Light touch, lean tally: impacts of a MSME support programme in Côte d'Ivoire

Tabea Lakemann,[1,2] Bernd Beber,[1,3] Jann Lay,[1,2] and Jan Priebe[1,4]

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Abstract

With Micro, Small and Medium Enterprises (MSMEs) being the most important employers in many developing countries, identifying ways to raise productivity, improve employment conditions and formalise labour in these firms is of prime policy importance. Yet, employment outcomes are often addressed only implicitly in interventions targeting MSMEs and their evaluations, due to the typically small number of employees and the long results chain linking management to employment. We conduct a rigorous impact evaluation of a support programme for MSMEs in Côte d'Ivoire with financial management and human resources (HR) components. 6-18 months after the end of the program, we find muted impacts on business practises, access to finance, and firm performance. On the employment side we find sizeable, positive impacts on employment quality, driven by the share of employees receiving minimum wages and written contracts. We find no significant effect on firm performance and the number of staff. Taken together, our results underscore both the difficulty of boosting firm performance and creating jobs with a low-intensity intervention and the feasibility and importance of improving employment quality in MSMEs in developing countries.

[1] German Institute for Global and Area Studies (GIGA), Hamburg, Germany
[2] Georg-August Universität Göttingen, Germany
[3] Leibniz Institute for Economic Research (RWI), Berlin, Germany
[4] Bernhard-Nocht Institute for Tropical Medicine, Hamburg, Germany

Corresponding author: Tabea Lakemann, tabea.lakemann@giga-hamburg.de.
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I. Introduction

Micro, small and medium enterprises (MSMEs) are the main employers outside agriculture in most African economies. As the sector continues to be characterised by low productivity and pervasive informality, employment in MSMEs often lacks key attributes of decent employment, such as a written contract, social security, and an adequate remuneration. A multitude of support programs exist for small-scale enterprises in developing countries, ranging from classroom-based trainings to consulting services. Such programs mostly aim to teach improved business practises and raise productivity, ultimately hoping to increase business formalisation rates, improve tax revenue, and create jobs. In this paper, we study a rare example of a consulting program for MSMEs that focuses explicitly on improving employment outcomes.

We study the short-term and medium-term effects of the *Programme d'Appui à la Productivité des PME* (PAP-PME), a support programme for MSMEs in Côte d'Ivoire that was implemented by the Ivorian SME agency with funding from German Development Cooperation. The programme focused on financial management and human resources (HR) management, offering a randomly selected treatment group of 262 Ivorian MSMEs access to individual consulting and a series of webinars. Individual consulting involved assessing each firm through a diagnostic, which informed specific recommendations. Consultants were also tasked with supporting firms in implementing these recommendations effectively. The programme was relatively light touch, with MSMEs receiving an average of two visits.

We assess short-term and medium-term effects of the program at the firm level. Six months after the end of the intervention, our most robust result is a sizeable and significant treatment impact on an employment quality index, which remains stable after 18 months. This effect is driven by positive treatment effects on the share of employees receiving the minimum wage, as well as the share of employees having written contracts. While we also find a small, positive effect on social security registration in the short run, it is not robust to adjusting for multiple hypothesis testing and disappears after 18 months. The treatment effects on HR management and accounting practises are positive, but insignificant. We find no significant impact on business practises and access to finance.

We also consider treatment effects on firm performance and firm size in terms of the number of staff. Although the coefficients are positive and sizeable when estimating average treatment effects on annual revenues and profits in the fiscal year following the intervention, heterogeneity analyses and quantile regressions reveal that treatment effects are close to zero for the majority of firms, and that positive coefficients are driven by firms in the upper quantiles of the distribution. As for the number of staff, we do not find a significant average treatment effect. Exploratory heterogeneity analyses suggest that positive effects for small firms and negative effects for medium-sized firms cancelled each other out, and that firms outside the economic capital Abidjan saw positive employment effects.

Whereas these muted overall effects do not compare favourably to the results of recent evaluations of consulting programs, they are plausible given the program's characteristics. The PAP-PME was very low-intensity and low-cost, with an average of less than five hours of individual consulting and a budget of just under 226,000 CFA (345 EUR)[5] per firm. In comparison, a highly effective consulting intervention in Nigeria evaluated by Anderson & McKenzie (2022) consisted of 88 hours of individual consulting and cost about 4,000 USD. Our intervention was thus closer in cost and intensity to the classical training interventions reviewed in McKenzie (2020), which typically cost a few hundred USD per firm, delivered up to five days of training, and mostly led to modest improvements in business

[5] This figure only covers the payment to the consulting firms and excludes other costs of the implementing organisation.

practises. Also, emphasis was placed on the employment dimension when briefing the consultants, which may have diminished the attention that financial management topics received.

Our paper adds to a large experimental literature on the effectiveness of MSME support programs. Within this field, it covers a context and a program type where the evidence base is still thin. Firstly, the intervention was implemented in a francophone country in sub-Saharan Africa. The direct applicability of evidence from other world regions to African economies is hampered by factors such as higher informality, a more difficult business environment including limited access to finance, and less developed markets for high-quality business support services. Our sample covers firms at varying degrees of formality, which means we are able to provide evidence on a highly relevant target group for business support programs. What is more, our study covers the economically challenging post-Covid period, which makes it relevant to policymakers in times of an economic slowdown. Finally, we study the effects of a real-world program that was financed by a development cooperation agency and implemented by an Ivorian government institution.

A second contribution lies in our explicit focus on HR management practises and employment outcomes. It is rare for a business support program to target HR practises explicitly, and to combine business advice with employment formalisation. Relatedly, the subjects of HR management and employment quality in MSMEs in developing countries remain understudied, with much of the existing literature focusing on self-employment. Our main contribution here lies in the explicit study of HR practises and employment conditions at the firm level, which offers important insights into employment quality in African firms.

This paper proceeds as follows. Section II discusses the main findings of the relevant literature on MSME support programs and their employment effects. Section III outlines our experimental design, followed by a brief discussion of our data and estimation methodology in Sections IV and V. We then present our firm-level findings in Sections VI to VIII. Section IX discusses and contextualises these findings and concludes.

II. What we know about the effectiveness of MSME support programmes for small firms in developing countries

The objective of the PAP-PME is to improve MSME productivity and performance, create jobs, and improve employment conditions. We briefly outline key findings of the literature on the effectiveness of programmes targeting these outcomes in small-scale firms in low and middle-income countries, with a focus on rigorous evidence. Notably, much of the existing evidence comes from Latin America or Asia, which needs to be considered in its interpretation. For more exhaustive discussions of the recent experimental literature, see Quinn & Woodruff (2019) for a critical review, McKenzie (2020) for a meta-analysis, and Jayachandran (2020) for a broader overview of the literature on small-scale entrepreneurship.

a. Business practises, firm performance, and productivity

Improving management practises and ultimately firm performance is the main objective of most support programmes for MSMEs. McKenzie's (2020) meta-analysis finds that business support programmes typically lead to small and often significant improvements in management practises, as well as average increases of 10% in firm profits and 5% in firm sales.[6] Effects on firm performance often materialise only in the medium to longer run, as is shown for instance by Higuchi et al. (2019) in a study from Tanzania.

[6] Earlier studies (reviewed in Bandiera et al., 2011; Cravo & Piza, 2016; McKenzie & Woodruff, 2014) often found no significant impact of business training on firm performance. McKenzie (2020) attributes this observation to a lack of statistical power given the relatively small expected effects and notes that studies often only considered short-term effects.

Much of the existing evidence concerns classical training, but a handful of experimental studies have explored the effectiveness of individual consulting interventions (S. J. Anderson & McKenzie, 2022; Bruhn et al., 2018; Iacovone et al., 2022). Individual consulting is generally found to improve business practises, which often translates into positive effects on firm performance. Bloom et al. (2013, 2020) find considerable positive effects of offering personalised consulting to large Indian firms that persist even nine years after the intervention. Similarly, Bruhn et al. (2018) document positive and significant effects of a consulting programme for small and medium enterprises in Mexico on total factor productivity and return on assets.

However, due to the high cost of individual consulting, newer studies examine its effectiveness compared to cheaper alternatives and find no significant difference. Anderson & McKenzie (2022) work with a sample of Nigerian firms and conclude that while individual consulting resulted in significant improvements in management practises and certain business performance indicators, insourcing and outsourcing achieve comparable results at half the cost. Likewise, in a field experiment in Colombia, Iacovone et al. (2022) show that group-based consulting improves business practises by as much as individual consulting but has more robust, positive effects on firm performance, costing only one third of individual consulting.

b. Effects on job creation

Whereas job creation is a primary motivation for many business support interventions, employment outcomes are seldom considered as direct programme targets, resulting in a thinner evidence base than for business performance outcomes. A meta-analysis of the existing evidence by Grimm and Paffhausen (2015) concludes that the employment generation effects of interventions targeting MSMEs are modest. Some programs were successful in generating self-employment, but there is little evidence that training or consulting expand employment in existing firms, especially small ones.

One key reason for muted employment impacts in existing firms is the long and complex results chain linking business support programs to job creation (Grimm & Paffhausen, 2015). In the absence of increases in productivity and output, the returns to new staff are unlikely to justify the costs. Relatedly, an experiment where wage subsidies were paid to micro-enterprises in Sri Lanka to hire additional workers only had temporary effects on the number of employees, and did not affect sales and profits in the short or long run (de Mel et al., 2010, 2019).

Two newer studies have found positive impacts of training or consulting interventions on job creation due to increased sales or productivity improvements. Anderson et al. (2018) compare the effects of offering training in marketing or finance skills to micro-enterprises in South Africa. They find that marketing training prompts entrepreneurs to focus on expanding investment and sales, allowing them to increase profits and hire new employees. While the finance training also led to improved business performance, the main mechanism was cost reduction, which did not increase employment. In the case of the above-mentioned consulting programme for SMEs in Mexico that led to productivity improvements, Bruhn et al. (2018) also find a notable increase of about 50% in the number of employees registered for social security as well as the daily wage bill five years after the program.

In a similar vein, training and consulting interventions rarely have an explicit focus on improving human resources (HR) management practises. This circumstance can be attributed to the perception that HR management is of lesser importance for small-scale firms, even though these firms frequently identify attracting and retaining quality employees as a major challenge. Furthermore, effective HR management is crucial for enhancing employment conditions, which is a key policy objective.

c. Employment quality and formalisation

Our paper also adds to a long-standing, but still growing, literature on understanding and tackling informality in developing countries. Importantly, one needs to distinguish between *business formalisation*, broadly understood as registering a business, and *employment formalisation*, understood as registering workers with the appropriate authorities, in most cases social security providers. In a meta-

analysis of interventions aiming to reduce informality in low and middle income countries, Jessen and Kluve (2021) find that just under half of the studied estimates are positive and significant,[7] with only minor differences between intervention types.[8] Formalisation interventions more often have a positive effect on "worker registration" than on other measures of formalisation, with 66% of the studied estimates being positive and significant and an average effect of 3.7 percentage points.

Formality and informality are increasingly understood as opposite ends of a spectrum rather than clearly defined opposites, with considerable fluidity over time in the degree of formality. In a panel study of different dimensions of formality in Peruvian micro-enterprises, Diaz et al. (2018) find that about 30% of the firms in their sample are only partly formalised, and that firms frequently change their formality status in both directions. While an instrumental variable analysis finds a positive influence of business formalisation on subsequent employment formalisation, the reverse is not true.

One key question when expanding social security coverage for employees in private enterprises is to disentangle job creation from formalisation, that is to gauge the extent to which newly registered workers are also new employees, or simply previously unregistered workers who become formalised. In the case of the consulting intervention in Mexico, Bruhn et al. (2018) suggest that the growth in the number of employees registered for social security represents job creation, as the effect only becomes visible in administrative data with a delay. Asik et al. (2022) study the effects of a 25% subsidy for social security contributions for small firms in Turkey and find increases of 5-8% in the number of registered workers. Contrary to the Mexican case, they conclude based on an analysis of household data that this increase largely represents the formalisation of existing workers rather than the hiring of new personnel.

