



WHAT WORKS IN SUPPORTING WOMEN-LED BUSINESSES?

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OVERVIEW

The narrative among policymakers about women's entrepreneurship is slowly shifting from encouraging the creation of a high number of startups to focusing on supporting women who are well positioned to lead growth-oriented enterprises. Innovative women entrepreneurs can be agents of change and provide new solutions to global challenges, yet they face multiple barriers to growing their businesses. This policy brief examines the following four areas of constraints and provides evidence on measures to reduce gender gaps in each:

1. **Human capital**, including gender gaps in access to skills and networks
2. **Factors constraining access to finance**
3. **Factors constraining technology uptake and market expansion**
4. **Contextual factors**, including legal and regulatory constraints, social norms, access to care, and gender-based violence

Three cross-cutting recommendations emerge from the literature and operational review:

1. **Interventions need to be better targeted** to women entrepreneurs who could derive the highest returns on them. The development of efficient targeting tools is a non-trivial task, and more work is required in this area.
2. **Interventions need to be designed to consider the multiple constraints faced by women entrepreneurs.** There is a consensus that women-led firms are affected simultaneously by several constraints. Data collection efforts could help identify those constraints, and a mix of innovative approaches could be used to test the most cost-effective composition of the package of support.
3. **The differential needs of women entrepreneurs must be considered during program implementation**, such as childcare support and convenient locations.

The evidence also shows there is a need to target different types of interventions to those women-led firms that would derive the largest returns on them. Several interventions show promising results in supporting women entrepreneurs, but a number of them have not been rigorously evaluated. Therefore, it is important to **continue to support the collection of sex-disaggregated data and the implementation of impact evaluations for promising innovative programs.** A significant part of the existing evidence comes from policies tested with micro or small enterprises. More research is needed on which policies can work for larger women-led enterprises.

TABLE OF CONTENTS

Introduction	1
ADDRESSING HUMAN CAPITAL CONSTRAINTS WITH INTERVENTIONS ON SKILLS AND NETWORKS	4
INTERVENTIONS TO INCREASE ACCESS TO FINANCE	8
INTERVENTIONS TO INCREASE ACCESS TO MARKETS AND TECHNOLOGY	12
INTERVENTIONS THAT ADDRESS CONTEXTUAL CONSTRAINTS	16
Conclusions	18
Resources & References	19

This thematic policy note is part of a series that provides an analytical foundation for the update to the World Bank Group Gender Strategy (FY24–30). This series seeks to give a broad overview of the latest research and findings on gender equality outcomes and summarize key thematic issues, evidence on promising solutions, operational good practices, and key areas for future engagement on promoting gender equality and empowerment. The findings, interpretations, and conclusions expressed in this work are entirely those of the author(s). They do not necessarily reflect the views of the World Bank Group or its Board of Directors.

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Entrepreneurship can foster innovation, productivity growth, and employment (Schumpeter 1934, Acemoglu and Robinson 2012). According to the Global Entrepreneurship Monitor 2020 Survey, over half of the women in developing countries are, or aspire to be, entrepreneurs. However, most lead subsistence-oriented micro-businesses, which are not seen as key drivers of innovation and growth (La Porta and Schleifer 2014).¹ The narrative among policymakers about women's entrepreneurship is slowly shifting from encouraging the creation of a high number of startups to focusing on supporting women who are well positioned to lead growth-oriented enterprises (Elam et al. 2021). Innovative women entrepreneurs can be agents of change and provide new solutions to global challenges.

This policy brief is based on evidence from rigorous research and operational experience that **identify policy solutions to reduce gender gaps in entrepreneurship**. The focus is on measures that can support women who lead growth-oriented micro, small, and medium enterprises (MSMEs) in improving the performance of their businesses. Not addressed are equally important interventions that affect women's selection into entrepreneurship or that foster basic income generating activities, such as subsistence enterprises.²

Women-led firms typically register lower levels of labor, total factor productivity, and profits than men-led firms.

This points to the existence of differential constraints restricting the growth and performance of women-led firms that have been widely documented (e.g., Aterido et al. 2011, Bardasi et al. 2011, Campos et al. 2019, Islam et al. 2020, Allison et al. 2021, World Bank 2021, Fang et al. 2022).³ Moreover, recent studies show that the COVID-19 pandemic has had a disproportionate negative impact on businesses led by women (Goldstein et al. 2020, Kugler et al. 2021, Liu et al. 2021, Torres et al. 2021). When the skills of innovative women entrepreneurs are not channeled to their best use, there is a misallocation of resources that can have major implications for economic growth and development (Chiplunkar and Goldberg 2021). Some studies estimate economic gains in the order of \$5–6 trillion if women started and scaled new businesses at the same rate men do (Siegrist 2022).⁴

The existence of constraints restricting the growth of women-led firms is evidenced by the fact that **the share of businesses that are led by women decreases as the size of the firm increases** (Figure 1). Women-led businesses represent 25 percent of formal businesses around the world.⁵ However, the share of women-led firms decreases from 27 percent of small formal firms to 17 percent of large firms. This pattern is replicated around the world, except in the Middle East and North Africa and South Asia, where there is an overall smaller share of formal women-led firms.

¹ According to the Global Entrepreneurship Monitor 2020 data, 91 percent of women-owned businesses have five or fewer employees, while the share of men-owned business with five or fewer employees is 80 percent (Elam et al. 2021).

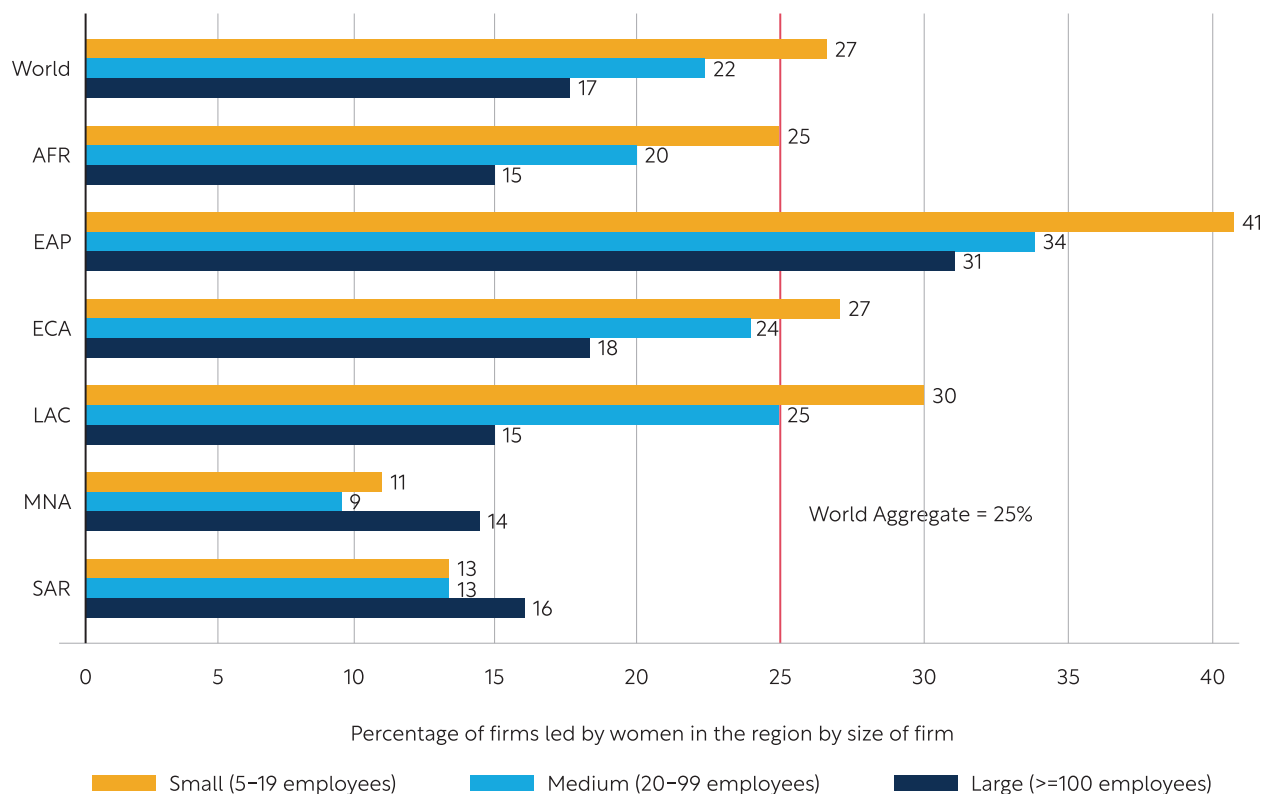
² This brief does not explore the argument that differential selection into entrepreneurship for women and men could explain a fraction of the profit gender gap. That would be the case if women's decision to start a business rather than seeking wage work was more affected by constraints than men's decision (Campos et al. 2019). This brief also does not focus on policies for very large, limited liability companies where the policy evidence is still limited.

³ However, some studies find no evidence of gender gaps in profits or productivity for enterprises of larger size (World Bank 2021, Fang et al. 2022).

⁴ These estimates are based on a methodology developed by McKinsey for the [UK Rose Review](#) and are in line with recent analysis carried out by the Boston Consulting Group, which shows that if women and men participated equally as entrepreneurs, the global economy could grow by \$2.5 trillion to \$5 trillion (Unnikrishnan and Blair 2019).

⁵ In these calculations, women-led firms are defined as those that have more than 50 percent female ownership or a top manager who is a woman. Alternative definitions result in a similar pattern by firm size across regions. In the sample used to prepare the graph, the share of firms with a woman top manager is 18 percent (per the definition of women-led business adopted by Islam et al. 2020), with more than 50 percent female ownership is 20 percent, with a woman top manager and at least one woman owner is 14 percent (per definition adopted by Fang et al. 2022), and with at least 20 percent female ownership or a woman top manager is 22 percent. The share with at least one woman owner is 37 percent, and only for this variable the pattern by size is not so clear. However, Fang et al. (2022) argue that having a woman manager better captures firms actually led by women than having at least one woman owner. These shares are consistent with data collected directly from business registers in 81 economies by the We-Data project (see Meunier et al. 2022), which show that women represent 25 percent of new business owners in limited liability companies, 25 percent of new business directors, and 33 percent of new sole-proprietors.

FIGURE 1. PERCENTAGE OF FORMAL FIRMS LED BY WOMEN BY REGION AND FIRM SIZE



Source: Author's calculation using the last survey available for each country in the pooled World Bank Enterprise Surveys Microdata. These surveys target formal firms with at least five employees. Replication codes are available upon request.

Notes: A woman-led firm is defined as a firm with more than 50 percent of female ownership or with a woman top manager. Statistics were obtained by using sample weights considering the design of the Enterprise Surveys. AFR=Africa, EAP=East Asia and Pacific, ECA=Europe and Central Asia, LAC=Latin America and the Caribbean, MNA=Middle East and North Africa, SAR=South Asia.

What factors drive the global gender gap in firms' performance? Multiple factors constrain women's decisions on what sector to enter, how much capital and labor to use in their firms, and what business practices and technology to adopt. These and other considerations contribute to differences in firm performance (Campos et al. 2019, Siegrist 2022). This policy brief examines the following four areas of constraints and provides evidence on measures to reduce gender gaps in each:

1. **Human capital**, including gender gaps in access to skills and networks
2. **Factors constraining access to finance**
3. **Factors constraining technology uptake and market expansion**
4. **Contextual factors**, including legal and regulatory constraints, social norms, access to care, and gender-based violence



This policy brief builds on the review by the Women Entrepreneurs Finance Initiative (We-Fi) on what works in supporting women entrepreneurs (Siegrist 2022) and presents evidence on measures to reduce gender gaps along four dimensions linked to the areas of constraints: **access to skills and networks, access to finance, access to technology and markets, and contextual constraints.** This evidence is complemented with examples of how these findings are informing World Bank Group's operations and initiatives. Evidence is categorized into three groups:

- **“Effective”** indicates that there is more than one causal impact study demonstrating the effectiveness of the policy across contexts.
- **“Emerging”** indicates that there is only one piece of causal evidence, mixed results or a strong body of descriptive evidence pointing to improvements in the performance of women-led firms.
- **“Less promising”** indicates that there is causal evidence that demonstrates that the intervention has limited or negligible impact. In this case, different versions of the policy that could be more successful are discussed.

