

**An Unexpected Convergence:
Informality, the Gig-Economy, and Digital Platforms**

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Coase in 1937

“The Nature of the Firm”, *Economica* 1937

- Why does the economy feature a number of firms instead of consisting exclusively of a multitude of independent, self-employed people who contract with one another.
- Coase’s Answer: *Transactions Costs* (incl. information and communication, bargaining, contract enforcement costs)
 - Incentive to internalize production of goods and services required to deliver a product
- Explains also *Size of Firm*

Coase Today

Two observations:

- Developing Countries: Firms are either absent or small → Informality
- Changing Nature of Firms Worldwide
 - Drastic reductions in information and communications costs and international integration
 - Wider Firm Boundaries. Firms are outsourcing more and more tasks to the market
 - Emergence of Gig Economy and Digital Platforms
 - Changing Nature of Work

Thesis of this Talk: These developments represent an unexpected convergence between developed and developing countries regarding the nature of firms and work.

Road Map

A. Informality in Developing Countries

- a. The Face of Informality
- b. Consequences
- c. Approaches to Reducing Informality

B. Technology and Changing Firm Boundaries

→ the Gig Economy and Digital Platforms

C. Implications

- a. Nature of Work
- b. Social Protection
- c. Growth and View of Informality

A. Informality

Definitions:

- Informal firms: those that do not register with tax authorities, **invisible** to governments.
- Informal workers: not covered by labor regulations (no formal contract), and therefore have no benefits such as social security

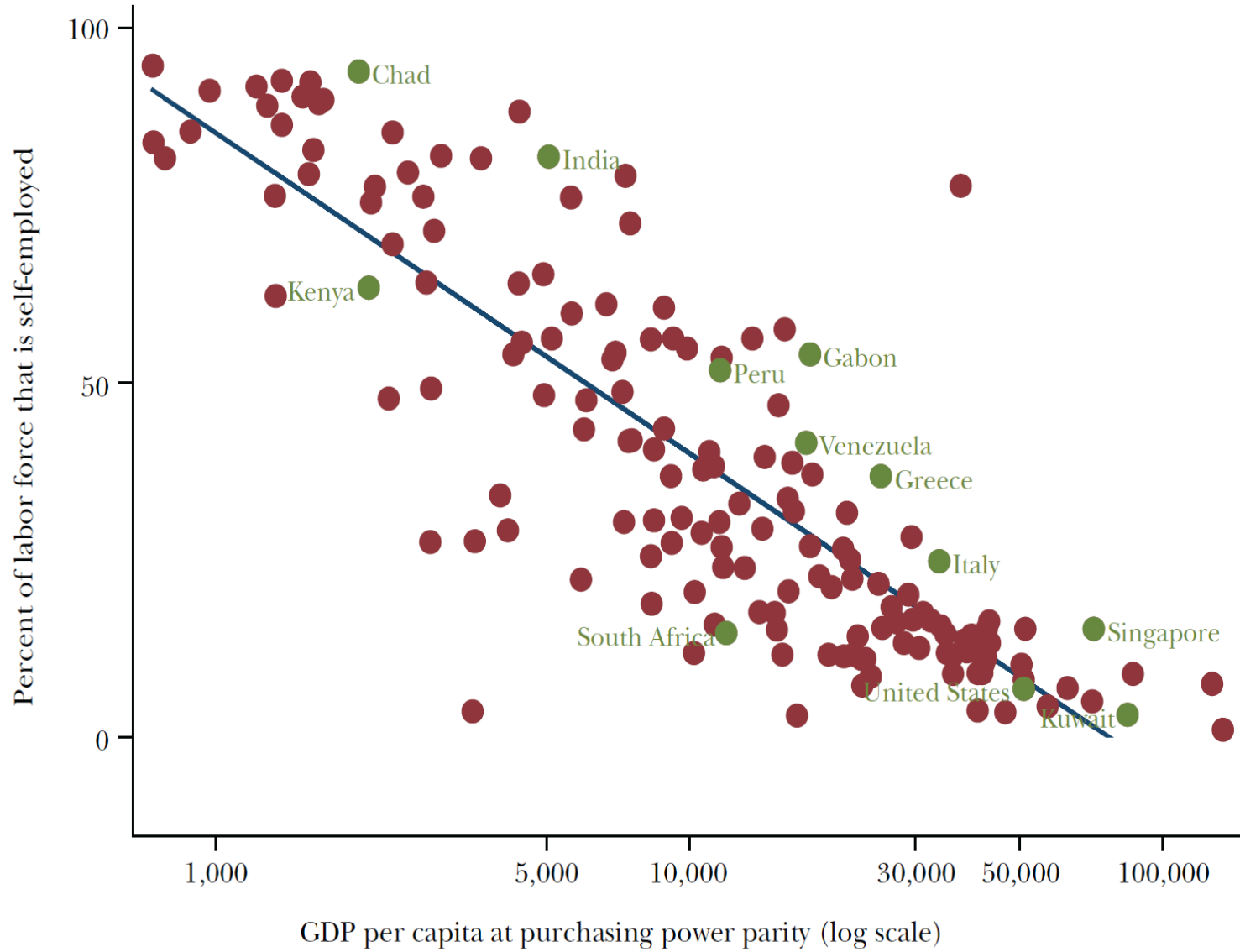
Note: Usually “self-employed” are included in the informal sector definitions.

a. The Face of Informality

Five Facts

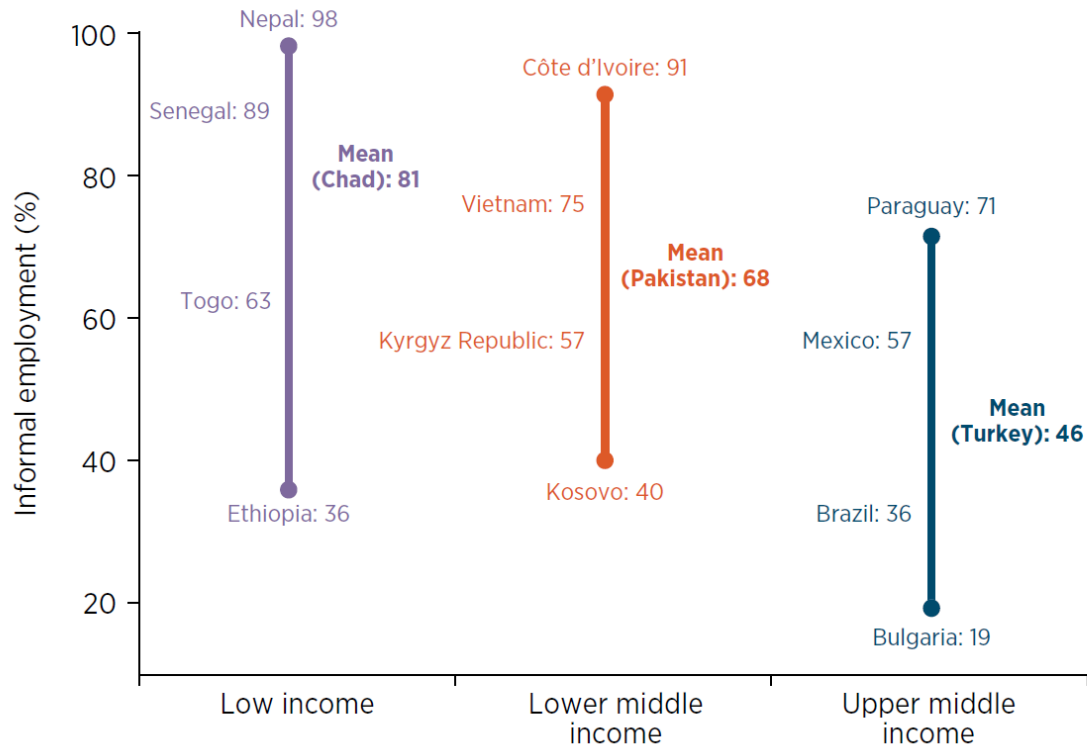
Fact 1: Informality/Self-Employment are negatively correlated with development.

Self-Employment and GDP per Capita in 2013



Source: LaPorta and Shleifer (JEP 2014)

