Skills, Practices, and Aspirations of Small-scale Entrepreneurs in Low-income Settings

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Lecture Overview

1 **PART I: Lecture**

Business Practices and Training

- Business Practices and Productivity
- Classical MSME Training
- Extensions of the Classical Approach
- Measuring Firm Performance
- Mechanisms
- Alternative Approaches

2 **PART II: Paper**

Curating Local Knowledge

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Business Practices and Productivity

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Dispersion of Business Practices

Stylized facts about firms

Large country-level heterogeneity in productivity	Large country-level heterogeneity in mgmt quality
Large firm-level heterogeneity in productivity	Large firm-level heterogeneity in mgmt quality

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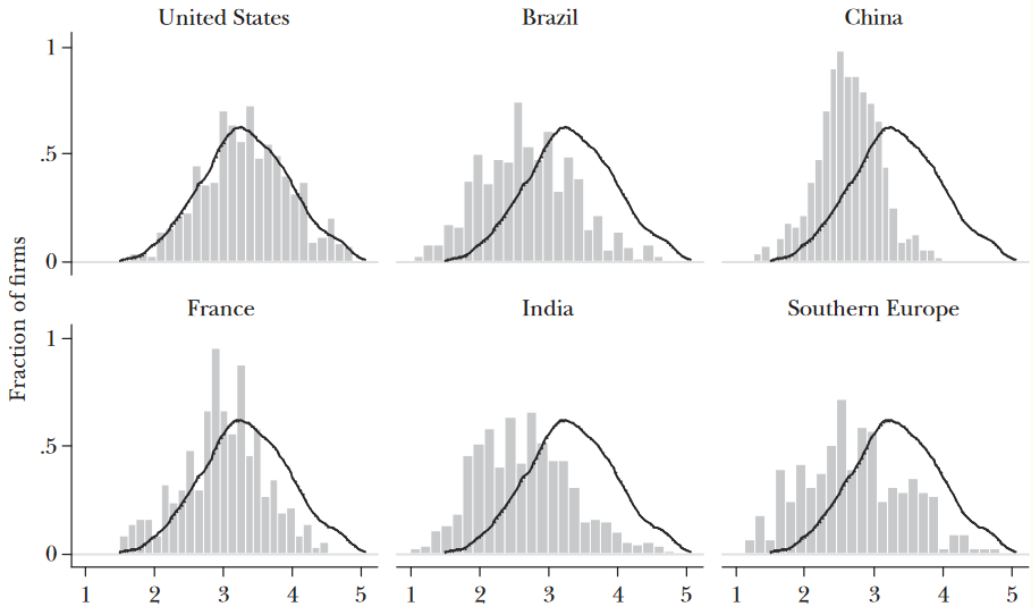
Dispersion of Business Practices

Mid-sized and large companies

Figure 2
Management Practice Scores across Firms



- Heterogeneity in mgmt practices across mid-sized and large firms (Bloom and Van Reenen, 2007; Bloom and van Reenen, 2010; Syverson, 2011)

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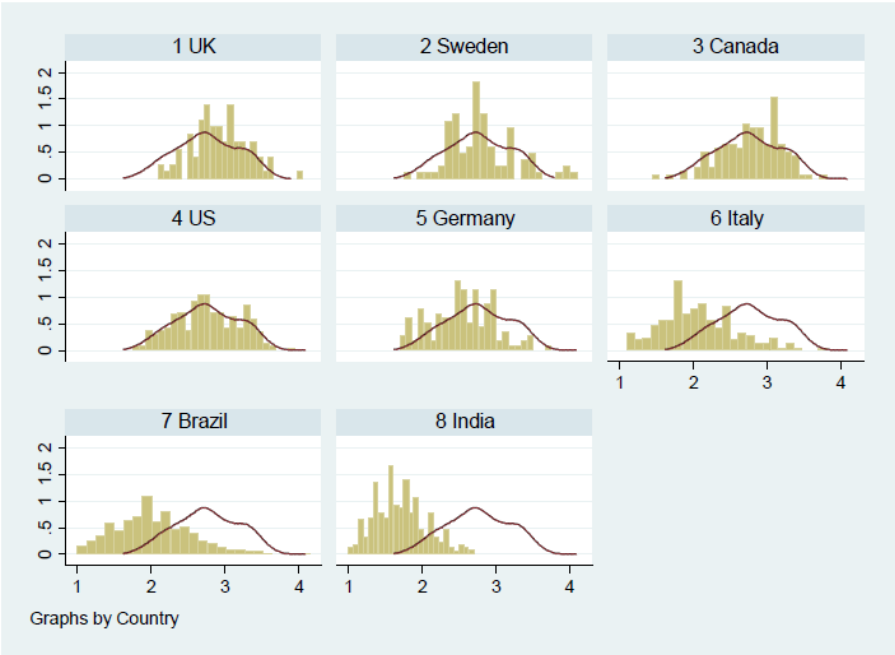
Dispersion of Business Practices

Public-sector companies

FIGURE 3: MANAGEMENT WITHIN COUNTRIES



Notes: Data from 1,851 schools showing the distribution of the firm level school scores. A smoothed kernel density plot of the US data is shown on each panel for easy comparison to the US management distribution.

- Heterogeneity in mgmt practices across schools (Bloom et al., 2015) and hospitals (Bloom et al., 2020)

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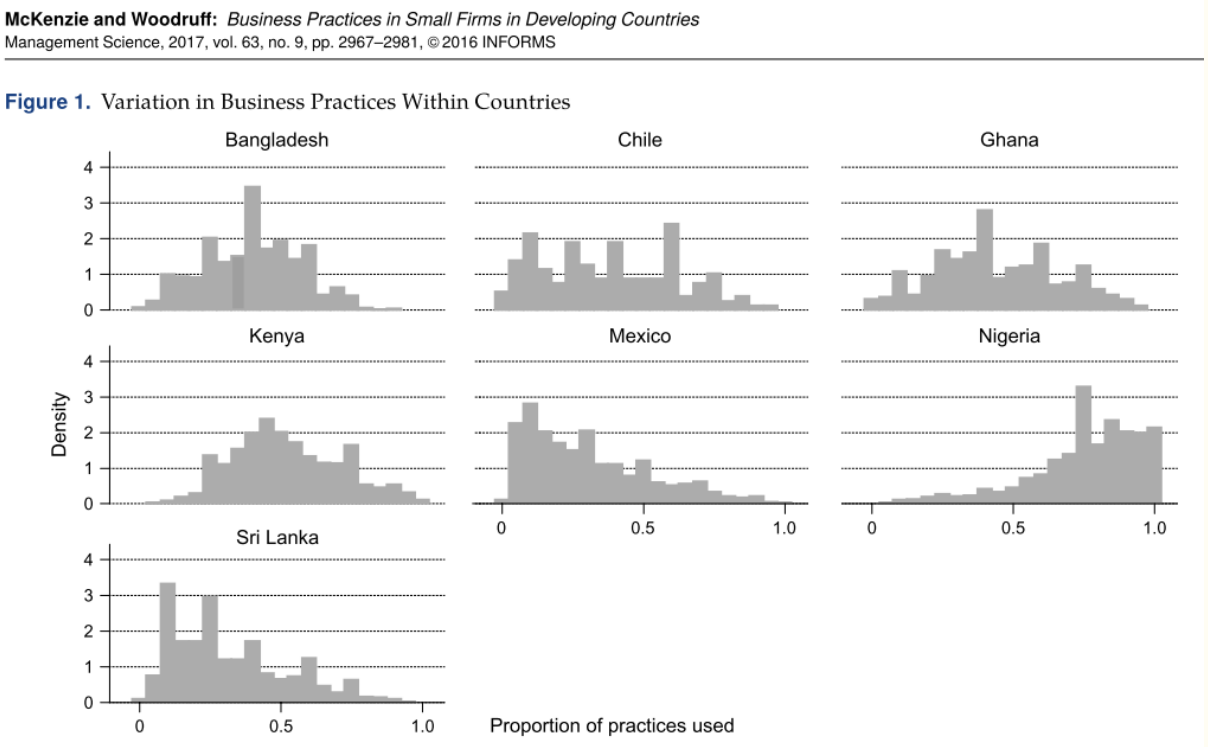
Dispersion of Business Practices

