WHAT IS HOLDING FIRMS BACK?

Christopher Woodruff, University of Warwick and IGC

IGC Growth Week, June 2, 2016

What is holding firms back

- 30 minutes, 30 commonly cited constraints:
  - Access to capital
  - Lack of skilled labor
  - Unreliable suppliers
  - Electricity shortages
  - Market demand
  - Informality
  - Water
  - Corruption
  - Natural gas quotas
  - Import restrictions
  - Export barriers

What is holding firms back

- Will focus instead on a limited set of issues, chosen in part to be complementary to the rest of the Firms sessions:
- Start with the premise that every IGC country has the talent to have a vibrant private sector.
- There are then two main challenges:
  - Allocating the right people to key positions in firms (owners / managers),
  - Incentivizing the talent
- What does research tell us about either of these?

Managerial talent: What matters?

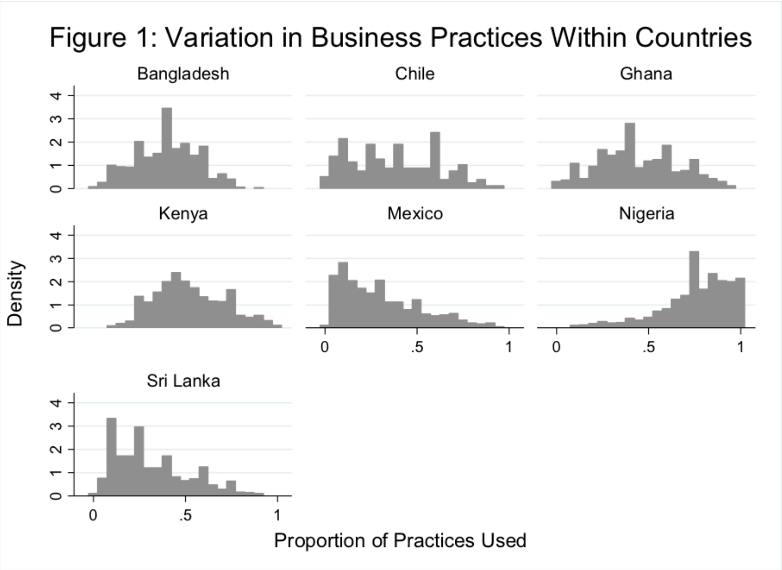
- At least two possibilities, innate ability and managerial ability (practices). Recent research suggests that both of these matter, and in roughly equal proportions
  - Micro and small firms (e.g., McKenzie and Woodruff)
  - Large firms (e.g., Bandiera, Hansen, Pratt and Sadun)

Measuring business practices in small firms

- Mckenzie and Woodruff business practices: 26 questions in 4 areas, taken from curriculum of ILO SIYB:
  - Marketing
  - Buying and stock control
  - Record keeping
  - Financial planning

Measuring business practices in small firms

- 26 questions in 4 areas:
  - Marketing
  - Buying and stock control
  - Record keeping
  - Financial planning