ADDRESSING HUMAN CAPITAL CONSTRAINTS WITH INTERVENTIONS ON SKILLS AND NETWORKS



Gender gaps are pervasive in the critical skills and networks needed to run a successful business (World Bank 2021b). More than \$1 billion is spent subsidizing business training programs around the world (McKenzie et al. 2021). Traditional business training programs offer classroom-based learning that covers a range of recommended business practices, including accounting, marketing, human resource management, finance, and the preparation of business plans. However, rigorous evaluations of traditional business training programs indicate that they are not transformative for women-led businesses (McKenzie and Woodruff 2014).

A growing number of studies show that training programs can improve the performance of women-led businesses when they focus on socio-emotional skills, women-specific constraints, or networking opportunities. Moreover, adapting training programs to address constraints to women's participation can significantly increase uptake (Beegle et al. 2020, IFC 2020).

Traditional business training programs An influential review of randomized controlled trials in different contexts indicates mostly no statistically significant average effects of traditional business training programs for either men or women entrepreneurs (McKenzie and Woodruff 2014). The evidence shows that training programs were successful at encouraging the adoption of a small share of recommended business practices correlated with business growth (McKenzie and Woodruff 2017), but the change was too small to result in improved performance.

However, new evidence indicates that the effects of traditional business training programs might not be null. McKenzie (2020) and McKenzie et al. (2021) conducted a meta-analysis of the literature, including new papers with more statistical power to detect effects. They show that the typical training program increases profits and sales by an average of 5 to 10 percent, which means that they could pass cost-benefits calculations if costs were low enough. Some evidence indicates that effects might

be even lower for women entrepreneurs, particularly where their opportunities are constrained by social norms (Jayachandran 2021, Gine and Mansuri 2021). Field et al. (2016) find that allowing women to bring a friend to the training allows them to set more ambitious goals for their business and take more loans, indicating that the role of peer support in increasing women's aspirations could be important.⁶ Lafortune et al. (2018) show that adding entrepreneurs into business training to act as role models can significantly enhance the effects of the training. Overall, traditional business training programs alone do not show great promise in improving the performance of women-led businesses, but variations in content, focus, or implementation could make them cost-effective.

Approaches to make traditional business training cost-effective at scale. The small effects of traditional business training can translate into a profitable investment, even for women-led firms, if costs per participant are low or the programs are better targeted. McKenzie (2021) discusses the following three approaches that governments can use to provide business training at scale.

1. Develop a market for business services (Argidious Foundation, 2021). Maffioli et al. (2022) show in Jamaica that both men and women-led firms are willing to pay a positive amount for business training, indicating that entrepreneurs believe training could be profitable. They find that those who pay for the training are more likely to attend. However, demand drops sharply when the cost charged to participants is more than 25 percent of the full cost of the training, and poorer and smaller businesses are less likely to pay and attend the training once the price rises. Instead of subsidizing business training, **firms could be offered a subsidy to hire experts on the topics that the training would teach.** Anderson and McKenzie (2022) show in Nigeria that this can be an efficient way for larger firms to hire accountants or marketing experts, either from within (insourcing) or using external providers (outsourcing).

⁶ However, there is evidence that it is also important to avoid training programs that can generate unrealistic aspirations and might lead to frustration (McKenzie et al. 2022).

BOX 1. TARGETING GROWTH-ORIENTED FIRMS IN MALAWI

The Financial Inclusion and Entrepreneurship Scaling (FInES) Project (P168577) aims to promote entrepreneurship and capabilities of SMEs in Malawi, including addressing COVID-19 implications, with a target of including at least 40 percent women-led businesses. FInES will offer firms three stages of interventions, ranging from group training (in socio-emotional skills and traditional business skills) to more personalized interventions, such as one-on-one mentoring and tailored services to foster entry into new markets. Using a rigorous impact evaluation, the project will design, implement, and test a novel funneling approach to screen and target growth-oriented entrepreneurs (Grover and Imbruno 2020). This work is in partnership with the World Bank's Finance, Competitiveness and Innovation Global Practice, the Gender Group, and the Africa Gender Innovation Lab.

The funneling approach consists of offering less expensive interventions to a broad range of entrepreneurs, and then screening who is funneled ahead so the more expensive interventions are targeted toward a narrower set of firms that would benefit most from them. At every stage of the funnel, the project will screen firms that graduate to receive subsequent interventions, each of which aligns with one key growth constraint. Firms completing their assigned interventions will be offered preferential access to finance. The project will also test the differential impact of specific interventions on business practices and firm growth for men and women-led businesses. Each intervention will be adapted to address the differential constraints faced by women entrepreneurs (e.g., offering to bring a caretaker to training, convenient times and locations, and a safe environment).

2. Offer virtual instead of in-person training. This could be done through television shows (edutainment),⁷ SMS messages (with a focus on rule-of-thumb messages), applications on mobile phones, or interactive online training programs. Such online programs have expanded significantly during the COVID-19 pandemic,⁸ but evidence remains limited on their effectiveness.⁹ This approach requires addressing gender gaps in accessing digital technologies and skills.

3. Target business training programs to firms that derive the largest returns on them. For example, the World Bank is piloting a funneling approach in Malawi, which will provide less expensive interventions to a larger group of firms and then use firms' performance in those interventions to identify firms that are offered more expensive interventions (see Box 1). Selecting women-led entrepreneurs with the highest returns on different interventions is not a trivial task. Ellis et al. (2022) highlight that there is a different and larger set of variables that predict loan growth for women than men, consistent with greater barriers to growth among women entrepreneurs.¹⁰

⁷ The impact evaluations of two edutainment shows for entrepreneurs in Tanzania (Bjorvatn et al. 2019) and Egypt (Barsoum et al. 2022) indicate the programs made viewers more interested in entrepreneurship, but they did not affect business creation or business outcomes.

⁸ For example, Kayumbi (2021) describes how a commercial bank in Kenya used IFC's Grow Learn Connect Program to switch from face-to-face to online training for MSMEs.

⁹ Lafortune et al. (2022) show that a gamified virtual entrepreneurship challenge for secondary students in Rwanda during the COVID-19 pandemic had statistically significant effects on keeping their small business activities open and increased the profits for both girls and boys.

¹⁰ McKenzie and Sansone (2019) show that even counting with a significant amount of data and using machine learning tools, it is not possible to have good predictive power to select top performers. Bryan et al. (2022) find that using a large set of psychometric variables can significantly improve prediction on the effect of large versus small loans. Similarly, Ellis et al. (2022) find that motivations for entrepreneurship and constraints faced can significantly improve prediction. Bardasi et al. (2021) find stronger effects of business training in Tanzania for more experienced women entrepreneurs, indicating that experience can be a variable used for targeting, which is in line with the evidence from microfinance cited in this brief. In small communities, using knowledge from peer entrepreneurs (in an incentivized way to avoid strategic reporting) can help select those entrepreneurs with the largest returns (Hussam et al. 2022).

Changing content with socio-emotional skills training.

A growing body of evidence indicates positive effects of psychology-based training programs on both men and women-led businesses. This type of training focuses on **changing the way entrepreneurs think about their business** instead of recommending a set of business practices.¹¹ The training aims at building soft skills that have been linked to successful entrepreneurship (e.g., proactiveness, future orientation, self-efficacy, perseverance after failure, initiative). An influential randomized study in Togo shows that personal initiative training was more effective than traditional business training at increasing both men and women entrepreneurs' profits (Campos et al. 2017). Personal initiative training in such context was highly cost-effective, paying for itself within one year. The study has significantly influenced World Bank operations, with around 35 projects in 24 countries implementing or planning to implement a variant of personal initiative training.

A randomized study in Ethiopia warns about the importance of recruiting high-quality trainers to achieve positive results (Alibhai et al. 2019). Also, one randomized study in Jamaica finds that the effect of personal initiative training was not significant for women entrepreneurs who were less poor or more likely to be single than in the Togo sample, which could indicate that the training is particularly effective for women with less bargaining power (Ubfal et al. 2022). Another data point of causal evidence comes from Mexico, where a program combining personal initiative training and traditional business training found significant effects on business outcomes for women microentrepreneurs (LACGIL 2021). More evidence is needed on the complementarity between personal initiative training and other interventions, such as access to finance (see Box 1 and Box 2), and on heterogeneity of returns to understand whether socio-emotional skills training can be effective for larger firms.¹²

BOX 2. SCALING-UP SUPPORT TO WOMEN ENTREPRENEURS IN THE DEMOCRATIC REPUBLIC OF CONGO

Approved in 2018, the SME Growth and Development Project (PADMPME, P160806) provides capacity development and grants to women entrepreneurs, young entrepreneurs, and growing SMEs in the Democratic Republic of Congo (DRC). It has partnered with the Africa Gender Innovation Lab to conduct a field experiment that is testing the effect of combining personal initiative training for women entrepreneurs with \$2,000 in-kind grants. The experiment includes a group of women who are invited to the training with their husbands, with the goal of testing the effects of addressing socio-cultural constraints that might restrict investments in women's businesses. Project implementation is advanced and initial results indicate that inviting husbands to the training increased women's participation.

A follow-on project, Empowering Women Entrepreneurs and Upgrading MSMEs for Economic Transformation and Jobs (TRANSFORME, PI 178176) approved in May 2022, aims to expand the reach and impact of PADMPME on women-led enterprises. It will focus on creating a market for business development services to generate sustainable sources of finance and training for women entrepreneurs and MSMEs. It will also support the implementation of existing gender-inclusive legislation to help improve the business environment for women-led firms. The design of the two DRC projects has also informed that of the Burundi Skills for Jobs: Women and Youth Project (P164416), which incorporates behavioral training for women and youth entrepreneurs.

¹¹ Even not focusing on recommended business practices, soft skills training programs prove more effective than traditional business training at fostering adoption of those practices (Campos et al. 2017, Ubfal et al. 2022). This is consistent with evidence that shows providing information to entrepreneurs on recommended business practices is not effective unless combined with behavioral nudges, such as motivational movies or peer counseling (Dalton et al. 2021, Bruhn and Piza 2022).

¹² Campos et al. (2018) show that effects are positive for both more and less educated women in the Togo sample. Recent studies indicate that similar training can also be effective in other contexts (see Montalvao 2022 for a field experiment offering personal initiative training to women farmers in Mozambique).

Changing content and focus with gender-oriented training. There is evidence that training **programs focusing on the differential constraints faced by women entrepreneurs** can improve the performance of women-led businesses. Two randomized controlled trials that evaluated the International Labour Organization's Gender and Enterprise Together program find significant effects on adoption of recommended business practices (Bulte et al. 2016 in Vietnam) and persistent effects on profits (McKenzie and Puerto 2021 in Kenya). Such programs combine material from traditional business training (e.g., recordkeeping, finance) with gender-oriented topics, such as how to enter male-dominated sectors, overcoming stereotypes, and dealing with household demands. However, there is still no evidence on the additional value of the gender-specific content on top of the traditional content. A significant body of qualitative evidence shows that a training program can achieve positive results if both its content and implementation consider the differential needs of women entrepreneurs (Beegle et al. 2020, IFC 2020, Argidius Foundation 2021). This could mean including implementation features, such as childcare services or the opportunity to bring a caretaker, convenient times and locations, safe transportation, and anti-harassment policies.

More personalized services through mentorship and consulting. Mentors (usually for smaller firms) or consultants (paid typically by larger firms) could provide personalized advice to firms. There is mixed evidence on the effect of mentorship for small firms. Brooks et al. (2018) find that mentorship is more effective than traditional business training for women-owned microenterprises in Kenya. However, the effects on profits vanish when the relationship with the mentor ends. This could be linked to the ever-changing demands faced by small enterprises and the need for sustained support. Also looking at Kenya, McKenzie and Puerto (2021) find that mentorship does not increase the effects of the gender-oriented business training offered. Bakhtiar et al. (2021) find that a mentorship program in Ethiopia did not significantly increase the profits of the mentees, but mentoring improved the business performance of the women entrepreneurs who acted as mentors.

More promising results are found by Anderson et al. (2022), who show large effects on sales for small business owners in Uganda when mentored via Skype by volunteer international coaches. The improvements in sales were larger for firms linked to experts in marketing (Anderson et al. 2021), but results were not disaggregated by gender. Moreover, the costs of coaches should be factored in when considering applying this intervention in other settings and could be related to the outsourcing approach previously discussed. **For larger enterprises, more expensive individual consulting shows significant and persistent effects** on the performance of businesses (Bloom et al. 2013, Bloom et al. 2020). These results are not disaggregated by gender and programs do not translate into well-developed markets for consulting (McKenzie 2021). Offering small-group rather than individual consulting to firms is a model that could be more cost-effective, as shown in Colombia (Iacovone et al. 2022).