Small firms



- Heterogeneity in business practices across micro and small enterprises (McKenzie and Woodruff, 2017)

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Characterization of Business Practices

Set of general best practices for small firms

- McKenzie and Woodruff (2017) identify set of 26 business practices most closely associated with business performance
  - Validated in 7 countries in Asia, Africa, and South America
  - 4 major domains of business practices
    1. Book-keeping and accounting
    2. Financial planning
    3. Inventory management and stock control
    4. Marketing

    → Strong persistent component at one-year endline ($r = 0.59$)

  → How exactly should we think about business practices translating into performance gains?

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Business Practices in the Production Decision

Standard Production Decision

- Owner maximizes output $Y = f(A, L, M, K)$ at given wealth W:

$$\max_{K,M,L} \{p f(A, L, M, K) - wL - sM - rK\}$$

$$\text{s.t. } wL + sM + rK \leq \lambda W$$

.. where L is labor, M is materials, and K is capital.

.. where w the cost of labor, s the cost of raw materials, r cost of capital, and p is the output price

.. where A represents a productivity factor and λ parameterizes borrowing constraints

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- 2 general conceptualizations of business practices
  1. As factor of production B chosen by owner at market price p_B
  2. As technology affecting productivity factor A

  (See, e.g., Bloom et al., 2016; McKenzie and Woodruff, 2017)

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Business Practices in the Production Decision

- Further specific channels of potential impact
  1. Better negotiation practices may affect raw material prices s
  2. Record-keeping and financial planning practices may affect borrowing constraints λ through banks' willingness to lend (see, e.g. Bruhn and Zia, 2013)
  3. Marketing practices may affect output price p by changing demand

  $\rightarrow$ Plausible association between business practices and revenues, profits, and business growth

  $\rightarrow$ Prices (p, s, and p_B) and inputs (K, L, and M) likely endogenous to business practices B

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Business Practices and Performance

Using panel data and a model that treats managerial capital as technology, Bloom et al. (2016) find differences in management practices account for about 30% of cross-country TFP differences

- Robust correlation with productivity in mid-sized and large firms, and in the public sector (Bloom et al., 2015, 2020)
- Robust correlation with performance and firm survival across industries and contexts in small firms (McKenzie and Woodruff, 2017)

Open questions

- Does adoption of best practices *cause* performance to increase?
- How can adoption of practices best be encouraged?

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Classical MSME Training

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History and Prevalence

- At least USD 1 billion per year (to 4-5 million entrepreneurs; McKenzie (2020))
- Classical training programs *precede* evidence that business practices vary and are predictive for productivity
- Examples:
  - Start and Improve Your Business (ILO)
  - Business Edge (IFC)
  - EMPRETEC Entrepreneurship Training Workshop (UNCTAD)

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Typical Training Program

Stylized facts on MSME trainings

- Group of 15 to 40 entrepreneurs per trainer
- In-class (often with elements of active and interactive learning)
- Period of up to two weeks
- Foci of typical syllabi
  - Encourage start-up: Business ideas and business plans, permits, costing, pricing, and budgeting
  - Grow existing businesses: Record-keeping, accounting, and financial planning, marketing, human resources and hiring, stock and inventory management
- Average training program not inexpensive (USD 177 per person for ILO training, van Lieshout and Mehta (2017))

  $\rightarrow$ Typical training program highly subsidized

  (Median contribution 10% of full price)

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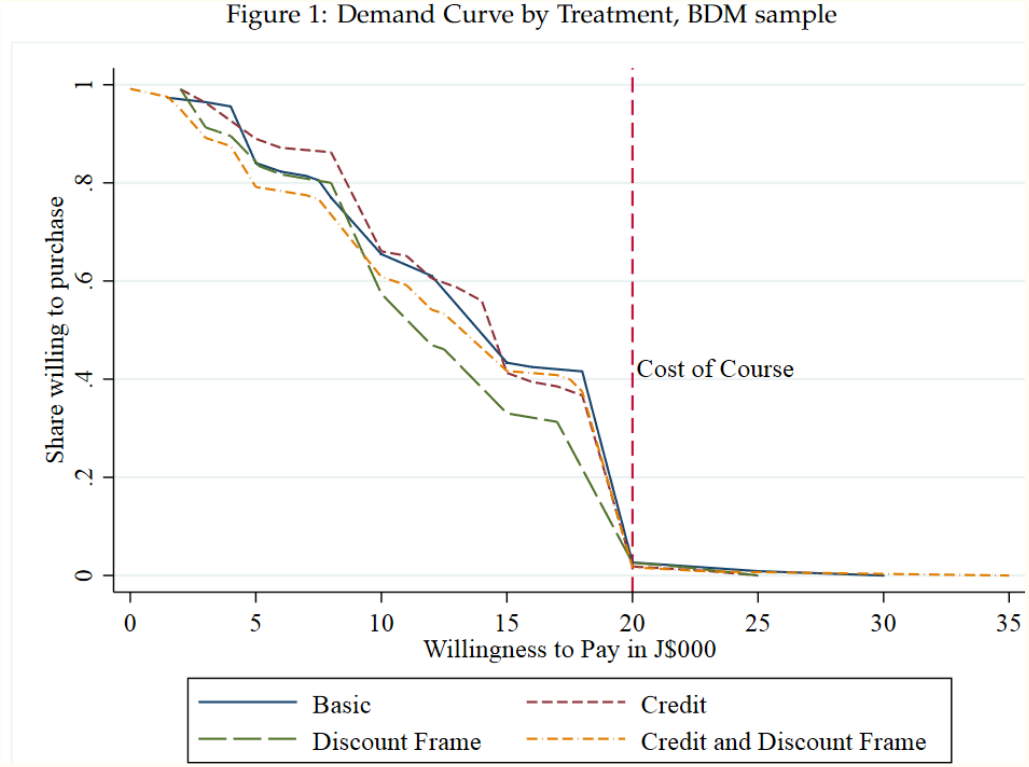
Typical Training Program

Demand for business training



- Demand curve for business training in Jamaica: ∼60-70% willing to pay half, ∼10% full price (Maffioli et al., 2020)

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Impact on Performance

First wave of evaluations

- Headline result: No impact on business performance
  - Modest short-term adoption of practices (long-term fade-out)
  - Null-effect on business sales and profits
  - Early examples: Field et al. (2010); Karlan and Valdivia (2011); Bruhn and Zia (2013), also Giné and Mansuri (2021, WP in 2014)

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Impact on Performance

Econometric and implementation issues (McKenzie and Woodruff, 2014)

- Lack of statistical power with MDEs often substantially above policy-relevant levels
  - Small samples (typically $N = 200 - 400$ per treatment cell)
  - Typical attendance between 40 and 70%
  - Typically substantial rates of survey attrition (up to $24 - 28\%$)
  - Large heterogeneity in age, education, training delivery and costs, etc.

