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Skills Training and Business Outcomes: Experimental Evidence from Liberia

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Abstract

This paper explores whether skills training in business performance and customer practices was a promising way to increase business outcomes among self-employed workers who operate small businesses in developing countries. We randomized training in business-management skills and business and inter-personal skills among BRAC's Small Enterprise Programme firm owners in Liberia. We found that firm owners who received either training experienced an increase in attention to customers, which consequently enhanced the performance of the businesses, including higher average monthly revenue, less loss of customers, and a smaller likelihood of encountering business losses. Customers, however, reported no effect on their customer experiences.

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I. Introduction

In Africa, small and medium enterprises (SME) represent more than 90% of businesses and employ about 60% of workers, many of whom are women and youth. Yet more than 70% of SMEs cease within 5 years and in some countries, the failure rate was as high as 90% (ITC 2018). This paper shows the results of a randomized intervention to assess the impact of skills training in business performance and customer practices. The intervention consisted of either a one- or two-day training depending on the category to which they had been assigned, in a) business-management skills, and b) inter-personal skills, respectively. Thus, the training aimed at improving firms' performance by enhancing business practices and behavior, customer satisfaction, and loyalty. We implemented this project in Liberia, a country that was largely dominated by SME comprising about 96% of the business entities (Musinamwana & Togba, 2014). The sector was largely viewed to have the potential to contribute towards poverty alleviation and the creation of a middle-income society by creating jobs and increasing incomes among firm owners (GOL, 2014).¹

Investing in business training was one of the interventions undertaken to improve business outcomes among SMEs in many developing countries. Most of the training directed towards improving existing businesses commonly entails business-management skills such as financial planning, marketing, pricing and cost, legal rights and obligations, business organization, inventory management, and customer service (Campos et al., 2017; McKenzie & Woodruff, 2014; Calderon et al., 2013). The evaluation of most soft skills training has focused on motivational skills, namely personal initiative, proactive, goal setting, planning, innovation and overcoming obstacles, which were centered on self and business improvement (Campos et al., 2017; Frese & Gielnik, 2014; McKenzie & Woodruff, 2014). For instance, the experiment designed by Campos et al. (2017) provided training on personal initiative, intended to enhance entrepreneurial personality, to a group of participants in Togo.

¹ According to the Government of Liberia (2014), the SME sector faces four critical challenges: i) lack of adequate legal and regulatory reforms within the business sector, ii) limited access to markets, iii) lack of access to finances, and iv) inadequate business skills and knowledge. In order to enhance the sector's performance, the MSME Division, together with its partners, trained fifty firm owners in customer service, business planning, access to finance, procurement, marketing, and accounting services during 2014 (GOL, 2014).

Business training leads to mixed business outcomes among SMEs in both developed and developing countries. For instance, Hayton (2015) showed a direct association in the UK between entrepreneurial-skills training and income as well as a positive impact on productivity. In developing countries, entrepreneurial personality training has been associated with long working hours and the introduction of more products in Togo (Campos et al., 2017). Moreover, research indicates that management-skills training positively impacts business performance. For example, Yahya, Othman, and Shamsuri (2012) found a positive significant impact on profits, revenue, and size among small business owners in various sectors in Malaysia. A study conducted in rural Mexico also revealed positive impacts of skills training on profits, revenue, number of clients, use of formal accounting techniques, and business registration with government agencies (Calderon, Cunha, DeGiorgi, et al., 2013; Frese & Gielnik, 2014; McKenzie & Woodruff, 2014).

Recent research shows a growing emphasis on enhancing leadership and communication skills. Prada, Rucci, and Urzua (2019), for example, reported on leadership training provided to randomly selected managers at one of the largest retailers in Latin America, in addition to training randomly selected sales associates at the same business in customer handling and the relevance of customer care. Attention to skills training associated with interpersonal relations and integrity with customers was limited, however, even though research showed a positive correlation between good customer relations and customer contentment (Jahanshahi et al., 2011). Less attention has been given to customer feedback as a way of evaluating the impact of business training, yet customers provide important feedback on customer service and business performance (Lebing, 1997).

Evidence exists that training on both management and soft skills influences various components of business performance (Frese & Gielnik, 2014). The evaluation of most programs that provide “personality-trait” training has used quasi-experimental designs with hardly any control or randomization of the control group, however (Glaub, 2011; Kithae, 2013). Some exceptions exist, for instance, Prada, Rucci, and Urzua (2019) measured the positive impact of soft skills training on both managers and workers in Latin America, and McKenzie and Woodruff (2014) analyzed the effects of training on business management in Tanzania, Uganda, Ethiopia, Ghana, and Tunisia.

Our main results revealed significant pooled positive treatment effects on the business marketing and customer practices among the firm owners. Overall the impact was

higher on organization, followed by attention and marketing practices. However, further analysis by treatment indicates the additional value of training on interpersonal relations. The higher impact was revealed among Treatment 2 on attention to customers, which consequently enhanced the performance of the businesses including higher average monthly revenue, less likely to have lost customers and less likely to encounter business losses. The research findings highlight the relevance of entailing training on interpersonal relations to enhance business performance. Given the limited consideration of the role of interpersonal relations, our findings, therefore, contribute to literature using an experimental design to assess the impact of interpersonal relations, “customer-oriented” approach. Furthermore, our findings contribute to the literature by utilizing customer surveys to serve a proxy to assess the impact of skills training on the small enterprise. The absence of no observable impact on customer experiences from the customers may reflect a tendency by firm owners’ to overreport the impact of the skills training or since customers already are receiving marketing information and discounts. However, the customer survey needs to be improved further to improve the precision of the estimates.

The rest of the paper is organized as follows. The next section provides a description of the intervention, evaluation design and a description of the baseline data sets and associated summary statistics. Sections 3 and 4 present the main findings and Section 5 concludes the paper.

II. Context, Experimental Design, and Data

The project was implemented in partnership with BRAC-Liberia, one of the largest microfinance institutions in Liberia. BRAC offers two loan products: i) BRAC NGO-Microloan, available only to women working in a group setting; and ii) BRAC Liberia Microfinance Company-Small Enterprise Programme (SEP), which provides individual loans to men and women business owners. Our sample was included firm owners who had were received a SEP loan.

2.1 Training Program

The intervention recognized that business outcomes related to firms' poor performance resulted partially from poor business skills and knowledge (GOL, 2014)—that is, poor business management in the following areas: i) inadequate financial management, ii) inadequate recordkeeping, iii) poor business organization, and iv) inadequate marketing skills. In addition, poor performance may have stemmed from negligence regarding non-cognitive skills and, in particular: a) poor communication, b) poor time management, c) low trust, d) minimal flexibility with customers, and e) inadequate workplace hygiene. However, interacting with customers is an important part of the daily operations of typical firm owners in the retail or service sectors.