Informal employment, by income group



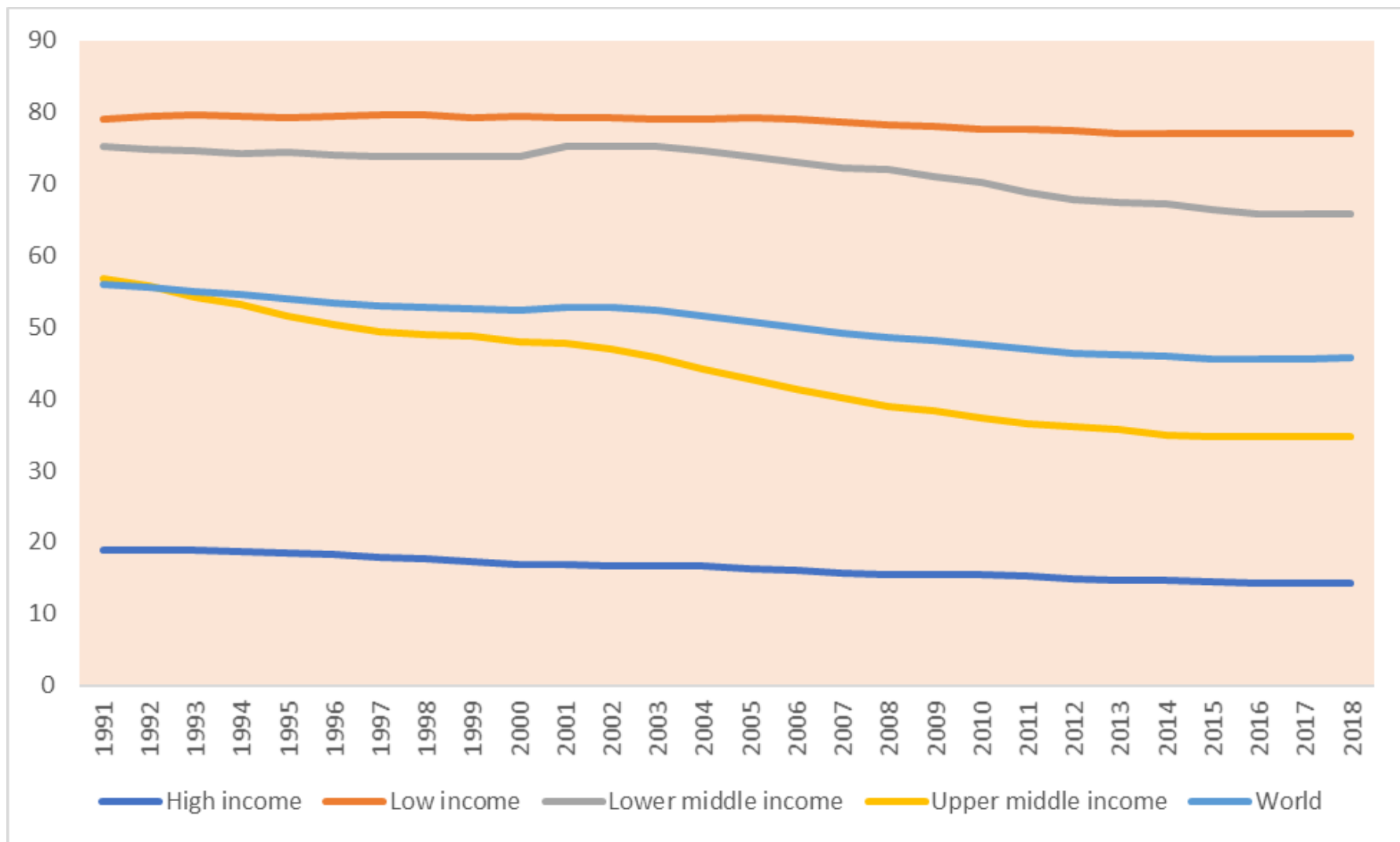
Source: WDR 2019 team, using household and labor force survey data from the World Bank's International Income Distribution Data Set

The Face of Informality

Five Facts

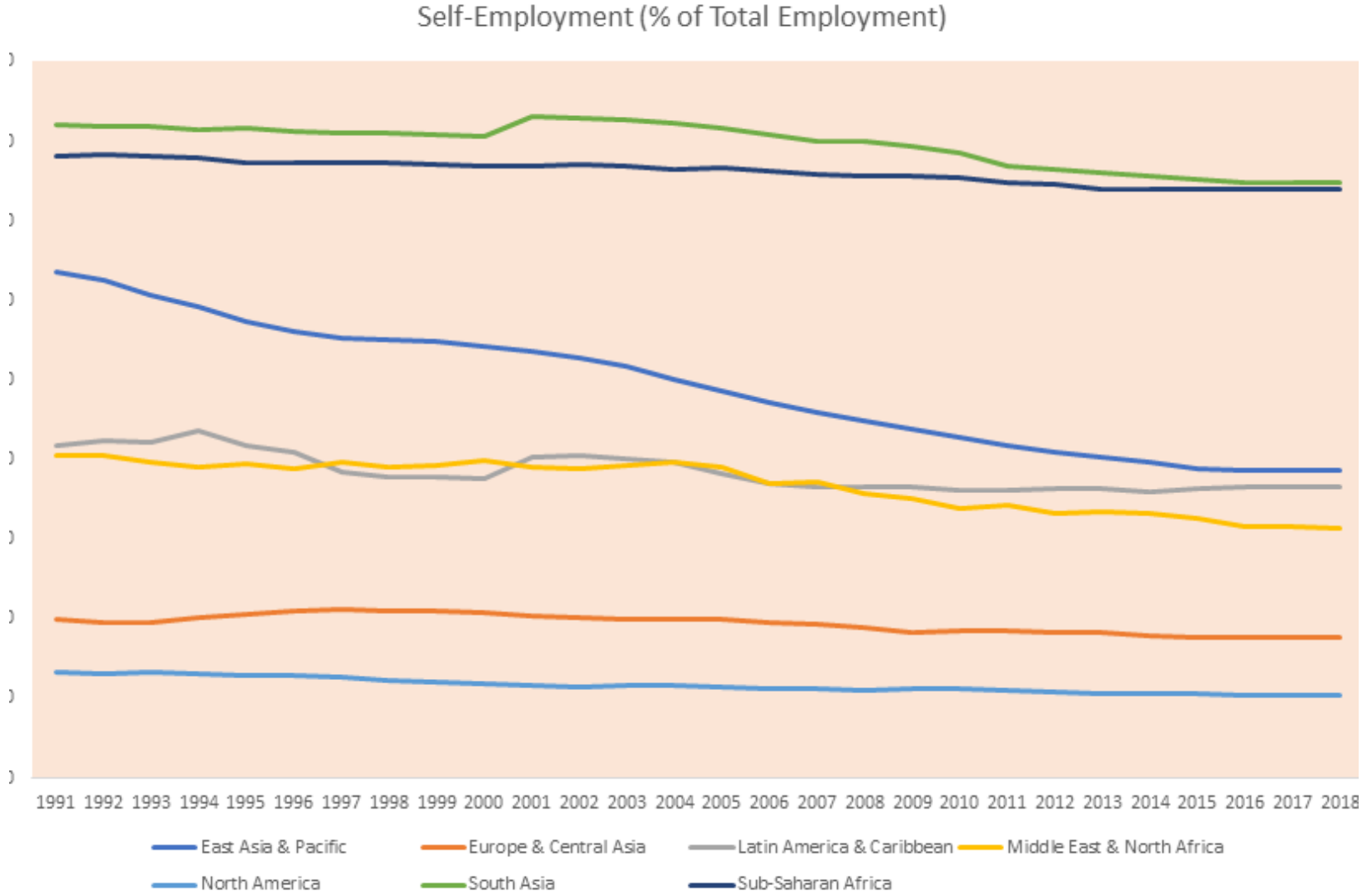
Fact 2: Informality/Self-Employment have been stable over time despite global economic growth, and despite improvements in the regulatory environment. They remain high in Emerging and Developing Economies.

Self-Employment over Time by Income



Source: ILO

Self-Employment over Time by Region

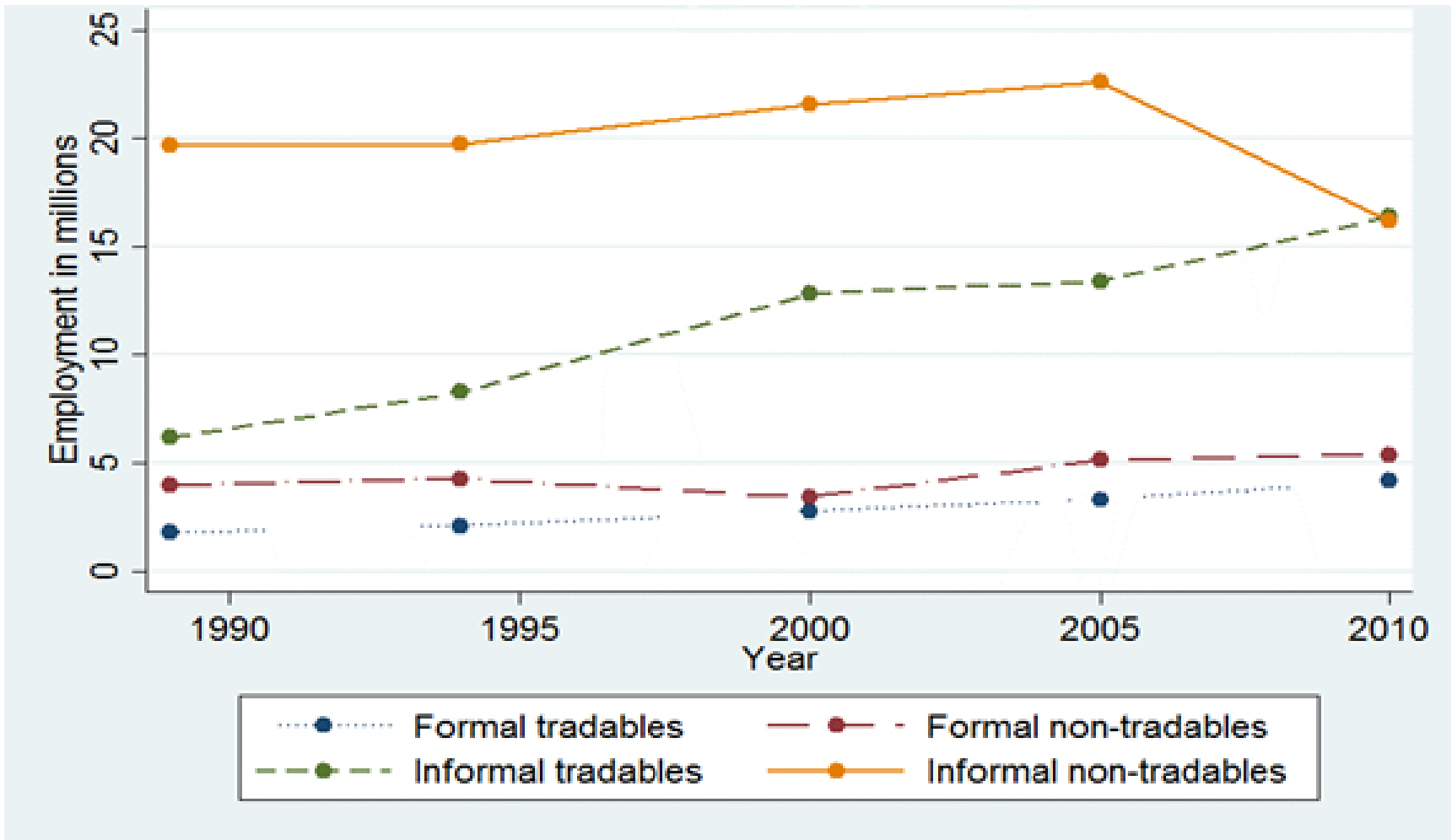


Source: ILO

Recent Experience in India

- Average growth in last decade around 7%
- Informality remains at around 90%
- Paper by Ghani, Kerr, and Segura (2015):
Manufacturing employment growth in India *is driven by* increase of informal sector

