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# Microentrepreneurship in Developing Countries

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This paper reviews the recent literature in economics on small-scale entrepreneurship (“microentrepreneurship”) in low-income countries. Major themes in the literature include the determinants and consequences of joining the formal sector; the impacts of access to credit and other financial services; the impacts of business training; barriers to hiring; and the distinction between self-employment by necessity and self-employment as a calling. The paper devotes special attention to unique issues that arise with female entrepreneurship.

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## Executive Summary

This paper reviews the recent economics literature on non-agricultural small-scale entrepreneurship (“microentrepreneurship”) in low-income countries. Microenterprises, defined as businesses with zero to four employees, are more prevalent in low-income countries than in high-income countries, and the vast majority have no employees besides the owner (the “microentrepreneur”).

Major themes in the literature include the determinants and consequences of joining the formal sector, the impacts of access to credit and other financial services, the impacts of business training, barriers to hiring, and the degree to which the poor become microentrepreneurs by necessity. The paper devotes special attention to unique issues that arise with female-owned microenterprises, and policy interventions that try to address these issues.

### Formalization

Most microenterprises in developing countries are not formally registered with the government. While formalization would give firms greater access to capital and wider markets, the financial costs and red tape involved can be a major deterrent. Several studies have analyzed the impact of interventions that help with the formalization process, such as covering registration fees, information provision, and cash incentives to register. The most effective type of assistance involves close interactions with the firms and is therefore quite expensive, though only a small proportion of firms actually want to formalize. Thus, cost-effective interventions need to identify and target those firms who wish to formalize but are discouraged by the associated costs.

### Business training

Business training is a widely used intervention to help microentrepreneurs in developing countries. The evidence on its impacts is mixed, with many studies failing to find significant impacts on revenues or profits. However, this literature often suffers from small sample sizes, which make it difficult to detect an effect. Promising interventions focus on the psychological determinants of success such as self-esteem, proactiveness, and aspirations, with add-ons to traditional training that offer mentorship, provide exposure to role models, or strengthen ties among self-employed individuals. This line of research might shed light on the gender profit gap, given that in many societies, women expect fewer career opportunities than men.

### Returns to capital and access to credit

Many studies have looked at the impact of greater access to capital and credit. Several studies that offered capital to small businesses find large impacts on profits. Other studies that offered microcredit loans did not find a similarly large effect, possibly because the firms targeted in the cash grant studies tended to be larger and more established than the typical firms receiving microcredit loans. In addition, the term structure and other requirements of microcredit loans may discourage the sort of long-term investments that grant recipients undertook.

A stark pattern across several studies is that grants often improve business outcomes exclusively for male-run businesses. Recent work identifies one important reason: money given to female entrepreneurs is often not invested in their businesses, whether by their choice or not. In light of this finding, more work is needed to investigate whether grant and loan programs can be redesigned to enable women to invest capital they receive in their businesses.

Other studies examine the impact of access to financial services other than credit. For example, in Kenya, where many people lack access to reliable ways to save, giving zero-interest bank accounts to microentrepreneurs increased savings and investment for women but not men.

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## **Barriers to hiring**

One part of the literature investigates why most microenterprises do not hire non-family employees. Potential barriers to hiring include incomplete information about non-family job applicants' attributes, the need to invest in training new hires, and moral hazard leading to low productivity of non-family hires. However, these factors do not seem to be the binding constraint on expansion for most firms. For example, less than one-quarter of Sri Lankan microenterprises took advantage of a temporary wage subsidy for new employees, and most firms that did so hired someone whom they knew (hiring a family member was not allowed). As other frictions such as credit constraints are eased, labor market frictions could become increasingly important for understanding business expansion. In addition, given high youth unemployment in many developing countries, the effect of providing skills training and certification and re-calibrating employment expectations will continue to be important topics.

## **Microentrepreneurship by choice vs necessity**

Microentrepreneurs can be categorized into two groups: those who start businesses because they value the perks of self-employment, and those who become microentrepreneurs by necessity. Data on employment transitions in developing countries suggests that self-employment is what many workers do until they find paid employment. There is also evidence that poor employment prospects, such as a low level of education or a prolonged illness, can “push” people into microentrepreneurship.

The other group of microentrepreneurs consists of highly talented individuals who chose entrepreneurship over paid employment, and have the potential to run highly profitable, fast growing firms. In many cases, their firm's growth is limited by policy-fixable constraints, such as imperfect capital markets. Higher social and financial returns could be achieved by targeted lending to these microentrepreneurs.

## **Gender and entrepreneurship**

Unlike in developed countries, women run the majority of microenterprises in developing countries. On many indicators, including sales, assets, and profits, female-run microenterprises underperform their male-run counterparts. Part of this gender gap in firm performance can be explained by the unique challenges that women face in running successful businesses, such as commitments at home and difficulties in keeping business and family finances separate. The policy solutions that can address frictions and power imbalances within households will likely need to be more context-specific than current policies.

# Microentrepreneurship in Developing Countries\*

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## Abstract

This article reviews the recent literature in economics on small-scale entrepreneurship (“microentrepreneurship”) in low-income countries. Major themes in the literature include the determinants and consequences of joining the formal sector, the impacts of access to credit and other financial services, the impacts of business training, barriers to hiring, and the distinction between self-employment by necessity and self-employment as a calling. The article devotes special attention to unique issues that arise with female entrepreneurship.

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# 1 Introduction

A third of workers in low- and middle-income countries are self-employed, compared to fewer than a tenth in high-income countries (Gindling and Newhouse, 2014). In the poorest countries (those classified as low-income by the World Bank) half of workers are self-employed. Many of the self-employed work in agriculture, but this alone does not explain the differences between rich and poor countries: thirty percent of non-agricultural workers in low- and middle-income countries are self-employed.

Most of these businesses are small. In nine out of ten cases, the business has no employees besides the owner (Gindling and Newhouse, 2014). This review focuses on very small, or “micro” businesses, which I define loosely as those with no employees or fewer than five employees. Following the literature, I refer to these businesses as microenterprises and their owners as microentrepreneurs. While the term “entrepreneur” often connotes a highly ambitious, growth-oriented business owner, in the context of this review, the term is more neutral. Indeed, one of the key questions in the literature is what proportion of microentrepreneurs are self-employed out of necessity and would prefer working for someone else as a paid employee.

This article reviews the recent literature on microentrepreneurship in developing countries, with the scope restricted to the non-agricultural sector. Many studies I discuss use a sample of firms with varying sizes, but my aim is to focus on firms with fewer than five employees — and often no employees besides the business owner.<sup>1</sup> I focus mostly on impact evaluations that use policy interventions to better understand the inner workings of microenterprises or to identify ways of increasing their profitability and growth rates. Some of the main topics discussed are formalization, business training, access to credit, barriers to hiring, and the degree to which the poor become microentrepreneurs by necessity. A special emphasis throughout is gender and microentrepreneurship, or the differences in patterns for male and female-run microenterprises.

## 2 Formalization

Most microenterprises in developing countries are not formally registered with the government. La Porta and Shleifer (2014) estimate that among the poorest countries (bottom quartile based on GDP per capita), the informal sector accounts for 35% to 40% of the economy, compared to less than 20% in the richest quartile of countries.<sup>2</sup>

One view is that small firms generally do not need or want the benefits that come with formalization, such as access to credit or to wider markets. This “dual economy” view posits that microenterprises and larger firms operate in different spheres. According to this view, informal firms tend to have low productivity, so when they skirt taxes and regulation, they do not gain an undue advantage over formal firms, as they cannot or do not compete with higher productivity formal firms. La Porta and Shleifer (2014) argue that most informal firms would not thrive in the formal sector, and so encouraging informal firms to register will not promote economic growth. Rather, they argue that

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<sup>1</sup>For a complementary review, see Quinn and Woodruff (2019), who review the literature on randomized experiments used to understand entrepreneurship in developing countries.

