

# IMPACT EVALUATION OF SME TRAINING UNDER THE WOMEN ENTREPRENEURS FINANCE INITIATIVE IN SRI LANKA

TA9080 SRI: SME LINE OF CREDIT PROJECT

FINAL EVALUATION REPORT

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WOMEN ENTREPRENEURS  
FINANCE INITIATIVE

**ADB**

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## COMMISSIONED BY

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# Executive Summary

Although trainees widely appreciated the training and emphasized its usefulness, there was no quantitative evidence that the online business training had a statistically significant impact on improving overall business performance. However, the impact evaluation did show that the training statistically significantly improved operations-related practices and the creation of business growth plans

**In the period 2016-2022, the Asian Development Bank (ADB) provided small and medium-sized enterprises (SMEs) in Sri Lanka with an SME Line of Credit as well as a grant and business training programme specifically aimed at women entrepreneurs (WEs).**<sup>1</sup> The SME Line of Credit Project started in February 2016 with the aim of encouraging ten participating local banks in Sri Lanka to grow their SME portfolios. This was later complemented by a grant financed by the Women Entrepreneur Finance Initiative (We-Fi) to better include female-owned SMEs. In order to increase the number of qualified women-led SME borrowers, the ADB used the remaining USD 3.1 million to finance a general business training programme for WEs, which was provided by PwC Sri Lanka (hereafter: "PwC"). PwC provided two types of business training: 1) multiple rounds of in-person training for a selection of WEs that were nominated as potential SME clients by partner banks that participated in the ADB SME Line of Credit project (so-called 'bank-nominated trainee group'), and 2) multiple rounds of online business training to a more general group of WEs (i.e. 'the general trainee group'). While the first type of training was offered in person in 2019, the second type of training was offered online in 2021-2022, in response to the COVID-19 pandemic.

**SEO Amsterdam Economics (SEO) was commissioned by ADB (as part of a consortium led by Palladium) to conduct the impact evaluation of the business training component.** SEO led the impact evaluation and carried out multiple surveys in conjunction with its local partner Kandy Consulting Group (KCG), based in Kandy, Sri Lanka. The key evaluation instruments included:

- **Quantitative survey**
  - Three large quantitative surveys of a bank-nominated trainee group: conducted before the training (baseline), a few months after the training (midline) and one year after the training (endline);
  - Two large quantitative surveys of the general trainee group ('treatment group'): conducted before the training (baseline) and one year after the training (endline);
  - One large quantitative survey of a comparison group: conducted at the same time as the endline survey for the general trainee group. This group did not receive training and served as a benchmark.
- **Qualitative Focus Group Discussions (FGDs)**
  - Two FGDs with selected WEs from the bank-nominated trainee group in 2019;
  - Four FGDs with selected WEs from the general trainee group in 2022;
  - One FGD with selected WEs from the comparison group in 2022.

**This report presents the results of the impact evaluation, based on both quantitative and qualitative findings.** It contains a thorough analysis of the survey data using difference-in-differences (DiD) analysis to compare changes in business practices and business outcomes between participants and comparable non-participants of the online business training programme. Moreover, this report also describes the main findings from a before-after analysis for

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<sup>1</sup> <https://we-fi.org/project/creating-an-enabling-business-environment-for-women-entrepreneurs-in-sri-lanka/>

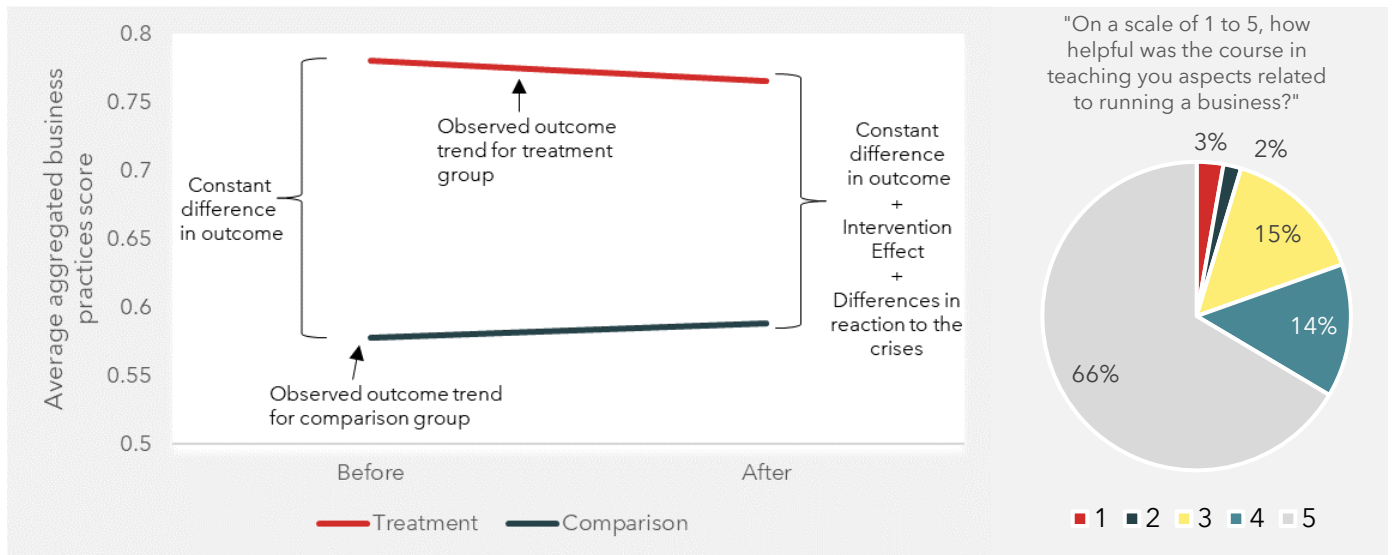
the bank-nominated trainee group as well as a comparison between the bank-nominated trainees and the general trainees. Finally, we complement this quantitative analysis with qualitative findings obtained through the FGDs.

The key findings of this evaluation are as follows:

- 1. There is no quantitative evidence that the online business training had a statistically significant impact on improving aggregate business practices of the general trainee group.** The level of self-reported business practices, summarised in an aggregated score, remained relatively stable from base- to endline. When controlling for key respondent and business characteristics, the impact of the training on business practices of general trainees was statistically insignificant in our difference-in-differences (DiD) estimations. There are a few possible explanations for the absence of a significant difference. First of all, the training might not have helped because business practices were stronger than anticipated at baseline level. This might mean that the training was not sufficiently advanced or that the effect of the training on improving business practices was limited due to a 'ceiling effect'. Secondly, training participants could have overstated how good they were at certain business practices at baseline level, because they were reluctant to admit that they did not implement a certain practice. Alternatively, the comparison group might have reported an improvement over time, because they felt that this was a socially desirable answer.
- 2. The online business training did have a statistically significant positive effect on the preparation of business growth plans, which is important for both business outcomes and improving access to finance.** However, after controlling for key business characteristics, this finding becomes statistically insignificant. This suggests that this finding was driven by differences in characteristics between the treatment and comparison groups.
- 3. Nevertheless, the online business training did have a statistically significant positive effect on operations-related business practices, which include business registration.** When controlling for key respondent and business characteristics, the training had a significantly positive impact on operations-related practices. Operations-related practices include business registration and the creation of an organization chart. The former was especially significant, as business registration can improve WE's access to finance and chances of development.
- 4. There is no quantitative evidence that the online business training contributed to improved profitability of businesses that completed the training.** During the evaluation period, businesses in Sri Lanka suffered from multiple crises: the 2019 Easter Sunday Attacks, the COVID-19 pandemic, and especially the 2022 financial crisis. All crises obviously had a negative impact on profitability, due to a combination of lower demand, supply chain bottlenecks and energy shortages. However, when we compared the trainee group with the comparison group, we did not find statistical evidence that the former did better in terms of profitability than the latter.
- 5. However, there were some indications that the training had a positively significant effect on sales.** Even when controlling for key respondent and business characteristics, we found a statistically significant positive effect of business training on trainees' sales compared to those of the comparison group. However, there was no statistical evidence that the training contributed to other outcomes, such as lower expenses, a higher business owner salary or a higher number of paid employees.
- 6. Nevertheless, there is qualitative evidence that both the in-person training (of bank-nominated trainees) and the online business training (of general trainees) were useful for WEs in Sri Lanka.** During multiple group discussions, FGD participants noted that the business training was useful with regard to improving their business outcomes. Both trainee groups appreciated the training and agreed on its usefulness (also confirmed by the fact that most of them fully completed the training programmes). The fact that the training programmes were geared towards completing a business plan was particularly well appreciated, also as the majority of trainees indicated that they needed time to rebuild their businesses following the various crises they experienced. In the trainees' view, the general business skills taught during the training programmes helped

them to improve their business practices and business outcomes - even though the quantitative results suggest that the various crises constrained them from practically applying new insights, as a result of which the extent to which business outcomes improved was limited. Overall, respondents still expressed strong satisfaction and recommended the training programme to their peers.

Figure 1 Although trainees appreciated the training program, there is no quantitative evidence that it improve their overall business practices



## List of abbreviations

|       |   |
|-------|---|
| ADB   | Asian Development Bank                    |
| CAPI  | Computer Assisted Personal Interviews     |
| CATI  | Computer Assisted Telephone Interviews    |
| CSO   | Civil Society Organisations               |
| DiD   | Difference-in-differences                 |
| FGD   | Focus Group Discussion                    |
| JFPR  | Japan Fund for Poverty Reduction          |
| KCG   | Kandy Consulting Group                    |
| NEDA  | National Enterprise Development Authority |
| OLS   | Ordinary Least Squares                    |
| PwC   | PricewaterhouseCoopers                    |
| SEO   | SEO Amsterdam Economics                   |
| SME   | Small and Medium Enterprise               |
| TA    | Technical Assistance                      |
| TOC   | Theory of Change                          |
| WE    | Women Entrepreneur                        |
| We-Fi | Women Entrepreneurship Finance Initiative |

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# 1 Introduction

This report describes the findings of a mixed-method impact evaluation of business training provided under the We-Fi programme in Sri Lanka, based on triangulation of rigorous survey data analysis and results from focus group discussions (FGDs).

## 1.1 Background of the Programme

**In the period 2016-2022, the Asian Development Bank (ADB) provided small and medium-sized enterprises (SMEs) in Sri Lanka with an SME Line of Credit as well as a grant and business training programme specifically aimed at women entrepreneurs (WEs).**<sup>2</sup> The SME Line of Credit Project started in February 2016 with the aim of encouraging ten participating local banks in Sri Lanka to grow their SME portfolios. This was later complemented by a grant financed by the Women Entrepreneur Finance Initiative (We-Fi) to better include female-owned SMEs. In order to increase the number of qualified women-led SME borrowers, the ADB used the remaining USD 3.1 million to finance a general business training programme for WEs, which was provided by PwC Sri Lanka. PwC provided two types of business training: 1) multiple rounds of in-person training for a selection of WEs that were nominated as potential SME clients by partner banks that participated in the ADB SME Line of Credit project (so-called 'bank-nominated trainee group'), and 2) multiple rounds of online business training to a more general group of WEs (i.e. 'the general trainee group'). While the first type of training was offered in person in 2019, the second type of training was offered online in 2021-2022, in response to the COVID-19 pandemic.

**This report describes the results of the first ('Impact Evaluation') out of four workstreams of the overarching We-Fi programme evaluation.** The other workstreams are 'Gender Gap Assessment and Action Plan for Banks' (2), 'Gender Gap Assessment and Action Plan for Government Agencies and CSOs' (3) and 'White Paper on Women Entrepreneurship' (4). As part of the evaluation, SEO reconstructed a 'Theory of Change' (ToC) for the four workstreams (see Appendix G). This ToC aims to better explain how the programme intends to contribute to the overall goal of sustainable growth of women-led enterprises in Sri Lanka through the four workstreams. The evaluation team subsequently used the second pathway of this ToC as a basis for the development of the survey questionnaire and the impact evaluation.

**The main focus of the impact evaluation was to measure the impact of the business training provided by PwC on WEs' business practices.** Table 1.1 shows the various components of the business training. The impact on business outcomes was a secondary focus, as this was strongly affected by the series of recent crises experienced by SMEs in Sri Lanka. In addition, this report provides feedback on how WEs experienced the training programmes, the impact of the various crises, and the extent to which the training helped WEs to deal with these crises.

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<sup>2</sup> <https://we-fi.org/project/creating-an-enabling-business-environment-for-women-entrepreneurs-in-sri-lanka/>

Table 1.1 The training and survey focused on five categories of business practices

| Category                                | Contents  |
|---|---|
| Marketing and sales                     | <ul style="list-style-type: none"> <li>● Conducting a market assessment:                             <ul style="list-style-type: none"> <li>● Obtaining information on competitors’ prices and product ranges</li> <li>● Obtaining information from customers on potential demand</li> </ul> </li> <li>● Use of:                             <ul style="list-style-type: none"> <li>● Special price offers</li> <li>● Advertisements</li> <li>● Strategic pricing</li> <li>● Sales targets</li> </ul> </li> </ul> |
| Production, planning and costing        | <ul style="list-style-type: none"> <li>● Negotiating with suppliers</li> <li>● Comparing prices of different suppliers</li> <li>● Having a proper stock management system in place</li> <li>● Defining profit margins per product</li> </ul>  |
| Operations                              | <ul style="list-style-type: none"> <li>● Obtaining a <i>Business Registration Certificate</i></li> <li>● Developing an organizational chart</li> </ul>  |
| Record-keeping and financial management | <ul style="list-style-type: none"> <li>● Financial record keeping and sales analysis</li> <li>● Budgeting</li> <li>● Separating personal and business finance</li> <li>● Using other financial accounting measures (e.g. balance sheet, cash flow statement)</li> </ul>   |
| Business growth plan                    | <ul style="list-style-type: none"> <li>● Developing business plans</li> </ul>   |

The table below summarises the three key hypotheses that we aimed to test during the evaluation. Due to the changed setup of the evaluation and the removal of the grant component from the We-Fi programme in Sri Lanka, no questions were asked regarding access to finance in the endline. Therefore, the second hypothesis could not be tested.

Table 1.2 Three key hypotheses

| # | Outcome area       | Hypothesis   |
|---|--------------------|--|
| 1 | Business practices | The training will lead to improved business practices  |
| 2 | Access to finance  | The training and the improved business practices (or the expectation thereof) will lead to improved access to finance                  |
| 3 | Business outcomes  | Improved business practices and improved access to finance will lead to improved business outcomes (e.g. profits, sales and firm size) |

We tested the two relevant hypotheses using data from the survey and focus group discussions (FGDs) among three groups of WEs (see Table 1.3). The main sources of information are the survey data from the general trainee group and the comparison group, as these are best compared because they are most similar in characteristics (more details in the next section).