Manufacturing employment in India



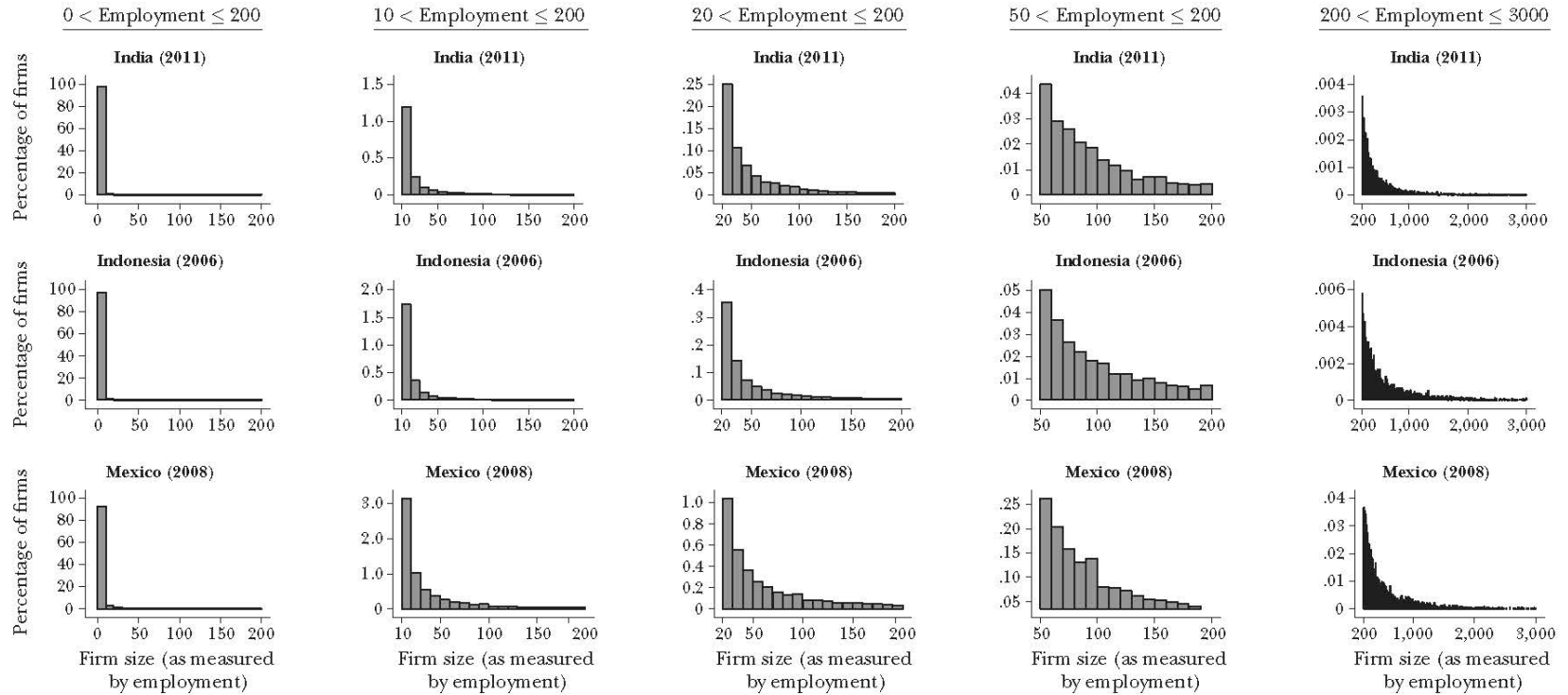
Source: Ghani, Kerr, and Segura (2015)

The Face of Informality

Five Facts

Fact 3: (Informal) firms in developing countries are small. They never die, and they never grow (Hsieh and Klenow).

Distribution of Firm Size as Measured by Number of Workers



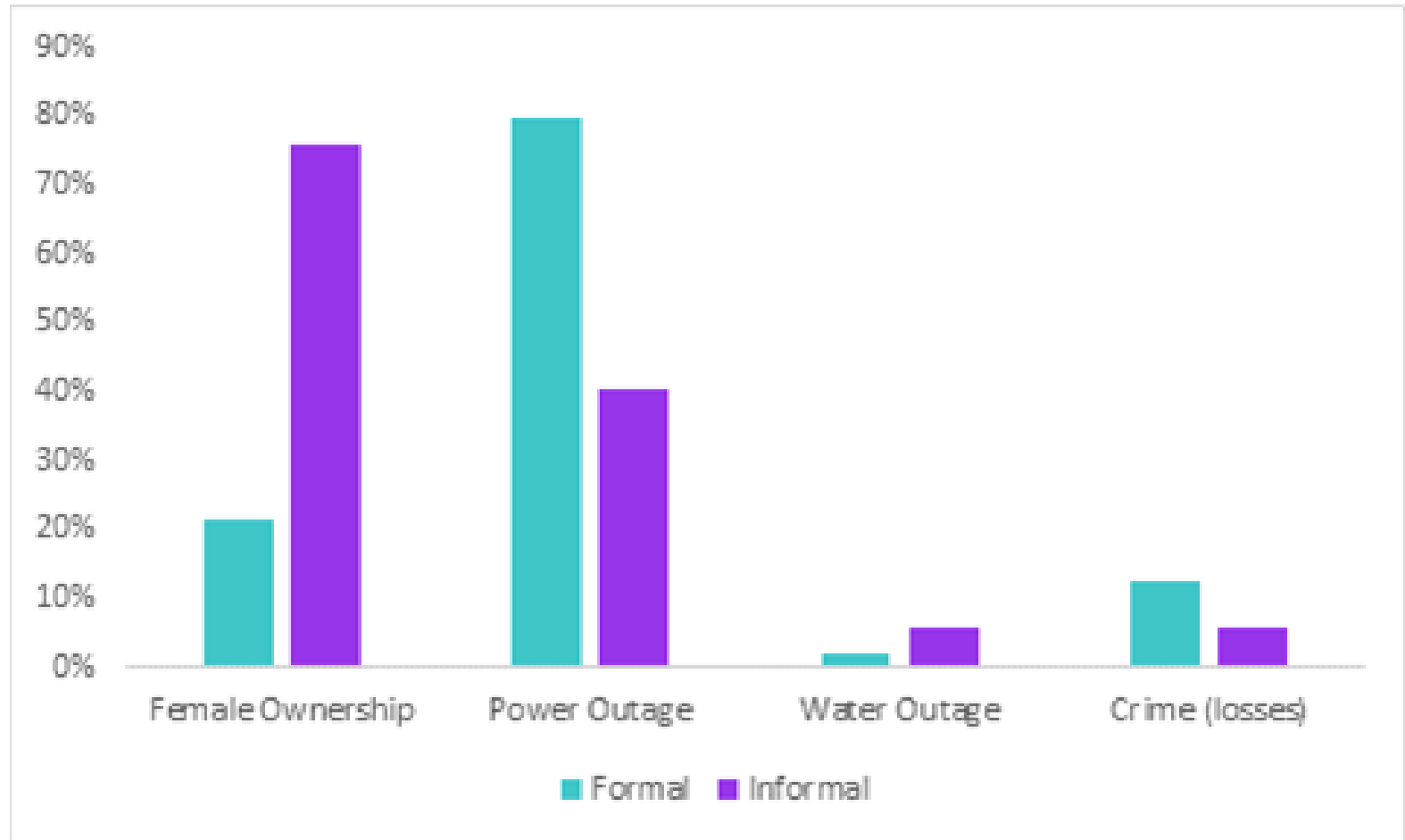
Source: Hsieh and Olken (JEP 2014)

