

Does phone-based heuristic financial training alter entrepreneurial behavior?

Experimental evidence from Ethiopia

[Preliminary results]

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Self-employment is important for women, but constraints prevail

- More women are attracted to self-employment opportunities than men in Africa → half of women in the non-agricultural labor force are engaged in self-employment (World Bank, 2019).
- Women-owned firms often operate in low-return sectors and report significantly lower business earnings (de Mel, McKenzie, and Woodruff 2008; Alibhai et al., 2017; Bernhardt et al., 2019).
- Women entrepreneurs face a multitude of social, economic and regulatory constraints.

Motivation

Skills-based interventions abound

- Classroom-based business training programs have been popular interventions (e.g., McKenzie and Woodruff, 2014; Cole et al., 2011; Bruhn and Zia 2013; Abebe et al., 2018; McKenzie 2021).
 - Mixed evidence on effectiveness, the importance of context specificity, trainer quality of training programs
- Emerging evidence points towards the benefits of simplifying training contents
 - Heuristics-based training programs could be more effective than traditional training programs (Drexler et al. 2014; Arraiz et al. 2019).
- We test Heuristics-based financial lessons delivered through mobile phone-based Interactive Voice Response (IVR) → Part of GIL's **Innovations in Financing Women Entrepreneurs** project.

Data and Study Design

An impact evaluation study

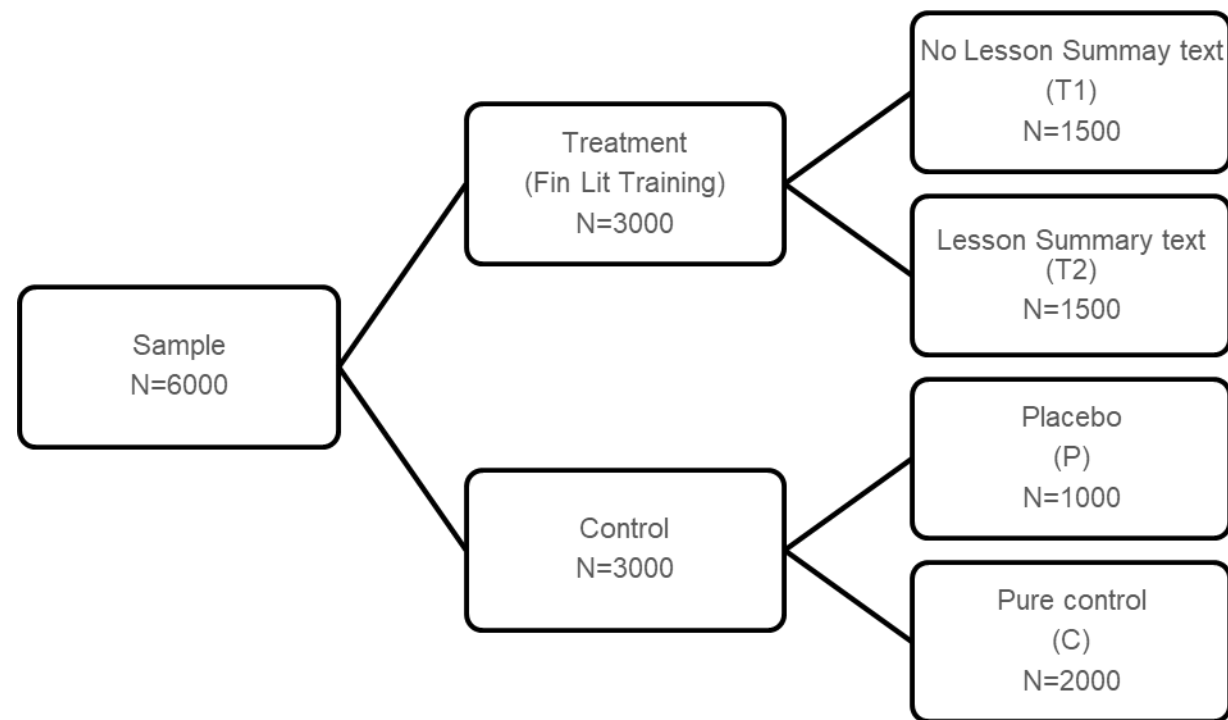
- **Focus on:**

- Take-up

- Training engagement and the likelihood of phone pick up
- Comparison with classroom-based training programs