Networking opportunities. There is a wide consensus about the importance of social networks in the process of innovation and entrepreneurship. A few randomized controlled trials indicate that interventions that encourage firms to interact with other firms can significantly improve entrepreneurship outcomes (e.g., Cai and Szeidl 2018 for in-person interaction in China, and Vega-Redondo et al. 2019 for virtual interaction across Africa). Non-causal evidence from programs focusing on networking activities for women entrepreneurs indicates that they might lead to an expansion of women's business networks.¹³ However, causal evidence is not available on the effects of networking opportunities on the business performance of women-led businesses.

Studies around the world indicate that women entrepreneurs have smaller business networks than men and that their networks are mostly comprised of other women, which could make networking interventions more impactful for them. Incubators and accelerators usually incorporate networking activities into their package of support (Gonzalez-Uribe and Hmaddi 2022). A promising avenue for research is to test how the different services offered by accelerators (including networking) and their interaction benefit growth-oriented women entrepreneurs.

¹³ For example, IFC (2017) reports that a mini-MBA program focusing on networking activities helped women expand their business networks in the West Bank and Gaza.



There is wide consensus that **women entrepreneurs are less likely to gain access to financial services than men entrepreneurs in different contexts** around the world. This applies to services, such as credit and equity financing, insurance, and savings. There is evidence that the **gender gaps are wider for middle-sized firms**, which are too big for microfinance institutions and too small for riskier products offered by banks, venture capitalists, and private equity firms (Siegrist 2022).

IFC (2017b) estimates that the finance gap for women-owned microenterprises amounts to \$173 billion, which represents 24 percent of the overall finance gap for microenterprises. The finance gap for women-owned SMEs (WSME) is \$1.5 trillion, which represents 33 percent of the SME overall finance gap. Given that women are less likely than men to own property, collateral requirements present a key constraint that hinders the ability of women-led firms to access loans. This could be compounded by discriminatory practices against women-led businesses by male investors who make most large funding decisions in debt financing (IFC et al. 2019).

Traditional microcredit. The traditional microcredit lending model focuses on providing women with small loans to start and grow microbusinesses. The model relies on social collateral (women are asked to form groups and are jointly liable for their loans) as an alternative to physical collateral to solve moral hazard and adverse selection problems and to provide dynamic incentives (slightly larger loans) for repayment. Randomized controlled trials from several contexts show no evidence of transformative effects for the average borrower (Banerjee et al. 2015, Cai et al. 2021). Studies find increases in borrowing and some business creation, but no significant effects on performance for the average business.

More recent studies indicate that microcredit, if targeted appropriately, can have significant effects on business performance. Positive effects are found for entrepreneurs who started business operations before the expansion of microcredit in their area (Banerjee et al. 2019, Chernozhukov et al. 2018, Meager 2019). Moreover, relaxing some of the features of the traditional approach (e.g., allowing for flexible repayment and removing joint liability) shows promise (Field et al. 2013, Barboni and Agarwal 2018, Battaglia et al. 2021). More research is needed on how these innovations could be adapted to design products for larger businesses (Siegrist 2022).

Reducing the role of traditional collateral in lending decisions. Microloans using social collateral have increased access to finance for women microentrepreneurs. Other financial instruments that reduce the role of traditional collateral are also being tested to expand lending at larger loan sizes for women-led businesses.¹⁵ These instruments include alternative forms of assessing risk (e.g., psychometric tests, cashflow-based lending, and digital footprints)¹⁶ and securing loans (e.g., invoice financing, revenue-based financing, capital leasing, asset-based finance, digital collateral that uses lockout technology, microequity, and mutuality).

Psychometric tests can be used to predict probability of repayment and to reduce collateral requirements. Studies show that these tests have predictive power to distinguish differences in credit risk (Klinger et al. 2013, Bryan et al. 2022).¹⁷ Recent pilots in Peru and Ethiopia show promising effects of their use in increasing higher-value loans, with the pilots in Ethiopia focusing on women entrepreneurs (Arraiz et al. 2017, Alibhai et al. 2019b, Alibhai et al. 2022). However, evidence is still limited on the impacts of using alternative methods of assessing lending risk and securing

¹⁴ See Field et al. (2023) for more details and additional examples.

¹⁵ A complementary strategy to increase access to finance for women-led businesses is to increase women's control over assets, for example, by encouraging joint titling for spouses. There is causal evidence that joint titling can increase women's access to capital in agricultural settings (Ali et al. 2014).

¹⁶ Digital footprints include mobile phone usage, social media data, and digital transaction records from mobile money, banking, or e-commerce platforms. One relevant example is the history of orders for retailers who are active in digital platforms. IFC (2022) describes the experience of a digital distribution platform active in Indonesia and the Philippines that plans to use the digital footprint of women-owned firms to improve its credit-scoring algorithm.

¹⁷ Uncollateralized high-interest rate loans of small size offered via mobile money show large uptake rates in Africa (Robinson et al. 2022). However, opaque loan terms linked to the low financial literacy of many clients and inattention to hidden costs are features of concern (Brailovskaya et al. 2021).

loans on business performance. One study in Ethiopia finds impacts of psychometric score-based lending on access to credit and firm survival among women-led firms (Alibhai et al. 2022),¹⁸ and a study in Nigeria on cashflow-based lending is ongoing.¹⁹ Offering alternative ways to secure loans, such as asset-based finance (Bari et al. 2021), digital collateral (Gertler et al. 2021), or microequity and mutuality (Cordaro et al. 2022) may also help expand women's access to credit. Such products show promise, but so far, there is no causal evaluation estimating their effects on the performance of women-led businesses.

In-kind or targeted larger cash grants or loans. A pattern in a series of experimental studies shows that cash grants to micro or small firms improve business outcomes exclusively for men-led businesses (Jayachandran 2021). One key reason is that women entrepreneurs do not manage to invest in their own business, because they use the funds to satisfy other household demands or family requests or they invest in the business of the husband (Jakiela and Ozier 2016, Bernhardt et al. 2019).²⁰ Offering **in-kind grants** (Fafchamps et al. 2014, James et al. 2022) or **large grants to more successful women entrepreneurs** (McKenzie 2017) is more effective at improving their business performance. The combination of less fungible funds that act as a commitment device (either because they are in-kind or large enough and labeled for the business) and targeting grants to growth-oriented businesses (e.g., to winners of business plan competitions)²¹ can have strong positive effects.

The importance of targeting is confirmed by recent findings pointing to significant heterogeneity in the returns on loans. Crepon et al. (2022) show in Egypt that the heterogeneity of effects for the same instrument across entrepreneurs is more important than differential effects across instruments (in-kind or cash grants, or loans). Similarly, Bryan et al. (2022) find significant heterogeneity of effects when offering larger loans in Egypt, with large negative effects for the

worst performers and large positive effects for the top performers, who were less likely to be women. Finally, Ellis et al. (2022) provide evidence that a different set of variables predict loan growth for women than men. This highlights the relevance of designing effective targeting tools (see Box 1 and Footnote 11).²²

Blended finance.²³ Blended finance instruments can play a role in reducing gender gaps in access to finance by rebalancing the risk-return profile of investing in women-led businesses (see Box 3). Blended concessional finance solutions can include performance-based incentives to banks, equity co-investments, partial portfolio guarantees, or a combination of products (Liaulina and Sierra-Escalante 2022). Large commercial banks and multilateral development banks are beginning to use gender bonds issuance with concessional elements. While these products have not been rigorously tested, they show promise in benefitting larger women-led businesses.

The range of products could include equity co-investments in startup accelerators and early-stage funds targeting women-led businesses (Liaulina and Sierra-Escalante 2022). It could also include trade credit and guarantees and insurance for exporting. For example, IFC's [Banking on Women Global Trade Finance Program](#) aims to increase trade finance to women importers and exporters. There is still very little evidence on the effects of trade and supply chain finance, private equity or venture capital funds, accelerators, and crowdfunding on the performance of women-led businesses (Argidius Foundation 2021, Siegrist 2022). A relevant complementary intervention is an investment readiness program, which aims to prepare firms to be willing to consider equity, make relevant changes, and pitch to investors. Cusolito et al. (2021) evaluate such a program in the Western Balkans and find that it significantly increased the probability of receiving outside funding for smaller firms and teams with at least one woman founder.

¹⁸ Alibhai et al. (2022) work with a microfinance institution in Ethiopia to randomize the offer of uncollateralized loans among 131 women who had passed a psychometric test. The study finds that women who were offered the loan significantly increased their access to formal finance at the extensive and intensive margins and were more likely to keep their business open during the COVID-19 pandemic, but they did not significantly improve their business outcomes.

¹⁹ The cash flow-based loan product is part of a broader [initiative](#) by the World Bank in cooperation with the Development Bank of Nigeria and commercial banks to design instruments that can unlock commercial financing for women entrepreneurs.

²⁰ Friedson-Ridenour and Pierotti (2019) show that women in Ghana choose to hide income from their husband and might even prefer not to expand their business if doing so reduces their chances of obtaining economic support.

²¹ Several studies indicate that women are less likely than men to participate in a competition; however, they are more likely to enter competitions when facing other women rather than men (Campos et al. 2019). This indicates that designing women-only competitions might have significant effects on uptake.

²² Cai and Szeidl (2022) find that the positive effects of a loan program in China came at the expense of competitors that did not receive the loan. This indicates that financial expansion programs should carefully consider possible negative spillover effects to firms that do not participate in the program.

²³ For more details, see Field et al. (2023).

Secure and convenient savings instruments. Worldwide, the share of adults who report saving to start, operate, or expand a business is lower among women than men, and the same holds true for access to savings accounts at financial institutions.²⁴ The lack of reliable ways to save, and the inability to access convenient formal savings products, can compound the effects of credit constraints and limit business growth (Blattman et al. 2014). An early influential experiment in Kenya shows that **offering basic savings accounts** to women market vendors who worked near the bank had large effects on business investments (Dupas and Robinson 2013). In another study across three countries, Dupas et al. (2018) use a more general sample and find limited average effects of access to basic savings accounts. They conclude that more tailored products with lower transaction costs and complementary interventions might be necessary. For example, when microfinance loans were disbursed by default into digital savings accounts labeled for women's business, the loans had significant effects on business performance (Riley 2022).²⁵ Transaction costs can be significantly reduced with mobile banking (de Mel et al. 2022). Combining access to savings instruments with other interventions (e.g., incentives to register or training) can also be effective.²⁶ More work is needed on the effects of savings products for larger firms.²⁷

Insurance In many different contexts, women are more risk averse than men, which might lead to less risky investments in their businesses. IFC and AXA (2015) estimate that women's individual spending on insurance premiums will grow three times its current size to reach \$1.4–1.7 trillion by 2030. Insurance products have large potential, but they have not been rigorously tested with women-led businesses. Bianchi and Bobba (2013) argue that predictable income from cash transfers can reduce risk aversion and encourage business investment. Battaglia et al. (2021) claim that flexible loan repayment options can act as an insurance mechanism and encourage business

performance. Groh and McKenzie (2016) designed and tested an innovative product for entrepreneurs covering macroeconomic risk, but they did not find significant effects on business outcomes.

Innovations in design in this area are needed, including products tailored to the needs of women-led businesses. For example, an Italian bancassurere offers business interruption protection to women entrepreneurs; women can suspend loan payments for up to one year under a series of circumstances, such as becoming mothers. Given women's responsibilities as caregivers and entrepreneurs, solutions that help them mitigate risk and protect them in the event of personal crises or business interruption are promising. IFC's Women Insurance Program has partnered with eight insurance companies in Africa and Asia to pilot insurance solutions for women (e.g., life insurance policy to finance personal goals for women entrepreneurs in Nigeria; an insurance bundle protecting against accidents, fire, and burglary for microbusinesses; and comprehensive insurance coverage for women-led MSMEs in Ghana).

Reducing gender biases among financial intermediaries.