<sup>2</sup>These statistics include agriculture, but the pattern of more informality in poor than rich countries holds for non-agricultural sectors too.

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the growth of formal sector firms naturally causes the informal sector to shrink over the course of economic development. Consistent with this viewpoint, Ulyssea (2018) analyzes Brazilian firms and concludes that the vast majority of informal firms are not being held back by their informality.

Another view, championed by de Soto (1989, 2000), is that informality is holding back the growth of microenterprises. With formalization, they would have better access to capital and product markets, fueling growth. In this view, firms would prefer to be formally registered, but are deterred by the financial costs and red tape of the application process or because they lack accurate information about the benefits of formalization. De Soto's ideas have influenced many governments and aid agencies to streamline their business registration processes.

Several studies have analyzed interventions that provide assistance with the formalization process or information on the benefits of formalization.<sup>3</sup> Other interventions to encourage formalization that have been studied include cash incentives to formalize, threats of inspections and fines for being unregistered, and reducing the extra tax burden that a firm incurs when it becoming formal. These studies typically have a two-fold goal of first, understanding what microentrepreneurs perceive to be the costs and benefits of formalizing and, second, assessing how becoming formalized affects firm performance. The first goal is achieved by analyzing impacts on formalization, and the second goal is achieved by assessing how the impacts on formalization, in turn, influence access to capital, profits, and so forth.

While most of studies that examine efforts to assist firms with the registration process find that doing so increases formalization (Jaramillo, 2009; McKenzie and Sakho, 2010; Campos et al., 2018), in other cases assistance is ineffective (and thus there is no first stage to assess downstream impacts). For example, de Andrade et al. (2013) find that giving information and covering fees for registration does not increase registration in Brazil, and Rothenberg et al. (2016) similarly find no impact of an Indonesian initiative that set up one-stop shops for business registration. Galiani et al. (2017) report that information on registration has only a short-run impact on formalization in Bogota, Colombia, with firms letting their registration lapse after a year. One pattern that emerges across the multiple studies is that information conveyed in person through trained staff is more effective than just brochures (de Andrade et al., 2013; de Mel et al., 2013; Benhassine et al., 2018).

A few studies in this literature restrict their attention to the first goal of examining how an intervention affects firms' likelihood of formalizing. For example, de Mel et al. (2013) trace out the demand curve for formalization in Sri Lanka among urban firms with at least one employee (and no more than 14 employees) by providing information on registration and covering the small 5 USD fee, with additional treatment arms offering cash incentives to register, set at 88, 175, or 350 USD. The highest cash incentive represents two months of profits for the average firm. While two thirds of the firms already had municipal-level registration, they lacked the division-level registration that allows a firm to sell to the government and to larger firms, and to get commercial bank loans. Providing information and covering the small registration fee did not increase formalization, but the cash incentives did prompt firms to formalize. At the two lower payment levels, about 20% of firms registered, while with the highest (350 USD) amount, 48% of firms did so.

While de Andrade et al. (2013) find no effect on formalization of providing information on the

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<sup>3</sup>See Bruhn (2014) for a review of the literature on formalization of firms in developing countries.



process, or of providing information combined with paying for registration fees and offering accounting services, another treatment arm in their study had inspectors visit firms, giving them 30 to 45 days to register before another visit; if the firm was not registered by this follow-up visit, it would be fined and shut down. This arm increased registration by 4 percentage points (from a baseline of 7.5% in the control group).

Turning to studies that also analyzed effects of formalization, Benhassine et al. (2018) provided information on a new registration status and how to apply for it in Benin. Benin was one of over a dozen African countries that jointly introduced the registration status of “*entreprenant*,” which was aimed at microenterprises. Unlike standard registration, there is no monetary cost to obtain this registration status and the process takes just one day, with interaction with only one government office. The new status confers many of the benefits of standard registration such as access to business banking services and eligibility for some government contracts, but excludes others such as access to large government contracts and the right to export. One arm of the Benhassine et al. (2018) study provided basic information on the registration status and process, another arm added in information on potential benefits of formalization, and a third treatment arm paired the basic information with tax compliance assistance. Registration increased by 10 percentage points in the basic information treatment, by 13 percentage points when the benefits of formalization were emphasized, and 16 percentage points when information on tax compliance was included (from a baseline that was close to 0).<sup>4</sup> However, formalization did not lead to any measured increases in sales, profits, or number of employees. Because the cost of formalization is over 1,000 USD, the authors estimate that it would take the government many decades to recoup its costs, even if the newly registered firms paid 100% of their tax obligation.

Campos et al. (2018) conducted a randomized evaluation among 3,000 unregistered microenterprises in urban Malawi. The main intervention was to assist with business registration by covering the monetary costs of registration and helping to reduce the non-monetary costs by filling out the paperwork and submitting the forms on the firms’ behalf. The monetary costs included a 1.3 USD registration fee, transportation costs to submit the forms, and fees to middlemen to facilitate faster processing. Among these treated firms, one subset also received assistance opening a business bank account, for which registration is a prerequisite, and another subset received assistance with tax registration. Note that in Malawi, as in many countries in Africa, business registration and tax registration are distinct processes.

When offered help with business registration only, 75% of the firms registered their business. This percentage was somewhat higher when paired with the banking session and somewhat lower when paired with tax registration assistance. Meanwhile, take-up of tax registration was only 4%. The authors find no significant impact on firm productivity from business registration alone, but when paired with banking information, it led to 20% higher sales and 15% higher profits. Consistent with the channel being access to banking services, these firms report being less credit constrained.

The take-up of business registration between male- and female-owned firms was similar. The effect on sales and profits was also similar in levels, but female-owned firms experienced a larger proportional improvement, as they had lower sales and profits under the status quo.

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<sup>4</sup>Impacts on formalization were smaller for female-owned firms (63% of the sample), which could be due to these firms being smaller rather than female-owned per se.

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The quite different propensity of firms to pursue business registration and tax registration found by Campos et al. (2018) highlights a key cost and benefit of de-linking these two activities. On the one hand, allowing firms to reap the benefits of being a registered business, including business loans, without the automatic need to pay taxes reduces tax revenue. On the other hand, linking the two activities would mean that fewer firms register and enjoy the increase in profits that business registration might unleash.

Fajnzylber et al. (2011) examine whether reducing the tax burden for small firms encourages them to formalize. The study takes advantage of a 1996 policy change in Brazil that offered a simplified tax system for small firms, called SIMPLES, which lowered their tax liability by 8%. One specific component was to reduce social security payments for employees, which might have deterred hiring. The study uses an interrupted time series design around the introduction of SIMPLES, classifying firms based on their creation date. The analysis makes two fairly strong assumptions: that the composition of firms that are created is unaffected by the policy change and that there was no anticipation of the policy change (which would have shifted the creation date of firms). With that caveat, the paper finds that firms that started after SIMPLES was in place were 30% more likely to be registered, from a baseline of 11%. These firms also report higher revenues, profits, and employment levels, but these impacts might not be due just to formalization. To interpret them as due to formalization requires the exclusion restriction that firms were not affected by the policy change unless it was pivotal in their decision to formalize. However, the policy lowered firms' tax burdens, including for firms that would have formalized without SIMPLES.

