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Breaking into Supply Chains

Experimental Evidence on Procurement Training for Women-Owned SMEs

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Abstract

Women-owned-or-led small and medium-sized enterprises (WSMEs) are underrepresented in public and corporate supply chains worldwide. There is growing interest in promoting SMEs' and WSMEs' integration into value chains, but limited causal evidence whether interventions to support their participation in procurement are effective. This paper conducts a phased randomized controlled trial to estimate the impacts of corporate procurement training for WSMEs in Colombia. The program increases procurement knowledge and readiness, resulting in a ten percentage point increase in registrations to corporate portals, and an eight percentage point increase in the likelihood of submitting a bid. Impacts on winning bids are concentrated in WSMEs with prior procurement knowledge or experience, whose probability of winning a contract increases by eight to nine percentage points. These impacts are approximately twenty percent of the control means. More broadly, the paper illustrates how complier-weighted treatment effects can be used to evaluate programs delivered through a funnel-shaped participation process, common in private sector development interventions.

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Produced by the Research Support Team

Breaking into supply chains: experimental evidence on procurement training for women-owned SMEs*

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1 Introduction

Women-owned-or-led small and medium size enterprises (WSMEs) are underrepresented in public and corporate supply chains worldwide, earning less than one percent of procurement spending by large corporations and governments (Vazquez and Frankel, 2017). Public procurement alone represents 13% of GDP in low- and middle-income countries, and similarly 14% in high-income countries.[1] Winning a public procurement contract (Ferraz et al., 2015; Mensah et al., 2026), becoming a supplier to a multinational (Alfaro-Ureña et al., 2022), and broader customer acquisition (Ignaszak and Sedláček, 2026) have been shown to have positive impacts on firm growth and job creation. A broader lack of demand, and being situated in more crowded markets, has been found to be a binding constraint on the growth of many female-led firms (Hardy and Kagy, 2020). Hence, access to large, relatively stable demand via government and corporate supply chains may help catalyze WSMEs' growth.

WSMEs may face both demand- and supply-side constraints in being able to receive procurement contracts. Demand may be limited if buyers have preferences and procedures that favor existing and large suppliers, or if some buyers perceive WSMEs to have lower capacity. Nevertheless, many buyers may perceive commercial benefits from diversifying and increasing competition in their supply chains, such as greater resilience to supply chain shocks, lower costs, or increased product varieties. There may also be positive reputational effects among socially-oriented customers and investors. However, even when buyers seek to source from WSMEs, they may lack sex-disaggregated data, or struggle to find eligible WSMEs among their bidders. On the supply side, WSMEs may concentrate in sectors where there are fewer opportunities, and tend to be smaller and less formalized than male-owned SMEs. WSMEs may also lack specific information, networks, skilled personnel and access to capital needed to apply for and fulfill corporate procurement opportunities. Further,

[1] https://blogs.worldbank.org/en/developmenttalk/how-large-public-procurement. The World Bank Group (WBG) itself achieved a commitment to double its procurement spending with WSMEs by 2023, and has increased its commitment to 12 percent of procurement spending by 2030.

WSMEs may not submit bids if they believe they have low chances of success. There is a lack of rigorous quantitative evidence on interventions that can overcome these constraints, and increase WSMEs' participation in procurement.

This paper conducts a randomized controlled trial (RCT) to evaluate a procurement-readiness training for WSMEs in three major cities in Colombia, designed to alleviate these supply-side barriers. The training was run as part of the International Finance Corporation's (IFC's) *Sourcing2Equal* program.[2] The overall program works on the demand side with corporate buyers, to facilitate peer-learning and offer advice on how buyers can systemically integrate gender-inclusive sourcing strategies in their procurement operations. In parallel, the program works on the supply side to build the capacity of WSMEs. The capacity-building training uses a funnel approach, which is a popular model for entrepreneurial support organizations and policymakers to offer some services to many participants, and then extend more intensive and expensive services to progressively smaller subsets. The funnel consisted of three main, procurement-focused interventions: i) short online masterclasses, offered to a large sample of firms; ii) bootcamps, comprising an online and an intensive in-person component, available to firms that complete the masterclasses and make the time commitment; and iii) mentoring, for a smaller number of "star suppliers", that complete both the masterclasses and the bootcamps, and are selected by the implementing team based on potential.

This funnel approach presents several challenges to the standard RCT set-up. First, aiming to serve a large number of firms in the first phase, coupled with the limited number of eligible WSMEs (typically requiring five or more employees), meant that there were insufficient firms for an oversubscription design and pure control group. Instead, the team worked to recruit 1,105 eligible WSMEs, then used the staggered roll-out of the program to conduct a phased-in RCT. Firms were randomly assigned to enter the funnel in three waves, each roughly six months apart. Impacts are then measured using a midline survey conducted approximately six months after the first wave was treated (with waves two and

[2] https://www.ifc.org/en/what-we-do/sector-expertise/gender/inclusive-supply-chains/sourcing2equal-program.

three serving as the control group), and an endline survey twelve months after the first wave and six months after the second wave were treated (with wave three serving as the control group). This design, of course, limits the ability to measure longer-term effects.

Second, incomplete take-up is a desired feature of the funnel approach, rather than an inconvenience to be minimized as in a standard RCT. The different stages of intervention self-select firms on effort, and reveal more information that the project team can use to ensure that scarce resources are spent on the firms they think are most likely to benefit. However, selective funneling reduces statistical power, and makes it harder to isolate which components of the bundled package had the most impact.

In addition to estimating the standard intent-to-treat (ITT) effect of the average effect of being offered an early starting place for the entire intervention funnel, we illustrate how progress can be made in unpacking the elements of the funnel through several additional estimates. First, we look at selection into the later stages, bootcamps and mentoring, and present correlational evidence of how outcomes vary with intervention participation. Second, and most standard, we calculate local average treatment effects (LATEs). The assumptions needed for these estimates are plausible for dealing with a lack of participation in the online masterclasses, but they become increasingly less credible for measuring impacts for the groups making it through to the bootcamps and mentoring. Third, and more novel, we illustrate the use of complier-weighted average treatment effects (Joffe and Brensinger, 2003; Coussens and Spiess, 2021), which put more weight on individuals that are predicted to be more likely to reach later stages.

The standard ITT results show impacts of the training on all but one of the pre-registered primary outcomes. These primary outcomes were designed to capture the outcomes that the project both targeted and thought it would be feasible to see change in after six and twelve months. Specifically, after six months the training produced impacts on an index of procurement knowledge (effect size 0.24 over a control mean of 3.65), an index of procurement readiness (effect size 0.28 over a control meant of 3.24), the proportion of WSMEs registering

with corporate portals (effect size 10 percentage points over a control mean of 53 percent) and submitting corporate bids (effect size 8 percentage points over a control mean of 43 percent). These six-month impacts are not significantly different when measured again twelve months after the intervention, and most remain significantly different from zero. In pooled estimates to improve power, the training also produces significant impacts on winning bids (5 percentage points over a control mean of 30 percent). The only primary outcome with a negative but insignificant coefficient is an index of attitudes toward procurement.

When examining heterogeneity by pre-specified firm characteristics, the training produced positive, significant impacts on winning corporate bids among firms that had some baseline knowledge (effect size nine percentage points over a control mean of 30 percent), or had won at least one corporate bid at baseline (effect size eight percentage points). Firms with no baseline experience significantly *decreased* their index of attitudes toward procurement (effect size -0.14 index points over a control mean of 3.69). This decrease was anticipated by the project team, and is consistent with a realistic reassessment of fit following the training, at least at these firms' current stage of development.

There was a steep funnel: of the 1,105 eligible firms, 612 attended the masterclass (55%), 399 the bootcamps (36%), and 120 the mentoring (11%). LATE estimates of the impact of attending at least the masterclass hence give impacts approximately 1.3 times as large as the ITTs. However, in order to believe a LATE for the effect of attending the bootcamp, or mentoring, we would need to assume no effect of the previous phases. The complier-weighted treatment effects (CWTEs) do not require the same exclusion restrictions, but instead require us to be able to predict which firms are more likely to make it through the different stages of the funnel. In practice, while some baseline variables do have predictive power, it is difficult to predict precisely which firms will make it to the later stages — underlining the value of self-selection in the funnel. This finding highlights a partial tension for implementation and evaluation: complier-weighted treatment effects will be more precise when compliance can be easily predicted; but if compliance could be easily predicted ex ante, there would be less

need for a funneling process. Nevertheless, our CWTEs do suggest larger impacts for the types of firms more likely to comply fully and to get to the mentorship stage. For example, we estimate a CWTE of 17.2 p.p. on registering in a corporate portal, compared to an ITT of 10.3 p.p.; and a CWTE of 7.3 p.p. on the likelihood of winning a bid, compared to an ITT of 4.8 p.p.

This paper contributes to three main literatures. First, a large literature has documented how women's firms lag behind their male-owned counterparts in profitability and size, and explores different explanations for these gaps (Aterido et al., 2013; World Bank Group, 2019; Jayachandran, 2021; Ubfal, 2026). Much of this work has focused on informal and micro firms, with relatively less evidence on WSMEs. The firms in our sample are already much larger and more profitable than most female-owned enterprises, with a median of six employees and potentially higher capacity for job creation including for women. Yet, less is known about what can be done to help these larger firms grow.

Second, we contribute to a literature on the use of training, mentoring, and consulting for firms, as surveyed by McKenzie et al. (2025). A key insight for our study is that other work in Colombia has shown how group-based consulting can have lasting impacts on Colombian SMEs (Iacovone et al., 2022, 2026). *Sourcing2Equal*'s bootcamps and part of the mentoring build on the use of group-based approaches to working with SMEs. Another insight is that mentoring is likely to be more effective when directed at advanced firms looking to innovate and do something new, where their local networks may not have sufficient expertise. *Sourcing2Equal*'s mentors are selected and coached to provide specialized knowledge on the procurement process that women are likely to lack, and find harder to learn on their own.

Third and most directly, we contribute to a new literature on causal impacts of interventions specifically designed to support SMEs' or WSMEs' participation in procurement. The most related work is Hjort et al. (2020), who conduct an experiment in Liberia. Their study invites 1,192 SMEs (average size four employees) to a seven-day "sellership" training program, focused on contracting and selling goods and services to large corporations or

governments. The authors find low take-up, with only 20% of firms attending. Firms that participate win three times as many formal contracts a year later, employ more workers, and are more likely to stay in operation after three years. These effects are concentrated in the upper quartile of firms, and are not disaggregated by gender.[3] The present study complements that work through the focus on WSMEs, and use of a funneled intervention.

A further related study is by Colonnelli et al. (2024), who conduct two experiments in Uganda with firms interested in doing business with the government. They provide biweekly personalized newsletters with procurement opportunities, and find that such information alone does not increase firms' participation in procurement. However, they find that firms are overly pessimistic about the integrity of procurement opportunities, and that providing information showing that firms have a fair opportunity does get more firms to engage in bidding. The intervention in the present study may provide a signal that WSMEs have a good opportunity in bidding, as it includes information stressing that some buyers are committed to increasing sourcing from WSMEs. However, we do not attempt to isolate this channel from information about broader requirements, opportunities, and ways to improve the quality of proposals.

2 Context and intervention

2.1 Procurement in Colombia

In Colombia, MSMEs are estimated to generate approximately 65% of employment and 40% of GDP (OECD, 2022). Altogether 1.7 million companies are formally registered, of which the overwhelming majority are microenterprises, with 4.3% classified as SMEs (Colombia, 2023). Of those SMEs, 23% are primarily owned by women (World Bank Group, 2024). WSMEs tend to be smaller than their male-owned counterparts. WSMEs also tend to op-

[3] A qualitative study by Siegrist (2022) suggests that when public procurement has open procedures with clear guidelines and streamlined application processes, women-led firms are more likely to apply and win.

erate in sectors such as education, hospitality and commerce, where there may be more limited opportunity for high-value corporate contracts than in male-dominated sectors, such as transport and logistics, mining, construction and technology. There is a lack of data on the participation of WSMEs in corporate procurement nationally. Interviews with buyers, WSME suppliers and business support organizations suggest participation is very low, following the global trend.