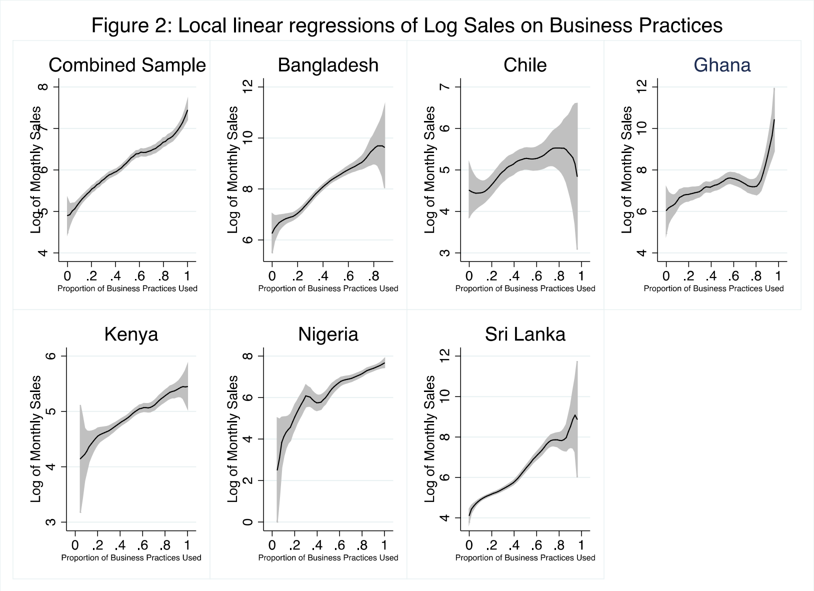


Table 2: Cross-Sectional Associations of Business Practices with Sales

	Log Sales	Log Sales
Business Practices Score	1.211***	0.965***
	(0.047)	(0.046)
Log(Paid Workers)	0.653***	0.475***
	(0.026)	(0.026)
Log(Owners Hours)	0.351***	0.313***
	(0.020)	(0.019)
Log(Capital Stock)		0.094***
		(0.007)
Log(Inventories)		0.200***
		(0.010)
Years of education of owner		
Digitspan recall		
Raven test score		
Sample Size	18146	18146

Table 2: Cross-Sectional Associations of Business Practices with Sales

	Log Sales	Log Sales	Log Sales
Business Practices Score	1.211***	0.965***	0.833***
	(0.047)	(0.046)	(0.048)
Log(Paid Workers)	0.653***	0.475***	0.464***
	(0.026)	(0.026)	(0.027)
Log(Owners Hours)	0.351***	0.313***	0.302***
	(0.020)	(0.019)	(0.019)
Log(Capital Stock)		0.094***	0.085***
		(0.007)	(0.006)
Log(Inventories)		0.200***	0.198***
		(0.010)	(0.010)
Years of education of owner			0.012***
			(0.003)
Digitspan recall			0.036***
			(0.007)
Raven test score			0.019***
			(0.004)
Sample Size	18146	18146	18146

Business practices of manager's ability?

- A one standard deviation increase in business practices (0.24) is associated with a 22% increase in TFP. (26% if ability measures not included.)
- One standard deviation change in each of the the three "owner ability" measures is associated with and 18% change. (24% if business practices not included.)

- Business practices and ability measures have roughly equal-sized, and mostly independent, effects on firm size.

Practices and ability in large firms

- Consistent findings in larger firms: both manager characteristics and management practices matter.
- One very nice example: Bandiera, Hansen, Pratt and Sadun (2016):
  - Use date from time diaries of CEOs in six countries to create in index of “CEO behavior”
  - The firms of higher quality CEOs perform better.
  - Management practices also affect firm performance, but largely independently of CEO type.
  - As an aside to this point, using cross region / cross country data they conclude that matching frictions: “may account for a sizable fraction of the cross country productivity differential observed in the data.”

Practices vs. ability

- Initial punchline: Both management practices and manager characteristics (ability, style) affect firm efficiency.

- What can we do about either, and can we think about them separately?
  - Manager-fixed characteristics are about selection and allocation.
  - Management practices may be either manager-fixed (selection) or subject to change through training in large firms.