Monteiro and Assunção (2012) use a difference-in-differences design to analyze the SIMPLES reform, finding quite different results. Their study compares firms before and after the reform, across sectors eligible and ineligible for the reform. The study finds no overall impact on registration. Breaking down the results by sector, there is no effect in construction, manufacturing, transportation, or services, but a sizeable increase in formalization in the retail sector (13 percentage points from a baseline of 27%).

Contrary to evidence described above that many firms avoid tax registration, McKenzie and Sakho (2010) find that registering with the tax authority seems to increase small firms' profits in Bolivia. Their analysis uses distance to the tax authority as an instrumental variable for tax registration. The reasoning behind the instrument is that closeness to the office increases the firms' knowledge of the tax office (and thus how to register) and increases tax officials' likelihood of inspecting the firm. Distance is indeed negatively correlated with tax registration among small firms. The second-stage results suggest that tax registration leads to 88% higher profits, driven by firms with 2-5 workers, with no such benefits and perhaps lower profits for firms with fewer than 2 or more than 5 employees. The authors argue that smaller firms do not have the capacity to expand to wider markets, which is the main advantage of tax registration, while larger firms have higher-quality management and can do so even without registration.

Demenet et al. (2016) use panel data collected in 2007 and 2009 in Vietnam to examine the impacts of formalization. The identification comes from comparing the 147 initially informal firms who became formal over the two-year window between survey waves to the 1,317 firms that remained informal. That is, the study examines the effect of formalization, controlling for firm and time fixed effects. The decision to become formal could be endogenous to expansion plans and expected profits —



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the correlation with observables indicates that the decision is not random — so to improve the identification, the analysis uses matching techniques to make the treated and control firms more similar on observables. The study finds that becoming formal is associated with a 20% increase in value added. Other measures of performance such as profits show positive impacts when the sample is restricted to firms with at least one employee.

A closely related study is Rand and Torm (2012), which uses the same panel data. They find that becoming formal is associated with a 9% increase in profits. In addition, formalization is associated with increased investment, improved access to credit, and a decrease in the share of casual workers.

## Gender

Gender differences is not a major theme in the literature on formalization, but some studies find heterogeneous effects by gender. Benhassine et al. (2018) find that female-owned firms in Benin are less responsive to interventions that encourage registration. As reported by Demenet et al. (2016), the rate of formalization in Vietnam is lower for female-owned firms. An open question is whether the differences are due to firm characteristics that are correlated with gender, such as female-owned firms being smaller, or to factors more deeply intertwined with gender norms, such as aspirations to grow. For example, in a descriptive study of 141 microentrepreneurs in Indonesia, Babbitt et al. (2015) speculate that cultural norms restrict how female owners can interact with business associations, and family obligations constrain some of their business activities. An interesting direction for future research would be to explore how these norms affect female microentrepreneurs' ambitions and whether a gender gap in the desire to expand the firm leads to lower demand to formalize for female microentrepreneurs.

## Recap

Overall, the evidence from studies that encouraged firms to formalize does not provide much support for the optimistic view that formalization unleashes growth for microenterprises. Most randomized evaluations do not find impacts of formalization on firm profits. Quasi-experimental studies tend to find larger impacts; while these estimates should be interpreted with caution due to potential omitted variable bias, they suggest that more work is needed to settle the debate on how much, and for which types of firms, formalization improves business performance.

Another area where more evidence is needed is on which specific benefits of formalization, such as access to wider markets or access to finance, convince firms to formalize and help their performance. Such evidence would help policymakers as they decide which rights and opportunities to withhold from informal firms. Similarly, governments have latitude to decide which obligations are tied to registration. Some consequences of formalizing, such as greater tax liability and regulatory scrutiny, are downsides from the firm's perspective but upsides from other perspectives. How much effort to put into encouraging formalization and whether to remove some of its obligations depend on the relative importance of helping small firms versus of raising tax revenue and of other societal goals such as ensuring labor standards are met.

For policymakers that want to encourage formalization, there is extensive research on which interventions are effective in doing so. Besides the levers of changing the rights and obligations of

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formalization, assistance with the application process and cash incentives have been shown to increase formalization, for example. Help with the application process, in particular, seems like a win-win opportunity: Some firms want to formalize but are deterred by the complicated process. However, the most effective type of help is high-touch and therefore expensive, while the proportion of firms that want to formalize is modest. Thus, successfully identifying and targeting the subset of firms who would formalize but for the hassle costs is key to making this type of intervention more cost effective. How to identify such firms warrants further work.

### 3 Business training

Several recent studies examine business training of microentrepreneurs. Many of them find no significant positive effects of training on business performance (Karlán and Valdivia, 2011; Drexler et al., 2014; Fiala, 2018). But others find that business training increases profits, survival, or growth in the long- (Blattman et al., 2016; McKenzie and Puerto, 2017) or short-term (Mano et al., 2012; de Mel et al., 2014; Field et al., 2016).

As one example, Karlán and Valdivia (2011) study the impact of including business training in mandatory group-lending meetings for women-only village banks, working with FINCA in Peru. As in several other studies, the training material was based on the non-profit Freedom from Hunger's business training material. Despite high attendance, there is limited evidence of any positive impacts of the training.

McKenzie and Woodruff (2014) summarize the literature on business training in developing countries and cite small sample sizes and sample attrition as limitations of the literature. McKenzie and Puerto (2017) conduct a study in rural Kenya with market-level randomization, which improves on power. The key study aim is to measure whether gains from training just constitute zero-sum business stealing from the un-trained microentrepreneurs. Detecting spillover effects requires a large sample size: they offer four days of training to a subset of female-owned businesses (1,172 women) in 93 treated markets, and conduct no interventions in 64 control markets. An additional benefit of the large sample size is that the study is more powered to detect smaller effects on profits than much of the literature.

The study finds that, three years after the training, firms whose owners were offered business training were 3 percentage points more likely to survive than control firms (which had an 85% survival rate), and they had 18% higher sales and 15% higher profits. Moreover, the treated women reported better mental health and subjective living standards. A subset of those assigned to receive training were also offered personalized mentoring and follow-up training, which appeared to have no impact.

The study finds more positive and persistent impacts of standard business training than much of the literature. The training cost about \$200 per person, so given the increase in profits of about \$2.60 a day, the costs would be recouped after about 1.5 years. The study detects some negative spillover effects on untreated firms in treated markets at the one year mark, but three years after treatment, the spillovers are negligible. Thus, the gains for the treated women appear to be net gains for the market.

Klinger and Schündeln (2011) examine the impacts of the non-profit TechnoServe's business training

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activities in El Salvador, Guatemala, and Nicaragua using a quasi-experimental design. TechnoServe holds business plan competitions and provides training to entrants throughout the several rounds of the competition. Those who make it past an initial screening are invited to training, and then they submit a business plan. Judges rate the business plan and select a subset to advance to the next round; these individuals are given further business development support to complete a final business plan. The top plans among these final versions are awarded 6,000 to 15,000 USD to invest in their business.

The study uses data from four years of the competition and a regression discontinuity design around the cutoff scores for different years and phases of the competition. For the first phase, those who make the cutoff – and thus receive training – have a 16 to 18 percentage point higher likelihood of starting or expanding a business. The treatment effects for the first round are particularly large in El Salvador, which is the only country among the three to do an additional 7-day training on technical skills. Being above the second phase cut-off (and thus being offered the second round of training) is associated with a 40 percentage point increase in the likelihood of starting a business or expanding one's current business. The study also examines the final round, in which the winners receive a grant rather than further training: winning the competition and receiving a monetary prize increases the likelihood of starting a business by 34 percentage points.