In order to enhance firm owners' abilities, they were randomly allocated into three groups. Participants in Treatment 1 received training in business-management skills, which included financial literacy, record keeping, sales, and marketing.² Participants in Treatment 2 received training in business-management and interpersonal skills. Modules on interpersonal skills contained details about self-understanding and how to relate with others.³ All soft-skills-related topics included practices, potential barriers if skills were not practiced, and relevance of the skills to customer satisfaction and loyalty. Participants in the control group received no training. The duration of the training was one day (Treatment 1) or two days (Treatment 2). McKenzie and Woodruff (2014) indicated two days as the shortest average training duration. Nonetheless, the experiment of Bruhn and Zia (2012) entailed only six hours of training, which was similar to our intervention among the participants in the treatment group assigned to receive business training alone.⁴

A local firm, the Business Start-Up Center, experienced in offering training to firm owners, was contracted to develop training materials and deliver training to firm owners from March to early May 2018. Similar to the approach in Campos et. al (2017), the instructors

² The financial literacy module entailed: i) basic accounting, ii) budgeting and expenditure management, iii) savings promotion, iv) marketing, and v) financial negotiation. Recordkeeping emphasized recording of revenue, expenditures, and business debts to track business profitability

³ Interpersonal skills included: effective communications, customer care, customer trust, time management, analytical thinking, problem solving, empathy, assertiveness, stress management, anger and conflict resolution, and workplace hygiene.

⁴ Trainers used visual materials, exercises, stories, and participatory approaches. The training was originally planned for eight hours each day (including tea break and lunch) but was adjusted to six hours after participants complained about being away from their businesses for so long. The trainers used both English and local dialects to accommodate firm owners with low literacy levels.

were certified in using Business Edge training materials, internationally accredited by the International Finance Corporation. Participants were provided with food and refreshments during the training worth (USD \$7 per person each day) and USD \$5 per day for transportation and opportunity costs. All participants were offered a certificate of attendance after the training.

2.2. Sampling and Baseline Information

Firm Data

In order to identify the sample of firms for the intervention, a census of SMEs was conducted in all twenty branch locations where the BRAC-Small Enterprise Programme operated in September of 2017 (Figure 1). These branches covered six out of fifteen counties in Liberia.⁵ The BRAC-SEP census elicited information from 1,023 firms on individual social demographic characteristics and basic business characteristics (see Figure 2).⁶ Table 1 shows that the average owner was female in a firm that employed two workers and had been in operation for 6.7 years. The firms operate on a small scale, typical of most businesses in Liberia (Musinamwana & Togba, 2014). The most common trade was grocery stores, provisional shops, or stores, making up 43% of the sample. Most firms were in Montserrado, which is the most populous county in Liberia.

At the end of the interview, we asked firm owners whether they were interested in participating in business-management skills training organized by BRAC, and 99.7% confirmed their interest. Budgetary constraints kept us from including all firm owners in our study, however. We selected a stratified random sample of thirty-seven observations per branch location for a total of 577 firm owners in seventeen branches.⁷

⁵ We covered Montserrado (Caldwell, Congo Town, Jacob Town, Paynesville North, Paynesville South, Barnesville, Gardnerville, Logan Town, New Kru Town, Sinkor, West Point and Airport), Bong (Gbarnga), Margibi (Kakata), Grand Bassa (Buchana), Nimba (Ganta), and Lofa (Voinjama).

⁶ According to BRAC SEP Management and Information System data, we expected the census to capture responses from 1,264 firms. Information was not available for 241 firms, however, either because the owners were not available or because they had incorrectly been identified as active borrowers.

⁷ We dropped three branches because there were less than twelve observations at these locations. For power calculation, we considered a 20% attrition rate, 5% significance level, and the proportion of explained variance by the blocking variable to be 0.35. This sample would be able to detect any impact, which was at least

Firms with completed census information were randomly assigned to one of three groups: 189 firm owners received training in business management alone, 191 received training on both business management and interpersonal relations, and 190 received no training (Figure 2).⁸ Table 2 shows the main characteristics of firm owners and their firms at baseline.

The background characteristics of respondents in both treatment and control groups were not different statistically at baseline. Table 2 shows that 58% of firm owners were female, that most firm owners could read and write, and that 45% had finished senior high school. Nine percent in the treatment group never attended school as compared to the control group (16%). Moreover, more than half in treatment and in control groups were heads of households. This suggests heavy economic reliance of other family members on the firm owner and, therefore, a potential threat to savings for business expansion. On average, firm owners had been working with BRAC-SEP over the previous twenty-seven months. The average loan was 184,204 LRD and 173,629 LRD (equivalent to USD \$880 and USD \$835), in the treatment and control group, respectively.

Firm characteristics are shown in Table 3. Most firms were in urban areas. They had been in existence for thirty-four months (treatment) and twenty-nine months (control). The main three income-generating activities included provisional shops (50% in treatment and control group), tailoring (10% in treatment and 9% in control group), and pharmacy (7% in treatment and 8% in control group). Nearly all (98%) of the firm owners in the treatment group and 97% in the control group had a trading license and most held a bank account.

Firms in both treatment and control groups employed one paid worker, on average. In October 2017, the revenues of the treatment and control groups were 131,513 LRD and 128,396 LRD (USD \$633 and USD \$618), respectively. Profits were also reported to be similar across groups. On average, firm owners reported profits of 43,698 LRD and 49,036 LRD (USD \$210 and USD \$236) in the treatment and control group, respectively. This earning was not typical because 45% of SMEs reported experiencing business losses over the previous six

0.20 standard deviations from the mean. Moreover, this sample size was within a reasonable effect change within less than a year (McKenzie & Woodruff, 2014).

⁸ The baseline survey included interviews from 570 clients, a 98.8% response rate. In three cases, firm owners were reportedly overdue in their loan payments and were apparently hiding from BRAC staff, two firm owners were away to attend a workshop, one firm owner had relocated, and one firm owner was not operating any business at the time of the survey.

months. Finally, these were small enterprises that operated in the formal market because more than 90% of owners reported paying taxes during the previous year.

Customer Data

We conducted the consumer baseline survey in December 2017-January 2018. Customers were identified by random spot-checks at our sample firms. Three customers were randomly selected to per firm and invited to participate in the survey.⁹ We limited to survey to customers between 18-60 years of age to ensure that only adults were interviewed. Following the completion of their business with the firm owner, customers were interviewed according to their order of arrival. The selection was proportionate to gender except in the case of firms that offered products or offered services to only one gender. We did not follow customers over time but rather surveyed a random sample of customers a month or two after the firm was surveyed.

We interviewed 1,629 customers who had had at least one transaction with our sample firms at baseline (Table 4).¹⁰ Customers in both treatment and control groups were mainly young (32 in the treatment group and 31 in the control group, on average). Customers had a similar educational background, but with a minimal difference in the category of highest level of education attained: 37% of the treatment group reported senior high as the highest level of education versus 40% in the control group. In addition, customers stated that they had known the firm owner for an average of 3.6 years in treatment and 3.4 years in the control group. Indeed, less than 15% had visited the firms for the first time. Thus, we considered customers to be well informed about the businesses. We also gathered information about customer interactions with the firm over the previous year (Table 5). The delivery of information regarding products or services was mostly done by phone (39%), followed by text messages (11%). Most importantly, 45% had received a discount, 47% received credit, and 58% negotiated the price of the purchase. Related to this, customers interacted repeatedly with the SME: the average customer had bought sixteen items from the business in the previous three months.

