
Private Sector, Infrastructure, and Entrepreneurship

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Technical Workshop on Development and Transformation



Massachusetts Institute of Technology

Outline

- The role of the private sector in the growth prospects of an economy
- How to encourage entrepreneurship and private sector growth, especially for the small firms
 - The role of capital and finance
 - Infrastructure
- Take aways



The Private Sector and Growth I

- Private sector important for growth (OECD 2004, 2006)
- GDP growth accounts for a large share of poverty reduction seen in developing economies (DFID 2008).
- World Bank's “Doing Business Reports”
- Role of firms and innovation/productivity growth in long run - much of the difference in GDP per capita is explained by differences in TFP and not capital and labour
 - Klenow and Rodriguez-Clare 1997, Hall and Jones 1999, Comin and Hobjin 2004, Caselli 2005, Comin et al 2008



The Private Sector and Growth II

- Small firms, esp in manufacturing, are key to economic and employment growth (Acs & Audretsch 1993, Carlsson 1992)
- Although the economies of Sub Saharan Africa have many self-employed workers, they are mostly agricultural
- Distinction between business owners and the self-employed is critical, since the two have vastly different opportunities and outcomes (Parga and Mondragón-Vélez 2008)
- Policy has shifted toward supporting entrepreneurship and small and medium enterprises (SMEs)



Innovation

Table 1 Geographic distribution of sample countries and technologies

Region	Mean technologies per country	Median technologies per country	Standard deviation of technologies per country	Number of countries
Total	34.2	28.0	20.37	159
Africa	24.9	26.0	9.00	48
Asia	28.9	26.5	12.51	44
Europe	49.3	41.5	28.23	38
North America	34.0	27.5	22.64	12
Oceania	43.3	44.0	21.09	4
South America	40.0	44.0	20.94	13

Source: Comin et al 2008.

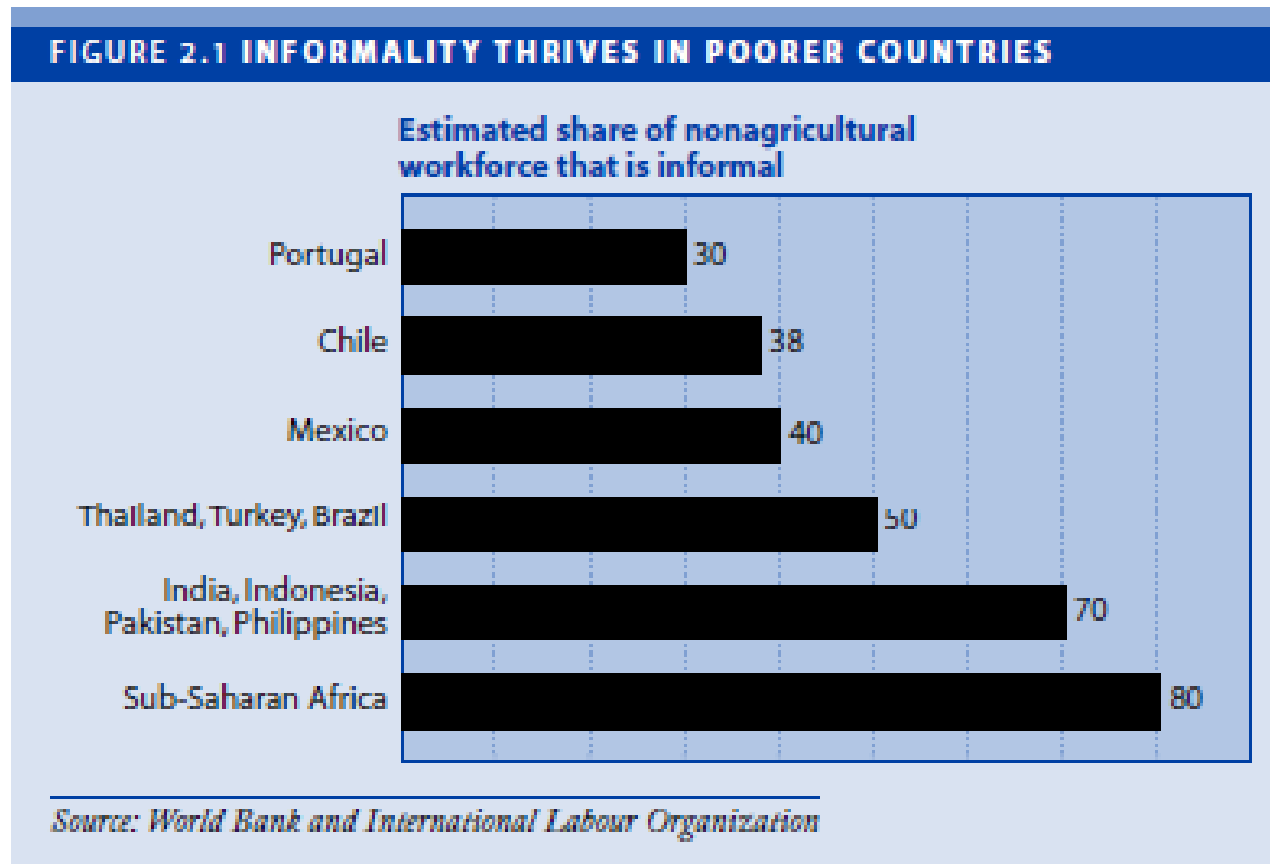


Constraints to Private Sector Growth

- Informality of the microenterprise and SME sectors
 - Underutilized manufacturing capacity
 - Worker training and skills
- Barriers to the growth of small firms (capital and finance)
- The limited competitive pressure that large firms face (UNDP 2004)
- The role of infrastructure for the economy in general as well as its interdependence with private sector success



Informal Business Activity I

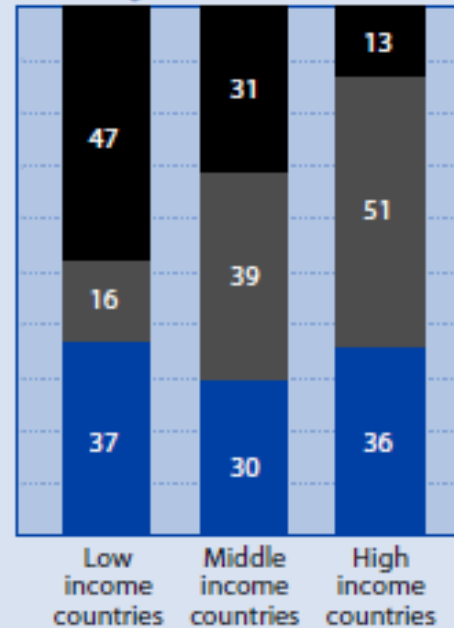


Source: UNDP 2004.