Processes and requirements vary across sectors and companies. Regarding contracting procedures, corporations use different methods — from single-sourcing to requests for proposals or requests for quotations — also depending on contract values and the goods or services to be provided. Regarding requirements, the most common are formal registration to operate, fiscal certificates, judicial records, anti-money laundering records, specific technical requirements for the goods or services to be provided, and proof of compliance with environmental, social and governance (ESG) standards. Some corporates may require a minimum number of years of supplier experience, depending on the procurement category and contract value. Microenterprises and new start-ups may face challenges in meeting these eligibility criteria. Meanwhile, (W)SMEs may face barriers more linked to having limited networks and information about opportunities and requirements, capacity to dedicate skilled resources to documenting the firm meets requirements and putting together bids, as well as potential constraints on accessing capital and labor to fulfil orders.

2.2 The *Sourcing2Equal* program

In 2019, IFC initiated the *Sourcing2Equal* program, which aims to facilitate and unlock market access for WSMEs by offering a variety of services to support increasing their participation and success in private sector procurement opportunities. *Sourcing2Equal* Colombia was implemented from 2023-26 and was part of a series of projects: *Sourcing2Equal* Kenya was implemented from 2021-24, and future *Sourcing2Equal* projects are currently being designed in countries including Mexico, Kenya for a second time, Nigeria and Bangladesh.

Sourcing2Equal Colombia operated at a national level, with supplier interventions concentrated in the major cities of Bogotá, Medellín and Cali. The program comprised three components: a corporate peer-learning platform on gender- inclusive sourcing for buyers; firm-level advisory support for buyers; and procurement-readiness capacity-building solutions for WSMEs. Under the capacity-building, WSMEs were invited to participate in a training. The training was designed by IFC not to replicate anything already available in the market, and to build on evidence about supporting WSMEs where available.

The training is intended to address multiple barriers, which may differ across firms and over time as firms become more engaged in procurement. One large component is information, for example general information on where to find opportunities and the types of processes and requirements used, information on specific technical topics, and information delivered via networking on when specific opportunities arise. Another dimension is beliefs on the likelihood of success, including via role modeling. Yet another is the skills to submit bids and deliver on orders. These barriers directly motivate the primary outcomes we pre-specify and test below.

2.3 Capacity-building intervention and funnel design

The WSME capacity-building was deliberately designed to employ a funnel approach, whereby firms were invited to participate in increasingly more intensive and costly levels of intervention, conditional on having completed the previous level. The three main levels of intervention comprised masterclasses, bootcamps, and mentoring. The purpose of the funnel was to focus the higher-resource interventions — bootcamps and mentoring, which could accommodate fewer participants due to budget constraints — on firms that had self-selected into attending previous interventions, thereby signaling a higher likelihood of actively participating. Participation in the earlier levels could also help the team to discern which firms might benefit most from the last intervention, mentoring, given it was selective not only on attendance but also on potential. The lower-resource interventions were also designed to

focus on foundational information and skills, allowing the higher-resource interventions with smaller numbers of participants to focus more efficiently on advanced skills and practical applications.[4]

The capacity-building interventions were implemented in three waves: wave one from November 2024-February 2025; wave two from May 2025-July 2025; and wave three from October 2025-December 2025. Each wave consisted of the masterclasses, followed a few weeks later by the bootcamps, and a couple of weeks later by the mentoring. The mentoring lasted up to four months in total, hence some of the later sessions concluded after the core dates of each wave. Figure 1 summarizes the design and timing. Activities were organized by city. Given the masterclasses were online, firms could participate in a session aimed at another city, if theirs was not convenient. The first and third wave of implementation offered all activities in each of Bogotá, Medellín and Cali. Wave two offered activities in Bogotá and Medellín only, due to the smaller population of WSMEs in Cali.

Online webinar masterclasses: 1 x 2-hour session. A few weeks in advance of their assigned wave, all firms in the wave were invited to attend a masterclass via email. Masterclasses were designed to reach a large pool of firms, including those with less experience. The sessions provided information focused on a general overview of corporate procurement opportunities, where they are advertised, processes and requirements — as well as light elements of role-modeling and networking. Altogether 612 firms participated of the 1,105 (55%) in the RCT sample — comprising 439 of 713 treatment firms (62%) during the treatment waves, and a further 172 firms during the control wave after the experiment ended.

[4]The project first undertook a design phase, consisting of preparation and facilitation of stakeholder workshops utilizing a design-thinking "Discover, Define, Develop, Deliver" methodology. Participants included WSMEs with no, little, and more substantial experience of attempting to participate in private sector procurement. The subsequent pilot phase, which the research team also attended, took place in Medellín in May-June 2024, trialing the masterclasses and bootcamps with 45 and 33 unique WSMEs respectively. Piloting enabled refinement of the curriculum and delivery methods, the selection of expert speakers and the exact format and timing of the sessions, monitoring and evaluation tools, the recruitment strategy, and estimates of the conversion rates from invitees to attendees of masterclasses and then to bootcamps.

Bootcamps: Two x half-day virtual sessions and 1 x two-day in-person workshop, total 25 contact hours over two weeks. Conditional on having attended at least 70% of a masterclass session, according to the webinar platform's data, firms were invited by email to register for the bootcamps. Firms that had signed up to a masterclass but had not attended, or had attended less than 30% of the session, were also emailed and given the opportunity to watch a recorded masterclass online and answer short debrief questions, before being able to register to participate. Only a handful of firms took this route. The bootcamps contained in-depth sessions on opportunities, case studies of successful WSMEs, legal considerations and standards, building business-to-business value propositions, working capital solutions, negotiation skills, understanding and planning for taxation, achieving quality order delivery, an autodiagnostic tool, developing and practising a business pitch, and advice from a panel of buyer representatives. Altogether 399 firms of the 1,105 in the RCT sample (36%) attended bootcamps, comprising 281 of the 713 treatment firms (39%) during the treatment waves, and 117 in the post-endline phase. In each wave, the bootcamp was followed up a few days later with the opportunity for firms to have their contact details shared with buyers in a directory. Most of the firms who participated in the bootcamps, 297, took this opportunity.[5]

Mentoring: three group sessions (onboarding, peer mentoring, final networking); three individual sessions (total ten hours including preparation and follow-up), over a period of up to four months. Firms that had participated in the bootcamps were invited to express interest in the mentoring and complete a short application form. Given the relatively small number of available slots (120), the *Sourcing2Equal* team then selected firms based on a scoring of the applications, weighting previous corporate clients, pitch quality, sector potential to continue doing business with corporate buyers, size, and social media presence. The mentoring developed objectives and a workplan customized to the needs of each firm. Core

[5]The buyer directory was opt-in via a form shared on email, so firms' non-participation may represent passive attrition rather than active opt-out. An in-person buy-supplier matchmaking event was later held in each city, with all three waves of bootcamp participants, allowing firms to present their offers to buyers one-on-one and explore opportunities. These matchmaking events were organized after the RCT endline, to avoid contamination across waves. Hence, any impact is not captured by the treatment effect estimates.

topics included identification and strategic analysis of new business opportunities, improving internal capacity, as well as marketing and other commercial and sales tasks. Altogether, 120 firms of 1,105 (11%) participated in the mentoring, of which 81 of the 713 firms in the treatment group (11%) during the experiment and a further 39 firms post-endline.

IFC hired Universidad EAFIT (Escuela de Administración, Finanzas e Instituto Tecnológico) to facilitate the design and delivery of the masterclasses and bootcamps, and CESA (El Colegio de Estudios Superiores de Administración) to facilitate the design and delivery of the mentoring. Both institutions are leading business schools, with large networks of professors and instructors, alumni in the business community, and affiliated businesses. The schools both have longstanding expertise in teaching business practices through virtual and in-person classes, mentoring, and other formats and events. The masterclasses and bootcamps featured expert speakers from IFC, EAFIT, and the business community. Mentors were corporate procurement or sustainability experts from large corporations or successful entrepreneurs in the business-to-business segment. Mentors were recruited by CESA in each of the three implementation cities, through their alumni and business community networks as well as social media. Further criteria included being in similar sub-sectors to the WSMEs who had been selected for mentoring, and being willing to commit to following the stipulated methodology and time requirement for the individual sessions.

Based on program data, we estimate the combined average cost of the intervention to be US$400 per firm invited to participate, as part of the pilot or any of the three waves of the RCT. Considering only those entrepreneurs who actually participated, we estimate an average cost of the combined masterclasses and bootcamps of US$628 per participant, and an average cost of the mentoring of US$819 per participant — implying an average cost of US$1,147 for firms who participated in both the masterclasses and bootcamps and the mentoring. For comparison, Hjort et al. (2020) report a training cost of US$1,740 per firm. Splitting the costs into fixed (predominantly curriculum development) and marginal (mainly delivery, with staff time and recruitment costs distributed across fixed and marginal), we

estimate a marginal cost for participants in the masterclasses and bootcamps of US$422, and in the mentoring of US$626. These figures imply that the marginal cost of an additional firm participating in the entire funnel of masterclass, bootcamp and mentoring was $1,048.

3 Sample, randomization and data

3.1 Sample

The research team worked with the project team to run an open call from June to September 2024, with the aim of registering as large a number as possible of interested and eligible WSMEs. WSMEs were recruited by the project team via channels including collaboration with chambers of commerce and NGOs, and social media campaigns via IFC's and EAFIT's accounts on LinkedIn and Meta platforms. Advertisements explained that the program would be free to participants. WSMEs were asked to complete a short online registration form, if they wanted to apply to be considered for the virtual masterclasses, in-person bootcamps in Bogotá, Medellín or Cali, and mentoring for star suppliers. The form also asked contact information, and the city in which the firm would prefer to attend in-person activities if invited. The open call was national, since the project team reasoned that some women entrepreneurs may be willing and able to travel to one of these three major cities for the in-person component, even if their firm was not based there. However, the collaboration especially with EAFIT based in Medellin, plus the natural geographic distribution of firms, meant that most WSMEs who registered were based in the three cities. The language did not promise WSMEs a place in any particular activity, and no dates were promised for any particular event.

The registration form also collected the information to determine if the firm would be classified as a WSME and hence eligible. We-Fi defines women-ownership as: either (i) being at least 51% owned by women or a woman; or (ii) meeting all the following three sub-criteria: (a) being at least 20% owned by a woman or women, (b) a woman is the most senior or

second-most senior executive, and (c) if a board exists, at least 30% of the board members are women. In the final RCT sample, after firms that were not women-owned or women-led had been excluded, 86% of firms meet the definition of being women-owned and 96% meet the definition of being women-led, with most firms meeting both definitions. The very high proportion of firms that are women-owned relieves any potential concerns that male-owned firms may report a woman as a senior executive to access programs targeted at women.

The project targeted formal, small and medium enterprises — with a provision to include larger microenterprises if they had some procurement experience. Informal firms and smaller or inexperienced microenterprises were considered ineligible — given that buyers always require firms to be formally registered, and often also require additional certifications, a minimum number of years of operation, and capacity to deliver at scale. Firms with fewer than five employees were categorized by the project as microenterprises, which is often used as a working definition in Colombia, while those with 5-10 employees were included alongside firms with 10-300 employees as SMEs. The form also asked with how many corporate clients the firm had previously contracted. Firms that had 3-4 employees, but had at least one prior corporate client, were categorized by the project as "eligible microenterprises" that could be invited to the activities (except the mentoring) alongside SMEs. Firms with two or fewer employees, or 3-4 employees but no prior experience, were considered ineligible.

Altogether, 1,478 firms registered. Fourteen firms were excluded on the basis of not meeting the criteria for being women-owned or women-led. Four firms were excluded for having more than 300 employees. A further 344 were excluded for being ineligible microenterprises. Of the remainder, 11 were excluded from the experimental sample since they indicated they could not attend in-person activities in Bogotá, Medellín or Cali — although they were separately invited by the project team to attend the online masterclasses only, if they desired. The final sample for the RCT was 1,105 women-owned-or-led firms, comprising 86% SMEs and 14% eligible microenterprises.

Firms also indicated their category of activity and specified their exact product or ser-

vice. Given the broad number of self-identified activity categories, we consolidated these into three sector categories: services, manufacturing, and agribusiness.[6] At baseline, 641 firms (58.0%) can be classified under services, 426 (38.6%) under manufacturing, and 36 (3.3%) under agribusinesses, while two did not specify their activity clearly. Firms under services are diverse, including providing logistics support, transport, and scientific and financial expertise. Likewise, manufacturers produce a vast array of products, from chocolates and candles to recyclable materials, electronic equipment and machinery. Altogether, 58.7% of firms reported ever having won corporate procurement contracts, comprising 62.9% of service providers, 53.1% of manufacturers, and 52.8% of agribusinesses. This breakdown is consistent with anecdotal evidence that procurement processes for goods are more complex and have more requirements than those for many services.