⁹ Based on power calculations, the ideal size for the customer survey was 1,710 customers (3,570 firms) to be able to detect at least a 0.20 minimum difference in business owners' practices at a 5% significance level.

¹⁰ Interviews could not be conducted among the customers of five firm owners. In addition, our data include only two interviews from customers at one firm and four interviews from another firm.

2.3 Take-Up and Attrition

Though most respondents showed interest in training before the baseline, 67% of the target firm owners actually received such training in either business management (70%) or both business management and interpersonal relations (63%).¹¹ Training uptake was higher among the participants selected for Treatment 1 (business-management training only). Administrative data showed that nonparticipation in the training was caused mainly by the inability to find someone to attend to the business when the firm owner was unavailable (83%).

Regardless of whether firm owners accepted the training or not, we tracked 92.7% of them in the follow-up survey, a total of 529 (355 in the treatment group and 174 in the control group). As shown in the Appendix, attrition was lower (6.6%) in the treatment group compared to 8.9% in the control group. The main reasons for attrition were business-related travel and migration.

III. Treatment Effects

This section presents the results of the estimation of the training treatment to the firms using the follow-up survey. A standard OLS regression equation was used to measure program impact:

$$Y_i = \alpha + \beta \text{Treatment} + \gamma Z_i' + \varepsilon$$

where Y_i was the outcome of interest, α was the constant, treatment was an indicator variable where 1=treatment and 0=comparison, Z was a vector of controls, and ε was the error term. Because 67% of firm owners participated in the training, we were estimating intent-to-treat estimates.

¹¹ McKenzie and Woodruff (2014) found a 65% average take-up rate among training participants in the various studies.

We captured multiple measures of firm behavior in the survey. Following Kling, Liebman, and Katz (2007), we created a summary measure (Y^*) defined as the unweighted average of the different indicators as follows:

$$Y^* = \frac{1}{K} \sum_{k=1}^K \frac{y_k - \mu_k^c}{\sigma_k^c}$$

where each indicator k was standardized by the mean and variance of the control group, c . Thus, the magnitude of the estimated index shows where the mean of the treatment group was in the distribution of the control group in terms of standard deviation units. This allowed us to test whether the treatment had an overall positive or negative ITT effect.

We created three index variables: the marketing index, which included communication and advertising actions; the attention index, which surveyed variables related to customer experience and satisfaction; and the organization index, which reflected the behavior of the firm regarding improved management habits. In particular, the marketing index included indicators of whether business owners used phone calls, text messages, flyers, or posters; changed packaging; sent e-mails, used social media; or provided free samples to promote their business. The customer attention index included whether discount or credit were offered, whether the customer was referred to the business by a third party, whether customers provided feedback, whether the owner suggested other products, allowed mobile money as a method of payment, changed or added new products, offered loyalty schemes, negotiated better prices, and haggled with customers. The organization index included whether the owner checked expiry date, compared suppliers, reviewed financials, set monthly sales targets, compared monthly sales targets, and was present at the business every day. We created similar marketing and customer attention indices based on information provided by customers.

All regressions included branch and county fixed effects, the gender of the firm owner, and educational level. To determine covariates, we used the Lasso method, which selected variables that had greater relevance to the outcome variable. Standard errors were clustered at the branch level.

3.1 Treatment Effects: Firm Outcomes

Table 6 shows the positive impact of training on business performance. Panel A of Table 6 indicates that firm owners exposed to the training reported a statistically significant increase of 0.199, 0.189, and 0.293 standard deviations, compared to the control group, on the marketing, attention, and organization indices, respectively. Panel B disaggregated this effect by type of treatment and shows that the effect was similar across treatments, except in the case of the attention index (firm owners exposed to Treatment 1 reported slightly stronger effects).

Columns 4-6 of Table 8 shows the effects of training on the average number of customers, whether the firm lost a customer, and business losses. Column 4 shows that firm owners in the treatment group were 16% less likely to have lost a customer and 10% less likely to have experienced a business loss relative to the control group. The finding highlights the influence of the training on maintaining customers because small businesses in the treatment group reported significantly high customer turnover than their counterparts at baseline.

Firm owners in the treatment group reported better business practices as Table 7 shows. Keeping records of the transactions was a practice that showed positive impacts, and firm owners exposed to the treatment reported a statistically significant increase of 23% in the practice of keeping records of business expenses, sales, and inventory. The findings were partially explained by the tracking forms provided to firm owners, including sales, expenses, and goods and inventory templates, as well as the emphasis on capturing customer details, all of which was highlighted during training for Treatment 2. However, we observed no differential effects across treatments.

Previous studies have revealed similar positive, self-reported effects on the same business practices (Campos et al., 2017; McKenzie & Woodruff, 2014). Qualitative interviews revealed that record-keeping was performed to ensure tracking of the stock in most cases when more than one person attended to the business. Details of who made purchases were also tracked such that they can be contacted in the future (especially when there was new stock). In addition, firm owners reported increased ownership of a bank account after treatment. The impact was higher (12%) among Treatment 2 group at a 10% significance level, compared to 7% among Treatment 1 group at 1% significance level.

Average revenue significantly increased, although both treatments had significantly positive impacts, Treatment 2 had a higher impact (83,305 LRD, on average) per month, compared to 78,637 LRD on average per month in the Treatment 1 group (See Table 7). Both represented an increase on average of 45% relative to the control group. The finding further affirms that training in customer care and relations is valuable.

Finally, we investigated whether there were differential effects by observable characteristics. To do so, we ran similar regressions as before but added the interaction term between observable characteristics and the treatment indicator. Unreported estimates showed there were no differential effects across gender, education, or location. Table 8 shows the effects on business outcomes when treatment effects varied with the type of economic activity. Table 8 reports only statistically significant interactions. We focused on SMEs that were businesses, provisional shops, or stores (about 50% of our sample) in which the interaction between customers and sellers was very frequent. We found that, among grocery stores and shops, training increased the average number of customers and decreased the probability of losing a customer relative to other types of SMEs. In addition, these businesses were more likely to keep records of business expenses and inventory.

3.2 Treatment Effects: Customer Outcomes

Overall, we found no reported effects on customer experiences. These findings are presented in Table 9. Customers in the treatment group scored the same as those in the control group on the attention index, which tracked whether the consumer benefited from discounts, credits, price negotiation, and loyalty schemes. Moreover, customers in the treatment group experienced a negative but not significant result on the marketing index, which measured the use of text messaging and discounts as marketing tools. Overall, the results may imply that business owners over-reported the impact of skills training, which may explain the lack of impact on customer experiences. Alternatively, because customers tended to interact frequently with the same business, it was possible that marketing and discounts were directed to new customers. Our study was underpowered to detect the effects on new vs. returning customers. In addition, these findings should be taken with caution because the customer survey followed a cross-sectional random sampling design, which means that

customers were identified through random spot-checks at the firms. Thus, we may not have captured the average consumer.