Table 1.3 KCG surveyed three groups from 2019-2022

| Name | Definitions |
|------|-------------|
|------|-------------|



**Bank-nominated trainee group**

WEs that were **nominated by banks** for the **business training programme** and therefore were either (1) existing customers that were interested in bank financing or (2) identified by the banks as having the potential to use bank financing. Some had already built up good relationships with their banks and had expressed interest in receiving business training to their banks; hence, the nomination by their bank was a natural outcome.

**General trainee group**

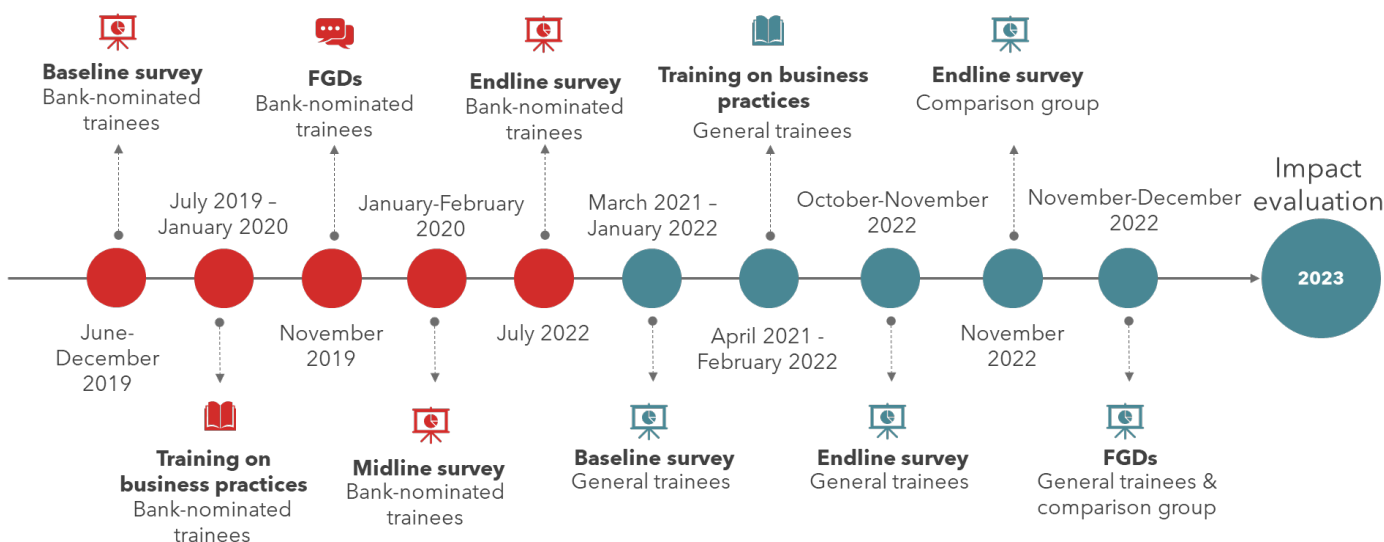
WEs that followed the **business training programme** after 1) responding to the advertisements posted by PwC Sri Lanka, and 2) fulfilling the eligibility criteria. These WEs received treatment (i.e. the business training) and can to some extent be seen as representative for ADB’s target group (in contrast to the bank-nominated trainees who already had existing relations with partnering banks and are therefore considered to be at the higher end of the distribution).

**Comparison group**

WEs that did **not follow the business training programme**. These WEs were drawn from the NEDA database (using random and convenience sampling), to serve as a benchmark for the general trainee group. WEs had to fulfil similar eligibility criteria as the general trainee group, whilst the evaluation team tried to maintain a similar geographical distribution.

## 1.2 Timeline of the evaluation

Figure 1.1 The impact evaluation was divided in 10 phases



More details can be found in Appendix E.

**KCG conducted all surveys in the same staggered manner, just as PwC provided the training.** This to ensure that for each respondent a roughly equal amount of time had passed between the baseline survey and the training, as well as between the training and the endline survey. Overall, the survey instrument covered three moments in time: pre-training ('before'), post-training 'short term' ('mid'), and post-training 'long term' ('after').

## 2 Methodology

In this study, we analysed the impact of the We-Fi training programme by comparing a treatment group with a later created comparison group. We use difference-in-differences (DiD) as our main estimation method, whilst relying on self-reported business practices and outcomes as dependent variables.

### 2.1 Survey sampling

#### **General trainees (i.e. the 'treatment group')**

**For the treatment group, PwC Sri Lanka recruited WEs through advertisements, using a set of eligibility criteria and the principle of 'first come, first served'.** PwC published advertisements across several media outlets, allowing all WEs to respond. PwC screened interested participants and compiled them into 14 batches of maximum 40 entrepreneurs. The eligibility criteria were discussed extensively (between the evaluation team, ADB, the government of Sri Lanka, and PwC Sri Lanka) and included:

1. The enterprise should be female-headed (in the case of partnership, female ownership should be at least 50 percent);
2. The business should have been in operation for at least the past 12 months;
3. The business should have at least three employees, including the owner, and each of them should be working for at least 20 hours per week within the given enterprise;
4. The WE should have an interest in and capability for participating in PwC's online business training (at least 80 percent attendance and completion of compulsory e-learning material), and;
5. The WE should be able to present a business plan at the end and be willing to participate in an evaluation survey conducted by KCG.

For a total of 550 WEs selected by PwC, KCG conducted a further screening based on the baseline survey where the abovementioned criteria were utilised, resulting in a final treatment group of 533 WEs.

#### **Comparison group**

**For the comparison group, KCG selected WEs based on the NEDA database showing a similar geographical distribution to serve as a 'benchmark'.** KCG drew a total of 575 WEs from a total of 11 districts: Kurunegala, Gampaha, Colombo, Kalutara, Matale, Kandy, Kegalle, Ratnapura, Matara, Galle and Jaffna. This included 500 Sinhala and 75 Tamil speaking WEs.<sup>3</sup> In addition to matching the treatment group's geographical distribution as a whole, each individual WE also had to adhere to the following three criteria:

1. The enterprise should be female-headed (in the case of partnership, female ownership should be at least 50 percent);
2. The business should have been in operation since 2019, and;
3. At any point in time within the past three years, the business should have had at least three employees (including the owner), each of them working at least 20 hours per week within the given enterprise.

<sup>3</sup> However, due to a recent selection criterion based on at least 15 or more entrepreneurs being recruited and interviewed for the General Track survey, the three districts of Batticaloa, Kilinochchi & Ampara were abandoned, resulting in a sample increase in favour of the remaining 11 districts.

**The sampling methodology was a mix of random sampling, purposive sampling and convenience sampling.**

As a sample frame for the comparison group, we used a database of 72,281 entrepreneurs (island-wide) that officials from the National Enterprise Development Authority (NEDA) shared with KCG and ADB. After removing duplicated entries, contacts without valid telephone numbers, errors in formatting, and enterprises that had already been surveyed as part of this study,<sup>4</sup> the evaluation team was left with 5,783 potential WEs distributed across the 11 districts. For the initial sample, KCG randomly selected WEs per district (randomised stratified sampling). Due to logistical difficulties associated with contacting entrepreneurs, gaining their consent for participation and geographical dispersion of survey participants (requiring constant ad hoc travel for enumerators), the data collection team was not able to survey a sufficiently large sample. To complete the sample, the data collection team had to fall back on 'convenient sampling'.<sup>5</sup> Criteria for the convenience sampling were the ease of making contact and the proximity to the DS division in which the enumerators were operating. Based on this sampling method, KCG selected a total of 474 enterprises through an initial contact survey. Despite difficulties in contacting respondents, KCG managed to eventually collect comparison group data for a final sample of 396 WEs.

**Bank-nominated trainees**

**For the bank-nominated trainee group, the evaluation team drew from the WEs that were nominated by the partner banks.** In total, partner banks nominated 330 WEs, out of which 9 and 36 WEs did not complete the training or the baseline survey respectively. This resulted in a final sample of 285 bank-nominated trainees for this study. The WEs were fairly evenly distributed among the eight different locations.

*For the remainder of this report, the focus will be on the general trainee and comparison groups as these are central to the econometric analysis. Therefore, throughout the report we will also refer to the general trainee group as the 'treatment group', whilst the reference to the comparison group remains unchanged.*

## 2.2 Survey data collection

**KCG collected data for the treatment and control group in three survey rounds (see Table 2.1).** KCG collected baseline data for the treatment group between March 2021 and January 2022, and endline data from October to November 2022. KCG collected data for the comparison group during one combined survey that took place in November and December 2022. In this survey, respondents were asked to answer questions regarding their business practices and outcomes in the month preceding the endline survey and also at the time of the baseline survey for the treatment group. We then used these 'recall questions' to reconstruct a baseline for the comparison group. The original study design planned to use a truly experimental design, where participants would be randomly assigned to either the treatment group or a control group. However, given the difficult economic situation and the COVID-19 pandemic, ADB and the government of Sri Lanka decided that it was more ethical to provide all applicants with the opportunity to participate in the business training. Later, the evaluation team decided to compare the results to those of a non-random comparison group through the use of recall questions to reconstruct the baseline. The average completion period for the treatment group survey was 60 minutes for both groups.

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<sup>4</sup> This may have been a source of bias, as the more digitally literate and ambitious entrepreneurs may have been more likely to apply for the training.

<sup>5</sup> A convenience sample is drawn from a source that is conveniently accessible to the researcher. Convenience sampling is different from purposive sampling in that it does not select based on characteristics of participants, while purposive sampling focuses on selecting participants possessing specific characteristics associated with the research study. See: <https://www.scribbr.com/frequently-asked-questions/purposive-and-convenience-sampling/>

Table 2.1 Data collection periods

| Group                               | Before   |  | After  |   |  |
|-------------------------------------|--|--|--|---|--|
| <b>Treatment Group</b>              |  |  |  |   |  |
| Type of survey                      | Baseline Survey  | Reconstructed Baseline Survey  | Endline Survey   |   |  |
| Survey period                       | March 2021 - January 2022  | October-November 2022  | October-November 2022  |   |  |
| Data collected                      | <ul style="list-style-type: none"> <li>• Background characteristics</li> <li>• Business practices</li> </ul> | <ul style="list-style-type: none"> <li>• Business outcomes</li> </ul>  | <ul style="list-style-type: none"> <li>• Business practices</li> </ul>   | <ul style="list-style-type: none"> <li>• Background characteristics</li> <li>• Business outcomes</li> <li>• Impact of crises</li> <li>• Reflection on training programme</li> </ul> | <ul style="list-style-type: none"> <li>• Business practices</li> </ul> |
| Period for which data was collected | Average for the two years <u>before</u> the training   | Approximately one month <u>before</u> training                         | Approximately one month <u>after</u> training  | Approximately one year <u>after</u> the training  | Approximately one year <u>after</u> the training                       |
| <b>Comparison Group</b>             |  |  |  |   |  |
| Type of survey                      | Reconstructed Baseline Survey  |  | Endline Survey   |   |  |
| Survey period                       | November 2022  |  | November 2022  |   |  |
| Data collected                      | <ul style="list-style-type: none"> <li>• Business practices</li> </ul>                                       | <ul style="list-style-type: none"> <li>• Business outcomes</li> </ul>  | <ul style="list-style-type: none"> <li>• Background characteristics</li> <li>• Changes in business</li> <li>• Business outcomes</li> <li>• Impact of crises</li> </ul> |   | <ul style="list-style-type: none"> <li>• Business practices</li> </ul> |
| Period for which data was collected | Average for the time period June 2019-June 2021 (i.e. the middle of the time period for the treatment group) | June 2021 (i.e. the middle of the time period for the treatment group) | One month after the training for the treatment group   | Average for the time period June 2021-December 2022 (proxy for the 'post-treatment period' of the treatment group)  |  |

**KCG collected data for the comparison and treatment group for various periods.** For the treatment group, KCG collected pre-treatment data for two periods: the first part - on background characteristics and business practices - before the training, referring to the last two years of operation, and data on business operational information directly after the training for the period April 2021-July 2022. These questions were not part of the first round of questions as they could contain (business) sensitive information that participants were unlikely to share at that stage. After building a 'relationship' through the training programme, participants were more likely to share this information. In addition, the data collection team made use of this additional survey round to inquire once more about the respondents' business practices. KCG surveyed the comparison group once in November/December 2022, collecting pre-treatment data for the period June 2019-June 2021 using 'recall questions', and post-treatment data for the time period June 2021-December 2022.

**Due to the COVID-pandemic, KCG conducted the surveys for the treatment group in the form of Computer Assisted Telephone Interviews (CATI), using Survey CTO software.** A total of 14 research assistants from KCG conducted the fieldwork: 10 of them operated in Sinhala and 4 in Tamil. All enumerators participated in a one-day training session on the specific questionnaire, using Survey CTO enabled tabs. Although the situation allowed for in-person interviews during the endline, the evaluation team decided to keep the mode of interviewing the same as in the baseline for comparability.

**KCG conducted the surveys for the comparison group in the form of Computer Assisted Personal Interviews (CAPI), using Survey CTO software.** Enumerators conducted physical interviews whilst using CTO enabled tablets. A total of 21 KCG research assistants conducted the fieldwork: 17 of them conducted interviews in Sinhala and 4 of them in Tamil. Similar to the treatment group, all enumerators participated in a one-day training session on the specific questionnaire. Although the surveys for the treatment group were conducted by phone, the absence of a personal relationship with the participants and the potential hesitancy about sharing sensitive information made the evaluation team decide to conduct this survey in person.

**KCG implemented various quality control measures.** Firstly, KCG recorded calls (after receiving prior consent from the respondent) and performed audio audits at the start, mid and end points of data collection to ensure adequate and stable data quality. Based on these audits, two designated KCG research assistants provided feedback to enumerators to improve their accuracy of data collection and their overall interviewing skills. Secondly, data being tabulated on Survey CTO enabled devices meant that errors that often occur with traditional paper and pencil-based methods were eliminated as restrictions, and skipping patterns as well as other conditions relating to data tabulation were pre-set within the software. Moreover, KCG organised various focus group discussions (FGDs) in which participating respondents were also asked about the recent surveys conducted by KCG enumerators. The fact that FGD participants expressed satisfaction about their survey experience provided further confidence in the quality of data collection.

## 2.3 Econometric Design

In order to assess the effects of the training programme econometrically, we conducted two types of analyses:

1. A **difference-in-differences** (DiD) analysis using pre and post treatment data for both the treatment and the comparison group to test the effect on business practices and business outcomes
2. **OLS regressions** of 1) a simple 'after comparison' using the post treatment data for both the treatment and the comparison group, and 2) a before-after comparison of the treatment group to test the effect on business practices and business outcomes.