Some studies argue that women investors are more likely than men investors to invest in women-led businesses (IFC et al. 2019). This points to the need to increase women's leadership at banks and investment funds. However, evidence from two studies in Türkiye shows that both men and women loan officers held implicit discriminatory views against women, but the bias decreased with experience (Alibhai et al. 2019c, Brock and De Haas 2021). Gender intelligence training to reduce unconscious bias might be effective.²⁸ Given that they do not collect sex-disaggregated data, many banking institutions are unaware of gender biases in their products. **The collection and analysis of sex-disaggregated data should be a priority for financial institutions, government, regulators, and corporations.**²⁹

²⁴ Based on author's own calculations using World Bank Gender Data Portal and the 2017 Global Findex Database. The 2021 Global Findex data indicate that the gender gap in account ownership across developing economies fell to 6 percent from 9 percent, where it had been for several years.

²⁵ Default effects help encourage savings. Somville and Vandewalle (2018) and Field et al. (2021) show that savings increase more when funds are directly transferred into accounts instead of giving participants the option to deposit those funds.

²⁶ Campos et al. (2023) show that combining monetary incentives to register a business with access to banking services had significant effects on business performance for both men and women entrepreneurs in Malawi. Buvinic et al. (2020) find an intervention combining financial training, business training, mentorship, and incentives to promote agent banking savings accounts had significant effects on women-led business in Indonesia. Batista et al. (2022) find significant effects in Mozambique of combining a short rule-of-thumb training with mobile saving accounts.

²⁷ IFC's Banking on Women Program develops products targeted to larger firms.

²⁸ IFC (2021) describes the case of Gender Sensitivity Training for 660 members of senior management, staff, and agents of an insurance company in the Philippines. A non-causal evaluation found that the training helped achieve visible changes in participants' gender bias and improved their ability to engage with women customers.

²⁹ For more details on data collection initiatives, see Moylan et al. (2023).



BOX 3. TWO LARGE INITIATIVES TO SUPPORT WOMEN ENTREPRENEURS

The Women Entrepreneurs Finance Initiative (We-Fi) is a collaborative initiative established in 2017 with initial funding from 14 countries to support WSMEs in developing countries. We-Fi's theory of change identifies the key constraints faced by women entrepreneurs and the type of interventions that could help improve the performance of women-led businesses (Siegrist 2022). It invests in the design and evaluation of interventions that increase WSMEs' access to finance, training, mentorship, and networks, and markets and improve the enabling environment. The World Bank hosts the We-Fi Secretariat and projects are implemented by six multilateral development banks. As of June 2022, We-Fi has provided \$1 billion in direct financing for women entrepreneurs and mobilized \$1.9 billion in funding from public and private sources. We-Fi projects have reached 44,000 women-led businesses in 59 countries with 268 partners. The initiative expects to benefit over 200,000 women entrepreneurs.

The Women Entrepreneurs Opportunity Facility (WEOF) is a 10-year facility launched in 2014 by IFC's Banking on Women and the Goldman Sachs Foundation to help expand access to capital for women entrepreneurs and demonstrate the commercial viability of investing in women. WEOF offers funding for blended finance, advisory services, and market research to catalyze financial services to WSMEs. By 2022, WEOF had reached 144,000 women entrepreneurs, putting it ahead of schedule in achieving its goal of financing 100,000 women entrepreneurs by 2024.



One leading explanation of the gender gap in business performance is that women-led businesses tend to be segregated into lower-paying industries and sectors around the world (World Bank Group 2021).³⁰ There is evidence that women entrepreneurs in female-concentrated sectors earn lower profits than women and men in male-concentrated sectors (Goldstein et al. 2019).³¹ Interventions encouraging women to cross over to male-dominated sectors show promise. Women-led businesses are also less likely to export, have less access to corporate value chains, and get a very small share of public or private procurement (IFC 2021b). On the demand side, constraints are linked to gender gaps in networks, skills, and finance. On the supply side, many large corporations report lacking sex-disaggregated data on procurement and distribution channels that would allow them to take positive action. Finally, women entrepreneurs have less access than men entrepreneurs to digital skills and digital technologies and platforms. This could be linked to gender gaps in mobile phone ownership and access to the Internet due to affordability, gender norms, or security concerns, which limit women-led firms' expansion in e-commerce. There is still very little causal evidence on the effects of interventions dealing with these constraints on the performance of women-led businesses.

Encouraging women to cross over to male-dominated sectors. A unique report with data from 10 countries provides non-causal evidence that **women in male-concentrated sectors earn higher profits than women in female-concentrated sectors**, even after controlling for a series of observable characteristics (World Bank 2022, see Box 4). Interventions encouraging women entrepreneurs to cross over to male-dominated sectors show promise. Factors correlated with entering male-dominated sectors include higher access to male mentorship (including spousal support), role models, and information (Goldstein et al. 2019, LACGIL 2021). A recent field experiment in the Republic of Congo shows that providing young women with information on trade-specific earnings can shift their preferences toward male-dominated trades (Gassier et al. 2022). Interventions fostering the participation of husbands, role models, or networking could have similar effects. Addressing men's misperceptions and engaging adolescents on gender attitudes could foster cross over as these efforts have increased labor force participation for women in some contexts (Bursztyn et al. 2020, Dhar et al. 2022). However, there is still no rigorous evidence on whether these types of interventions help women entrepreneurs improve the performance of their businesses. Moreover, it is important to complement cross over interventions with anti-harassment and related measures.

BOX 4. BREAKING BARRIERS: FEMALE ENTREPRENEURS WHO CROSS OVER TO MALE-DOMINATED SECTORS

Under the guidance of the World Bank's Gender Group, the Gender Innovation Labs of three regions (Africa, East Asia and Pacific, and Latin America and the Caribbean) joined forces to generate a unique report on the characteristics of women who cross over to male-dominated sectors. The report gathers evidence and analyzes data from 10 countries and a global survey of entrepreneurs to highlight potential interventions that can encourage women entrepreneurs to enter male-dominated sectors. It provides non-causal evidence that women who manage to cross over reduce gender gaps in profits. Key recommendations include programs that encourage spousal support, connect women to mentors and role models, provide information and training on male-dominated sectors, and increase access to capital. The report warns that such interventions should be combined with measures to avoid harassment and other challenges of operating in the environment of typically male-dominated sectors (World Bank 2022).

³⁰ Evidence from Africa and Southeast Asia shows large gender gaps in profits even within sector, which means that sectorial segregation cannot fully explain the profits gender gap (Campos et al. 2019, World Bank 2021). Moreover, sector of activity explains little, if any, of the gender gap in microenterprise profits in Indonesia, Lao PDR, and Vietnam (World Bank 2021).

³¹ There is significant concentration of women-led business in retail, education, social services, tourism—all sectors hit hard by the COVID-19 pandemic (Torres et al. 2021).

Interventions fostering trade readiness and access to new markets. Compared to men entrepreneurs, women entrepreneurs face stronger constraints that restrict their ability to trade and realize the benefits of trade (International Trade Centre 2015, World Bank and World Trade Organization 2020). Multidimensional, country-level approaches that address the multiple supply and demand constraints women entrepreneurs face in accessing finance and markets might be required (see Box 5).

Women entrepreneurs are more likely to lack information about tastes, preferences, and price sensitivity of foreign customers (Campos et al. 2019), which could be linked to limited learning due to smaller access to networks. They are also more likely to see customs and trade regulations as major constraints, and since their businesses are smaller, they are more affected by non-tariff measures (International Trade Centre 2015). Possible interventions, yet to be

evaluated, include marketing interventions to attract new customers and improve product design, export-readiness programs, virtual trade missions and participation in fairs, and information on and simplification of trade regulations. Interventions encouraging cross overs to male-dominated sectors, which are typically less protected and more profitable, and access to trade finance can also make women-led businesses more likely to become exporters. More evidence on the effects of these policies is crucial since the literature finds a strong correlation between exporting and increases in productivity (Verhoogen 2022). Furthermore, if a lack of demand for their products is a binding constraint for women entrepreneurs (as shown in Ghana by Hardy and Kagy 2020), interventions on skills and capital might not be effective. Rather, interventions that help women access new markets (e.g., crossing over to tradeable industries, exporting, using digital technology to sell online, or accessing procurement) might be a priority.

BOX 5. MULTIDIMENSIONAL PROJECTS PROMOTING WOMEN ENTREPRENEURS' ACCESS TO FINANCE, MARKETS, AND NETWORKS

With the support of We-Fi, gender and sector specialists from the World Bank Finance, Competitiveness and Innovation (FCI), the Development Economics Vice Presidency (DEC), the Gender Innovation Labs, and IFC are testing new ways to address multiple constraints faced by women entrepreneurs in 20 countries across three regions. Each project develops new products to overcome supply and demand constraints that women entrepreneurs face in accessing finance and markets. These are supported by complementary reform and technical assistance activities to promote sex-disaggregated data collection and analysis, and to create entrepreneurship ecosystems for women's businesses to grow and succeed. The projects work with public and private sector partners and leverage country portfolios to promote inclusion of women in loan operations for scale.

This multidimensional approach was implemented in Mozambique (P168391), where the government, financial institutions, non-governmental organizations, academia, and business associations partnered to expand access to markets and finance for women-led firms. Activities included social gender training and coaching, encouragement to cross over to male-dominated sectors, digital training, acceleration programs, an online movable collateral registry, and the design of financial products targeted to women.

In the Middle East and North Africa, an e-commerce initiative (P168392) is advancing women-led firms' integration into e-commerce through country-specific reforms, advisory and capacity-building activities and hands-on coaching. In Pakistan, an early-stage finance platform (P168388) includes regulatory reforms, data collection, training for accelerators and incubators, training for women entrepreneurs, and the creation of a network of investors.



Increasing access to public and private procurement.

Some estimates indicate **that women-led firms earn less than 2 percent of purchases by large corporations and governments** (Vazquez and Frankel 2017). An ongoing study by IFC's [Sourcing2Equal Program](#) finds that a significant share of large corporations do not collect sex-disaggregated data on procurement, which is usually the first step in designing corporate supplier diversity programs. Initiatives in several countries aim to connect women entrepreneurs to market opportunities through corporate procurement (see Box 6). However, evidence is not available on the effectiveness of such programs or how best to integrate women-led businesses into corporate value chains. Some studies indicate that when public procurement has open procedures with clear guidelines and streamlined application processes, women-led firms are more likely to apply and win contracts (Siegrist 2022). A training program on how to win large contracts showed positive effects on small business performance in Liberia, but effects were not disaggregated by gender (Hjort et al. 2020).

Increasing access to digital platforms and e-commerce.³²

The growing role of services in the global economy and trade creates new opportunities for women to reap the rewards of trade (World Bank and World Trade Organization 2020). However, women entrepreneurs face a series of constraints that prevents them from benefitting from e-commerce. Women-led firms lag behind in the adoption of new digital technologies.³³ First, there are significant

gender gaps on mobile phone ownership and access to the Internet, email accounts, and business websites. Second, women entrepreneurs have lower levels of digital skills, with skill upgrading limited by time and mobility constraints (Campos et al. 2019).³⁴

There is still a scarcity of causal evidence on the effects of digital skills training for women entrepreneurs. The IFC's [Digital2Equal Initiative](#) works with technology companies in the online marketplace to offer opportunities for women entrepreneurs on digital platforms. Business-to-business distribution platforms can help women entrepreneurs connect to corporate manufacturers and improve their integration into corporate value chains.³⁵ Additional evidence is required on how to encourage women entrepreneurs to join these platforms and on the effects of training designed to help women better navigate and use these platforms. For example, Jin and Sun (2020) find a program in China that trained over 2 million new sellers on a large e-commerce platform had small positive effects on revenues for both men and women, and women sellers were less likely to participate in the training. Finally, recent research warns that simply bringing many firms onto e-commerce platforms may not be sufficient to foster their growth due to large demand-side frictions. Policies, such as the creation of premium market segments or focusing on promising newcomers, might be necessary to improve market efficiency (Bai et al. 2021).

³² For more details, see Aranda and Qasim (2023).

³³ See Verhoogen (2022) for a non-gendered survey of possible factors constraining the uptake of new and traditional technologies.

³⁴ For example, a survey with informal retailers on a digital platform in Egypt shows that, compared to men retailers, women retailers are less likely to know how to use the mobile application and are more likely to end up with stock-outs because of not tracking inventory (Mignano and Kipnis 2022).