IV. Difference-in-Difference Estimation

We also estimated the impact of the training using a difference-in-difference model as follows

$$Y_{ij} = \alpha + \beta_1 Treatment_i + \beta_2 Year_j + \beta_3 Treatment * Year + \gamma Z_i' + \varepsilon_{ij}$$

where Y_i was the outcome of interest, α was the constant, treatment was an indicator variable where 1=treatment and 0=comparison, time was the time variable (0=2017, 1=2018), and β_3 was the difference-in-difference estimator, Z was a vector of pre-treatment controls, and ε was the error term.

The estimate includes county and branch fixed effects. We used Lasso to select the control variables that have greater relevance to the outcome variable. We used the baseline survey as a pre-treatment period for both treatment and control groups. The reported standard errors were clustered at the branch level. We created indices as equally weighted averages of several indicators. The "marketing index" included eight indicators of whether the customer received phone calls, text messages, flyers, posters, or other social media, among others, from a firm. The "attention index" included twelve indicators of whether the customer benefited from discounts, referrals, credit, or loyalty schemes, among others.

Table 10 show that the difference between the treatment and control firms prior to the intervention were not statistically significant except for organization index, the average number of customers, and whether the firm lost customers. Moreover, the mean change in outcomes before and after the intervention in the control group was not statistically significant except for "marketing index" and "owning a bank account." The difference-in-difference estimates showed that the scores of firm owners on the marketing, attention, and organization indices increased, as did "retention of customers," among those who underwent training. We also observed an increase in average revenue and of record-keeping

of inventory. Thus, after controlling for differences at baseline and for changes in the control group, we concluded that our results were mostly in line with our previous findings

We also estimated the effects on customer experience, though we did not follow the same customers over time. Instead, we used data from a cross section of customers who made a purchase from our sampled firms. Table 11 shows that the difference between the treatment and control customers prior to the intervention was not statistically significant except for the marketing index, but the effect was small (1.3 percentage points). Moreover, there were no statistically significant changes in outcomes in the control group. The difference-in-difference estimates was small and not statistically significant except for marketing index at the 10% level. The results were mostly in line with our previous findings: no differences in outcomes between treatment and control groups.

V. Conclusions and Policy Recommendations

Interventions aimed at improving business performance have mostly focused on business management and motivational skills. Limited attention has been given to skills training associated with interpersonal relations and integrity with customers. Our study involved a customer-centered business-training to assess the feasibility of providing alternative approaches to business-management skills training. Furthermore, less attention has been given to customer feedback as a way of evaluating the impact of business training. Thus, we collected data from Small and Medium Enterprise BRAC firms and their respective customers in Liberia to assess the effect of training firm owners in the alternative business and management skills that have been associated with business performance and customer loyalty and satisfaction.

Survey findings revealed positive treatment effects on business marketing and customer practices. In other words, a customer-centered approach to enhancing business performance seemed to work. Overall, the treatment had a higher significant impact on “business management,” followed by “attention to customers” and “business marketing.” The impact was captured on “attention to customers.” Increased customer care and satisfaction enhanced the performance of the businesses in the form of higher average

monthly revenues, reduced loss of customers, and a smaller likelihood of business losses. The survey findings highlight the relevance of embedding training in customer care and relations in skills programs to enhance the performance of small businesses.

On the other hand, the data showed no treatment effect on customer experiences. The findings may show that overestimation of the treatment effects of the skills training by firm owners. It was possible that firm owners self-reported better practices because they knew they were being surveyed by BRAC. Alternatively, it was possible that customers did not report any changes because they were already receiving discounts and negotiating prices.

Our findings have important policy implications. Training in both business skills and interpersonal relations contributes to business and economic growth. Moreover, a customer-driven business approach enhances customer contentment and satisfaction, resulting in higher income, and, as a result, contributes to national revenue in the form of taxes. Additionally, investment in training in interpersonal relationships may enhance both psychological and social cohesion, which was likely to contribute to peacebuilding and reconciliation. The expected returns to investment in training in soft skills imply that training institutions should highlight the role of soft skills and expand content on interpersonal relations. Policymakers should also include soft skills during the formulation and reformulation of SME policy in order to bridge the business skills and knowledge gap.

References

- Berge, L. I. O., Bjorvatn, K., & Tungodden, B. (2015). Human and Financial Capital for Microenterprise Development: Short-Term and Long-Term Evidence from a Field and Lab Experiment. *Management Science* 61(4):707-722
- Calderon, C., Cunha, J. M., and De Giorgi, G. (2013). Business Literacy and Development: Evidence from a Randomized Control Trial in Rural Mexico. NBER (National Bureau of Economic Research) Working Paper 19740. Cambridge, MA. <http://www.nber.org/papers/w19740>.
- Campos, F., Frese, M., Goldestain, M., Iacovone, L., Johnson, H., McKenzie, D., and Mensmann, M. (2017). Personality vs. Practices in the Making of an Entrepreneur: Experimental Evidence from Togo. CSAE draft paper. Entrepreneurship Evaluations around the Developing World? World Bank Research. https://editorialexpress.com/cgi-bin/conference/download.cgi?db_name=CSAE2017&paper_id=493.
- Frese, M. and Gielnik, M. M. (2014). The Psychology of Entrepreneurship. *Annual Review of Organizational Psychology and Organizational Behavior*, 1, 13.1-13.26.
- Glaub, M. and Frese, M. (2011). A Critical Review of the Effects of Entrepreneurship Trainings in Developing Countries. *Enterprise Development and Microfinance*, 22, 335-353
- GOL (Government of Liberia) (2011). Poverty Alleviation and Wealth Creation Through Small Enterprise Development: Rationale, Policy, and Implementation Framework For MSME Development Liberia-2011-2016. Monrovia, Liberia. <http://www.moci.gov.lr/doc/Final%20MSME%20Policy%20Liberia%202011-2016.pdf>,
- GOL (Government of Liberia) (2014). MSME Division Mid-Year Report: January-July 2014. Ministry of Commerce and Industry. Monrovia, Liberia. <http://www.moci.gov.lr/doc/FINAL%20%20Mid%20Year%20Report%20on%20the%20SME%20Project%20-NOV%20%202014.pdf>
- Hayton, J. (2015). Leadership and Management Skills in SMES? Measuring Association with Management Practices and Performance. BIS (Department for Business, Innovation and Skills) Research Paper No. 211. <http://www.gov.uk/bis>.
- ILO (International Labour Organisation) (2011). A Skilled Workforce for Strong, Sustainable and Balance Growth: AG20 Training Strategy. International Labour Organization 2011. Geneva, Switzerland.
- ITC (International Trade Center) (2018). *Promoting SME Competitiveness in Africa: Data for De-Risking Investment*. Geneva: International Trade Center.
- Jahanshahi, A. A., Gashti, A., Mirdamadi, M. A. H., Nawaser, K., and Kakshar, S. M. S. (2011). Study The Effect of Customer Service and Product Quality on Customer Satisfaction and Royalty. *International Journal of Humanities and Social Sciences*, 1(7), 253-260 (Special Issue – June 2011) Centre for Promoting Ideas. www.ijhssnet.com.
- Kithae, P. P. (2013). Impact of Entrepreneurship Training on Performance of Micro and Small Enterprises (MSEs) in Kenya: A Case Study of Embu Municipality. *International Journal of Business and Management Review*, 1(2), 1-17.
- Kling, J., Liebman, J., and Katz, L. (2007). Experimental Analysis of Neighborhood Effects. *Econometrica*, 75(1), 83-119.
- Lebing, K. (1997). *Improving Customer Service Through Effective Performance Management: Performance Management Practitioner Series*. United States Office of Personnel Management (USOPM) & Performance Management and Incentive Award Division (PMIAD). https://www.opm.gov/policy-data-oversight/performance-management/reference-materials/historical/customer_service.pdf.