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  - Typical attendance between 40 and 70%
  - Typically substantial rates of survey attrition (up to $24 - 28\%$)
  - Large heterogeneity in age, education, training delivery and costs, etc.
- Endline follow-ups very short-term (typically 1-2 years out)
- Sources of selection bias by treatment status
  - Firm survival can be endogenous on treatment
  - Record-keeping likely to increase reporting accuracy
  - Clear potential for differential experimenter demand effects
- Most trainings offered at no private costs
  - Potential for reverse sunken cost fallacy in valuation (see, Maffioli et al., 2020)

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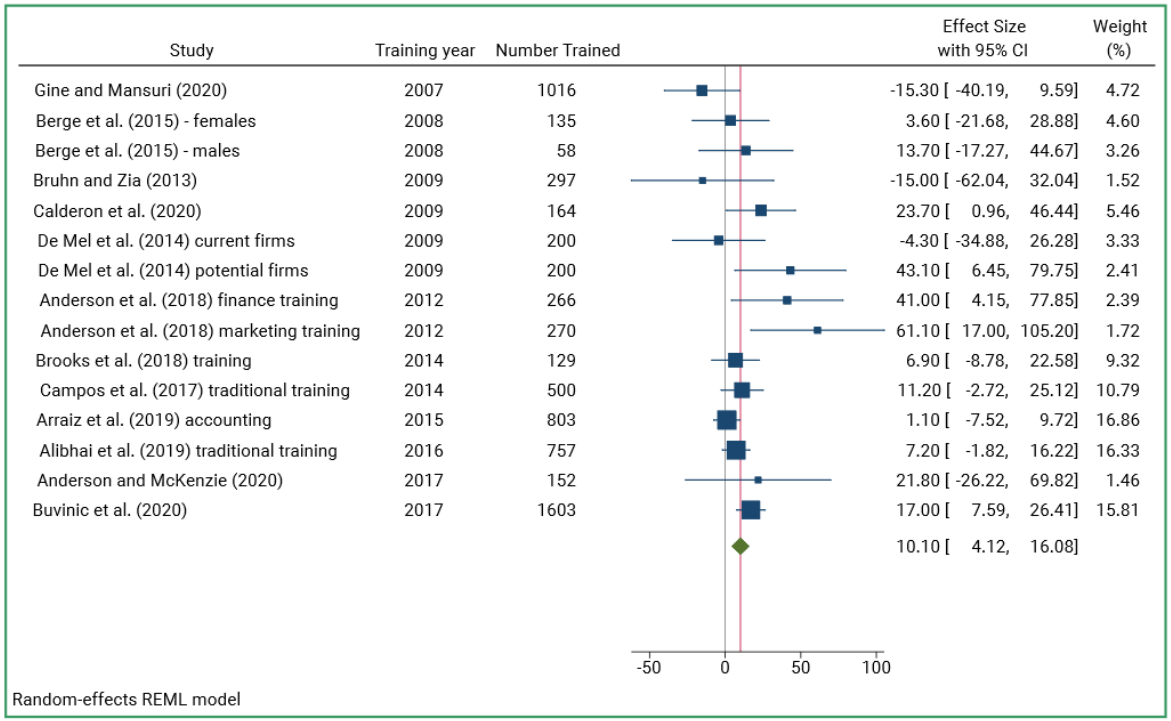
Impact on Performance

Recent meta-study (McKenzie, 2020)

Figure 2 Estimates of the impact of business training on firm profits



Source: McKenzie (2020)

- Small positive impact on practice adoption and performance

  → Estimated 10.1% plus in profits, and 4.7% plus in ▸ sales

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Targeted Training

Refinements of the classical model

- Targeting specific subgroups of the population
  - Alleviating particularly severe constraints
    → Marginalized or disadvantaged groups (e.g., women, youth)
  - Maximizing treatment impact or cost-effectiveness
    → Promising entrepreneurs (e.g., high-growth firms)
  - Plus: Maximizing statistical power through homogeneity
- Training of specific clusters of business practices
  - Alleviating specific constraints
  - Investigating mechanisms of treatment impact

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Targeted Training

Female entrepreneurs

- Examples:
  - Gender and Enterprise Together (GET Ahead, ILO; Bulte et al., 2017; McKenzie and Puerto, 2021)
  - Start and Improve Your Business (SIYB, IFC; de Mel et al., 2014)
- Most common type of targeted training (complementary to classical microfinance model)
- Structural reasons
  - Women overrepresented in subsistence entrepreneurship
  - Female entrepreneurs often subject to more severe constraints; e.g., due to household-level reallocation (see, e.g., Bernhardt et al., 2019; de Mel et al., 2009a)

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Targeted Training

Young entrepreneurs

- Typically embedded as entrepreneurship courses in school or university (business concepts and soft skills)
- Example: Final year university course in Tunisia (Alaref et al., 2020)
  - Positive impact on business entry tapers off after 4 years

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High-growth businesses ("gazelles")

- Extensive-margin prediction of future MSE growth is hard (Fafchamps and Woodruff, 2017)
  - Survey, ability measure, expert panel all explain unique variation
  - But: Business training for predicted gazelles shows no impact
- McKenzie (2017) finds more encouraging results with a nationwide business plan competition in Nigeria
- Small literature on business accelerators and incubators
  - Cusolito et al. (2021); Gonzalez-Uribe and Leatherbee (2018); González-Uribe and Reyes (2021)

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Targeted Training

Training of specific clusters of practices

- Anderson et al. (2018) assign 852 South African micro-entrepreneurs to distinct types of training:
  1. Marketing/sales skills
  2. Finance/accounting skills

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Targeted Training

Training of specific clusters of practices

- Anderson et al. (2018) assign 852 South African micro-entrepreneurs to two distinct trainings:
  1. Marketing/sales skills
     - "Growth focus" on higher sales, stock investments, and hiring
     - 61% increase in profits

       $\rightarrow$ Benefits new businesses (= less market exposure)
  2. Finance/accounting skills

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     - "Growth focus" on higher sales, stock investments, and hiring
     - 61% increase in profits
       → Benefits new businesses (= less market exposure)
  2. Finance/accounting skills
     - "Efficiency focus" on lower costs
     - 41% increase in profits
       → Benefits established businesses

  → Different "pathways to profits"

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Extensions of the Classical Approach

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On-site Consulting

Stylized facts on business consulting

- Three-step procedure
  1. Diagnosing practices
  2. Identifying areas of improvement
  3. Joint and interactive problem solving

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On-site Consulting

Stylized facts on business consulting

- Three-step procedure
  1. Diagnosing practices
  2. Identifying areas of improvement
  3. Joint and interactive problem solving
- Typically one-on-one (also group-based)
- Sustained and intensive
  - Total of 88 to 200 hours and more (Anderson and McKenzie, 2020; Bruhn and Schoar, 2018)