Informal Business Activity II

FIGURE 2.2 SMALL AND MEDIUM ENTERPRISES BECOME MORE IMPORTANT AND INFORMALITY LESS IMPORTANT AS COUNTRIES BECOME WEALTHIER

Percentage of GDP



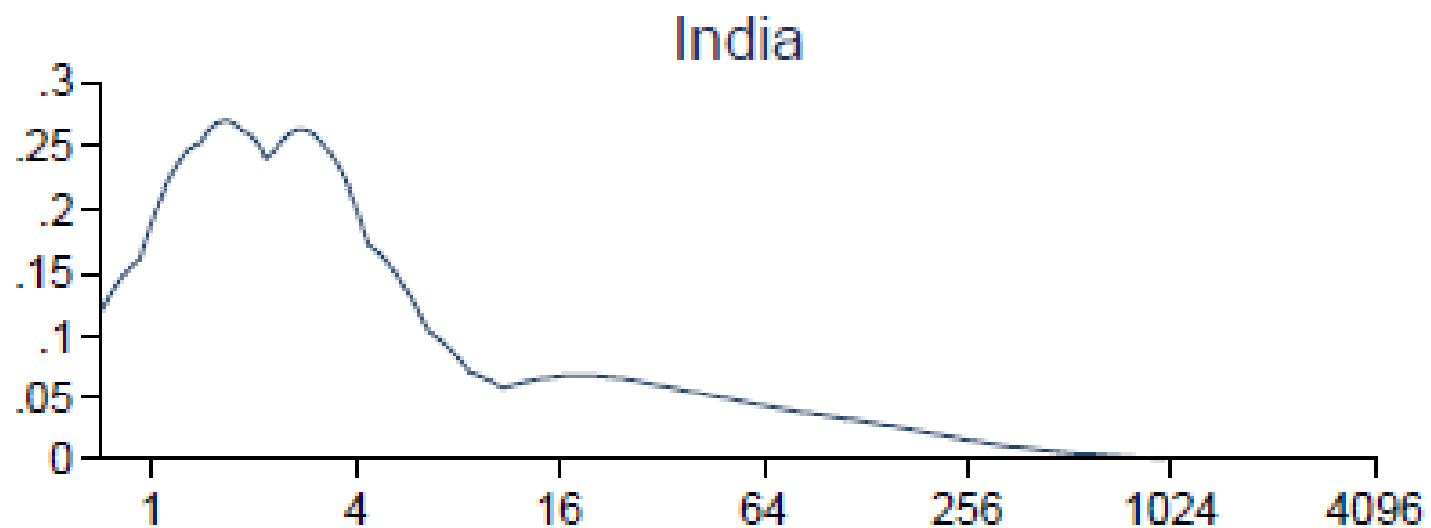
■ Informal activity
■ Small and medium enterprise activity
■ Remaining activity



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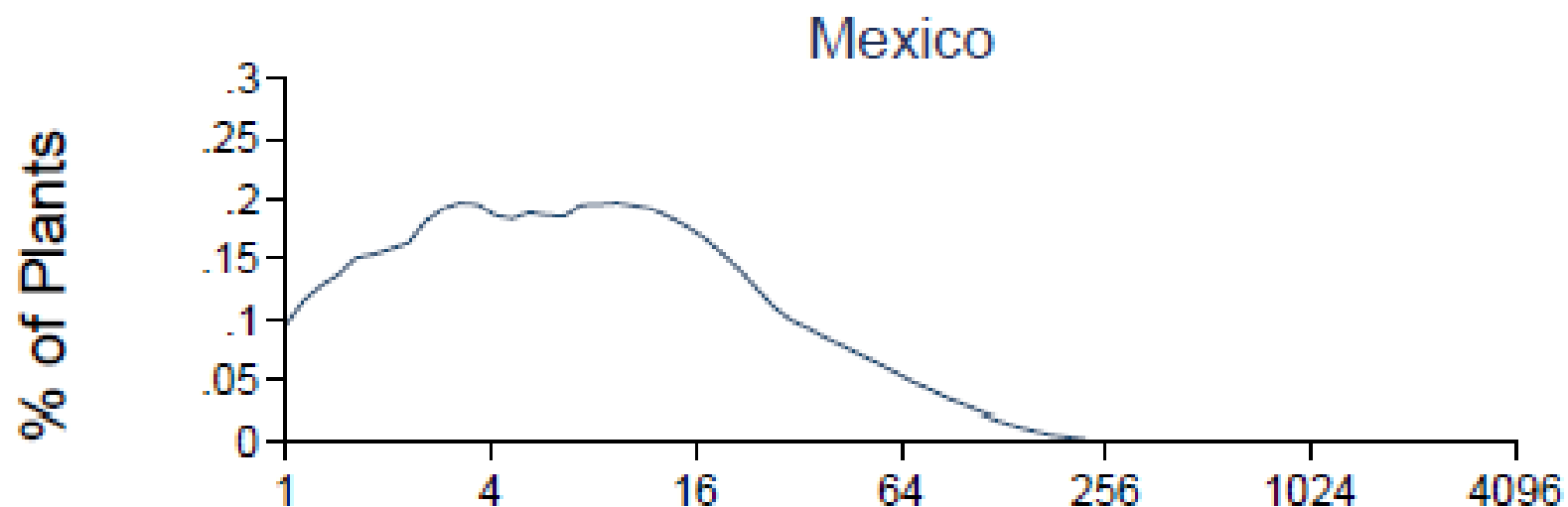
Source: Ayyagari, Beck, and Demingüç-Kunt (2003)