We conducted a Difference-in-Differences (DiD) regression analysis to study the effect of the training programme on business practices and business outcomes. We conducted separate regressions, using the following specification:

$$Y_i = \alpha + \beta_1 Treatment_i + \beta_2 After_{it} + \beta_3 After * Treatment_{it} + X_{it} + \varepsilon_{it}$$

Here,  $Y_i$  refers to 1) the business practices scores: a) aggregated business practices,<sup>6</sup> b) marketing and sales, c) production, planning, and costing, d) operations, e) record keeping and financial management, and f) business growth plans, and 2) business outcomes - i) profit, ii) sales, iii) expenses, iv) salary of the business owner, and v) number of employees.  $X_j$  refers to a vector of controls, including the education level of the respondent (acting as a proxy for the personal development of the respondent), the sector in which the respondent operates, the age of the business (acting as proxy for the maturity/development of the firm), and the province in which the firm operates. Along with the main independent covariates, these were regressed on the business practices scores.

We conducted the DiD analysis on a balanced dataset due to the high drop-out rate between the base- and endline. There was a relatively high survey drop-out rate between the base- and endline survey. To control for the bias this might introduce in our dataset, we performed all of our regressions on a balanced dataset (i.e. only including treatment WEs who were present in both the baseline and endline survey).<sup>7</sup>

We assumed business characteristics to be fixed for the comparison group, to compensate for missing data. Although part of only one survey, KCG collected data on business practices for the comparison group referring to two time periods (before and after the treatment). However, questions on the background characteristics (sector, education, age of business, location of business) only referred to the time of the survey. To include these as controls in our DiD estimation, we assumed that these characteristics were non-dynamic and had remained the same between the two time periods. Similarly, KCG did not collect data on education level in the endline survey for the treatment group. Given that few if any entrepreneurs were expected to still be enrolled in education during the evaluation period, we assumed this variable to be constant over time.

Table 2.2 Definitions of variables used in the regression analysis

| Category            | Variable Name            | Definition   | Question asked in questionnaire |
|---------------------|--------------------------|--|---------------------------------|
| Dependent Variables | Business Practices Score | What percentage of the 21 business practices indicated do the respondents use in their business? |                                 |

<sup>6</sup> We aggregated the answers to the various ‘closed questions’ regarding business practices into an overall score per respondent as well as a score per category, using equal weights. This was done in two ways. First, we assigned each question on business practices a 1 (if the respondent answered ‘yes’) or a 0 (if the respondent answered ‘no’ or can’t remember’) and we excluded the answer ‘not relevant’ on the basis that if it is truly irrelevant it should not lower their score. We also excluded questions that were not answered by respondents. Second, we calculated the unweighted average of each question on business practices, implicitly assigning an equal weight to each question. The aggregated score therefore shows what share of the questioned business practices each respondent complies with (per category)

<sup>7</sup> We also performed separate regressions using the entire dataset and found that the results were the same as those presented in this report.

|                              |                 |  |  |
|------------------------------|-----------------|--|--|
| <b>Independent Variables</b> | Profit          | Profit of the business in the last month                   | What was the total income the business earned during the last month after paying all expenses including wages of employees, but excluding your own salary, i.e. the profit of your business during the last month? |
|                              | Sales           | Sales of the business in the last month                    | Could you tell me the total monthly sales of your business in the last month from all sources, including manufacturing, retail sales and services, and including sales on credit?                                  |
|                              | Expenses        | Expenses of the business in the last month                 | May I know the amount you have spent on the business during the last calendar month?   |
|                              | Employees       | Number of full-time and part-time paid workers             | Can you tell me the number of paid workers that are currently at your business, during a normal week?  |
|                              | Salary          | Salary of the business owner in the last month             | What was the salary allocated to yourself during the last month of operating the business?   |
|                              | Treatment       | Belonging to the treatment group that was offered training |  |
| <b>Control Variables</b>     | After           | After the training period                                  |  |
|                              | Education       | Education level of the respondent                          | What is the highest level of education attained? (from year one to university post-graduate or technical school)   |
|                              | Age of business | The age of the business as of 2023                         | When did you start operating this business?  |
|                              | Sector          | Sector in which the business operates                      | What is the main activity of this business? (Production, Services or Retail/Sales)   |
|                              | Province        | Province in which the business operates                    |  |

**Due to the absence of data from multiple time periods pre-treatment, we could not ‘test’ the parallel trends assumption.** Nor could we assume that the assumption would hold as a result of random selection. Moreover, pre-treatment levels of background characteristics for the comparison and treatment group were significantly different from each other. This already suggested that it was likely that the parallel trends assumption was violated, as both groups were not comparable in characteristics and therefore may not have had similar trends in the usage of business practices or in their business performance even without the treatment.

## 2.4 FGD sampling

**Prior to the FGDs, SEO provided a training workshop on FGD methodology to KCG staff and potential FGD facilitators.** This training took place in Kandy on 29 October 2019. Shortly after the training, KCG conducted two FGDs involving the bank-nominated trainees in Colombo on 31 October and 1 November 2019, observed by the evaluators from SEO.

**All FGDs were conducted in an open-ended but semi-structured conversational format.** The discussions focused on the following aspects: the impact of COVID-19 and coping mechanisms implemented by enterprises, the impact of the financial crisis and coping mechanisms implemented, if any, access to finance, the training programme and the loan programme, participant perceptions on female-owned enterprise success and access to finance, and finally the surveys conducted by Kandy Consulting Group (KCG).

**The FGDs lasted roughly about three hours**, including a 30-minute break (which also allowed for some in-depth one-on-one conversations). At the end of the sessions, participants received a small cash reimbursement as a token of appreciation for their participation/compensation for travel costs.

### 2.4.1 Bank-nominated trainee group

**KCG conducted two FGDs with We-Fi bank-nominated trainee groups in Colombo on 31 October and 1 November 2019.** A total of 19 diverse We-Fi bank-nominated trainees from the Colombo, Gampaha, Matara and Galle areas participated in the FGDs. Their enterprises were from a diverse range of manufacturing and service sectors, including the garment industry, fashion design, the sale of fashion accessories, beauty salons, grocery stores, hardware and construction, hotel industry, freight forwarding & logistics management, event management, offset printing, manufacturing (e.g. cleaning brushes, plastic bottles and shoes), metal crushing, architectural services and a beer distribution service.

**Participants in the FGDs consisted of We-Fi bank-nominated trainees that had either or not completed the loan application process by that time.** The first FGD on 31 October comprised of six participants (out of eight who had been invited and confirmed) who had already completed the loan application process. The second FGD on 1 November included 13 participants (out of 16 who had been invited and confirmed) who had not proceeded with the loan application process or had not yet completed it. Both FGDs lasted about three hours, including a 30-minute break for refreshments (which allowed for more in-depth one-on-one conversations). At the end of the sessions, the participants were offered a small gift as a token of appreciation for their participation.

### 2.4.2 Treatment and comparison group

**KCG conducted five FGDs between 7 and 30 November 2022, advertised by PwC.** This included discussions with four treatment groups and one comparison group. The participants in the treatment group responded to an open advertisement for the aforementioned online business training by PwC, where KCG selected the participants in the comparison group from a business directory maintained by the NEDA. Out of the total of five FGDs, the four discussions with the general trainees took place in Colombo, Kandy, Gampaha and Matara. The discussion with the comparison group took place in Kandy. All entrepreneurs carried out their activities within or in close proximity to the districts within which the FGDs were held and offered a diverse range of manufacturing, services or a combination of both. They included enterprises operating within the garment industry, fashion design, a variety of food production and value addition industries, horticulture, Ayurveda, beauty culture, construction, the hotel industry, offset printing, tourism, professional education services and export-oriented industries. A total of 81 entrepreneurs participated in these FGDs.

**The majority of FGD participants (80 percent) was engaged in production.** 17.5 percent was solely engaged in services and 2.5 percent was engaged in some combination of both production and service delivery. Each FGD consisted of at least 14 and at most 19 WEs. While all the FGDs represented diversity in terms of the scale of business operations, it should be noted that the FGD with the comparison group was dominated by entrepreneurs operating at a relatively small scale in comparison with the general trainee group.



## 3 Data Description

The evaluation team collected survey data for 533 and 334 treatment WEs at base- and endline respectively, complemented by endline survey data for 396 comparison WEs.

### 3.1 Treatment Group

**The baseline sample for the treatment group consisted of 533 WEs selected (based on the eligibility criteria listed in section 2.1) from a pool of 800 eligible WEs, across 14 locations.** Only 17 of the pre-selected WEs did not complete the baseline survey, whereas half of the surveyed baseline respondents also completed the PwC training a few months later (see Table 3.1). The endline samples consisted of all baseline respondents minus a 35 percent drop-out rate (see Table 3.2). Reasons for dropping out of the endline survey included incomplete questionnaires, non-responsiveness or refusing to do the endline survey, as well as KCG deciding to drop the respondent.

Table 3.1 Baseline survey and training completion

| Location       | Pre-selected WEs | Baseline survey completed | Training completed |
|----------------|------------------|---------------------------|--------------------|
| <b>Sinhala</b> |                  |                           |                    |
| Batch 1        | 40               | 38                        | 17                 |
| Batch 2        | 40               | 39                        | 21                 |
| Batch 3        | 62               | 61                        | 28                 |
| Batch 4        | 39               | 38                        | 21                 |
| Batch 5 & 6    | 82               | 81                        | 50                 |
| Batch 7 & 8    | 76               | 74                        | 42                 |
| Batch 9        | 49               | 47                        | 24                 |
| Batch 10       | 28               | 28                        | 17                 |
| Batch 11       | 39               | 36                        | 14                 |
| Batch 12       | 31               | 31                        | 20                 |
| <b>Tamil</b>   |                  |                           |                    |
| Batch 13       | 39               | 36                        | 10                 |
| Batch 14       | 25               | 24                        | 4                  |
| <b>Total</b>   | <b>550</b>       | <b>533</b>                | <b>268</b>         |

Source: SEO and KCG

Table 3.2 Endline Survey Completion

| Location      | Completed | Incomplete |
|---------------|-----------|------------|
| Northern      | 20        | 8          |
| North Western | 24        | 18         |

|               |            |            |
|---------------|------------|------------|
| Western       | 153        | 96         |
| North Central | 7          | 9          |
| Central       | 35         | 17         |
| Sabaragamuwa  | 38         | 11         |
| Eastern       | 17         | 11         |
| Uva           | 13         | 2          |
| Southern      | 38         | 16         |
| <b>Total</b>  | <b>344</b> | <b>184</b> |

Source: SEO and KCG

### 3.2 Comparison Group

The comparison sample consisted of 396 WEs selected from a pool of 480 eligible WEs across 10 districts (see Table 3.3). 17 percent (84 respondents) of the pre-selected WEs did not complete the comparison survey for various reasons, including refusal to complete the survey (4), not being at home at the time of the survey (6), and being dropped by KCG (4).

Table 3.3 Comparison survey completion

| Location      | Eligible Count | Completed  |
|---------------|----------------|------------|
| Northern      | 47             | 40         |
| North Western | 46             | 41         |
| Western       | 143            | 113        |
| North Central | 0              | 0          |
| Central       | 120            | 103        |
| Sabaragamuwa  | 8              | 4          |
| Eastern       | 60             | 50         |
| Uva           | 0              | 0          |
| Southern      | 56             | 45         |
| <b>Total</b>  | <b>480</b>     | <b>396</b> |

Source: SEO and KCG

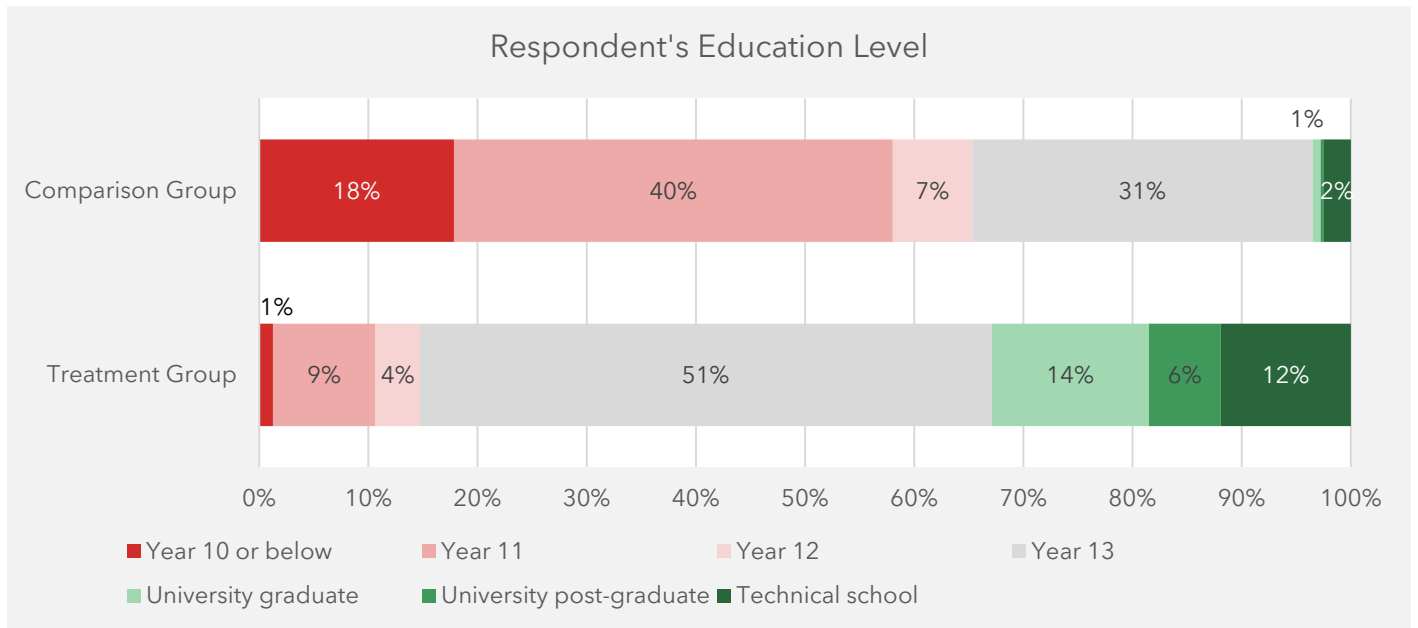
### 3.3 Background Characteristics

There were significant differences in the background characteristics of the comparison and treatment groups. Treatment group respondents had higher levels of education and spent more hours on their business. Treatment group SMEs were less likely to have in-house production and employed more non-relatives than comparison group SMEs.

### 3.3.1 Respondent Characteristics

**The treatment group had higher levels of education than the comparison group.** As Figure 3.1 shows, more than 80 percent of the treatment group respondents had completed post-secondary education (year 13 and beyond), compared to only 34 percent of the comparison group respondents. 14 percent of the treatment group respondents were university graduates, whereas only 1 percent of the comparison group respondents had obtained a university degree.

