

What does research say about how to improve access to skills for women-led businesses?

WHAT IS THE WE-FI EVIDENCE PAPER?

This snapshot is part of a series which highlights select research findings and evidence gaps from the We-Fi Evidence Paper: [Supporting Women Entrepreneurs in Developing Countries: What Works](#). It reviews existing evidence on what works and what doesn't in supporting women-owned and led SMEs (WSMEs) in developing countries and maps this evidence along four We-Fi focus areas: Access to finance, access to skills and networks, access to markets and technology, and the enabling environment.

The review also identifies evidence gaps and highlights research opportunities for each focus area. The paper's main contribution is a conceptual and comprehensive mapping of the literature, classifying the strength and direction of evidence across various interventions. It provides a dynamic view of how the literature is evolving, highlights where evidence gaps remain, and is intended as a resource for both researchers and policymakers/practitioners.



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WHAT ARE THE CHALLENGES WSMEs FACE IN ACCESS TO SKILLS?

Limited access to knowledge, skills, and networks remains a major barrier for women entrepreneurs. Compared to men, they often have lower technical, financial, and management skills and are less confident in their abilities. They are also less likely to participate in business trainings, accelerators, or incubators, often due to the time-intensive nature of these programs, which can be especially challenging for those with family responsibilities. In addition, most training programs are not designed to address the specific needs of women-led businesses, making them less accessible and relevant.

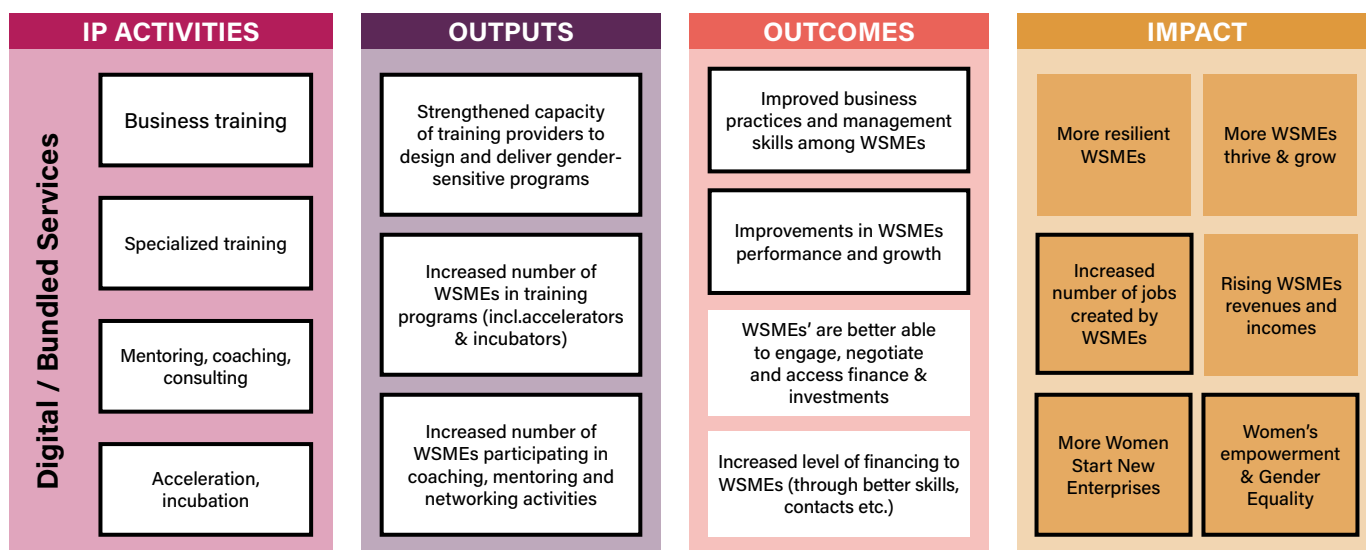
- ◆ Only 13% of applicants to accelerator programs are women-led teams compared to 52% men-led and 35% mixed teams.¹
- ◆ Globally, only 35% of STEM students in higher education are women, of which a mere 3% pursue studies in information and communication technologies (ICT).²
- ◆ Men report significantly higher socio-emotional skills than women, a gap equivalent to 5.6 years of education, of which closing the education gap would reduce only 17%.³

HOW CAN THIS BE CHANGED?