Size Distribution of Firms I



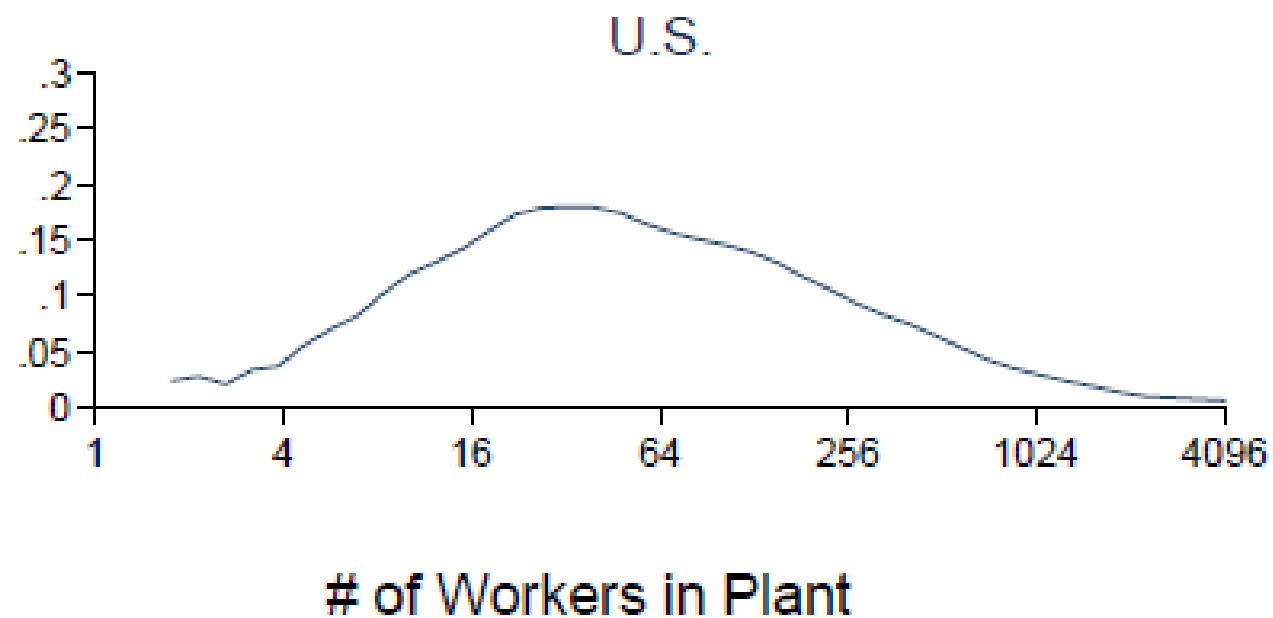
Source: Hsieh and Klenow 2011

Size Distribution of Firms II



Source: Hsieh and Klenow 2011

Size Distribution of Firms III



Source: Hsieh and Klenow 2011

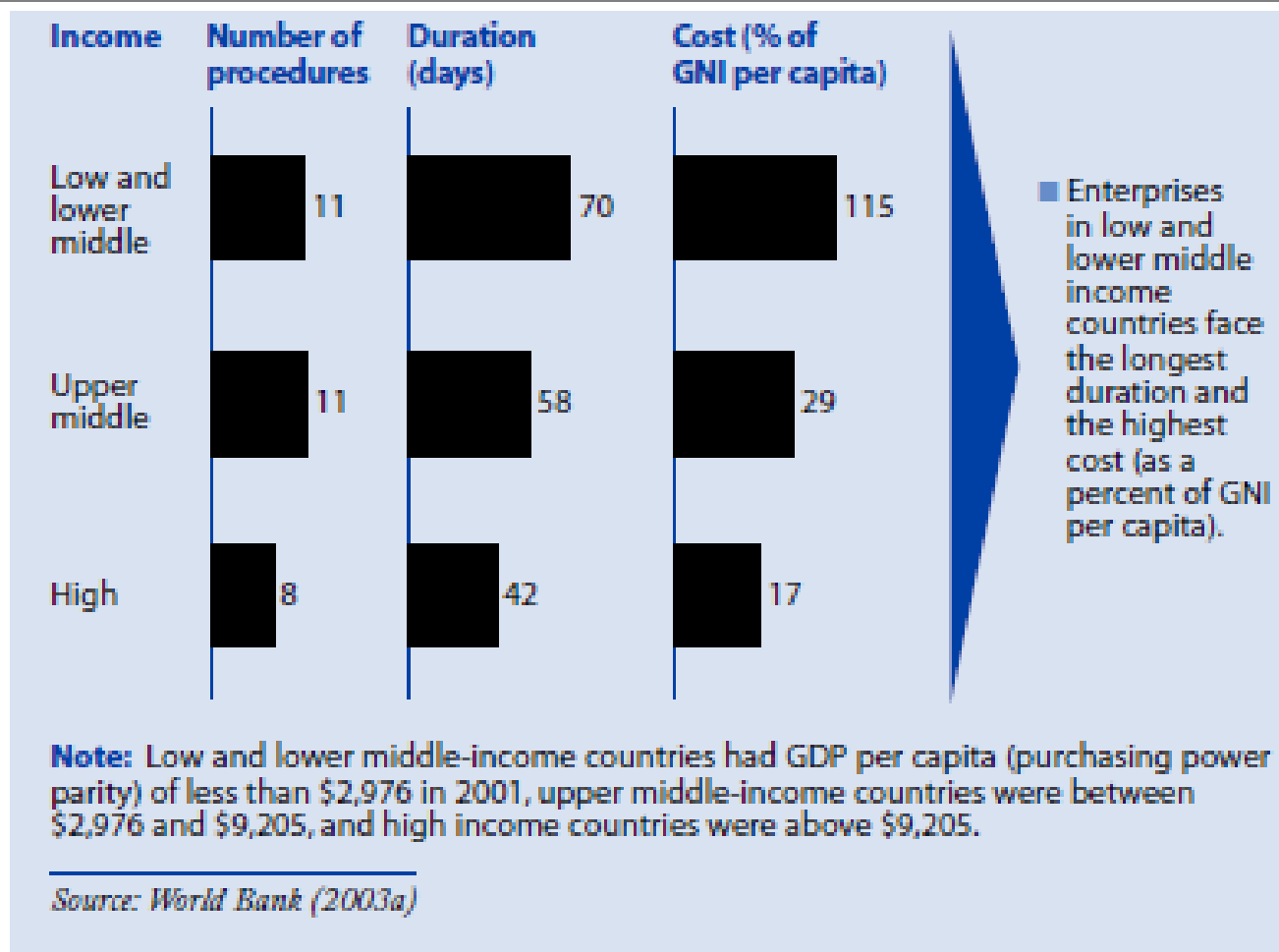


Encouraging and Growing Entrepreneurship



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Regulatory Burdens

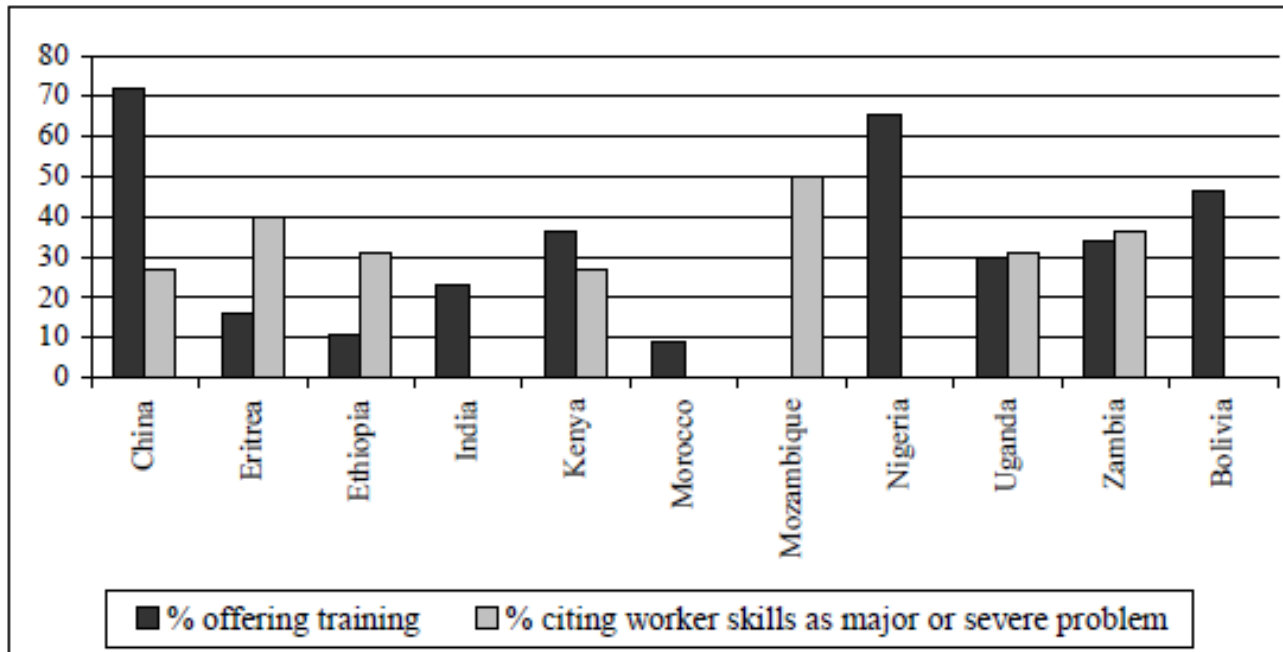


The Regulatory Environment

- Macro constraints: cross-country relationship between heavy regulatory burdens and large “informal” business sectors (Loayza et al 2005, and Djankov et al 2006)
- Micro constraints: Bruhn 2008 and Mullainathan and Schnabl 2009 show that business registration reforms in Mexico and Peru make wage earners open new businesses
 - For the Mexican case, Bruhn finds that these new firms contributed to increases in wage employment



Worker Training



Note: In Nigeria, 9% of Nigerian firms listed worker skills among the top three constraints on their business, and 7% said worker skills were a major or severe obstacle to capacity utilization.