Another important dimension of employment formalisation is the existence of written work contracts, which often constitute the first step towards formalisation. Challenges are not only some employers' lack of knowledge, but also that they often do not see an incentive to offer written contracts to their employees in environments where workers are easily replaced. If, on the other hand, good employees are hard to find and keep, employers may have a stronger rationale to provide written contracts. There is much less empirical literature on the promotion of written contracts than for social security, but some experimental evidence is available for agricultural contexts. Notably, Jäckering et al. (2021) find that a group based awareness intervention among Ivorian cocoa farmers increases their preferences for providing written contracts to their agricultural workers and the likelihood of initiating concrete steps to do so. The authors attribute the change in farmers' preferences to the relative scarcity of reliable employees in the study context, and the realisation that clearly defining responsibilities in written contracts can help pre-empt conflicts.

Finally, it is important to acknowledge that the labour markets and employment contexts of developing countries are radically different from those of the industrial countries that standards of decent employment are based on. Dependent employment in large companies, the standard case that contributory social security systems were designed for, is much less common in African economies than in Europe. Functions that are highly institutionalised in western-style social security systems, such as pensions or health insurance, are often organised in informal systems that co-exist with formal ones. Against this backdrop, it is tempting to question the viability and attractiveness of classical contributory social security schemes in low-productivity contexts where employers and employees struggle to afford the contributions. However, two discrete-choice experiments provide empirical evidence that workers in developing countries do value attributes of job stability such as written contracts and social security. Such experiments typically test how much of a hypothetical income increase participants would be willing to forgo to have access to a job with a given attribute, for example a one-year written contract.

[7] Other reviews of the effects of formalisation interventions (Bruhn & McKenzie, 2013; Floridi et al., 2020) draw more muted conclusions, but typically focus on business formalisation.

[8] Tax incentives are most likely to show positive effects at 56% of the considered estimates, but other intervention types do similarly well (labour inspection/enforcement, financial incentives, information interventions, simplifying registration procedures).

Youth in Kenya are found to place a high value on social insurance,[9] with a willingness to pay of 45 to 87 USD[10] per month only for a pension (Elzir Assy et al., 2020). In a similar experiment in Bangladesh, Mahmud et al. (2020) find that workers would be willing to forgo an increase of 27% of their monthly salary to have a one-year contract, 44% for a long-term contract, and 18% for access to a pension fund. Both studies find some heterogeneity in preferences for job stability, with women placing a higher value on pensions in both cases, and more educated workers as well as government employees in the Bangladeshi sample having the highest preference for written long-term contracts.

III. Experimental design

a. The Programme d'Appui à la Productivité des PME (PAP-PME)

The PAP-PME was implemented by the public Ivorian SME agency, Côte d'Ivoire PME (CI PME),[11] with funding from German development cooperation. Our evaluation covers the third cohort of the program, which was implemented in the second half of 2021 and focused on the areas of financial management and human resources (HR) management. The intervention consisted of **individual consulting**, which is described in more detail below, and a series of twelve **webinars** with external speakers on subjects relating to financial and HR management. In addition, both treatment and control group were given access to an online platform for SMEs with contents unrelated to HR and financial management.

The consulting firms had the following tasks:

(1) **Conduct a diagnostic** of the enterprise identifying strengths and weaknesses in the areas of financial and HR management. Consulting firms were provided with an individual portrait of each SME including key performance metrics as well as information on financial and HR management practises from baseline data, with instructions to collect additional information from the SME as required.
(2) **Draw up a structuring plan** with key recommendations for improvement and validate it with the SME's manager.
(3) **Support SMEs in implementing recommendations**. Consultants were asked to provide necessary *tools*, such as templates for accounting documents or job advertisements; *training* to use these tools; *information*, for example on registration procedures with tax authorities and the social security provider; and *contacts*, for example to external tax consultants or training providers. They were also asked to follow up on the implementation of recommendations with the enterprises.

b. Theory of Change

We give an illustrative overview of the main hypothesised mechanisms underlying programme design, which inform our analyses, in Figure 1. In the short term, which this paper focuses on, the PAP-PME is expected to affect management practises in the two focal areas of financial management and HR management. More specifically, the intervention might help formalise a firm's accounting system and tax compliance, including the elaboration of formal financial statements and declaration to the tax authorities. The PAP-PME might also help firms get access to finance. In fact, obtaining funding was the key motivation behind most application to the programme – which is unsurprising given that firms in sub-Saharan Africa face the world's highest credit constraints (Islam & Meza, 2023).[12] While the PAP-PME did not place a strong emphasis on access to finance, there could be positive effects through

[9] The willingness to pay is highest for health insurance, followed by pension and unemployment insurance.
[10] The average income as a benchmark is not stated.
[11] Until 2022 known as *Agence Côte d'Ivoire PME*.
[12] Islam and Meza's analysis based on World Bank Enterprise Survey Data from 109 economies finds that at 48%, sub-Saharan Africa is the region with the highest share of partially or fully credit constrained firms. Côte d'Ivoire is above this regional average, with 53% of firms being classified as credit constrained.

improved accounting systems and document availability (often a prerequisite for financing), or simply because consultants provided guidance on available financing options.

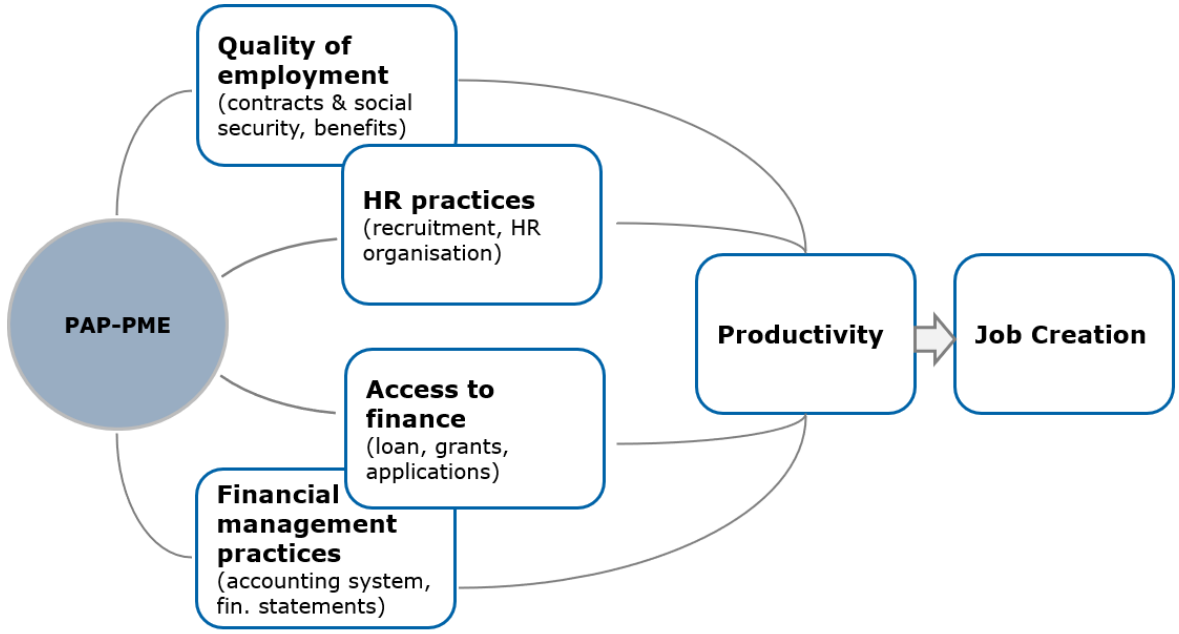

Figure 1: Theory of change

On the employment side, the PAP-PME aims to improve HR practices in a similar fashion as for financial management. It placed strong emphasis on improving employment conditions in terms of providing written contracts and social security to firms' employees – with consultants issuing recommendations whenever necessary, and one webinar on each of these dimensions.

c. Implementation

Applications for the relevant program cohort were open in March 2021. Out of 576 unique applications received, 503 MSMEs fulfilled the minimum eligibility criteria of one year of existence and having one full-time employee aside from the owner.[13] 448 eligible MSMEs could be interviewed in a baseline survey in April and May 2021. Out of this sample, 262 MSMEs were then randomly selected to participate in the programme, [14][15] with the remainder serving as a control group.

Five Ivorian consulting firms were contracted to deliver the consulting component of the programme. Although each firm was required to include team members specialised in financial management and HR, only 18% of the individuals working with the firms were HR specialists. During an inception meeting in late May 2021, representatives of the consulting firms were provided with the details of their mission. Among the two programme objectives of improving firm productivity on the one hand and creating jobs and improving employment conditions on the other, emphasis was placed on the employment dimension. Concrete examples given for desired outcomes were to raise the number of employees with written contracts and the number of those registered for social security.

The intervention was originally scheduled to last four months, from June to September 2021. In September 2021, based on analysis of monitoring data suggesting that programme delivery was

[13] The program also excludes non-profit organizations.
[14] The numbers reported here exclude 4 MSMEs (3 treatment, 1 control) that were interviewed in the baseline and follow-up survey but remained closed throughout the study period.
[15] The original treatment group consisted of 247 MSMEs. 15 enterprises were reported as dropouts in the first weeks of the programme and replaced by firms from a randomly selected waiting list. As some of the firms reported as dropouts subsequently continued participating in programme activities, we consider all 262 as treatment group firms for the purposes of implementation and take-up analyses.

incomplete,[16] CI PME decided to extend the programme delivery period until the end of the year 2021, albeit without committing additional funds.

The intensity of the program, in terms of the number of enterprise visits or consulting hours per SME, was not pre-determined. The main deliverables were one final report including a diagnostic and structuring plan per firm, as well as a global, final report covering all MSMEs.

As the program had no clearly defined end point, we present statistics on the different milestones achieved and programme components delivered. The data were provided by CI PME and largely come from an end-of-program survey conducted with the treatment group in January 2022. While CI PME received final reports for 236 MSMEs, the number of firms confirming the following milestones (see Figure 2) is lower: 212 firms confirmed having received a diagnostic, and 170 having received a structuring plan. About half of the treatment group report having received "tools" or information on financial and HR management, 76 firms (30%) received support in implementing recommendations, and 53 firms (20%) received assistance in using the tools provided. Over 40% of the firms participated in capacity building activities, which refers to the webinar series or additional activities by the consulting firms.

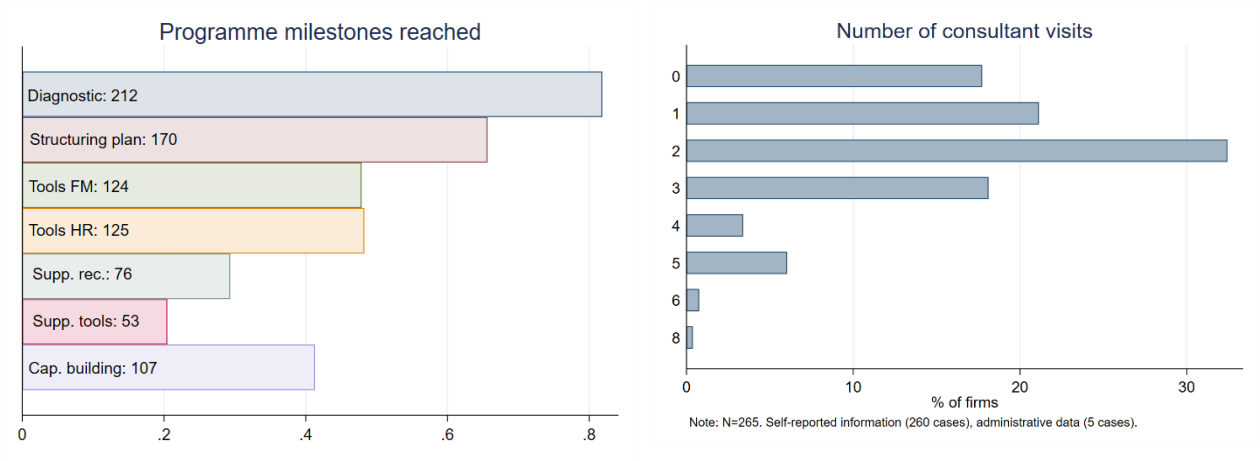

Figure 2: Treatment intensity. *Data sources: end-of-program survey of beneficiary firms.*

Relatedly, about 40% of the treatment group received none or only a single visit (18 and 21%, respectively). About one third of the treatment group received two visits, which corresponds to the treatment group average. Just under 30% received between three and eight visits. The average number of hours of 1:1 support that firms report (retrospectively) is 4.6, conditional on having received one or more visits.