Related to the the business training literature are studies on the impacts of management consulting. Management consulting has been found to increase the return to capital, labor employed, and entrepreneurial spirit, primarily through improvements in marketing, financial accounting, and longer-term planning (Bruhn et al., 2018). Similarly, Lafortune et al. (2018) find some positive impacts of personalized advice for microentrepreneurs in Chile. At odds with these results is a study in Peru (Valdivia, 2015), which found that technical assistance tailored to business needs was not more effective than basic business training (marketing strategies, self-esteem and social skills).

Brooks et al. (2018) study a different approach to training, which is mentorship from experienced entrepreneurs from one's own community. They do so in rural Kenya, pairing a mentor with inexperienced female entrepreneurs. The study also has a treatment arm with business classes, as a benchmark. A very important caveat is that the study has high attrition, which appears to be differential between the treatment groups and the control group. Take-up was high for mentorship; all mentees met with their mentor at least once during treatment; 85% reported meeting their mentor during the previous week. However, for the business classes, only 40% attended all four classes. Thus, the mentorship has higher dosage once one takes into account take-up. Mentorship seems to increase profits, whereas the business classes do not. The main channel for improved profits seems to be reductions in supply costs due to changing suppliers. In contrast, the experiment analyzed in McKenzie and Puerto (2017) found that personalized mentoring had no additional benefits over standard business training.

Besides transferring knowledge, a mentor might provide moral support and inspiration, and boost participants' confidence. The psychological determinants of success is an emerging theme in the literature on training. In some cases, psychological attributes are studied as a mechanism through which standard business training has impacts. For example, in the Field et al. (2016) and Lafortune et al. (2018) studies described in the subsection on gender below, higher aspirations seems to be a mechanism through which women improved their business outcomes.

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Recent studies have also examined psychological training. Campos et al. (2017) evaluate “personal initiative” training for microentrepreneurs in Togo. The curriculum, taught through 12 half-day sessions, covers topics such as how to have the mindset of a successful entrepreneur, proactiveness, goal setting, overcoming obstacles, and finding opportunities. The study also included a treatment arm offering standard business training. The personal initiative training led to 30% higher profits, averaged over the two and a half years following the intervention. The program seems to have been equally beneficial for female and male participants. The authors calculate that the training cost about 760 USD per participant and raised profits by 60 USD per month on average; thus the training costs would be recouped through higher profits within about a year. In contrast, traditional business training did not increase profits or sales in this setting.

While the initial study on personal initiative (PI) training in Togo had very encouraging findings, follow-on work has found more disappointing impacts. Alibhai et al. (2019) evaluate the same PI curriculum in Ethiopia, focused on female microentrepreneurs. Their study also evaluates a second variant of psychological training, focused on self-esteem and entrepreneurial spirit. Neither the PI training nor the alternative psychological curriculum improved business outcomes or had lasting effects on psychological outcomes. According to the authors, the null results for PI training might have been due to poor implementation. Ubfal et al. (2019) evaluate the PI program in Jamaica. The study design includes two treatment arms in which standard PI curriculum is bundled with one of two add-ons: five additional days of PI/soft skills training or five days of standard business skills training. These treatment arms are compared to a control group. The study finds that in the short run, the high-dosage PI training leads to higher sales and profits, but just for male-run businesses. The regular-dosage PI training paired with business training has no impact on business outcomes. In addition, even for the high-dosage PI training, the impacts on business outcomes fade out within a year, although there are persistent impacts on soft skills.

## Gender

Business training is a particularly popular intervention for female microentrepreneurs, based on the view that one disadvantage women have in running a business is less access to formal education.

However, providing business know-how might not be sufficient to improve business success, especially for women whose opportunities are constrained by restrictive social norms (Jayachandran, 2019). In a study in Pakistan, Giné and Mansuri (2019) find that both male and female participants gain knowledge from business training, but women do not then enjoy the same improvements in business outcomes as men do. The authors’ interpretation is that women lack the agency to put the knowledge into practice because their husbands often de facto run the businesses. In such a setting, in order to be effective, interventions might need to be designed to address women’s limited agency.

Field et al. (2010) and Field et al. (2016) report on a business training experiment in Ahmedabad, India, a setting in which women have limited agency and freedom of movement. The study aimed to unpack why women are disadvantaged as entrepreneurs and also to explore the importance of psychological factors in mediating the impacts of business training. The study offered a two-day business counseling program that taught basic financial literacy and business skills, and showed participants a film showcasing successful role models in their community. The participants, trained in groups of about 12 women, were female microentrepreneurs who were members of the Self-Employed

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Women's Association (SEWA) Bank. Participants ran small businesses such as vegetable stands or did home-based piecework such as embroidery and making incense sticks.

The new twist in this study is that in the study arm that offered training, half of the women were randomly selected to be able to name a female friend or family member to be invited to the training too. The hypotheses were that having the ability to invite a friend might increase take-up, lead to more engagement during training, and facilitate reinforcement of the learnings after the training was over.

Women invited to training were more likely to take out loans than women in the control group, and what women did with the loans differed significantly based on whether they came with a friend. Those invited without a friend mostly used their loans for home repairs unrelated to their businesses. Women who were asked to bring a friend along, in contrast, were more likely to use their loans for business purposes. Moreover, the women who brought friends reported having a higher volume of business, as well as higher household income, four months after the program ended, compared to the control group. They were also less likely to report their occupation as housewife, suggesting that being a microentrepreneur became a stronger part of their identity. Those invited to training without a friend saw no such gains.

Being invited with a friend did not increase attendance at the training or knowledge gained. What then was the mechanism? Some suggestive evidence comes from the fact that women invited to the sessions with a friend set more ambitious goals for themselves during a class activity in which participants set concrete business goals. Having a friend around seemed to raise women's aspirations for their businesses.

The improvement in business outcomes was especially large for women belonging to castes or religious groups that impose more restrictions on whether women can move about the community and interact with others unaccompanied. Socially restricted women who attended the training with a friend were four times as likely to take out a loan than similar women in the control group. Highly restricted women face barriers to building strong professional networks with other female entrepreneurs. Thus, attending training with a friend or acquaintance may have helped build up this peer network. One direction for further research is to explore this idea that limited interactions with others in business contributes to the gap in entrepreneurship between men and women. Moreover, some of the gap may be in aspirations, so interventions that encourage women to set more ambitious goals might be useful complements to those that provide them with the skills to reach their goals.

In a similar vein, Lafortune et al. (2018) test the impacts of two separate add-ons to business training in Chile — either a one-hour visit by a previous participant of the program who became successful in her business or tailored consulting — and find that only the visit by the role model increases business profits. Another related study is the one by Brooks et al. (2018) described above, which found that being mentored improved women's business outcomes in Kenya.

## Recap

Business training is a widely used intervention to help microentrepreneurs in developing countries. The evidence on its impacts is mixed. Many studies fail to find significant impacts on revenues or profits. However, McKenzie and Woodruff (2014) argue that weak statistical power hampers this

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literature. If the effect size that would render a training cost-effective is too small to be detectable, then a null result does not imply the intervention was unsuccessful. Conducting larger studies and meta-analyses is one way forward. Another is to improve the measurement of profits and revenues. These outcomes are volatile and also challenging to measure with precision. Methodological studies that find innovative ways to improve data quality or validate best practices for measurement of revenues and profits (see Garlick et al. (2019), for example) would have high returns for all studies focused on microenterprises, including those on business training.