Source: Eifert Ramachandran 2005.



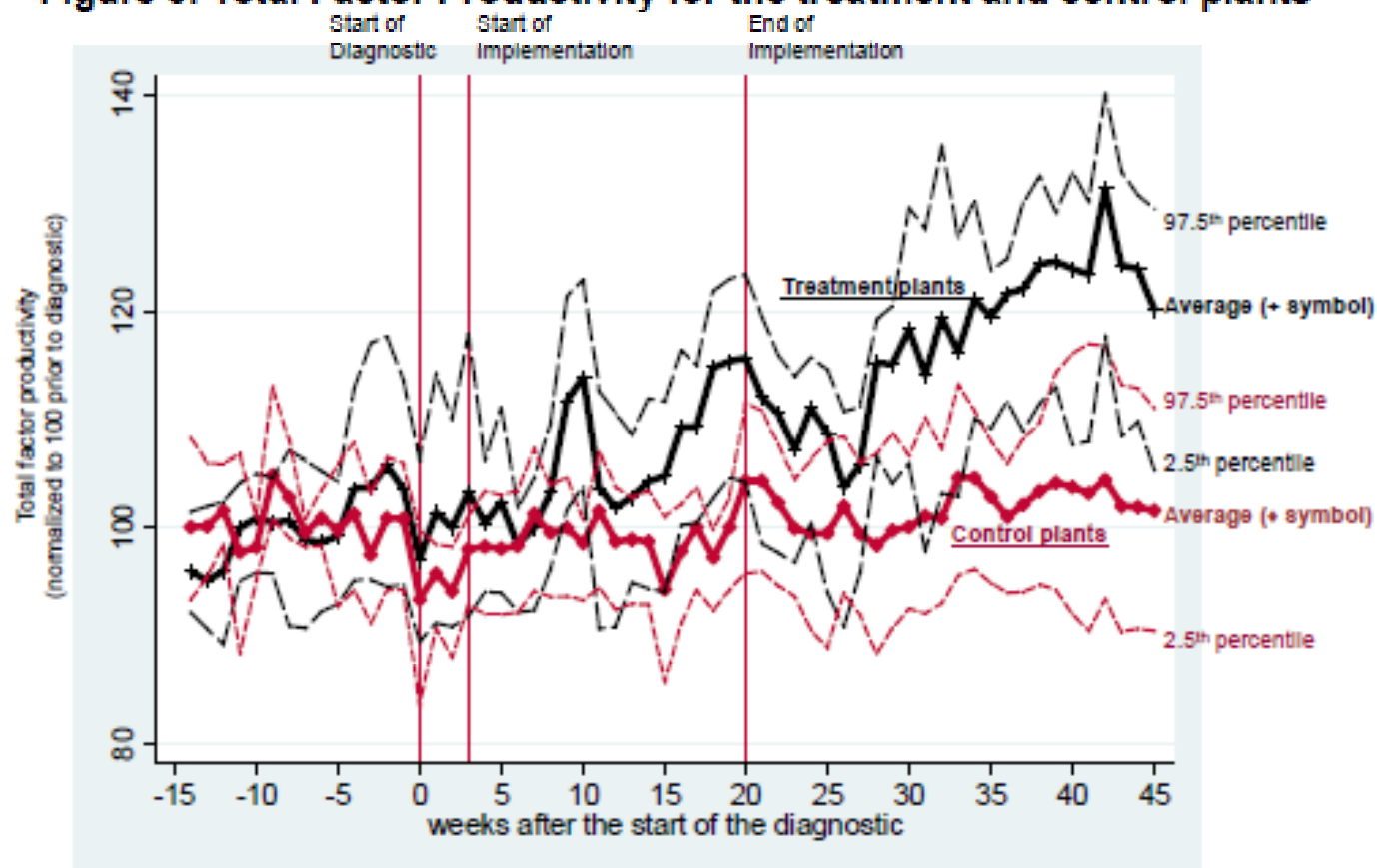
Skills

- “Managerial capital” and financial literacy impact the competitiveness of small firms
 - Bruhn et al 2010: effects on accounts, marketing (Mexico)
 - Drexler et al 2010: business practices and outcomes improve from simple rules of thumb training (DR)
- Importance of managerial abilities and talent in explaining the growth prospects of an economy (Bloom et al 2010)
- Bloom et al 2011 show immense returns to management consulting for large textile firms in India.



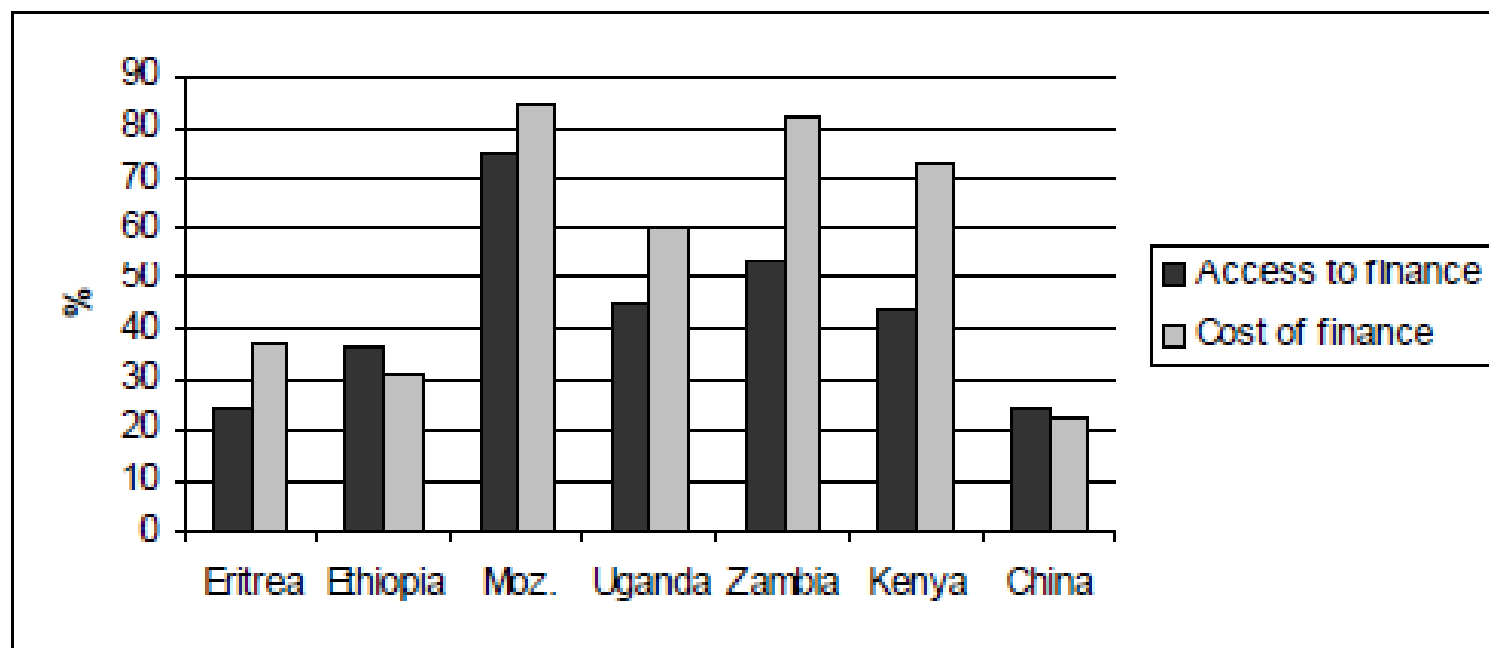
Importance of Management (India)

Figure 5: Total Factor Productivity for the treatment and control plants



Notes: Displays the weekly average TFP for the 14 treatment plants (+ symbols) and the 6 control plants (+ symbols). Values normalized so both series have an average of 100 prior to the start of the intervention. Confidence intervals we bootstrapped the firms with replacement 250 times. Note that seasonality due to Diwali and the wedding season impacts both groups of plants.