3.2 Randomization

The RCT design randomized eligible firms to be invited to participate in wave one, wave two (except for registrants indicating they would attend in Cali), or wave three. Figure 1 summarizes the RCT design visually. Individual-level computer randomization was used, stratified by the three implementation cities, being an SME or an eligible microenterprise, having won zero or some previous corporate bids, and having no/basic or some knowledge of procurement (self-reported at baseline). Baseline balance for a list of pre-specified variables, both variable-by-variable and in an overall joint F-test, is confirmed in Table 1. Balance at midline and endline respectively, using the same set of variables, is confirmed in Table A1.

In the days following the closure of the open call in September 2024, all firms were sent an email by the *Sourcing2Equal* team. The email informed firms that, due to high demand, they would be screened for eligibility and then allocated to a training cohort in a fair manner

[6]Some firms mentioned a product without specifying if they manufactured it or distributed it, in which case we classified them as manufacturers given this was more likely for firms seeking to participate in procurement. If a firm both manufactured a product and provided related services such as installation and training, we likewise characterized them as a manufacturer (examples included personal protective equipment, and air conditioning).

across cities. Approximately two weeks later, firms were re-contacted and informed of their eligibility and their training cohort assignment. Firms in wave one were sent invitations to training on specific dates, while firms in waves two and three were told of the date windows in which they would be invited, with calendar invitations being sent nearer the time.

To minimize the risk that firms in waves two or three would drop out from the intervention, or from responding to the subsequent midline and endline surveys, the project team ensured regular interactions with the firms. Monthly newsletters were sent out to all registered participants, unless they opted to unsubscribe. Newsletters included opportunities to participate in polls about the issues most important to firms, highlighting of other opportunities that were valuable but minimally related to the outcomes to be studied by the RCT (such as business card workshops and invitation to ESG events), and information on when the midline and endline surveys were being launched.

3.3 Data

In addition to the baseline registration form that women filled out online, the research team conducted midline and endline surveys. An independent survey firm administered the questionnaire, contacting respondents directly with an introductory text that stressed the firm's independence and the confidentiality of answers, to minimize response bias. All 1,105 initial eligible firms from the RCT sample were sought out at both midline and endline (even if they did not respond at midline). The research team also accessed de-identified monitoring and evaluation data collected by the project team, to measure participation.[7]

Figure 1 summarizes the timing of the midline and endline surveys visually. The midline survey was conducted in April 2025, after wave one had completed their masterclasses, bootcamps, and introductory mentoring sessions if applicable. Interviews were conducted over the phone, with a minimum of five attempts to reach each respondent, unless they

[7]Colombia's excellent national firm-level administrative data unfortunately cannot be used to study impacts on outcomes such as revenues here. Administrative outcomes are reported for each fiscal year, whereas this study's waves two and three are control groups and then treated all within the same fiscal year (2025).

answered the phone and indicated non-consent to participate.

The endline survey was conducted in October 2025, after wave two had completed the same activities. Interviews were again mainly conducted over the phone, with up to ten attempts to reach respondents, and follow-up on email in cases where phone numbers did not work or respondents did not pick up. In-person "mop-up" interviews were conducted in cases where respondents answered the phone or email and stated a preference to conduct the interview in person. In-person interviews were also conducted in a small number of cases where respondents did not answer the phone or email, or did not have a working telephone number or email address, but did have a physical address on file and consented when enumerators reached them in person.[8]

At both midline and endline, respondents were incentivized to participate in the survey by notices in the newsletters and consent script explaining that the data would help improve understanding of WSMEs' needs for future similar programs. Further, respondents were informed that all individuals completing the survey would be entered into a prize draw for one of five tablet computers per round, with the winners advertised in the following monthly newsletter (to assure respondents that the draw would indeed be conducted).

Despite these efforts, Table 2 shows that attrition was considerable. Altogether, 65% of the initial sample of 1,105 firms responded to the midline survey, and 57% to the endline survey. Similar studies in other settings report comparable attrition. For example, Hjort et al. (2020) have a similar baseline sample size of 1,192 firms, and resurvey 789 firms (66%) at first follow-up, and 628 (53%) at second follow-up. Similar or worse response rates are also seen in other established surveys of formal SMEs, as well as larger microenterprises and large firms. For example, Scur et al. (2024) document the World Management Survey achieving average response rates of 32% in countries where participation is not mandatory.

[8]In a small number of cases, a different senior female representative of the WMSME attended one activity compared to another — for example if the COO attended the masterclass but then the CEO attended the bootcamp. The survey firm was given a strict protocol of whom to contact within the company, prioritizing individuals who participated in the most advanced activities, to ensure they interviewed the individual most informed about the program and procurement activities.

Attrition in our study also differed by treatment assignment. While baseline interest in activities was balanced across waves (Table 1), with the phased design in this study, the survey firm found that the control waves were more eager to respond as they were awaiting treatment. At midline, 58 percent of firms assigned to wave one responded, 68 percent of those assigned to wave two, and 69 percent of those assigned to wave three. The difference between wave one and the other waves is significant, while the difference between waves two and three (both of whom were still awaiting treatment at the time) is not significant. At endline, 52 percent of firms assigned to wave one responded, 61 percent of wave two, and 58 percent of wave three. The difference between waves one and two is significant, but the difference between waves one and three is not significant, nor the difference between waves two and three. This pattern is the opposite to that normally observed in an RCT, where typically the treatment group stays more engaged than the control group.

Table 3 shows that firms responding at midline had fewer baseline employees and fewer baseline corporate clients, and were more likely to be in agriculture. Firms found at endline exhibited smaller differences compared to the baseline sample, and no individual variable was significantly different across baseline and endline. However, a joint F-test rejects that both the baseline and midline and the baseline and endline samples are identical on observable characteristics. Interacting treatment arms with baseline covariates, attrition is balanced on covariates for wave two at midline and endline and for wave three at midline, but the F-test for wave three at endline is significant. Nonetheless, Table A1 shows that the midline sample (N=715) and endline sample (N=627) remain balanced on observables across treatment arms. We employ several approaches to examine robustness to attrition in section 4.7.

3.4 Primary and secondary outcomes

Given the relatively short time-frame of 6-12 months between the intervention and surveys, we expected to observe impacts on short-to-medium-term outcomes, rather than outcomes such as firm growth and employment. The primary outcomes registered in the pre-analysis

plan were therefore procurement knowledge, attitudes and beliefs, registration in corporate supplier portals, submission and winning of corporate bids (see also Table 4).[9]

Procurement knowledge is measured as the sum of answers to four questions: i) a subjective question about self-assessed knowledge; then three questions with objectively right or wrong answers about ii) sources of procurement information, iii) types of procurement process, and iv) the definition of a value proposition.[10] Procurement attitudes (beliefs) are measured as the average of the responses to five items on a five-point Likert scale, where a higher score means a more positive attitude. The items are: i) I am confident that my firm can approach and engage with corporate buyers; ii) I am confident that my firm can successfully compete for and win corporate procurement contracts; iii) corporations are genuinely interested in contracting with WMSMEs for social reasons; iv) corporations are genuinely interested in contracting with WMSMEs for commercial reasons; and v) winning corporate contracts is about personal relations, and not about the quality of the proposal (reverse coded). Procurement readiness is measured as the average of the responses to six questions about the firm's activities in the last six months on a five-point Likert scale, where a higher score means more effort is made to be ready for procurement contracts. The items are: i) conducted market analysis or search focusing on corporate procurement opportunities; ii) improved understanding of the corporate procurement process; iii) discussed or interacted with new corporate buyers and explored potential business opportunities; iv) discussed or interacted with other women entrepreneurs to explore synergies or learnings regarding cor-

[9]Outcomes pre-registered as secondary included number of corporate bids submitted and won, revenues from corporate bids, and employees hired. It was anticipated that a longer timeline would be needed to show impacts, while WMSMEs bore any immediate fixed costs of engaging in more corporate procurement, and as corporate contracts started to accumulate. Further, these continuous outcomes are noisier in nature, and ex ante power calculations suggested only large effects would be detectable. It was also anticipated that the intervention was likely to produce positive spillovers into firms' ability to compete in other forms of procurement, but over a longer time-frame. Other pre-registered secondary outcomes were therefore submission and winning of bids to other MSMEs, and to public buyers (see also Table 5).

[10]A larger set of questions with objectively right or wrong answers was included at midline, but some appear to have been too complicated to answer over the phone (e.g., requiring multiple right answers without prompting). At endline, we therefore reduced the number of objective questions and simplified the way in which they were scored. We are able to apply the endline scoring near-perfectly to the midline data, so we create a preferred midline measure "knowledge 0-9" which matches the measure constructed for endline. We also construct "knowledge -1-12" as pre-specified only at midline, available on request.

porate procurement contracts; v) made changes to improve the preparation of offers or proposals; and vi) asked for and used feedback from previous tender rejections to improve future submissions.

The remaining primary outcomes are binary: registering in a corporate portal, submitting a bid to a corporate buyer, and winning a bid with a corporate buyer. These outcomes were all asked about the last six months, to align with the timeline between treatment waves and the surveys.

4 Results

4.1 Six-month and twelve-month impacts

Our preferred specification groups individuals by the length of time since their treatment. Let $Treat_{ist}$ be a binary variable indicating whether individual i in stratum s is assigned to be treated before the respective survey round t or not, so that it takes value 1 for those treated by that survey round, and 0 otherwise. Let us denote 0 as the baseline period, 1 as the midline period and 2 as the endline period. We run a stacked panel regression using the combined midline and endline data, and estimate equations for $t = 1, 2$, of the form:

$$Y_{ist} = \alpha + \delta_2 + \beta_6 6MonthTreat_{ist} + \beta_{12} 12MonthTreat_{ist} + \gamma Y_{is0} + \omega_s + \epsilon_{ist}. \quad (1)$$

Here β_6 gives the impact of being assigned to treatment for six months — which pools together the comparison i) at midline of wave one as treatment group to waves two and three as the control group, and ii) at endline of wave two as treatment group to wave three who remain as the control group. Meanwhile, β_{12} gives the impact of being assigned to the treatment for twelve months — which compares wave one to wave three at endline only. The regression controls for survey round fixed effects δ_2, the baseline value of Y_{i0} or a similar baseline variable where available, and clusters the standard errors at the firm level. Strata

ω_s are training city x firm size (SME vs eligible micro) x having some baseline procurement knowledge x having won at least one corporate bid at baseline.[11]

Table 4 reports the results for the primary outcomes. There are positive six-month impacts on the index of procurement knowledge (effect size 0.24 over a control mean of 3.65, p-value 0.016), the index of procurement readiness (effect size 0.28 over a control meant of 3.24, p-value < 0.01), the proportion of firms registering to portals (effect size 10 percentage points over a control mean of 53 percent, p-value 0.01) and submitting corporate bids (effect size eight percentage points over a control mean of 43 percent, p-value 0.008).

These impacts are not significantly different after twelve months — and remain significant for procurement readiness, registration to corporate portals and submitting corporate bids. However, the twelve-month estimates are less precise, given the identifying variation comes from the wave one versus wave three comparison at endline only, and the impacts for procurement knowledge become insignificant. The point estimate for the impact on procurement attitudes is negative at both six and twelve months, but is not significant. Table 4 also presents tests that the six-month and 12-month effects are the same ($\beta_6 = \beta_{12}$). The tests fail to reject equality for all of the primary outcomes, although the test for equality of the six- and twelve-month impacts on procurement readiness has a p-value of 0.10.