A growing focus in the business training literature is on the psychological determinants of success. Add-ons to traditional training that offer mentorship, provide exposure to role models, or strengthen ties among self-employed individuals have shown promising results. In addition, trainings designed to instill personal initiative or other soft skills are an intriguing approach for which more work is needed. While psychologically-focused interventions have been found to be valuable for both men and women, this line of research might shed light on the gender profit gap, given that in many societies girls grow up expecting fewer career opportunities than boys.

## 4 Returns to capital and access to credit

Many studies have looked at the impact of access to cash grants, loans, or in-kind transfers on microenterprises. In an influential paper, de Mel et al. (2008a) use the straightforward approach of providing cash grants to microenterprises in Sri Lanka to estimate their returns to capital. Treated firms received either an in-kind or cash grant, in the amount of 100 or 200 USD. Participants were told that it was not required that the cash grants be spent for business purposes. All types of grants significantly raised the capital stock of microenterprises compared to the control group. Pooled together, the treated arms enjoyed a significant increase in profits: a grant of 100 USD raised profits by 5 USD per month, which corresponds to a return of 60% per year. Note that this estimate is not exactly the marginal return to capital, as recipients might not have invested all of the money in their firm, or they might have complemented the grant with additional capital from other sources. One of the striking findings in the study is that the return to capital for female microentrepreneurs, who make up half the sample, is not statistically different from zero. I discuss this further in the subsection on gender below. Follow-up data collection shows that the benefits of relaxing capital constraints were persistent up to five years later (de Mel et al., 2012). The same type of intervention among small, male-owned businesses in Mexico also seemed to lead to large but imprecisely estimated increases in profits, with suggestive evidence of larger effects for the in-kind grants (McKenzie and Woodruff, 2008).

Fiala (2018) offers loans or grants to microentrepreneurs in Uganda, cross-randomized with business training. Surprisingly, loans have larger effects than grants; they increase profits by 50%. The author speculates that receiving a loan may have pushed men to make more productive investments due to the obligation to repay, which a grant does not entail. This interpretation requires some other friction or behavioral bias, as the same options were in recipients' choice sets under grants. None of the treatments have positive impacts for female microentrepreneurs.

Fafchamps et al. (2014) vary whether grants offered to small businesses in Ghana are given as cash or in-kind. For the in-kind treatment, the business owner specified what capital he or she wanted



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(typically inventory) and the research team delivered it. Overall the in-kind capital has a larger impact on profits than cash. Another result, echoing other studies, is that the impacts of the cash treatment are larger for men than women.

Bianchi and Bobbba (2013) use variation in the receipt of Progresa conditional cash transfers in Mexico to study how cash transfers affect the extensive margin of entrepreneurship. They find that entrepreneurship increases by 1 percentage point from a base of 3 to 4 percent with the cash transfer. Through further analysis, the authors argue that the impacts are due to the program providing steady income and thus reducing risk aversion, rather than the easing of credit constraints.

Another intervention that, like Progresa, was not focused on entrepreneurship yet could have affected it is analyzed in Haushofer and Shapiro (2016). This study examines impacts on an array of outcomes from one-time cash transfers to poor individuals in Kenya from the non-profit GiveDirectly. The authors report a 33% increase in revenue from self-employment and a 50% increase in business expenditure, but no changes in profits or the likelihood of being a business owner.

Blattman et al. (2014) use cash grants to promote entrepreneurship among young men and women in post-war northern Uganda. Groups of around 20 to 30 people, most of them mixed gender, submitted applications to the government's Youth Opportunities Program, in which they wrote up a plan for how they would use the grant to acquire skills in trades such as tailoring, hairdressing, or carpentry. Funding was provided to 265 groups, randomly chosen from the 535 eligible groups. Groups received about 7,500 USD on average, or around 400 USD per person. The grants were successful in promoting non-agricultural employment among recipients. The treated group also had higher earnings, worked more hours, and accumulated more capital than the control group. Receiving the grant caused the treated group to adopt formal business practices such as record keeping and paying business taxes. Women benefited more from receiving the grant, and their earnings grew much faster than those of women in the control group. The authors speculate that this heterogeneity by gender is due to women facing more stringent credit constraints. Despite these impressive initial results, a follow-up nine years after baseline found that the treatment group no longer had significantly higher income than the control group. However, those in the treatment group, particularly women, were still more likely to be engaged in a skilled trade at the time of the nine-year follow-up survey.

Blattman et al. (2016) study how a large cash grant affects the entrepreneurial activities of marginalized women in war-torn northern Uganda. The intervention provides 150 USD in cash, equivalent to two years of income, plus 5 days of business training. Each of the 120 study villages was asked to provide a list of marginalized individuals; from these lists 10 to 20 were selected to participate in the study. Randomization was at the village level. Half of the treated villages also received group dynamics training. The treatment doubled entrepreneurial activity and income compared to the control group. The group dynamics training, which consisted of advice on how to collaborate in business ventures and instructions on how to form a ROSCA savings group, led to significant increases in income.

Another study of cash grants is by Klinger and Schündeln (2011), described in the previous section, which analyzed TechnoServe's business plan competitions in Central America. That study found that receiving a large grant as one of the winners of a business plan competition had a large impact on the likelihood of starting a business.

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The studies above suggest that in many settings, giving grants to microentrepreneurs can have large returns. This evidence that small firms are capital constrained provides *prima facie* support for the hypothesis that, if the capital were in the form of loans rather than grants, recipients could expand their businesses and pay back the loans through higher profits.

Inspired by Muhammed Yunus's Grameen Bank in Bangladesh, many organizations around the world specialize in providing loans to microentrepreneurs. The microcredit lending model varies across microfinance institutions, but often has elements aimed at encouraging repayment and achieving a broader social mission. For example, the loan structure often requires repayment to begin almost immediately. Several organizations also focus on female clients and use a group lending model with liability for the loan jointly shared by group members.

Several studies examine how expanded access to microcredit affects microenterprises. The thrust of the recent literature is that microcredit helps some microenterprises, but access to credit is not a silver bullet to transform most of them into thriving, fast-growing businesses. The title of a prominent recent study, "The Miracle of Microfinance? Evidence from a Randomized Evaluation" exemplifies the tamping down of excitement about microcredit associated with this recent literature (Banerjee et al., 2015a). That study uses the randomized roll-out of Spandana, a for-profit microfinance lender in India, across neighborhoods in Hyderabad, India that began in 2007. Spandana lends to female microentrepreneurs using a group lending model. Take-up of the loans is fairly low, at 18% in the treatment group (compared to 5% in the control group), indicating that demand for microcredit is not universal. The authors find no statistically significant increase in business profits, but they do find improvements for households with preexisting businesses.

Six other randomized evaluations of microcredit published at the same time as Banerjee et al. (2015a) find broadly similar results that access to credit only helps a subset of firms (Banerjee et al., 2015b). For example, Angelucci et al. (2015) worked with Credito Mujer, which offers group-lending joint liability loans to women in Mexico. The study uses an encouragement design, randomizing in-person marketing of Credito Mujer. Take-up of the loan product is 19% in the treatment group, compared to 6% in the control group. The study finds an increase in revenue but not profits or household income. Attanasio et al. (2015) randomly offer microcredit to women in Mongolia and find that it increases self-employment. There is no impact on self-reported income or profits, with the loans mostly going towards consumption. Meager (2019) presents quantile estimates that pool the seven studies that were published in tandem, using a Bayesian framework. She shows that the impacts are quite precisely zero for most of the distribution, with imprecise estimates pointing to positive impacts for the right tail.