Financing Constraints



Source: Eifert Ramachandran 2005.

The Role of Capital and Finance

- Large literature documenting very high returns to capital in developing economies
- Banerjee and Duflo 2003 (74%-100%)
- Bigsten et al (30%)
- Udry and Anogol 2006 (60%-250%)
- McKenzie and Woodruff 2006 (10%/month)



Microfinance?

- Seems not to be a “silver bullet”
- Banerjee et al 2010 find significant impacts of microcredit on investment – but just one financial tool
 - No effects on health, education, women’s decision making
 - Impacts are only for those more likely to start a new business or have an existing business
- Karlan and Zinman 2011 find no evidence that microcredit stimulates private enterprise growth
 - Microfinance may strengthen community ties and improve the ability to manage risks



Is Capital Enough?

- Three randomized trials find no effect of increasing capital on the profits of microenterprises owned by women
 - De Mel et al. 2008 – cash grants in Sri Lanka
 - Banerjee et al. 2010- loans in India
 - Karlan and Zinman 2010 – loans in the Philippines
- Positive returns in male-owned enterprises in Sri Lanka and the Philippines and in Mexico
- Positive returns for those starting businesses in India

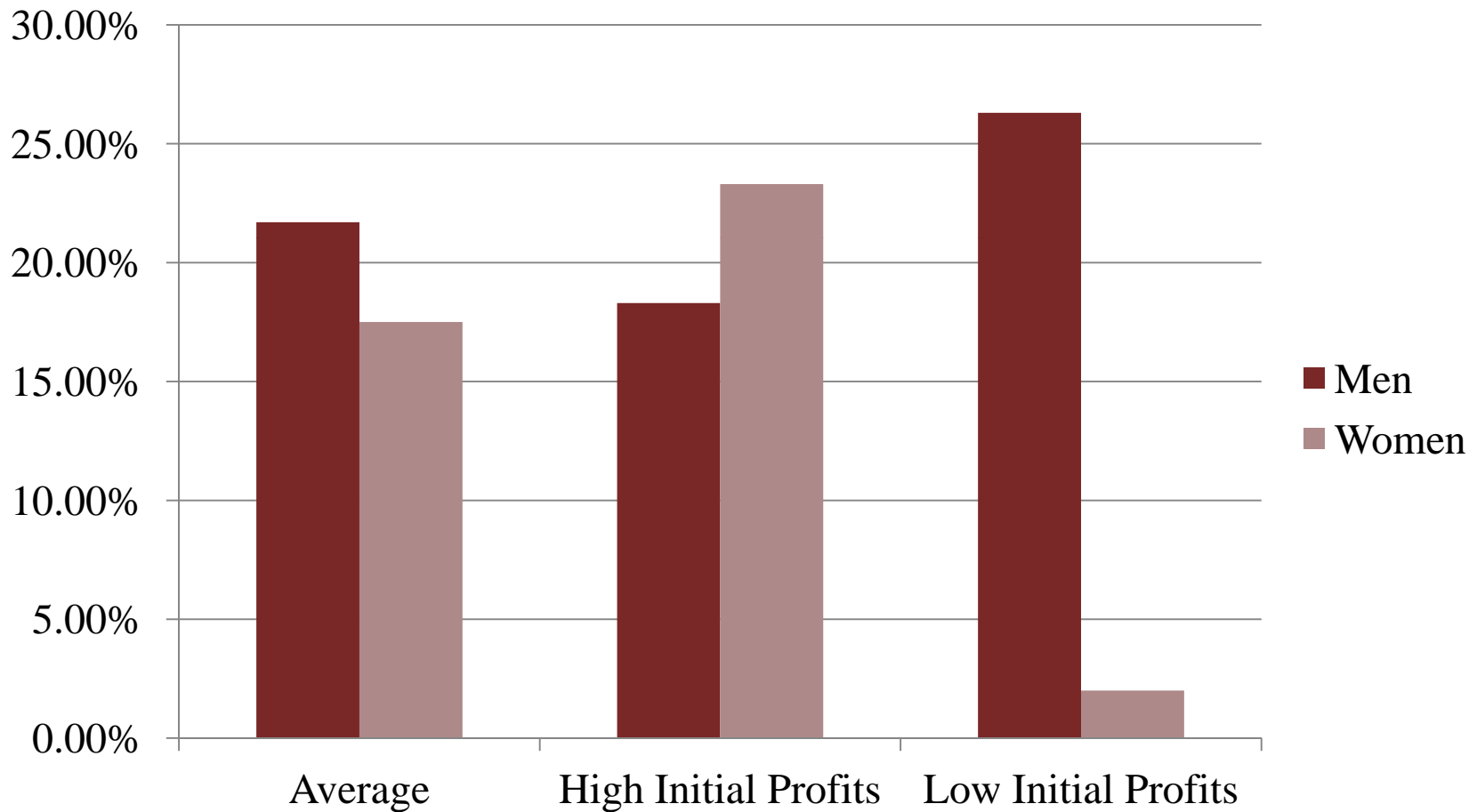


The Impacts of Capital Grants

- de Mel et al 2008, Fafchamps et al 2011
- \$100-\$200, in cash or equipment (median capital stock)
- Sri Lanka: 5-6% return, higher returns for males, for those with higher ability, for those with lower wealth
- Ghana: large average returns to both men and women from in-kind grant (profits rise by 37-39 cedi on 150 cedi grant)
 - For women, subsistence enterprises see no return, larger initial businesses see large returns
 - Cash grants had much lower effects



Returns to Capital: Ghana



Other Financial Tools

- Insurance and risk-management are fundamental constraints for private sector growth in the developing world
- Among small-scale farmers in Ghana, Karlan et al 2011 find that insurance products have much larger impacts on agricultural investment than increased access to credit
- Dupas and Robinson 2011 show that improving access to savings accounts affects investment for female entrepreneurs in rural Kenya