- Outcomes

- Changes in financial behavior: financial practices, inventory management, and credit management.
- Downstream effects on firm performance



Data and Study Design

Sources of data, estimation method and background characteristics

Survey

- The sampling frame for the study is a registry of Women Entrepreneurship Development Project (WEDP).
- Baseline survey collected between February – April 2021 and Follow-up survey between June – August 2022.
- Detail call logs and admin data from the VIAMO platform.

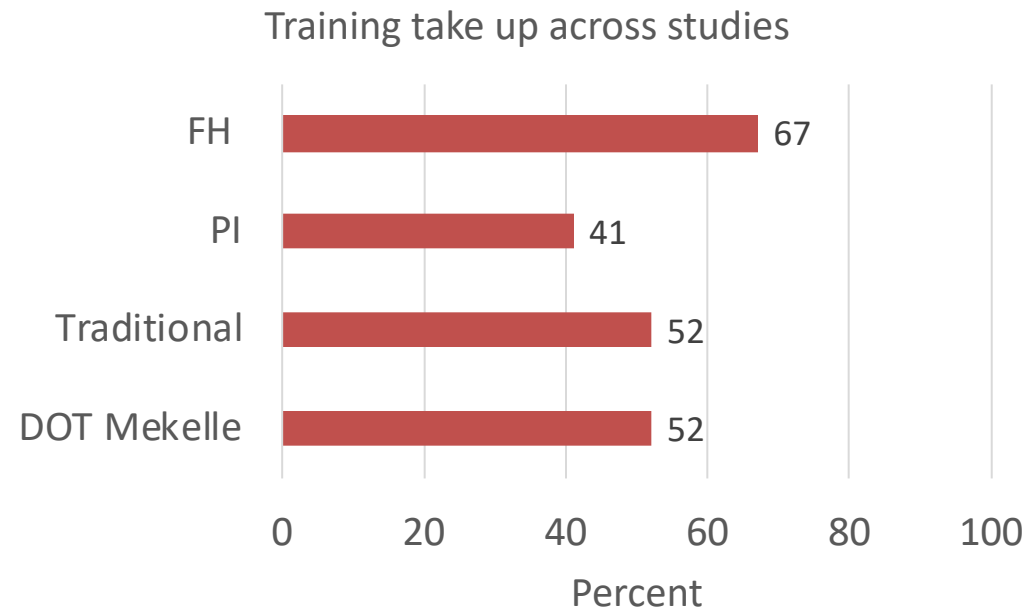
Estimation methods

- Impact estimated using ANCOVA and machine learning to identify covariates.
- We also test heterogeneity of impact across subgroups.

Take up

Overall take-up is decent

- **Two-thirds** of the women have received training certificates – high compared to other business trainings in Ethiopia
- The average lesson completion rate is nearly **70%** while 84% of women who pickup the call finish the lesson.
- **97%** of the women have completed at least one lesson.
- Education, literacy, access to loans and business size matter for take up.



Results

Impact on primary and secondary outcomes

Primary Outcomes

- Both IVR and IVR + SMS have an impact on the financial practice scores.
 - **24 %** increase in financial practice scores in the IVR group.
 - **13 %** rise in financial practice scores in IVR + SMS group.
- Improvement in inventory management due to IVR but no impact of IVR + SMS.
 - **13.4%** increase in inventory management score in the IVR group.
- No change in business practice and credit management scores.

Secondary Outcomes

- Increase in the probability of saving.
- No impact on business performance outcomes such as profits, sales and business size in the full sample.

We see subgroup effects – impacts are concentrated among unmarried women, women with higher education and women who own smaller than median businesses.

Work in progress

Further work

- Examine impact on business survival
- Explore impact on intermediary variables such as investment and borrowing
- Understand mechanisms to impact
- Conduct multiple hypothesis tests (q-values)
- Cost-effectiveness and potential for scale-up
- Plan for long term follow up



Thank you!
Any questions?