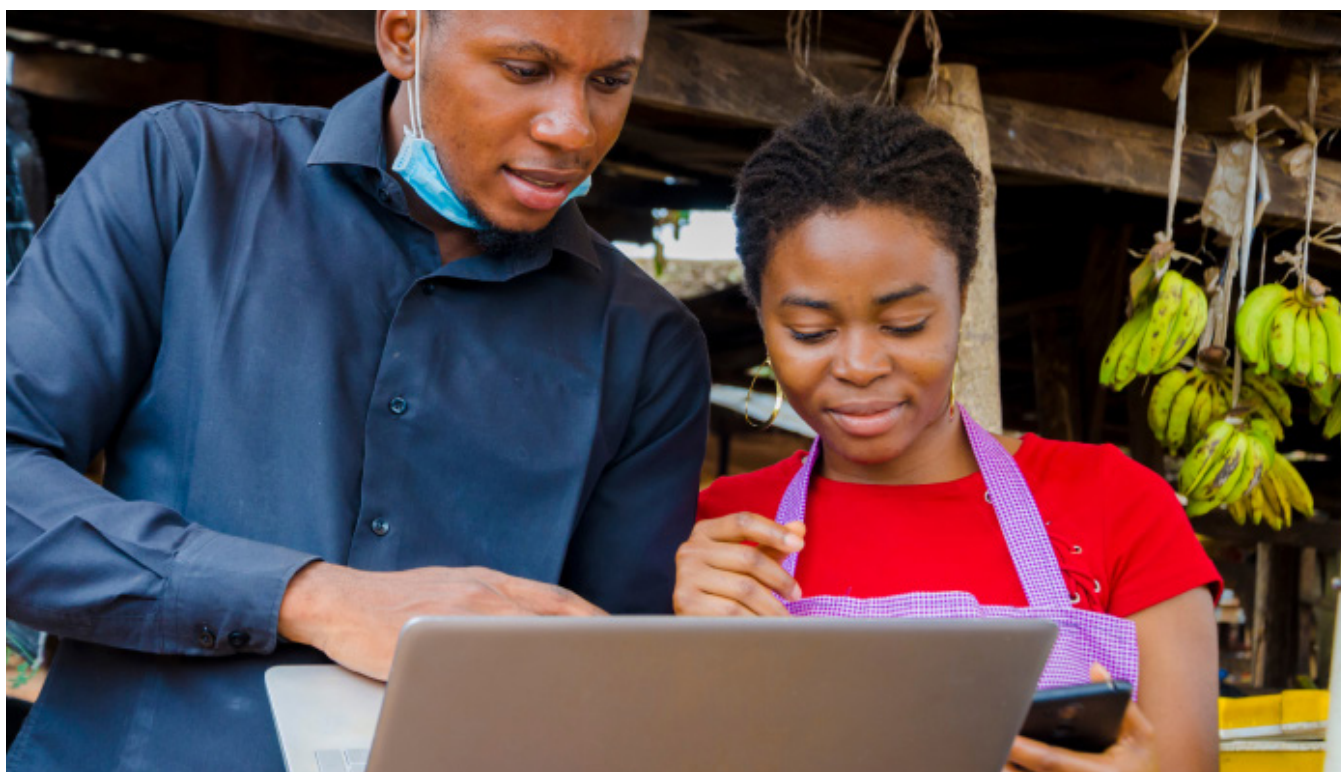
³⁵ IFC (2022) describes the experience of digital business-to-business distribution platforms in Nigeria, Egypt, and the Philippines.

BOX 6. FOSTERING ACCESS TO PRIVATE AND PUBLIC SECTOR PROCUREMENT FOR WOMEN ENTREPRENEURS

IFC's [Sourcing2Equal](#) (P603523) is a global program launched in 2019 in partnership with We-Fi and the Government of Norway. It seeks to connect WSMEs to new market opportunities via corporate procurement. It involves three main activities: market research and case studies on the business case for buyers to increase their purchases from WSMEs, support for at least 50 large companies to adopt policies and practices that facilitate WSMEs' access to corporate procurement contracts, and support to 5,000 WSMEs to meet corporate procurement requirements through capacity building solutions, networking opportunities with corporate buyers, and connections to supply chain finance solutions. Operations are underway in several countries, including [Sourcing2Equal Kenya](#), [Mexico2Equal](#), [Increasing WSME Access to Markets and Finance in Mozambique](#), and [Nigeria2Equal](#).

[Corporate Connect: Strengthening Market Access for Women Business Owners in Bangladesh](#) (P168387) is a project launched in 2017 in partnership with We-Fi, with implementation support from [WEConnect](#) International and in collaboration with Bangladesh North South University and SME Foundation. The program aims to enhance the ecosystem for supplier diversity and to create a sustainable environment for supporting gender-inclusive sourcing in Bangladesh. The project aims to train over 700 women to be supplier-ready, work with at least 40 large companies to enhance their supplier diversity efforts, and register at least 900 women in the national supplier database.

The [Connecting National Procurement Needs with Women-owned SMEs in Senegal](#) project (P168394) is supported by We-Fi aims to catalyze WSMEs' access to public procurement. Launched in 2019, the project has promoted regulatory reforms to integrate gender dimensions into public procurement. It has provided technical assistance to the Senegalese public procurement authority in partnership with UN Women, with the goal of earmarking 15 percent of public procurement contracts for women and young people. It has supported the development and approval of two Development Policy Operations designed to increase women's access to public procurement. It has also provided technical and behavioral capacity building to WSMEs and civil servants.





According to the 2022 [World Bank's Women Business and the Law](#) (WBL) dataset, in 104 out of 190 economies, women face at least one legal constraint that prevents them from running a business in the same way as men. Significant improvement over the last 50 years have led to most economies allowing women to sign contracts, register a business, and open a bank account in the same way as men. However, only 45 percent of economies prohibit gender discrimination in access to credit.³⁶ Furthermore, socio-cultural factors linked to restricted gender norms are still pervasive in some regions and hinder the implementation of laws (see Box 7).

One crucial gender norm is about the division of time for household activities. Women are overburdened by care responsibilities and domestic work, limiting their ability to work more hours in their business. This can explain part of the gender gap in profits (World Bank 2021). The prevalence of gender-based violence (GBV) may also affect women's choice of business sector, location, and networking activities. Promising interventions include law reforms, information and discussion around informal norms, and child and elder care. More causal evidence is needed about each of these interventions.

Changing gender-biased laws.³⁷ There is emerging evidence that gender-biased laws correlate negatively with women's employment and entrepreneurship (WBL 2022, Adnane 2021, Hyland et al. 2021, Islam et al. 2017). More quasi-experimental studies are needed to analyze the effects of changes in gender-biased laws on the performance of women-led businesses.

Interventions to shift informal gender norms.³⁸ While significant progress in reforming gender-biased laws has occurred over time, the implementation and enforcement of new laws are constrained by informal social norms and

customary laws that discriminate against women (e.g., Campos et al. 2019 in Africa). These informal norms can also affect women's aspirations and the way they perceive their own abilities. Interventions involving husbands and adolescents that encourage them to think differently about the role of women show promise in promoting women's participation in the labor force,³⁹ and could potentially have effects on fostering crossovers to male-dominated sectors. Connecting women entrepreneurs with other women, role models, or mentors and information sharing through media campaigns or school-based programs can also be effective at changing aspirations (Jayachandran 2021b, see Box 7). Causal evidence on the effects of these interventions on the performance of women-led businesses is still lacking.

Child and elder care programs.⁴⁰ There is emerging evidence that subsidized day care can relax women's time constraints and foster income-generating activities (Evans et al. 2021, Halim et al. 2021). Experimental work in Uganda indicates that access to childcare can enable mothers to be more productive at work, generating higher revenues even when working the same number of hours (Bjorvatn et al. 2022, Delecourt and Fitzpatrick 2021). Location, costs, and hours of childcare services, in addition to norms around the acceptability of childcare, are critical factors for their effectiveness. Quasi-experimental evidence from Indonesia indicates that an expansion of pre-schools had significant effects on plant-level total factor productivity by increasing the labor supply of educated women, improving the allocation of talent, and reducing turnover (Cali et al. 2022). More evidence is needed on the effects of childcare on the performance on women-led firms. Women entrepreneurs can be part of the solution by offering innovative services and products on care. There is also a lack of evidence on the effects of elder care.

³⁶ Based on the author's own calculation using the WBL 2022 dataset.

³⁷ For more details, see Hasan et al. (2023).

³⁸ For more details see Muñoz et al. (2023).

³⁹ See Halim et al. 2023.

⁴⁰ For more details, see Ahmed et al. (2023) and Halim et al. (2023). See also Grantham and Sonji (2022) on childcare solutions for women-led micro and small enterprises.



Addressing gender-based violence.⁴¹ While there is no direct causal evidence on the effects of GBV on the performance of women-led business, the effects of GBV on women's mental and physical health can have direct impact on their ability to work on the business. Moreover, the high prevalence of violence might discourage women from working outside the home, expanding their networks, hiring more workers, or entering male-dominated sectors. Business training programs specifically designed for women affected by trauma show promise for aspiring entrepreneurs in Colombia (Ashraf et al. 2021).⁴² Interventions that reduce GBV in non-entrepreneurial contexts could also be tested with women entrepreneurs.⁴³

BOX 7. REFORMING AND ENFORCING GENDER-BIASED LAWS IN THE DRC

The reform of the Family Code in the DRC is an example of what can be achieved by leveraging World Bank Group's convening power and knowledge expertise. A coalition of government champions, private sector, civil society, and development partners came together, with Bank Group financial and technical support, to advocate for change to the Family Code. In 2013, the Ministries of Gender and Justice proposed revisions, which included removing most of the required marital authorizations to sign a contract, register a business, open a bank account, and other actions. Efforts of the coalition continued until the parliament adopted a new Family Code in 2016.

Implementation of the new Family Code amendments has been uneven, especially in the most conservative regions of the country where customs and social norms are key barriers to the growth of women-led businesses (Campos et al. 2019, Braunmiller and Dry 2022). The PADMPE and TRANSFORME programs (see Box 2) include activities to disseminate the code (addressing potential information gaps) and to promote behavioral change that can lead to its implementation. Similar activities will also be included in the Burundi Economic Transformation for Jobs Project (P177688), which proposes leveraging digital platforms to launch social marketing campaigns encouraging the implementation of gender-friendly legislation.

⁴¹ For more details and other recommended interventions to reduce GBV, see Maruo et al. 2023

⁴² Relatedly, interventions offering cognitive behavioral therapy for women entrepreneurs reduced stress levels and improved mental health in Bangladesh and Pakistan, but without showing clear effects on business outcomes (Lopez Pena 2022, Saraf et al. 2019).

⁴³ For example, engaging men in group discussions regarding GBV lowered reports of violence and increased decision making in Rwanda (Doyle et al. 2018). A youth empowerment program offering soft and technical skills training, sexual education, mentoring, and job-finding assistance during the COVID-19 lockdown increased girls' earnings and decreased violence against girls in Bolivia (Gulesci et al. 2021).



Three cross-cutting recommendations emerge from the interventions reviewed. First, **interventions need to be better targeted** to women entrepreneurs who could derive the highest returns on them. The development of efficient targeting tools is a non-trivial task, and more work is required in this area. Second, **interventions need to be designed to consider the multiple constraints faced by women entrepreneurs**. Data collection efforts could help identify those constraints and approaches, such as the funneling approach (see Box 1), could be used to test the most cost-effective composition of the package of support. Third, **the differential needs of women entrepreneurs must be considered during program implementation**, such as childcare support and convenient locations.

This evidence review yielded more “yellows” than “greens,” which indicates there are several promising interventions being implemented around the world to support women entrepreneurs that have not been rigorously evaluated. It is **crucial to continue to support data collection efforts** and, in particular, the collection of sex-disaggregated data. Practitioners interested in understanding the effects of their interventions on the performance of women-led firms should partner with researchers to **rigorously evaluate innovative programs**. More support is needed to enable practitioners at the design stage of projects to identify key constraints, design innovative interventions, and systematically measure results by partnering with researchers to conduct impact evaluations.⁴⁴

Analyzed separately, the following interventions show effectiveness in improving the performance of women-led firms in more than one context: **socio-emotional skills training, gender-oriented training, secure and convenient savings instruments, and large grants for winners of business plan competitions**. Evidence was obtained mainly with micro and small firms, so there is a need to test how these instruments could be adapted to support larger women-led firms. More evidence is also needed on which types of interventions work for different segments of women entrepreneurs (e.g., micro/small versus medium size, growth oriented versus subsistence).