Addressing the complex challenges faced by WSMEs requires multi-dimensional approaches, innovative tools, and a cross section of stakeholders. This snapshot focuses on the 'Access to Skills' component of We-Fi's Theory of Change. It lays out how different inputs and activities (e.g., gender-inclusive business training, specialized SME training, mentoring, coaching, or consulting) are intended to stimulate short-term outputs (e.g., increased number of WSMEs participating in and completing training programs), medium-term outcomes (e.g., improved business practices and skills, improved business performance) and long-term changes (e.g., women's business creation, job growth, and women's economic empowerment).

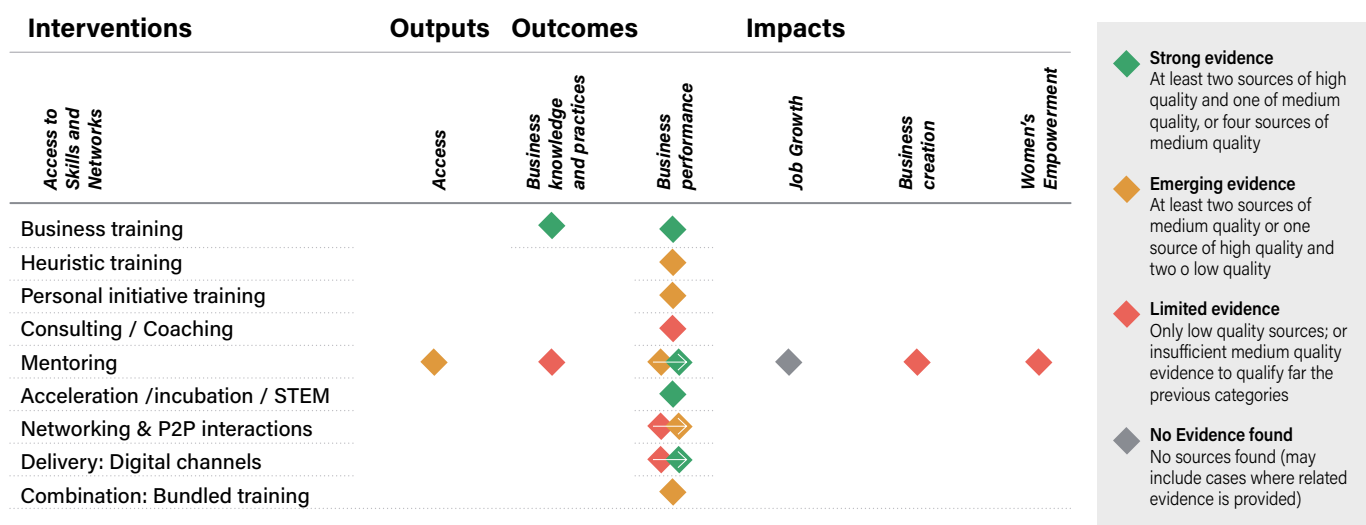
Due to enormous heterogeneity in the types of firms, different approaches are likely to be needed for different segments of WSMEs. A gender-inclusive training design should consider the following elements:

1. **Training methods** (e.g., classroom-based business training, specialized SME training, bespoke mentoring, coaching, consulting, or acceleration)
2. **Training content** (e.g., business skills, soft skills, digital skills, or technical skills)
3. **Training delivery** (e.g., in-person, hybrid, or digital trainings)
4. **Targeting** (e.g., segmentation and selection of WSMEs)



Snapshot Focus

WHERE IS EVIDENCE STRONGEST?



A scale based on the number and quality of studies was used to classify the strength of evidence for specific interventions as strong (green), emerging (yellow), or limited (red)⁴. Most evidence on access to skills focuses on traditional business training, which is typically targeted at micro-entrepreneurs. Evidence on other interventions remains limited or emerging. Two dots and an arrow indicate a change in the evidence rating between the [2022 review](#) and the [2025 review](#). Recent literature shows a growing focus on digital approaches, particularly digital training.

WHAT ARE SOME RESEARCH FINDINGS AND IDENTIFIED EVIDENCE GAPS?

The following highlights preliminary research findings on access to skills and outlines persistent evidence gaps where more research is needed. While this is not a full overview of all findings and available studies mentioned in the evidence paper, it aims to provide a useful framing of insights.

TRAINING METHODS

What training methods (e.g., traditional classroom-based training, coaching, mentoring, consulting etc.) are effective in improving business skills and firm performance for WSMEs?