The Face of Informality

Five Facts

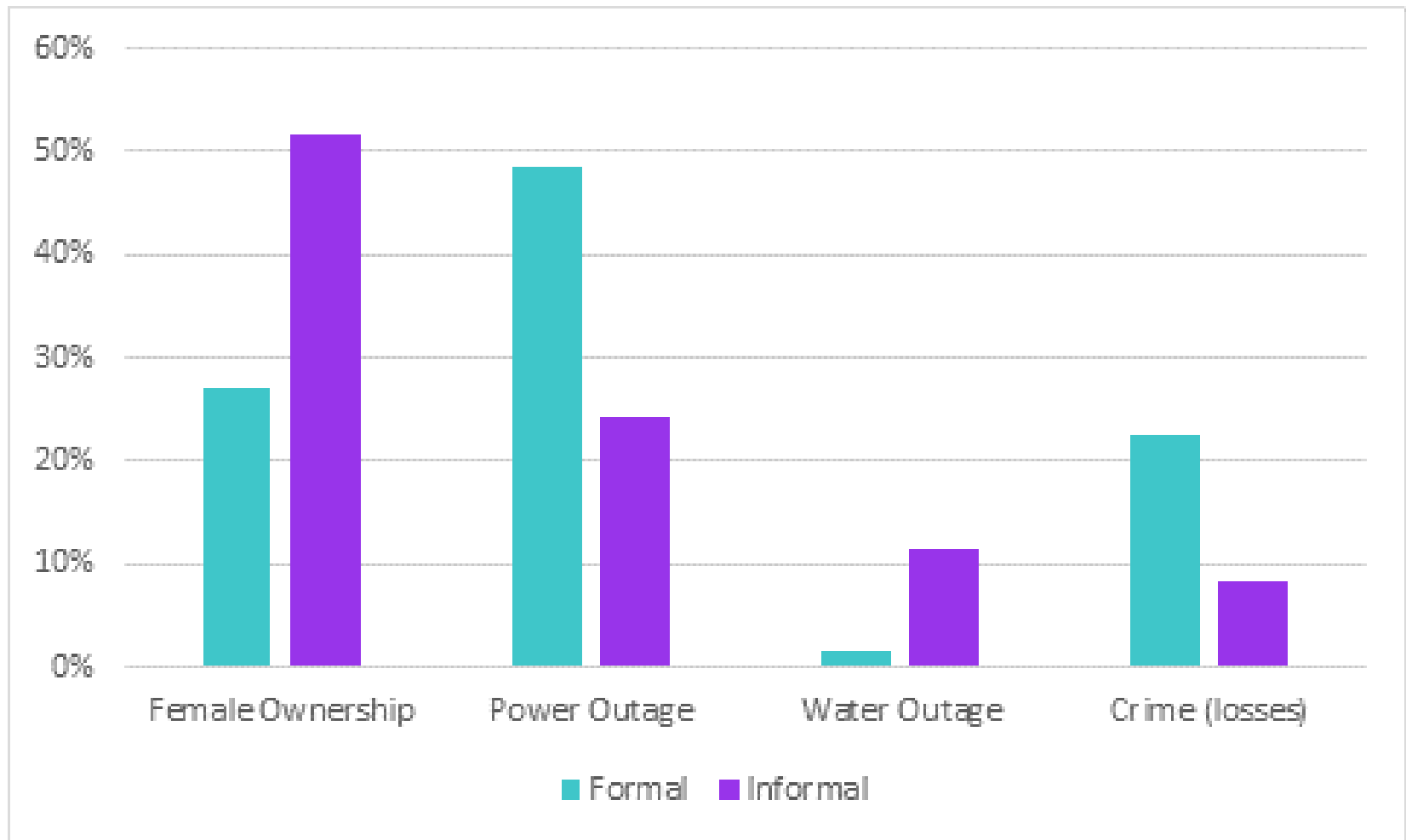
Fact 4: Women are overrepresented in the informal sector.

The Face of Informality in Lao PR



Source: World Bank Enterprise Surveys team, Lao Informal Firm Survey 2019.

The Face of Informality in Mozambique



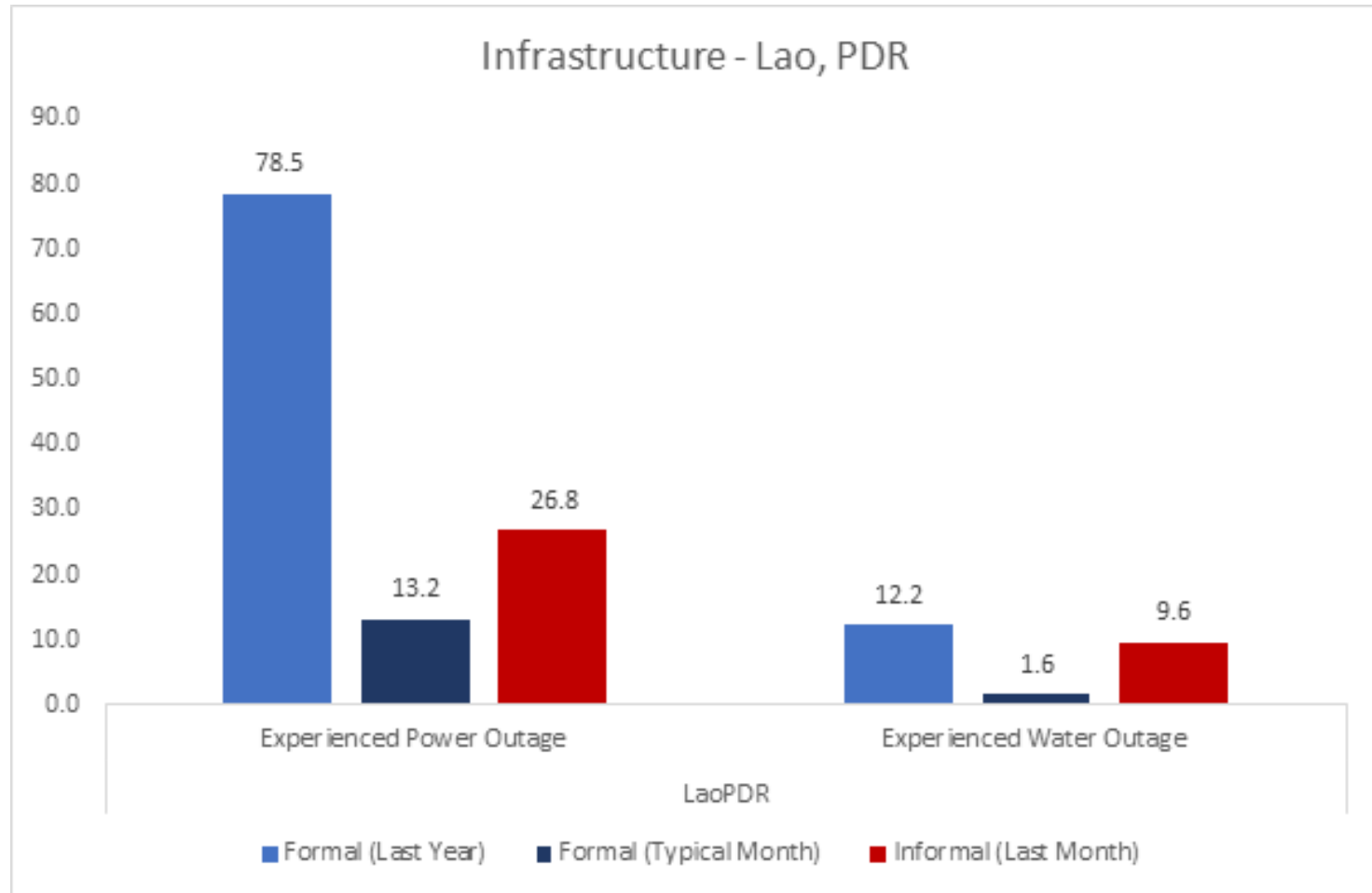
Source: World Bank Enterprise Surveys team, Mozambique Informal Firm Survey 2018.

The Face of Informality

Five Facts

Fact 5: Informal firms face higher water and power shortages. Water shortages are more of a problem than power outages.

The Face of Informality in Lao PR

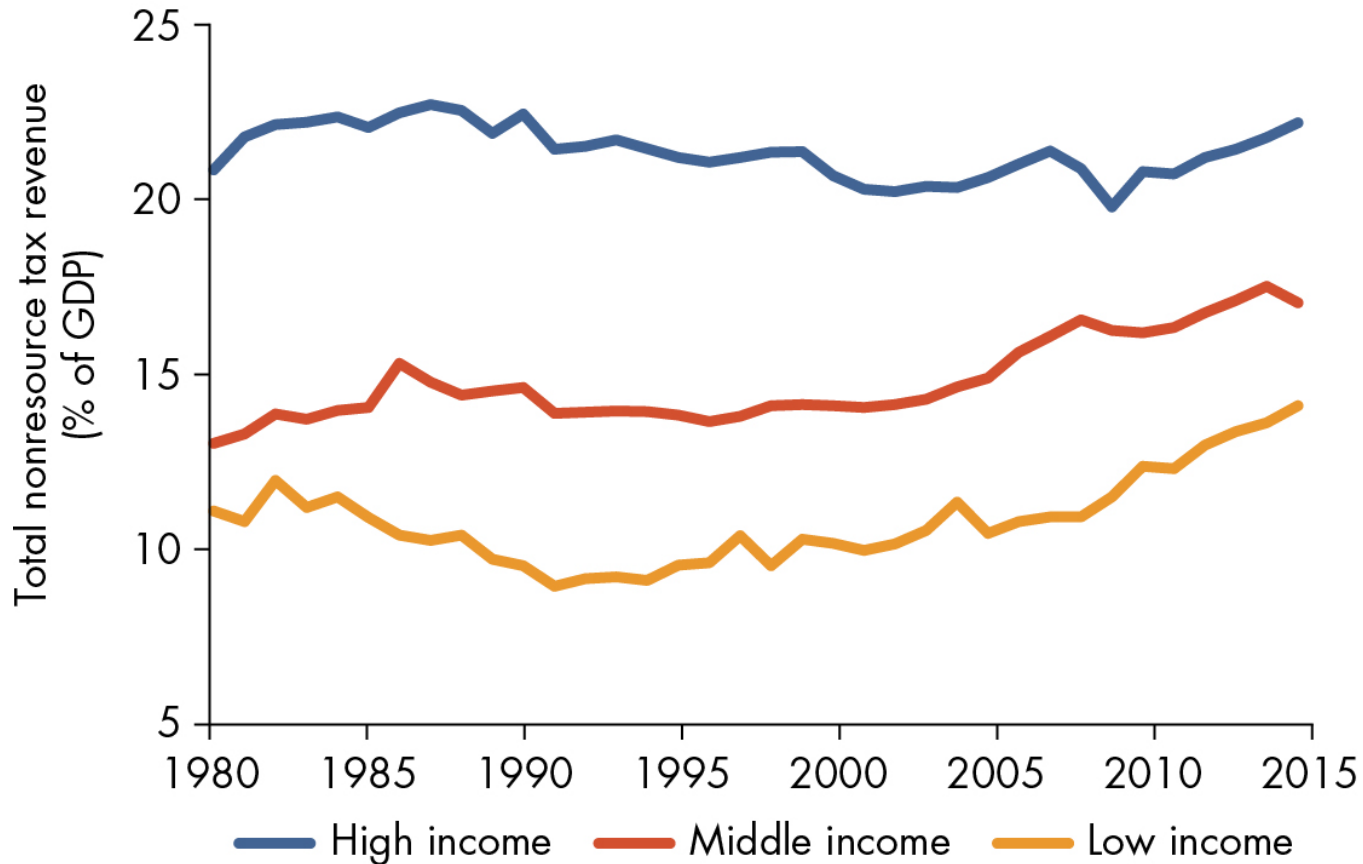


b. Consequence of Informality

→ Intimately connected to the question of why we care.

