



# Markets and Development Initiative

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## ABOUT

**The Markets and Development Initiative**, hosted by the Economic Growth Center, brings together Yale economists from a range of subfields to explore how the structure and functioning of markets shape economic growth and development in low- and middle-income countries (LMICs).

## MOTIVATION

Some of the most important policy issues facing LMICs today relate to market dynamics: how agricultural, educational, energy, financial, manufacturing, and other markets can best be designed and regulated to promote entrepreneurship, spur firm growth, and drive economic development. A large body of research has shown that market failures and poor public policies can hinder firm productivity – yet empirical research on how market dynamics interact with firm decisions remains nascent, especially in LMICs.

By cultivating collaboration among a diverse network of economists, the Markets and Development Initiative brings together the methods and approaches from a set of cross-cutting subfields within economics, namely Industrial Organization (IO), trade, and development economics. The initiative's goal is to combine a deep understanding of markets in LMICs with micro-empirical evidence and an understanding of local institutions, in order to shed new light on the power of policy to shape markets for economic growth and development.



## THEMATIC AREAS

**Firm size and productivity:** Firms in LMICs tend to be small and inefficient: many are born, fail to grow, yet — in contrast to advanced economies — rarely exit despite their lack of productivity. What are the market dynamics and possible distortions that can explain these patterns? Both IO and trade models are helpful for exploring such complex questions — as is the literature on manufacturing productivity — while also helping to address concerns around data quality and institutional context. In particular, an important research frontier in this area is empirical work that explicitly connects policy choices to firm productivity.

**Market structure, competition, contracting, and trade:** What obstacles to trade and market integration are most important for LMIC governments to address? Recent work in development economics, often combining detailed data with IO-based models, has provided useful empirical grounding to explore this question. In particular, such research has focused on the tools and technologies that can help small firms in LMICs overcome contracting failures.

**Environmental regulation:** Policymakers in LMICs are often reluctant to strictly enforce environmental regulations, despite the clear economic rationale that misaligned incentives and market failures lead to negative externalities. Part of the challenge is that regulations in LMICs are often enforced in a traditional “command-and-control” manner, which can entail high costs and uncertain efficacy. To deepen our understanding of these issues, faculty affiliates of the Markets and Development Initiative have studied in detail how firms respond to environmental regulations, as well as how emissions trading programs might reduce the cost of regulation for firms. Future work may explore the efficacy of non-traditional regulations, such as market-based regulations or distributed monitoring.

**Energy markets:** Energy markets are often subject to regulation or direct government intervention, given that they are prone to monopoly and can produce large negative externalities in terms of air pollution and emissions that contribute to climate change. Moreover, in many LMICs energy subsidies are a means of redistribution to the poor, since energy costs often represent a significant expenditure for households and small enterprises. The Markets and Development Initiative explores how LMIC governments can play an effective role in regulating energy markets.

**Markets for financial services:** IO tools are ideal for exploring questions of market design in financial services. For instance, it is well known that increased access to mobile phone and 3G technology in LMICs has had important economic and development benefits, including gender employment effects — yet less is known about their effects on financial inclusion, or about mobile technology’s deep integration with other goods and services markets. Likewise, in the banking sector, policymakers in LMICs frequently regulate bank branch entry — but until recently, evidence examining the impacts of such regulations at the market level has been limited.



## SELECT RESEARCH IN PROGRESS

### Firm size and productivity

#### TRADE IN THE PRESENCE OF INFORMALITY, LABOR MARKET FRICTIONS, AND REGULATIONS

**How does trade affect economic outcomes in the presence of informality?** Using data from Brazil, Penny Goldberg and co-authors develop a framework for evaluating the role of trade in contexts with large informal sectors, yielding new insights on trade's effects on the labor market, productivity, welfare, and wage inequality. The study has six key findings. (1) While informality in the non-tradable sector may increase as an economy opens up to trade – depending on the starting point and the extent of trade liberalization – informality in the tradable sector is reduced. (2) The productivity gains from trade are understated when the informal sector is omitted. (3) Trade openness leads to large welfare gains even when informality is repressed. (4) Repressing informality increases productivity, but at the expense of employment and welfare. (5) The effects of trade on wage inequality are reversed when the informal sector is included in the analysis. (6) The informal sector works as an “unemployment buffer” but not a “welfare buffer” in the event of negative economic shocks. Future work may explore the transition dynamics associated with various policy changes.

### Market structure, competition, contracting, and trade

#### DISTRIBUTIONAL EFFECTS OF INDIAN AGRICULTURAL INTERVENTIONS

#### How do government programs that distort prices in agricultural markets affect producers and consumers along the income distribution?

Sagar Saxena (post-doctoral associate with the Markets and Development Initiative) and co-author develop and estimate a structural model of the agriculture sector in India, accounting for how production and consumption decisions are impacted by various government-sponsored price interventions – including fertilizer subsidies, procurement of crops at minimum support prices (MSP), and the sale of subsidized grains to households. The researchers' model estimates



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the effects of each intervention on both supply (producers/farmers) and demand (households), finding that the interventions are largely progressive on the demand side (offering greater benefits to lower-income households) but (weakly) regressive on the supply side due to inequities in implementation, which favor wealthier farmers.

### Energy markets

#### HOLDING UP GREEN ENERGY: COUNTERPARTY RISK IN THE INDIAN SOLAR POWER MARKET

#### How does the risk of hold-up affect procurement?

Green energy is produced by assets that are vulnerable to counterparty risk, or the risk that one party in a financial transaction will not fulfill their obligations per the terms of a contract. Using data on the universe of solar power auctions in India, Nicholas Ryan studies the effects of counterparty risk on the procurement of new solar power plants. The Indian context allows clean estimates of counterparty risk, because solar plants are procured in auctions that are intermediated either by the federal government or by comparatively risky state governments. Ryan finds that the counterparty risk of an average state increases solar prices by 10% – and since state demand for green energy is elastic, higher prices due to risk reduce investment in green energy. Contract intermediation by the central government, by contrast, eliminates the counterparty risk premium.



## SELECT PUBLICATIONS

Ryan N. (2021), **THE COMPETITIVE EFFECTS OF TRANSMISSION INFRASTRUCTURE IN THE INDIAN ELECTRICITY MARKET.** *American Economic Journal: Microeconomics* 13(2).

Bergquist L., Dinerstein M. (2020), **COMPETITION AND ENTRY IN AGRICULTURAL MARKETS: EXPERIMENTAL EVIDENCE FROM KENYA.** *American Economic Review* 110(12).

Burgess R., Greenstone M., Ryan N., Sudarshan A. (2020), **THE CONSEQUENCES OF TREATING ELECTRICITY AS A RIGHT.** *Journal of Economic Perspectives* 34(1).

De Loecker J., Goldberg P.K., Khandelwal A.K., Pavcnik N. (2016), **PRICES, MARKUPS, AND TRADE REFORMS.** *Econometrica* 84: 445-510.

## INITIATIVE APPROACH

### Cultivation of a network of top scholars working at the intersection of IO, trade, and development

Build a community of scholars within the markets and development domain, support high potential projects in the initiative's focus areas, and foster collaboration among IO, trade, and development economists, including those at Yale and beyond.

### Mentorship and collaboration with junior researchers

Encourage and support younger scholars (assistant professors, post-docs, graduate students and pre-doctoral fellows) to work on topics in the markets and development domain.

### Policy outreach

Bring together researchers, practitioners, and policymakers to discuss the current evidence base and new research contributions, as well as high-potential and policy-relevant research areas for further exploration.