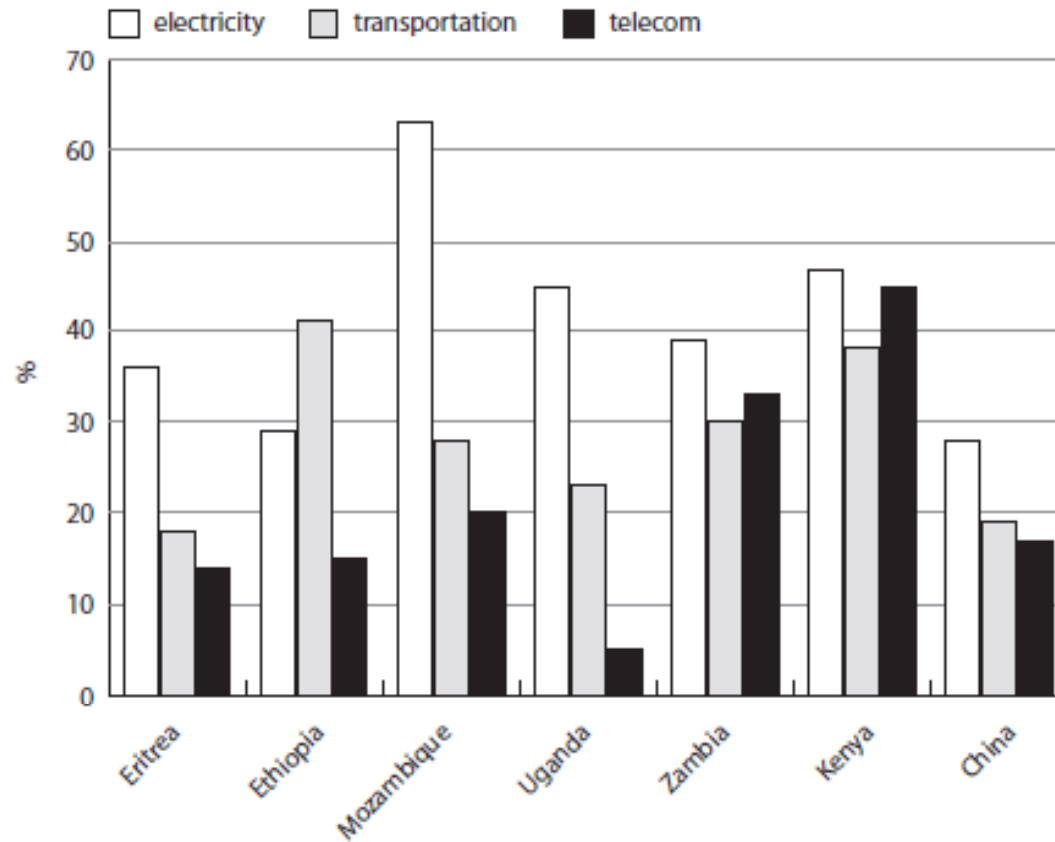


Mobile Money as a Financial Service

- Jack and Suri 2011: mobile phones have enabled one of the most successful payment systems in the continent
- Biggest impact has been lowering of transaction costs
- Has allowed people to manage and smooth risks better
 - Would expect to see better investment decisions
- Just one more financial tool...



