

# Discussion on “Spatial Linkages and the Uneven Effects of a Commodity Boom” by Benguria, Saffie and Zhang

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**Trade and Uneven Development Conference**

September 13th

## The paper

- Very **interesting** paper!
- Measures the impact of the global increase in commodity prices in **inequality** across **workers** and **regions** in **Brazil** and explore how **spatial linkages** shape these responses in wages and employment
- In a nutshell,
  - The exposure to the commodity shock is heterogeneous across regions
  - There is an expansion of labor demand, especially for unskilled labor, in the regions positively affected
  - Increases in wages incentivize migration to “booming” regions, increasing labor supply
  - As income increases and population expands, the local price index increases reducing the (“nominal”) wage gains
  - The commodity shock affects the distribution of economic activity across geographies and industries, and the benefits of the shock are unevenly distributed across factors and regions
  - The spatial linkages, through migration and trade, **spread** the gains from the commodity shocks to **less exposed** regions

## The Key Parameters in the Model

- (↑ Labor Demand) Labor share in commodities  $\rightarrow \alpha$
- (Bias towards unskilled workers) The skill intensity in production  $\rightarrow \phi_i^j$
- (↑ Labor Supply) The parameter governing mobility across regions and sectors  $\rightarrow \sigma$ 
  - Might be interesting to allow for differential elasticities across sectors, regions **AND** types of labor
- (↑ in Local Price Index) Elasticity of substitution between tradeables and non tradeables in consumption  $\rightarrow \gamma_G$

## The Key Parameters in the Model

- Since these elasticities are **key** for the **quantitative implications** of the model, both for the transition and the new steady state of the economy, I would suggest the following calibration strategy (similar to Rodriguez-Clare, Ulate, Vasquez 2024)
- ① Compute impact of commodity price exposure on population, skill intensity in different sectors, skill premium, non-tradeable employment and employment in the commodity sector in the **data**

$$\Delta Y_r = \beta_0 + \beta^Y \Delta p_r + u_r$$

- ② Solve model given some parameters and run same regressions on the **model-generated data**
- ③ Choose the **values** of the parameters that **match** these three empirical **regression coefficients**

# What About the Bust?



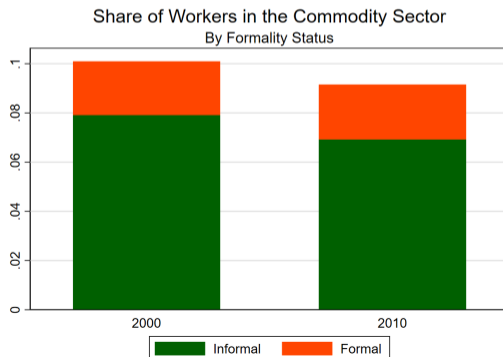
Figure: Global Commodity Price Index (IMF)

## What About the Bust?

- Are there effects of the commodity price shock that **persist** once prices go down?
- Generally, in these class of models, wages go up in the short-run, and then as labor supply adjusts they go back down (not all the way) in the long-run
  - ⇒ it is hard to generate persistent and gradual wage responses
- If empirically, the dynamics of employment and the skill premia across space, suggest that effects are persistent it might be worthwhile to **add capital** as in Kleinman, Liu and Redding (2023) or Bilal and Rossi-Hansberg (2023)

## Informality in the Production of Commodities

- Informality is sizable in Brazil, especially in primary sectors (see work by Ulyssea and coauthors)
- In the Census, one can classify workers on whether they have a social security card or not
- A rough calculation points towards **80% of the workers** in the commodity sector being **informal**
- Since the dynamic hat algebra **conditions** on the initial observed allocation and wages, the counterfactuals are sensitive to the **observed** data



## Other Comments

- Can the model be expanded to allow for the usual narratives related to resources curses and Dutch diseases? (e.g. Krugman 1987 JDE)
- Can favorable developments in commodity prices lead to permanent productivity losses of other sectors and regions, and reduce aggregate welfare in the long run?
- For example, in another context in Brazil, we find that **industrialization** induced by new technologies in agriculture can **reduce** manufacturing **TFP** in the long-run due to the skill bias of the reallocation (Bustos, Castro-Vincenzi, Mestieri, Monras and Ponticelli 2024)



**Great work, looking forward to reading the next version!**