The numbers above show considerable variation in the intensity of programme participation. There is anecdotal evidence for both consultants and firm managers being partly responsible for low treatment intensities. Consultants were paid a fixed amount for each firm without clear instructions on the number of visits to conduct. They frequently reported scheduling difficulties with the firm managers. Firm managers were often reluctant to participate in the programme because they were mainly interested in financing and did not immediately see the usefulness of the programme.[17] We analyse the correlates of take-up, defined as having received two or more visits, in Section IV.b.

[16] More specifically, most MSMEs reported having received only one or two visits and little or no support in implementing recommendations.

[17] There were about 30 cases where consultants submitted reports for firms that did not confirm receiving visits or did not confirm having reached the first programme milestones, a diagnostic, and a structuring plan. Three of the five consulting firms diligently submitted reports for all fifty firms they had been allocated, as the individual reports were specified as deliverables in their service contract. This was possible because they had received firm

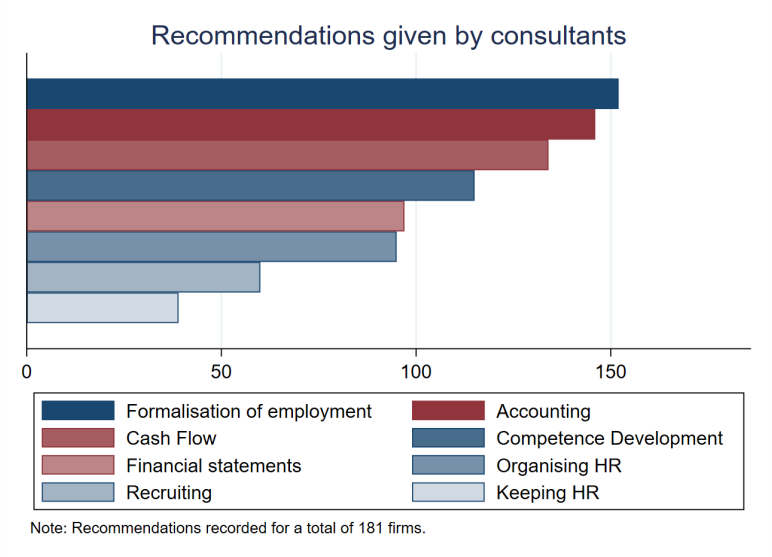

Figure 3: Recommendations given by consultants. *Data source: implementation data provided by consultants.*

Figure 3 categorises the recommendations consultants gave to firms. Recommendations were recorded by consultants in an online questionnaire for a total of 181 firms. The most common advice given to more than 150 firms was to formalise employment, which comprises the recommendations to provide written contracts and social security, medical coverage, and respecting the minimum wage. An almost equally high number of firms received suggestions pertaining to accounting, followed by cash flow management. The second most common HR-related advice was to invest in competence development. Just over half of the firms for which we have data received recommendations about financial statements, and HR organisation, followed by recruitment procedures, as well as motivating and keeping HR.

IV. Data and randomisation

a. Data

Baseline data were collected in April-May 2021 for a total of 452 firms who had applied to the PAP-PME and fulfilled the minimum eligibility criteria of one year of existence and one employee apart from the owner. 250 firms were randomly selected after stratifying by the *number of employees* (up to 3, more than 3 and up to 6, more than 6), *annual revenues* (less than 20 Mio. FCFA; 20 Mio. FCFA or more; no information), the *share of female staff* (up to 25%, more than 25%), and the firm district. The first three strata variables were averaged over the 2018-2020 period to increase robustness. 30 firms from the control group were put on a waiting list using the same randomisation procedure. The randomisation was prepared in Stata by the research team and executed in a joint workshop with CI PME. The 250 MSMEs were then randomly allocated in batches of 50 to the five consulting firms by the research team. 15 firms were reported as dropouts in the first month of the programme and were replaced with firms from the waiting list.

b. Baseline balance

As Table 1 illustrates, treatment and control group in the baseline sample are fully balanced with respect to the main outcome variables we define below, strata variables, and other firm characteristics. As an illustration, we give a brief description of the characteristics of the treatment group, bearing in mind that

portraits prepared using baseline data. Also, firm managers may not correctly recall consultant visits, may not have "counted" them if they did not perceive them as useful, or may not be informed of a visit if they did not personally receive the consultant.

the control group does not differ significantly. On average, roughly 79% of staff received at least the minimum wage, and 40% of staff had a written contract and social security, respectively. 29% of treatment group firms had any external financing, and 69% are located in the economic capital Abidjan, with the remainder spread across the country. The sample mainly consists of micro-enterprises with an annual revenue of at most 30 million CFA Franc (45,730 EUR, 62%), 26% are small enterprises with an annual revenue of up to 150 million CFA Franc (229,000 EUR), and the remainder are medium enterprises with higher annual revenues. The average number of staff was 6.3, with a mean share of female staff of 33%. The average firm age at baseline was seven years. Most firms are in the service sector (61%), followed by construction (18%) and manufacturing (11%). The overwhelming majority of sample firms have a male manager (82%) with tertiary education (71%), and report being formally registered (93%).

We define take-up as having received two or more visits from a consultant, the rationale being that the first visit was mostly used to finalise the diagnostic. While there is no significant difference in the baseline values of our main outcome variables between firms who took up the treatment versus firms who did not, we do see that micro-enterprises were more likely and small enterprises were less likely to participate in the programme. Firms in Abidjan were less likely to receive two or more visits, although the difference is only statistically significant at 10%. None of the four treatment group firms in the electricity sector received two or more visits. Characteristics of the main manager are important for take-up, with female managers and tertiary-educated managers being significantly less likely to take up the treatment.

------ Table 1 about here -------

c. Attrition

Of the 452 MSMEs surveyed in the baseline survey, 386 (361) could be interviewed again in the first (second) follow-up survey after 6 (18) months. The main reason for attrition given in the first follow-up survey was refusal (46 firms), which was largely driven by managers' disappointment over the lack of a financing component in the program. 12 firms could not be interviewed again because they were closed, and 8 firms dropped out for other reasons. As t-test results reported in Appendix Tables A1 and A2 show, drop-outs across both follow-up surveys are significantly more likely to be in Abidjan. They also tend to have lower average revenues, with small firms being more likely and medium-sized firms being less likely to drop out, although these differences are only weakly significant. Firms in the service sector were significantly more likely to drop out, as were those with a female manager and firms that were not formally registered.

To see whether attrition has led to imbalances, we repeat the balance tests for significant differences in baseline characteristics only for treatment and control group firms who were interviewed in the two follow-up surveys. As the right panels of Appendix Tables A1 and A2 show, both groups remain balanced with respect to all outcome and strata variables, as well as most firm characteristics. The only imbalance we identify is a significant difference in the share of firms in agriculture, where control group firms were less likely to drop out. We include controls for a firm's sector in our analyses. Overall, we conclude that while attrition may have changed the composition of the sample relative to the baseline and thus the group our treatment estimates are valid for, it is not a major threat to the internal validity of our treatment effects.

V. Estimating treatment effects

a. Defining and measuring outcomes

In line with the theory of change, we study treatment effects on primary outcomes in the areas listed below.

(i) *Business practises and financial management*

a. **bp_all,** an index of business practises calculated based on 25 of the 26 items suggested by McKenzie and Woodruff (2015). The index covers the areas of advertisement, record-keeping, stock management and planning, for which we calculate sub-indices. The stock management index is only defined for firms that report keeping stocks.

b. **acc_all,** an index of accounting practises and tax compliance. The index is an unweighted average of the following items: having a formal accounting system (self-reported), the share of key accounting documents the firm has, the share of digitalised or outsourced accounting practises (i.e. practises that are not done manually), the share of financial statements prepared for the past 3 years, the share of financial statements submitted for the past 3 years.

(ii) *Access to finance*

a. **finance_any,** a dummy variable equal to one if the firm reports having received any external financing in the past year.

(iii) *HR management practises*

a. **hr_all,** an index of 7 HR management practises. The index is an unweighted average of dummy variables for each of the following practises: documents working hours of each employee, has public organigram, uses formal recruitment channels, provides employees with monthly pay slips, uses a pay grid, regular performance evaluations, offered staff training in past year.

(iv) *Employment quality*

a. **empqual,** the unweighted average of three measures of employment quality at the firm level, as reported by the firm:

i. sh_minwage, the share of employees receiving at least the minimum wage.[18]

ii. sh_wrcon, the share of employees with a written contract. The calculation excludes the employer.

iii. sh_sosec, the share of staff registered with the social security provider CNPS.

We then consider the following secondary outcomes.

(v) *Firm performance and productivity*

a. **rev,** 2022 annual revenues as reported by the firm, in '000 EUR. Based on the firms' financial statements whenever available.

b. **prof**, 2022 annual profits as reported by the firm, in '000 EUR. Based on the firms' financial statements whenever available.

c. **prod_labour,** labour productivity calculated as annual revenues in 2022 divided by the number of workers at the end of the year.

d. **prod_capital,** capital productivity calculated as annual profits in 2022 divided by the value of the firm's capital stock.

(vi) *Job creation*

a. **lemp,** the logarithm of the number of full-time employees.

b. Empirical strategy

For all primary outcomes, we estimate intention-to-treat (ITT) effects at the firm level using the following ANCOVA specification:

$$y_{ft} = \beta_1 TREAT_f + \beta_2 y_{ft-1} + \beta_3 M_{ft-1} + \beta_4 S'_f + \varepsilon_{ft}$$

[18] The minimum wage was raised from 60,000 CFA (91.50 EUR) to 75,000 CFA (114.30) in January 2023, between the two rounds of follow-up data collection.

where y_{ft} is our outcome of interest for firm f at the time of the endline survey t, $TREAT_f$ is assignment to treatment, y_{ft-1} is the baseline value of the dependent variable, and M_{ft-1} is a dummy variable equal to one if the baseline value of the dependent variable was missing. S_f is a vector of variables used in randomisation[19] discussed above, and ε_{ft} is the error term. We use robust standard errors to account for unobserved heterogeneity. The ITT estimate is then given by coefficient β_1.

All primary outcomes were measured in the two follow-up surveys. We can thus estimate short-term effects on outcomes six months after the end of the intervention as well as their persistence one year later. The secondary outcomes may be affected eventually by changes in the primary outcomes, for example an improvement in business practises raising profits. For performance and productivity, we have annual revenue and profit data for 2022, the year following the intervention. For the number of full-time employees, we have four post-treatment data points (0, 6, 12 and 18 months after the end treatment, respectively), which allows us to follow the evolution of the number of employees.

c. Multiple hypothesis testing

As we estimate the effect of our treatment on a multitude of outcomes, we need to adjust for multiple hypothesis testing. We reduce the number of regressions by grouping related outcomes into indices whenever appropriate (HR practises, business practises, accounting), or by using broad outcome indicators (access to any type of finance). In addition, we calculate and report sharpened q-values for our main outcomes using the procedure developed by Benjamini et al. (2006) and implemented by Anderson (2008).