Selection: Identifying entrepreneurs with more potential

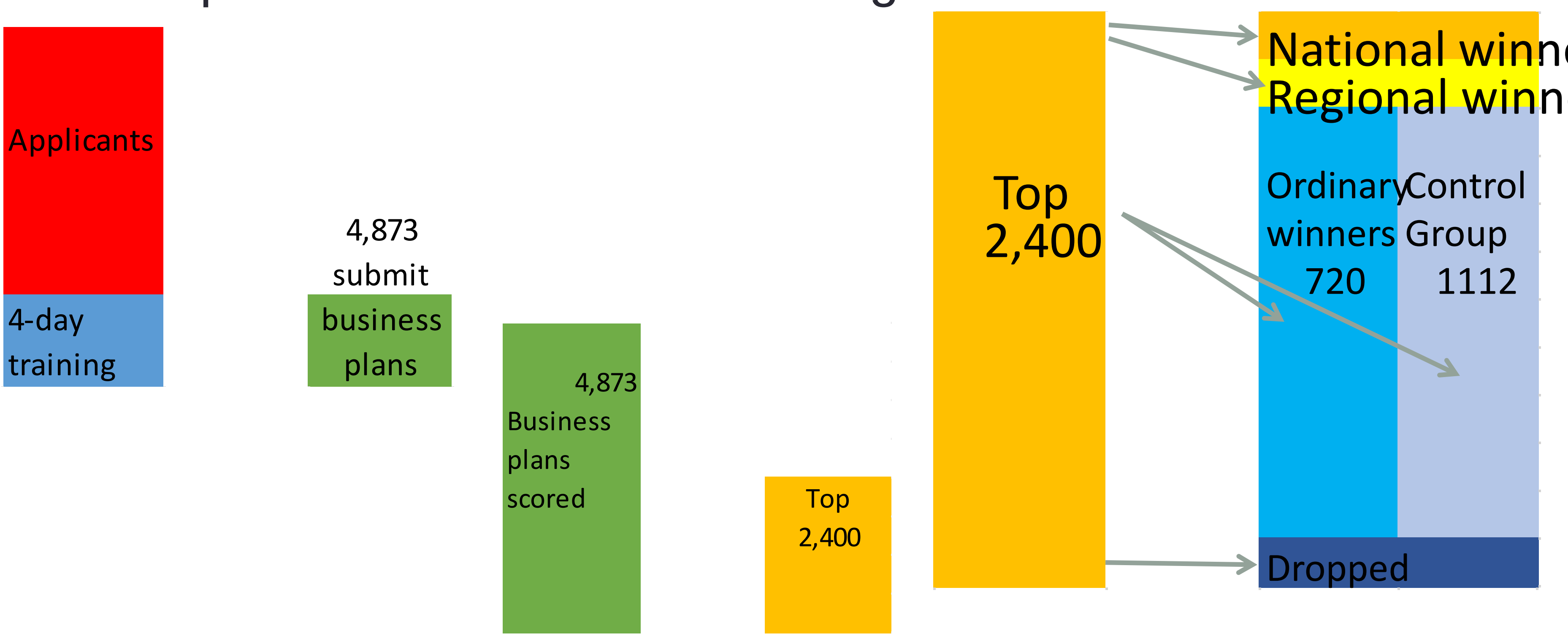
- Several recent attempts to identify firms with higher potential for growth, using:
  - For large firms, increasing penetration of private equity, venture capital.
  - Information from communities: Rigol and Roth, 2016; Bryon, Karlan and Osman, ongoing work on scaling up successful clients from MFIs.
  - Non-cognitive measures: Klinger and Khwaja 2013, psychometric testing predicts default on loans

Selection: Identifying entrepreneurs with more potential

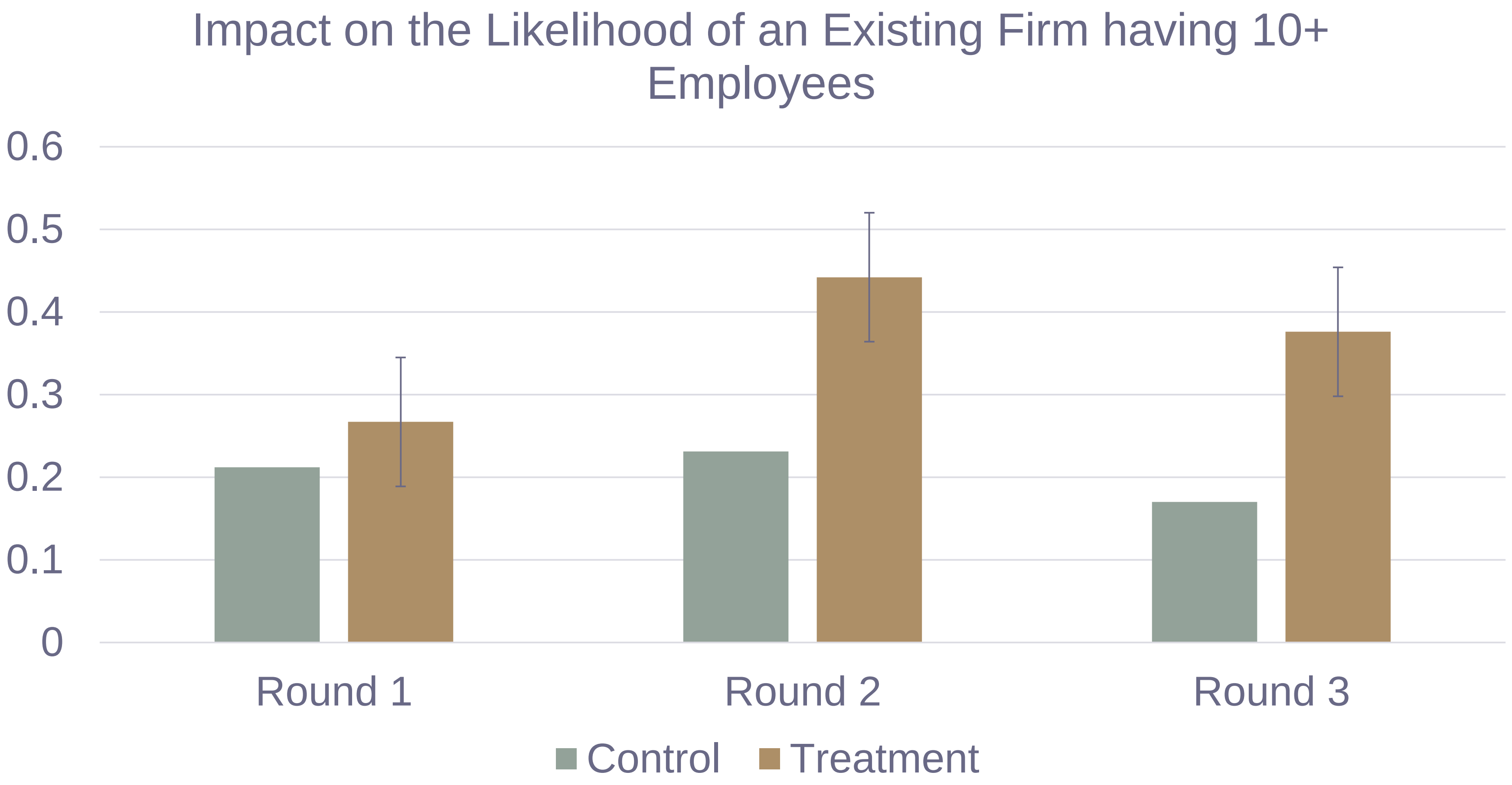
- Several recent attempts to identify firms with higher potential for growth, using:
  - Business plan competitions:
    - Klinger and Schündeln (2011), RD design shows those rated more highly likely to start a business;
    - Fafchamps and Woodruff (2016), BP + training prize; both panels and survey identify faster growing firms, independently.
    - Fafchamps and Quinn (2014), high score + USD 1000 prize leads to more entry, higher profits;
    - McKenzie (2016): YouWin, "youth" (<40) BP competition in Nigeria. Competition + ~ USD50,000 prize.
- Note that these are mostly hybrids of identifying entrepreneurs + relaxing a constraint.