    → Typically several months

    → Meetings monthly to twice weekly, 2-4 hours
  - Total cost between USD 4,000 and 12,000 per firm (Anderson and McKenzie, 2020; Bruhn and Schoar, 2018)
- Often gov't-subsidized (private contributions typically ∼10%)

  → Matching-grant programs

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On-site Consulting

Example: Subsidized matching grant program for MSMEs in Mexico (Bruhn and Schoar, 2018)

- Weekly 4-hour visits over one year
- USD 12,000 per person (subsidized at 70 – 90%)
- Small positive impacts on profits and ROA after 1 year
- Using admin data, 57% higher employment after 5 years
  - Availability issues of admin data may have introduced selection
  - Not clear if effects concentrated among few businesses

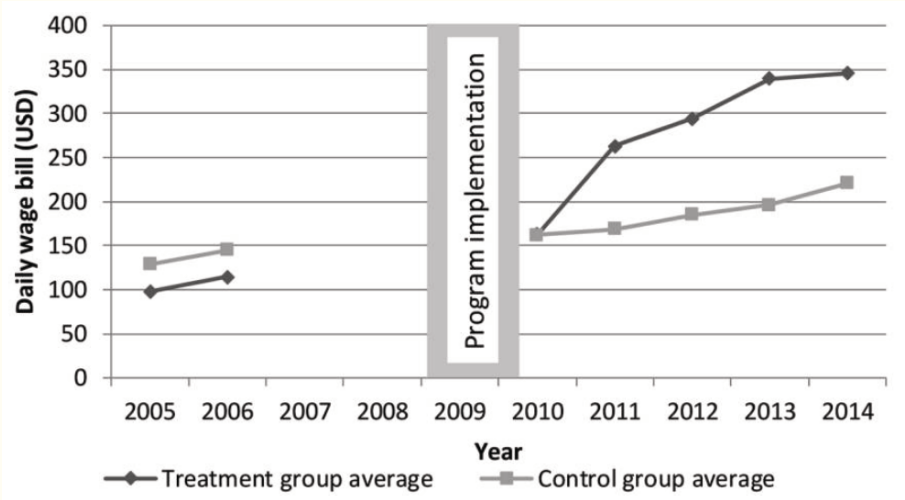

FIG. 3.—Average daily wage bill (US dollars) in the treatment and control groups over time (administrative data). Source: Administrative data from the Mexican Social Security

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Multimedia delivery

TV shows

- Examples: Reality show competitions in Tanzania (Bjorvatn et al., 2020) and Egypt (Barsoum et al., 2018)
- Differential random incentivization schemes

  → No impact on business knowledge and business entry

  → But: High viewership (conventional MDEs substantially above policy-relevant levels)

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Text messages

- Examples:
  - Heuristics-based business advice (Cole et al., 2018)
  - Daily personalized inventory level recommendations (Acimovic et al., 2020)

→ Small literature with generally mixed results or null effects

→ But: MDEs substantially above policy-relevant levels

→ But: Complementarities between in-person training and SMS reminders still unclear

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Measuring Firm Performance

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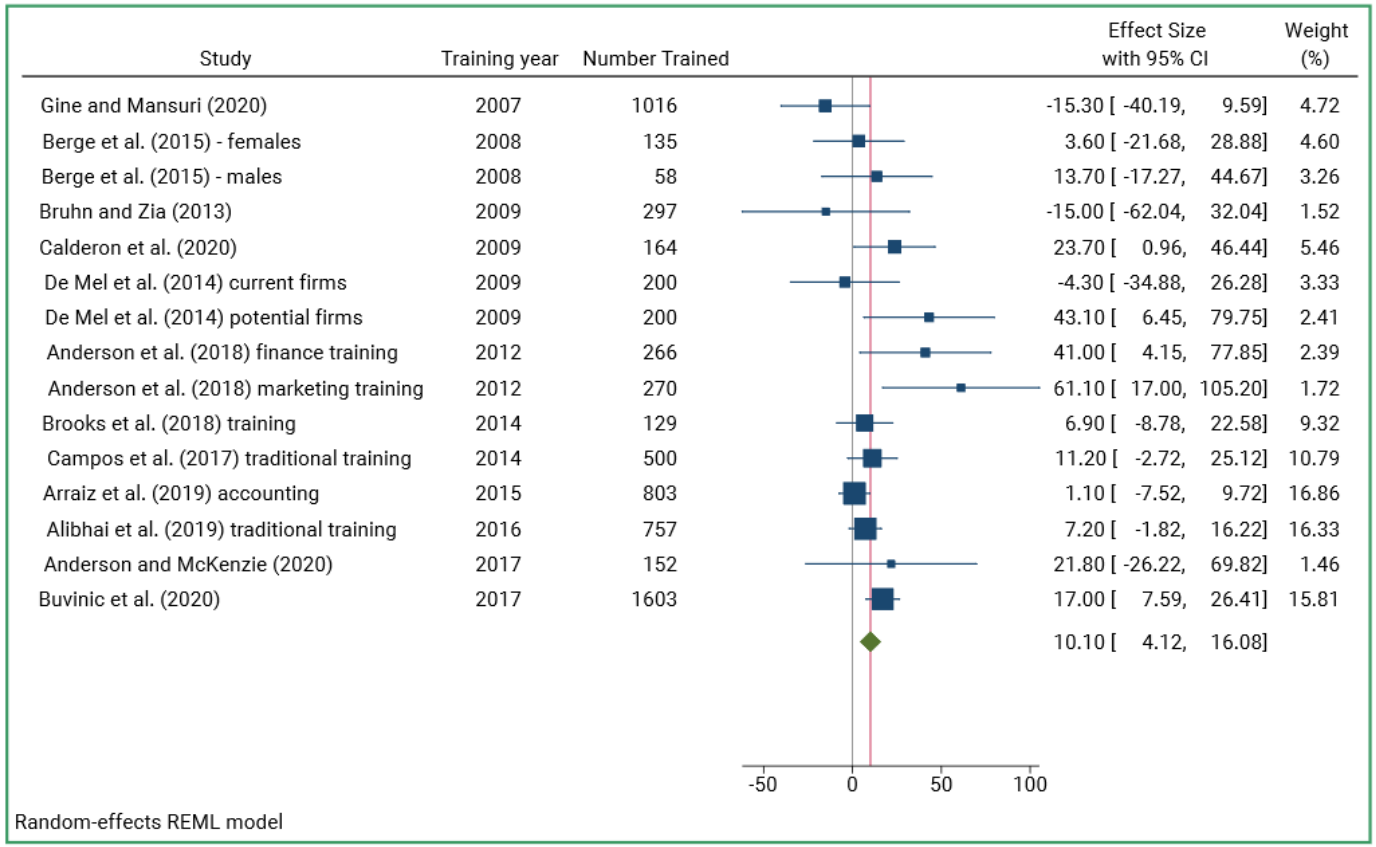
Variation in Outcome Measures

Figure 2 Estimates of the impact of business training on firm profits



Source: McKenzie (2020)

- Extremely wide confidence intervals on impact estimates

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Variation in Outcome Measures

Alternative measures of business profits (de Mel et al., 2009b)

- 15-16 unannounced visits during one month
- Random assignment of profit measure, and accounting diaries, and recall span

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Variation in Outcome Measures

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- 15-16 unannounced visits during one month
- Random assignment of profit measure, and accounting diaries, and recall span