VI. Treatment effects on primary outcomes: management practices, access to finance, and employment quality

a. ITT effects

We report intention-to-treat (ITT) effects relating to our primary firm-level outcomes in Table 2. For each outcome, we estimate the ITT separately for the 6-month and the 18-month follow-up, and then pool the two surveys. The estimated impact of the intervention on the McKenzie and Woodruff (2017) business practises index is close to zero and insignificant both in the short and the medium term (Columns 1-3). The lack of a significant impact is not surprising given that the intervention did not target the underlying practises specifically. However, the set of practises contained in the index has been shown by McKenzie and Woodruff (2017) to be robustly associated with key measures of firm performance such as sales and profits, as well as labour productivity and total factor productivity. The muted effect on the broad index thus dampens expectations for substantial impacts on firm performance and productivity. We also consider treatment effects on a narrower accounting index (Columns 4-6), which is more closely aligned with the contents of the intervention. At the six-month follow-up, we find a small positive, but insignificant treatment effect of 0.031, corresponding to 5.4% of the control group mean. The effect is below the minimum detectable effect size and driven by entrepreneurs now describing their accounting system as formal (Detailed Tables in the Appendix). Similarly, we find no significant impact of the intervention on having any external financing in any of the survey rounds (Columns 7-9).

We report ITT effects on HR management practises in Columns 10-12 of Table 2. While the coefficients are all positive, only the short-run effect is weakly significant at 0.44, corresponding to 12.6% of the control group mean. Finally, we find a positive and highly significant effect of the intervention on employment quality (Columns 13-15): after six months, assignment to treatment is associated with a 7.2 percentage-points increase in the employment quality index, corresponding to about 14% of the control group mean. The effect remains similar in size and highly significant after 18 months. As the detailed

[19] We include the strata variables (i) location in the economic capital Abidjan vs. the rest of the country, (ii) average annual turnover 2018-2020, and (iii) average number of employees 2018-2020 to control for randomisation strata.

results in Table 3 show, the effect on the index is driven largely by positive effects on the share of employees receiving the minimum wage, especially after 18 months, as well as positive effects on the share of employees having a written contract. Both effects are substantial: the share of employees with a written contract rose by 9.9 percentage points after six months, corresponding to 23% of the control group mean of 43%. The share of employees earning at least the minimum wage rose by 10.2 percentage points after 18 months, corresponding to 15.2% of the control group mean of 67%. While we also observe a positive coefficient for the share of staff being registered for social security in the short run, it is only weakly significant and disappears completely in the medium run.

----- Tables 2 and 3 about here -----

We now conduct two types of robustness checks. First, we adjust for multiple hypothesis testing to avoid drawing conclusions based on chance differences between treatment and control group, which may occur given the high number of outcome variables we estimate effects for in this and the following sections. We report sharpened q-values as proposed by Benjamini et al. (2006) and implemented by Anderson (2008) to adjust for multiple hypothesis testing in Appendix Table B1. The effect on the employment quality index remains strongly significant with a q-value of 0.003. All effects that were insignificant in the main specification remain so, and the effect on the HR index becomes insignificant.

Secondly, we calculate Lee bounds as proposed by Lee (2009) and implemented by(2014) for our main results to adjust for attrition. Although attrition did not cause significant imbalances between treatment and control group as we show above, the sample composition changed due to MSMEs dropping out, which could have influenced our results. Lee bounds give us lower (upper) bounds for the treatment effect under the extreme assumption that attrition is perfectly negatively (positively) correlated with the outcome variable. Results reported in Appendix Table B2 show coefficients ranging from 0.062 to 0.094 for the employment quality index, with 90% confidence intervals between 0.002 and 0.169. This result largely supports the robustness of the effect on employment quality, although our sample size prevents us from estimating the effect more precisely. For the business practices index, the lower and upper bounds as well as the confidence intervals are centred around zero, supporting our finding of a zero effect. For the accounting index, access to finance, and the HR index, we estimate positive lower bounds with confidence intervals including zero. Here, we cannot reject small treatment effects that are below the minimum detectability threshold given our sample size.

b. Heterogeneous effects

We now test for heterogeneity in treatment effects between categories of our strata variables (annual revenue, no. of staff, location), firm characteristics (firm age, the largest sector categories, the education level of the main manager), as well as baseline values of the dependent variable. For each main outcome, we report the results of regressions where assignment to treatment is interacted with the categories of a given heterogeneity dimension. It should be stressed that this is an exploratory analysis and results need to be interpreted with care, as we conduct many hypothesis tests and inference is based on small samples of varying sizes. Our main interest here is an improved understanding of the groups of MSMEs driving our results. We also examine heterogeneous effects explicitly by testing for significant differences in ITTs between groups (see p-values in the final column(s) of each table).

Our results reported in Appendix Tables C1-C7 do not show significant effects on the business practices index for most sub-samples,[20] which is in line with the overall ITT from Table 2. For the accounting index, we find positive and significant effects for some sub-groups (mid-sized firms with four to six staff, firms in the construction sector, firms with below-median accounting practises at baseline), but the between-group differences in ITTs are not statistically significant. We also find positive and significant treatment effects for firms outside the economic capital Abidjan, with a (weakly) significant

[20] The only exception is a small, weakly significant and negative effect for manufacturing enterprises. This effect is driven by a negative short-term effect on the stock management sub-index and we do not have reasons to assume a direct connection to the treatment.

difference in ITTs. For access to finance, we find heterogeneous treatment effects with respect to firm age: firms that have existed for three years or less saw an increase in 13.2 percentage-points in access to external finance, more than four times the control group mean of 3%.

There is some heterogeneity in the treatment effects on the HR management index, where the smallest and youngest firms (up to three staff members, up to three years of existence), as well as those in the service sector, see the largest and most significant positive effects. Somewhat puzzlingly, we also find a negative and highly significant treatment effect of 24.5% of the control group mean in the manufacturing sector.

We do not find any significant heterogeneity in the treatment effects on the employment quality index, as almost all sub-groups see positive and significant impacts ranging roughly from 0.06 to 0.12. However, the treatment effect is insignificant for medium enterprises with annual revenues exceeding 150 million CFA (roughly 229,000 EUR), where the control group mean is already high at 0.76. The treatment effect for manufacturing enterprises is small and insignificant as well.

VII. Treatment effects on firm performance and productivity

a. Methodological considerations

The estimation of treatment effects on firm performance and productivity is complicated by the high variance and right-skewed distributions of these outcomes. Treatment effects estimated using untransformed versions of the dependent variables are sensitive to the influence of extreme values, which may partly be due to measurement error, and partly reflect real, but rare outcomes. Even if true, individual observations with extreme values can have large impacts in linear regression, thus leading to conclusions that do not reflect the underlying mechanisms for most firms. Any decision to exclude certain observations, for example by winsorizing the dependent variable at the 99th or 95th percentile, implies a trade-off between preserving valuable information on the one hand, and letting extreme values drive results on the other hand.

Although the widely used logarithmic and inverse hyperbolic sine (IHS) transformations can mitigate the discussed problems and coefficients are conveniently interpreted as percentage changes, they come with other drawbacks. The validity of treatment effects estimated using log-like transformations of dependent variables such as log(y+c) or the IHS has been drawn into question lately. Notably, treatment effects based on IHS-transformed dependent variables (i) are unit-dependent, meaning that the size of the estimated treatment effect changes with the scaling or the currency of the underlying variable (Aihounton & Henningsen, 2021; Chen & Roth, 2023; De Brauw & Herskowitz, 2021; Mullahy & Norton, 2022), and (ii) the weighting of extensive-margin vs. intensive-margin effects also depends on the scaling of the variable (Chen & Roth, 2023; Mullahy & Norton, 2022). Robustness tests where regressions are re-estimated with differently scaled versions of the dependent variable (see Aihounton & Henningsen, 2021; De Brauw & Herskowitz, 2021) shed light on the degree of unit-dependence, but do not convincingly solve the problem of arbitrary weighting of extensive-margin and intensive-margin effects (Chen & Roth, 2023; McKenzie, 2024).

Considering these challenges, we proceed as follows. We first estimate ITTs based on (i) untransformed annual revenues and profits, in '000 EUR, (ii) 90%-winsorized annual revenues and profits in '000 EUR,[21] and (iii) IHS-transformed annual revenues and profits. While these estimates suffer from the discussed shortcomings, they are nevertheless informative. In a second step, we estimate heterogeneous effects as well as quantile treatment effects.

[21] Values below the 5th and above the 95th percentile in the distribution are set to the 5th and the 95th percentile, respectively. Regressions include dummy variables controlling for these cases.

b. (Average) ITT effects on firm performance and productivity

Results for untransformed, winsorized, and IHS-transformed annual revenues and profits are reported in Table 4. We find an extremely large and weakly significant treatment effect of 235.513 on annual revenues in '000 EUR (corresponding to more than twice the control group mean of 110), which however melts down to an insignificant 15.7911, less than 10% of the control group mean, for winsorized revenues. The coefficient for IHS revenues is positive and weakly significant. For annual profits in '000 EUR, we also find a positive and significant treatment effect. Even for the winsorized outcome variable, there is still a significant treatment effect of 3,853 EUR, corresponding to more than 50% of the control group mean of 7.48. The ITT for IHS profits is positive and insignificant.

------ Table 4 about here -------

We also estimate program impacts on labour productivity, calculated as annual revenue per worker, and capital productivity, calculated as annual profits divided by the capital stock. Results reported in Table 5 show positive, but insignificant coefficients for labour productivity, driven by the positive effect on annual revenues shown above. For capital productivity, the coefficients are both insignificant.

------ Table 5 about here -------

Robustness checks where we use DFBETA and DFITS criteria to detect outliers (see Appendix Tables B3-B6) still yield positive and significant results for untransformed revenues and labour productivity, and for IHS profits when using the DFITS outlier correction. When controlling for multiple hypothesis testing (Appendix Table B1) and attrition (Appendix Table B2), however, we do not obtain significant results. Taken together, the lack of significance for the IHS variables as well as the multiple hypothesis tests and Lee bounds suggests there is no robust, average treatment effect on firm performance and the derived productivity measures. The unrealistically large, sometimes significant ITTs suggest that the effects we observe for the '000 EUR variables are largely driven by extreme values. However, the fact that we still find significant treatment effects when winsorizing and when excluding outliers also shows that there are more extreme values in the treatment group, and more extreme values than the different techniques of accounting for them identify.

c. Heterogeneous effects

We now estimate heterogeneous effects for winsorized as well as IHS-transformed revenues and profits with respect to the set of baseline characteristics we considered for the primary outcome variables (Appendix Tables C6-C9). Given the large variation in the dependent variables, our results need to be interpreted with caution and should be interpreted as identifying characteristics associated with reporting higher performance in the treatment group. Our results for annual revenues show some heterogeneity with respect to firm size: most notably, we find a large and significant ITT of 113,175 EUR for medium-sized firms, corresponding to just over a third of the control group's annual revenue. We find a similar pattern of a large and significant ITT for IHS-transformed annual profits, although the coefficient is so large that it cannot be meaningfully interpreted. The results for labour and capital productivity (Appendix Tables C10-C13) largely reproduce these results, with pronounced positive effects on labour and capital productivity for medium-sized firms.

d. Quantile treatment effects

In addition to the heterogeneous effects, we now estimate quantile treatment effects for annual revenues and profits, to shed more light on the drivers of the implausibly large average effects seen in the previous section. As Figure 4 shows, the estimated treatment effect is very close to zero up until the 60th percentile in the case of annual revenues, at which point it rises, first somewhat moderately up to the 80th percentile, and sharply after the 90th percentile. The confidence intervals become considerably larger from the 70th percentile onwards, and no quantile treatment effect is significant at a confidence level of 95%. The pattern is somewhat similar for profits: here, we have large confidence intervals at the 5th percentile, as there are some extreme, negative values for profits. The coefficients remain close to zero and start rising

from the 40th percentile onwards. At the 70th percentile, we estimate a weakly significant treatment effect of 4,227 EUR, corresponding to more than half of the control group value at this percentile. The estimated coefficients then get successively larger, as do the confidence intervals, translating into insignificant estimates.