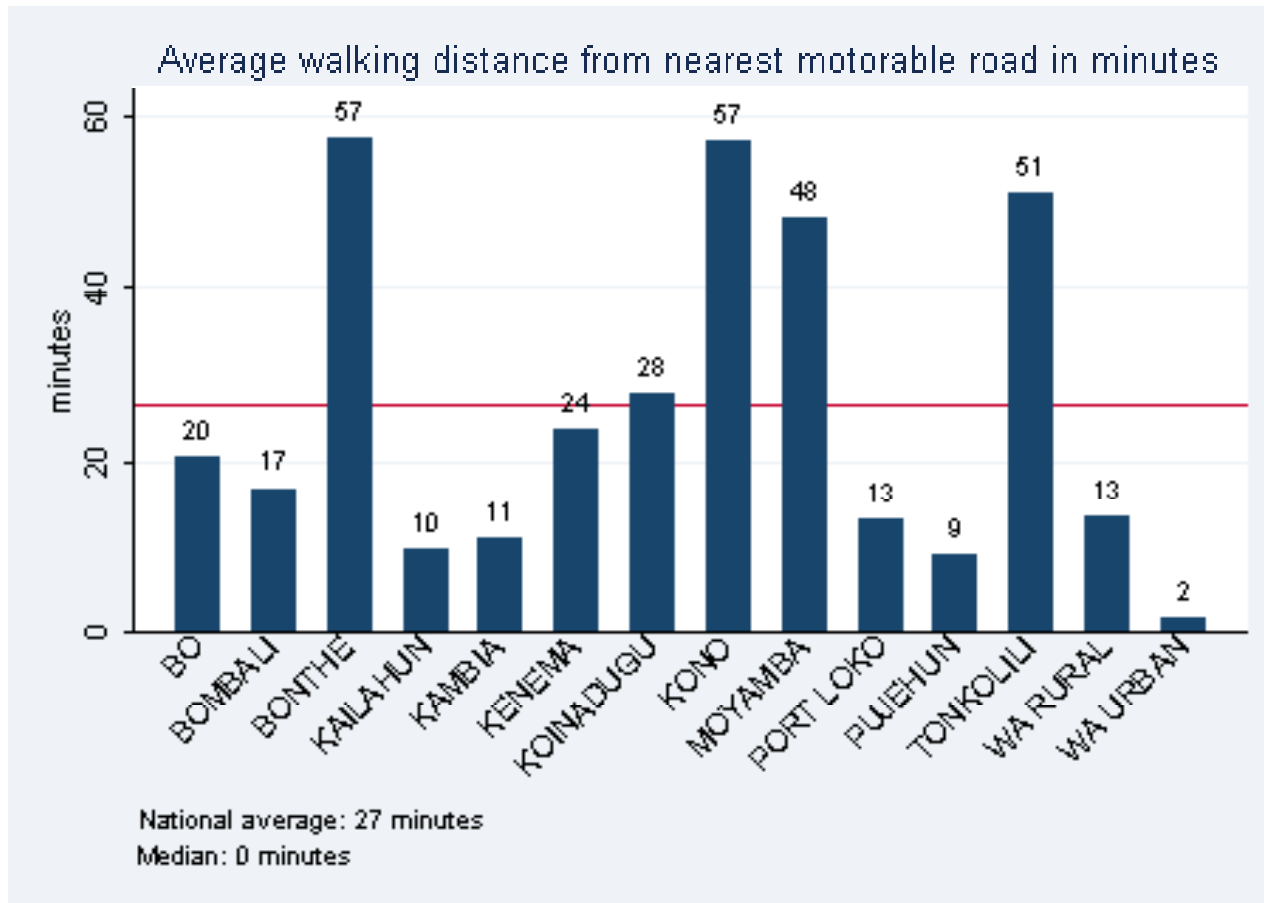
Infrastructure Constraints



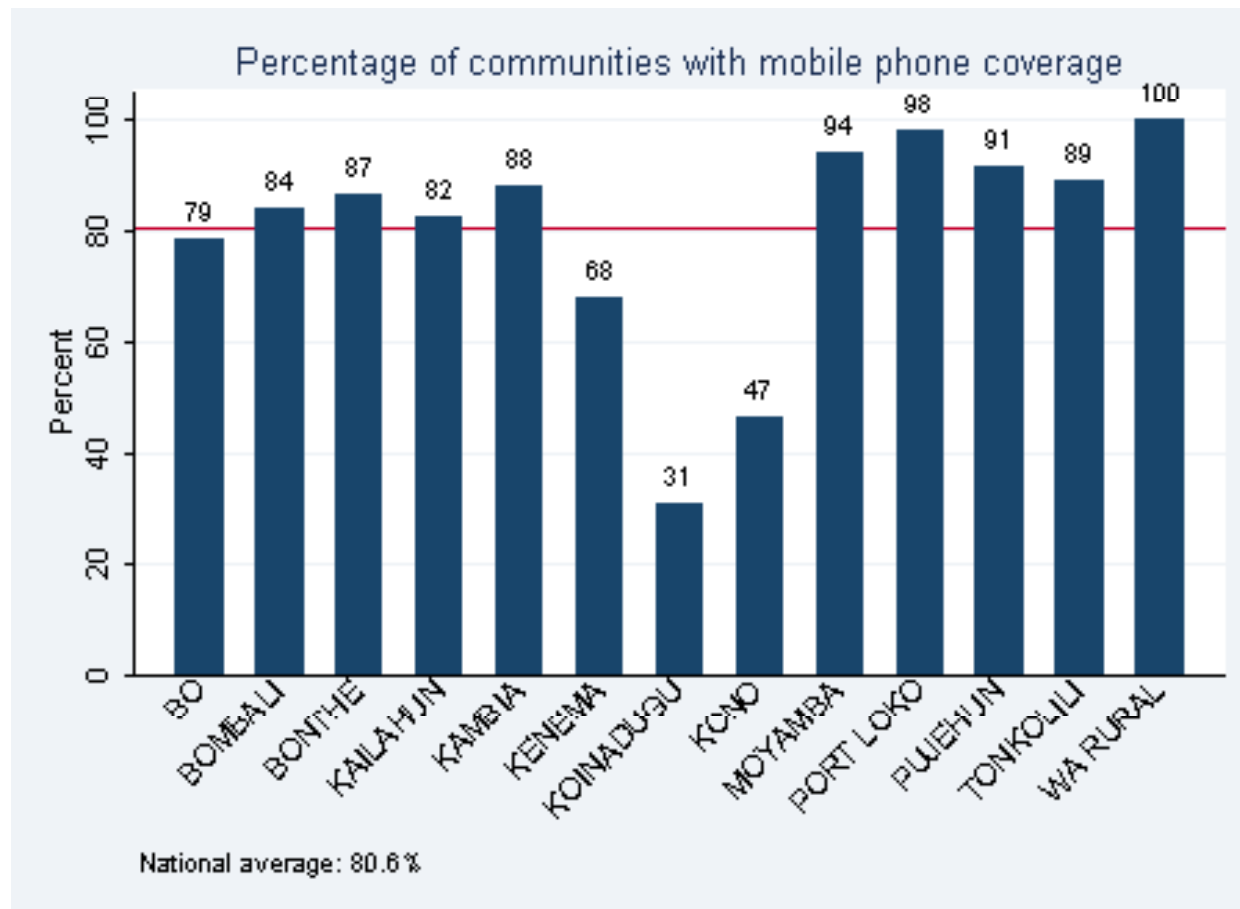
Source: Eifert/Ramachandran 2004, p. 25.



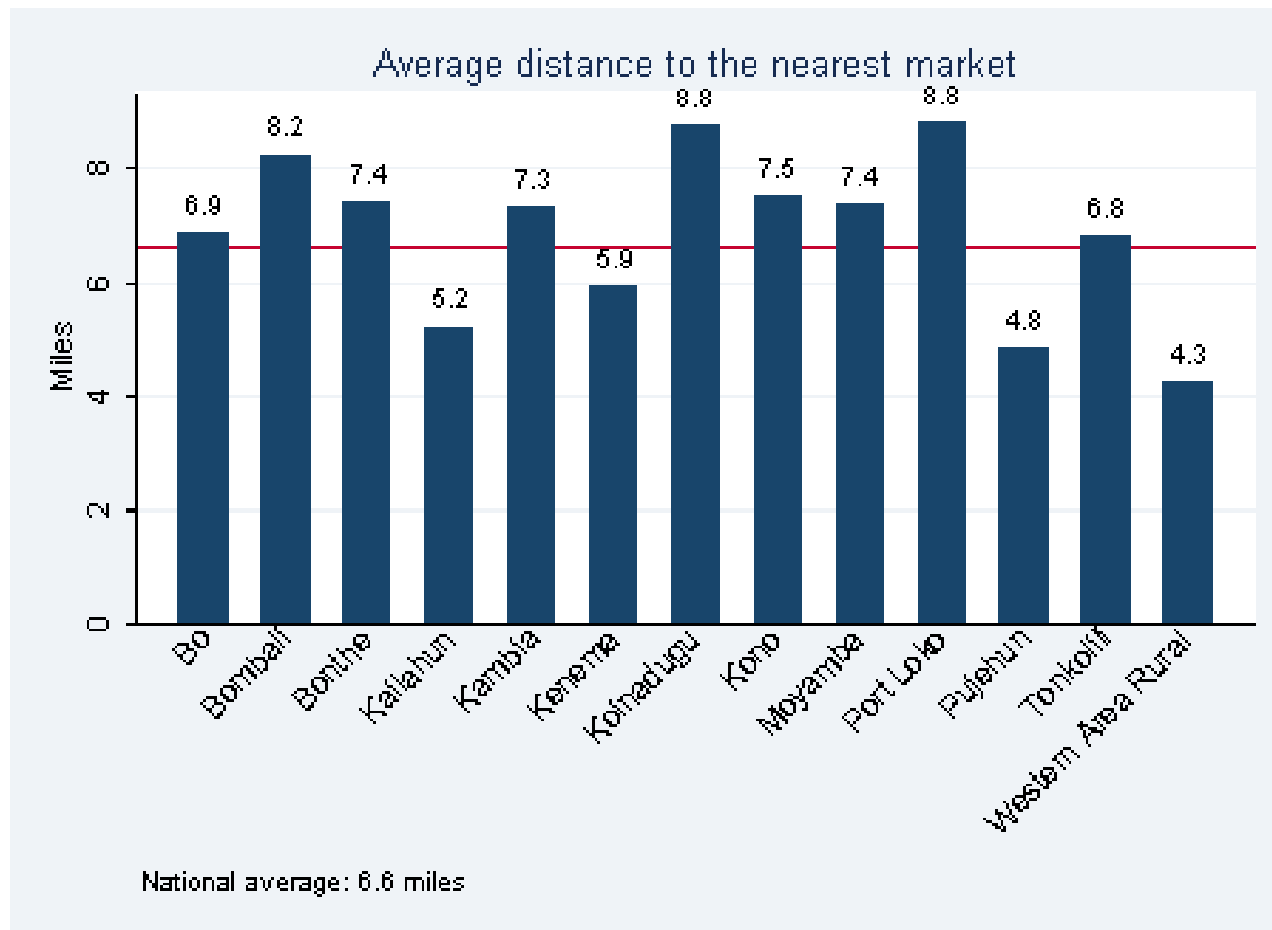
Distance to Roads (AHTS)