- Generally, informal firms are considered an anathema to development because:
 - Small size and inefficiency
 - Tax avoidance hinders provision of public goods
 - Workers have no security, no benefits
- BUT: Informality may provide more *flexibility* that is particularly valuable when the economy faces adverse shocks.

Tax Revenues by Income Group



Source: WDR19 team analysis based on International Centre for Tax and Development (ICTD) and UNU-WIDER Government Revenue Dataset 2017.

In the following I focus on:

- Informality and Efficiency
- Informality as a Buffer

Informality and Inefficiency

Question: Are ALL small informal firms less efficient than formal firms and as such, an impediment to growth?

Answer: Evidence is mixed.

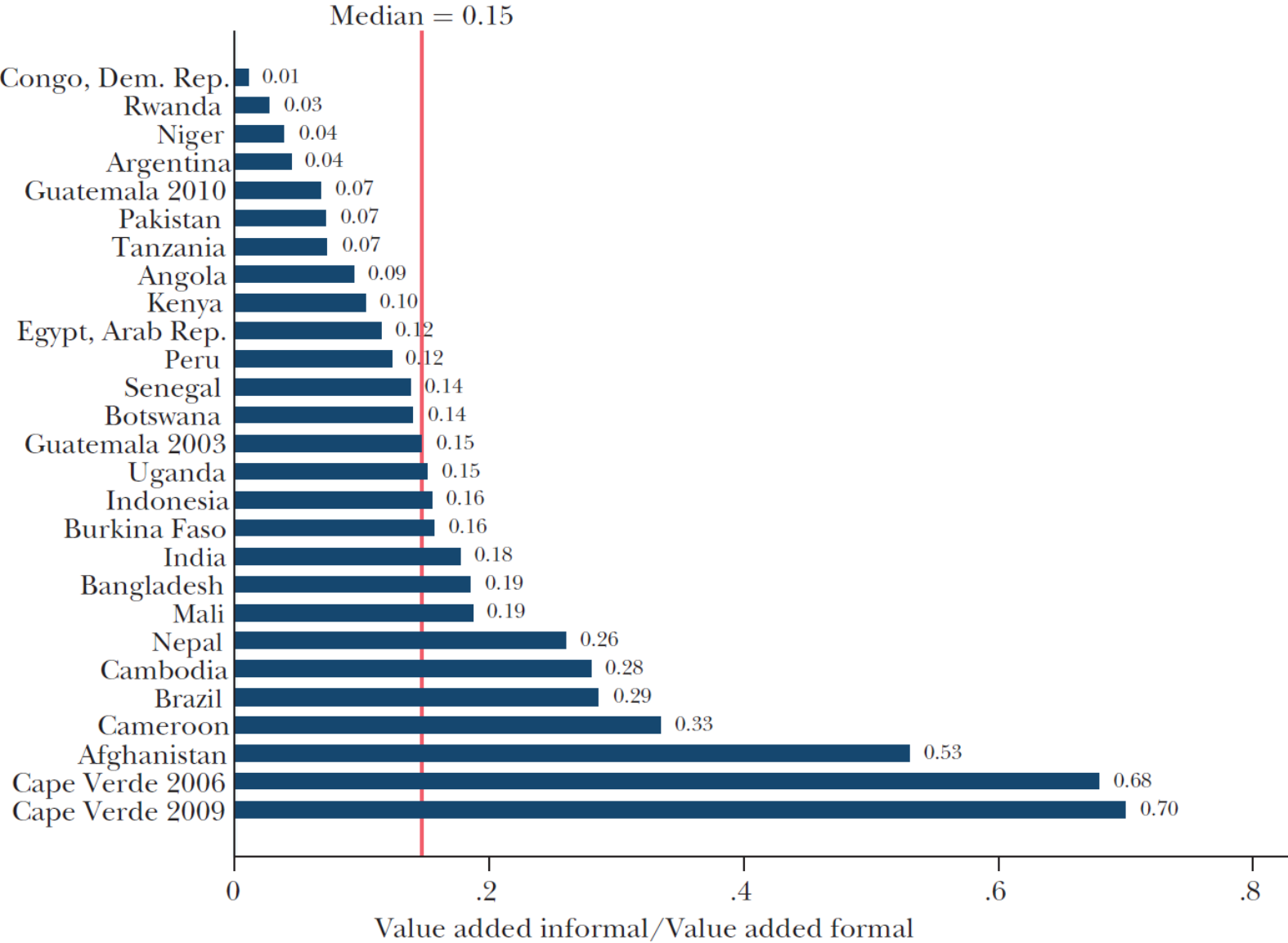
On one side:

- Tybout (JEL 2000): NO
 - No evidence that dispersion of firm productivity is higher in developing countries
 - No evidence that small firms are less efficient
 - Small firms operate at optimal scale given markets they serve
- Echoed in Foster and Rosenzweig 2018 paper on fArms.

On the other side:

- La Porta and Shleifer, Hsieh and Klenow and follow-up literature:
 - higher productivity dispersion in developing countries
 - small firms inefficient; never grow; never die
- Hsieh and Olken (JEL 2014): Average (and likely also marginal) products of K and L lower in small firms. Consistent also with Harrison and Rotemberg (2006 policy change in India)
- Large literature on heterogeneous firms in trade documents that larger firms more efficient (in the revenue sense).
- Fernandes, Freund and Pierola (2016): Exports in many developing countries are driven by a small number of “superstar” firms.

Ratio of the Value Added by Informal Firms to Value Added by Formal Firms



Source: La Porta and Shleifer (2014)

Three views of informal firms

- 1) Survivors:** Informal firms too small and inefficient; informality is a means of survival (dual view)
- 2) Parasites:** Informal firms could break even as formal firms, but choose not to formalize to avoid regulations and save on taxes (McKinsey view)
- 3) Held-back entrepreneurs:** Informal firms would formalize if they did not face high costs of entry and regulation (romantic view)

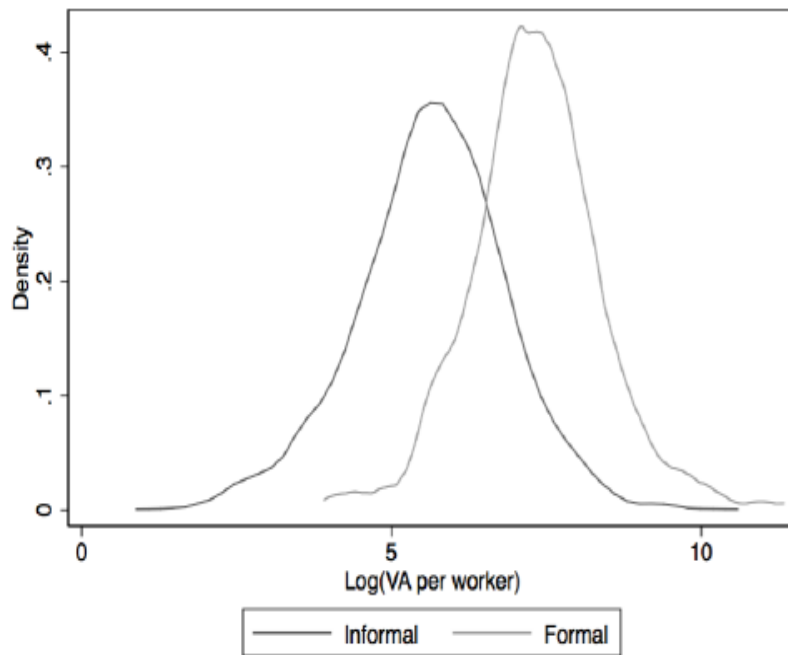
The three views (contd.)

Important, because each view has different policy implications

- **LaPorta and Shleifer** → Dual View
- **Hsieh and Olken** → No View entirely supported by the data
- **Ulyssea** → All three types co-exist (in Brazil!). Reflect heterogeneous firms optimally responding to the institutional environment

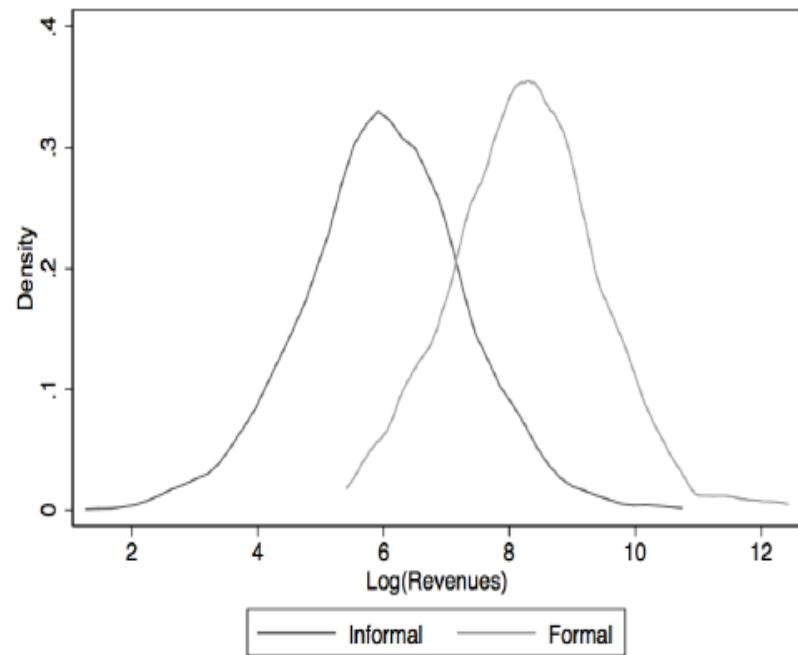
Firm Productivity and Revenue Distributions Formal vs. Informal Firms (Brazil)