1. Self-reported profits most accurate measure

   $\rightarrow$ Correlation with sales-minus-expenditures only $r = 0.3$

2. Accounting diaries have no effect on profits (but on sales)
3. With recall over 4 months vs. 1 month, entrepreneurs understate revenues by $10 - 15\%$ due to memory
4. Entrepreneurs estimate average rival business to underreport sales by 30%

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Variation in Outcome Measures

Survey media and frequencies (Garlick et al., 2019)

- 12-week panel with detailed measurements of employees, profits, sales, assets, transfers, etc.
- Random assignment to different survey modes and frequencies
  1. Monthly in-person
  2. Weekly in-person
  3. Weekly phone

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- Random assignment to different survey modes and frequencies
  1. Monthly in-person
  2. Weekly in-person
  3. Weekly phone
- Survey medium
  - All survey modes generally yield similar statistical moments
  - Phone surveys yield higher within-firm, cross-temporal variation (Some evidence for greater social desirability bias.)
- Survey frequency
  - Higher frequency generally does not alter statistical moments
  - No evidence for higher attrition

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Variation in Outcome Measures

Technological aids (Fafchamps et al., 2012)

- Random assignment to Personalized Digital Assistants (PDAs)
- Potential channels of impact
  1. More timely data entry
  2. Greater accuracy (especially by correct use of skip patterns)
  3. More and more complex consistency checks
- Vast majority of large changes in sales and profits genuine income volatility
- Positive, but limited, effect of consistency checks in reducing variation in firm performance (and within-firm autocorrelation)

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Mechanisms

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Heterogeneity of Impact

Heterogeneity of treatment effects poorly understood across different approaches

- Potential constraints are manifold, and likely context-dependent
- Some more obvious constraints:
  - Credit constraints (e.g., Berge et al., 2015; Giné and Mansuri, 2021)
  - Education and literacy constraints
  - Gender norms and constraints

$\rightarrow$ More recent literature highlights additional behavioral constraints

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Education and literacy

Most MSE entrepreneurs have limited education

McKenzie and Woodruff: *Business Practices in Small Firms in Developing Countries*
Management Science, 2017, vol. 63, no. 9, pp. 2967–2981, © 2016 INFORMS

Table 1. Summary Statistics

	Full sample		Means by country						
	Mean	SD	Bangladesh	Chile	Ghana	Kenya	Mexico	Nigeria	Sri Lanka
Male	0.23	0.42	0.99	0.09	0.78	0.00	0.00	0.85	0.47
Owner's age	41.0	12.6	41.9	36.6	39.3	35.7	45.3	30.9	37.3
Years of education	9.7	4.1	9.7	10.0	14.0	9.0	8.6	14.8	10.8
Digitspan recall	4.5	2.1	5.4	n.a.	6.5	5.0	3.3	7.5	6.4
Raven test score	5.0	2.9	n.a.	n.a.	n.a.	6.9	4.9	4.4	3.2
…	…								…
Number of observations	20,400		1,724	158	335	3,532	10,265	1,725	2,661

Notes. "n.a." denotes not asked in this data set. Business practice score is the proportion of 26 business practices used by the firm. Marketing (seven practices), buying and stock (three practices), record-keeping (eight practices), and financial planning (eight practices) are subcomponents.

- Typical small-firm owner dropped out of highschool
- Test scores on digitspan and Raven's matrices about % of Western university samples (comp.)

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Education and literacy

Potential for heuristics and rules of thumb

- Example: Heuristics-based business training program by Drexler et al. (2014)

  → Discussed under ▸ alternative approaches

- See also, Cole et al. (2018) and Arráiz et al. (2019)

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Family and neighborhood

Family commitments

- Unequal responsibilities for child care (see, e.g., Delecourt and Fitzpatrick, 2021)
  - Audit study with mystery shoppers among drug stores in Uganda
  - Average gender profit gap of 60%
  - Close to all women have ≥ 1 child, breastfeed for median 19.8 months
    $\rightarrow$ Among female entrepreneurs, those with child at work ..
    - .. are out of stock more often, and stock up less.
    - .. have 48% lower profits.

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Market segregation

- Markets can be geographically (and socially) segregated, especially in residential areas
  - Potential demand constraints (in the spirit of Hardy and Kagy, 2020, , for women in Ghana)
  - (Scant work, but seems important.)

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Dynamic complementarities in skill acquisition

Complementarities in skills

- Clusters of skills may be more valuable in combination
  - Record keeping and financial planning complement each other
- Skills may build on each other
  - Profit calculation relies on record keeping
  - Advanced inventory management relies on record keeping (and profit calculation)

Learning styles

- Psychological research finds interpersonal differences in exploration-exploitation behavior
  - Evidence for trait-like persistence of preference (see, e.g.,Waldner et al., 1998, Engler et al., 2010)
  - If technology has initial fixed costs, poverty *per se* may affect trade-off

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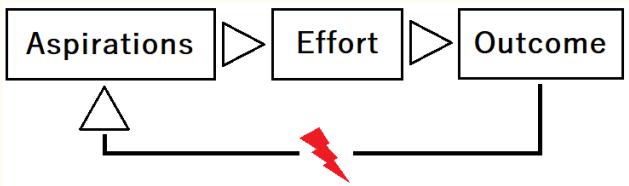
Aspirations

Aspirations theory (following Dalton et al., 2016)

- Aspirations are desired level of outcome
- In theoretical work, aspirations are modeled as reference-dependent preferences
  - Agent derives utility from relative level wrt their aspirations
    $\rightarrow$ Aspirations motivate effort
  - Behavioral constraint: Agent neglects outcomes $\rightarrow$ aspirations



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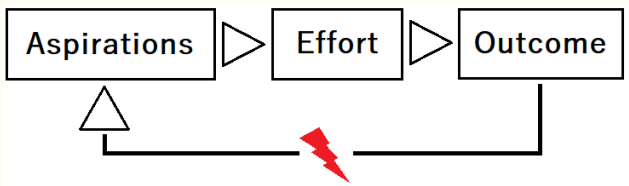

- Consequence: Sufficiently poor agent with sufficiently low aspirations chooses suboptimally low effort

  → Potential for behavioral poverty trap

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Aspirations

Evidence on aspirations in entrepreneurship

- Descriptive evidence that micro-entrepreneurs show sizable growth aspirations (Dalton et al., 2018)
  - Both short-term and long-term, for growth in size, labor, and sales
  - Entrepreneurs update dynamically given new information

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  - Both short-term and long-term, for growth in size, labor, and sales
  - Entrepreneurs update dynamically given new information
- Garlick et al. (in progress) cross-randomize role-model intervention and large UCT to study complementarity
  - Exposure to role models increases aspirations, labor supply, expenditures, and sales
  - Cash also increases aspirations, labor supply, expenditures, and sales

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  - Exposure to role models increases aspirations, labor supply, expenditures, and sales
  - Cash also increases aspirations, labor supply, expenditures, and sales
- Aspiration interventions can backfire
  - Goal setting intervention resulted in *lower* investment (McKenzie et al., 2021)

    → Potential of aspiration frustration if external constraints bind

    (see also, Galiani et al., 2018)

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Rules of Thumb

Core idea: Provide simplified rules to make training more cognitively accessible

- Example:
  - Instead of detailed accounting practices, ..

