School	0.55	0.83	0.00	22.00	64935	0.61	0.88	0.00	12.00	64952
Number of Senior High School	0.28	0.71	0.00	40.00	64935	0.34	0.77	0.00	13.00	64952
Inter-government Transfer										
Revenue from village fund transfer	115.39	203.67	0.00	7792.00	64935	117.55	127.06	0.00	13662.00	62738

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Results
Main Results

Items
- ► Cats
  - • British Shorthair
- ► Dogs
- ► Birds

Enumerations
1. First
   1.1 First subpoint
2. Second
3. Last

Descriptions

Apples Yes
Oranges No
Grappes No

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RESULTS
ROBUSTNESS

Items
- Cats
  - British Shorthair
- Dogs
- Birds

Enumerations
1. First
   1.1 First subpoint
2. Second
3. Last

Descriptions

Apples	Yes
Oranges	No
Grappes	No

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CONCLUDING REMARKS

Table 2. Largest cities in the world (source: Wikipedia)

City	Population
Mexico City	20,116,842
Shanghai	19,210,000
Peking	15,796,450
Istanbul	14,160,467

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Mexico City	20,116,842
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Ichsan, Muhammad, Matthew Lockwood, and Maghfira Ramadhani. 2022. "National oil companies and fossil fuel subsidy regimes in transition: The case of Indonesia." *The Extractive Industries and Society* 11: 101104.

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