

Global prices and internal migration: Evidence from the palm oil boom in Indonesia

Previously titled "Global prices, trade protection, and internal migration: Evidence from Indonesia"

Rizki Nauli Siregar (University of Mainz)

link to paper: bit.ly/Siregar-PalmOil



email: rsiregar@uni-mainz.de

Motivation

- Global prices, especially commodity prices, matter.
 - World shocks, stemming from commodity market, explain on average 33% of output fluctuations in individual countries (Fernandez et al., 2017).
- Trade shocks may provide incentives for labor to move.
 - Most studies on the impact of trade shocks to labor, e.g., Autor, Dorn, and Hanson (2013), assume and find that trade shocks are localized.
 - Most studies in this stream of literature also use trade shocks that are disadvantageous to local income. (Pavcnik, 2017)
 - 1 out of 10 people in the world is an internal migrant (Lucas, 2015).

Context

Indonesian economy in the 2000s:

- The economy faced a commodity boom to its exports commodity, including palm oil.
- Palm oil experienced price-driven export growth.
- The country also has regionally-representative data that allows us to study regions.

Theoretical Framework

- Measurement of price shocks
 - Environment:** 2-sector Specific Factor Model and multi-region economy as in Redding (2016)
 - Proposition:** impact of price shocks to income depends on the share of the sector that experiences the shocks.
- Welfare changes estimation
 - Environment:** continuum of goods, multi-region economy (Redding, 2016)
 - Proposition:** decomposition of welfare changes into gains from trade and gains from migration.

Results

Districts exposed to palm-oil price shocks had higher real expenditure per capita.

They also received more (net inward) migration.

Research Question

How do regions respond to price shocks in the presence of internal migration?

Stylized Facts

[Fact 1] Agricultural sector had higher importance in pre-shocks poorer district

Empirical Setup

This paper: exploits the regional variation of potential share of palm-oil in the face of uniform price shocks from the world market.

Empirical strategy: difference in difference, with exposure to palm-oil price shocks as the treatment.

Main Findings & Contribution

- Facing trade shocks that are advantageous to local income, people respond by moving to booming regions, i.e., trade shocks are no longer localized.
- Internal migration has a role in diffusing local windfall to the rest of the economy.
- I find substantial gains from internal migration.

Crops	2000		2010	
	mill. ha	%	mill. ha	%
Rice	12	37%	13	33%
Oil palm	2	6%	6	14%
Maize	4	11%	4	10%
Rubber	2	8%	3	9%
Coconuts	3	8%	3	7%

[Fact 2] Rice and palm oil became the two main crops.

[Fact 3] Districts face upward-sloping labor supply

Exposure to palm-oil price shocks

More Results and Conclusions

- Palm-oil price shocks benefited producing districts with higher purchasing power.
 - Temporary,
 - Spurred through extensification in palm oil sector,
 - Internal migration diffuses the shocks.
- There is evidence of spillovers of the shocks to non-exposed districts.
- One-third of the welfare gains in 2005 to 2010 is explained by internal migration.