    .. focus on physical separation of household and business finances

    .. and only transfer money with an explicit "IOU" note

- Classical study: Drexler et al. (2014)
  - Comparison of heuristics-based and standard accounting training with 1,193 micro-entrepreneurs in the Dominican Republic
  - Null effect for full sample

    → Statistical power limited due to substantial missing sales data

    → Larger gains with heuristics-based training for less educated entrepreneurs

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Rules of Thumb

- Arráiz et al. (2019) compare 4-hours heuristics-based finance training with standard finance and accounting program among 2,408 micro-entrepreneurs in Ecuador
  - Heuristics-based training increases daily business sales and profits by about 8% each
  - Effects driven by women and entrepreneurs with lower cognitive scores

- Points of critique
  - Limited target group of cognitively challenged
  - Limited scope (mostly confined to accounting practices)
  - So far no long-term follow-up (studies use 1-year endlines)
  - Cole et al. (2018) find more mixed evidence for text-based rule-of-thumb assistance among micro-entrepreneurs in India and The Philippines

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Entrepreneurial mindset

Core idea: Develop proactive mindset and increase growth aspirations

- Examples:
  - Encourage continued search for new opportunities
  - Encourage reflection on business differentiation
  - Learning by doing and from mistakes
  - Set daily goals

- Campos et al. (2017) compare mindset training to standard business training among 1,500 micro-entrepreneurs in Togo
  - 36 hours classroom instruction
  - 4 monthly 3-hours one-on-one follow-ups by trainer
  - USD 750 per person

  → Initiative training improves business profits by 30% over 2.5 years

  (Standard business training improves profits by 11%)

  → Costs amortized within a year through firm profits

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Entrepreneurial mindset

Figure 3 Estimates of the impact of psychological training on firm profits

- Average increases in business profits of 14% and in sales of 10%
- Programs show substantial heterogeneity wrt content and focus

  → Heterogeneous, but generally positive, results

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Entrepreneurial mindset

Points of critique

- Probably limited target group
- Not clear whether standard curriculum and personal initiative training are complements or substitutes
- Alibhai et al. (2019) and Ubfal et al. (2020) find mixed results with lower treatment intensity
- No work yet on whether classroom training and/or one-on-one follow-ups necessary and/or sufficient conditions for success

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Local Knowledge and Mentoring

Local entrepreneurs as mentors

- Core ideas:
  - Information may be highly localized
  - Peers may know better about particular local constraints and practices
  - Social learning may work better between peers
  - Local mentors may be more cost effective

→ Who mentors?

→ Will mentors agree to share information?

→ How to incentivize continued mentoring?

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Local Knowledge and Mentoring

- Successful business owners mentor smaller firms (Brooks et al., 2018)
  - Random assignment of mentors or standard business training to 372 female micro-entrepreneurs in Kenya
  - Mentorship dyads
    - Mentors local entrepreneurs from more profitable firms
    - Encouragement of weekly meetings at mentor's firm for one month
    - Many dyads continue meeting for more than one year
  - Mentored businesses show increases in profits by 20%
  - $\rightarrow$ Effect fades after one year (when dyad dissolves)
  - No effect of standard business training.
  - McKenzie and Puerto (2021) find no impact of a 5-months mentoring scheme among female micro-entrepreneurs in Kenya

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Local Knowledge and Mentoring

Peer-to-peer learning

- Core idea: Firms may improve through mutual social learning
- Firms matched among peers (Cai and Szeidl, 2018)
  - Random assignment of peer group meetings among 2,820 SMEs in China
  - Monthly meetings with 9 peers for 10 months
  - Peer groups of different sizes and sector compositions

  → Sales increased by $8 - 10\%$

  → Comparable increases in material inputs, employment, and assets

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Takeaways

- Business practices differ substantially across firms ..

  .. and vary with productivity

- Standard business training has limited ability to change practices and firm performance in the short-term ..

  .. while long-term evidence is scarce

- Some of that is due to measurement error (especially wrt firm profits) and lack of statistical power ..

  .. but extensions of classical approach also show promise:

  - Personal initiative training
  - Business mentoring
  - Peer-to-peer learning

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Questions

Any questions?

.. before we move on to our paper?

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Curating Local Knowledge

Experimental Evidence from Small Retailers in Indonesia

Patricio S. Dalton[1] Julius Rüschenpöhler[2] Burak Uras[1] and Bilal Zia[3]

[1]Tilburg University
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[3]The World Bank

March 04, 2021

Paper Overview

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Business Practices and Training

2 **PART II: Paper**

Curating Local Knowledge

- Motivation
- Our Approach
- Data and Design
- Results
- Discussion
- Conclusion

Motivation

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Background

- Micro and small firms (MSEs) are typically the main source of employment in the developing world
- In Indonesia, MSEs represent ..
  - .. 99% of all firms
  - .. 94.5% of employment
- Understanding the factors fostering efficiency and growth of MSEs is an important research and policy goal

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A Growing Focus on Management

- Classroom Training: McKenzie and Woodruff (2014); Karlan and Valdivia (2011); Bruhn and Zia (2013); Anderson et al. (2018); Bulte et al. (2017); Field et al. (2010)
- Consulting:Bruhn and Schoar (2018); Anderson and McKenzie (2020); Karlan et al. (2015)
- Mobilizing Peer Knowledge:
  - Brooks et al. (2018) → Local mentors (market information)
  - Cai and Szeidl (2018) → Business meetings
  - Abebe et al. (2019) → Management experience matching

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Harnessing Cross-Firm Heterogeneity

Some stylized facts about business practices in small firms

- Vast heterogeneity in business practices and performance across similar businesses (McKenzie and Woodruff, 2017; de Mel et al., 2009b)
- Variation in practices accounts for up to 30% of variation in TFP across plants within the same firm in the US (Bloom et al., 2019)

  $\rightarrow$ Research has largely overlooked this heterogeneity in program design and implementation

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Harnessing Cross-Firm Heterogeneity

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  $\rightarrow$ Research has largely overlooked this heterogeneity in program design and implementation

We make productive use of this heterogeneity in our research design:

- Use cross-firm variation to identify practices associated with business performance
- Curation of local best practices
- Test different modes of delivery, and their cost-effectiveness

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Selecting Local Best Practices

Detailed qualitative interviews with local business peers

- Understand and codify their practices (record-keeping, financial planning, stocking-up, marketing, and joint decision-making)
- Identify implementation norms and beliefs regarding each practice (e.g. whether they are complicated, necessary, etc.)
- Document locally relevant tips and rule of thumbs

Quantitative baseline survey

- Measure practices and outcomes
- Quantitative association of business practices with profits and sales

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Disseminating Knowledge

Basic information intervention

- Handbook
  - Pure information on profitable practices, implementation advice

Two complementary behavioral interventions

- Movie of successful peers
  - Psychological and emotional involvement

    → Social learning through observing experiences of similar others

    (see,e.g., Bernard et al., 2014; La Ferrara et al., 2012; Chong and La Ferrara, 2009; Berg and Zia, 2017)
- On-site assistance
  - Hands-on involvement

    → Social learning through own idiosyncratic experience
  - Facilitated by local lay person

→ Movie and assistance based exclusively on handbook!

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Research Questions

Characterization of local best practices

- Which practices are associated with high profits?
- How do successful businesses implement them?

Adoption of best practices

- Do retailers adopt best practices once aggregated and made common knowledge?
- If so, does the type of experiential involvement matter?