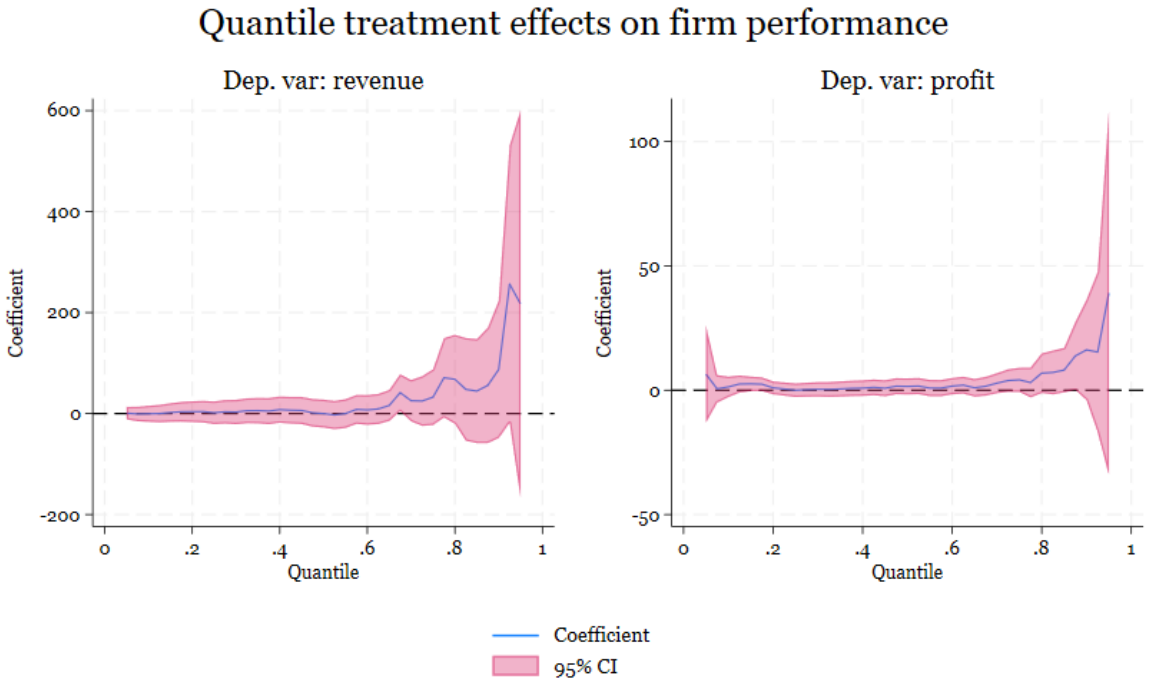

Figure 4: ***Quantile treatment effects on firm performance outcomes.***

The results for labour and capital productivity reported in Figure 5

VIII. Treatment effects on employment

a. ITT effects

We first graph the evolution of predicted firm sizes in terms of the number of full-time staff in the treatment and control group from 2018-2023 in Figure 4.[22] This period includes four pre-treatment data points over 2,5 years, as well as four post-treatment data points for firm size, at 0, 6,12, and 18 months after the end of the intervention, respectively. While firm sizes rose slightly in both groups until reaching 6 to 6.5 persons in mid-2021 (the beginning of the intervention), they started declining and fell below their 2018 levels in 2022/2023. Although predicted firm size for the treatment group is above that of the control group throughout and the distance widens slightly post-treatment, the confidence intervals overlap, and the differences between groups are not statistically significant.

[22] To do so, we first construct a full panel dataset for all time periods when we have data on the number of staff. The resulting dataset has a longer panel dimension than our three survey rounds, as we also asked retrospective questions about the number of staff at the end of each year. We then regress the number of employees on a full interaction of assignment to treatment and a time dummy, plus sector, strata, and enumerator controls. The sample is restricted to firms interviewed in the second follow-up survey.

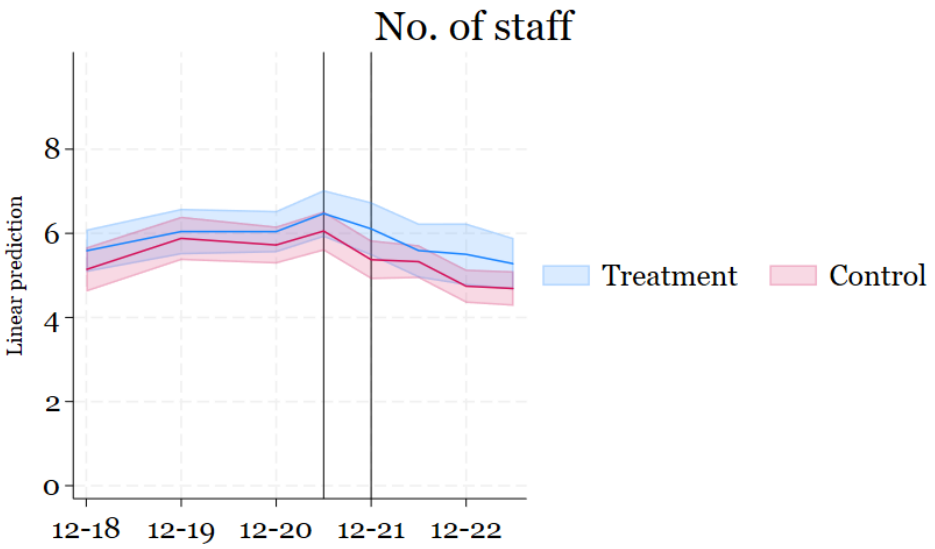

Figure 5: ***Predicted number of employees 2018-2023.*** *Data source: firm surveys. Notes: 95% confidence intervals. Excludes top 1% in terms of baseline firm size.*

We then estimate ITT effects in a model where we pool all data points from 0-18 months post-treatment, resulting in more than 1,400 observations. In principle, we might now be able to detect even a small effect with higher precision thanks to the larger sample size. However, as shown in Table 5, we find no significant treatment effect for the level or log specification. One might also suspect that effects are not yet visible directly after the intervention. If we shorten the time period effects are pooled over, looking only at 6-18 months or 12-18 months post-treatment, the coefficients remain small and insignificant.

------ Table 6 about here -------

b. Heterogeneous effects

As a next step, we test for effect heterogeneity using the pooled sample and in terms of the same baseline characteristics as before (size, age, sector, location). Although the pooled sample offers more power than for the other outcomes, these remain only exploratory analyses. Our results reported in Appendix Tables C10 and C11 illustrate that the muted average impacts hide opposing effects for some sub-groups. While small firms with annual revenues between 30 and 150 million CFA see a positive and significant treatment effect of 19% (corresponding to 0.93 additional workers per firm), there is a negative and significant treatment effect of -21% for medium-sized firms (corresponding to a loss of 1.95 workers per firm). The treatment effect for micro-enterprises is positive, but insignificant. What is more, we find a positive and highly significant treatment effect of 14% for firms outside Abidjan.

IX. Discussion and Conclusion

We have presented experimental evidence on the effects of the *Programme d'Appui à la Productivité des PME* (PAP-PME), which was implemented in Côte d'Ivoire in 2021. The intervention focusing on financial management and HR management consisted of 6 months of individual consulting support and a series of webinars. Out of 448 eligible firms having participated in the baseline survey in 2021, a treatment group of 262 MSMEs was selected randomly after stratification by annual turnover, the number of employees, share of female employees, and district, with the remainder serving as a control group. We evaluate the short-term and medium-term effects of the intervention based on surveys of 386/360 treatment and control group firms conducted in mid-2022 and mid-2023.

We assess short-term and medium-term effects of the program at the firm level. Six months after the end of the intervention, our most robust result is a sizeable and significant treatment impact on an employment quality index, which remains stable after 18 months. This effect is driven by positive treatment effects on the share of employees receiving the minimum wage, as well as the share of employees having written contracts. While we also find a small, positive effect on social security registration in the short run, it is not robust to adjusting for multiple hypothesis testing and disappears after 18 months. The treatment effects on HR management and accounting practises are positive, but insignificant. We find no significant impact on business practises and access to finance. In line with these muted impacts on primary outcomes, we also do not find significant and robust average impacts on firm performance, productivity, and the number of staff.

Our observations allow for some tentative conclusions regarding program design. First, our results suggest that the program was not ideally targeted. Take-up was higher outside Abidjan and for micro-enterprises, which implies that it was perceived as more relevant by these firms. Similarly, despite muted average impacts, there were positive treatment effects on some management practises for firms with low baseline values of these outcomes, firms outside Abidjan, and firms where the manager had below-tertiary education. If the program had only been implemented outside Abidjan or targeted firms with specific needs, the evaluation results could have been more favourable given the larger treatment effects. The consulting firms frequently stressed that the large geographical distances and the heterogeneity between the firms they worked with made it more costly and difficult to cater to the different needs. Also, most MSMEs submitted applications hoping to get access to finance, which resulted in cases of treatment group firms that were not interested in the program at all.

Secondly, although the program was low-intensity overall compared to other consulting interventions, the diagnostic that was conducted for each firm was about as time-intensive as for these other programs. While the ratio between the time spent on the diagnostic and subsequent individual consulting was roughly 1:1 for the PAP-PME, it was 1:10 for the consulting program in Nigeria evaluated by Anderson & McKenzie (2022) and 1:25 for the program in Mexico evaluated by Bruhn et al. (2018). In some cases, the diagnostic was conducted, and reports were submitted for firms that did not go on to receive further consulting. These observations suggest that the comprehensive diagnostic was not put to optimal use.

In sum, our results suggest that the effectiveness and efficiency of future programs could be enhanced by tailoring them more specifically to the needs of firms of a certain size, level of formalisation, sector, and/or geographic zone. Also, it is advisable to adapt overall program intensity as well as the relative weight of different program components to the interest and needs of the respective firms, to avoid spending resources on firms that are unlikely to benefit. McKenzie (2020) discusses a "funnel" approach, where very basic services are offered to a large group of MSMEs, and additional services to a smaller group based on the results of the first stage.

In the employment dimension, there is a striking disparity between the program's ambitious objective, which was to create about one new job per firm, and our findings of no significant job creation. Although one could argue that the evaluation period was too short and jobs might still be created in the longer run, the lack of substantial short-term impacts on management and firm performance suggests otherwise. At the same time, our results underscore the feasibility and importance of focusing on employment quality and employment formalisation in MSMEs in developing countries. Our data illustrate that dependent employment often needs improvement in terms of formalisation and remuneration. The evaluation results suggest that (small) improvements in employment conditions are possible and can be achieved even with a relatively light consulting intervention, especially in firms that previously did not have access to the relevant information or services. Policymakers should thus keep in mind that some "quick wins" in terms of improved employment conditions may be possible and worthwhile.

