

Evaluation of a Support Program for Micro, Small and Medium Enterprises in Côte d'Ivoire

– Pre-Analysis Plan –

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Abstract

Business support programs, such as classroom-based training or consulting services, are widely used by developing country governments to enhance the performance of small-scale enterprises. Although job creation and the central role of the small business sector for overall employment are one common justification for implementing such programs, they are often not designed to target employment outcomes directly and few studies have established a clear link between business support interventions and job creation or employment quality. We conduct a rigorous impact evaluation of a support program for micro, small and medium enterprises (MSMEs) in Côte d'Ivoire. The program will deliver consulting services to 250 Ivorian MSMEs over the duration of six months and focuses on the dimensions of financial management and human resource management. Beneficiary MSMEs are selected randomly from the pool of more than 450 MSMEs who applied to participate in the program, passed the eligibility assessment, and responded to a baseline survey. Our evaluation covers key outcomes at two levels : at the firm level, we will consider (i) employment in quantitative terms, (ii) employment security and quality, (iii) HR management practices, (iv) firm performance, (v) capital and labor productivity, (vi) access to finance and financial constraints, as well as (vii) financial management practices. At the individual level, outcomes are (i) employment, (ii) employment quality, and (iii) mobility.

Experimental design

Interventions

The Programme d'Appui à la Productivité (PAP-PME) offers six months of consulting support to Ivorian Micro, Small and Medium Enterprises (MSMEs). While the program also targets overall business performance and productivity, there is a strong, politically mandated emphasis on creating and improving employment. The third and final cohort of the program, which is at the

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center of this evaluation, offers consulting support primarily in the areas of financial management and human resource (HR) management. Should the PAP-PME be continued, the evaluation may be extended to include one or more future cohorts

Procedures

The implementing agency advertised the program nationwide using its network of local representations as well as business associations. In total, 576 interested enterprises (excluding double submissions and beneficiaries of earlier cohorts) from different regions in Côte d'Ivoire submitted application documents in March 2021, 503 of which were identified as fulfilling the eligibility criteria of at least one year of existence and having at least one employee. These 503 MSMEs received an email congratulating them on their admission to the program and inviting them to a virtual program inception meeting. They were informed that the program would begin with the baseline data collection which doubled as a diagnostic, and consist of virtual and in-situ coaching. A baseline survey of 452 eligible enterprises and their employees was carried out in April and May 2021, with the remaining MSMEs refusing to participate in the survey, being unresponsive or unavailable over the duration of six weeks. Out of the MSMEs who responded to the baseline survey, 250 firms were randomly assigned to the treatment group in blocks formed by the administrative region, size in terms of the number of employees, the share of female employees, and annual revenue. While the treatment group received access to individual consulting and interactive webinars, both treatment and control group received access to an online platform with courses on general management topics.

Following the end of the program, a short online survey is carried out among treatment group MSMEs to capture program participation, intensity and satisfaction. Six months after the end of the program (and twelve months after the baseline), we carry out an endline survey of both treatment and control group to assess program impacts on firm performance, employment, and management practices. An additional follow-up survey may be conducted twelve months after the end of the intervention, in order to capture more long-term impacts.

Randomization

We randomly assign enterprises to treatment or control within blocks formed by administrative region, size in terms of the number of employees, the share of female employees, and annual revenue. This randomization is carried out by PIs, with a replicable procedure using statistical software. The unit of randomization is the firm, and firms are not clustered. For analyses at the level of employees, their treatment status derives from that of their firm, so employee-level assignments are clustered within firm.

Sample size

The baseline sample consists of 452 enterprises, 250 of which were assigned to the treatment group. The employee-level sample includes 2,090 individuals.

Timeline

The application period for the program ended on March 31, 2021. The baseline survey was carried out from mid-April to early June 2021. Program implementation began in June 2021 and ends in December 2021. A short online survey covering program participation and satisfaction will be carried out among treatment group enterprises in early 2022. An endline survey of treatment and control group enterprises will be carried out in mid-2022, and an additional follow-up survey may be carried out in early 2023.

Analysis plan

Outcomes of interest

We discuss below groups of outcomes for our interventions and provide examples of a number of specific research questions to be answered. These outcomes may be considered across several academic papers.

Our evaluation considers outcomes both at the enterprise and at the employee level. At the firm level, important outcomes are (i) employment, measured both in terms of the number of jobs and hours worked, as well as in terms of staff turnover and workforce composition, (ii) employment security and quality, e.g. the share of employees with a written contract or registered for social security, as well as the provision of training opportunities and benefits, (iii) other HR management practices, (iv) metrics of firm performance, such as revenue and profit, (v) capital and labor productivity, (vi) access to finance and financial constraints, (vii) financial management practices.