Impact on business performance

- Does adoption increase firm profits?
- If so, what are the channels?

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Data and Design

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Sample

- Listing of 2042 small retail businesses from 29 sub-districts (”kelurahan”) in urban Jakarta
- Selection criteria for firm listing:
  - At least $4m^2$ in size
  - At least two different product categories on offer
  - At least 30 meters distance to next business in sample $\rightarrow$ to minimize spillovers
- Random sample of 1301 from the list
- Randomization to treatment arms stratified by
  - Gender
  - Firm space (4-6m^2, 6-10m^2, 10 and above m^2)
  - Composite score of business practices above or below median
  - Sub-district

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Experimental Design

Three types of information delivery:

1. Handbook with best practices and implementation tips
2. Movie with successful peers
3. On-site assistance with practice adoption

Five experimental groups

1. Handbook only (N=260)
2. Handbook + invitation to movie screening (N=260)
3. Handbook + offer of two assistance visits (N=260)
4. Handbook + movie + assistance (N=260)
5. Control (N=261)

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Timeline

1. September 2015: Qualitative Interviews
2. January 2016: Firm listing ($\rightarrow$ survey instrument)
3. Feb-Apr 2016: Baseline survey
4. Oct-Nov 2016: Interventions
5. Apr-May 2017: Midline survey
6. Apr-May 2018: Endline survey

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Typical Business in the Sample

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Typical Business in the Sample

Best-practices Handbook

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Handbook Content

Why you should try these best practices in your shop

Evidence from a large-scale study on Jakarta-based retailers

RECORD-KEEPING

Shop owners who keep business records report 28% higher monthly sales and 26% higher monthly profits than those who do not keep business records.

Shop owners who track their customers' debts report 40% higher monthly sales and 36% higher monthly profits than those who do not track their customers' debts.

STOCK-UP SCHEDULING

Shops that maintain stock-up schedules earn 26% more in monthly sales and 25% more in profits than those that do not maintain stock-up schedules of their primary products.

Shops that stock up daily rather than weekly earn 48% more in monthly sales and 37% more in monthly profits.

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Movie with Successful Peers

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Implementation Assistance for Business Practices

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Summary Statistics

	(1) Control	(2) HB only	(3) HB & MOV	(4) HB & HELP	(5) HB & MOV & HELP
	N = 261	*N = 260*	*N = 260*	*N = 260*	*N = 260*
Firm Owner Characteristics					
Gender (Male=1)	0.28	0.3	0.29	0.3	0.28
Age	45.22	45.27	45.28	45.16	45.38
Education (Years)	9.1	9.52	9.36	9.42	9.55
Risk Preference (0 - 10 "Perfectly Risk-Seeking")	3.74	3.76	3.88	3.6	3.68
Time Preference (0 - 10 "Perfect Patience")	5.19	5.07	5.21	5.25	5.2
Firm Characteristics					
Firm Age (Years)	12.76	13.77	14.03	13.98	13.47
Family Member Is Business Partner	0.56	0.6	0.63	0.59	0.62
Total Number of Workers	2.03	2.05	1.9	1.99	2.04
Business Has Tax ID	0.2	0.21	0.2	0.15	0.18
Total Sales Last Month (USD PPP)	4454.37	4730.64	4840.55	4761.4	5139
Total Profits Last Month (USD PPP)	889.58	961.1	926.78	825.25	934.66
Applied for Bus Loan in Last 12 Months	0.2	0.17	0.15	0.22	0.17
Obtained Bus Loan in Last 12 Months	0.18	0.15	0.14	0.18	0.14
Business Practices					
Management Practices Aggregate Score	0.37	0.36	0.37	0.35	0.37
Marketing Subscore	0.23	0.23	0.25	0.23	0.24
Stocking-up Subscore	0.45	0.47	0.47	0.47	0.46
Record-keeping Subscore	0.33	0.28	0.3	0.29	0.3
Financial-planning Subscore	0.51	0.47	0.47	0.43	0.47

Test of joint orthogonality from multinomial logit (p-value): 0.857

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Movie: Take Up and Assessment

	(1)	(2)
	HB & MOV	HB & MOV & HELP
	(A)	(B)
	N=260	*N=260*
Attendance		
Business Owner or Partner Attended Film Screening	0.52	0.49
Evaluation (1-4 Scale):		
Has Learned Something New	3.34	3.21
Feels Inspired	3.31	3.30
Feels Hopeful	3.60	3.42
Feels Bored	0.83	0.97

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Assistance: Take Up and Assessment

	(1)	(2)
	HB & HELP	HB & MOV, & HELP
	(A)	(B)
	N=260	*N=260*
Attendance		
Business Owner or Partner Attended 1st Session	0.77	0.78
Business Owner or Partner Attended 2nd Session	0.68	0.68
Evaluation (1-4 Scale)		
Has Learned Something New	2.88	2.89
Feels Inspired	2.76	2.83
Feels Hopeful	2.88	2.97
Feels Bored	0.59	0.43

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Impact on Business Practices

Aggregate Scores

	Record Keeping (1)	Planning (2)	Stocking-up (3)	Marketing (4)	Joint Decision-making (5)
Assigned Handbook	0.025	0.027	-0.007	-0.011	0.011
	(0.209)	(0.273)	(0.694)	(0.694)	(0.694)
Assigned Handbook & Movie	0.057***	0.043	0.038	0.040	0.040
	(0.009)	(0.107)	(0.117)	(0.166)	(0.217)
Assigned Handbook & Assistance	0.065***	0.034	0.011	0.039	0.037
	(0.004)	(0.166)	(0.664)	(0.166)	(0.239)
Assigned All Three	0.054***	0.068***	0.053**	0.061**	0.059*
	(0.009)	(0.009)	(0.020)	(0.032)	(0.094)
R-squared	0.204	0.192	0.187	0.150	0.120
Sample Size	2205	2204	2205	2205	2205
Dependent Variable Mean of Control	0.196	0.402	0.471	0.250	0.269
Dependent Variable SD of Control	0.252	0.310	0.270	0.320	0.420
F-tests (p-value):					
Book = Book & Mov	0.069	0.487	0.014	0.028	0.300
Book = Book & Assistance	0.025	0.754	0.304	0.030	0.348
Book = All Three	0.096	0.073	0.001	0.002	0.082

Multiple hypothesis testing corrected p-values in parentheses

- "All Three" improvement of 28 % in record-keeping, 17 % in planning, 11 % in stocking, 24 % in marketing and 22 % in joint decision making.

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Business Profits

	(1)	(2)
	Profits last month (win 5%) (1)	Profits last month (IHS) (2)
Assigned Handbook	-91.307	-0.067
	(78.400)	(0.088)
Assigned Handbook & Movie	110.378	0.055
	(86.841)	(0.092)
Assigned Handbook & Assistance	310.455***	0.261***
	(89.488)	(0.096)
Assigned All Three	191.088**	0.199**
	(84.662)	(0.094)
R-squared	0.179	0.211
Sample Size	2172	2172
Dependent Variable Mean in Control Group	894.544	6.817
Dependent Variable SD in Control Group	1127.783	1.348
F-tests (p-value):		
Book = Book & Mov	0.020	0.167
Book = Book & Assistance	0.000	0.000
Book = All Three	0.001	0.003

- Intention to treat (ITT): Profits increase by 35% (about 0.28 sd.)