- McKenzie, D. and Woodruff, C. (2014). What Were We Learning from Business Training and Entrepreneurship Evaluations around the Developing World? *The World Bank Research Observer*, 29(1), 48–82.
- Musinamwana, E. and Togba, D. F. (2014). Gathering Competitive Momentum: Overview of the Liberian Economy. Building Markets. Monrovia, Liberia.
https://buildingmarkets.org/sites/default/files/pdm_reports/gathering_competitive_momentum_-_overview_of_the_liberian_marketplace_2014.pdf
- Prada, M., Rucci, G., and Urzua, S. (2019). Training, Soft Skills and Productivity: Evidence from a Field Experiment. IZA Institute of Labor Economics. IZA DP No. 12447. Bonn, Germany.
<https://www.iza.org/publications/dp/12447/training-soft-skills-and-productivity-evidence-from-a-field-experiment>.
- Solomon, G., Frese, M., and Friedrich, C. (2013). Can Personal Initiative Training Improve Small Business Success? A Longitudinal South African Evaluation Study. *Entrepreneurship and Innovation*, 14(4), 255-268.
- Yahya, A. Z., Othman, M. S., and Shamsuri, A. L. S. (2012). The Impact of Training on Small and Medium Enterprises (SMES) Performance. *Journal of Professional Management*, 2(1), 15-25.
- World Bank (2014). The Economic Impact of the 2014 Ebola Epidemic: Short- & Medium-Term Estimates for Guinea, Liberia & Sierra Leone. Report No. 90745. The World Bank Group.
<http://documents.worldbank.org/curated/en/627851468102871113/The-economic-impact-of-the-2014-Ebola-epidemic-short-and-medium-term-estimates-for-Guinea-Liberia-and-Sierra-Leone>.