Online Appendix Table A2 shows that the impact on knowledge is driven both by self-assessed knowledge, and the test question on knowledge of sources of procurement information — with a smaller, insignificant increase in the test question on knowledge of procurement

[11]The pre-analysis plan specified that we would seek further to improve power and reduce any imbalances due to attrition by using post-double LASSO to select additional covariates from the following baseline list, partialling out the randomization strata and the lagged outcome variable where available: number of employees (winsorized at the 99th percentile), log income in 2023, age of the company (winsorized at the 99th percentile), previously registered in a corporate database, number of previous corporate database registrations (winsorized at the 99th percentile), level of previous procurement knowledge, has an existing corporate client, number of corporate clients (winsorized at the 99th percentile), income from procurement contracts above median, sector (dummies created for the three main sectors), dummies if the SMEs are primarily women-owned or women-led. However, based on recent literature about the relatively small precision gains of using post-double LASSO to select controls, we instead include the full list of these controls rather than relying on LASSO to select (Cilliers et al., 2024). Since the standard errors increase compared to the estimations with no controls, rather than the stated objective of increasing power, we present the version without controls as our preferred specification. Results are robust to including the full set of controls, see Table 10.

processes, and a smaller, insignificant decrease in the test question on knowledge of value propositions. Online Appendix Table A3 shows that improvements in the readiness index at six months come from every constituent question, except engagement with new corporate buyers. Point estimates for impacts on improving understanding of the procurement process and proposal preparation remain significant after twelve months. Point estimates for conducting market analysis, peer exchange with women entrepreneurs, and use of rejection feedback become smaller and insignificant — although they are not significantly different from the six-month estimates.

Online Appendix Table A4 shows that the insignificant decline in the attitudes index is in the context of very high control means for the confidence in engaging buyers and winning contracts (over 4 out of 5 in each case), and the beliefs that corporates are willing to contract with MSMEs for social and commercial reasons (over 3.6 out of 5 in each case), with a more neutral control mean for the belief that contracts depend on personal relations (2.5 out of 5). Significant reductions are seen in the two confidence questions, which may be consistent with some firms learning that procurement is not a good fit for them specifically (discussed in Section 4.4). There is a significant *improvement* in the belief about contracts depending on personal relations (reverse coded, implying this increase is desirable). That said, given the lower control mean for this belief, even the treatment group remain comparatively pessimistic about this need compared to beliefs about their abilities and corporates' demand.

Table 5 presents results for the secondary outcomes. For having submitted a bid to other MSMEs, the twelve-month impact is significant (a reduction of nine percentage points over a control mean of 74 percent) and we reject equality of six- and twelve-month impacts. This twelve-month impact suggests some substitution away from submitting bids to other MSMEs in the medium term, as firms increase submissions to corporates. The point estimate for having won MSME bids is similarly negative, but insignificant. The point estimates for the likelihood of having submitted or won public bids after six and twelve months are positive, but not significant.

We reject equality of six- and twelve-month impacts on the number of employees hired. The coefficient is much larger at twelve months (0.43 employees hired, over a control mean of 0.64), although it is not significant. Neither the number of corporate bids submitted nor won, nor revenue from corporate bids, show significant impacts; nor do we fail to reject that the six-month is equal to the twelve-month impact.

4.2 Pooled impacts

Given that almost all tests of equality of six- and twelve-month impacts fail to reject, as pre-specified we can also improve power further by estimating the stacked panel pooled-treatment-effects model:

$$Y_{ist} = \alpha + \delta_2 + \beta Treat_{ist} + \gamma Y_{is0} + \omega_s + \epsilon_{ist} \tag{2}$$

Here, β gives the average effect of being assigned to treatment over the two follow-up waves, pooling together the 6-month and 12-month effects.

Table A6 reports these results for the primary outcomes. Findings are highly consistent with the six- and twelve-month results. There are positive and highly significant impacts on the index of knowledge, the index of readiness, and the proportion of firms who have registered to corporate portals or submitted corporate bids in the last six months. The impact on having won bids becomes significant in the pooled specification: five percentage points, over a control mean of 30 percent.

4.3 What contracts do firms win?

Contracts won by the treatment group at endline had a median value of approximately US$24,000, and a mean value of approximately US$110,000, with a highly right-skewed distribution. We next examine the companies with whom firms report winning contracts in the last six months. At midline, 4.0% of the entire control group and 3.5% of the treatment

group report having won contracts with buyers participating in *Sourcing2Equal*, compared to 31% and 36% respectively who won contracts with any buyer (including participating buyers and other buyers). At endline, 2.8% of the control group and 3.8% of the treatment group report having won contracts from participating buyers in the last six months — of which a handful report having won multiple contracts — compared to 28% of the control group and 31% of the treatment group having won contracts with any buyer. Thus, around 90% of contracts won come from non-participating buyers, and the proportion of contracts coming from participating buyers is not systematically higher in the treatment group. This finding is in a sense unsurprising, given that fourteen (albeit large and well-known) buyers participated compared to the many corporate buyers in Colombia. Importantly, the finding implies that gains are transferrable beyond participating buyers. Nor are the effects driven by participating buyers reaching out to firms who chose to be listed in the supplier directory following the bootcamps. The contracts reported are also dispersed across a wide range of buyers.[12] Taken together, these results suggests that the training builds suppliers' capabilities that open a broad range of doors beyond the program's own buyer network.

The fact that the intervention increases firms' propensity to submit and (in the pooled specification) to win corporate bids, but not the number of bids submitted or won, may indicate enhanced efficiency for some participants. This pattern of results is consistent with some firms beginning to submit bids as a result of participating, with others who were already submitting bids reducing quantity in favor of more targeted or quality bids. We caveat though that the number of bids submitted and won are continuous and heavily right-skewed, resulting in confidence intervals that cannot rule out moderate positive impacts on these outcomes — in particular on the number of bids submitted.

Examples of contracts won by treated firms vary widely. For example, one WSME won a contract valued at approximately US$8,100 to supply digital marketing services to a fast-

[12]The research team initially planned to request procurement databases from participating buyers, and possibly large non-participating buyers, to match to the survey data to verify reports of submitting and winning bids. However, the wide dispersion in reported bids across non-participating buyers means such matching would not be useful.

moving consumer goods company. Another WSME successfully obtained a contract worth approximately US$21,000 to supply weight calibration services to a construction materials company. A third WSME secured an approximately US$36,000 contract to provide tax services to a bank. The fact that WSMEs report such granular details reduces our concern about potential experimenter demand effects in this self-reported variable.

4.4 Heterogeneity

We next present heterogeneity by pre-specified characteristics.

Firm size: Table 6 present the impacts from the pooled specification on primary outcomes, disaggregated by firm size. To recall, microenterprises comprise only 17% and 14% of the sample at midline and endline respectively, thus there is much lower power to detect impacts among this subsample. In general, the impacts for microenterprises are insignificant, but not significantly different from the significant impacts among SMEs. An exception is that microenterprises, despite their small sub-sample size, also exhibit a significant impact on registering in corporate portals (effect size 13 percentage points, over a control mean of 52 percent, p-value 0.057). This effect may in part reflect microenterprises having more portals to which they were not registered at baseline. While the same proportion (63%) of both microenterprises and SMEs were registered to portals at baseline, microenterprises were registered to on average 2.4 portals compared to 4.5 among SMEs.

Baseline knowledge: Table 7 presents impacts from the pooled specification disaggregated by baseline knowledge. In general, the treatment effects are not significantly different across those with no or basic baseline knowledge, versus moderate or more baseline knowledge. An exception is the impact on winning corporate bids — which is positive and significant for firms with higher baseline knowledge (nine percentage points, over a control mean of 30 percent, p-value 0.03), while it is zero for firms with lower baseline knowledge.

Baseline experience: Table 8 presents impacts from the pooled specification disaggregated by baseline experience — having won zero corporate bids, versus one or more

corporate bids. Here again, impacts on winning corporate bids are significant only for those with higher baseline experience (eight percentage points over the same control mean of 30 percent, p-value 0.04). Similarly, impacts on submitting bids are only significant for those with corporate clients at baseline (eleven percentage points, over a control mean of 56 percent). In contrast, firms with no baseline experience show a significant *decrease* in attitudes toward procurement reported above (-0.14 index points, over a control mean of 3.69, p-value <0.01). This finding was anticipated by the project team, and is consistent with a learning mechanism whereby less experienced firms perhaps realistically update their priors downwards — at least at their current stage of development. The attitudes index is significantly correlated with participation in procurement via registering to portals and submitting bids at endline, although we cannot confirm the direction of causality.[13]

4.5 Which barriers were overcome and which remain?

The impacts on knowledge and readiness are consistent with descriptive evidence from open-ended questions, where treated firms were asked to report what, if anything, they had changed in their business after participating in *Sourcing2Equal*.[14] Six months after their participation in the program, 32.2% of respondents mentioned changes to their strategy and sales pitch, for example improving their business-to-business value proposition. Internal process improvements were noted by 15.5%, such as strengthening capacity to fulfil larger orders. Improvements in ability to meet documentary and compliance requirement were referenced

[13] At endline, the correlation between the attitudes index and having registered to a portal in the last six months is 0.11 (p-value < 0.01) in the whole sample, or 0.14 (p-value < 0.01) in just the treatment group). The correlation between the attitudes index and having submitted a bid in the last six months is 0.11 (p-value < 0.01) in the whole sample, or 0.11 (p-value < 0.01) in just the treatment group.

[14] We used AI to identify the most commonly cited themes and lists of keywords relating to each theme. The LLM used was Claude Opus 4.5. The specific prompt was "Create a list of keywords for responses to changes in the WSME business. Only include observations for respondents who participated in the project. Categorize those into themes." We then reviewed, adjusted and consolidated manually. We then used Stata to categorize responses by these themes, again with manual review and adjustment. Responses were often counted under multiple categories, as many respondents noted more than one key change or interrelated changes. Similar to our preferred specification for estimating treatment effects, we segment this descriptive analysis of responses by the length of time since exposure to the intervention — allowing us to distinguish changes six months (wave one at midline and wave two at endline, N=459) and twelve months (wave one at endline, N=268) after treatment.

by 12.9%. In addition, 8.9% noted improved knowledge and information, especially in their ability to locate procurement opportunities. Meanwhile, 16.7% said they had not made changes. Consistent with our impact estimates staying constant or having (insignificantly) smaller point estimates after twelve months, self-reported changes are also consistent after twelve months, with a smaller proportion of respondents mentioning each type of change. Online Appendix Table A5 presents the full descriptive results.

The heterogeneity evidence suggests that the intervention helped firms with less baseline familiarity to obtain basic information and readiness — but did not get them the whole way to bidding and winning more contracts. Meanwhile, the intervention helped firms who were already acquainted with procurement to bid and win more, via various potential channels. The impacts on knowledge and readiness are still highly significant for the firms with more baseline knowledge and experience — as seen from the p-values in the final columns of Tables 7 and 8. We cannot rule out that information was still the binding constraint for these firms — if the additional knowledge that they acquired during treatment was what drove their increased bidding and winning. However, given that the bootcamps and mentoring also imparted skills, role modeling and networking, we also cannot rule out that any one of these elements was the binding constraint. It may well be that the binding constraints differed across different firms.

Mentors and mentees also documented their activities and completed a follow-up survey, providing richer information on how the intervention helped. For example, a firm that manufactures plastic products for civil works received mentoring to identify key performance indicators to demonstrate the company's capabilities to corporate buyers — while also strengthening its commercial image through social media, its website, and LinkedIn. The company successfully closed two new deals: one with a buyer in the higher education sector, and another with an organization in the social services and employee welfare sector. Meanwhile, a smaller manufacturer of corporate uniforms and workwear received mentoring to incorporate an environmental component to its value proposition for corporate buyers.

The mentor supported the entrepreneur through the supplier registration and onboarding process with a large company in the construction materials sector, from which the company received a positive response, and to set a goal of registering as a supplier to a major company in the beverage sector. Finally, a startup specializing in sustainability, digitalization, and data intelligence worked with its mentor on structuring a client engagement process — to diagnose client operations, design and implement customized digital solutions, train client personnel, and use business intelligence to identify inefficiencies and provide actionable recommendations. The start-up established client pilots as a mechanism to test and validate the new functionalities, and specific targets: fully implementing its solutions with at least 10 clients within six months, generating average cost savings of 10%, and achieving an average 15% improvement in clients' operational efficiency.

Nonetheless, firms reported that they continued to face challenges after completing their participation.[15] The most common barrier, cited by around a third of firms, was a mixture of skills and information — with firms repeatedly emphasizing that information about procurement opportunities is spread out, and that it is hard to know where to look. Related, a fifth of firms cited staff time and internal capacity, typically to search for opportunities and prepare proposals. Consistent with the quantitative survey results on the belief that contracts depend on personal relations, one in eight firms perceived a need to know personal contacts at corporations to get information, or be invited to submit, with some respondents perceiving a lack of transparency. Documentation and requirements were cited by around a fifth of firms, including stricter requirements set out by international buyers.