Several papers on microcredit examine how the contract structure of microloans influences their impacts. Field et al. (2013) use a randomized experiment in Kolkata, India to study whether the requirement of high repayment amounts early in the loan period discourages profitable opportunities that entail a high upfront outlay but greater returns in the longer run. They find that adding a grace period to individually-liable microfinance loans, during which no interest payments are due, increases business investment and profits and decreases non-business loan use. The trade-off is that the loan default rate was three times as high in the treatment group as in the control group. Fischer (2013) points out that the joint liability structure that is common in microcredit could lead to inefficiently low risk-taking. The paper's theoretical insight is that because fellow group members

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bear the downside risk but do not share in the upside risk, they might block entrepreneurs from taking advantage of high-risk, high-return opportunities. Other work compares group lending to individual lending (Giné and Karlan, 2014; Attanasio et al., 2015).

## Gender

### Explaining gender differences in returns to capital

A follow-up paper to de Mel et al. (2008a) further probes the gender differences in returns to grants in Sri Lanka (de Mel et al., 2009). The authors argue that women's grants were "captured" by other household members, but that larger grants were more difficult to capture. This interpretation is related to the more general point that there is often no rigid separation between business and family for microentrepreneurs. One way this materializes is that pressure from family to share income can lead to income hiding and decrease the likelihood of starting a business or investing in an existing business (de Mel et al., 2009; Jakiela and Ozier, 2016). This challenge might be especially large for women, who typically have less power in the family than men. Another way home and business are entangled is that, with access to capital, an individual faces a choice to spend on household expenses or the business, and women might put more weight on or have more responsibility for spending for the household.

Consistent with this conjecture, Fafchamps et al. (2014) find that in-kind transfers are more effective than cash transfers in increasing profits for female business owners. Women are more likely to use cash transfers for household expenses and to make transfers outside the household. Friedson-Ridenour and Pierotti (2019) find that spousal and societal pressure can push female entrepreneurs to invest less in their business, save more for the household, and hide income so as to not have to pay for their spouse's share of expenses. However, not all studies find support for this idea that pressure from others explains the gender patterns: Fafchamps et al. (2014) find that external pressure does not play a role in women's lower business profits.

Bernhardt et al. (2017) systematically examine whether the pattern that women have a lower return to capital than men can be explained by these intrahousehold dynamics. They re-analyze data from prominent studies and find that returns to capital are lower for women in households with other entrepreneurs than for men who live in households with other entrepreneurs, but *household-level* profits do not differ. That is, when women receive grants or loans, the husband's or other family members' profits increase, pointing to the money being used for an enterprise other than the woman's own enterprise. Consistent with this story, women in single-enterprise households have high returns to capital.

Klapper and Parker (2011) offers a different explanation, which is that the divergent returns to loans between men and women is due to the industries they work in, and that adjusting for the different industry composition, returns to loans do not differ by gender. Industry can explain much of the raw difference because women tend to work in industries that have smaller, less efficient firms, with lower potential for growth. An area for further work is to better understand why women work in industries with lower growth potential or, as suggested by Hardy and Kagy (2019), more competition.

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## Impacts of access to credit on women's empowerment

Another gender-related question in the literature is whether business success improves women's empowerment and, in turn, children's outcomes. One motivation for microcredit being focused on women is that women are excluded from other credit channels. But an additional motivation is that helping women, and specifically giving them earning power, might increase their decision-making power. Women having a greater say in household decisions is a desirable end in itself for equity reasons if decision-making is dominated by men, and is also hypothesized to lead to better outcomes for children, for example if mothers put more weight on children's health and education than fathers do. Thus, the literature on microcredit has examined if one of the downstream effects of access to credit is greater women's empowerment. Many studies such as Banerjee et al. (2015a) find no evidence that access to microcredit improves women's empowerment. An exception is Angelucci et al. (2015) who find some impact on women's decision-making in the household.

## Recap

Several studies that offer grants to small businesses find tantalizingly large impacts on profits. This suggests that, at a minimum, this type of philanthropic intervention could be helpful to many small firms. The high returns also suggest that this intervention could pay for itself if the capital could be given in the form of loans, with a high enough repayment rate and low enough administrative costs. The microfinance industry aims to do this, but several studies reach a similar conclusion: microcredit only has meaningful impacts on business performance for a small share of recipients.

There are several potential ways to reconcile the findings on grants versus microloans. The firms targeted in the cash grant studies tend to be somewhat larger and more established than the typical firms receiving microcredit loans. This is consistent with the finding that microcredit increases profits for only a subset of recipients and being an established firm is a predictor of being in this subset. In addition, the term structure and other requirements of microcredit might inhibit the sort of high-return investments that grant recipients undertook. These potential reasons suggest that more research on how to identify high-potential microentrepreneurs (as discussed in section 6) and on how loan terms influence the way the capital is invested would be fruitful.

A stark pattern across several studies is that grants often improve business outcomes exclusively for male-run businesses. Recent work identifies one important reason: money given to female entrepreneurs is often not invested in their businesses, whether by their choice or not. In light of this explanation, more work is needed to test if grant and loan programs can be redesigned to enable women to invest capital they receive in their businesses.

## 5 Barriers to hiring

The vast majority of microenterprises have no employees outside the owner's family. One potential reason is information frictions combined with firing costs, whereby firms are unsure of a worker's ability and may have legal difficulty firing unproductive workers. Carranza et al. (2019) find that providing workers a way to certify their skills to firms can increase youth employment rates in South Africa, with part of the mechanism being more information for the firms on the applicants' skills.

They find in their setting that risk aversion about hiring a worker with unknown skills is an especially salient concern for microentrepreneurs, who are also least able to afford the fixed cost of setting up a system to assess workers' skills during the application process. Donovan et al. (2019) find that wages rise more sharply with tenure in developing countries than developed ones. They interpret this pattern as reflecting a selection effect: Firms have imperfect information at the time of hiring, and they shed lower-performing workers as these workers' low ability becomes apparent to the firm.<sup>5</sup>

Bassi and Nansamba (2019) examine information frictions about workers' soft skills in the job search and hiring process. They assess applicants' soft skills and provide the assessment information to applicants and firms in Uganda. They find that doing so increases the low-but-not-lowest skill workers' likelihood of being hired and also causes low-skill applicants to seek more training. These findings are consistent with both workers and firms having imperfect information about applicants' skills.

In contrast, de Mel et al. (2019) do not find evidence that points to hiring frictions. They offer (male-owned) microenterprises in Sri Lanka a temporary wage subsidy that covers half the wage for a newly hired employee for six months (34 USD), plus an additional 17 USD for 2 extra months after that. At baseline 81% of firms have no employees.<sup>6</sup> The study finds 24% take-up of the wage subsidy, with 68% of these firms using it for six months or more. About half of the take-up is on the extensive margin: the likelihood of having at least one paid worker increased by 14 percentage points. Most of the hires were known to the business owner (though hiring a family member was not allowed). However, the effect on employment does not extend beyond the subsidy period, suggesting that the intervention was not overcoming a market imperfection but rather just temporarily transferring surplus to participating firms. The treatment increases firm survival by 8 percentage points after two years (from a baseline of 85%), presumably because of the extra surplus the owner received during the wage subsidy period. Conditional on the business still being in operation, treated firms do not have higher profits or sales at the two-year mark.