Traditional classroom-based business training can be effective for micro and small enterprises, but results are mixed and highly context dependent.⁵ For medium and large firms, such training is used less frequently, as established entrepreneurs tend to look for a more customized and tailored approach. Evidence shows that combining training with tailored support such as coaching, mentoring, consulting, or specialized expertise can improve firm outcomes, particularly for medium and large firms. For example, [Bardasi et al. \(2017\)](#) find that training complemented by **coaching** helped women entrepreneurs in Tanzania adopt better business practices, particularly among more experienced business owners. **Mentoring** may also be particularly beneficial for more established firms seeking to innovate or expand. For example, a randomized controlled trial in Uganda by [Anderson et al. \(2024\)](#) found that pairing small businesses with remote mentors increased sales by 28 percent over two years for both women- and men-owned firms. Further analysis shows that women entrepreneurs achieved greater sales and profit gains when matched with female mentors, while male entrepreneurs performed similarly regardless of mentor gender. However, a two-stage experiment with women-owned microenterprises in Ethiopia found that the overall impact of mentoring was limited: while it significantly improved the adoption of business practices, it did not lead to statistically significant gains in profits ([Bakhtiar et al. 2022](#)).

EVIDENCE GAP #1: EFFECTIVENESS OF DIFFERENT TRAINING METHODS

More research focused specifically on WSMEs is needed to better understand how traditional business training can be bundled with more tailored approaches (incl. mentoring, coaching, consulting) to improve women's business practices and firm performance across different segments of WSMEs. In particular, evidence on the effectiveness of incubators, accelerators, and investment readiness programs for high-growth startups in developing countries remains limited, and further work is needed to unpack individual program components to assess their impact, scalability, and cost-effectiveness. At the same time, many of these bespoke services are costly, and their scalability remains uncertain. Future research is needed to examine the marginal costs and benefits of different interventions, evaluate their cost-effectiveness, and assess their longer-term impacts on firm performance, job creation, and women's economic empowerment.

A randomized controlled trial in Nigeria found that **insourcing or outsourcing** specialized expertise improved business practices more than traditional business training and was as effective as consulting at half the cost, although the study did not assess gender-specific impacts (Anderson and McKenzie 2020). For larger firms, consulting tends to be focused on increasing productivity or exports. For example, a randomized controlled trial by [Cusolito et al. \(2023\)](#) found that combining training and consulting helped innovative firms in the Western Balkans expand exports by increasing sales to existing customers, gaining market-specific knowledge, and building confidence to pursue new ideas. However, the high costs of consulting pose challenges for scaling such interventions ([McKenzie and Woodruff 2025](#)).

TRAINING CONTENT

How can training content be designed to effectively improve business practices and firm performance of WSMEs?

Helping women entrepreneurs grow small businesses by teaching them formal **business skills** like record-keeping, marketing, financial planning etc. has yielded mixed results. Training content integrating *gender-specific topics* like gender stereotypes, family responsibilities, or work-life-balance may help women overcome gender barriers to firm growth, enter different sectors, or better manage segregating household and business tasks ([McKenzie 2021](#)). Moreover, specialized trainings focused on *SME-specific topics* (e.g., MBA-style training for executives or trainings focused on public procurement or corporate value chains) may have a role in helping women-led SMEs grow. A randomized controlled trial by [Hjort et al. \(2020\)](#) with medium-sized firms in Liberia demonstrated the positive impacts that a week-long training on public procurement can have on the business performance of small businesses. The non-sex-disaggregated results indicate that firms that participated win three times as many formal contracts.

There is also emerging evidence that **soft skills / personal initiative** training (incl. self-efficacy, self-confidence, leadership, creativity, risk propensity, mental health etc.) can promote behavioral change, shift attitudes, and increase firm performance. [An experiment with micro-enterprises in Togo](#) found that women micro-entrepreneurs who participated in a personal initiative training (focused on initiative, perseverance, and resilience) increased their profits by an average of 40 percent compared to 5 percent for traditional business training. Several years later, [Campos et al. \(2024\)](#) revisited the same cohort of entrepreneurs and found sustained average impacts of personal initiative training, with monthly profits increasing by \$91—an effect size larger than that observed at the two-year mark. However, these long-term impacts differ markedly by sex: for men, the effects grow over time, driven by greater capital accumulation and increased self-efficacy, whereas for women, the impacts tend to diminish.