Source: Ulyssea, AER 2018



kernel = epanechnikov, bandwidth = 0.2183

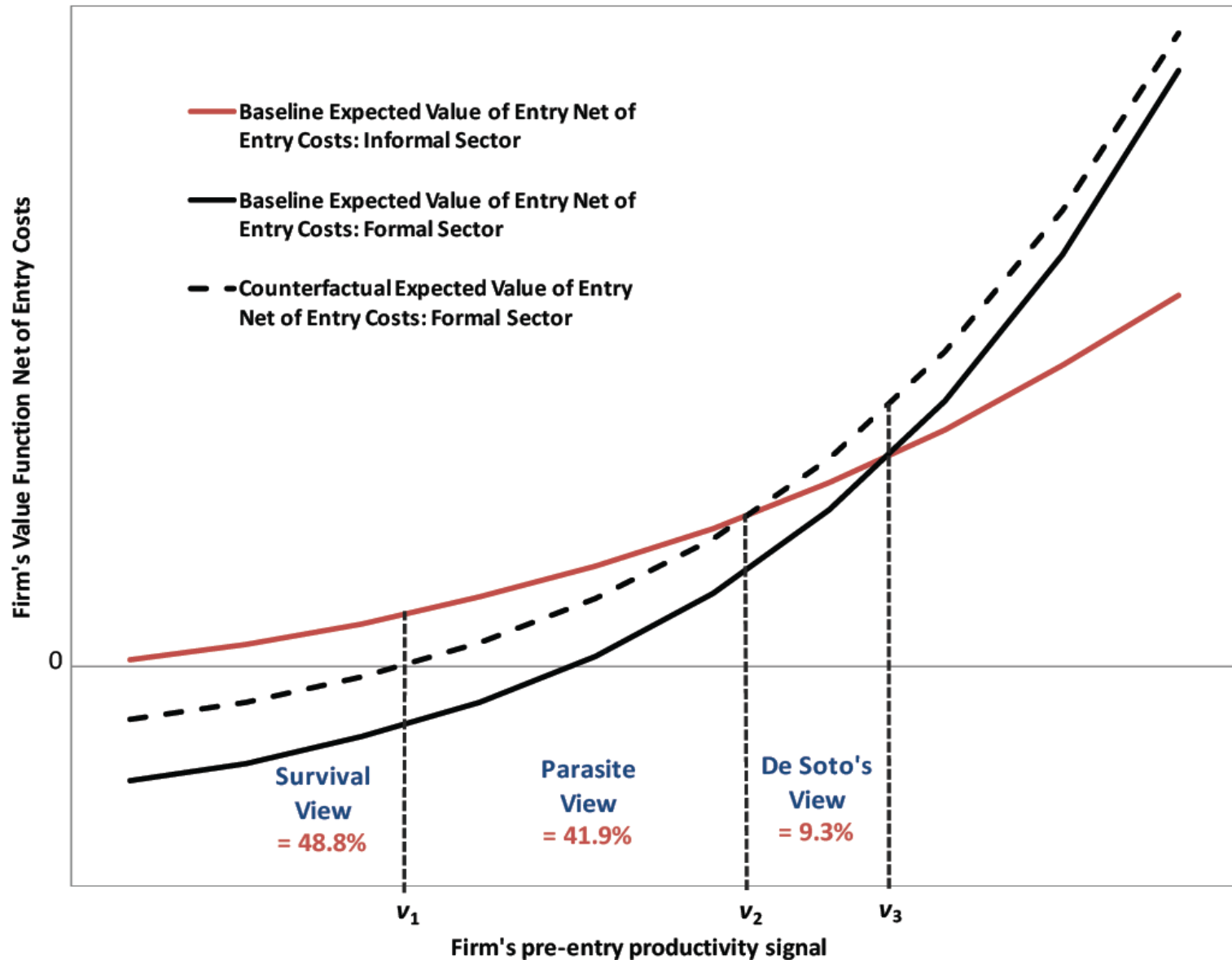
(a) Productivity: $\text{Log}(\text{VA}/\text{Worker})$



kernel = epanechnikov, bandwidth = 0.2308

(b) Size: $\text{Log}(\text{Revenues})$

The three types of informal firms in the data



In Sum:

- Strong evidence that share of “survivors” is large
- Strong evidence that share of “held-back entrepreneurs” is small
- Some evidence that share of “parasites” is substantial.

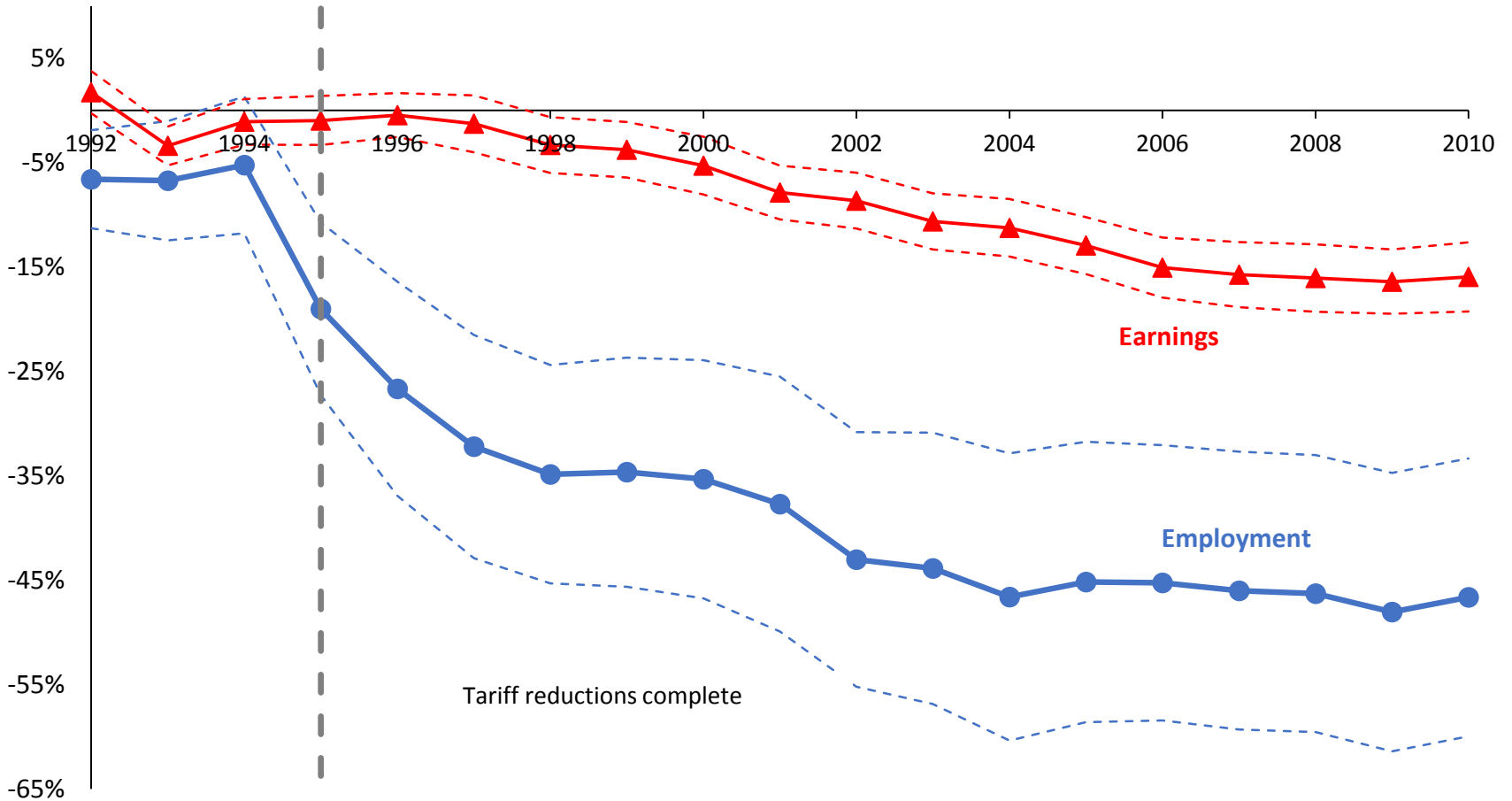
Informality as a Buffer

Question: Does informality provide firms and workers with *de facto* flexibility in highly regulated environments, helping them to cope with adverse shocks?

Answer: Evidence suggests **YES**.