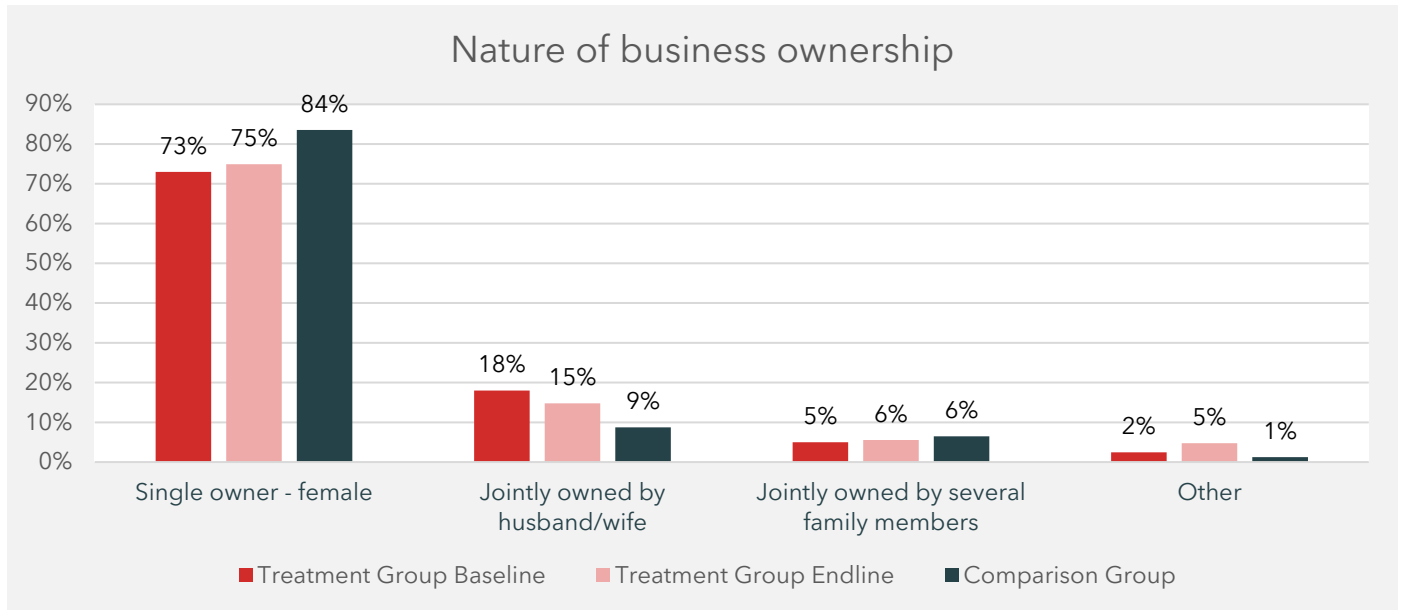
Figure 3.1 General trainees generally had higher levels of education than members of the comparison group



Source: SEO and KCG

**Most treatment and comparison group respondents were the single owner of their SME.** As Figure 3.2 shows, more than three quarters of the surveyed female entrepreneurs from the treatment and comparison groups were also the owner of the SME in question. A slightly higher percentage of treatment group respondents (18 percent) than comparison group respondents (9 percent) jointly owned their business with their spouse.

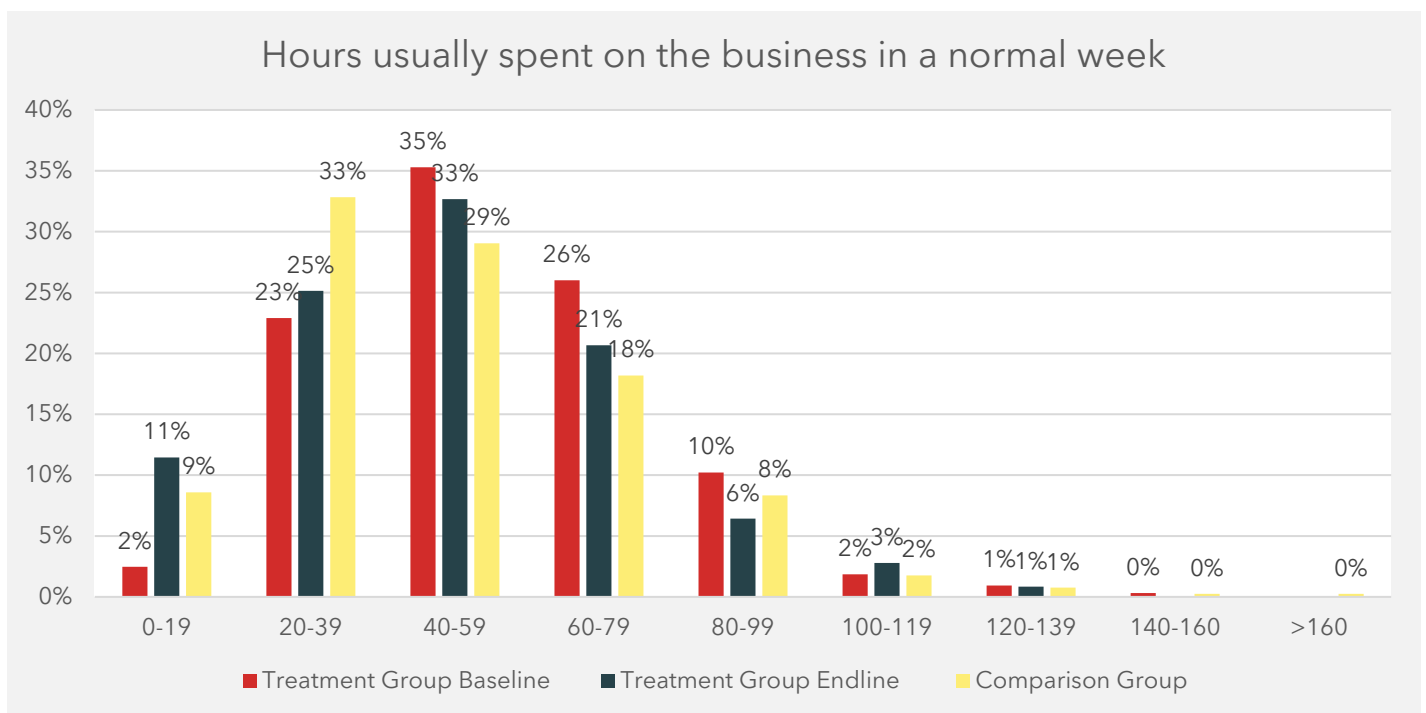
Figure 3.2 Most respondents in the comparison and treatment groups were the single owner of their SME



Source: SEO and KCG

**WEs in the treatment group tended to spend more hours on their business than those in the comparison group.** Most WEs in the treatment and comparison groups spent between 20 to 80 hours on their business in a normal week (see Figure 3.3). However, more respondents from the treatment group worked more hours (>60) than those from the comparison group. As treatment group respondents had the chance to somewhat self-select into the treatment group, it is possible that they were more motivated business owners, therefore working more hours.

Figure 3.3 Most entrepreneurs spent between 20 and 80 hours on their business in a week

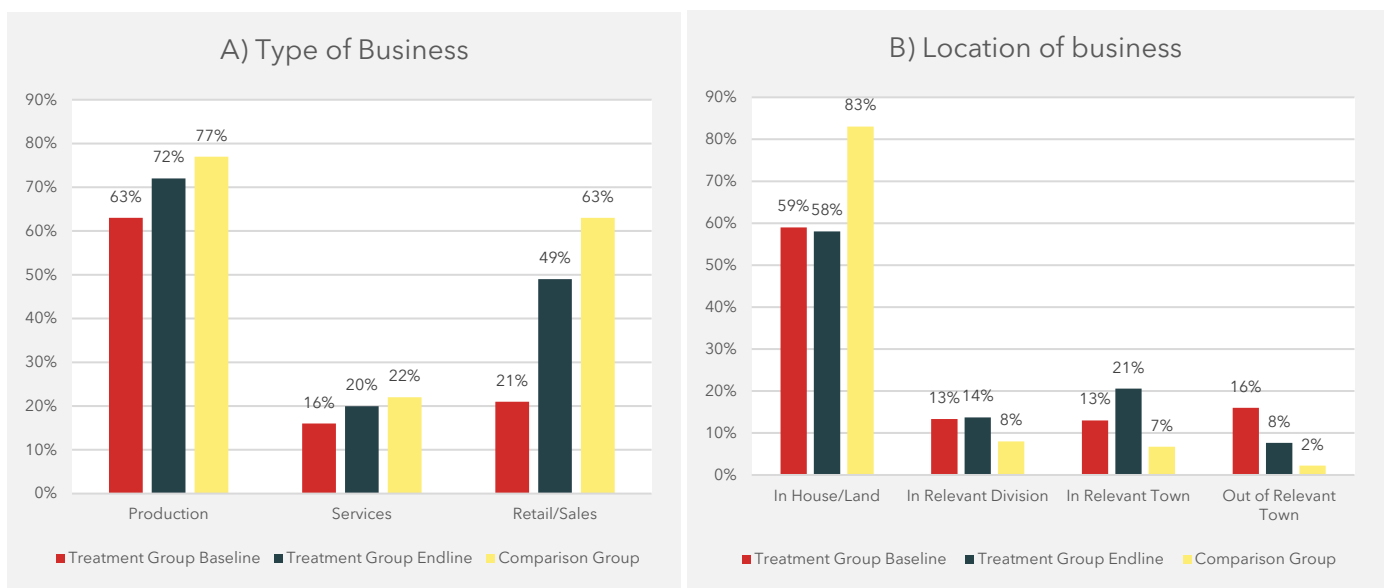


Source: SEO and KCG

### 3.3.2 Business Characteristics

**A larger share of respondents conducted ‘in-house production’ in the comparison group than in the treatment group.** As shown in Figure 3.4B, 83 percent of the comparison group respondents had businesses with in-house production, while only around 50 percent of treatment group respondents produced in-house. This might suggest that comparison group respondents owned smaller, less developed businesses. The remaining entrepreneurs had located their business in their relevant town or division, with very few (especially in the comparison group) locating their business outside their town. Most treatment and comparison group businesses were active in the production sector (see Figure 3.4A).

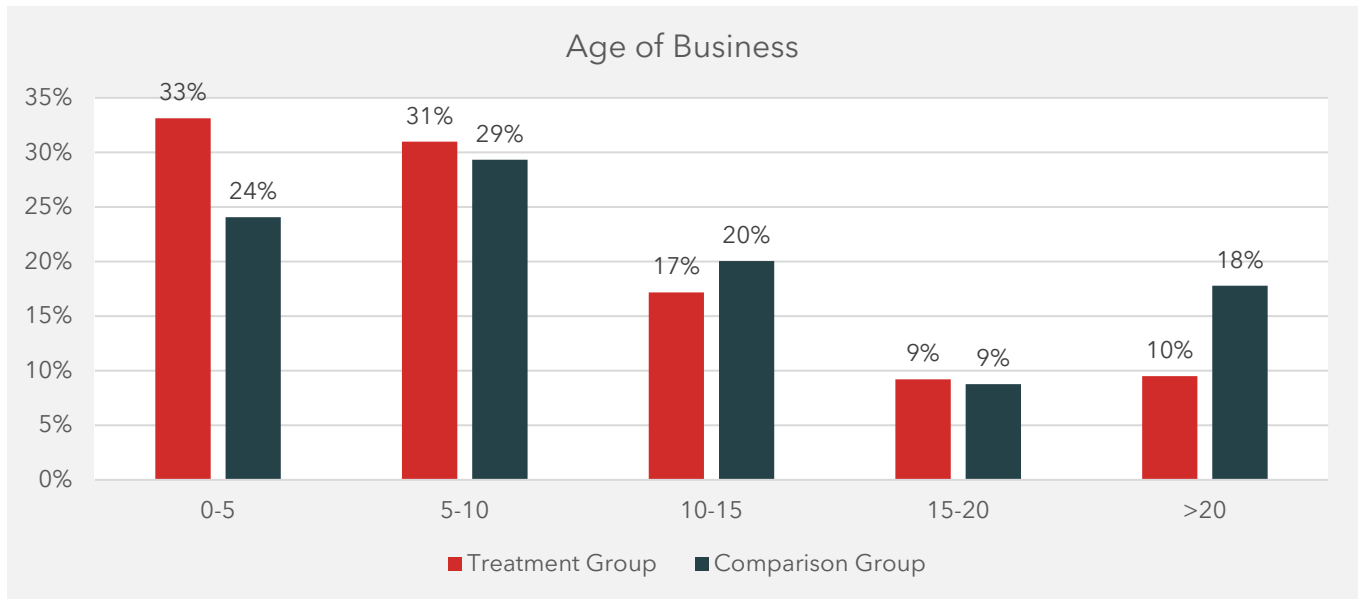
Figure 3.4 The majority of the respondents could be categorised as in-house production



Source: SEO and KCG. Note that the percentages in Figure A do not add up to 100 percent, as some businesses were considered part of multiple categories.

**Most treatment and comparison group businesses were younger than 20 years.** Treatment and comparison group businesses had a similar age distribution, as seen in Figure 3.5. However, the comparison group had more businesses that were older than 20 years - 18 percent in contrast to the 10 percent of treatment group businesses older than 20.

Figure 3.5 Most businesses were younger than 20 years

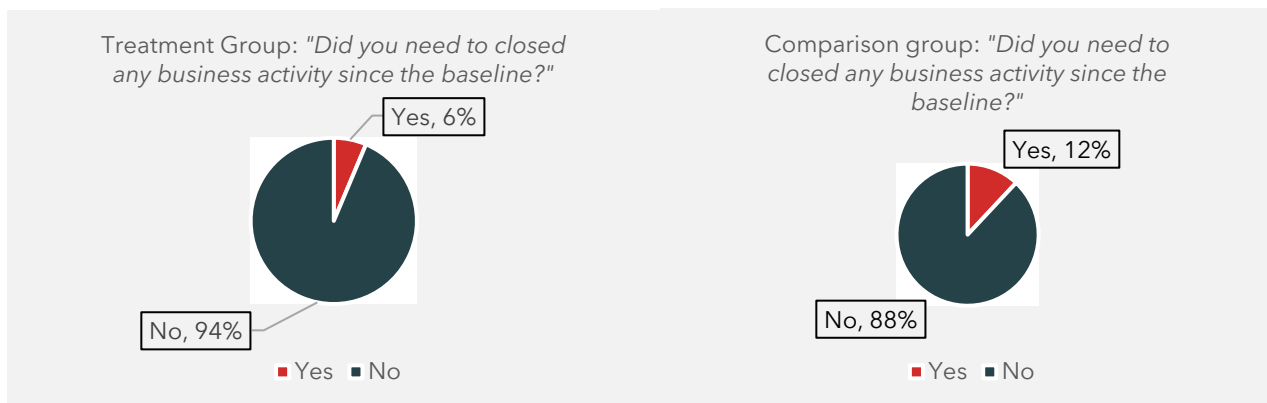


Source: SEO and KCG

### 3.3.3 Changes in the business

**Most businesses remained in operation during the entire survey period, but more comparison group businesses closed since the pre-treatment survey.** As shown in Figure 3.6, around 90 percent of the treatment and comparison group businesses stayed in business throughout the survey period. However, 12 percent of the comparison group businesses and only 6 percent of the treatment group businesses closed since the pre-treatment survey.