A similar proportion of firms also highlighted limited access to finance, particularly working capital, given the lagged nature of corporate payment terms. By endline, only 15% of women who reported having won contracts reported that they had accessed finance to support these contracts – comprising 8% accessing loans (formal or informal, with 3.2% reporting formal loans), and 6.5% a line of credit.

[15]The same AI-assisted method was used as in Section 4.1 for categorizing the changes firms made. Table A10 gives the full results.

4.6 Participation and complier-weighted treatment effects

Since the intervention as evaluated during the experimental timeframe is a bundle of first masterclasses, then bootcamps for many participants, then mentoring for a smaller number of selected participants, it is not possible to identify causally the separate impact of each activity. There was a steep funnel: of the 1,105 eligible firms, 612 attended the masterclass (55%), 399 the bootcamps (36%), and 120 the mentoring (11%). More broadly, we would expect impacts to be greater for firms who attend more of the program. We conduct several exercises to provide suggestive evidence as to which components may have played the most important roles.

First, Online Appendix Table A8 presents the mean baseline and endline outcomes by highest activity completion in the treatment groups: none, masterclass, bootcamp, or mentoring. Firms who went on to participate in no activity or just the masterclass appeared slightly worse at baseline than the control group in terms of mean outcomes. Those who went on to participate in the bootcamp (but not the mentoring) appeared approximately equal to the control group. Those who went on to participate in mentoring appeared much stronger at baseline than the control group, which was expected due to the program having selected mentoring participants based on potential observed after the bootcamp stage. At endline, treatment-group respondents who did not attend any activities appear weaker than the control group across all outcomes. Participants in only the masterclass appear slightly weaker than the control group, but this pattern may be attributable to the negative selection as observed from baseline data. Participants in up to the bootcamp appear slightly stronger than the control group, despite having appeared the same on observables at baseline. Participants in the mentoring appear much stronger than the control group across all outcomes, except attitudes. This pattern may in part reflect the positive selection designed by the program, and observed in the baseline data, or in part the more resource-intensive nature of the mentoring producing greater impact.

Second, we present local average treatment effects (LATEs) — instrumenting take-up of participating in at least the masterclass, at least the bootcamp, and at least the mentoring by treatment assignment (wave). Table 9 presents the results. The LATEs for participating in at least the masterclass increase the estimated effect sizes compared to the ITT by a factor of around 1.3, showing that firms that took part in at least part of the program were 13 percentage points more likely to register in a corporate portal, and 9 percentage points more likely to win a corporate bid. The exclusion restriction required for this estimate to be valid is the assumption that there is no impact of just being offered the program early, for firms that do not take part in any activities, which seems plausible. Columns 3 and 4 then make progressively stronger assumptions. Under the assumption that the two-hour masterclasses had no effect, Column 3 shows the impact of receiving the bootcamp. This assumption may be less plausible for outcomes around knowledge and attitudes, which a two-hour online masterclass may affect, but may still be plausible for outcomes involving procurement actions and success. Under this assumption, Column 3 suggests that firms that received at least the bootcamp had almost twice the impact as the ITTs of those who received just the masterclass in Column 1, including an 8 percentage point increase in the likelihood of winning a corporate bid. Conversely, the LATE estimates in Column 4 are very large but are unlikely to be valid causal estimates, since they require assuming that the only effects of the program are for firms that make it all the way through to the mentoring.

Third, rather than requiring the exclusion restrictions of LATE, in Table 9 we estimate compliance-weighted average treatment effects (CWTEs). The first step is predicting which baseline variables predict participation in different aspects of the program. We use a leave-one-out estimator, so that treated observations are not being used to predict their own status. Based on this prediction model, we obtain for each firm its predicted likelihood of taking part in each stage of the funnel, and use these predicted likelihoods as weights. The CWTEs then place more weight on the types of firms that are more likely to reach each stage of the funnel. If we were able to predict participation in each stage of the funnel well, this

exercise would then enable us to increase power and isolate better treatment effects for the types of firms likely to make it to each stage. However, in practice, baseline characteristics are only weak predictors of subsequent participation. Thus while we put more weight on units more likely to participate, the gains in precision are less than they would be with more accurate predictions. We see that the CWTEs for those participating in the masterclass are very similar to the ITTs, while the CWTEs for participating in the bootcamps and the mentorship are progressively higher. The CWTE for registering to a corporate portal for those units more likely to make it to the mentoring stage is 17.2 p.p., compared to an ITT of 10.3 p.p.; and for winning a bid is 7.3 p.p., compared to an ITT of 4.8 p.p. This pattern shows the potential of the CWTE approach to help isolate the effects for different subgroups, without the need for the unrealistic exclusion restrictions of LATE. However, it also highlights a partial tension for implementation and evaluation: complier-weighted treatment effects will be more precise when compliance can be easily predicted; but if compliance could be easily predicted ex ante, there would be less need for a funneling process. The complier-weighted treatment effects method is thus likely to be most informative when compliance is ex ante difficult to predict, but ex post correlates strongly with baseline characteristics.

4.7 Robustness

Another way to estimate the impacts, which we also pre-specified, is by midline and endline survey wave. Online Appendix Table A7 reports these results for the primary outcomes, which are highly similar to the six- and twelve-month results.

As noted, the attrition we observe is considerable and differential across treatment arms — although not differential by baseline characteristics, nor baseline characteristics interacted with treatment, leaving a balanced sample at midline and endline. We take several approaches to test robustness to attrition. First, we look at selection into attrition by baseline outcomes, to understand whether it is firms with more or less baseline knowledge, preparedness and experience that attrit. Table 3 shows that attrition at midline and endline

are not significantly predicted by baseline procurement knowledge (dummy or continuous level), baseline registration in corporate portals (dummy or number of databases), nor by having a corporate client at baseline. The number of corporate clients at baseline does negatively predict participation in the midline survey, with a smaller negative coefficient for participation in the endline survey that is not significant. Second, Table 10 shows that the main results are robust to controlling for the full set of baseline observable characteristics.

Third, Table 10 also reports Lee bounds for the main results. We follow standard approaches for Lee bounds, which selectively trim (or re-weight for ties) either the top or bottom observations in the group with lower attrition. For knowledge, the lower bound is slightly negative; whereas for all of the other primary outcomes where significant positive effects were reported, the lower bound is also positive. The lower bounds assume that the additional attritors in the treatment group all had very low levels of procurement knowledge and outcomes. As just described, we do not in fact observe selective attrition by baseline knowledge or being in a corporate database. As a result, being at the lower bounds for these outcomes is unlikely. The negative point estimate on procurement attitudes has a negative lower bound and positive upper bound, and we do not have baseline measures of attitudes to look at selective attrition. As a result, any impact on attitudes is more sensitive to assumptions about attrition.

Finally, given the phased nature of the design, we undertake checks for evidence of anticipation effects. If the control group reduced behaviors such as registrations and submissions, postponing them until after treatment, this would bias our estimated treatment effects upward. We believe it is more plausible that any anticipation effects went in the opposite direction — wherein the control group may have become more engaged in procurement via the program's newsletters, and already begun to increase their behaviors ahead of participating — biasing our estimated treatment effects downward.

Comparing the control means and baseline versus midline and endline is not very informative, since at baseline the survey asked about having submitted or won bids in the

last two years, whereas at midline and endline it asked about the last six months to align with treatment windows. Comparing outcomes among wave three respondents suggests no adjustment of behavior from being a control group far from treatment (at midline) to being a control group about to start treatment (at endline) — except attitudes appear to be worse at endline just prior to treatment, which if anything implies that the negative treatment effect may be attenuated. That said, comparisons of midline and endline control means may also be influenced by seasonality in the procurement cycle. At midline, wave two are significantly more likely to have submitted and won a bid than wave three (excluding Cali for comparability), suggesting that if anything control groups increase their bidding behavior prior to treatment — again, attenuating our positive observed treatment effects.

5 Conclusion

This study contributes to a relatively sparse evidence base on interventions to support SMEs, especially women-owned-or-led SMEs, and their participation in procurement. The RCT demonstrates that the project produced positive impacts on the outcomes it targeted: knowledge, readiness, registering to portals and submission of bids. Firms with baseline experience also became more likely to win bids. The fact that the vast majority of corporate bids won are with buyers who did not participate in the program suggests that the training builds suppliers' capabilities that open doors beyond the program's own buyer network. In contrast, firms with no baseline experience revised their attitudes toward procurement downward.

The phased-in design meant little chance of seeing impacts on longer-term outcomes such as revenues, profits, and jobs. It is also possible that impacts for firms with less baseline experience might take longer to materialize. A future study, in a context with a thicker market of WSMEs in sectors amenable to procurement, might permit registration of sufficient firms to generate oversubscription. Such a setting could then allow for a pure control group, to measure impacts over a longer time horizon. Future work could also test the

impact of different activities separately — for example, if there was large oversubscription of eligible firms at the margin of transition from masterclasses to bootcamps, or bootcamps to mentoring.

Given the remaining barriers that firms report facing, a complementary intervention might seek to consolidate information on procurement opportunities and requirements in one place, and to streamline processes. Linking WSMEs to access to finance as a complement to procurement training also appears critical. Testing the impact of such interventions remains an important topic for future research.

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Figure 1: Experimental design