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XI. Tables

Table 1: Balance in baseline sample & take-up

	Treatment (1)		Control (2)		Orthogonality Mean (1)-(2)		Took up (3)		Did not take up (4)		Orthogonality Mean (3)-(4)	
	N	Mean	N	Mean	Difference	p-value	N	Mean	N	Mean	Difference	p-value
Outcome variables												
Employment quality	262	0.506	186	0.515	-0.009	0.764	158	0.504	104	0.509	-0.005	0.907
Minimum wage (share)	234	0.787	167	0.787	-0.001	0.986	139	0.806	95	0.759	0.046	0.317
Written contract (share)	262	0.395	186	0.410	-0.015	0.731	158	0.386	104	0.410	-0.024	0.678
Social security (share)	261	0.400	186	0.405	-0.004	0.905	158	0.392	103	0.413	-0.021	0.667
HR index	262	0.308	186	0.313	-0.005	0.831	158	0.295	104	0.327	-0.032	0.336
Business practices index	260	0.728	186	0.750	-0.022	0.235	157	0.725	103	0.733	-0.007	0.774
Accounting index	262	0.542	186	0.574	-0.033	0.261	158	0.540	104	0.545	-0.006	0.889
Any external financing	262	0.290	186	0.285	0.005	0.906	158	0.285	104	0.298	-0.013	0.818
Strata variables												
Abidjan	262	0.687	186	0.645	0.042	0.354	158	0.646	104	0.750	-0.104	0.075
Revenue (18-20, EUR)	260	111.321	182	118.641	-7.319	0.731	156	110.068	104	113.202	-3.134	0.909
Size: micro (revenue <30 Mio FCFA)	260	0.608	182	0.593	0.014	0.763	156	0.660	104	0.529	0.131	0.034
Size: small (revenue 30-150 Mio FCFA)	260	0.254	182	0.253	0.001	0.979	156	0.212	104	0.317	-0.106	0.055
Size: medium (revenue above 150)	260	0.138	182	0.154	-0.015	0.652	156	0.128	104	0.154	-0.026	0.559
Staff (18-20)	262	6.846	186	6.524	0.322	0.739	158	6.912	104	6.744	0.168	0.895
1-3 staff	262	0.313	186	0.290	0.023	0.608	158	0.348	104	0.260	0.088	0.132
4-6 staff	262	0.370	186	0.387	-0.017	0.717	158	0.354	104	0.394	-0.040	0.516
More than 6 staff	262	0.317	186	0.323	-0.006	0.897	158	0.297	104	0.346	-0.049	0.409
Share of female staff	262	0.326	186	0.292	0.034	0.210	158	0.315	104	0.344	-0.029	0.460
Firm characteristics												
Annual profit (18-20, EUR)	254	8.494	176	7.022	1.472	0.642	155	7.993	99	9.280	-1.287	0.756
Capital stock (18-20, EUR)	256	46.318	178	50.154	-3.836	0.745	158	43.096	98	51.511	-8.415	0.593
Firm age (years)	261	7.402	186	7.887	-0.485	0.457	158	7.190	103	7.728	-0.538	0.524
Act: Agriculture	262	0.084	186	0.118	-0.034	0.230	158	0.095	104	0.067	0.028	0.432
Act: Manufacturing	262	0.111	186	0.124	-0.013	0.674	158	0.120	104	0.096	0.024	0.545
Act: Electricity & gas	262	0.015	186	0.011	0.005	0.683	158	0.000	104	0.038	-0.038	0.013
Act: Construction	262	0.183	186	0.172	0.011	0.762	158	0.203	104	0.154	0.049	0.321
Act: Services	262	0.607	186	0.575	0.032	0.503	158	0.582	104	0.644	-0.062	0.317
Male manager	262	0.828	186	0.796	0.033	0.383	158	0.861	104	0.779	0.082	0.086
Manager with tertiary education	259	0.703	184	0.761	-0.058	0.177	157	0.637	102	0.804	-0.167	0.004
Registry of commerce	262	0.935	186	0.941	-0.006	0.805	158	0.949	104	0.913	0.036	0.250

Notes: take-up is defined here as having received 2 or more visits from a consultant (as reported by the firm).

Table 2: Treatment effects on primary outcomes

	BP (Index 0-1)			Accounting (Index 0-1)			Any finance (0/1)			HR index (Index 0-1)			Employment quality (Index 0-1)		
	6M	18M	P	6M	18M	P	6M	18M	P	6M	18M	P	6M	18M	P
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
assignment	-0.002	-0.006	-0.002	0.031	0.019	0.025	0.025	0.024	0.022	0.044*	0.012	0.024	0.072***	0.071***	0.075***
	(0.018)	(0.020)	(0.013)	(0.019)	(0.021)	(0.017)	(0.040)	(0.039)	(0.032)	(0.026)	(0.024)	(0.020)	(0.025)	(0.024)	(0.020)
R-squared	0.266	0.138	0.188	0.520	0.398	0.468	0.280	0.273	0.285	0.263	0.227	0.257	0.519	0.545	0.537
N	386	360	720	386	360	720	386	360	720	386	360	720	385	360	719
Control mean	0.76	0.75	0.75	0.57	0.52	0.54	0.22	0.20	0.22	0.35	0.30	0.33	0.52	0.50	0.51
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: 6M/18M: 6 months/18 months post-treatment. P: pooled sample of two follow-up surveys. Standard errors in parentheses: robust Huber/White standard errors (6M/18M), clustered at firm level (P).

Table 3: Treatment effects on employment quality index and components

	Employment Quality (Index 0-1)			> min. wage (share)			written contract (share)			social security (share)		
	6M	18M	P	6M	18M	P	6M	18M	P	6M	18M	P
	1	2	3	4	5	6	7	8	9	10	11	12
assignment	0.072***	0.071***	0.075***	0.043	0.102***	0.083***	0.099**	0.091**	0.093***	0.067**	0.004	0.037
	(0.025)	(0.024)	(0.020)	(0.034)	(0.039)	(0.029)	(0.040)	(0.041)	(0.032)	(0.033)	(0.036)	(0.029)
R-squared	0.519	0.545	0.537	0.315	0.323	0.327	0.387	0.371	0.386	0.393	0.378	0.390
N	385	360	719	346	303	629	373	360	707	383	349	706
Control mean	0.52	0.50	0.51	0.78	0.67	0.72	0.43	0.41	0.42	0.41	0.48	0.44
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1. 6M/18M: 6 months/18 months post-treatment. P: pooled sample of two follow-up surveys.

Table 4: 12-month treatment effects on annual revenue and profits

	Revenue ('000 EUR)	Revenue ('000 EUR wins)	Revenue (IHS)	Profit ('000 EUR)	Profit ('000 EUR wins)	Profit (IHS)
	1	2	3	4	5	6
assignment	235.513*	15.793	0.265*	14.843**	3.853**	0.349
	(136.441)	(12.743)	(0.152)	(6.866)	(1.922)	(0.243)
R-squared	0.124	0.604	0.782	0.063	0.370	0.579
Number of observations	335	335	335	299	299	235
Control mean	109.98	105.55	10.90	3.29	7.48	8.92
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: Robust Huber/White standard errors in parentheses. Missing values for lagged dependent variables are replaced with the mean of the estimation sample, with regressions including a dummy variable to control for such cases. Outlier detection method: dfits. Model 1: 5 obs. excluded. Model 2: 15 obs. excluded. Model 3: 13 obs. excluded. Model 4: 11 obs. excluded.

Table 5: 12-month treatment effects on productivity

	Lab. prod. ('000 EUR wins)	Lab. prod. (IHS)	Cap. prod. ('000 EUR wins)	Cap. prod. (IHS)
	1	2	3	4
assignment	0.394	0.200	0.238	-0.043
	(3.070)	(0.154)	(0.195)	(0.133)
R-squared	0.474	0.109	0.256	0.386
Number of observations	323	321	287	268
Control mean	23.66	3.12	0.74	0.41
Strata controls	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: Robust Huber/White standard errors in parentheses. Missing values for lagged dependent variables are replaced with the mean of the estimation sample, with regressions including a dummy variable to control for such cases. Outlier detection method: dfits. Model 1: 6 obs. excluded. Model 2: 15 obs. excluded. Model 3: 2 obs. excluded. Model 4: 11 obs. excluded.

Table 6: Treatment effects on the number of staff

	Staff		Staff		Staff	
	(No)	(Log)	(No)	(Log)	(No)	(Log)
Months since treatment	0-18	0-18	6-18	6-18	12-18	12-18
	1	2	3	4	5	6
assignment	0.431	0.029	0.365	0.014	0.487	0.035
	(0.336)	(0.049)	(0.335)	(0.052)	(0.373)	(0.063)
R-squared	0.246	0.371	0.238	0.352	0.226	0.306
Number of observations	1406	1406	1052	1052	707	707
Control mean	5.03	1.38	4.91	1.37	4.71	1.32
Strata controls	Yes	Yes	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: 6M/18M: 6 months/18 months post-treatment. P: pooled sample of two follow-up surveys. Standard errors in parentheses: robust Huber/White standard errors (6M/18M), clustered at firm level (P).

XII. Appendices

a. Appendix A: Attrition

Table A1: Attrition and balance in sample observed at 6-month follow-up

	Observed in endline (1)		Drop-out (2)		Orthogonality Mean (1)-(2)		Treatment (3)		Control (4)		Orthogonality Mean (3)-(4)	
	N	Mean	N	Mean	Difference	p-value	N	Mean	N	Mean	Difference	p-value
Outcome variables												
Employment quality	386	0.506	62	0.534	-0.028	0.535	229	0.505	157	0.508	-0.003	0.918
Minimum wage (share)	349	0.789	52	0.775	0.013	0.799	203	0.793	146	0.782	0.011	0.780
Written contract (share)	386	0.392	62	0.462	-0.070	0.268	229	0.386	157	0.400	-0.014	0.766
Social security (share)	385	0.396	62	0.442	-0.046	0.380	228	0.402	157	0.386	0.016	0.692
HR index	386	0.308	62	0.323	-0.015	0.680	229	0.308	157	0.308	-0.000	0.989
Business practices index	384	0.739	62	0.727	0.012	0.645	227	0.731	157	0.751	-0.019	0.324
Accounting index	386	0.545	62	0.622	-0.077	0.061	229	0.534	157	0.560	-0.026	0.402
Any external financing	386	0.298	62	0.226	0.072	0.245	229	0.297	157	0.299	-0.002	0.959
Abidjan	386	0.650	62	0.790	-0.140	0.030	229	0.668	157	0.624	0.044	0.375
Strata variables												
Revenue (18-20, EUR)	381	121.419	61	70.094	51.324	0.091	227	118.149	154	126.238	-8.090	0.740
Size: micro (revenue <30 Mio FCFA)	381	0.606	61	0.574	0.033	0.631	227	0.612	154	0.597	0.015	0.770
Size: small (revenue 30-150 Mio FCFA)	381	0.236	61	0.361	-0.124	0.038	227	0.238	154	0.234	0.004	0.926
Size: medium (revenue above 150)	381	0.157	61	0.066	0.092	0.058	227	0.150	154	0.169	-0.019	0.617
Staff (18-20)	386	6.749	62	6.483	0.266	0.847	229	6.941	157	6.469	0.472	0.665
1-3 staff	386	0.303	62	0.306	-0.003	0.958	229	0.306	157	0.299	0.006	0.895
4-6 staff	386	0.383	62	0.339	0.045	0.501	229	0.380	157	0.389	-0.009	0.865
More than 6 staff	386	0.313	62	0.355	-0.041	0.518	229	0.314	157	0.312	0.002	0.962
Share of female staff	386	0.310	62	0.327	-0.017	0.664	229	0.320	157	0.294	0.027	0.360
Firm characteristics												
Annual profit (18-20, EUR)	377	7.839	53	8.266	-0.427	0.928	225	8.999	152	6.122	2.877	0.408
Capital stock (18-20, EUR)	377	48.733	57	42.324	6.409	0.709	225	49.470	152	47.641	1.830	0.889
Firm age (years)	385	7.584	62	7.726	-0.141	0.879	228	7.526	157	7.669	-0.142	0.835
Act: Agriculture	386	0.104	62	0.065	0.039	0.338	229	0.079	157	0.140	-0.062	0.052
Act: Manufacturing	386	0.122	62	0.081	0.041	0.349	229	0.127	157	0.115	0.012	0.724
Act: Electricity & gas	386	0.016	62	0.000	0.016	0.324	229	0.017	157	0.013	0.005	0.713
Act: Construction	386	0.187	62	0.129	0.057	0.274	229	0.183	157	0.191	-0.008	0.850
Act: Services	386	0.573	62	0.726	-0.153	0.023	229	0.594	157	0.541	0.052	0.307
Male manager	386	0.839	62	0.661	0.178	0.001	229	0.847	157	0.828	0.019	0.616
Manager with tertiary education	384	0.714	59	0.814	-0.100	0.109	227	0.683	157	0.758	-0.075	0.110
Registry of commerce	386	0.946	62	0.887	0.058	0.078	229	0.952	157	0.936	0.016	0.506

Notes: on the left side of the table, we compare baseline characteristics of panel firms (1) to those of drop-outs (2). On the right side of the table, we compare baseline characteristics of treatment (3) and control group firms (4) who were observed in the endline survey.