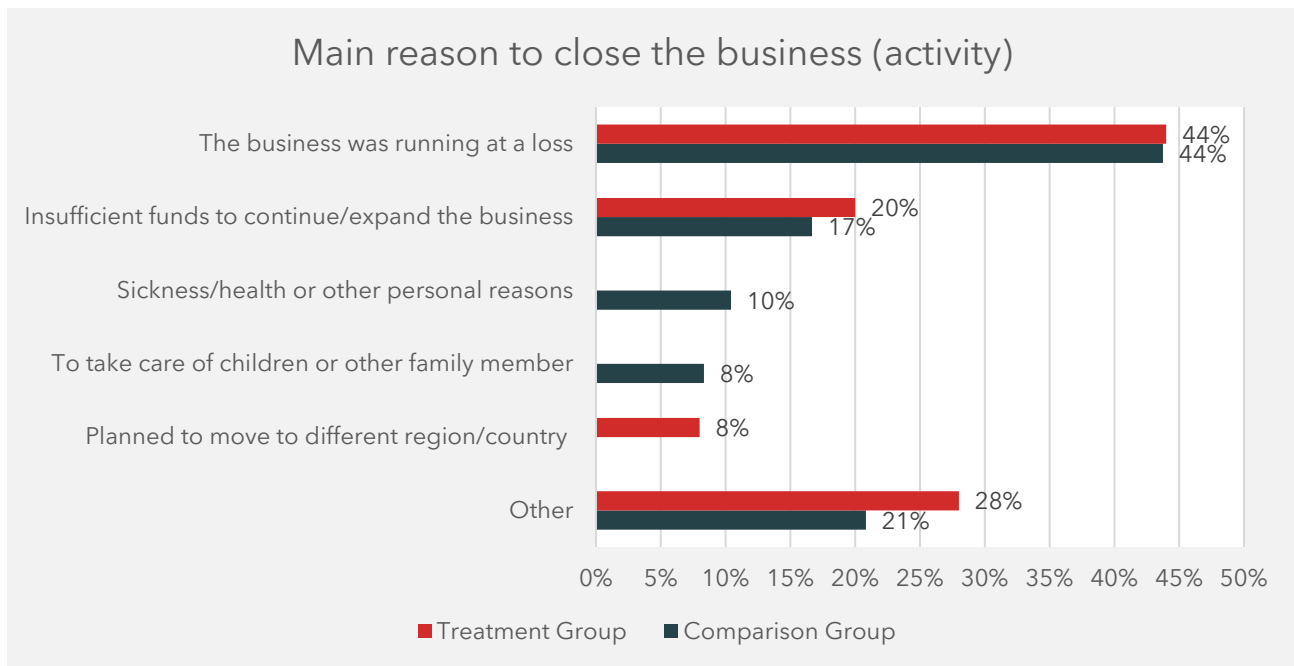
Figure 3.6 Most businesses remained in operation during the entire survey period



Source: SEO and KCG

**Almost half of the businesses that closed a business activity did so due to their business running at a loss, in both the treatment and comparison group.** Moreover, around 20 percent indicated that insufficient funds to continue or expand the business were the main reason for closing their business (activity).

Figure 3.7 The business running at a loss was the foremost reason for closure for both the treatment and comparison group



Source: SEO and KCG

## 4 Descriptive Analysis

The treatment group was already performing at a higher level than the comparison group pre-training in terms of business practices, but it did not report an improvement over time. Moreover, there is no evidence that the training helped the treatment group to better mitigate the effects of the national crises, as businesses from both groups experienced similar levels of performance deterioration.

### 4.1 Business Practices

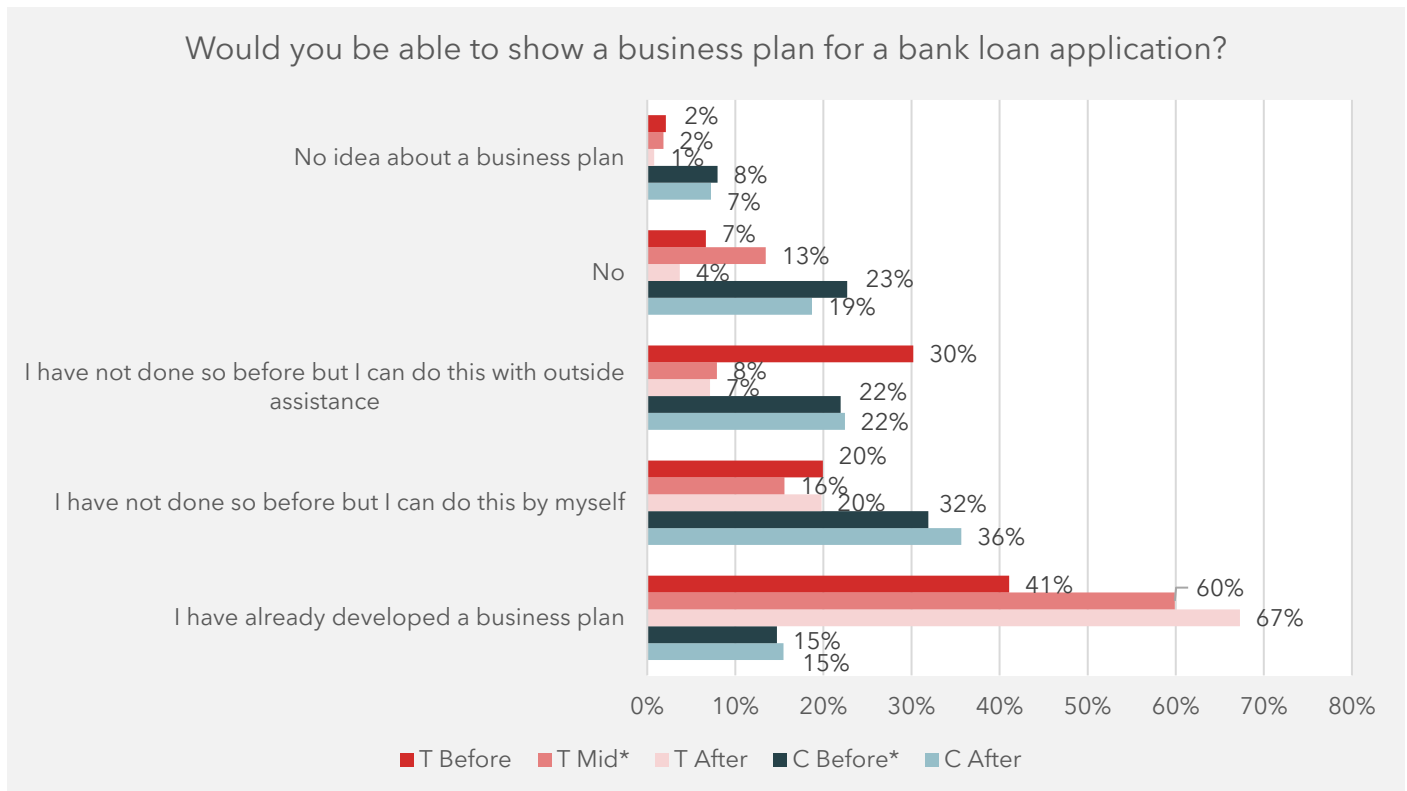
**Most respondents in the treatment and comparison groups had stock management practices in place throughout the entire survey period (see Figure B.1 in Appendix B).** This was true especially when it came to being aware of the costs and profit/markup of each main product/service. However, a much lower percentage of respondents from the comparison group had sales targets or stock management systems in place than in the treatment group to begin with. The usage of these practices did not change for the comparison group after the treatment period, while numbers for the treatment group were slightly lower post-training.

**The comparison group had a significantly lower usage of record-keeping practices than the treatment group throughout the entire survey period.** Only around half of the respondents in the comparison group maintained records to meet bank requirements, monitor sales change, cashflow, and every sale and expense, while around 90 percent of the treatment group respondents maintained these records (see Figure B.2). These figures did not change significantly after the training period for both groups. Additionally, more than half of the comparison group respondents did not prepare any financial statements, a much higher percentage than found for the treatment group (see Figure B.3). While the preparation of key financial statements reduced post-treatment for the treatment group, it remained more or less the same for the comparison group.

**Additionally, a significantly higher percentage of respondents from the treatment group had developed a business plan after the training** when compared to the situation before treatment (Figure 4.1). Meanwhile, the percentage of respondents from the comparison group that developed a business plan remained low at 15 percent, both before and after the training. This might reflected the direct impact of the training on participants' abilities to develop a business plan and their awareness of its importance.



Figure 4.1 More treatment group respondents developed a business plan after having received training



Source: SEO and KCG. Note: Mid\* refers to a reconstructed midline and Before\* refers to a reconstructed baseline

**Respondents from both the treatment and comparison group kept a close eye on their value chain partners from base- to endline (see Figure B.5).** This included:

- Competitor assessment (e.g. obtaining information about their products and prices), and
- Supplier assessment (e.g. obtaining information about products that sell well and prices, as well as entering negotiations).

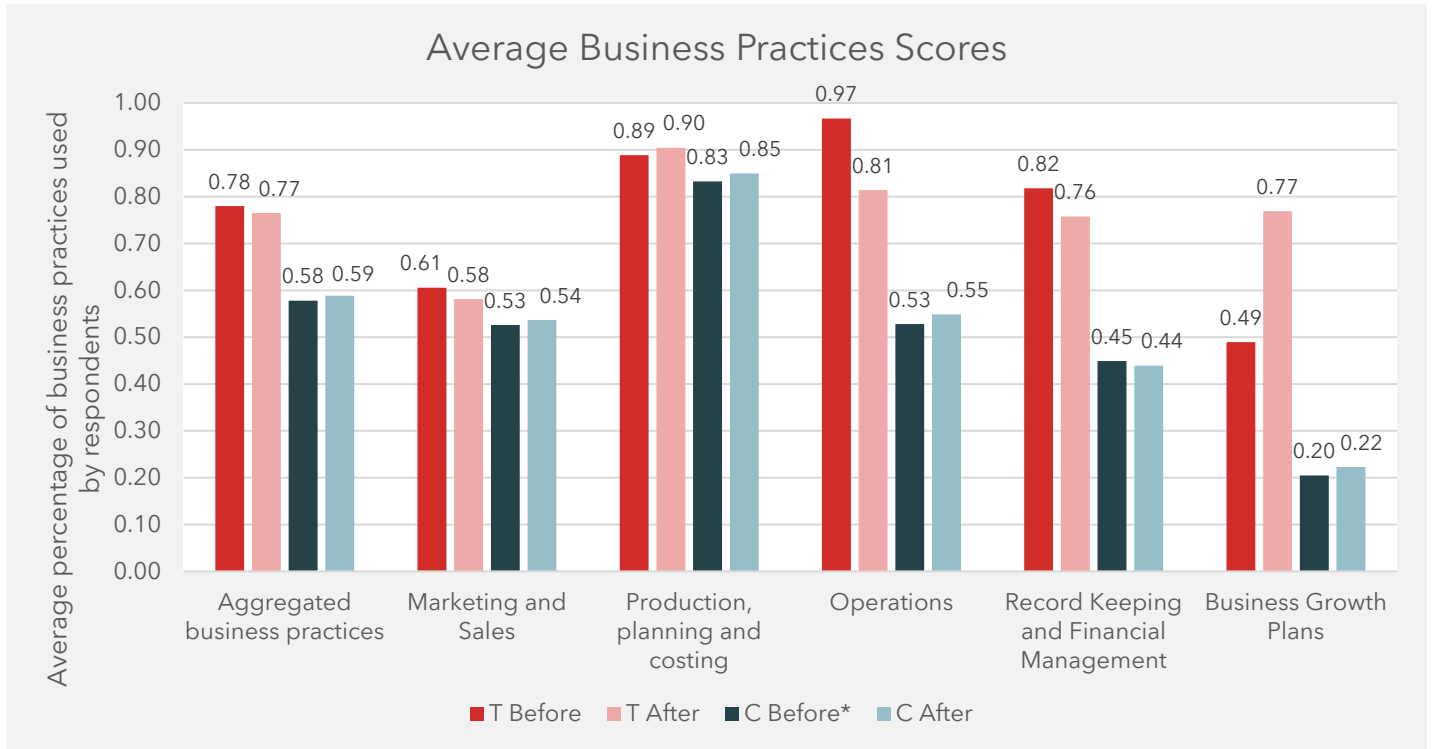
While slightly fewer respondents from the comparison group applied competitor and supplier assessments, respondents scored similarly well before and after the training in both the treatment and comparison group.

**Treatment group respondents used lower levels of customer engagement and marketing techniques post-training (see Figure B.6).** Most treatment group respondents performed a customer assessment and used marketing techniques. However, the percentage of respondents who did so dropped after the treatment period. At the same time, while fewer comparison group respondents used these customer-related business practices, the percentage who did so increased slightly post-treatment.

**The relative reduction in the treatment group’s usage of business practices could be attributed to their initially higher level of business practice usage.** Overall, the treatment group saw a reduction in the usage of several business practices while the same did not occur for the comparison group. This reduction in the usage of business practices was often seen in the period shortly after the training (“mid\*”) already. This might be because the treatment group was doing very well in terms of their business practices to begin with. Therefore, due to the crises, they might have been forced to refocus on their core business and maintaining resilience to the crises, having to let go of some of their best practices. This trend can be seen in Figure 4.2 where the treatment group has higher

average business practices scores across all categories, but sees a reduction (in most categories) 'after' the training period while the comparison group does not.