It is unclear what the upper limit on firm size should be for these programs, as they may be less effective for entrepreneurs who already have strong aspirations and initiative. For micro-entrepreneurs, soft skills training and heuristics-based approaches appear particularly promising. For example, a randomized controlled trial by [Arraiz et al. \(2019\)](#) with women micro-entrepreneurs in Ecuador found that **heuristics-based (rule-of-thumb) training** was more effective in teaching business concepts

and improving firm performance than traditional business training. However, [McKenzie and Woodruff \(2023\)](#) note that the long-term impacts of these approaches remain unclear. Additionally, most examples of rule-of-thumb guidance focus on financing, with limited heuristics available for areas like marketing, stock control, and other essential aspects of business management.

EVIDENCE GAP #2: EFFECTIVENESS OF SKILLS MIX AND TRAININGS FOCUSED ON DIGITAL AND AI SKILLS

More evidence focused specifically on SMEs is needed to determine which curricula and combinations of skills—such as business, technical, soft, and digital skills—are most effective in helping women grow their businesses and enter male-dominated sectors. This includes understanding how training needs and effective skill mixes vary across different segments of WSMEs. Moreover, more research is needed on what works in teaching digital and AI skills and their impact on women's time use and business growth.

Building **digital and AI-related skills** is becoming increasingly important for entrepreneurs and digital tools may have significant potential to support the growth of women-owned businesses. For example, an experiment in Jordan by [Alhorr \(2024\)](#) found that providing women entrepreneurs with virtual storefronts and digital marketing training increased business survival, revenues, and the number of online clients, with the strongest impacts observed among women facing mobility constraints. Initial evidence also suggests that AI tools may further enhance the growth potential of women-led businesses. A study by the [Cherie Blair Foundation \(2026\)](#), based on survey responses from 3,072 women entrepreneurs across 66 low- and middle-income countries, found that AI adoption among digitally connected women entrepreneurs rose from 38 percent to 82 percent in one year. The study also found that 69 percent of respondents reported time savings, while others cited innovation (42 percent), better customer engagement (35 percent), and increased sales (34 percent), highlighting AI's potential to improve business performance.

TRAINING DELIVERY

How can digital delivery channels and operational adaptations to training programs increase women entrepreneurs' enrollment, participation, and completion rates, leading to better business practices and firm performance?

Digital training offers new opportunities to deliver training in ways that are more gender-inclusive, targeted, and cost-effective through flexible formats that may better enable women to balance participation with other responsibilities, including caregiving. A randomized controlled trial by [Davies et al. \(2023\)](#) in Guatemala and Mexico, measured the impact and cost-effectiveness of a live zoom business training for women micro-enterprises during the COVID-19 pandemic. The zoom training led to improved business practices and higher sales after two months, but these effects disappeared after six months. In a randomized controlled trial in Ethiopia, [Cassidy et al. \(2024\)](#) evaluated a business training for growth-oriented female entrepreneurs delivered through a smartphone app vs. in-person. Results showed high take-up rates but low completion rates for the smartphone app training. Another randomized controlled trial by [Estefan et al. \(2023\)](#) found that digital training is a cost-effective alternative to in-person training, but its effectiveness is highly dependent on face-to-face interactions, including introductory sessions on the use of digital tools, as well as ongoing technical support and follow-up coaching. While digital technologies can reduce logistical barriers for women entrepreneurs to participate in training programs, these findings highlight important challenges related to scaling digital training programs and suggest that additional support mechanisms to address the digital gender gap, as well as incentives, may be needed to ensure that entrepreneurs not only enroll in, but also complete, the training.

EVIDENCE GAP #3: DIGITAL AND AI-ENABLED TRAINING DELIVERY

More gender- and SME-specific evidence is needed to better understand how digital technologies and AI can enhance the delivery, (cost)effectiveness, and scalability of training programs for women entrepreneurs. In particular, further research is needed on how different delivery modalities such as online, in-person, and hybrid formats, as well as operational adaptations can increase women's participation and completion rates while improving business growth outcomes.