Figure 1: Project Timeline

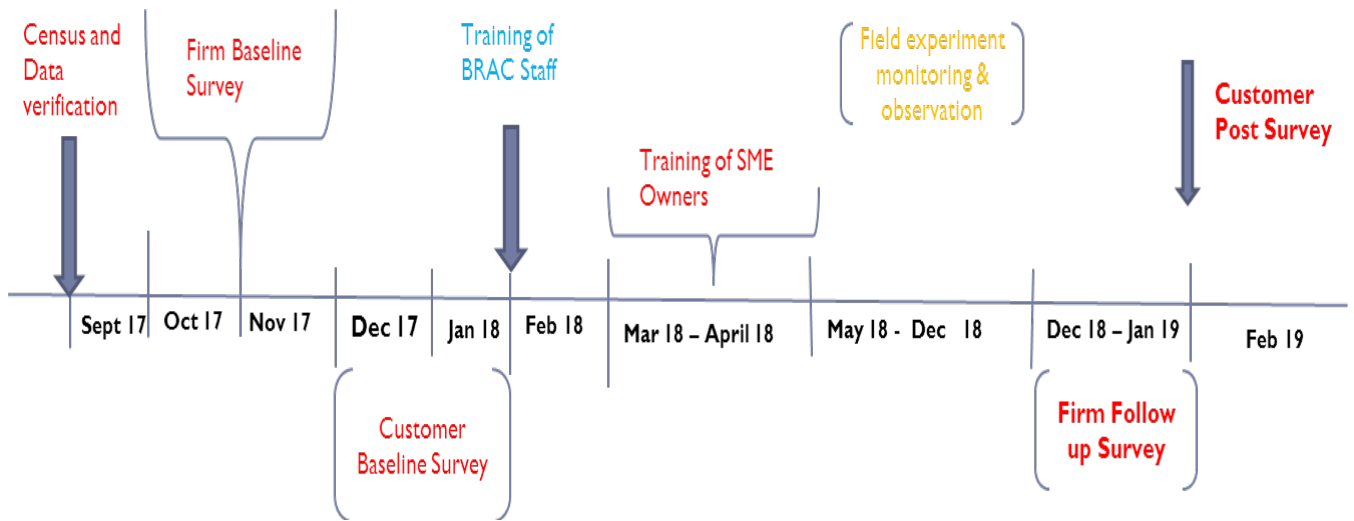


Figure 2: Summary of Experimental Design

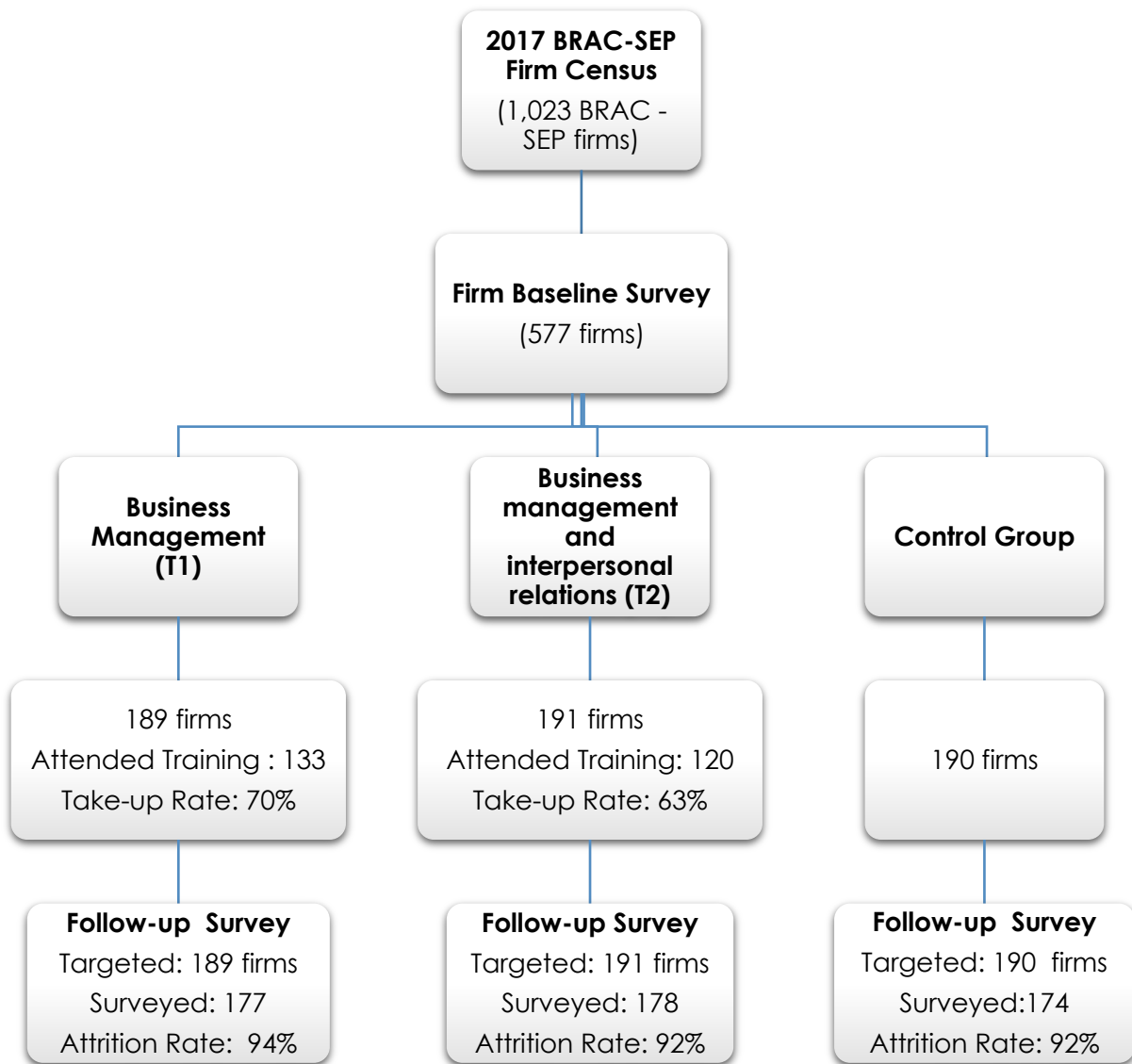


Table 1: Firm Characteristics from 2017 BRAC-SEP Census

	Mean (1)	SD (2)	Median (3)
Owner and firm characteristics			
Owner was male	0.408	0.492	0
Urban	0.772	0.420	1
Number of employees	1.971	2.108	2
Age of business (Years)	6.878	4.812	6
Sector			
Carpentry/Timber	0.009	0.093	0
Catering	0.122	0.328	0
Hair Dressing	0.036	0.187	0
Motor mechanics	0.059	0.235	0
Tailoring/Textile	0.146	0.353	0
Grocery/Provisional Shop/Store	0.428	0.495	0
Pharmaceuticals	0.065	0.246	0
Construction	0.056	0.229	0
Welding	0.005	0.070	0
Gas/Fuel Station	0.075	0.264	0
County			
Bong	0.074	0.262	0
Grand Bassa	0.043	0.203	0
Lofa	0.024	0.154	0
Margibi	0.134	0.341	0
Montserrado	0.650	0.477	1
Nimba	0.074	0.262	0

Notes: The table is based on data from the initial census of 1,023 firms conducted in September 2017. The census was conducted in fifteen counties of Liberia in which the BRAC-Small Enterprise Programme (SEP) was in operation.

Table 2: Firm Owners' Characteristics at Baseline

	Treatment (T1+T2) (1)	Control (2)	p-value (3)
Age of the firm owner	40.432 [0.480]	41.688 [0.845]	0.188
Female	0.574 [0.036]	0.584 [0.045]	0.756
Never attended school	0.089 [0.016]	0.163 [0.031]	0.032
Elementary school	0.095 [0.012]	0.089 [0.019]	0.775
Junior High school	0.153 [0.024]	0.126 [0.038]	0.493
Senior High school	0.458 [0.040]	0.437 [0.045]	0.571
University	0.147 [0.026]	0.147 [0.029]	0.959
Total number of household members	6.739 [0.281]	6.763 [0.323]	0.911
If respondent was the head of household	0.547 [0.035]	0.584 [0.043]	0.393
If resides in a house owned by household member	0.725 [0.045]	0.668 [0.062]	0.228
Married	0.876 [0.023]	0.868 [0.043]	0.789
Household with cement floor	0.708 [0.065]	0.732 [0.064]	0.482
Household with tile floor	0.292 [0.065]	0.268 [0.064]	0.482
Cement block walls	0.645 [0.099]	0.637 [0.088]	0.821
Concrete Wall	0.266 [0.100]	0.253 [0.092]	0.461
Household has toilet	0.695 [0.080]	0.658 [0.084]	0.141
Duration of borrowing with BRAC SEP (months)	27.103 [2.305]	27.877 [3.432]	0.756
Amount borrowed from BRAC SEP (thousands LRD)	184.204 [139.88]	173.629 [331.231]	0.268

Notes: The p-values were from separate OLS regressions of the variable of interest on a constant, treatment indicator, and branch fixed effects. Standard errors in brackets were clustered at the branch level. Number of firms: 380 in treatment group and 190 in control group

Table 3: Firm Characteristics at Baseline

	Treatment (T1 + T2) (1)	Control (2)	p-value (3)
Main activity: Catering	0.066 [0.013]	0.084 [0.028]	0.351
Main activity: Hair dressing	0.032 [0.014]	0.026 [0.017]	0.815
Main activity: Tailoring	0.105 [0.035]	0.089 [0.037]	0.413
Main activity: Provisional shop	0.497 [0.044]	0.495 [0.055]	0.896
Main activity: Pharmacy	0.068 [0.021]	0.079 [0.022]	0.507
Main activity: Construction	0.042 [0.011]	0.053 [0.018]	0.376
Urban	0.639 [0.122]	0.632 [0.124]	0.854
Duration of existence of main activity (months)	34.034 [10.020]	28.605 [14.385]	0.655
Average number of customers in last week	112.862 [26.211]	85.194 [13.026]	0.128
Total number of employees, excluding owner	2.300 [0.187]	2.074 [0.167]	0.234
Number of paid employees	1.260 [0.144]	0.988 [0.202]	0.222
Number of skilled employees	0.875 [0.186]	0.742 [0.180]	0.335
Total business revenue in October, 2017 (thousand LRD)	131.513 [10.726]	128.396 [140.180]	0.882
Total business profits in October, 2017 (thousand LRD)	43.698 [13.971]	49.036 [21.280]	0.559
If owns a bank account	0.803 [0.040]	0.753 [0.061]	0.218
If experienced business loss during past six months	0.450 [0.080]	0.484 [0.090]	0.382
Does this business have a trading license	0.979 [0.009]	0.974 [0.015]	0.764
If paid any business taxes during the past one year	0.942 [0.022]	0.911 [0.045]	0.401
How much tax did you pay (LRD)	9572.646 [2813.012]	9783.191 [3090.329]	0.831

Notes: The p-values were from separate OLS regressions of the variable of interest on a constant, treatment indicator and branch fixed effects. Standard errors in brackets were clustered at the branch level. Number of firms: 380 in treatment and 190 in control.