Table A2: Attrition and balance in sample observed at 18-month follow-up

	Observed in endline (1)		Drop-out (2)		Orthogonality Mean (1)-(2)		Treatment (3)		Control (4)		Orthogonality Mean (3)-(4)	
	N	Mean	N	Mean	Difference	p-value	N	Mean	N	Mean	Difference	p-value
Outcome variables												
Employment quality	360	0.506	88	0.526	-0.020	0.611	213	0.506	147	0.506	-0.000	0.993
Minimum wage (share)	327	0.786	74	0.790	-0.004	0.936	189	0.788	138	0.784	0.003	0.932
Written contract (share)	360	0.394	88	0.434	-0.040	0.462	213	0.392	147	0.396	-0.004	0.934
Social security (share)	359	0.394	88	0.437	-0.044	0.343	212	0.405	147	0.377	0.027	0.506
HR index	360	0.307	88	0.320	-0.012	0.691	213	0.311	147	0.302	0.010	0.731
Business practices index	358	0.739	88	0.733	0.005	0.820	211	0.729	147	0.752	-0.023	0.248
Accounting index	360	0.545	88	0.597	-0.052	0.146	213	0.536	147	0.558	-0.022	0.498
Any external financing	360	0.303	88	0.227	0.076	0.162	213	0.300	147	0.306	-0.006	0.909
Abidjan	360	0.639	88	0.795	-0.157	0.005	213	0.662	147	0.605	0.057	0.274
Strata variables												
Revenue (18-20, EUR)	357	122.077	85	81.818	40.259	0.130	212	121.615	145	122.754	-1.139	0.964
Size: micro (revenue <30 Mio FCFA)	357	0.608	85	0.576	0.031	0.596	212	0.608	145	0.607	0.002	0.976
Size: small (revenue 30-150 Mio FCFA)	357	0.232	85	0.341	-0.109	0.038	212	0.236	145	0.228	0.008	0.856
Size: medium (revenue above 150)	357	0.160	85	0.082	0.077	0.069	212	0.156	145	0.166	-0.010	0.803
Staff (18-20)	360	6.791	88	6.387	0.404	0.735	213	7.002	147	6.487	0.515	0.656
1-3 staff	360	0.300	88	0.318	-0.018	0.740	213	0.305	147	0.293	0.013	0.798
4-6 staff	360	0.383	88	0.352	0.031	0.591	213	0.376	147	0.395	-0.019	0.717
More than 6 staff	360	0.317	88	0.330	-0.013	0.817	213	0.319	147	0.313	0.006	0.899
Share of female staff	360	0.305	88	0.340	-0.035	0.306	213	0.314	147	0.292	0.022	0.462
Firm characteristics												
Annual profit (18-20, EUR)	352	7.726	78	8.638	-0.911	0.822	209	9.065	143	5.770	3.296	0.365
Capital stock (18-20, EUR)	351	46.172	83	55.159	-8.987	0.543	209	50.686	142	39.529	11.156	0.375
Firm age (years)	359	7.549	88	7.830	-0.281	0.728	212	7.448	147	7.694	-0.246	0.722
Act: Agriculture	360	0.103	88	0.080	0.023	0.513	213	0.075	147	0.143	-0.068	0.038
Act: Manufacturing	360	0.125	88	0.080	0.045	0.234	213	0.127	147	0.122	0.004	0.904
Act: Electricity & gas	360	0.014	88	0.011	0.003	0.854	213	0.019	147	0.007	0.012	0.341
Act: Construction	360	0.183	88	0.159	0.024	0.596	213	0.178	147	0.190	-0.012	0.772
Act: Services	360	0.575	88	0.670	-0.095	0.103	213	0.601	147	0.537	0.064	0.232
Male manager	360	0.847	88	0.682	0.165	0.000	213	0.859	147	0.830	0.029	0.450
Manager with tertiary education	358	0.712	85	0.788	-0.076	0.158	211	0.687	147	0.748	-0.061	0.210
Registry of commerce	360	0.947	88	0.898	0.049	0.086	213	0.953	147	0.939	0.014	0.553

Notes: on the left side of the table, we compare baseline characteristics of panel firms (1) to those of drop-outs (2). On the right side of the table, we compare baseline characteristics of treatment (3) and control group firms (4) who were observed in the endline survey.

b. Appendix B: Robustness

Table B1: Sharpened q-values

Estimate #	Outcome variable	Coefficient	P-value	Sharpened q-value
1	BP Index	-0.002	0.896	0.566
2	Accounting index	0.025	0.135	0.377
3	Any finance	0.022	0.490	0.442
4	HR Index	0.024	0.217	0.429
5	Employment Quality	0.075	0.000	0.003
6	IHS revenue	0.265	0.082	0.370
7	IHS profit	0.349	0.152	0.377
8	Labour productivity	28.286	0.090	0.370
9	Capital productivity	-13.929	0.269	0.429
10	Log (no. of staff)	0.029	0.557	0.449

Sharpened two-stage q-values are calculated as described in Anderson (2008) and introduced in Benjamini, Krieger, and Yekutieli (2006).

Table B2: Lee bounds

Wave	Outcome variable	Lower bound	Upper bound	CI lower	CI upper	Trimming
2	BP index	-0.011	0.010	-0.043	0.047	0.029
3	BP index	-0.010	0.007	-0.046	0.060	0.028
2	Accounting index	0.015	0.042	-0.031	0.094	0.029
3	Accounting index	0.007	0.021	-0.043	0.073	0.028
2	Any finance	0.030	0.058	-0.053	0.131	0.029
3	Any finance	0.011	0.036	-0.085	0.119	0.028
2	HR index	0.030	0.057	-0.023	0.107	0.029
3	HR index	0.007	0.030	-0.049	0.080	0.028
2	Emp. quality	0.062	0.089	0.003	0.152	0.029
3	Emp. quality	0.070	0.094	0.002	0.169	0.028
3	IHS revenue	0.289	0.466	-0.358	1.541	0.010
3	IHS profit	1.184	1.482	-0.468	3.725	0.011
3	Labour prod.	11.759	29.605	-48.211	52.789	0.011
3	Capital prod.	-26.143	-26.123	-73.794	21.732	0.000
3	Log (no. of staff)	-0.044	0.033	-0.208	0.186	0.025
3	Log (no. of staff)	-0.012	0.083	-0.192	0.238	0.026

Lee bounds are calculated using the leebounds stata command introduced in Tauchmann (2009), based on the Lee (2009) approach. We report 90% confidence intervals. Regressions of primary outcomes include the firm size by revenue as a tightening parameter.

Table B3: 12-month treatment effects on annual revenue and profits (DFBETA)

	Revenue ('000 EUR)	Revenue (IHS)	Profit ('000 EUR)	Profit (IHS)
	1	2	3	4
assignment	74.742**	0.060	-2.413	0.156
	(29.934)	(0.108)	(3.638)	(0.208)
R-squared	0.367	0.866	0.113	0.627
Number of observations	333	329	289	232
Control mean	109.98	10.90	3.29	4.29
Strata controls	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: Robust Huber/White standard errors in parentheses. Missing values for lagged dependent variables are replaced with the mean of the estimation sample, with regressions including a dummy variable to control for such cases.

Table B4: 12-month treatment effects on annual revenue and profits (DFITS)

	Revenue ('000 EUR)	Revenue (IHS)	Profit ('000 EUR)	Profit (IHS)
	1	2	3	4
assignment	84.437***	0.098	0.779	0.412**
	(31.706)	(0.102)	(2.899)	(0.190)
R-squared	0.385	0.875	0.094	0.727
Number of observations	330	320	286	224
Control mean	109.98	10.90	3.29	4.29
Strata controls	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: Robust Huber/White standard errors in parentheses. Missing values for lagged dependent variables are replaced with the mean of the estimation sample, with regressions including a dummy variable to control for such cases. Outlier detection method: dfits. Model 1: 5 obs. excluded. Model 2: 15 obs. excluded. Model 3: 13 obs. excluded. Model 4: 11 obs. excluded.

Table B5: 12-month treatment effects on productivity (DFBETA)

	Lab. prod. ('000 EUR wins)	Lab. prod. (IHS)	Cap. prod. ('000 EUR wins)	Cap. prod. (IHS)
	1	2	3	4
assignment	8.251*	0.034	-13.929	-0.121
	(4.492)	(0.143)	(12.576)	(0.127)
R-squared	0.395	0.131	0.888	0.388
Number of observations	315	314	270	264
Control mean	23.71	3.10	1.28	0.39
Strata controls	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: Robust Huber/White standard errors in parentheses. Missing values for lagged dependent variables are replaced with the mean of the estimation sample, with regressions including a dummy variable to control for such cases. Outlier detection method: dfbeta. Model 1: 3 obs. excluded. Model 2: 7 obs. excluded. Model 3: 0 obs. excluded. Model 4: 4 obs. excluded.

Table B6: 12-month treatment effects on productivity (DFITS)

	Lab. prod. ('000 EUR wins)	Lab. prod. (IHS)	Cap. prod. ('000 EUR wins)	Cap. prod. (IHS)
	1	2	3	4
assignment	7.765*	0.206	-0.303	0.116
	(3.992)	(0.138)	(0.662)	(0.092)
R-squared	0.211	0.181	0.012	0.456
Number of observations	312	306	268	257
Control mean	23.71	3.10	1.28	0.39
Strata controls	Yes	Yes	Yes	Yes
Lagged dep. var	Yes	Yes	Yes	Yes

*** p<.01, ** p<.05, * p<.1

Notes: Robust Huber/White standard errors in parentheses. Missing values for lagged dependent variables are replaced with the mean of the estimation sample, with regressions including a dummy variable to control for such cases. Outlier detection method: dfits. Model 1: 6 obs. excluded. Model 2: 15 obs. excluded. Model 3: 2 obs. excluded. Model 4: 11 obs. excluded.

c. Appendix C: Heterogeneous effects

Table C1: Business practices - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	434	0.74	0.00	166	0.79	-0.03	114	0.80	0.00	0.33	0.91	0.51
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	216	0.70	0.00	276	0.76	-0.00	228	0.80	-0.00	0.90	0.92	0.97
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	80	0.70	0.03	396	0.77	-0.02	242	0.75	0.01	0.28	0.64	0.32
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	164	0.79	-.045*	132	0.78	-0.02	424	0.73	0.02	0.53	0.03	0.20
Firm location		*Abidjan*			*Rest of the country*							
	466	0.75	-0.00	254	0.76	0.00	.	.		0.90		
Manager education		*Tertiary*			*Below tertiary*							
	510	0.76	-0.00	206	0.73	-0.00	.	.		0.98		
Baseline value		*Above-median*			*Below-median*							
	343	0.82	-0.03	375	0.69	0.02	.	.		0.08		

Notes: OLS regression with variable bp_all_4 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on clustered standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C2: Accounting practices - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	434	0.47	0.04	166	0.66	0.01	114	0.64	0.01	0.46	0.47	0.96
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	216	0.46	-0.02	276	0.55	.049*	228	0.60	0.04	0.10	0.14	0.80
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	80	0.52	-0.03	396	0.55	0.02	242	0.54	.051*	0.36	0.15	0.35
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	164	0.56	-0.01	132	0.58	.059*	424	0.52	0.03	0.19	0.41	0.46
Firm location		*Abidjan*			*Rest of the country*							
	466	0.57	0.00	254	0.49	.072**	.	.		0.05		
Manager education		*Tertiary*			*Below tertiary*							
	510	0.57	0.01	206	0.47	.065*	.	.		0.23		
Baseline value		*Above-median*			*Below-median*							
	360	0.68	0.00	360	0.40	.048*	.	.		0.19		