Alfonsi et al. (2017) highlight another barrier to hiring, which is that an employee's productivity might be initially low, and a credit-constrained small firm might not be able to bear the initial period of losses during which wages exceed productivity. This study worked with a set of unemployed youth and a set of firms in Uganda. One of the interventions offered firms a wage subsidy to offer on-the-job training to new workers that the researchers matched to the firm. The study also had a treatment arm that instead offered workers vocational training. Many workers in the on-the-job training arm were not successfully matched to a firm and thus never received the training. Thus, from the workers' perspective, being offered vocational training was most valuable in increasing skills and initial employment. Nonetheless, those in the on-the-job training arm also enjoyed an earnings boost compared to the control group. From the firms' perspective, being matched to a worker for on-the-job training increased profits, primarily because the trained workers had a longer tenure on the job. Because on-the-job training is not as visible to outside firms as a credentialed vocational course and because it is firm-specific human capital, it offers the benefit of less competition for the workers from other firms. Firms trade off this benefit against the benefit of hiring already-trained

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<sup>5</sup> A paper similar in flavor examines how wages vary with age (rather than job tenure), and finds that the age-wage profile is less steep in developing than developed countries (Lagakos et al., 2018).

<sup>6</sup> The study also had two supplementary interventions, a savings account with matched deposits and business training.

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workers, who have sector-specific but lack firm-specific skills, and for whom the firm faces more competition. This suggests that a firm with access to credit that can offer training can then keep more of the surplus due to having some monopsonistic power over that worker.

Another potential constraint on hiring is moral hazard. Non-family members may put in less effort and their performance on the job may be difficult to monitor. This issue is prominent in the development economics literature in the context of agriculture (Benjamin, 1992), but is likely also relevant in non-agricultural firms. A recent study by Kelley et al. (2019) offers an interesting case study of how new monitoring technologies can help firms. Privately-run matatus, or minibuses, are the cornerstone of the transportation system in Nairobi, Kenya. Owners of matatus employ drivers to operate the vehicles but are limited in their ability to monitor how much revenue the matatu driver takes in or whether he drives safely; unsafe driving puts passengers at risk and can increase car repair costs from wear-and-tear or accidents.

The intervention in Kelley et al. (2019) is a monitoring device installed in the matatu that tracks the matatu's distance traveled, location, and vertical motion. The distance data allows the owner to "guesstimate" the number of trips completed and, hence, the amount of fare revenue collected. Data on location and vertical acceleration inform the owner if the driver has taken shortcuts on bumpy dirt roads that damage the vehicle.

Treated drivers engaged in less risky and off-route driving, and repair costs declined by almost a half. In addition, drivers increased their hours worked per day by about 10% and seemed to be less likely to under-report revenue. As a result, the owners' profits increased. During the initial months, owners reprimanded drivers more often, but over time they also seemed to decrease the target revenue they set for the driver, which suggests that owners learned over time that they had been too distrustful of drivers, who were not shirking as much as they thought. Because drivers reduced the under-reported earnings and worked more hours, it is not clear that they benefited, however. As new technologies are developed, the topic of using technology to monitor employees studied by Kelley et al. (2019) is likely to be an active area of research. More work is needed on not just the efficiency gains from new technologies, but also on the distributional consequences, or how workers and firms share the efficiency gains.

## Recap

Only a minority of businesses in developing countries have non-family employees. Studies have investigated various potential barriers to adding employees such as incomplete information about job applicants' attributes, the need to invest in training new hires, and moral hazard leading to low productivity of hires. These factors do not seem to be the binding constraint on expansion for most firms. However, as other frictions such as credit constraints are eased, labor market frictions could become increasingly important for understanding business expansion. In addition, given high youth unemployment in many developing countries, providing skills training and certification and re-calibrating employment expectations are and will continue to be important topics from the perspective of the workers' welfare. Finally, there is a gender angle to this topic that, to my knowledge, has not received extensive attention in the literature: being able to hire and delegate certain roles to an employee might be especially valuable to women micro-entrepreneurs because of the competing demands on their time from child care and household responsibilities.



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## 6 Microentrepreneurship by choice versus necessity

While in popular imagination entrepreneurs start businesses because they want to be their own boss, or to create and build something, or to become rich, the persistent small size of most microenterprises belies this image. A large literature has studied whether people start businesses because of these perks of entrepreneurship or as the fallback option when they cannot find adequate paid employment. This dichotomy is over-simplified in that the vast majority of people would prefer self-employment over sufficiently unattractive paid employment and would prefer a sufficiently attractive job over self-employment. Nonetheless, several studies have shed light on whether microentrepreneurs start businesses primarily because of their ambitions to run large successful companies.

This literature generally finds that most microentrepreneurs start businesses out of necessity. Some of the evidence for this is that, when asked, people say they would prefer jobs with steady wages (Günther and Launov, 2012; Calderon et al., 2016). Donovan et al. (2019) use data on employment transitions to investigate this issue. They use panel data on employment for several developed and developing countries and show that transitions from self-employment to being an employee are much more common in poor countries than rich ones, suggesting that self-employment is not an “absorbing state” in developing countries, but rather what many people do until they find paid employment. Nonetheless, other studies find that some individuals prefer entrepreneurial jobs to paid employment, with high ability individuals selecting into entrepreneurship (Falco and Haywood, 2016; Blattman and Dercon, 2018).

Another set of studies examines the characteristics of microentrepreneurs and shows that they more closely resemble people in paid employment than people who run larger firms. For example, de Mel et al. (2008b) compare traits of microentrepreneurs in Sri Lanka to two other groups: people running small and medium enterprises with employees and those employed by someone else. They find that microentrepreneurs resemble wage workers more than they resemble more successful entrepreneurs.

In a similar vein, Gindling and Newhouse (2014) use data for several countries and document that people who run businesses with no employees have less education, on average, than those in paid employment. While low education speaks to their absolute, not comparative, (dis)advantage in paid employment, this fact is suggestive of poor employment prospects leading to self-employment. This study also finds that, among business owners, education is the strongest predictor of having at least one employee. Interestingly, they find no gender differences between male and female entrepreneurs in the likelihood of having an employee.

Another piece of evidence that people are pushed rather than pulled into entrepreneurship is that negative shocks can trigger self-employment. Adhvaryu and Nyshadham (2017) document that people sometimes start businesses due to a prolonged illness, switching away from farm labor, which presumably is more physically taxing than their new occupation.

### Finding the “constrained gazelles” or “gung-ho entrepreneurs”

One upshot of this strand of the literature is that, while most microentrepreneurs do not seem poised to run highly profitable, fast growing firms, an important subset of them are but are held back by policy-fixable constraints, such as imperfect capital markets. Higher social (and financial) returns

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could be achieved by targeted lending to this group with a high return to capital.

Grimm et al. (2012) use the term “constrained gazelles” for this group and identify them based on their resembling high-performing small businesses on observable traits yet not being high-performing. Banerjee et al. (2019) use the data from Banerjee et al. (2015a) to distinguish between “gung-ho entrepreneurs” (those whose target business size is large) and “reluctant entrepreneurs” (those whose target business size is small).

Hussam et al. (2018) crowdsource information from the community on which potential borrowers have a high marginal return to capital within villages in Maharashtra, India. They ask individuals to rank their peers in terms of the likely increase in profits from extra capital. By providing 100 USD cash grants to randomly selected individuals who vary in how the community rated them, the researchers show that the peer rankings have quite strong predictive power. This result suggests that eliciting the community’s views could be a feasible way to identify high-return micro-lending opportunities. There is also evidence of incentive problems when people know that their ratings will determine who receives grants, but the study suggests that it might be possible to ameliorate these problems by using an incentive compatible elicitation mechanism.