Table 4: Customer Characteristics at Baseline

	Treatment (T1 + T2) (1)	Control (2)	p-value (3)
Respondent's age	32.198 [0.672]	32.145 [0.577]	0.900
Respondent's number of years attended school	14.301 [0.494]	14.206 [0.545]	0.798
Urban	0.638 [0.122]	0.627 [0.125]	0.333
Female	0.501 [0.011]	0.492 [0.017]	0.654
Never attended school	0.150 [0.023]	0.154 [0.028]	0.852
Elementary school	0.082 [0.017]	0.093 [0.031]	0.524
Junior High school	0.200 [0.021]	0.181 [0.033]	0.481
Senior High school	0.431 [0.026]	0.429 [0.036]	0.931
University school	0.089 [0.015]	0.081 [0.016]	0.541
Diploma	0.012 [0.006]	0.018 [0.006]	0.381
Can read and write	0.820 [0.024]	0.813 [0.028]	0.692
Married	0.664 [0.034]	0.671 [0.045]	0.755
Divorced or Separated	0.005 [0.002]	0.009 [0.004]	0.442
Widower	0.012 [0.002]	0.014 [0.007]	0.689
Single	0.319 [0.034]	0.305 [0.043]	0.585

Notes: The p-values were from separate OLS regressions of the variable of interest on a constant, treatment indicator and branch fixed effects. Standard errors in brackets were clustered at the branch level. Number of customers: 1,113 in treatment and 550 in the control group .

Table 5: Customer Interactions with Firm

	Treatment (T1 + T2) (1)	Control (2)	p-value (3)
For how long you have known the firm owner? (years)	4.585 [0.412]	4.222 [0.372]	0.388
First time visit	0.121 [0.027]	0.124 [0.025]	0.885
Have you received information regarding business products or services by (...) during the last year			
Phone call	0.375 [0.059]	0.316 [0.057]	0.021
Text Messages	0.035 [0.013]	0.025 [0.012]	0.431
Flyers	0.035 [0.028]	0.031 [0.028]	0.053
Received a discount	0.649 [0.070]	0.621 [0.073]	0.254
Received credit	0.547 [0.062]	0.521 [0.054]	0.358
Have you negotiated the price?	0.644 [0.085]	0.670 [0.077]	0.262
How many times did you make purchases/orders from this business in the previous 3 months	19.064 [2.498]	18.958 [2.385]	0.955

Notes: The p-values were from separate OLS regressions of the variable of interest on a constant, treatment indicator and branch fixed effects. Standard errors in brackets were clustered at the branch level. Number of customers: 1,113 in treatment group and 550 in control group

Table 6. Business Marketing and Customer Practices

	Standardized Marketing Index (1)	Standardized Attention Index (2)	Standardized Organization Index (3)	Average # Customers (4)	Did you lose a customer? (5)	Did you experience business losses? (6)
Panel A						
Treatment	0.199*** (0.048)	0.189** (0.067)	0.293*** (0.094)	24.540** (9.644)	-0.154** (0.0631)	-0.108*** (0.0327)
N	529	529	529	497	529	529
R-squared	0.256	0.518	0.334	0.4581	0.3341	0.3075
Panel B						
Treatment 1	0.208*** (0.045)	0.163** (0.074)	0.289*** (0.090)	22.220** (8.498)	-0.179** (0.068)	-0.103** (0.044)
Treatment 2	0.190*** (0.0586)	0.215*** (0.0639)	0.297*** (0.101)	26.900* (12.850)	-0.130* (0.061)	-0.112*** (0.029)
N	529	529	529	529	529	529
R-squared	0.256	0.520	0.334	0.458	0.337	0.308
Mean Control Group	-	-	-	93.018	0.270	0.402

Notes: Robust standard errors clustered at the branch level in parenthesis. Control variables included gender of the firm owner, indicators of educational level, and branch and county fixed effects. Indices were standardized by the mean and standard deviation of the control group. *p<0.1, **p<0.05, ***p<0.01

Table 7. Treatment Effect on Firm Practices

	Average Revenue (1)	Average Profit (2)	Keeps record of business expense (3)	Keeps record of sales (4)	Keeps record of inventory (5)	Did you reinvest assets? (6)	Did you save your profits? (7)	Owens bank Account (8)	Would expand IGA (9)	Own business premises (10)
Panel A										
Treatment	80,965*** (24,457)	10,117 (8,355)	0.226*** (0.066)	0.264*** (0.081)	0.226*** (0.076)	-0.0457 (0.031)	-0.009 (0.025)	0.0758** (0.031)	0.0439 (0.039)	0.0293 (0.044)
N	522	529	529	529	529	529	529	529	464	529
R-squared	0.186	0.381	0.251	0.280	0.248	0.251	0.333	0.395	0.427	0.143
Panel B										
Treatment 1	78,637*** (26,144)	10,644 (10,993)	0.230*** (0.0646)	0.275*** (0.0787)	0.222*** (0.0759)	-0.0608* (0.031)	-0.0383 (0.036)	0.0530 (0.033)	0.0330 (0.038)	0.0507 (0.060)
Treatment 2	83,305*** (26,161)	9,594 (8,262)	0.222*** (0.0691)	0.253*** (0.0849)	0.230*** (0.0774)	-0.031 (0.034)	0.020 (0.030)	0.099*** (0.033)	0.055 (0.046)	0.008 (0.047)
N	522	529	529	529	529	529	529	529	464	529
R-squared	0.186	0.381	0.251	0.280	0.248	0.253	0.338	0.397	0.428	0.144
Mean Control Group	179025.5	68476.93	0.469	0.484	0.471	0.320	0.358	0.426	0.436	0.454

Notes: Robust standard errors clustered at the branch level in parenthesis. Control variables included gender of the firm owner, indicators of educational level, and branch and county fixed effects.

*p<0.1, **p<0.05, ***p<0.01

Table 8. Differential Impacts on Business Outcomes by Principal Economic Activity

	Average # Customers	Did you lose a customer?	Keeps record of expenses	Keeps record of inventory
	(1)	(2)	(3)	(4)
Treatment	-10.110 (12.610)	-0.035 (0.063)	0.127** (0.054)	0.102* (0.057)
Grocery/Provisional Shop/Store	-20.910 (15.560)	0.122* (0.067)	-0.119 (0.073)	-0.150* (0.078)
T* Grocery/Provisional Shop/Store	53.290* (25.410)	-0.177** (0.083)	0.147* (0.077)	0.184* (0.091)
N	497	529	529	529
R-squared	0.469	0.345	0.259	0.260

Notes: Robust standard errors clustered at the branch level in parenthesis. Control variables included gender of the firm owner, indicators of educational level, and branch and county fixed effects.