Several promising interventions still need to be tested across the four areas of constraint examined in this brief:

- 1. Access to skills and networks:** Finding affordable ways to scale up business training (e.g., developing a market for business providers, using technology to deliver training, and targeting), offer high-quality personalized services (e.g., virtual coaches, group consulting, insourcing, and outsourcing), and support networking activities geared toward women entrepreneurs
- 2. Access to finance:** Designing innovative finance products that support WSMEs (e.g., alternative credit scoring, uncollateralized loans, insurance products, and the use of blended finance) and reducing gender biases among financial intermediaries
- 3. Access to markets and technology:** Designing interventions that encourage women to cross over to male-dominated sectors, increase WSME access to public procurement and corporate value chains, foster trade readiness, and encourage the use of digital platforms to profit from e-commerce
- 4. Contextual constraints:** Offering child and elder care, changing gender-biased laws, shifting gender norms, and protecting women from GBV, including engaging men to provide a more supportive environment

The World Bank Gender Group aims to coordinate efforts to raise awareness on the importance of supporting growth-oriented women-led firms. This thematic note is just a first step to setting the agenda and engaging with implementing partners, including practitioners, researchers, organizations of women entrepreneurs, and other stakeholders. Policies that support women-led businesses can spur innovation, productivity growth, and employment. They can play an essential role in promoting green, resilient, and inclusive development outcomes.

⁴⁴ See Burga et al. (2021) for a [toolkit](#) providing practical guidance to help teams working on women’s entrepreneurship projects apply digital solutions to project design and policy advice.



RESOURCES

[Banking on Women](#)

[Digital2Equal](#)

[Grow Learn Connect](#)

[FINDEX dataset](#)

[Sourcing2Equal](#)

[Using Digital Solutions to Address Barriers to Female Entrepreneurship](#)

[We-Data Entrepreneurship Database](#)

[Women, Business and the Law](#)

[Women Entrepreneurs Finance Initiative](#)

World Bank Gender Data Portal: [Entrepreneurship section](#)

[World Bank Enterprise Surveys](#)

[Women Entrepreneurs Opportunity Facility](#)

[Women Insurance Program](#)

REFERENCES

Acemoglu, Daron and James Robinson. 2012. *Why Nations Fail: The Origins of Power, Prosperity and Poverty*. 1st ed. New York: Crown, 529.

Adnane, Souad. 2021. "Women's Economic Participation and the Impact of Regulatory Barriers." *Equitable Growth, Finance and Institutions Insight*; World Bank.

Ahmed, Tanima, Glinskaya, Elena, Devercelli, Amanda, and Rudaba Nasir. 2023. "Thematic Note on Care." World Bank Group Gender Thematic Notes Series. Washington, DC: World Bank Group.

Ali, Daniel Ayalew, Collin, Matthew, Deininger, Klaus, Dercon, Stefan, Sandefur, Justin, and Andrew Zeitlin. 2014. "The Price of Empowerment: Experimental Evidence on Land Titling in Tanzania." World Bank Policy Research Working Paper 6908.

Alibhai, Salman, Donald, Aletheia, Goldstein, Markus, Oguz, Alper Ahmet, Pankov, Alexander, and Francesco Strobbe. 2019c. "Gender Bias in SME Lending: Experimental Evidence from Turkey." World Bank Policy Research Working Paper 9100.

Alibhai, Salman, Buehren, Niklas, Coleman, Rachel Goldstein, Markus, and Francesco Strobbe. 2019b. "Disruptive Finance: Using Psychometrics to Overcome Collateral Constraints in Ethiopia." World Bank Group. <https://openknowledge.worldbank.org/bitstream/handle/10986/29746/125731.pdf?sequence=7&isAllowed=y>.

Alibhai, Salman, Buehren, Niklas, Frese, Michael, Goldstein, Markus, Papineni, Sreelakshmi, and Kathrin Wolf. 2019. "Full Esteem Ahead? Mindset-Oriented Business Training in Ethiopia." World Bank Policy Research Working Paper 8892.

Alibhai, Salman, Cassidy, Rachel, Goldstein, Markus, and Sreelakshmi Papineni. 2022. "Evening the Credit Score? Impact of Psychometric Loan Appraisal for Women Entrepreneurs." Working Paper.

Allison, Lee, Liu, Yu, Murtinu, Samuele, and Zuobao Wie. 2021. "Gender and Firm Performance around the World: The Roles of Finance, Technology, and Labor." SSRN. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=3764323.

Anderson, Stephen and David McKenzie. 2022. "Improving business practices and the boundary of the entrepreneur: A randomized experiment comparing training, consulting, insourcing and outsourcing." *Journal of Political Economy* 130(1): 157–209.

Anderson, Stephen, Chintagunta, Pradeep, and Naufel Vilcassim. 2022 "Virtual Collaboration Technology and International Business Coaching: Examining the Impact on Marketing Strategies and Sales. *Marketing Science*, forthcoming.

Anderson, Stephen, Chintagunta, Pradeep, Germann, Frank and Naufel Vilcassim. 2021. "Do Marketers Matter for Entrepreneurs? Evidence from a Field Experiment in Uganda." *Journal of Marketing* 85(3): 78–96.

Aranda, Clara, and Qursum Qasim. 2023. "Increasing Access to Technology for Inclusion." World Bank Group Gender Thematic Notes Series. Washington, DC: World Bank Group.

Argidius Foundation. 2021. "How to fulfill the potential of Business Development Services using SCALE." Argidius Foundation, <https://api.cofraholding.com/media/2612/report-fulfilling-the-potential-of-bds.pdf>.

Arraiz, Irani, Bruhn, Miriam, Ruiz-Ortega, Claudia, and Rodolfo Stucchi. 2017. "Are Psychometric Tools a Viable Screening Method for Small and Medium-Size Enterprise Lending? Evidence from Peru." World Bank Policy Research Working Paper 8276.

Ashraf, Nava, Bryan, Gharad, Delfino, Alexia, Holmes, Emily, Iacovone, Leonardo, and Ashley Pope. 2021. "Learning to see the world's opportunities: The impact of imagery on entrepreneurial success." Working Paper.

Aterido, Reyes, Beck, Thorsten, and Leonardo Iacovone. 2011. "Gender and finance in Sub-Saharan Africa: are women disadvantaged?" World Bank Policy Research Working Paper 5571.

Bai, Jie, Chen, Maggie, Liu, Jin, Mu Xiaosheng, and Daniel Yi Xu. 2021. "Search and Information Frictions on Global E-Commerce Platforms: Evidence from Ali Express." NBER Working Paper 28100.

Bakhtiar, Mehrab, Bastian, Gautam, and Markus Goldstein. 2021. "Business Training and Mentoring: Experimental Evidence from Women-Owned Microenterprises in Ethiopia." *Economic Development and Cultural Change*, forthcoming.

Banerjee, Abhijit, Karlan, Dean, and Jonathan Zinman. 2015. "Six Randomized Evaluations of Microcredit: Introduction and Further Steps." *American Economic Journal: Applied Economics* 7(1): 1–21.

Banerjee, Abhijit, Breza, Emily, Duflo, Esther, and Cynthia Kinnan. 2019. "Can Microfinance Unlock a Poverty Trap for Some Entrepreneurs?" NBER Working Paper 26346.

Barboni, Giorgia and Parul Agarwal. 2018. "How do flexible microfinance contracts improve repayment rates and business outcomes? Experimental evidence from India." Working Paper.

Bardasi, Elena, Sabarwal, Shwetlena, and Katherine Terrell. 2011. "How do female entrepreneurs perform? Evidence from three developing regions." *Small Business Economics* 37, 417.

Bardasi, Elena, Gassier, Marine, Goldstein, Markus, and Alaka Holla. 2021. "The Profits of Wisdom: The Impact of a Business Support Program in Tanzania." *World Bank Economic Research* 35(2): 328–347.

Bari, Faisal, Malik, Kashif, Meki, Muhammad, and Simon Quinn. 2021. "Asset-based Microfinance for Microenterprises: Evidence from Pakistan." CSAE Working Paper 2021-03.

Barsoum, Ghada, Crepon, Bruno, Gardiner, Drew, Michel, Bastien, and William Pariente. 2022. "Evaluating the Impact of Entrepreneurship Edutainment in Egypt: An Experimental Approach." *Economica* 89(353): 82–109

Batista, Catia, Sequeira, Sandra, and Pedro Vicente. 2022. "Closing the Gender Profit Gap." *Management Science*, forthcoming.

Battaglia, Marianna, Gulesci, Selim, and Andreas Madestam. 2021. "Repayment Flexibility and Risk Taking: Experimental Evidence from Credit Contracts." CEPR Discussion Paper 13329.

Beegle, Kathleen and Eliana Rubiano-Matulevich. 2020. "Adapting Skills Training to Address Constraints to Women's Participation." Jobs Notes No. 7, World Bank, Washington, DC.

Bernhardt, Arielle, Field, Erica, Pande, Rohini, and Natalia Rigol. 2019. "Household Matters: Revisiting the returns to Capital among Female Microentrepreneurs." *American Economic Review: Insights* 1(2): 141–60.

Bianchi, Milo and Matteo Bobba. 2013. "Liquidity, Risk, and Occupational Choices." *Review of Economic Studies* 80:491–511.

Bjorvatn, Kjetil, Ferris, Denise, Gulesci, Selim, Nasgowitz, Arne, Somville, Vincent, and Lore Vandewalle. 2022. "Childcare, labor supply, and business development: Experimental evidence from Uganda." Working Paper.

Bjorvatn, Kjetil, Cappelen, Alexander, Helgesson Sekei, Linda, Sørensen, Erik, and Bertil Tungodden. 2019. "Teaching Through Television: Experimental Evidence on Entrepreneurship Education in Tanzania." *Management Science* 66(6): 2308–2325.

Blattman, Christopher, Fiala, Nathan, and Sebastian Martinez. 2014. "Generating Skilled Self-Employment in Developing Countries: Experimental Evidence from Uganda." *Quarterly Journal of Economics* 129 (2): 697–752

Bloom, Nick, Eifert, Benn, Mahjan, Aprajit, McKenzie, David, and John Roberts. 2013. "Does Management Matter? Evidence from India." *Quarterly Journal of Economics* 128(1): 1–51.

Bloom, Nick, Mahjan, Aprajit, McKenzie, David, and John Roberts. 2020. Do Management Interventions Last? Evidence from India." *American Economic Journal: Applied Economics* 12(2): 198–219.