Figure 4.2 The treatment group had higher business practices scores across different categories



Source: SEO and KCG

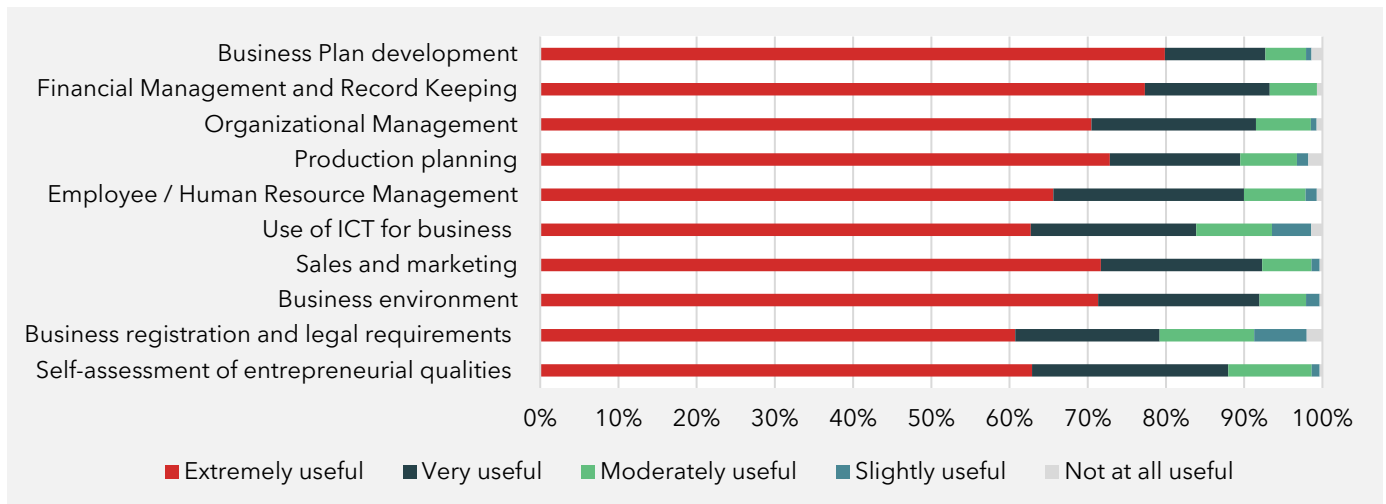
## 4.2 Reflection on the business Training Programme

**More than three quarters of the respondents completed the training programme, others were hindered by time constraints.** 94 percent of the respondents from the endline received an invitation to participate in the business skills related training programme under the We-Fi project. Of them, 91 percent participated in the training programme (i.e. attended at least one day). People who did not attend the training mostly indicated that this was due to time constraints, e.g. it was a very busy time period for the business. No respondents reported the training being irrelevant to themselves as a reason for not attending. Of those that participated in the training, 85 percent completed the training, either by meeting the attendance requirements or by completing the business plan. Again, most people that failed to complete the training did so due to time constraints, likely posed by the national crises.

**Participants considered the content of the training programme as extremely useful.** As shown Figure 4.3, each aspect of the course was perceived as 'extremely useful' by at least 60 percent of the respondents. The three topics of the training identified by respondents as most useful were 1) business plan development, 2) financial management and record keeping, and 3) sales and marketing. The three topics identified by respondents as least useful were 1) business registration and legal requirements, 2) self-assessment of entrepreneurial activities, and 3) the use of ICT for businesses (see figure A.12). Additionally, 77 percent of respondents who had attended the training had developed a business plan. 90 percent of them had already presented the business plan to bank representatives or programme trainers, and 83 percent had received feedback on how to improve their business

plan. This high rate of experience developed with creating a business plan and its apparent usefulness to participants might explain the finding in Section 4.2 that considerably more respondents were able to show a business plan for a bank loan application after treatment than before.

Figure 4.3 Participants deemed all aspects of the training as very useful



Source: SEO and KCG

**The endline survey suggested that the effect of the training was not limited to an increase in knowledge only:** participants also indicated to be able to use what they had learned in practice. Figure A.13 shows that the aspects of the programme that the participants were able to use most intensively were (a) identifying areas of improvement for the business as a whole, (b) maintaining financial records and budgets, and (c) setting up pricing strategies. Business registration was used the least in practice.

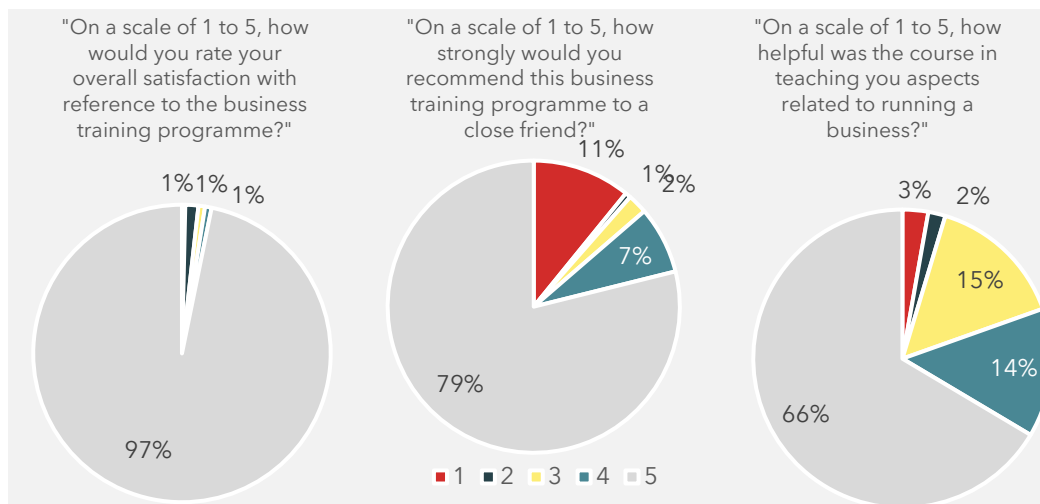
**Overall, respondents were very satisfied and would recommend the training programme to their peers.** 97 percent of respondents indicated to be very satisfied with the course (see Figure 4.4). Regarding the relevance of the course with respect to actually running a business, a lower (but large) share of respondents (80 percent) was (very) positive. Only 8 percent was not satisfied. As a result, more than 80 percent of the respondents would recommend the course to a close friend (with a similar business experience, but who had never attended such a programme). In addition, respondents reported that they would be willing to pay up to 500,000 LKR for the training programme.

**This satisfaction with the training programme was reflected in the FGDs.** FGD participants noted that they were especially satisfied with the following areas of the training:

- Accounting and bookkeeping:**  
WEs who previously had to outsource their bookkeeping to third parties were now able to keep financial records themselves, only requiring the stamp of an external accountant. They found this very useful as it reduced their expenses.
- Business plan development:**  
Similar to bookkeeping, WEs mentioned being able to create business plans with more understanding and without the need for outsourcing (which they had to do before), reducing their costs. Additionally, participants mentioned that rather than creating business plans merely to obtain loans, they had learned to appreciate the value of preparing a business plan for their own use to outline the goals of the business.

- Vigilance regarding product pricing and costing:**  
Some participants mentioned that they had become more vigilant regarding their product pricing and costing as a result of the training, which had enabled them to calculate and foresee the profitability of different business operations, making the transition to more profitable ones whilst terminating loss making activities.
- ICT skills:**  
Participants valued being able to incorporate more technology within their business
- Ability to network during the training:**  
Participants valued the opportunity to network with other entrepreneurs, as a result of which they helped each other and even did business with each other (e.g. placed orders).

Figure 4.4 Respondents were very satisfied and would recommend the programme to their peers



Source: SEO and KCG. '1' being highly negative and '5' being highly positive

**In Progress Report 3, we found that respondents from the treatment group remained rather resilient to the various national crises that they faced.**<sup>8</sup> Most surveyed WEs did quite well in terms of their business practices, both before and after the training. Additionally, although most businesses were significantly and negatively affected by the multiple national crises, survey data did not show a decline in business performance between base- and endline to the extent that could be expected due to the various crises. In the remainder of this section, we compare the treatment group’s performance to that of the comparison group to understand if the treatment group’s apparent resilience to the crises can be attributed to the training.

## 4.3 Business Outcomes

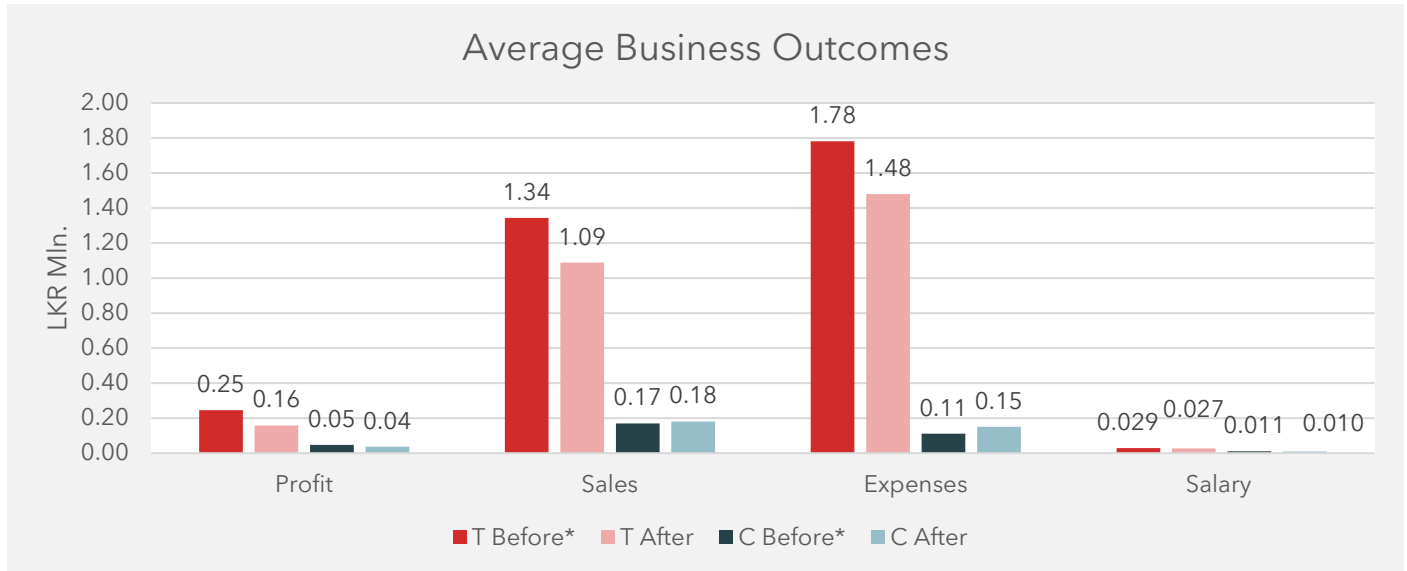
### 4.3.1 General

**There seemed to be a slight worsening in the overall profitability in 2022 - the last year of the evaluation period - for both the treatment and comparison group.** As Figure 4.5 shows, both the treatment and comparison group experienced a reduction in their average profits. However, the profitability decreased more for the treatment group, which witnessed a 36 percent reduction in profits whereas the comparison group saw its profits drop by 22

<sup>8</sup> SEO and KCG (2022). Progress Report 3 We-Fi programme (General Track) - Workstream 1

percent (see Figure 4.6). Nevertheless, the treatment group had higher average levels of profitability to begin with, so that there was more scope for a reduction in average profitability.

Figure 4.5 Business outcomes worsened for both the treatment and comparison group

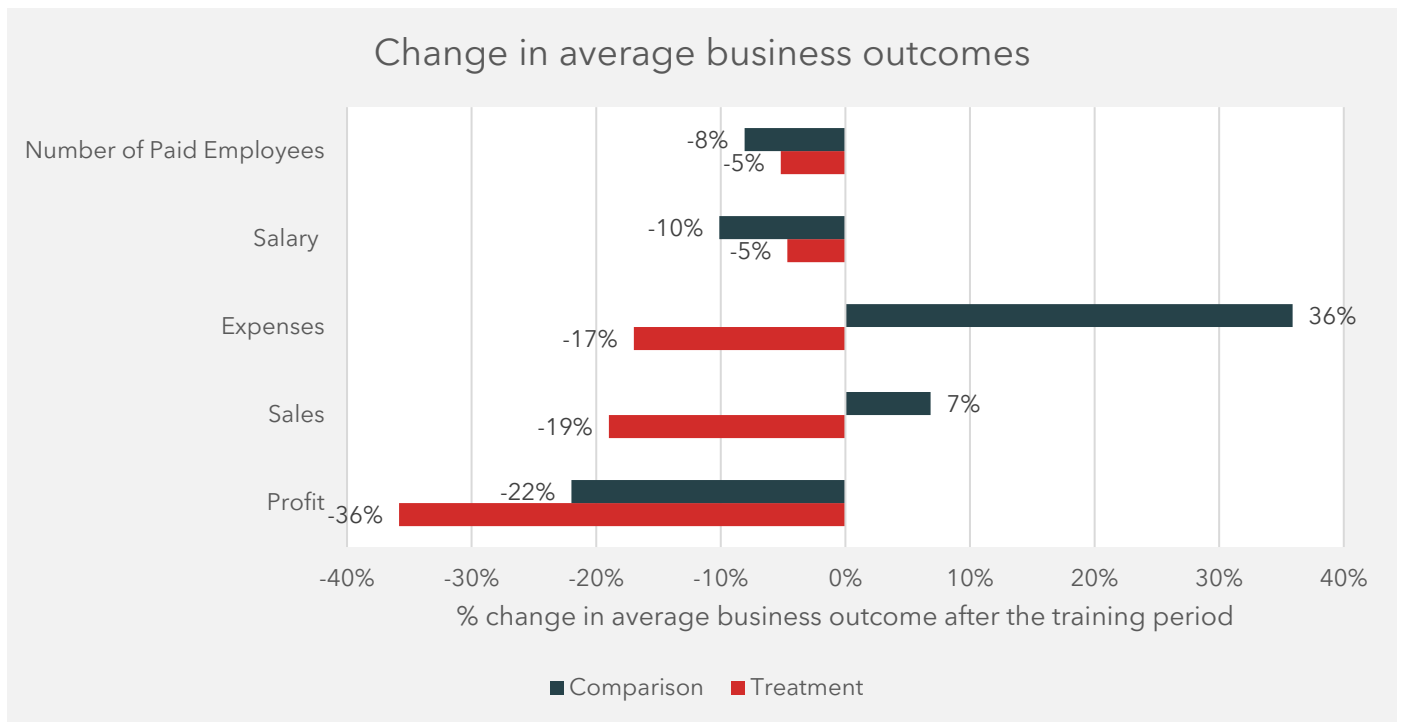


Source: SEO and KCG. Business outcomes were recorded for the last full month before the survey was conducted.

**The treatment group experienced a decrease in average expenses, while the comparison group experienced an increase in average sales.** The comparison group reported a 7 percent increase in its sales while the treatment group experienced a 19 percent decrease in its sales (see Figure 4.6). However, the comparison group had much lower average sales to begin with – an average of LKR 0.17 million, with around 70 percent of respondents having sales below LKR 0.1 million (see Figure B.16). Similarly, the treatment group had much higher average expenses of LKR 1.78 million pre-treatment, but experienced a 17 percent reduction in average expenses. This is surprising given the high inflation in Sri Lanka caused by the national financial crisis, which drove up the prices of inputs.