*p<0.1, **p<0.05, ***p<0.01

Table 9. Customer Experiences

	Standardized Marketing index (1)	Standardized Attention index (2)	Number of purchases in the previous 3 months (3)	First time to visit this business? (4)	Would recommend the firm's services to a friend? (5)	Would recommend to another person? (6)
Panel A						
Treatment	-0.000 (0.013)	0.007 (0.024)	-0.507 (1.713)	0.036 (0.025)	-0.002 (0.006)	-0.014 (0.017)
N	1,627	1,627	1,606	1,627	1,627	1,627
R-squared	0.368	0.529	0.187	0.126	0.048	0.119
Panel B						
Treatment 1	-0.032 (0.019)	-0.011 (0.022)	0.253 (2.231)	0.034 (0.023)	-0.001 (0.005)	-0.014 (0.019)
Treatment 2	0.030 (0.027)	0.023 (0.033)	-1.233 (1.576)	0.039 (0.032)	-0.004 (0.008)	-0.015 (0.017)
N	1,627	1,627	1,606	1,627	1,627	1,627
R-squared	0.370	0.530	0.188	0.126	0.048	0.119
Mean control group	-	-	16.957	0.107	0.993	0.936

Notes: Robust standard errors clustered at the branch level in parenthesis. Control variables included gender of the customer, indicators of educational level, and branch and county fixed effects. Treatment 1 firms, 540 customers; Treatment 2 firms, 555 customers; control group, 534. Indices were standardized by the mean and standard deviation of the control group. *p<0.1, **p<0.05, ***p<0.01

Table 10. Difference-in-Difference Estimates: Firm Outcomes

Panel A: Business Marketing and Customer Practices

	Marketing Index	Attention Index	Organization Index	Average # Customers	Did you lose a customer?	Did you experience business losses?
Treatment	0.001 (0.009)	0.006 (0.015)	0.039** (0.019)	33.410* (19.010)	0.047** (0.021)	-0.041 (0.036)
Year 2018	-0.075** (0.032)	-0.084 (0.051)	-0.064 (0.051)	-19.880 (23.650)	-0.001 (0.126)	-0.132 (0.101)
T*Y2018	0.069*** (0.021)	0.081** (0.033)	0.095** (0.039)	-8.090 (14.580)	-0.195** (0.071)	-0.059 (0.056)
Constant	0.442*** (0.021)	0.885*** (0.029)	0.895*** (0.016)	15.250 (32.010)	0.286*** (0.062)	0.726*** (0.069)
N	1,058	1,058	1,058	1,012	1,058	1,058
R-squared	0.298	0.371	0.256	0.155	0.229	0.270

Panel B: Firm Practices

	Average Revenue	Average Profit	Keeps record of business inventory	Did you reinvest assets?	Did you save your profits?	Owns bank account	Would expand IGA	Owns business premises
Treatment	2,338 (10,836)	18,909 (35,587)	0.053 (0.045)	0.004 (0.024)	0.014 (0.029)	0.045 (0.038)	0.015 (0.029)	-0.043 (0.039)
Year 2018	84,780 (52,560)	-95,437 (100,242)	0.075 (0.073)	-0.023 (0.059)	0.031 (0.071)	-0.184** (0.065)	-0.111 (0.088)	-0.036 (0.107)
T*Y2018	79,747*** (21,074)	-4,748 (39,052)	0.175** (0.064)	-0.050 (0.033)	-0.025 (0.040)	0.035 (0.043)	0.029 (0.052)	0.074** (0.034)
Constant	253,686* ** (30,788)	219,592* ** (53,586)	0.850*** (0.057)	0.185*** (0.059)	0.261** * (0.049)	0.868*** (0.058)	1.060*** (0.058)	0.396*** (0.039)
N	1,045	1,058	1,058	1,058	1,058	1,058	943	1,058
R-squared	0.150	0.175	0.250	0.096	0.138	0.260	0.295	0.113

Notes: Robust standard errors clustered at the branch level in parenthesis. Control variables included gender of the firm owner, indicators of educational level, and branch and county fixed effects. *p<0.1, **p<0.05, ***p<0.01

Table 11. Difference-in-Difference Estimates: Customer Experiences

	Marketing index	Attention index	Number of purchases in the previous 3 months	First time to visit this business?	Would recommend the firm's services to a friend?	Would recommend to another person?
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.013** (0.006)	0.000 (0.011)	0.186 (1.320)	-0.001 (0.019)	-0.006 (0.008)	0.011 (0.018)
Year 2018	-0.001 (0.031)	-0.096* (0.054)	-2.069 (2.990)	-0.017 (0.031)	0.004 (0.007)	0.059 (0.047)
T*Y2018	-0.012* (0.007)	0.008 (0.017)	-0.718 (2.158)	0.037 (0.029)	0.003 (0.010)	-0.028 (0.029)
Constant	0.171*** (0.021)	0.499*** (0.036)	15.860*** (1.661)	0.132*** (0.022)	1.002*** (0.006)	0.781*** (0.021)
N	3,314	3,314	3,285	3,314	3,314	3,314
R-squared	0.184	0.271	0.134	0.071	0.030	0.077

Notes: Robust standard errors clustered at the branch level in parenthesis. Control variables included gender of the firm owner, indicators of educational level, and branch and county fixed effects. Control variables included gender of the customer, indicators of educational level, and branch and county fixed effects. benefited from discounts*p<0.1, **p<0.05, ***p<0.01

Appendix

Table A.1: Firm Owners--Training Target and Participation

COUNTY	BRANCH	Treatment 1		Treatment 2		Total Attended	Total Target	Attendance (%)
		Target [Invited]	Attended	Target [Invited]	Attended			
Montserrado	BARNERSVILLE	12	10	12	10	20	24	83
Montserrado	GARNERSVILLE	12	9	13	10	19	25	76
Montserrado	JACOB TOWN	12	9	13	12	21	25	84
Montserrado	CALDWELL	9	9	9	9	18	18	100
Montserrado	LOGAN TOWN	13	9	13	11	20	26	77
Montserrado	NEWKRU TOWN	13	10	12	8	18	25	72
Lofa	VOINJAMA	8	5	8	4	9	16	56
Montserrado	CONGO TOWN	7	4	7	0	4	14	29
Montserrado	SINKOR	6	5	6	0	5	12	42
Montserrado	WEST POINT	12	2	12	3	5	24	21
Grand Bassa	BUCHANA	11	7	11	6	13	22	59
Bong	GBARNGA	12	9	12	9	18	24	75
Bong	GANTA	12	10	12	10	20	24	83
Montserrado	KAKATA	13	7	12	9	16	25	64
Montserrado	AIRPORT	13	9	13	9	18	26	69
Montserrado	PAYNESVILLE NORTH	12	9	13	3	12	25	48
Montserrado	PAYNESVILLE SOUTH	12	10	13	7	17	25	68
Total		189	133	191	120	253	380	65
Total (%)			70		63		67	

Source: BRAC Administrative data.

Table A.2: Causes of Attrition

	Treatment 1 (1)	Treatment 2 (2)	Treatment (3)	Control (4)
Business-related travel	6	6	12	7
Migration	5	5	11	3
Sickness	5	2	7	2
Non-Response	4	0	4	2
Death	1	0	1	0
Total	21	13	35	14

Source: BRAC Administrative data.