→ Brazilian Trade Liberalization of the early 1990s

Effects of Trade Liberalization on Formal Sector Employment and Earnings



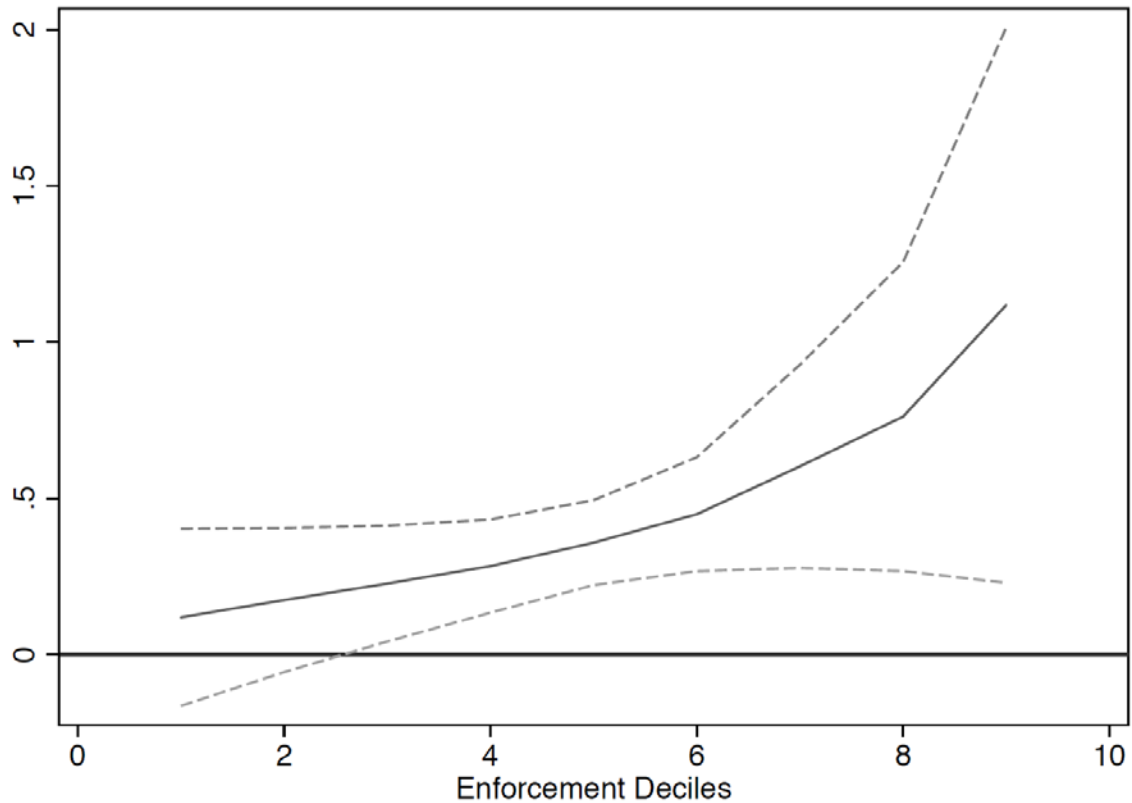
Effects of Trade Liberalization on Non-Employment and Informality

	1991-2000	1991-2010
Change in share:	(1)	(2)
<u>Panel A: Not-employed</u>		
Regional Tariff Reduction (<i>RTR</i>)	0.301*** (0.043)	-0.023 (0.058)
<u>Panel B: Informal</u>		
Regional Tariff Reduction (<i>RTR</i>)	0.213*** (0.053)	0.528*** (0.077)

Source: Dix-Carneiro and Kovak (2017)

Informality Seems to Be an Employment Buffer

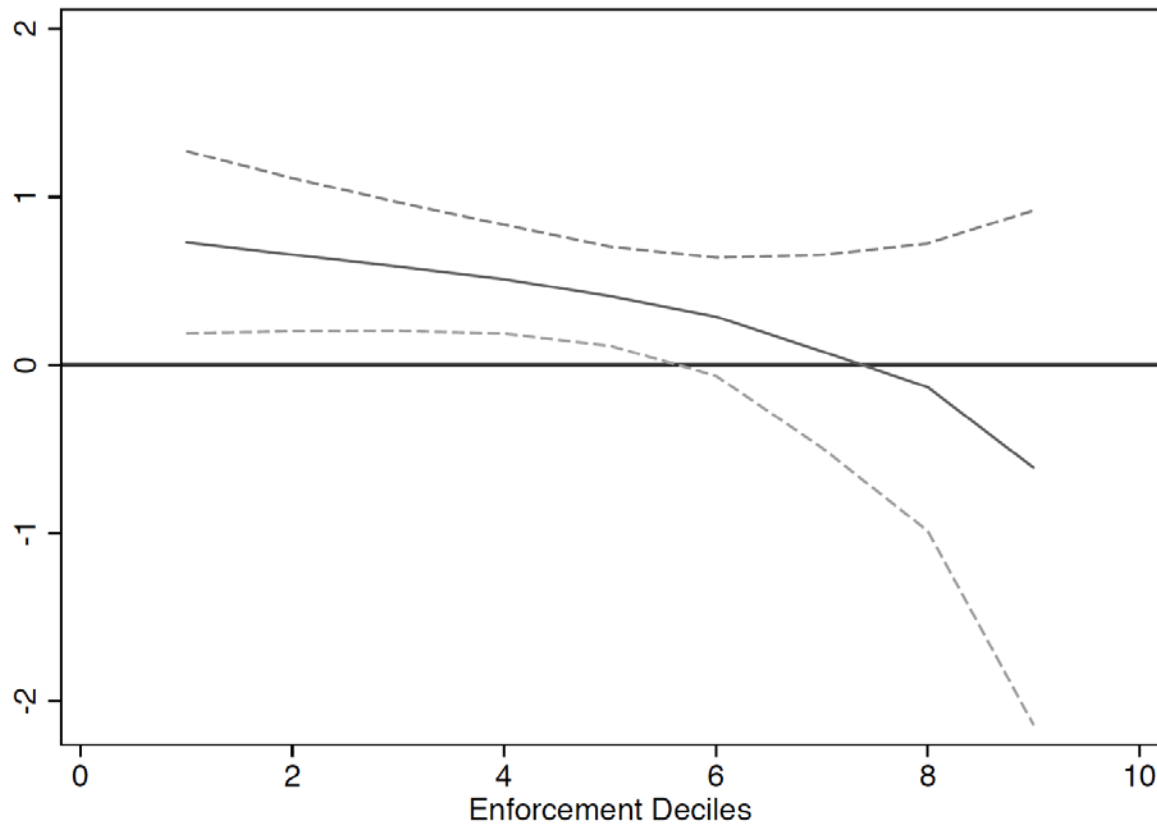
Effects of Trade Opening on Non-Employment



Source: Ponczek and Ulyssea (2017)

Informality Seems to Be an Employment Buffer

Effects of Trade Opening on Informality



Source: Ponczek and Ulyssea (2017)

To Sum Up:

- Many informal firms are less efficient than formal firms (→ survivors). Driving them out of the market through enforcement would promote growth, but might create a big social problem.
- Many informal firms are as efficient as formal firms, but remain informal to evade taxes (→ parasites). Enforcement would promote growth and boost fiscal capacity.
- Informality serves as a buffer when firms and workers are faced with adverse shocks.
- How do we trade off these considerations?
- What is the appropriate policy response towards small and informal firms?

→ Need integrated framework to address these questions →
DGMU (2019)

Dix-Carneiro, Goldberg, Meghir, Ulyssea (DGMU, 2019)

We develop a structural equilibrium model of a small open economy that features:

- Heterogeneous firms choose to operate in the informal sector (but can be caught) or in the formal sector (and are subject to regulations).
- Search and matching frictions in the labor market.
- Rich institutional setting: minimum wages, hiring/iring costs, payroll and revenue taxes, government enforcement.
- Taxes and labor market regulations that are imperfectly enforced
→ informality.

DGMU (contd.)

- We estimate the model using several data sources, including matched employer-employee data from formal and informal firms and workers in Brazil.
- Unique data availability and quality. Allows the direct observation of informality for workers and firms.
- We use the estimated model to perform counterfactual simulations to evaluate the effects of various policies directed towards the informal sector.

DGMU (contd.) - Results

- 1. Trade Liberalization:** Large effects on trade flows and exchange rate. Small effects on allocations, informality, productivity, real income.
- 2. Eradicating Informality:** Large increases in welfare. Strong gains in productivity, small changes in unemployment.
- 3. Productivity Shocks:**
 - Negative: Effect on welfare and unemployment is larger without informality. Consistent with informal sector working as a buffer during bad times.
 - Positive: Does not reduce informality. Better economic conditions allow low productivity informal firms to enter and survive

DGMU (contd.) - Results

- Main Implication: Big Returns from Reducing Informality (at the steady state).
 - Caveats:
 - No transitional dynamics
 - Results may be specific to Brazil
- But how?

Potential Policy Responses

- Domestic
- Trade

Domestic

- **Stricter enforcement:** force the “parasites” to formalize. Increases efficiency. But also eliminates survivors at potentially high social and welfare cost.
- **Policies supporting small businesses:** ineffective if small businesses inefficient
- **Reducing the entry costs to formal sector (registration):**
 - BUT: in Ulyssea 2018, this would make a small difference
 - Experiments suggest minimal effect of registration
 - Brazil: De Andrade, Henrique, Bruhn, and McKenzie (2013)
 - Sri Lanka: De Mel, McKenzie, and Woodruff (2013)
- **Reducing regulatory and bureaucratic costs; taxes:** Promising according to simulations by Ulyssea 2010, 2018.

Trade

➤ Intensified competition and growth of exports expected to lead to reallocation of resources towards larger firms

→ Evidence:

Evidence on Trade and Informality

is mixed

- **Goldberg and Pavcnik: Colombia and Brazil**
 - Unilateral trade liberalization; Mercosur
 - No effects of trade reform on informality in Brazil
 - Effects on informality in Colombia only prior to a labor market reform
- **McCaig and Pavcnik: Vietnam**
 - Bilateral trade liberalization with US
 - Rise in Exports
 - Structural transformation. Resources move to formal sector
- **Dix-Carneiro and Kovak: Brazil**
 - Unilateral trade liberalization
 - Increase in unemployment in short run, strong increase in informality in the long-run
 - Informality fall-back sector – otherwise higher unemployment

Counterfactual Simulations in DGMU

- **Lax Labor Regulations/Less Bureaucracy:**
Not Effective
- **Lax Labor Regulations + Trade Openness + Growth:**
Not Effective
- **Enforcement**
Seems the only way.

Summary So Far

- Eliminating informality is associated with big productivity and welfare gains.
- This is despite the fact that informality acts as a buffer during bad times.
- Opening up to trade, deregulation, and growth do not reduce informality by themselves. Consistent with its persistence over the past decades.
- Strict enforcement seems worthwhile despite social cost of eliminating “survivors”.