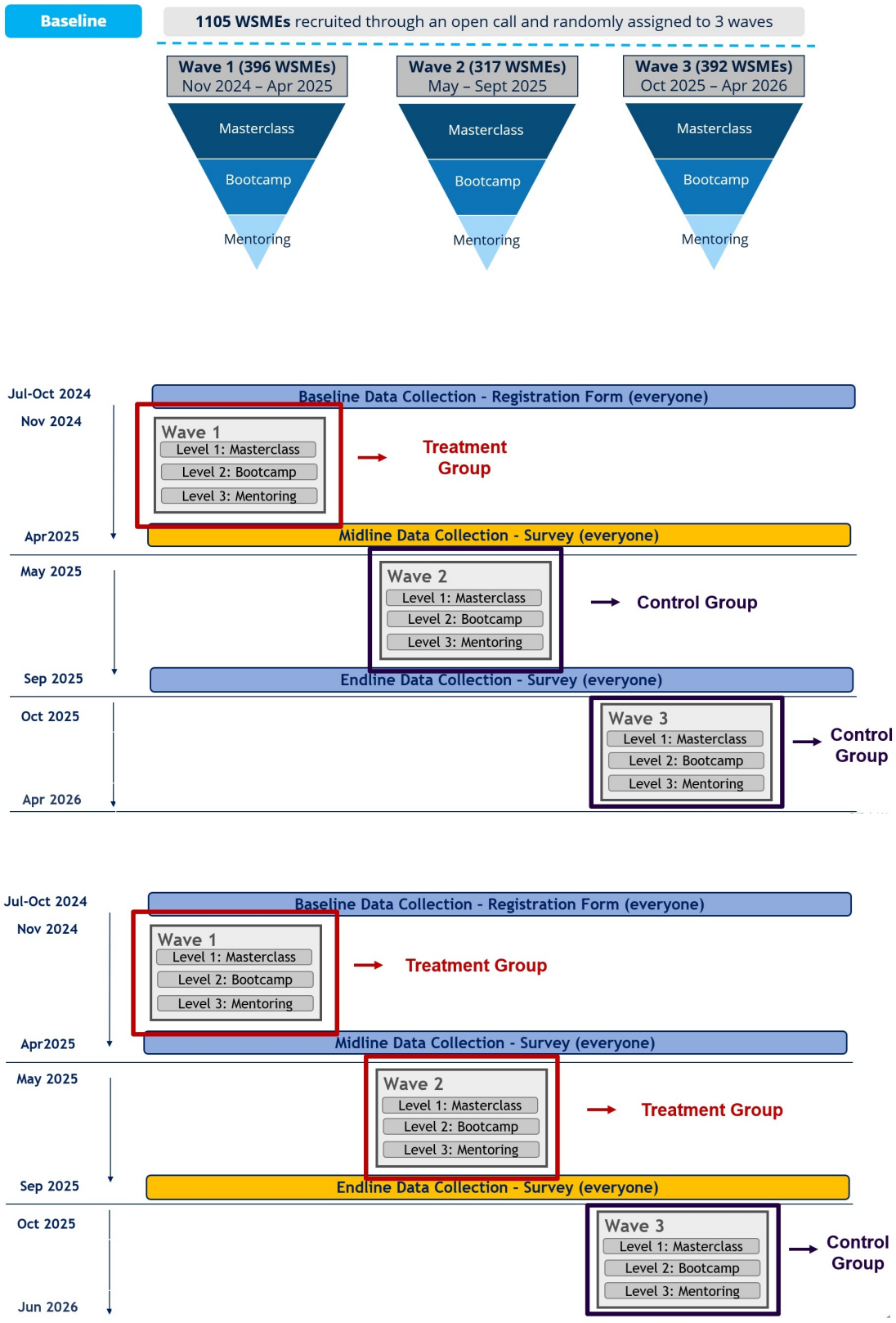

Table 1: Balance by Wave — Baseline

	Mean	Coeff./SE		
Variable	Wave 1	Wave 2	Wave 3	W2=W3 pval
SME	0.86	0.00	0.00	.
		(0.00)	(0.00)	
Employees (2023) (winsorized)	12.95	-0.74	-1.02	0.84
		(−0.04)	(−0.05)	
Income 2023 (log)	18.58	0.12	0.02	0.71
		(0.03)	(0.00)	
Company age (2023) (winsorized)	9.04	-0.21	-0.03	0.78
		(−0.02)	(0.00)	
Registered in corporate database	0.64	0.01	-0.02	0.48
		(0.01)	(−0.04)	
No of registered databases (2023) (Winsorized)	3.70	1.25*	0.49	0.31
		(0.14)	(0.05)	
Some procurement knowledge	0.55	0.00	0.00	.
		(0.00)	(0.00)	
Procurement knowledge (level)	1.87	-0.04	-0.01	0.65
		(−0.03)	(−0.01)	
Won procurement bids	0.58	0.00	0.00	.
		(0.00)	(0.00)	
Had corporate clients	0.88	0.01	0.00	0.71
		(0.03)	(0.01)	
No of corporate client (2023) (Winsorized)	16.77	-2.42	-3.16	0.74
		(−0.07)	(−0.09)	
Above median procurement income (2023)	0.48	0.04*	0.03	0.60
		(0.07)	(0.05)	
Sector: Manufacturing	0.40	-0.01	-0.03	0.58
		(−0.02)	(−0.06)	
Sector: Agriculture	0.04	-0.02	-0.00	0.22
		(−0.09)	(0.00)	
Sector: Services	0.56	0.03	0.03	0.93
		(0.06)	(0.07)	
Women own more than 51%	0.86	0.01	0.00	0.77
		(0.03)	(0.01)	
Women-led firm	0.96	-0.01	-0.02	0.45
		(−0.02)	(−0.08)	
Interest: Masterclass	0.74	-0.01	0.05	0.12
		(−0.01)	(0.11)	
Interest: Bootcamps	0.73	-0.03	0.00	0.32
		(−0.07)	(0.01)	
Interest: Mentoring	0.79	-0.04	-0.00	0.22
		(−0.10)	(0.00)	
Joint F test		F= 0.73	F= 0.73	F= 0.60
		(p=0.799)	(p=0.797)	(p=0.977)
Observations	396	317	392	

Notes: Baseline was conducted in June-September 2024. After baseline, participants were randomly assigned to three waves, which were treated in phases. Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 2: Attrition by Wave

Variable	(1) Total Mean/(SE)	(2) Wave 1 Mean/(SE)	(3) Wave 2 Mean/(SE)	(4) Wave 3 Mean/(SE)	(2)-(3) Mean difference	(2)-(4) Pairwise t-test Mean difference	(3)-(4) Mean difference
Found at midine	0.647	0.581	0.675	0.691	-0.094**	-0.111***	-0.016
	(0.014)	(0.025)	(0.026)	(0.023)			
Found at endline	0.567	0.520	0.609	0.582	-0.089**	-0.061	0.027
	(0.015)	(0.025)	(0.027)	(0.025)			
Number of observations	1105	396	317	392	711	786	709

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 3: Predictors of Attrition

		Found at		
Baseline Characteristic	Mean	Midline Coeff.	Endline Coeff.	Mid=End pval
SME	0.86	0.00	0.00	.
		(0.00)	(0.00)	
Employees (2023) (winsorized)	12.20	-3.23**	-1.77	0.36
		(−0.19)	(−0.09)	
Income 2023 (log)	18.61	-0.12	0.28	0.14
		(−0.03)	(0.07)	
Company age (2023) (winsorized)	9.00	-0.21	0.74	0.09
		(−0.02)	(0.09)	
Registered in corporate database	0.63	0.04	0.00	0.28
		(0.08)	(0.01)	
No of registered databases (2023) (Winsorized)	4.17	-0.95	-0.87	0.91
		(−0.11)	(−0.09)	
Some procurement knowledge	0.54	0.00	0.00	.
		(0.00)	(0.00)	
Procurement knowledge (level)	1.85	-0.05	-0.02	0.53
		(−0.04)	(−0.01)	
Won procurement bids	0.59	0.00	0.00	.
		(0.00)	(0.00)	
Had corporate clients	0.88	-0.00	0.01	0.59
		(−0.00)	(0.03)	
No of corporate client (2023) (Winsorized)	15.19	-6.03**	-2.35	0.12
		(−0.22)	(−0.06)	
Above median procurement income (2023)	0.50	0.01	0.02	0.63
		(0.02)	(0.04)	
Sector: Manufacturing	0.39	-0.03	-0.02	0.69
		(−0.06)	(−0.03)	
Sector: Agriculture	0.04	0.04***	0.01	0.05
		(0.18)	(0.07)	
Sector: Services	0.58	-0.01	0.01	0.65
		(−0.02)	(0.01)	
Women own more than 51%	0.86	-0.02	0.01	0.20
		(−0.06)	(0.03)	
Women-led firm	0.95	0.00	-0.00	0.91
		(0.00)	(−0.00)	
Joint F test		F= 4.49	F= 14.07	
		(p=0.000)	(p=0.000)	
Extension testing for differential attrition by treatment arm				
Wave 2 × covariates		F= 0.53	F= 0.70	
		(p=0.934)	(p=0.793)	
Wave 3 × covariates		F= 1.04	F= 2.03	
		(p=0.415)	(p=0.009)	
Observations		1,105	1,105	

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 4: Primary Outcomes — 6-vs-12-month

	6 mths		12 mths			
Outcome	Control Mean (1)	T Coeff. (2)	Control Mean (3)	T Coeff. (4)	N (5)	6=12mth pval (6)
Procurement Knowledge (0-9)	3.65 (1.78)	0.24** (0.10)	4.55 (1.55)	0.17 (0.14)	1,342	0.63
Procurement Attitudes (1-5)	3.65 (0.56)	-0.05 (0.03)	3.55 (0.56)	-0.08 (0.06)	1,338	0.48
Procurement Readiness (1-5)	3.24 (0.89)	0.28*** (0.06)	3.30 (0.91)	0.15* (0.09)	1,333	0.10
Registered to corporate portal in last 6m$^+$	0.53 (0.50)	0.10*** (0.03)	0.52 (0.50)	0.10** (0.05)	1,335	0.98
Submit corporate bid in last 6m$^+$	0.43 (0.50)	0.08*** (0.03)	0.43 (0.50)	0.07* (0.04)	1,315	0.93
Won corporate bid in last 6m$^+$	0.30 (0.46)	0.04 (0.03)	0.29 (0.45)	0.06 (0.04)	1,315	0.73

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated for six months and Waves 2 and 3 are control. At endline, Wave 1 is treated for 12 months, wave 2 is treated for six months, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. +: ANCOVA regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 5: Secondary Outcomes — 6-vs-12-month

	6 mths		12 mths			
Outcome	Control Mean (1)	T Coeff. (2)	Control Mean (3)	T Coeff. (4)	N (5)	6=12mth pval (6)
Corporate bids submit in last 6m(#)$^{+}$	4.43 (18.69)	-0.49 (0.91)	3.57 (11.69)	-0.47 (1.14)	1,307	0.98
Corporate bids won in last 6m(#)$^{+}$	1.40 (5.25)	-0.04 (0.28)	1.22 (4.25)	0.17 (0.46)	1,296	0.56
Corp bids revenue in last 6m($10k$) $^{+}$	2.02 (9.53)	0.39 (0.54)	2.23 (11.88)	1.69 (1.07)	1,208	0.23
Employees hired in last 6m(#)	0.82 (2.89)	-0.04 (0.21)	0.64 (2.66)	0.43 (0.32)	1,295	0.08
Submitted MSME bids in last 6m	0.72 (0.45)	-0.01 (0.03)	0.74 (0.44)	-0.09** (0.04)	1,269	0.03
Won MSME bids in last 6m	0.70 (0.46)	-0.03 (0.03)	0.58 (0.49)	-0.06 (0.04)	1,010	0.44
Submitted public bids in last 6m	0.24 (0.43)	0.02 (0.03)	0.24 (0.43)	0.05 (0.04)	1,268	0.51
Won public bids in last 6m	0.14 (0.34)	0.03 (0.02)	0.15 (0.36)	0.02 (0.03)	1,268	0.80

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated for six months and Waves 2 and 3 are control. At endline, Wave 1 is treated for 12 months, wave 2 is treated for six months, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. # denotes the number of bids and employees respectively. +: ANCOVA regression estimates for outcomes captured at baseline. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 6: Pooled Sample Heterogeneity : Firm Size

Outcome	Coeff. Treatment	SME	Interaction	Control	N	pval (T + Int)
	(1)	(2)	(3)	(4)	(5)	(6)
Procurement Knowledge (0-9)	0.12	0.02	0.11	3.37	1,342	0.03
	(0.23)	(0.18)	(0.25)	(1.71)		
Procurement Attitudes (1-5)	0.01	0.07	-0.07	3.69	1,338	0.07
	(0.08)	(0.05)	(0.09)	(0.54)		
Procurement Readiness (1-5)	0.15	-0.11	0.10	3.19	1,333	0.00
	(0.13)	(0.11)	(0.14)	(0.89)		
Registered to corporate portal in last 6m^{+}	0.14**	0.00	-0.05	0.52	1,335	0.01
	(0.07)	(0.05)	(0.08)	(0.50)		
Submit corporate bid in last 6m^{+}	0.01	0.05	0.08	0.42	1,315	0.00
	(0.07)	(0.05)	(0.08)	(0.49)		
Won corporate bid in last 6m^{+}	-0.02	-0.00	0.07	0.30	1,315	0.06
	(0.06)	(0.05)	(0.07)	(0.46)		

Notes: "SME" denotes a baseline firm size of 5 or more employees (as opposed to 3-4 employees, among eligible micro firms). "Interaction" represents the variable $Treatment * SME$. Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. +: ANCOVA Regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 7: Pooled Sample Heterogeneity : Some Procurement Knowledge

Outcome	Coeff.					
	Treatment	Some Proc. Knowledge	Interaction	Control	N	pval (T + Int)
	(1)	(2)	(3)	(4)	(5)	(6)
Procurement Knowledge (0-9)	0.23*	0.35***	-0.00	3.37	1,342	0.08
	(0.14)	(0.12)	(0.18)	(1.71)		
Procurement Attitudes (1-5)	-0.07	0.09*	0.03	3.69	1,338	0.36
	(0.05)	(0.04)	(0.07)	(0.54)		
Procurement Readiness (1-5)	0.27***	0.30***	-0.04	3.19	1,333	0.00
	(0.08)	(0.08)	(0.11)	(0.89)		
Registered to corporate portal in last 6m$^+$	0.08*	0.07*	0.05	0.52	1,335	0.00
	(0.04)	(0.04)	(0.06)	(0.50)		
Submit corporate bid in last 6m$^+$	0.04	0.12***	0.06	0.42	1,315	0.01
	(0.04)	(0.04)	(0.05)	(0.49)		
Won corporate bid in last 6m$^+$	-0.00	0.09**	0.09*	0.30	1,315	0.02
	(0.04)	(0.04)	(0.05)	(0.46)		

Notes: "Some procurement knowledge" denotes a baseline response of some or more procurement knowledge at baseline (as opposed to no or basic knowledge). "Interaction" represents the variable $Treatment * Someprocurementknowledge$. Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. +: ANCOVA Regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 8: Pooled Sample Heterogeneity: Procured a Corporate Client