McKenzie (2017) uses a business plan competition to identify potential gazelles. In 2011, Nigeria conducted a national entrepreneurial incentive scheme named YouWiN! in which firms or people with ideas for firms competed to receive 50,000 USD in entrepreneurial grants. This amounts to 25 times GDP per capita. About 24,000 applications were received, and 6,000 were selected for a 4-day business plan course. The very top applicants were awarded grants, and then from among the 1,841 firms that submitted good-but-not-great applications that fell just below that top group, half were randomly assigned to receive the grant. The grants increased the likelihood of firm entry and survival and boosted sales, profits, and number of employees.

## Recap

The literature makes a distinction between entrepreneurs by necessity, who might have modest growth ambitions and skills, and the potential gazelles. With this in mind, a recent line of research has aimed to classify microenterprises into these different categories in order to target policies accordingly. For example, microcredit or assistance with formalization could then be targeted toward the potential gazelles. Meanwhile, for many other microentrepreneurs, running a business is not a calling but, rather, the fallback option when paid employment is unavailable. But interventions are often designed with a grander vision of microentrepreneurship. There may be scope for research that thinks creatively about the needs of this group and how to redesign interventions to best improve their lives.

## 7 Miscellaneous topics

This section briefly discusses a few other themes that arise in the literature on microenterprises in developing countries.

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## Access to financial services other than credit

Many people in developing countries lack access to reliable ways to save. Dupas and Robinson (2013) offer zero-interest bank accounts to microentrepreneurs in Kenya and find that for women but not men, bank accounts increase savings and investment (as well as personal expenditures).

Uncertainty can be a major deterrent to firm investment (Bloom, 2009). In developing countries, macroeconomic and political instability are major risks to firms, including microenterprises. Groh and McKenzie (2016) study Egypt from 2011 to 2013, the tumultuous period after the “Arab Spring” movement. Many firm owners in this context want to delay investments until the turmoil is over. The researchers worked with a microfinance institution and enrolled in their study existing clients who were at a decision point about whether or not to renew their loans. The randomized intervention entailed offering insurance against macroeconomic/political risk through a product called the economic protection plan, or EPP. EPP was an add-on to a standard 12 month loan from the MFI: In case of an economic/political shock to the business, EPP pays out 16.7% of loan value; in the case of two shocks, the payment becomes 25% of the loan value. Events that qualified as a shock were the stock exchange being suspended for more than five days, a curfew being imposed for more than five days, a specified increase in inflation, and a specified increase in fuel prices.

Among the 1,481 clients in the treatment group (those offered EPP), 67% renewed their loan and 37% purchased EPP. Loan renewal was not significantly different between the treatment and control groups, so EPP did not make borrowing more attractive, despite the fact that half of the treated group who took up the loan chose to purchase the EPP add-on. The study finds no significant effects on investments, either major physical capital investment or working capital investment such as inventory.<sup>7</sup> The authors argue that basis risk is unlikely to be the explanation, as past shocks seem to matter for firm performance. The insurance payout is large and the firms have a relationship with the MFI so trust in the payout should be high. The firms also seem to understand the product. Thus the authors interpret the null result as indicating that economic and political risk were not deterring these firms from investing, contrary to the hypothesis.

## Inter-firm relationships

Several studies examine peer effects and interlinkages among firms. Firm owners’ interactions with peers seem to facilitate their adoption of business practices related to formalization and banking (Fafchamps and Quinn, 2018), and to influence their firm’s performance (Fajnzylber et al., 2009). While geographical clustering could facilitate knowledge spillovers and is associated with higher profits (Ali and Peerlings, 2011), some studies find that geographic clustering is not enough; business connections are also needed for firm networks to translate into knowledge flows and innovation (Gebreeyesus and Mohnen, 2013). These benefits might not be as large for microenterprises, however. Small firms do not benefit, at least not as much, from formal and informal meetings between owners (Cai and Szeidl, 2018; Fafchamps and Quinn, 2018). Microenterprises also do not seem to interact with each other enough for there to be spillover effects on other firms, in the case that one firm receives an inspection visit to verify that it is registered (de Andrade et al., 2013).

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<sup>7</sup> A puzzling finding is that the treatment group experienced a 13% decrease in revenue but no significant effect on profits, suggesting that some component of costs decreased.

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## 8 Gender and entrepreneurship

An important difference between entrepreneurship in developing and developed countries is that women run the majority of microenterprises in developing countries, unlike in developed ones (Klapper and Parker, 2011). And on many indicators, female-run microenterprises underperform their male-run counterparts. Bruhn (2009) analyzes data from several Latin American countries and finds that women-run firms have lower sales, assets, and profits. They also are more likely to be home-based. Nix et al. (2015) find lower earnings for self-employed women compared to men across several sub-Saharan African countries, while Hardy and Kagy (2018) find a profit gap favoring men among microenterprises in Ghana; in both cases, adjusting for observable characteristics leaves much of the gender gap unexplained.<sup>8</sup>

The prevalence of female-owned businesses and the gender gaps in performance help explain why many interventions aimed at helping microenterprises, notably microcredit and business training, focus mostly on female entrepreneurs. The hypothesis that at least implicitly underlies this focus on women is that women are more constrained in their access to traditional financing and to education. Another reason many organizations focus on helping female-owned businesses is that their objective is not just to boost household income, but to also increase women's share of that household income. The rationale is that increasing women's economic position will increase their personal autonomy and give them more say in households, with perhaps better outcomes for children as a downstream benefit.

However, whether these hypotheses are in fact correct is unclear. For business training, there is limited evidence on how impacts vary by gender. For microcredit, while most studies either are underpowered to examine heterogeneous effects by gender or focus on one gender, influential results reported in de Mel et al. (2008a) and companion papers find that directing capital to men rather than women would generate higher returns. This suggests that if increasing firm growth and profitability is the main goal, then a focus on just female entrepreneurs might be misguided. As for broader benefits of helping female businesses, the current evidence on female-focused programs improving women's empowerment and children's outcomes is also scarce.

At the same time, there is mounting evidence that women do face unique challenges in running successful businesses, ones that might be amenable to policy fixes. For example, the lower return to grants given to women is at least partly because the money is less likely to be invested in her business than when a man receives a grant (Bernhardt et al., 2017). That suggests a different course correction than redirecting programming toward men, namely finding ways to ensure that women maintain control over grants or loans given to them (perhaps by making more of them in-kind). The policy solutions that can address frictions and power imbalances within households will likely need to be more subtle and context-specific than current policies.

More generally, to understand the performance of female-owned businesses, one needs to understand how intertwined women's business and family lives are. Bruhn (2009) finds that commitments at home seem to explain part of the gender gap in firm performance, and Fafchamps et al. (2014) find

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<sup>8</sup>Hardy and Kagy (2019) provide demand shocks to male and female microentrepreneurs in the garment industry in Ghana and find that women's businesses have more slack. This research points to another potential source of the gender profit gap, namely demand constraints.

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that a sizable portion of grants given to female business owners are spent on household expenses. Delecourt and Fitzpatrick (2019) send “mystery shoppers” to small, owner-run drug stores in Uganda and find that 38% of women and 0% of men bring their small children to work, and that doing so is associated with lower profits.

Arguably for all microenterprises, but most certainly for female-owned ones in developing countries, the separation theorem rarely holds: people cannot or do not decouple their business from the rest of their lives and solely maximize the business’s profits. Further research on women’s interconnected decisions about their business’s and family’s finances and their business and family obligations is an important priority for understanding and narrowing the gender gap in microenterprise performance.

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