**The personal income of business owners remained relatively stable for both the treatment and comparison group (see Figure 4.5).** On average, treatment group respondents achieved a higher salary from the business than comparison group respondents. More treatment group respondents fell into the >75,000 LKR salary category, whilst many more comparison group respondents fell into the 0-12500 LKR salary category (see Figure B.18). Still, the average monthly salary for business owners in both groups was low at LKR 30,000 for the treatment group and LKR 10,000 for the comparison group. The average salary for comparison and treatment group respondents remained relatively stable, with a change of only around LKR 1,000. This suggests that although some businesses were affected by the national crises through lower sales and higher expenses, personal income remained relatively stable.

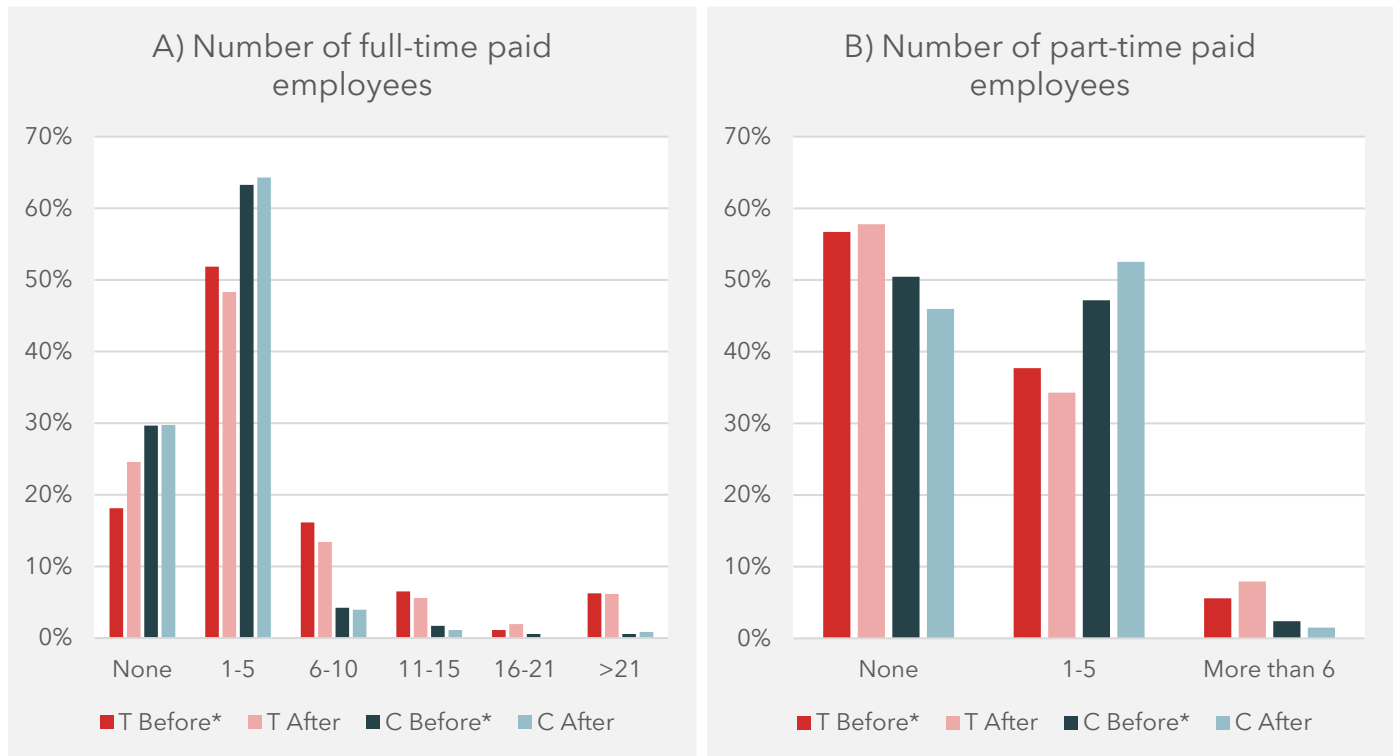
Figure 4.6 The comparison group experienced an increase in average sales, but an even stronger increase in expenses



Source: SEO and KCG

**The treatment group included larger businesses with more paid employees than the comparison group (see Figure 4.77).** Nevertheless, more than half of the SMEs were ‘microbusinesses’ in both the treatment and comparison group, with an average of around 8 paid employees for the treatment group and around 3 paid employees for the comparison group. The number of treated businesses with no full-time paid employees increased by 7 percentage points. However, firm sizes did not change dramatically for the comparison or treatment group. This might be due to the fact that firm sizes are more likely to change in the long term and therefore are less affected by short-term crises.

Figure 4.7 The treatment group had a larger number of employees than the comparison group



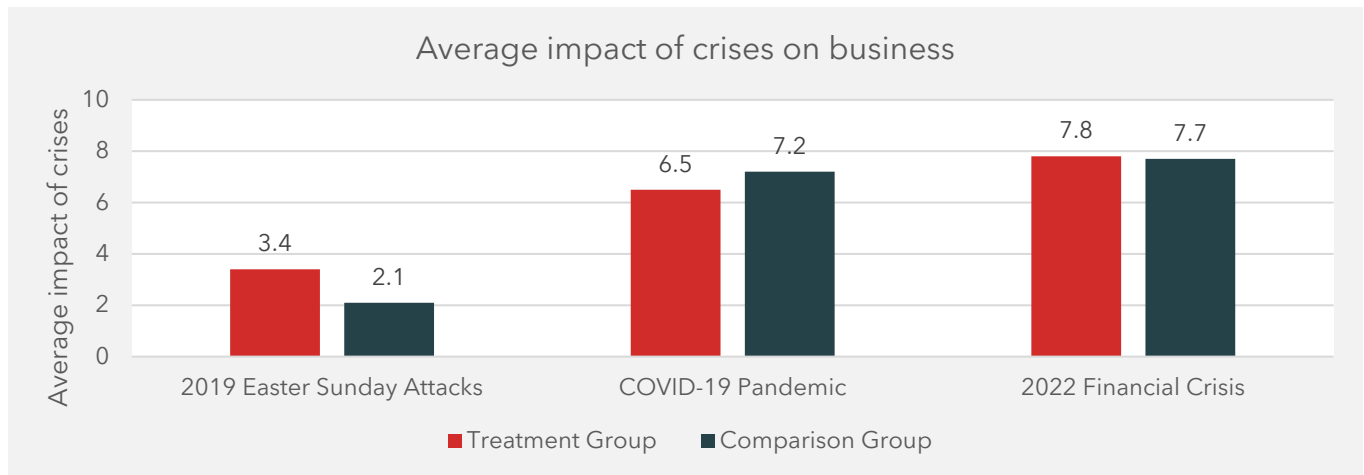
Source: SEO and KCG

### 4.3.2 Impact of the various crises

**Many firms were severely hit by the national crises.** As shown in Figure 4.8, firms reported being most severely impacted by the COVID-19 pandemic and the 2022 financial crises (and partly by the 2019 Easter Sunday Attacks). On average, comparison group firms reported being more heavily affected by the COVID-19 pandemic, while the treatment group was more severely affected by the 2019 Easter Sunday Attacks. Both groups were most severely (and similarly) hit by the 2022 financial crisis. Many FGD participants indicated that the COVID-19 pandemic resulted in a stark reduction of sales (because customers decided to focus on the ‘essentials’) and an increase in prices (due to import restrictions). Some businesses were forced to close altogether, either temporarily or permanently. Moreover, imposed lockdowns and risks of COVID exposure made it difficult for business owners to make use of their employees.

**Some WEs also saw the pandemic as an opportunity.** A few FGD participants active in the construction sector indicated that more people engaged in household construction work, thereby increasing the demand for their businesses. Other FGD participants saw their original business being hit by COVID, forcing them to seek opportunities elsewhere. The Ayurveda products and services industry got more attention thanks to increased interest in indigenous medicine and medical practices, and some WEs managed to reform their business and ‘jump’ into this growing market. Other WEs started to diversify their businesses, which may be beneficial for the future.

Figure 4.8 The 2022 financial crisis and COVID-19 pandemic severely impacted firms



Source: SEO and KCG. Note: Scale ranges from '0' for no impact at all to '10' for very severe impact.

**Most businesses from both the treatment and comparison group experienced a decrease in their revenues following the financial crisis.** Following the financial crisis, more than half of the respondents from the treatment and comparison groups experienced a major decrease in their revenues (see Figure 4.9). Only around 8 percent of the respondents from the treatment group and 13 percent from the comparison group experienced an increase in their revenues since the start of the financial crisis in the country. As shown in Figure B.8, the most common reasons for this decrease in revenues were 1) reduced demand from customers, 2) the power crisis, and 3) difficulties accessing supplies. Most respondents reported that it would take time to rebuild their businesses to what they were before (see Figure B.9). FGD participants mentioned price hikes and general difficulties in accessing inputs as the main issues arising from the financial crises. As a result, many of them were forced to reduce their production capacity, despite high demand from customers. The power cuts posed further difficulties for the businesses, especially those active in the hospitality and catering sector.

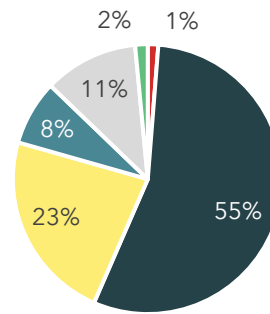
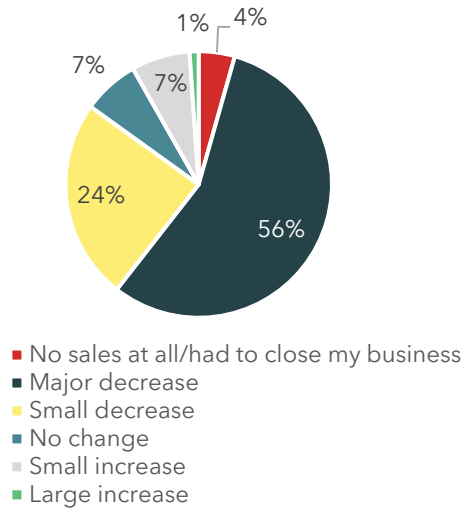
**FGD participants tried to cope with the financial crises by outsourcing part of the production and/or substituting inputs.** Facing the exponential increase in raw material prices, entrepreneurs employed substitutes, for example substituting hard landscaping (concrete) with soft landscaping (such as trees) when completing constructions for a theme park. Entrepreneurs also resorted to sourcing their own raw materials by investing in machinery, for example by planning to purchase a machine to produce saw dust for mushroom production. In the construction industry, entrepreneurs now place a greater emphasis on stock management and planning in order to avoid raw material wastage. Other WEs indicated that they were outsourcing part of the production process altogether.



Figure 4.9 Most businesses saw their revenues decrease following the financial crisis<sup>9</sup>

A) Treatment Group: Following the current financial crisis, what happened to the revenues (sales) of your business?

B) Comparison group: Following the current financial crisis, what happened to the revenues (sales) of your business?



Source: SEO and KCG

**Overall, businesses from both the comparison and treatment group seemed to have been similarly, negatively, affected by the national crises.** This suggests that the training did not help the treatment group to better adjust to, or mitigate the effects of, the crises.

<sup>9</sup> The lower percentage of comparison group respondents who had to close their business might be due to the fact that non-treated businesses that had to close down would automatically not be available for the comparison group survey and therefore not included in the comparison group.

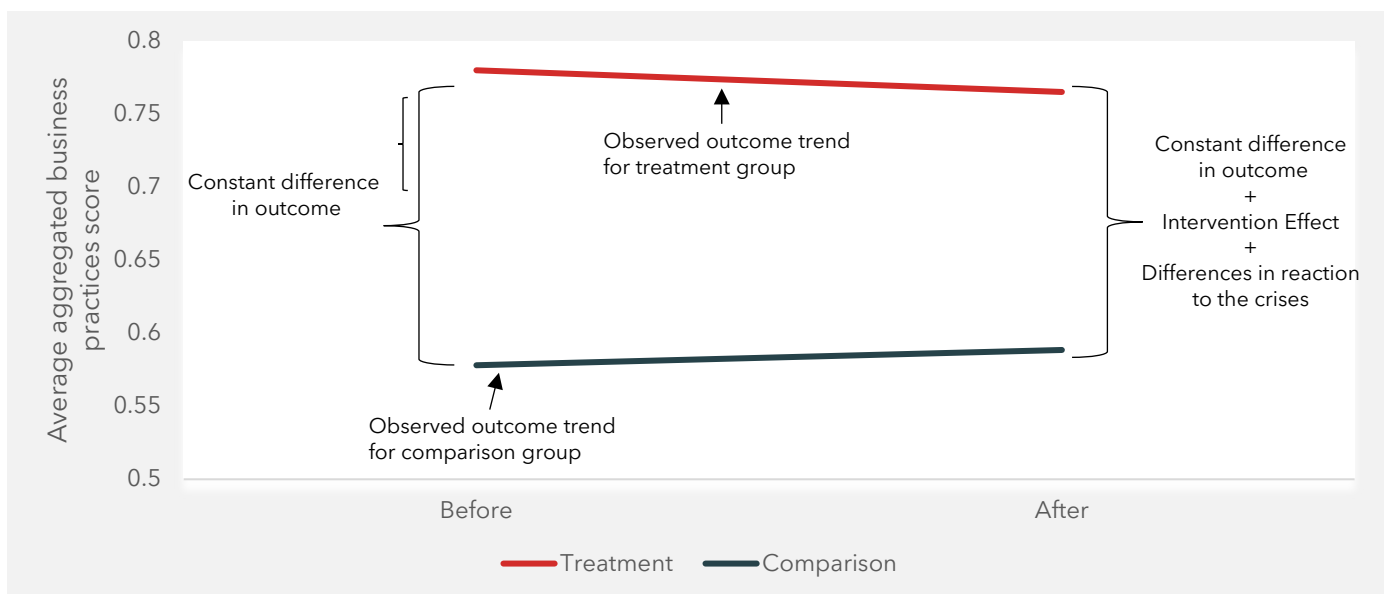
## 5 Econometric Analysis

Our econometric analysis does not provide evidence that the training contributed to improved business practices, except for ‘greater development of business growth plans’, which was a key goal of the training. Yet, we do find that the training led to a statistically significant increase in sales for the treatment group when controlling for key respondent and business characteristics.

### 5.1 Business Practices

**In a DiD analysis we found that the training had an insignificant impact on the aggregated business practices score of respondents.** Table 5.2 shows that the coefficient displaying the treatment effect (*‘After\*Treatment’*) was insignificant when looking at the impact on the aggregated business practices score (column 1). This implies that, on average, the usage of business practices did not significantly improve for training participants as a result of the training. The positively significant coefficient for *‘Treatment’* confirms that the treatment group, even before the training, was doing significantly better than the comparison group with regard to their usage of various business practices. This signals the presence of a ‘self-selection’ bias. This can be seen in Figure 5.1, where the treatment group has a larger average aggregated business practices score pre-treatment, but does not have the expected increase in trend post-treatment.