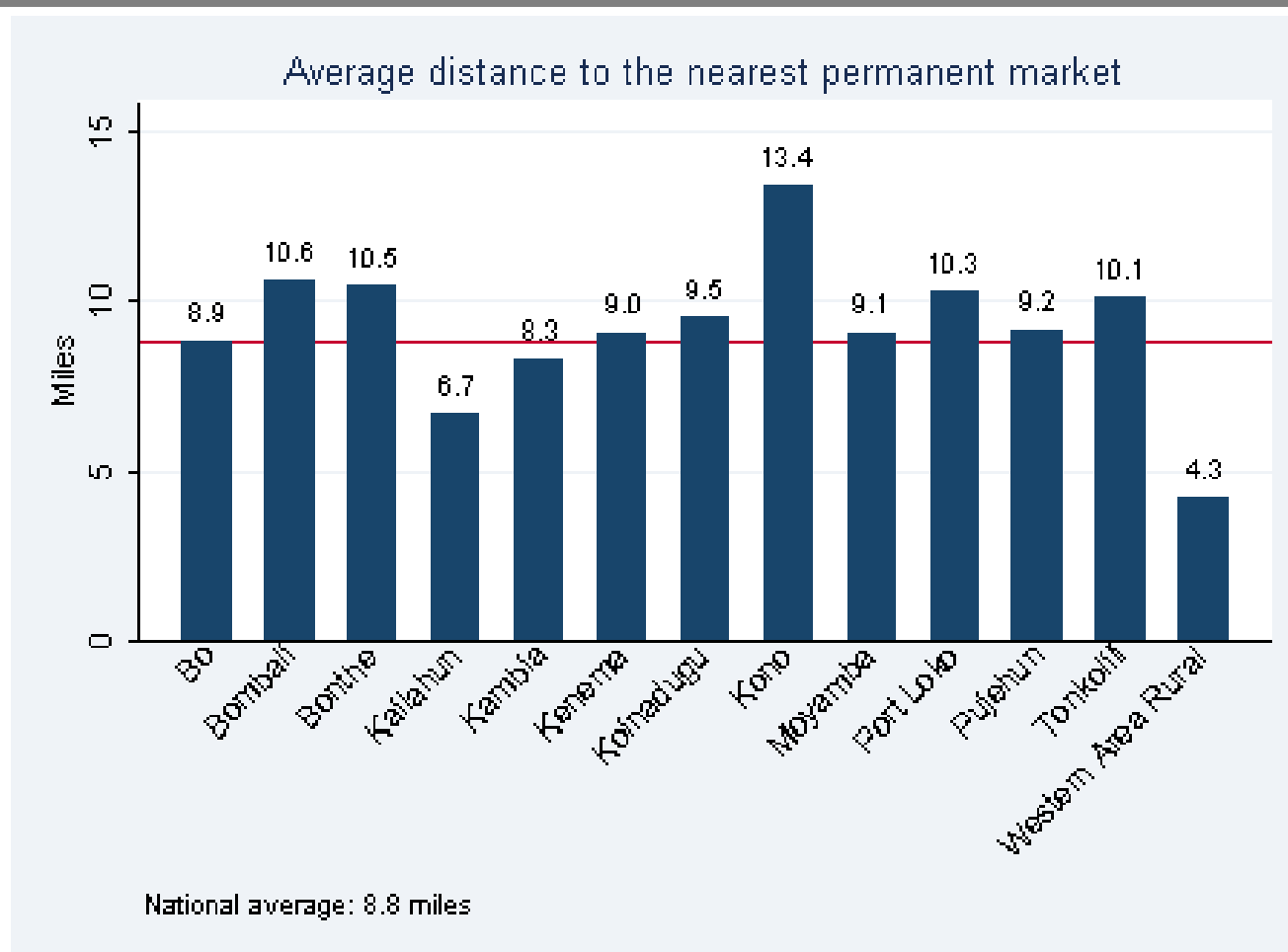
Mobile Phone Coverage (AHTS)



Distance to Markets (AHTS)



Distance to Markets II (AHTS)

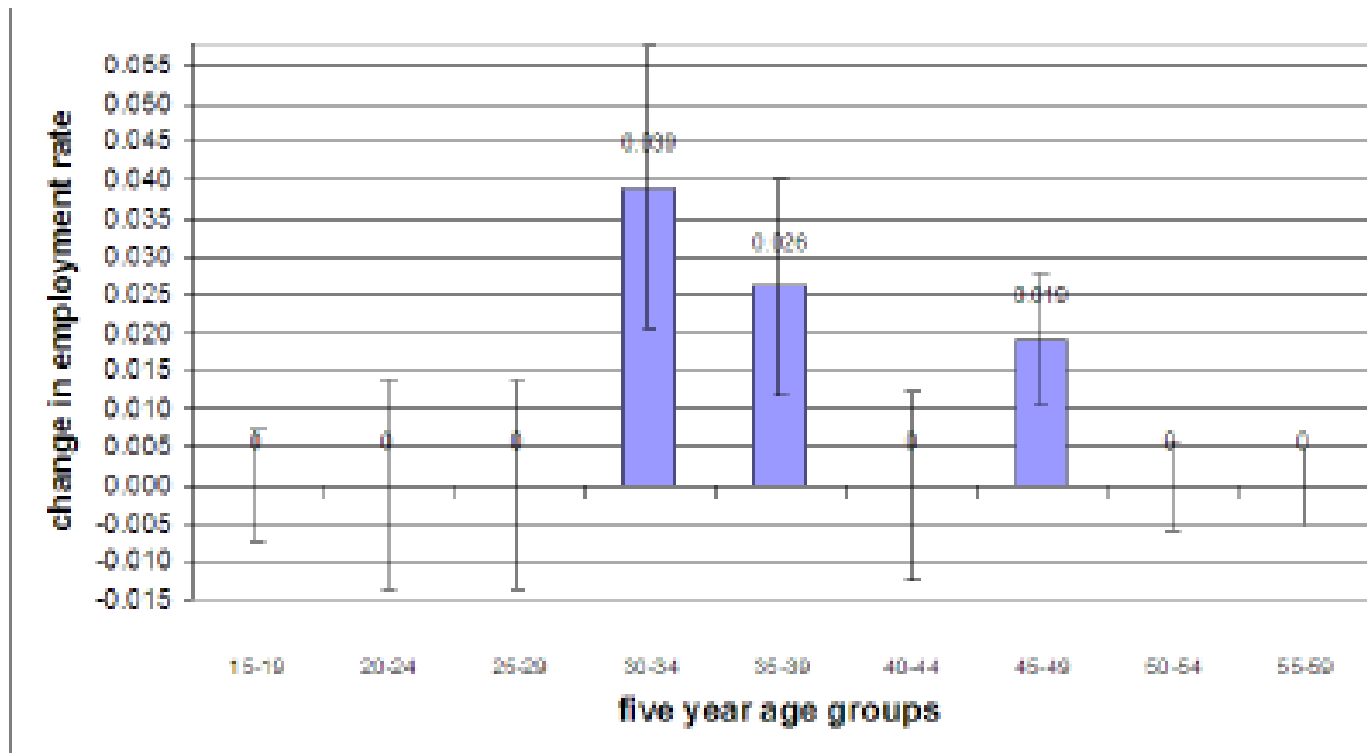


Impacts of Infrastructure

- Electrification in South Africa significantly raised female employment within five years (Dinkleman 2010)
- Lipscomb et al 2011 find large effects of electrification on development, through improvements in labour productivity
- Infrastructure improves access to new high productivity technologies in the agricultural sector (Suri 2011 for Kenya)
- For Uganda, Gollin and Rogerson 2010 show transportation costs affect the level of agricultural population and have complementarities with improvements in ag productivity



Electrification & Female Employment



Source: Dinkelman 2010.

Take Aways 1

- Too many small scale entrepreneurs that do not grow
- Large financial barriers to investment for small scale business
 - Improve access to a wide array/menu of tailored financial tools, encourage experimentation
- Skill constraints, magnified for large firms
- Infrastructure crucial
 - Leverage public works that can also be an important tool for social protection (Grosch et al 2008)
 - Improve electricity and roads to kick off the private sector



Take Aways II

- Innovation in the private sector is key
- A lot of the successes we see across Sub-Saharan Africa come from innovative entrepreneurs
 - Find innovative ways to overcome the constraints
- Experimentation on the part of the private sector very important
- Replicability
- Adaptability