- Brailovskaya, Valentina, Dupas, Pascaline, and Jonathan Robinson. 2021. "Is Digital Credit Filling a Hole or Digging a Hole? Evidence from Malawi." NBER Working Paper 29573.
- Braunmiller, Julia and Marie Dry. 2022. "Reforms to Enhance Equality in the Democratic Republic of Congo: From Advocacy to Implementation." Global Indicators Brief No. 4, Women Business and the Law, World Bank Group.
- Brock, Michelle and Ralph De Haas. 2021. "Discriminatory Lending: Evidence from Bankers in the Lab." *American Economic Review: Insights*, forthcoming.
- Brooks, Wyatt, Donovan, Kevin, and Terence Johnson. 2018. "Mentors or Teachers? Microenterprise Training in Kenya." *American Economic Journal: Applied Economics* 10(4): 196–221.
- Bruhn, Miriam and Cao Piza. 2022. "Missing Information. Why don't More Firms Seek Out Business Advice?" World Bank Policy Research Working Paper 10183.
- Bulte, Erwin, Lensink, Robert, and Nhung Vu. 2016. "Do Gender and Business Trainings Affect Business Outcomes? Experimental Evidence from Vietnam." *Management Science* 63(9): 2885–902.
- Burga, Lucero, Noa Gimelli, Sofya Muradyan, Margaret Miller, Anja Robakowski, Marlon Rawlins, and Gwen Snyder. 2021. Using Digital Solutions to Address Barriers to Female Entrepreneurship. World Bank.
- Bryan, Gharad, Karlan, Dean, and Adam Osman. 2022. "Big Loans to Small Businesses: Predicting Winners and Losers in an Entrepreneurial Lending Experiment." Working Paper.
- Bursztyn, Leonardo, González, Alessandra, and David Yanagizawa-Drott. 2020. "Misperceived Social Norms: Women Working Outside the Home in Saudi Arabia." *American Economic Review* 110 (10): 2997–3029.
- Buvinic, Mayra, Johnson, Hillary, Perova, Elizaveta, and Firman Witoelar. 2020. "Can Boosting Savings and Skills Support Female Business Owners in Indonesia? Evidence from a Randomized Controlled Trial." Center for Global Development Working Paper 529.
- Cai, Jing and Adam Szeidl. 2018. "Interfirm Relationships and Business Performance." *Quarterly Journal of Economics* 133(3): 1229–1282.
- Cai, Jing, Meki, Muhammad, and Simon Quinn. 2021. "Microfinance." *VoxDevLit* 3(1).
- Cai, Jing and Adam Szeidl. 2022. "Indirect Effects of Access to Finance." NBER Working Paper 29813.
- Cali, Massimiliano, Johnson, Hillary, Perova, Elizaveta and Nabil Ryandiansyah. 2022. "Caring for Children and Firms? The Impact of Preschool Expansion on Firm Productivity." World Bank Policy Research Working Paper 10193.
- Campos, Francisco, Frese, Michael, Goldstein, Markus, Iacovone, Leonardo, Johnson, Hillary, McKenzie, David, and Mona Mensmann. 2017. "Teaching personal initiative beats traditional training in boosting small business in West Africa." *Science* vol. 357 (6357): 1287–90.
- Campos, Francisco, Frese, Michael, Goldstein, Markus, Iacovone, Leonardo, Johnson, Hillary, McKenzie, David, and Mona Mensmann. 2018. "Is personal initiative training a substitute or complement to the existing human capital of women? Results from a randomized trial in Togo." *AEA Papers and Proceedings* 108: 256–61.
- Campos, Francisco, Goldstein, Markus, and David McKenzie. 2023. "How should the government bring small firms into the formal system? Experimental evidence from Malawi." *Journal of Development Economics* 161:103045.
- Campos, Francisco, Coleman, Rachel, Conconi, Adriana, Donald, Aletheia, Gassier, Marine, Goldstein, Markus, Hernandez, Zenaida, Mikulski, Joanna, Milazzo, Annamaria, Paryavi, Maliheh, Pierotti, Rachael, O'Sullivan, Michael, and Julia Vaillant. 2019. Profiting from Parity – Unlocking the Potential of Women's Businesses in Africa. World Bank Group, Washington D.C.
- Chernozhukov, Victor, Demirer, Mert, Duflo, Esther, and Ivan Fernandez-Val. 2018. "Generic Machine Learning Inference on Heterogeneous Treatment Effects in Randomized Experiments, with an Application to Immunization in India." NBER Working Paper 24678.
- Chiplunkar, Gaurav and Pinelopi K. Goldberg. 2021. "Aggregate Implications of Barriers to Female Entrepreneurship." NBER Working Paper 28486.
- Cordaro, Francesco, Fafchamps, Marcel, Mayer, Colin, Meki, Muhammad, Quinn, Simon, and Kate Roll. 2022. "Microequity and Mutuality: Experimental Evidence on Credit with Performance-Contingent Repayment." Working Paper.

- Crepon, Bruno, El Komi, Mohammed, and Adam Osman. 2020. "Is it Who You Are or What You Get? Comparing the Impacts of Loans and Grants for Microenterprise Development." *American Economic Journal: Applied Economics*, forthcoming.
- Cusolito, Ana, Dautovic, Ernest and David McKenzie. 2021. "Can Government Intervention Make Firms More Investment-Ready? A Randomized Experiment in the Western Balkans." *Review of Economics and Statistics* 103(3): 428–442.
- Dalton, Patricio, Rüschenpöhler, Julius, Uras, Burak, and Bilal Zia. 2021. "Curating Local Knowledge: Experimental Evidence from Small Retailers in Indonesia." *Journal of the European Economic Association* 19(5): 2622–2657.
- Dhar, Diva, Jain, Tarun, and Seema Jayachandran. 2022. "Reshaping Adolescents' Gender Attitudes: Evidence from a School-Based Experiment in India." *American Economic Review* 112 (3): 899–927.
- de Mel, Suresh, McIntosh, Craig, Sheth, Ketki, and Christopher Woodruff. 2022. "Can Mobile-Linked Bank Accounts Bolster Savings? Evidence from a Randomized Controlled Trial in Sri Lanka." *The Review of Economics and Statistics* 104 (2): 306–320.
- Delecourt, Solene and Anne Fitzpatrick. 2021. "Childcare Matters: Female Business Owners and the Baby-Profit Gap." *Management Science* 67(7): 4455–74.
- Doyle, Kate, Levtov, Ruti, Barker, Gari, Bastian, Gautam, Bingenheimer, Jeffrey, Kazimbaya, Shamsi Nzabonimpa, Anicet, Pulerwitz, Julie, Sayinzoga, Felix, Sharma, Vandana, and Dominick Shattuck. 2018. "Gender-transformative Bandebereho couples' intervention to promote male engagement in reproductive and maternal health and violence prevention in Rwanda: Findings from a randomized controlled trial." *PLOS ONE* 13(4): e0192756.
- Dupas, Pascaline, Karlan, Dean, Robinson, Jonathan, and Diego Ubfal. 2018. "Banking the Unbanked? Evidence from three countries." *American Economic Journal: Applied Economics* 10(2): 257–97.
- Dupas, Pascaline and Jonathan Robinson. 2013. "Savings Constraints and Microenterprise Development: Evidence from a Field Experiment in Kenya." *American Economic Journal: Applied Economics* 5: 163–192.
- Elam, Amanda, Hughes, Karen, Guerrero, Maribel, Hill, Stephen, and Catharina Nawangpalupi. 2021. "Women's Entrepreneurship 2020/21 - Thriving Through Crisis." *Global Entrepreneurship Monitor*.
- Ellis, Mia, Cynthia Kinnan, Margaret McMillan, and Sarah Shaikat. 2022. "What Predicts the Growth of Small Firms? Evidence from Tanzanian Commercial Loan Data." Working Paper.
- Evans, David, Jakiela, Pamela, and Heather Knauer. 2021. "The Impact of Early Childhood Interventions on Mothers." *Science* 372 (6544): 794–96.
- Fafchamps, Marcel, McKenzie, David, Quinn, Simon, and Christopher Woodruff. 2014. "Microenterprise Growth and the Fly-paper Effect: Evidence from a Randomized Experiment in Ghana." *Journal of Development Economics* 106: 211–226, 2014.
- Fang, Sheng, Goh, Chorching, Roberts, Mark, Xu, Lixin Colin, and Albert Zeufack. 2022. "Female entrepreneurs and productivity around the world: Rule of law, network, culture and gender equality." *World Development* 154: 105846.
- Field, Erica, Pande, Rohini, Papp, John, and Natalia Rigol. 2013. "Does the Classic Microfinance Model Discourage Entrepreneurship among the Poor? Experimental Evidence from India." *American Economic Review* 103: 2196–2226.
- Field, Erica, Jayachandran, Seema, Pande, Rohini, and Natalia Rigol. 2016. "Friendship at Work: Can Peer Support Stimulate Female Entrepreneurship?" *American Economic Journal: Economic Policy* 8(2): 125–53.
- Field, Erica, Rohini Pande, Natalia Rigol, Simone Schaner, and Charity Troyer Moore. 2021. "On Her Own Account: How Strengthening Women's Financial Control Impacts Labor Supply and Gender Norms." *American Economic Review* 111 (7): 2342–75.
- Field, Laurien, Giwa, Fatou, Khan, Anushe, Camba Opem, Lory, and Montserrat Ganuza. 2023. "WBG Gender Strategy Update Thematic Policy Note on Finance." *World Bank Group Gender Thematic Notes Series*. Washington, DC: World Bank Group, 2023.
- Friedson-Ridenour, Sophia and Rachael Pierotti. 2019. "Competing Priorities: Women's Microenterprises and Household Relationships." *World Development* 121: 53–62
- Gassier, Marine, Léa Rouanet, and Lacina Traore. 2022. "Addressing Gender-Based Segregation through Information: Evidence from a Randomized Experiment in the Republic of Congo." *World Bank Policy Research Working Paper No. 9934*.

- Gertler, Paul, Green, Brett, and Catherine Wolfram. 2021. "Digital Collateral." Working Paper.
- Gine, Xavier and Ghazala Mansuri. 2021. "Money or Management? A Field Experiment on Constraints to Entrepreneurship in Rural Pakistan." *Economic Development and Cultural Change*, forthcoming.
- Goldstein, Markus, Gonzalez Martinez, Paula, and Sreelakshmi Papineni. 2019. "Tackling the Global Profitarchy: Gender and the Choice of Business Sector." World Bank Policy Research Working Paper 8865.
- Goldstein, Markus, Gonzalez Martinez, Paula, Papineni, Sreelakshmi, and Joshua Wimpey. 2020. "The global state of small business during COVID-19: gender inequalities." World Bank Blog, September 8, 2020.
- Gonzalez-Uribe, Juanita, and Ouafaa Hmaddi. 2022. "The multi-dimensional impact of business accelerators: what does the research tell us?" London School of Economics and Political Science.
- Grantham, Kate and Aatif Somji. 2022. "Childcare Solutions for Women Micro and Small Enterprises." Research Paper. Donor Committee for Enterprise Development. Women's Economic Empowerment Working Group.
- Groh, Matthew and David McKenzie. 2016. "Macroinsurance for microenterprises: a randomized experiment in post-revolution Egypt." *Journal of Development Economics* 118: 13–25.
- Grover, Arti and Michele Imbruno. 2020. "Using Experimental Evidence to Inform Firm Support Programs in Developing Countries." World Bank Policy Research Working Paper 9461.
- Gulesci, Selim, Puente Beccar, Manuela, and Diego Ubfal. 2021. "Can Youth Empowerment Programs Reduce Violence Against Girls during the Covid-19 Pandemic?" *Journal of Development Economics* 153: 102716.
- Halim, Daniel, O'Sullivan, Michael, and Abhilasha Sahay. 2023. "Increasing Female Labor Force Participation." World Bank Group Gender Thematic Notes Series. Washington, DC: World Bank Group.
- Halim, Daniel, Perova, Elizaveta, and Sarah Reynolds. 2021. "Childcare and Mothers' Labor Market Outcomes in Lower- and Middle-Income Countries." World Bank Policy Research Working Paper No. 9828.
- Hardy, Morgan, and Gisella Kagy. 2020. "It's Getting Crowded in Here: Experimental Evidence of Demand Constraints in the Gender Profit Gap." *The Economic Journal* 130(631): 2272–2290.
- Hasan, Tazeen, Trumbic, Tea, Elefante, Marina, Mazoni, Natalia and Marie Caiitrona Hyland. 2023. "Accelerating Gender Equality through the Law." World Bank Group Gender Thematic Notes Series. Washington, DC: World Bank Group.
- Hjort, Jonas, Iyer, Vinayak, and Golvine de Rochambeau. 2020. "Informational Barriers to Market Access: Experimental Evidence from Liberian Firms." NBER Working Paper 27662.
- Hussam, Reshmaan, Rigol, Natalia, and Benjamin Roth. 2022. "Targeting High Ability Entrepreneurs Using Community Information: Mechanism Design in the Field." *American Economic Review* 112(3): 861–898.
- Hyland, Marie, Djankov, Simeon, and Pinelopi Goldberg. 2020. "Gendered Laws and Women in the Workforce." *American Economic Review: Insights* 2 (4): 475–90.
- Iacovone, Leonardo, McKenzie, David, and William Maloney. 2022. "Improving Management with Individual and Group-Based Consulting: Results from a Randomized Experiment in Colombia." *Review of Economic Studies* 89(1): 346–71.
- IFC. 2022. "Inclusive Distribution. Advancing Gender Equality in the Fast-Moving Consumer Goods Sector." Technical Report. International Finance Corporation.
- IFC. 2021. "Insular Life, Philippines – The Case for Insuring Women for a Better Tomorrow." Case Study. International Finance Corporation.
- IFC. 2021b. "Sourcing2Equal Kenya: Barriers and Approaches to Increase Access to Markets for WSMEs." World Bank Group, Washington, DC. <https://www.ifc.org/wps/wcm/connect/6f37b489-099a-4719-9732-934932e286e2/Sourcing2Equal-Kenya-Barriers-and-approaches-to-increase-access-to-markets-for-women-owned-businesses.pdf?MOD=AJPERES&CVID=nGdg8Hi>.
- IFC. 2020. "Guide to Training. Setting the standard for design, delivery, and evaluation of learning programs in emerging markets." Technical Report, International Finance Corporation.
- IFC. 2017. "Evaluation Report. Bank of Palestine Strengthens Women-Owned Businesses and the Economy." Technical Report, International Finance Corporation.