	Coeff.					
Outcome	Treatment	Won Proc Bids	Interaction	Control	N	p-val (T + Int)
	(1)	(2)	(3)	(4)	(5)	(6)
Procurement Knowledge (0-9)	0.06*	0.36***	0.27	3.37	1,342	0.01
	(0.14)	(0.12)	(0.18)	(1.71)		
Procurement Attitudes (1-5)	-0.14***	-0.01*	0.14**	3.69	1,338	0.98
	(0.05)	(0.05)	(0.07)	(0.54)		
Procurement Readiness (1-5)	0.18**	0.27***	0.10	3.19	1,333	0.00
	(0.09)	(0.08)	(0.11)	(0.89)		
Registered to corporate portal in last 6m$^+$	0.10**	0.14***	0.01	0.52	1,335	0.01
	(0.05)	(0.04)	(0.06)	(0.50)		
Submit corporate bid in last 6m$^+$	0.02	0.14***	0.09*	0.42	1,315	0.00
	(0.04)	(0.05)	(0.05)	(0.49)		
Won corporate bid in last 6m$^+$	-0.00	0.25***	0.08*	0.30	1,315	0.04
	(0.03)	(0.03)	(0.05)	(0.46)		

Notes: "Procured a corporate client" denotes a baseline response of having won at least one bid with a corporate in the past. "Interaction" represents the variable $Treatment * Procuredacorporateclient$. Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. +: ANCOVA Regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 9: Primary Outcomes — ANCOVA vs LATE vs CWTE (Pooled Sample)

	ANCOVA*	LATE			CWTE			
			Participated			Participated		
Outcome	T Coeff.	Masterclass	Bootcamp	Mentorship	Masterclass	Bootcamp	Mentorship	N
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Procurement Knowledge (0-9)	0.224**	0.275**	0.377**	1.483**	0.256***	0.262***	0.262**	1,342
	(0.095)	(0.115)	(0.155)	(0.610)	(0.097)	(0.101)	(0.125)	
Procurement Attitudes (1-5)	-0.055	-0.067	-0.091	-0.360	-0.056	-0.061*	-0.061	1,338
	(0.035)	(0.042)	(0.058)	(0.233)	(0.035)	(0.036)	(0.041)	
Procurement Readiness (1-5)	0.246***	0.301***	0.410***	1.614***	0.257***	0.270***	0.308***	1,333
	(0.056)	(0.067)	(0.090)	(0.366)	(0.056)	(0.058)	(0.075)	
Registered to corporate portal in last 6m$^+$	0.103***	0.126***	0.173***	0.677***	0.117***	0.129***	0.172***	1,335
	(0.029)	(0.036)	(0.048)	(0.194)	(0.030)	(0.031)	(0.037)	
Submit corporate bid in last 6m$^+$	0.075***	0.092***	0.126***	0.491***	0.083***	0.089***	0.118***	1,315
	(0.028)	(0.034)	(0.047)	(0.183)	(0.029)	(0.030)	(0.037)	
Won corporate bid in last 6m$^+$	0.048*	0.058*	0.080*	0.316*	0.051*	0.050*	0.073*	1,315
	(0.027)	(0.033)	(0.045)	(0.174)	(0.028)	(0.030)	(0.038)	

Notes: +: ANCOVA Regression estimates for outcomes captured at baseline. LATE estimates instrument participation by treatment assignment. CWTE estimates predict participation using baseline observables and baseline analogues of the outcome variables, then reweight observations according to their predicted probability of participation. Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Baseline obserables include numbers of employees, company age, income, corporate database registration, number of databases registered in, number of procured clients, income made form procurement, having some procurement knowledge, women led vs women owned, and sector. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table 10: Primary Outcomes — 6-vs-12-month — Robustness

	6 mths				12 mths				
Outcome	Control Mean	T Coeff. *(no controls)*	T Coeff. *(with controls)*	Lee Bounds	Control Mean *(no controls)*	T Coeff. *(no controls)*	T Coeff. *(with controls)*	Lee Bounds	N *(no controls)*
	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
Procurement Knowledge (0-9)	3.65	0.24**	0.23**	[-0.05,0.41***]	4.55	0.17	0.16	[-0.09,0.32**]	1,342
	(1.78)	(0.10)	(0.10)		(1.55)	(0.14)	(0.14)		
Procurement Attitudes (1-5)	3.65	-0.05	-0.05	[-0.16***,0.07**]	3.55	-0.08	-0.08	[-0.16***,-0.02]	1,338
	(0.56)	(0.03)	(0.03)		(0.56)	(0.06)	(0.06)		
Procurement Readiness (1-5)	3.24	0.28***	0.26***	[0.08,0.44***]	3.30	0.15*	0.15*	[0.01,0.26***]	1,333
	(0.89)	(0.06)	(0.05)		(0.91)	(0.09)	(0.08)		
Registered to corporate portal in last 6m^{+}	0.53	0.10***	0.10***	[0.04,0.16***]	0.52	0.10**	0.10**	[0.06,0.14***]	1,335
	(0.50)	(0.03)	(0.03)		(0.50)	(0.05)	(0.05)		
Submit corporate bid in last 6m^{+}	0.43	0.08***	0.07***	[0.03,0.14***]	0.43	0.07*	0.08*	[0.04,0.12***]	1,315
	(0.50)	(0.03)	(0.03)		(0.50)	(0.04)	(0.04)		
Won corporate bid in last 6m^{+}	0.30	0.04	0.04	[0.01,0.12***]	0.29	0.06	0.06	[0.03,0.12***]	1,315
	(0.46)	(0.03)	(0.03)		(0.45)	(0.04)	(0.04)		

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated for six months and Waves 2 and 3 are control. At endline, Wave 1 is treated for 12 months, wave 2 is treated for six months, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. +: ANCOVA Regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Controls include baseline numbers of employees, company age, income, corporate database registration, number of databases registered in, number of procured clients, income made form procurement, having some procurement knowledge, women led vs women owned, and sector. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

A Online Appendix

Table A1: Balance by Wave —- Midline & Endline

	Midline				Endline			
	Mean	Coeff.			Mean	Coeff.		
Variable	Wave 1	Wave 2	Wave 3	W2=W3 pval	Wave 1	Wave 2	Wave 3	W2=W3 pval
SME	0.83	0.00	0.00	.	0.86	0.00	0.00	.
		(0.00)	(0.00)			(0.00)	(0.00)	
Employees (2023) (winsorized)	12.00	-1.63	-2.01	0.78	11.59	-0.15	-0.19	0.98
		(−0.09)	(−0.12)			(−0.01)	(−0.01)	
Income 2023 (log)	18.61	-0.02	-0.27	0.49	18.62	0.12	0.23	0.74
		(−0.00)	(−0.07)			(0.03)	(0.06)	
Company age (2023) (winsorized)	8.39	0.18	0.60	0.61	8.92	-0.04	1.12	0.20
		(0.02)	(0.07)			(−0.00)	(0.13)	
Registered in corporate database	0.66	-0.00	-0.05	0.22	0.62	0.04	0.02	0.61
		(−0.00)	(−0.11)			(0.09)	(0.04)	
No of registered databases (2023) (Winsorized)	3.53	1.18	-0.00	0.17	3.52	1.51	-0.10	0.06
		(0.14)	(−0.00)			(0.18)	(−0.01)	
Some procurement knowledge	0.53	0.00	0.00	.	0.55	0.00	0.00	.
		(0.00)	(0.00)			(0.00)	(0.00)	
Procurement knowledge (level)	1.79	0.01	-0.01	0.85	1.84	0.02	0.02	0.92
		(0.00)	(−0.00)			(0.01)	(0.02)	
Won procurement bids	0.57	0.00	0.00	.	0.61	0.00	0.00	.
		(0.00)	(0.00)			(0.00)	(0.00)	
Had corporate clients	0.88	0.00	-0.01	0.75	0.86	0.03	0.04	0.70
		(0.00)	(−0.02)			(0.10)	(0.13)	
No of corporate client (2023) (Winsorized)	13.38	-0.02	-1.78	0.44	13.78	1.49	-0.82	0.39
		(−0.00)	(−0.07)			(0.06)	(−0.03)	
Above median procurement income (2023)	0.48	0.02	0.01	0.76	0.52	0.01	-0.01	0.45
		(0.04)	(0.02)			(0.02)	(−0.02)	
Sector: Manufacturing	0.38	-0.01	-0.00	0.80	0.38	-0.01	0.03	0.41
		(−0.02)	(−0.00)			(−0.03)	(0.06)	
Sector: Agriculture	0.06	-0.04	-0.01	0.18	0.05	-0.02	-0.02	0.72
		(−0.17)*	(−0.05)			(−0.12)	(−0.09)	
Sector: Services	0.56	0.05	0.02	0.42	0.57	0.04	-0.01	0.34
		(0.11)	(0.03)			(0.08)	(−0.02)	
Women own more than 51%	0.84	0.02	0.02	0.93	0.85	0.01	0.02	0.79
		(0.06)	(0.05)			(0.03)	(0.05)	
Women-led firm	0.96	-0.01	-0.03	0.35	0.96	-0.01	-0.02	0.59
		(−0.02)	(−0.11)			(−0.03)	(−0.09)	
Interest: Masterclass	0.74	0.01	0.05	0.24	0.76	-0.00	0.07	0.07
		(0.02)	(0.13)			(−0.01)	(0.18)*	
Interest: Bootcamps	0.76	-0.05	-0.00	0.26	0.77	-0.05	0.01	0.19
		(−0.12)	(−0.01)			(−0.12)	(0.01)	
Interest: Mentoring	0.82	-0.07	-0.01	0.14	0.82	-0.07	-0.00	0.10
		(−0.17)*	(−0.03)			(−0.17)*	(−0.00)	
Joint F test		F= 0.72	F= 0.80	F= 0.66		F= 0.51	F= 0.92	F= 0.73
		(p=0.812)	(p=0.719)	(p=0.950)		(p=0.959)	(p=0.553)	(p=0.890)
Observations	230	214	271		206	193	228	

Notes: Baseline was conducted in June-September 2024. After baseline, participants were randomly assigned to three waves, which were treated in phases. +: Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A2: 6-vs-12 months outcomes - knowledge

	6 mths		12 mths			
Outcome	Control Mean	T Coeff.	Control Mean	T Coeff.	N	6=12mth pval
	(1)	(2)	(3)	(4)	(5)	(6)
Self-assesed knowledge (0-2)	0.22	0.15***	0.29	0.12**	1,337	0.62
	(0.48)	(0.03)	(0.54)	(0.05)		
Procurement Sources (0-3)	1.42	0.11**	1.49	0.10	1,338	0.94
	(0.88)	(0.05)	(0.87)	(0.08)		
Procurement Process (0-1)	0.43	0.03	0.52	0.05	1,342	0.65
	(0.50)	(0.03)	(0.50)	(0.05)		
Value Proposition (0-3)	1.59	-0.03	2.26	-0.08	1,338	0.48
	(1.03)	(0.05)	(0.69)	(0.07)		

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated for six months and Waves 2 and 3 are control. At endline, Wave 1 is treated for 12 months, wave 2 is treated for six months, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. The table reports every constituent question used to construct the Knowledge Index, along with the corresponding score range (shown in parentheses). For questions with multiple correct responses, each correct option selected was awarded one point. No points were deducted for selecting incorrect options. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$. **Questions 1:** What is your company's current knowledge of corporate procurement processes, requirements and opportunities (excluding the public sector)? (None, Basic, Moderate, Good, Expert/Advanced; **Questions 2:** Can you please tell me , what are the top 3 most reliable sources of information to look for potential corporate procurement processes? Options: Networking, Business rounds (networking), Corporate web pages, Newspapers, Procurement aggregation websites, e.g., LicitacionesColombia.co. Correct answers: Networking, Corporate web pages, Procurement aggregation websites, e.g., LicitacionesColombia.co; **Questions 3:** Can you please tell me what the most likely type of process a company might conduct for a corporate procurement process valued in COP $2 thousand million pesos? There is one correct answer, please select it. Options: Exclusive vendor selection process, Open competitive procurement process, Closed process, Direct procurement process. Correct option: Open competitive procurement process; **Questions 4:** What should be the primary focus when crafting a relevant B2B value proposition? Note: B2B is understood as a value proposition for business customers. There are 3 correct answers. Please select the three that apply. Options: Clients' needs and requirements, Market share analysis, Clients' regulations, Competitors' marketing strategies, Own company goals and objectives. Correct options: Clients' needs and requirements, Clients' regulations, Own company goals and objectives.