Notes: OLS regression with variable acc_4 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on clustered standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C3: Access to finance - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	434	0.15	0.00	166	0.33	0.00	114	0.33	0.13	0.97	0.22	0.30
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	216	0.13	0.00	276	0.22	0.03	228	0.30	0.03	0.72	0.77	0.96
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	80	0.03	.132**	396	0.17	0.07	242	0.34	-0.08	0.42	0.02	0.04
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	164	0.27	-0.06	132	0.12	0.02	424	0.23	0.06	0.35	0.13	0.61
Firm location		*Abidjan*			*Rest of the country*							
	466	0.17	0.04	254	0.30	-0.01	.	.		0.42		
Manager education		*Tertiary*			*Below tertiary*							
	510	0.22	0.01	206	0.22	0.07	.	.		0.43		
Baseline value		*Above-median*			*Below-median*							
	218	0.49	0.06	502	0.10	0.00	.	.		0.48		

Notes: OLS regression with variable finance_any_4 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on clustered standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C4: HR management - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	434	0.27	0.03	166	0.39	-0.01	114	0.47	0.06	0.35	0.65	0.29
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	216	0.21	.065**	276	0.33	0.01	228	0.43	-0.00	0.27	0.15	0.70
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	80	0.23	.123**	396	0.34	0.00	242	0.33	0.03	0.03	0.14	0.48
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	164	0.38	-.093**	132	0.34	0.05	424	0.29	.064**	0.02	0.00	0.74
Firm location		*Abidjan*			*Rest of the country*							
	466	0.35	0.02	254	0.28	0.04	.	.		0.62		
Manager education		*Tertiary*			*Below tertiary*							
	510	0.34	0.02	206	0.26	.06*	.	.		0.27		
Baseline value		*Above-median*			*Below-median*							
	274	0.48	-0.00	446	0.23	.041*	.	.		0.28		

Notes: OLS regression with variable hr_all_4 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on clustered standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C5: Employment quality - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	434	0.40	.083***	165	0.63	.068*	114	0.76	0.06	0.75	0.61	0.84
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	216	0.37	.106***	276	0.55	0.04	227	0.59	.083**	0.24	0.67	0.41
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	80	0.44	.115*	395	0.51	.048*	242	0.53	.103***	0.30	0.87	0.20
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	164	0.47	0.04	132	0.59	0.07	423	0.50	.093***	0.59	0.23	0.64
Firm location		*Abidjan*			*Rest of the country*							
	465	0.59	.061**	254	0.37	.1***	.	.		0.36		
Manager education		*Tertiary*			*Below tertiary*							
	510	0.55	.066***	205	0.37	.114***	.	.		0.27		
Baseline value		*Above-median*			*Below-median*							
	317	0.74	.072***	402	0.33	.074**	.	.		0.97		

Notes: OLS regression with variable empquality_4 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on clustered standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C6: Revenue - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	206	40.92	0.58	74	124.22	23.50	53	324.33	113.175**	0.47	0.05	0.15
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	102	45.30	5.02	128	94.12	15.71	105	175.71	54.419*	0.68	0.16	0.27
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	18	63.48	140.325*	197	102.19	9.28	120	117.13	28.63	0.08	0.14	0.47
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	78	122.67	-31.69	61	130.28	31.76	196	88.30	45.426***	0.13	0.01	0.71
Firm location		*Abidjan*			*Rest of the country*							
	213	126.18	25.24	122	73.07	23.44	.	.		0.94		
Manager education		*Tertiary*			*Below tertiary*							
	236	111.36	33.509**	97	88.28	2.99	.	.		0.24		

Notes: OLS regression with variable revenue_wins5 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C7: IHS revenue - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	206	10.16	0.11	74	11.72	-0.21	53	12.61	1.447**	0.66	0.08	0.10
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	102	9.91	0.02	128	10.84	.769*	105	11.89	-0.08	0.30	0.90	0.20
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	18	9.72	2.61	197	10.85	0.15	120	11.15	0.12	0.17	0.17	0.95
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	78	11.23	-0.57	61	10.64	1.01	196	10.82	0.40	0.10	0.17	0.46
Firm location		*Abidjan*			*Rest of the country*							
	213	10.95	0.39	122	10.82	0.10	.	.		0.59		
Manager education		*Tertiary*			*Below tertiary*							
	236	10.99	0.33	97	10.62	0.21	.	.		0.84		

Notes: OLS regression with variable ihsrev as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C8: Profit - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	192	4.54	0.75	66	9.26	2.19	39	17.45	17.26	0.79	0.13	0.21
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	90	3.65	3.65	118	8.67	2.94	91	9.38	2.93	0.87	0.90	1.00
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	17	1.06	-5.18	182	7.84	5.454*	100	8.07	-0.02	0.05	0.40	0.29
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	69	11.62	0.49	54	8.10	3.62	176	5.36	4.12	0.69	0.54	0.94
Firm location		*Abidjan*			*Rest of the country*							
	190	8.41	3.23	109	6.06	3.00	.	.		0.96		
Manager education		*Tertiary*			*Below tertiary*							
	213	8.08	4.55	84	5.68	0.84	.	.		0.43		

Notes: OLS regression with variable profit_wins5 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C9: IHS profit - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	192	5.47	-0.39	66	3.50	0.27	39	1.31	6.824**	0.79	0.02	0.07
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	90	3.47	1.81	118	5.76	0.39	91	3.21	0.61	0.50	0.63	0.93
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	17	0.11	-1.41	182	4.95	0.79	100	3.97	1.08	0.57	0.54	0.89
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	69	5.19	2.40	54	3.97	1.79	176	3.98	-0.05	0.83	0.25	0.47
Firm location		*Abidjan*			*Rest of the country*							
	190	2.88	1.77	109	6.46	-0.66	.	.		0.18		
Manager education		*Tertiary*			*Below tertiary*							
	213	4.74	0.09	84	2.93	3.37*	.	.		0.12		

Notes: OLS regression with variable ihsprof as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C10: Labour productivity ('000 EUR wins) - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	197	11.65	0.74	72	40.96	-5.53	52	45.27	38.471***	0.51	0.00	0.00
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	97	17.39	-2.30	124	25.55	1.46	102	27.01	17.88**	0.60	0.02	0.06
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	17	24.43	-7.63	191	21.97	6.10	115	26.14	6.52	0.10	0.14	0.96
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	75	23.75	0.35	58	29.55	9.85	190	21.67	6.27	0.39	0.43	0.72
Firm location		*Abidjan*			*Rest of the country*							
	205	26.52	5.51	118	19.27	5.53	.	.		1.00		
Manager education		*Tertiary*			*Below tertiary*							
	228	25.35	7.986*	93	18.67	1.81	.	.		0.39		

Notes: OLS regression with variable prod_labour_wins5 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C11: IHS labour productivity - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	197	2.62	-0.00	72	3.70	-0.01	52	4.17	1.11***	0.99	0.00	0.01
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	95	2.69	0.10	124	3.25	0.09	102	3.34	0.45	0.98	0.39	0.35
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	16	3.70	-1.41***	190	2.99	0.24	115	3.24	.406*	0.00	0.00	0.59
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	75	3.09	-0.03	58	3.37	0.44	188	3.05	0.23	0.32	0.47	0.62
Firm location		*Abidjan*			*Rest of the country*							
	203	3.33	-0.02	118	2.79	.596**	.	.		0.06		
Manager education		*Tertiary*			*Below tertiary*							
	226	3.27	0.18	93	2.67	0.42	.	.		0.50		

Notes: OLS regression with variable prl as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C12: Capital productivity ('000 EUR wins) - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	187	0.91	-0.02	62	0.69	-0.01	36	0.19	1.256**	0.99	0.06	0.11
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	88	1.04	0.15	113	0.80	-0.04	86	0.39	0.50	0.73	0.54	0.29
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	17	0.58	-0.24	176	0.67	0.25	94	0.89	0.12	0.69	0.78	0.78
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	68	0.65	0.63	50	0.31	0.64	169	0.91	-0.14	0.99	0.12	0.18
Firm location		*Abidjan*			*Rest of the country*							
	182	0.70	0.30	105	0.80	-0.02	.	.		0.46		
Manager education		*Tertiary*			*Below tertiary*							
	203	0.81	0.00	82	0.52	0.59	.	.		0.24		

Notes: OLS regression with variable prod_capital_wins5 as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C13: IHS capital productivity - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	176	0.52	-0.09	57	0.40	-0.17	36	-0.04	0.71	0.83	0.12	0.13
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	80	0.52	0.09	108	0.45	-0.10	82	0.23	0.16	0.66	0.86	0.46
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	16	-0.01	-0.81	164	0.37	0.18	90	0.53	-0.10	0.41	0.56	0.37
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	64	0.38	.43**	49	0.16	0.35	157	0.50	-0.23	0.86	0.04	0.19
Firm location		*Abidjan*			*Rest of the country*							
	167	0.30	0.11	103	0.54	-0.09	.	.		0.52		
Manager education		*Tertiary*			*Below tertiary*							
	190	0.45	-0.12	79	0.26	0.39	.	.		0.16		

Notes: OLS regression with variable prc as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C14: No. of employees - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	855	3.99	0.23	323	4.94	1.993*	216	9.26	-0.98	0.12	0.33	0.06
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	429	2.76	0.36	543	4.25	0.95	434	8.19	-0.18	0.46	0.52	0.23
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	76	3.23	2.52	828	4.92	0.53	498	5.46	-0.06	0.45	0.33	0.36
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	317	5.61	-0.32	262	5.09	0.81	827	4.72	0.61	0.19	0.26	0.81
Firm location		*Abidjan*			*Rest of the country*							
	917	5.24	0.27	489	4.68	.738**	.	.		0.49		
Manager education		*Tertiary*			*Below tertiary*							
	1006	5.16	0.36	392	4.63	0.59	.	.		0.73		

Notes: OLS regression with variable emp as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.

Table C15: Log no. of employees - heterogeneity

	(1)			(2)			(3)			P-value		
	N	**CM**	**ITT**	**N**	**CM**	**ITT**	**N**	**CM**	**ITT**	**(1) = (2)**	**(1) = (3)**	**(2) = (3)**
Size (annual revenue, CFA)		*Micro (<=30 Mio)*			*Small (30 Mio. - 150 Mio.)*			*Medium (150 Mio.+)*				
	855	1.19	0.04	323	1.43	.189*	216	2.08	-.209*	0.21	0.09	0.01
No. of staff		*1-3*			*Up to 6*			*More than 6*				
	429	0.90	0.01	543	1.33	0.07	434	1.91	-0.01	0.60	0.90	0.54
Firm age		*0-3 years*			*4-9 years*			*10+ years*				
	76	1.04	0.15	828	1.38	0.03	498	1.44	0.02	0.66	0.64	0.93
Broad sector categories		*Manufacturing*			*Construction*			*Services*				
	317	1.50	-0.09	262	1.28	0.18	827	1.36	0.03	0.06	0.27	0.26
Firm location		*Abidjan*			*Rest of the country*							
	917	1.42	-0.03	489	1.32	.14**	.	.		0.07		
Manager education		*Tertiary*			*Below tertiary*							
	1006	1.40	-0.01	392	1.34	0.11	.	.		0.25		

Notes: OLS regression with variable lemp as dependent variable. Each row reports the results of one regression where assignment to treatment is interacted with the categories of the heterogeneity dimension indicated on the left. N reports the total number of observations in the respective category (treatment and control), and CM is the mean value of the dependent variable at endline in the control group in the respective category. ITT is the intention-to-treat effect for firms in the respective category and is calculated the sum of the coefficients of assignment to treatment and the interaction term. Regressions include controls for the lagged dependent variable and strata. The p-values in the rightmost column(s) indicate whether ITTs differ significantly between categories. Significance is based on robust Huber/White standard errors (not reported here). *** p<.01, ** p<.05, * p<.1.