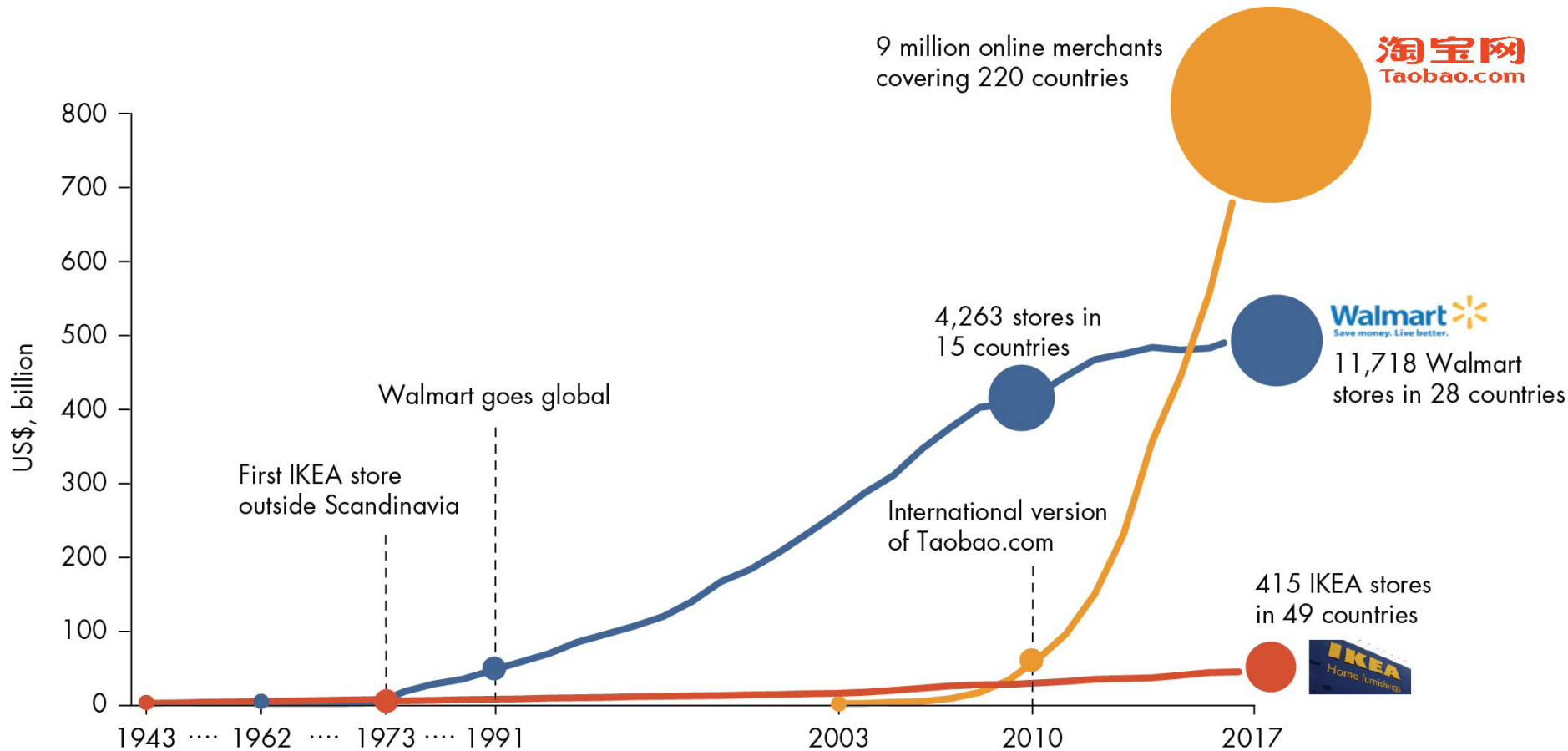
New Technologies and Informality

- Enforcement has proven difficult
- Technology may offer a new solution
 - Digitization may everything visible
- But technology has also changed the nature of firms and work
- May lead to reassessment of traditional view of “informality”.

B. Technology and Changing Firm Boundaries

- Digital technologies allow firms to scale up or down quickly, changing firm boundaries.
- New business models—digital platform firms—are evolving from local start-ups, often with few employees or tangible assets.
- Individuals and firms need only a broadband connection to trade goods and services online.
- This “scale without mass” may bring economic opportunity to millions of people who do not live in industrialized countries or even industrial areas.

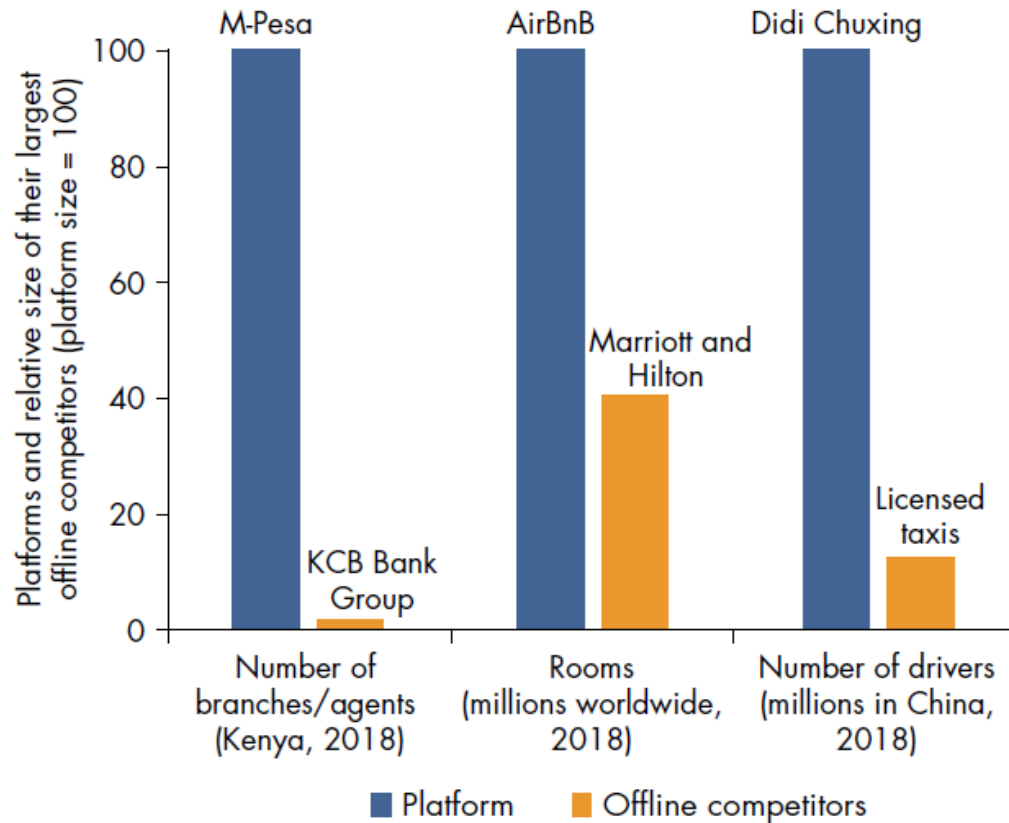
Recent Technological Advances Accelerate Firm Growth



Source: WDR19 team analyses based on Walmart Annual Reports, Statista.com, NetEase.com

Technology Is Changing the Nature of Firms

New Superstar Firms: digital platforms operating globally, existing in the cloud



Source: WDR19 team analysis based on data from Safaricom, KCB Bank Group, AirBnb, Marriot International Inc., Financial Times.

Many Examples in Developing Countries

- Taobao Villages:
 - 3 in 2009; 2118 in 2017; 490000 online shops
- Indiez in India; Wonderlabs in Indonesia
 - Online freelancing: connect talent to tech projects
- Asuku in Nigeria: Connects experts to businesses in Africa
- Crew Pencil in South Africa: Movie Industry
- Tutorama in Egypt: Connects students to local tutors
- Yandex in Russia: Connects drivers to demand

How Big is the New Economy?

- Hard to obtain reliable estimates.
- Many freelancers also hold a traditional job (e.g. in the U.S., 2/3 of the freelancers use freelancing to supplement traditional job income).
- Worldwide, share of people engaged exclusively in freelancing is estimated around 0.5% of global active labor force.
- In developing countries, around 0.3%.
- Still very small, but growing.

C. Implications

a. Changing Nature of Work

- Labor markets are becoming more fluid
- Self-employment on the rise
- No long-term contracts
- No benefits
- Fewer regulations

Implications

b. Social Protection

- Formal wage employment contracts have been the most common basis for social protection (insurance, minimum wage, severance pay)
- The changing nature of work is shifting demands for social protection from employers to the state.

Implications

c. Convergence Between Developing and Developed Countries

- Gig economy blurs the lines between formality and informality
- Challenges faces by workers participating in the gig economy in advanced countries similar to those faced by informal workers in developing countries
- Uncertainty, no job security, no social protection
- But higher flexibility

Rethinking Informality?

Traditional Thinking:

- Policy makers have traditionally tried to curb informality
- At the same time, political economy has dictated support for SMEs
- Economists have emphasized the role of large firms in development

Rethinking Informality?

New Thinking?

- Digitization may lead to elimination of tax evasion (all transactions become visible)
- Informality/Self-employment associated with inefficiency. But small size/self-employment may be consistent with efficiency and growth if new technology allows people to connect to platforms
- This new economy combines the efficiency advantage of large firms with the flexibility afforded by short-term work arrangements
 - Flexibility can be advantageous to both firms and workers

Rethinking Informality?

- Developing countries may have a comparative advantage in this new economy as they have always grappled with the challenges of a large informal sector.
- New Challenges:
 - Social Protection
 - Taxation
 - Competition / Market Power of Large Platforms

THANK YOU!