- IFC. 2017b. "MSME Finance Gap. Assessment of the Shortfalls and Opportunities in Financing Micro, Small and Medium Enterprises in Emerging Markets." Technical Report, International Finance Corporation.
- IFC and AXA. 2015. "SHEforSHIELD: Insure Women to Better Protect All." Technical Report. International Finance Corporation, AXA Group and Accenture.
- IFC, Wyman, Oliver, and Rock Creek. 2019. "Moving Toward Gender Balance in Private Equity and Venture Capital." World Bank Group, Washington D.C.
- Islam, Asif, Muzi, Silvia, and Mohammad Amin. 2017. "Unequal laws and the disempowerment of women in the labor market: evidence from firm-level data." World Bank Policy Research Working Paper 8202.
- Islam, Asif, Gaddis, Isis, Palacio Lopez, Ampara, and Mohammad Amin. 2020. "The Labor Productivity Gap between Formal Businesses Run by Women and Men." *Feminist Economics* 26(4): 228–258.
- International Trade Centre. 2015. "Unlocking Markets for Women to Trade." https://www.intracen.org/uploadedFiles/intracenorg/Content/Publications/women_in_trade_web.pdf.
- Jakiela, Pamela and Owen Ozier. 2016. "Does Africa Need a Rotten Kin Theorem? Experimental Evidence from Village Economies." *Review of Economic Studies* 83(1): 231–268.
- James, Laurin, Koelle, Michael, and Simon Quinn. 2022. "Do Capital Grants Improve Microenterprise Productivity?" Working Paper.
- Jayachandran, Seema. 2021. "Microentrepreneurship in Developing Countries." In *Handbook of Labor, Human Resources and Population Economics*: 1–31, Elsevier.
- Jayachandran, Seema. 2021b. "Social Norms as a Barrier to Women's Employment in Developing Countries." *IMF Economic Review* 69 (3): 576–95.
- Jin, Yizhou and Zhengyun Sun. 2020. "Lifting Growth Barriers for New Firms: Evidence from an Entrepreneur Training Experiment with Two Million Online Businesses." Working Paper.
- Kayumbi, Valentine. 2021. "Impact of the IFC Training: KCB Bank MSME Customers Story." Blog available <https://www.growlearnconnect.org/blogs/impact-ifc-training-kcb-bank-msme-customers-story>
- Klinger, Bailey, Khwaja, Asim, and Carlos del Carpio. 2013. *Enterprising Psychometrics and Poverty Reduction*. Springer Briefs in Psychology, Springer, New York.
- Kugler, Maurice, Viollaz, Mariana, Duque, Daniel, Gaddis, Isis, Newhouse, David, Palacios-Lopez, Amparo, and Michael Weber. 2021. "How Did the COVID-19 Crisis Affect Different Types of Workers in the Developing World?" Jobs Watch COVID-19, World Bank.
- La Porta, Rafael and Andrei Schleifer. 2014. "Informality and Development." *Journal of Economic Perspectives* 28(3): 109–26.
- LACGIL. 2021. "Promoting Women Entrepreneurs in Mexico." Technical Report. World Bank's LAC Gender Innovation Lab and International Finance Corporation.
- Lafortune, Jeanne, Riutort, Julio, and Jose Tessada. 2018. "Role Models or Individual Consulting: The Impact of Personalizing Micro-entrepreneurship Training." *American Economic Journal: Applied Economics* 10(4): 222–245.
- Lafortune, Jeanne, Pugatch, Todd, Tessada, Jose, and Diego Ubfal. 2022. "Can Interactive Online Training Make High School Students More Entrepreneurial? Experimental Evidence from Rwanda." IZA DP No. 15064.
- Liaplina, Aleksandra and Kruskaia Sierra-Escalante. 2022. "Closing the Gender Finance Gap Through the Use of Blended Finance." International Finance Corporation, World Bank Group.
- Liu, Yu, Wei, Siqi and Jian Xu. 2021. "COVID-19 and Women-Led Businesses around the World." *Finance Research Letters* 43: 102012.
- Lopez Pena, Paula. 2022. "Managing the second shift: The impact of noncognitive skills on female entrepreneur's time allocation and mental health." Working Paper.
- Maffioli, Alessandro, McKenzie, David, and Diego Ubfal. 2022. "Estimating the demand for business training: Evidence from Jamaica." *Economic Development and Cultural Change*, forthcoming.

- Maruo, Mirai, Arango, Diana, Grossi, Ariana, and Manuel Conteras Urbina. 2023. "Addressing Gender-Based Violence to Accelerate Gender Equality." World Bank Group Gender Thematic Notes Series. Washington, DC: World Bank Group.
- McKenzie, David. 2017. "Identifying and Spurring High-Growth Entrepreneurship: Experimental Evidence from a Business Plan Competition." *American Economic Review* 107(8): 2278–2307.
- McKenzie, David. 2021. "Small Business Training to Improve Management Practices in Developing Countries: Re-Assessing the Evidence for 'Training Doesn't Work.'" *Oxford Review of Economic Policy* 37 (2): 276–301.
- McKenzie, David, Mohpal, Aakash, and Dean Yang. 2022. "Aspirations and financial decisions: Experimental evidence from the Philippines." *Journal of Development Economics*, forthcoming.
- McKenzie, David and Susana Puerto. 2021. "Growing markets through business training for female entrepreneurs: A market-level randomized experiment in Kenya." *American Economic Journal: Applied Economics* 13(2): 297–332.
- McKenzie, David and Dario Sansone. 2019. "Predicting Entrepreneurial Success is Hard: Evidence from a Business Plan Competition in Nigeria." *Journal of Development Economics* 141: 102369.
- McKenzie, David and Christopher Woodruff. 2014. "What are we learning from business training evaluations around the developing world?" *World Bank Research Observer* 29(1): 48–82.
- McKenzie, David and Christopher Woodruff. 2017. "Business Practices in Small Firms in Developing Countries." *Management Science* 63(9): 2967–81.
- McKenzie, David, Woodruff, Christopher, Bjorvatn, Kjetil, Bruhn, Miriam, Cai, Jing, Gonzalez-Uribe, Juanita Quinn, Simon, Sonobe, Tetsushi, and Martin Valdivia. 2021. "Training Entrepreneurs." *VoxDevLit*, 1(2).
- Meager, Rachael. 2019. "Understanding the average impact of microcredit expansions: A Bayesian hierarchical analysis of seven randomized experiments." *American Economic Journal: Applied Economics* 11: 57–91.
- Meunier, Frederic, Fantoni, Sabrina, and Sarah Kouhlani-Nolla. 2022. "We-Data: Measuring the Gap in female Entrepreneurship Around the World." World Bank Blog Published on Let's Talk Development, March 2, 2022.
- Mignano, Kathleen and Heather Kipnis. 2022. "Inclusive Distribution. Advancing Gender Equality in the Fast-Moving Consumers Good Sector." IFC and WE-FI Learning Brief.
- Montalvao, Joao (2022). "Empowering Women Farmers: Evidence from a Randomized Control Trial in Mozambique." Available at: https://olc.worldbank.org/system/files/Mozambique_0.pdf
- Moylan, Heather, Bonfert, Anna, Bunker, Sarah, Tojeiro, Carol, and Shoghik Hovhannisyann. 2023. "Leveraging Gender Data to Accelerate Gender Equality." World Bank Group Gender Thematic Notes Series. Washington, DC: World Bank Group.
- Muñoz, Ana Maria, Dalton, Abigail, Orlando, Maria Beatriz, and Fatou Giwa. 2023. "Addressing Social and Gender Norms to Promote Gender Equality." World Bank Group Gender Thematic Notes Series. Washington, Dc: World Bank Group.
- Revenge, Ana and Meagan Dooley. 2020. "The constraints that bind (or don't). Integrating gender into economic constraints analyses." Global Economy & Development Working Paper 137, Brookings.
- Riley, Emma. 2022. "Resisting sharing pressure in the household using mobile money: Experimental evidence on microenterprise investment in Uganda." Working Paper.
- Robinson, Jonathan, Blumenstock, Joshua, and David Sungho Park. 2022. "The Impact of Digital Credit in Developing Economies: A Review of Recent Evidence." Working Paper.
- Saraf, Priyam, Rahman, Tasmia, and Julian Jamison. 2019. "Group-Based Cognitive Behavioral Therapy (CBT) Training Improves Mental Health of SME Entrepreneurs: Experimental Evidence from Conflict-Affected Areas of Pakistan." World Bank Policy Research Working Paper 8872.
- Schumpeter, Joseph. 1934. *The Theory of Economic Development: An Inquiry into Profits, Capital, Credit, Interest, and the Business Cycle*. Harvard University Press.
- Siegrist, Felicia. 2022. "Coming into Focus: What works in supporting women entrepreneurs in developing countries? A review of the evidence base & We-Fi's Theory of Change." Technical Report, Women Entrepreneurs Finance Initiative.

Somville, Vincent and Lore Vandewalle. 2018. "Saving by Default: Evidence from a Field Experiment in Rural India." *American Economic Journal: Applied Economics* 10(3): 39–66.

Torres, Jessica, Maduko, Franklin, Gaddis, Isis, Iacovone, Leonardo, and Kathleen Beegle. 2021. "The impact of the COVID-19 pandemic on women-led businesses." World Bank Policy Research Working Paper 9817.

Ubfal, Diego, Arraiz, Irani, Beuermann, Diether, Frese, Michael, Maffioli, Alessandro, and Daniel Verch. 2022. "The Impact of Soft-Skills Training for entrepreneurs in Jamaica." *World Development* 152: 105787.

Unnikrishnan, Shalini and Cherie Blair. 2019. "Want to Boost the Global Economy by \$5 Trillion? Support Women as Entrepreneurs." Boston Consulting Group, Blog published July 30, 2019, at: <https://www.bcg.com/publications/2019/boost-global-economy-5-trillion-dollar-support-women-entrepreneurs>.

Vazquez, Elisabeth and Barbara Frankel. 2017. "The Business Case for Global Supplier Diversity and Inclusion: The Critical Contributions of Women and Other Underutilized Suppliers to Corporate Value Chains." Technical Report, WEConnect International. <https://mediaweconnectinternational-org.s3.amazonaws.com/2020/08/Business-Case.pdf>.

Vega-Redondo, Fernando, Pin, Paolo, Ubfal, Diego, Benedetti-Fasil, Cristiana, Brummit, Charles, Rubera, Gaia, Hovy, Dirk, and Tommaso Fornaciari. 2019. "Peer Networks and Entrepreneurship: A Pan-African RCT." IZA Discussion Paper 12848.

Verhoogen, Eric. 2022. "Firm-Level Upgrading in Developing Countries." *Journal of Economic Literature*, forthcoming.

Women, Business and the Law. 2022. "Women, Business and the Law 2022" Technical Report available at: <https://openknowledge.worldbank.org/handle/10986/36945>.

World Bank. 2021. "Enterprising Women: Toward Equal Business Opportunity in Southeast Asia." Technical Report. Washington, DC. World Bank.

World Bank. 2021b. "Female Entrepreneurship Resource Point. Introduction and Module 1: Why Gender Matters." World Bank, available at <https://www.worldbank.org/en/topic/gender/publication/female-entrepreneurship-resourcepoint-introduction-and-module-1-why-gender-matters>.

World Bank. 2022. "Breaking Barriers: Female Entrepreneurs who Cross Over to Male-Dominated Sectors." Technical Report, World Bank.

World Bank and World Trade Organization. 2020. "Women and Trade: The Role of Trade in Promoting Gender Equality." Technical Report, World Bank, Washington, DC.

Zottel, Siegfried. 2021. "Here is a We-Fi innovative approach that helps unlock commercial financing and dreams for women-led businesses in Nigeria." Blog available at: <https://blogs.worldbank.org/african/here-we-fi-innovative-approach-helps-unlock-commercial-financing-and-dreams-women-led>.