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Business Sales

	(1)	(2)
	ITT Sales last month (win 5%) (1)	TOT Sales last month (win 5%) (2)
Assigned Handbook	-396.976	-417.198
	(314.252)	(-397.174)
Assigned Handbook & Movie	335.489	601.221
	(337.881)	(606.634)
Assigned Handbook & Assistance	836.755**	1031.692**
	(372.924)	(457.015)
Assigned All Three	807.462**	1558.326**
	(358.384)	(696.317)
R-squared	0.492	0.483
Sample Size	2197	2197
Dependent Variable Mean in Control Group	4998.923	4998.923
Dependent Variable SD in Control Group	5623.257	5623.257
F-tests (p-value):		
Book = Book & Mov	0.020	0.047
Book = Book & Assistance	0.000	0.000
Book = All Three	0.000	0.001

- Intention to treat (ITT): Sales increase by 16% (about 0.15 sd.)

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Other Outcomes

No significant impacts on:

- Business expenses
- Business size
- Number of employees
- Number of customers
- Business credit

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Efficiency Gains?

Impact on business practices → efficiency practices:

- Adjust stocks based on product profitability
- Negotiate lower prices with suppliers
- Consult with former customers
- Offer discounts
- Make joint decisions
- Review performance to identify ways to improve
- Make anticipated budget for upcoming costs

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Efficiency Gains?

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- Consult with former customers
- Offer discounts
- Make joint decisions
- Review performance to identify ways to improve
- Make anticipated budget for upcoming costs

→ Non-record-keeping practices

→ Causal mediation analysis: Stocking up and marketing practices drive performance impact

→ Variance in profits among treated firms does not converge

→ Efficiency gains

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Business Knowledge or Aspirations?

Impact on practice adoption and business performance may work through ..

- .. acquisition of business knowledge and/or
- .. strengthening of growth aspirations

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Business Knowledge or Aspirations?

Impact on practice adoption and business performance may work through ..

- .. acquisition of business knowledge and/or
- .. strengthening of growth aspirations

We directly measure business aspirations ..

- .. at baseline, midline, and endline
- .. for short (one year) and long (”ideal business”) time horizons
- .. for various dimensions of potential business expansion
  - Sales on a normal day
  - Physical size
  - Customers on a normal day
  - Employees

→ No impact on aspirations

→ Performance likely driven by increase in business knowledge

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Business Stealing?

Do treated businesses improve performance at the expense of the control?

- Sales and profits of control businesses do not decrease from baseline to endline (roughly equal)
- Sales and profits of control businesses closer to treated shops do not decrease by more than those further away

  $\rightarrow$ No evidence for business stealing

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Cost-Effectiveness

Small costs (per firm):

- Cost Handbook alone: USD 100
- Cost Handbook & Movie: USD 125
- Cost Handbook & Assistance: USD 125
- Cost Handbook & Movie & Assistance: USD 150

Substantial Benefits

- Up to USD 330 per month in profits
- Adoption of top practices by retailers

Research design likely scalable and portable

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Takeaways

- Curating local knowledge has value for business growth
- Information alone does not have impact, only combined with behavioral interventions
- Mechanism likely knowledge-based, not aspirations-based
- Behavioral interventions are inexpensive and scalable

  $\rightarrow$ Attractive for policy

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Questions

Any questions?

.. happy to stay on for a little while!

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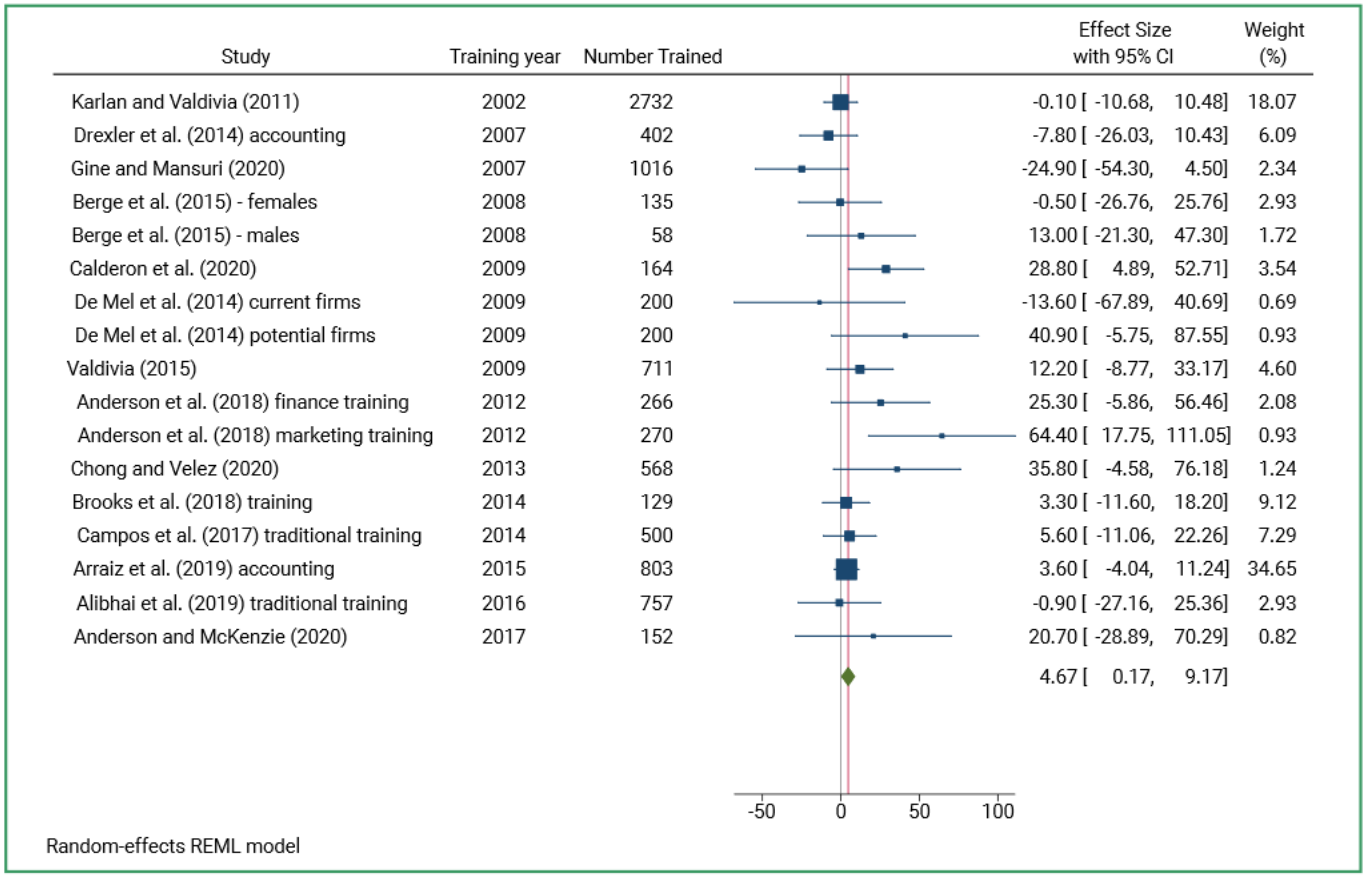
Evidence of Impact

Figure 1 Estimates of the impact of business training on firm sales



Source: McKenzie (2020)

- Small positive impact on sales (back to ▸ profits)

References
Appendix