Table A3: 6-vs-12 months outcomes - Readiness

	6 mths		12 mths			
Outcome	Control Mean	T Coeff.	Control Mean	T Coeff.	N	6=12mth pval
	(1)	(2)	(3)	(4)	(5)	(6)
Market analysis for procurement opportunities	3.07	0.21***	3.11	0.14	1,333	0.51
	(1.32)	(0.08)	(1.28)	(0.12)		
Understanding of procurement process	3.38	0.50***	3.52	0.32***	1,333	0.05
	(1.12)	(0.07)	(1.07)	(0.10)		
Engagement with new corporate buyers	3.52	0.03	3.52	0.02	1,333	0.87
	(1.20)	(0.07)	(1.17)	(0.11)		
Peer exchange with women entrepreneurs	3.16	0.44***	3.22	0.18	1,333	0.03
	(1.37)	(0.09)	(1.35)	(0.12)		
Improvements to proposal preparation	3.75	0.20***	3.77	0.20**	1,333	0.96
	(1.10)	(0.07)	(1.06)	(0.10)		
Use of rejection feedback	2.58	0.28***	2.65	0.06	1,333	0.12
	(1.57)	(0.10)	(1.60)	(0.15)		

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated for six months and Waves 2 and 3 are control. At endline, Wave 1 is treated for 12 months, wave 2 is treated for six months, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. The table reports every constituent question used to construct the Readiness Index, on a range of 1-5. Scale range: 1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A4: 6-vs-12 months outcomes - Attitudes

	6 mths		12 mths			
Outcome	Control Mean	T Coeff.	Control Mean	T Coeff.	N	6=12mth pval
	(1)	(2)	(3)	(4)	(5)	(6)
Confidence in engaging buyers	4.26	-0.04	4.25	-0.19**	1,334	0.07
	(0.89)	(0.05)	(0.89)	(0.09)		
Confidence in winning contracts	4.17	-0.05	4.14	-0.19**	1,338	0.08
	(0.89)	(0.05)	(0.91)	(0.09)		
Corporate interest: social motivation	3.62	-0.13**	3.59	-0.12	1,334	0.92
	(1.03)	(0.06)	(1.00)	(0.10)		
Corporate interest: commercial motivation	3.66	-0.05	3.63	-0.10	1,334	0.53
	(0.97)	(0.06)	(0.95)	(0.09)		
Contracts depend on personal relations	2.52	0.03	2.14	0.21**	1,334	0.07
	(1.15)	(0.07)	(1.01)	(0.11)		

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated for six months and Waves 2 and 3 are control. At endline, Wave 1 is treated for 12 months, wave 2 is treated for six months, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. The table reports every constituent question used to construct the Attitude Index, on a range of 1-5. Scale range: 1: Strongly disagree; 2: Disagree; 3: Neither agree nor disagree; 4: Agree; 5: Strongly agree. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A5: Changes since treatment

	6 Months (%)	12 Months (%)
No Changes	16.8	23.5
Internal processes and capacity	15.5	11.6
Strategy and sales	32.2	26.9
Documentation & Compliance	12.9	7.5
Financial	4.1	1.9
Knowledge and information	8.9	6.7
Networking	2.2	1.5
Observations	459	268

Notes: Treated WSMEs were asked to report what, if anything, they had changed in their business after participating in *Sourcing2Equal*. We used AI to identify the most commonly cited themes and lists of keywords relating to each theme. The LLM used was Claude Opus 4.5. The specific prompt was "Create a list of keywords for responses to changes in the WSME business. Only include observations for respondents who participated in the project. Categorize those into themes." We then reviewed, adjusted and consolidated manually. We then used Stata to categorize responses by these themes, again with manual review and adjustment. Responses were often counted under multiple categories, as many respondents noted more than one key change or interrelated changes. Similar to our preferred specification for estimating treatment effects, we segment this descriptive analysis of responses by the length of time since exposure to the intervention — allowing us to distinguish changes six months (wave one at midline and wave two at endline, N=459) and twelve months (wave one at endline, N=268) after treatment.

Table A6: Pooled Sample: Primary Outcomes

Outcome	T Coeff. (1)	Control Mean (2)	N (3)
Procurement Knowledge (0-9)	0.22**	3.37	1,342
	(0.10)	(1.71)	
Procurement Attitudes (1-5)	-0.05	3.69	1,338
	(0.03)	(0.54)	
Procurement Readiness (1-5)	0.25***	3.19	1,333
	(0.06)	(0.89)	
Registered to corporate portal in last 6m$^+$	0.10***	0.52	1,335
	(0.03)	(0.50)	
Submit corporate bid in last 6m$^+$	0.07***	0.42	1,315
	(0.03)	(0.49)	
Won corporate bid in last 6m$^+$	0.05*	0.30	1,315
	(0.03)	(0.46)	

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. Dummy variables 'SME', 'Some procurement knowledge', 'Procured a corporate client' and city were used to stratify the sample during randomization. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Estimates presented in this table use a stacked panel of midline and endline data with survey round fixed effects and strata dummies. +: ANCOVA Regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A7: Primary Outcomes — Midline and Endline

Outcome	Midline			Endline		
	T Coeff. (1)	Control Mean (2)	N (3)	T Coeff. (4)	Control Mean (5)	N (6)
Procurement Knowledge (0-9)	0.21	2.88	715	0.25*	4.41	627
	(0.14)			(0.13)		
Procurement Attitudes (1-5)	-0.03	3.73	712	-0.08*	3.60	626
	(0.05)			(0.05)		
Procurement Readiness (1-5)	0.26***	3.20	712	0.22***	3.17	621
	(0.07)			(0.08)		
Registered to corporate portal in last 6m^{+}	0.10***	0.54	708	0.10**	0.48	627
	(0.04)			(0.04)		
Submit corporate bid in last 6m^{+}	0.08**	0.43	705	0.08*	0.40	610
	(0.04)			(0.04)		
Won corporate bid in last 6m^{+}	0.06	0.31	705	0.04	0.28	610
	(0.04)			(0.04)		

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. Results presented in this table are estimated separately by survey round. +: ANCOVA Regression estimates for outcomes captured at baseline. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback. Significance levels: * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$

Table A8: Endline outcomes by highest activity participation

		Treatment			
	Control (W3)	No Activity	Masterclass	Bootcamp	Mentorship
Outcome at endline					
Procurement Knowledge	4.41	3.94	4.31	4.86	5.44
Procurement Attitude	3.60	3.53	3.37	3.49	3.65
Procurement Readiness	3.17	3.03	3.20	3.32	4.16
Registered to Database in last 6m	0.48	0.33	0.31	0.71	0.88
Submitted a corp bid in last 6m	0.40	0.29	0.35	0.49	0.71
Won a corp bid in last 6m	0.28	0.21	0.21	0.31	0.55
No of Bids won in last 6m	3.36	1.75	3.85	2.17	3.85
N	228	86	86	155	72
Outcome at Baseline (Endline Sample)					
Procurement Knowledge (self)	2.03	1.77	1.64	1.85	2.26
Had Corporate clients in last 2y	0.62	0.52	0.53	0.59	0.75
Registered to Database in last 2y	0.66	0.64	0.58	0.61	0.75
Submitted a corp bid in last 2y	0.75	0.63	0.64	0.68	0.83
Won a corp bid in last 2y	0.62	0.52	0.53	0.59	0.75
N	228	86	86	155	72
Outcome at Baseline (Baseline Sample)					
Procurement Knowledge (self)	1.86	1.74	1.79	1.83	2.31
Had Corporate clients in last 2y	0.59	0.53	0.60	0.59	0.74
Registered to Database in last 2y	0.62	0.62	0.62	0.63	0.74
Submitted a corp bid in last 2y	0.71	0.59	0.63	0.68	0.83
Won a corp bid in last 2y	0.59	0.53	0.60	0.59	0.74
N	392	272	159	201	81

Notes: Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control. **Knowledge:** index of self-assessed knowledge, knowledge on procurement sources, procurement process, and value proposition. **Attitude:** index of confidence to engage buyers, successfully bid, large corps interest in MSMEs for social and/or corporate reasons, proposal quality wins bid. **Readiness:** index of conduct market study, improve bids process, explore connections (new and with women entrepreneurs), improve proposals, integrate feedback.

Table A9: Predictors of participation — Waves 1 & 2

	(1)	(2)	(3)	(4)
	No activity	Attended Masterclass	Attended Bootcamp	Attended Mentoring
SME	-0.018	0.018		
	(0.055)	(0.055)		
Sector: Manufacturing	0.087	-0.087	-0.135	-0.014
	(0.098)	(0.098)	(0.106)	(0.054)
Sector: Services	-0.001	0.001	-0.038	0.053
	(0.097)	(0.097)	(0.106)	(0.055)
Medellin	-0.024	0.024	0.045	0.015
	(0.039)	(0.039)	(0.039)	(0.026)
Cali	-0.068	0.068	0.092	-0.037
	(0.060)	(0.060)	(0.063)	(0.035)
Some procurement knowlegde	-0.050	0.050	0.113***	0.061**
	(0.039)	(0.039)	(0.039)	(0.026)
Above median procurement income (2023)	0.041	-0.041	0.029	0.042
	(0.064)	(0.064)	(0.063)	(0.038)
Registered in corporate database	0.005	-0.005	-0.006	0.009
	(0.041)	(0.041)	(0.041)	(0.024)
Company age (2023) (winsorized)	0.001	-0.001	-0.000	0.000
	(0.002)	(0.002)	(0.002)	(0.001)
Submit bids in last 2 yrs	-0.072	0.072	0.111**	0.050*
	(0.050)	(0.050)	(0.048)	(0.027)
Procurmeent bids submitted in last 2y(#)	0.000***	-0.000***	-0.000***	-0.000**
	(0.000)	(0.000)	(0.000)	(0.000)
Won Procurment bids in last 6m	-0.051	0.051	-0.061	-0.035
	(0.071)	(0.071)	(0.069)	(0.041)
Procurment bids won in last 2y(#)	-0.001	0.001	0.001	0.001
	(0.001)	(0.001)	(0.001)	(0.001)
Interested in attending Bootcamp	-0.106**	0.106**	0.183***	0.056**
	(0.051)	(0.051)	(0.049)	(0.025)
Interested in attending Masterclass	-0.054	0.054	0.060	0.044*
	(0.051)	(0.051)	(0.051)	(0.024)
Observations	713	713	713	713

Reference categories: City: Bogota, Sector: Agriculture. Only SMEs were invited for Bootcamps and Mentoring

Baseline was conducted in June-September 2024, midline in April 2025, endline in October 2025. After baseline, participants were randomly assigned to three waves, which were treated in phases. At midline, Wave 1 is treated and Waves 2 and 3 are control. At endline, Waves 1 and 2 are treated, and Wave 3 is control.

Table A10: Challenges since treatment

	6 Months (%)	12 Months (%)
No Challenge	2.3	1.6
Skills & Information	30.9	35.6
Competition	11.7	8.5
Financial	14.4	17.6
Documentation & Requirements	18.2	16.0
Staff time & internal resources	19.6	20.6
Networking	12.6	10.1
Other	20.2	18.2
Observations	341	188

Notes: Treated WSMEs were asked to report any remaining challenges for their business after participating in *Sourcing2Equal*. We used AI to identify the most commonly cited themes and lists of keywords relating to each theme. The LLM used was Claude Opus 4.5. The specific prompt was "Create a list of keywords for responses to challenges in the WSME business. Only include observations for respondents who participated in the project. Categorize those into themes." We then reviewed, adjusted and consolidated manually. We then used Stata to categorize responses by these themes, again with manual review and adjustment. Responses were often counted under multiple categories, as many respondents noted more than one key challenge or interrelated challenges. Similar to our preferred specification for estimating treatment effects, we segment this descriptive analysis of responses by the length of time since exposure to the intervention — allowing us to distinguish changes six months (wave one at midline and wave two at endline, N=341) and twelve months (wave one at endline, N=188) after treatment.