Nigeria's "Youwin" competition and growth

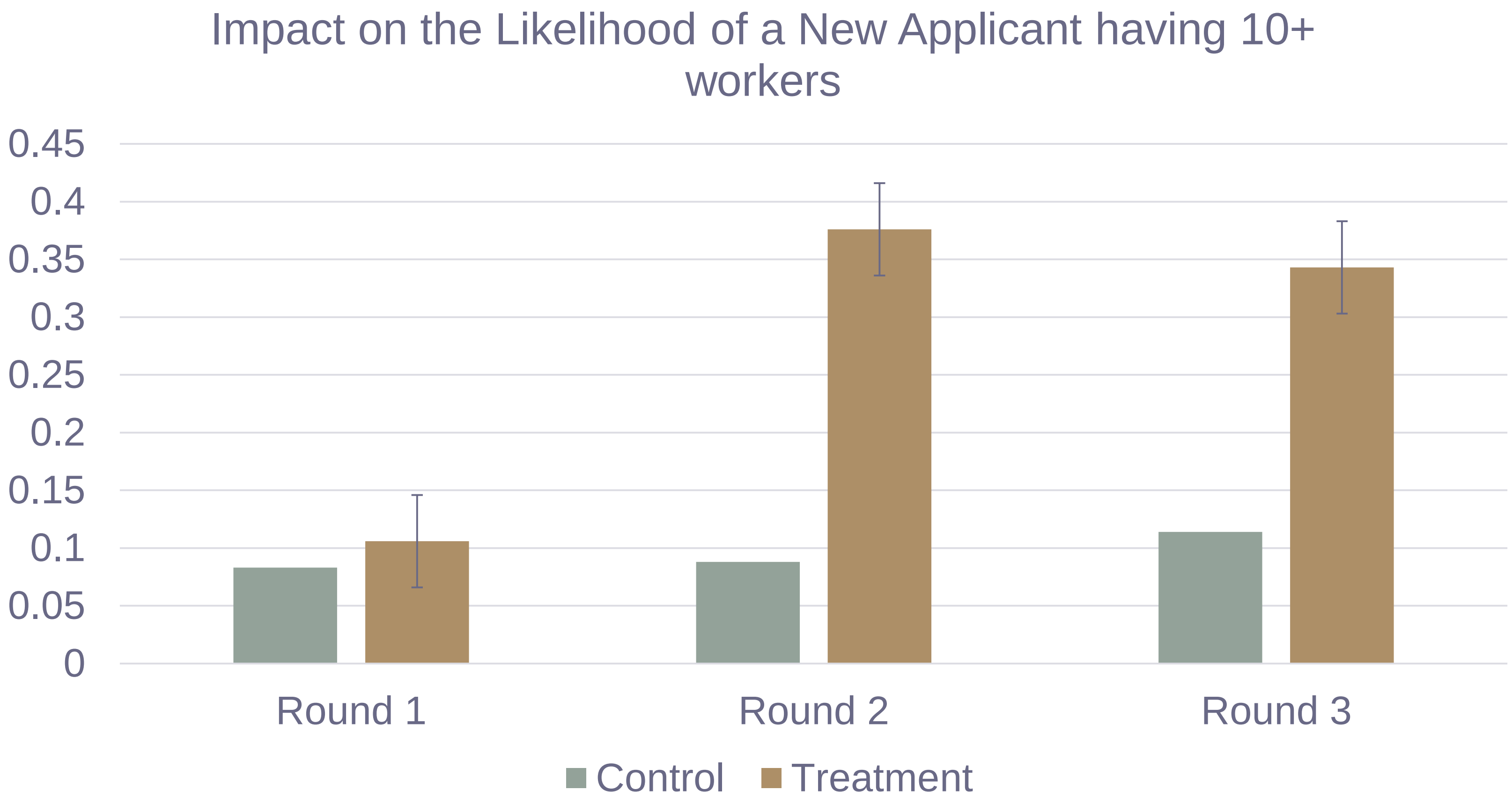
- 24,000 applicants, 15% exisiting firms. Initial 10-minute screen to select 5,000
- Training to write business plan, then more extensive review of the plans. Preference for existing firms.