Moreover, **gender-specific delivery mechanisms and operational adaptations**, such as adjustments to schedule, cost, location, and training intensity, can effectively reduce time, mobility, and caregiving barriers and encourage greater participation and completion rates among women entrepreneurs. For example, offering wraparound services such as transportation or childcare support can attract more WSMEs to training programs ([Beegle and Matulevich, 2020](#)). A randomized controlled trial in Togo by [Campos et al. \(2017\)](#) found that half-day sessions enabled women entrepreneurs to simultaneously run their businesses and fulfill family responsibilities. The study also found that entrepreneurs supported the introduction of an enrollment fee, as they believed participants placed greater value on programs they paid for. At the same time, scholarship options were important for ensuring access for entrepreneurs facing financial constraints, particularly women.

EVIDENCE GAP #4: NETWORKS AND PEER SUPPORT

More evidence is needed to better understand how different types of networks, such as business, social, and peer networks, help women entrepreneurs improve their business practices, access finance and markets, and grow their businesses, access finance and markets. More research is also needed on how networking programs and digital peer networks can best support WSME growth and resilience. In addition, important evidence gaps remain on how networks can strengthen women's confidence, aspirations, and decision-making, as well as support women entering male-dominated sectors, pursuing high-growth entrepreneurship, and recovering from economic or climate-related shocks.

TARGETING

Many studies on training report substantial heterogeneity in outcomes, indicating that skills training is most effective when well-targeted, matching the type of training with the type of enterprise, depending on its size, sector, and stage of their business development. A non-gender-specific study by [Gonzalez-Uribe and Leatherbee \(2024\)](#) in Colombia provides some of the first experimental evidence on the effectiveness of accelerator programs and the importance of targeting. The study found that managerial training increased sales growth by 18 percent for the average entrepreneur, while entrepreneurial training focused on product and service innovation led to 43 percent faster sales growth and greater full-time job creation among high-potential ventures. Another non-gender-specific study by [Anderson et al. \(2018\)](#) in South Africa found that the effectiveness of training depends on entrepreneurs' backgrounds and business maturity. Marketing training was more beneficial for entrepreneurs with less exposure to different business contexts (e.g., never travelled outside of Cape Town), while finance training generated greater benefits for owners of more established businesses.

These findings highlight the importance of tailoring training programs to the specific needs and capabilities of entrepreneurs. Building on this, [Anderson et al. \(2026\)](#) developed a Program Readiness Scorecard, a tool based on 10 observable factors related to entrepreneurial resources and capabilities, to identify entrepreneurs most likely to benefit from training programs. Using experimental data from firms in Uganda, South Africa, and Mexico, the study found that without targeted approaches, firms led by men experienced large and statistically significant gains, while women-led firms showed close to zero average returns. Together, these studies suggest that better matching entrepreneurs with appropriate training content, methods, and delivery models could improve outcomes for WSMEs. In particular, a stronger understanding of which skills are most relevant for different types of women entrepreneurs and stages of the business life cycle may help increase program effectiveness.

EVIDENCE GAP #5: SEX-DISAGGREGATED DATA AND SEGMENTATION FRAMEWORKS

The lack of sex-disaggregated data remains a major barrier to understanding what works for different types of women entrepreneurs and why. More evidence is needed to identify which training methods, content, and delivery channels are most effective for different segments of women-led SMEs. However, the collection and use of sex-disaggregated data by training providers remains limited, and many existing academic studies do not report outcomes separately by gender. Strengthening the use of sex-disaggregated data and segmentation frameworks in both program implementation and research will be critical to designing more targeted and effective support for WSMEs.



For access to the **full evidence paper**, [click here](#).



For access to the **searchable database** of publications used in the evidence paper and this snapshot, [click here](#).

¹ GALLI. 2020. "Accelerating Women-led Startups: A Knowledge Brief by the Global Accelerator Learning Initiative." Global Accelerator Learning Initiative, London.

² UNESCO. 2020. "Cracking the code: girls' and women's education in science, technology, engineering and mathematics (STEM)." UNESCO, Paris.

³ Ajayi et al. 2022. "Gender Differences in Socio-Emotional Skills and Economic Outcomes." World Bank Group, Washington, DC.

⁴ 189 studies were included in the full review, 55 of which focused on access to skills and networks. This includes experimental studies, quasi experimental, as well as non-experimental studies like systematic reviews or correlational studies. For details on the methodology, please see [Annex 3](#).

⁵ Based on rigorous studies (McKenzie and Puerto 2017; Alibhai et al. 2016; Bardasi et al. 2017; Lang and Seither 2024) and meta-analyses (McKenzie and Woodruff 2023; Cho and Honoratia 2014)