Specific research questions include

- Does program participation allow MSMEs to hire more workers at endline, to reduce the rate of staff turnover, or to increase the working hours of existing employees?
- Does program participation induce MSME managers to offer more secure employment and improved employment conditions, such as written contracts, higher pay, more training opportunities?
- Do treatment group enterprises improve their HR management practices, for example recruitment processes or HR planning?
- Does program participation improve firm performance, for example in terms of revenue and profits?

- Are treatment group enterprises more likely to apply for outside financing, and are they more successful than control group enterprises in obtaining it?
- Does program participation improve financial management practices, for example in terms of keeping written records, preparing financial statements, submitting them to the tax authorities? Do other management practices, such as stock management, improve?

At the individual level, outcomes are (i) employment, e.g. in terms of hours worked and job retention as well as diversification of income sources, (ii) employment quality in terms of a variety of outcomes such as earnings, having a written contract, job satisfaction, or training opportunities, and (iii) mobility, e.g. in terms of individuals' interest in and planning for relocating within Côte d'Ivoire or migrating internationally.

Relevant research questions partly mirror those specified above, but considering them at the individual level will allow us to capture intra-firm heterogeneity as well. Specific research questions include

- Does a firm's program participation increase its employees' working hours or the probability of remaining with the firm?
- Do employees of treatment group MSMEs benefit from job quality improvements relative to employees of control group enterprises?
- Are treatment group employees relatively less likely to want to relocate geographically?

Estimation

We will principally estimate treatment effects on outcomes of interest using an intention-to-treat analysis. Our core comparisons will be between MSMEs in the control group and those in the treatment group.

We will usually include the pre-treatment measure of the relevant outcome variable, if available and unless the outcome itself is measured as a deviation from baseline. We will also include additional control covariates to adjust for any remaining imbalance in our data, particularly those listed below as relevant for randomization checks. We will use clustered standard errors when appropriate due to clustering of treatment assignments.

We may construct measures of treatment intensity using administrative data on treatment delivery, and report results for low- and high-intensity treatment categories as well as results from an instrumental variable approach using assigned treatment as an instrument for actual treatment intensity. For downstream outcomes such as migration, we may use treatment assignment as an instrument for a measure of job and workplace improvements.

Randomization checks

We will report the extent to which observable covariates are balanced across treatment and control group, as we expect to be the case. Relevant baseline variables include capital stocks, revenue, sector, firm age, location in Abidjan vs. the rest of the country, the gender of the main manager, as well as the share of employees listed for social security.

Heterogeneous effects

We will report heterogeneous effects for each outcome and treatment-control group comparison, either by using separate samples or interactions. We will report such effects for firm-level variables including baseline firm performance and capital stock, firm age, manager characteristics such as gender and education, firm sector and location, degree of formalization, sophistication of financial management, access to finance, and previous exposure to training and/or consulting. In addition, we will report heterogeneous treatment effects with respect to consultant characteristics. At the employee level, we will study heterogeneity of treatment effects with respect to sociodemographic characteristics and pre-treatment measures of outcome variables such as gender and education, baseline earnings, tenure and role within the firm, and family relations to the manager.

Spillovers

The adopted randomization and program design implies a low risk of spillovers, as treatment delivery targets (and is tailored to) individual firms. If concerns over spillovers arise, we will calculate for each unit the average distance-weighted treatment exposure of its neighbors, where distance is an appropriate geographic or sector-specific measure, and then estimate spillover effects given this neighborhood exposure variable.

Compliance

We will compare units that are in compliance with their treatment/control assignment with those that are not, and report differences in means and related statistics for study-relevant baseline variables such as capital stocks, revenue, sector, firm age, location in Abidjan vs. the rest of the country, the gender of the main manager, as well as the share of employees listed for social security.

In the case of substantial non-compliance, we will report instrumental variable estimates for the relevant outcomes and comparisons, where random assignment serves as an instrument for actual treatment status. If possible given available administrative data, we will also construct measures of “dosage” received (e.g. number of consultant visits received, webinars attended), and use assigned treatment status as an instrument for actual treatment intensity.

Attrition

We will report dissimilarities between attrited units and those with available endline data by computing differences in means and related statistics by treatment status and for baseline variables capital stocks, revenue, sector, firm age, location in Abidjan vs. the rest of the country, the gender of the main manager, as well as the share of employees listed for social security, and other baseline-available outcome measures. In the case of substantial attrition, we will pre-process the data by matching on these relevant variables and calculate attrition-adjusted treatment effects.

Manipulation checks

We will conduct several checks to see if our interventions perform as expected. We will compare our random assignment of MSMEs to administrative program delivery data in order to see if benefits were distributed as planned and to gauge treatment intensity across beneficiaries. To address concerns about possible discrepancies, we will also collect information on treatment delivery directly from the implementing consultants and ask firms on the endline survey about their schedule of benefits.