Outcomes: Effect of capital conditional on being (fairly) high-ability



Outcomes: Effect of capital conditional on being (fairly) high-ability



USD 8,350 per job created

Selection and training

- Selection + training: Anderson-MacDonald, Chandy and Zia, 2015: Screening to select growth-oriented microenterprises in South Africa. Required multiple trips to register for training, no subsidies.
  - Randomizing from this selected sample, provided (relatively) intensive training focused on marketing or finance.
  - Something of an outlier in the size of the effects of the training.
- Atkin et al (in progress), innovation prize competition in Pakistan.

- Selection may be important for efficient channeling of resources (e.g., grants, training). But ideally, would unpack the effects of selection and novel grant size, training.

Can we improve management practices?

- Maybe…
- One notable success: Bloom et al (2013), Indian textiles. An intensity of treatment orders of magnitude larger than anything else out there.
    - Even controlling (linearly) for size, high intensity relative to other training interventions.

Can we change management practices: small firms?

- Training is arguably more important in smaller firms: A key difference between larger firms and micro/small firms and is that managerial talent is not tradable in small firms.
- In smaller firms, pockets of success.
  - Anderson-MacDonald et al, already discussed (South Africa)
  - Drexler, Fischer and Schoar (2014), rule of thumb (DR)
  - Brooks, Donnovan and Johnson (2016), mentoring by successful small business owners (Kenya)
  - Cai and Szeidl (2016), group learning (China)
- Note that these all use something other than the most common training programs (e.g., ILO) out there.
- Very idiosyncratic. From a policy perspective, we need replications.

Supply or demand?

- Most of this research thinks about relaxing constraints.

Supply or demand

- Most of this research thinks about relaxing constraints.

- Perhaps the key is creating necessity: conditions in the market, either through competition or opportunity, which induce investment by managers / entrepreneurs.
  - Suggestive evidence: Bloom and Van Reenen 2007: Cross sectional evidence that management practices are better in more competitive markets

Demand side effects

- Two very nice experiments changing markets:
- Andrabi, Das and Khwaja 2014: Providing performance information about (mostly private) school quality in rural Pakistan:
  - Dramatically raises school quality of low-performers
  - Lowers prices charged by high-performers
- Atkin, Khandewal and Osman (2016): Linking independent rug-makers in Egypt with export markets
  - Dramatically raises quality and productivity

- No supply-side intervention in either case

Concluding remarks

- Innovations in measuring management help us separate and understand the roles of innate ability and management practices: Both matter.
- This points to the need to a need for understanding in two dimensions:
  - selection / allocation of individuals to entrepreneurship / management. Important for efficient allocation of limited resources.
  - Improving management practices
- “Necessity is the mother of invention”: Demand-side interventions deserve more attention.
  - Need a better understanding of how markets function, at a micro-structure level (e.g., Potatoes, grains)