Figure 5.1 The treatment group did not show the expected increase in trend post-treatment<sup>10</sup>



Source: SEO and KCG

<sup>10</sup> A complete DiD trend estimation cannot be made because we only have one pre-treatment period with observations for both the comparison and treatment group. Therefore, we cannot determine 1) whether the treatment and comparison groups had the same trend pre-treatment nor 2) the unobserved counterfactual outcome trend for the treatment group.

**Without controlling for differences in characteristics, DiD analysis suggests that the training had a positive effect on the preparation of business growth plans.** Since an aggregated business score might hide changes within different business practices, we also performed separate regressions for different categories of business practices. We found that without controls, the training had a significantly positive impact on the preparation of business growth plans. This is probably because the training programme included the development of a business plan, where according to the midline survey, 77 percent of respondents who attended the training had developed a business plan.

**The effect on operations-related practices became positive and significant when controlling for key background characteristics.** Table 5.1 seems to suggest that the training had a significantly negative impact on business practices relating to operations (column 4). However, when controlling for key background characteristics, the impact of the training on operations-related practices becomes positive at a 10 percent significance level (see column 4 of Table 5.2). The two business practices that fall under ‘operations’ are 1) obtaining a Business Registration Certificate, and 2) having an organisational chart for the business. These practices are one-off implementable practices compared to, for example, financial practices that require continuous work, and therefore might have been more readily implemented by WEs after the training. Even though relatively easy to implement, increasing the registration of businesses as a result of the training is an important result as most women-owned businesses (in Sri Lanka and most developing countries) tend to be informal.<sup>11</sup> Therefore, by contributing to increased formalisation of WEs, the training also indirectly improved WEs’ access to finance, and therefore opportunities for development.

Table 5.1 Without controls, DiD analysis shows that training had a positively significant impact on business growth plans

| Variable           | (1)<br>Aggregated<br>Business<br>Practices | (2)<br>Marketing<br>and Sales | (3)<br>Production,<br>planning, and<br>costing | (4)<br>Operations    | (5)<br>Record<br>Keeping and<br>Financial<br>Management | (6)<br>Business<br>Growth Plans |
|--------------------|--|-------------------------------|--|----------------------|---|---------------------------------|
| (Intercept)        | 0.578***<br>(0.009)                        | 0.526***<br>(0.011)           | 0.833***<br>(0.010)                            | 0.528***<br>(0.018)  | 0.449***<br>(0.015)                                     | 0.205***<br>(0.020)             |
| treat              | 0.197***<br>(0.014)                        | 0.075***<br>(0.018)           | 0.054***<br>(0.015)                            | 0.439***<br>(0.029)  | 0.361***<br>(0.024)                                     | 0.269***<br>(0.032)             |
| after              | 0.010<br>(0.012)                           | 0.010<br>(0.016)              | 0.017<br>(0.013)                               | 0.020<br>(0.025)     | -0.010<br>(0.021)                                       | 0.018<br>(0.028)                |
| aftertreatment     | -0.015<br>(0.020)                          | -0.002<br>(0.026)             | 0.004<br>(0.022)                               | -0.182***<br>(0.041) | -0.039<br>(0.034)                                       | 0.198***<br>(0.046)             |
| Num.Obs.           | 1294                                       | 1294                          | 1292   | 1276                 | 1292  | 1263                            |
| Degrees of Freedom | 1290                                       | 1290                          | 1288   | 1272                 | 1288  | 1259                            |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

<sup>11</sup> Sri Lanka Export Development Board (n.d.). Women Entrepreneurs Development Program. <https://www.srilankabusiness.com/exporters/assisting-women-in-business.html>

**When controlling for key respondent and business characteristics, the impact of the training on all other categories of business practices became insignificant** (see Table 5.2). This might be because the previously significant result on business growth plans was largely driven by the differences in education levels of the WEs or locations of the businesses. For example, Table D.1 in Appendix D (which presents the full list of controls included) shows that higher levels of education of the entrepreneur are positively, significantly linked to higher business practices scores. Although such an aggregate statistical analysis hides changes within the usage of individual business practices, the descriptive analysis of such individual business practices in Section 4 showed a similar pattern – where businesses in the treatment group, although they had better business practices to begin with, did not experience a greater increase than the comparison group. Therefore, hypothesis 1 (that the training will lead to improved business practices) is rejected.

**Nevertheless, this insignificant impact on the adoption of most business practices may be driven by ‘ceiling effects’.** Ceiling effects occur when there is a maximum limit a respondent can achieve on a test/survey such that there is a discrepancy between the respondent’s answer and their true score. Our business practices score has a ceiling of 1, and most questions on which they are based also have a ‘ceiling’ of ‘yes’ to test whether the respondent had implemented business practices. This means that, for example, a respondent who had implemented 100 percent of the investigated business practices in the pre-treatment survey but had improved the quality or frequency of use of these business practices post-treatment would see no difference in their score. Therefore, we might be missing significant variations in respondents’ usage of business practices, which might be driving these insignificant results.

**Another potential reason for the insignificant impact on most business practices might be that the business practices of the treatment group were higher than anticipated at baseline level.** As a result, the training might not have been sufficiently advanced to further increase their business practices. Similarly, the treatment group might have overstated their usage of business practices at the baseline because they were reluctant to admit that they were not implementing a business practice. Alternatively, the comparison group might have reported an improvement over time even if there was none (as their baseline data was based on recall answers), because they felt that this was a socially desirable answer.

Table 5.2 With controls, DiD analysis shows that training positively and significant impacted operations-related practices

| Variable       | (1)<br>Aggregated<br>Business<br>Practices | (2)<br>Marketing and<br>Sales | (3)<br>Production,<br>planning, and<br>costing | (4)<br>Operations  | (5)<br>Record<br>Keeping and<br>Financial<br>Management | (6)<br>Business<br>Growth Plans |
|----------------|--|-------------------------------|--|--------------------|---|---------------------------------|
| (Intercept)    | 0.438***<br>(0.093)                        | 0.034<br>(0.120)              | 0.841***<br>(0.107)                            | 0.524**<br>(0.189) | 0.416**<br>(0.161)                                      | 0.206<br>(0.206)                |
| treat          | 0.112***<br>(0.033)                        | 0.113**<br>(0.043)            | 0.063<br>(0.038)                               | 0.018<br>(0.068)   | 0.148*<br>(0.058)                                       | 0.362***<br>(0.075)             |
| after          | 0.010<br>(0.012)                           | 0.010<br>(0.015)              | 0.018<br>(0.014)                               | 0.020<br>(0.024)   | -0.010<br>(0.020)                                       | 0.019<br>(0.026)                |
| aftertreatment | -0.008                                     | -0.126                        | -0.082   | 0.220+             | 0.099   | 0.013                           |

|                    |         |         |         |         |         |         |
|--------------------|---------|---------|---------|---------|---------|---------|
|                    | (0.066) | (0.085) | (0.075) | (0.134) | (0.113) | (0.145) |
| Num.Obs.           | 1049    | 1049    | 1048    | 1032    | 1049    | 1021    |
| Degrees of Freedom | 1019    | 1019    | 1018    | 1002    | 1019    | 991     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001  
 The regression includes controls for the education level of respondents, the sector of business operation, the province of operation, and the age of the business. The table with the full list of controls is presented in Appendix D in Table D.1.

## 5.2 Business Outcomes

**We find that without any controls the training had an insignificant impact on business performance outcomes.** We conducted DiD regressions on business outcomes, with and without controls. As shown in Table 5.3, the training had an insignificant impact on business outcomes when excluding controls as the coefficient displaying the treatment effect (*'After\*Treatment'*) is insignificant for all business outcomes. We also find, as shown before, that the treatment group was performing significantly better than the comparison group across all business outcomes before the treatment - as the *Treatment* coefficient is positively significant. The comparison group does not improve its business performance after the training period either.

Table 5.3 Without controls, DiD analysis showed that training had an insignificant impact on business outcomes

|                    | (1)<br>Profit                | (2)<br>Sales                  | (3)<br>Expenses             | (4)<br>Salary              | (5)<br>Paid Employees |
|--------------------|------------------------------|-------------------------------|-----------------------------|----------------------------|-----------------------|
| (Intercept)        | 47207.875**<br>(17073.288)   | 169633.559<br>(166336.331)    | 111091.987<br>(348380.283)  | 10783.624***<br>(2653.223) | 3.836<br>(3.007)      |
| treat              | 102920.395***<br>(26111.839) | 943974.656***<br>(260847.374) | 980010.667+<br>(560637.252) | 11388.840**<br>(3871.119)  | 12.998**<br>(4.669)   |
| after              | -10377.798<br>(23938.822)    | 11591.435<br>(233879.262)     | 39869.923<br>(491697.766)   | -1091.160<br>(3721.055)    | -0.386<br>(4.256)     |
| aftertreatment     | -26882.868<br>(36793.058)    | -253367.839<br>(368030.793)   | 485956.812<br>(792248.261)  | 2848.684<br>(5453.274)     | -4.383<br>(6.605)     |
| Num.Obs.           | 1101                         | 1154                          | 1215                        | 1001                       | 1103                  |
| Degrees of Freedom | 1097                         | 1150                          | 1211                        | 997                        | 1099                  |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**Nevertheless, when controlling for key respondent and business characteristics, we found that the training had a positively significant effect on sales.** Table 5.4 shows that the *'After\*Treatment'* coefficient is positively significant in column 2 - showing that the training increased the sales of training participants. Although marketing and customer-related business practices did not statistically significantly increase as a result of the training, this observed impact on sales might be due to qualitative improvements in marketing business practices of training participants that led to an increase in their sales. As Table 5.4 also shows, this increase in sales was not substantial enough to lead to an improvement in the profitability of training participants. There was also no statistical evidence

that the training contributed to lower expenses, a higher business owner salary or a higher number of paid employees.

Table 5.4 With controls, DiD regressions show that training had a positively significant effect on sales

|                         | (1) Profit                | (2) Sales                      | (3) Expenses                | (4) Salary               | (5) Employees      |
|-------------------------|---------------------------|--------------------------------|-----------------------------|--------------------------|--------------------|
| (Intercept)             | 45579.357<br>(178464.661) | -427797.999<br>(1817291.607)   | -72528.454<br>(1877286.580) | -10.205<br>(18610.154)   | 5.529<br>(28.245)  |
| Treatment <sup>12</sup> | -9507.198<br>(70156.839)  | 898642.087<br>(692186.796)     | 462728.259<br>(690847.180)  | 11080.732<br>(7740.754)  | 10.540<br>(11.077) |
| After                   | -8356.158<br>(24785.760)  | 13939.623<br>(244014.608)      | 31654.812<br>(245131.783)   | 1003.439<br>(2777.434)   | -0.400<br>(3.908)  |
| After * Treatment       | 76551.094<br>(133270.378) | 3795529.534**<br>(1355046.234) | 582948.242<br>(1403441.590) | 13547.295<br>(14097.284) | -0.991<br>(21.226) |
| Num.Obs.                | 869                       | 923                            | 983                         | 771                      | 876                |
| Degrees of Freedom      | 839                       | 894                            | 953                         | 741                      | 847                |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

This regression includes controls for the education level of respondents, the sector of business operation, the province of operation, and the age of the business. The table with the full list of controls is presented in Appendix D in Table D.1

### 5.3 Robustness Checks

**As there were several methodological constraints to our study (see section 6.2), we attempted to correct for these by conducting several additional regressions.** The regression tables corresponding to these robustness checks can be found in Appendix B.2. We find that some of these alternative regression specifications result in finding an insignificant impact on operations-related practices or on sales. Additionally, some find a significantly positive impact on other practices and performance indicators.

Table 5.5 We conducted several additional regressions to account for certain methodological constraints and biases

| Methodological Constraint   | How we accounted for this   | Result   | Tables   |
|---|---|--|----------|
| Comparison group had different characteristics than the treatment group at baseline | <ul style="list-style-type: none"> <li>We included controls for several key background characteristics to control for the differences between the treatment and comparison groups</li> <li>We also added further controls than those in our main regression specification (including age of the respondent, hours spent in the business, and registration at the</li> </ul> | <ul style="list-style-type: none"> <li>The 'treatment' variable remained significant in most regressions (even when we added additional controls).</li> <li>This suggests that our regression specifications do not fully control for the differences between the</li> </ul> | C.3, C.4 |

<sup>12</sup> The statistical insignificance of the 'treatment' coefficient implies that after controlling for key business and respondent characteristics, there is no longer a significant difference between the treatment and comparison group in business outcomes pre-treatment.

|  |  |  |                       |
|--|--|--|-----------------------|
|  | Business Chamber of Commerce, and profits for regressions on business practices)   | treatment and comparison groups  |                       |
|  |  | <ul style="list-style-type: none"> <li>• Adding additional controls made the <b>impact on record-keeping and financial management significantly positive</b></li> </ul>  |                       |
| Some respondents who had not fully completed the training were still present in the endline survey | <ul style="list-style-type: none"> <li>• We conducted separate regressions only with treatment WEs that had fully completed the training (i.e. who met the attendance requirement and/or completed the business plan).</li> </ul>  | <ul style="list-style-type: none"> <li>• With controls, the impact of the training on operations-related practices became insignificant</li> <li>• With controls, the impact of training on sales <b>and the salary of the entrepreneur was significantly positive</b></li> <li>• This suggests that including respondents who had not completed the training in the main regressions hid the positive effect on salary for those WEs that had fully completed the training</li> </ul> | C.5, C.6, C.7, C.8    |
| Ceiling effect for business practices  | <ul style="list-style-type: none"> <li>• We performed separate regressions with the natural log of business practices scores<sup>13</sup></li> <li>• We performed separate regressions using a tobit model<sup>14</sup></li> </ul> | <ul style="list-style-type: none"> <li>• Log: Similar results except for a <b>significantly negative impact on marketing and sales related practices</b> (with controls)</li> <li>• Tobit: Similar results as before</li> <li>• Therefore, we have not found evidence to support our theory on the role of ceiling effects in driving insignificant results</li> </ul>   | C.9, C.10, C.11, C.12 |
| Respondents were surveyed at different times   | <ul style="list-style-type: none"> <li>• We performed separate regressions adding separate controls for the month in which the baseline and endline surveys were conducted</li> </ul>  | <ul style="list-style-type: none"> <li>• The <b>impact on operations-related practices became insignificant</b></li> </ul>   | C.13, C.14            |

**We also conducted several additional regressions/robustness checks:**

Table 5.6 Conducting regressions with clustered standard errors made the impact of the training on business practices and performance (with controls) insignificant

| Robustness Check  | Result   | Tables                 |
|---|--|------------------------|
| Conducted regressions with clustered standard errors (at both an individual WE level and at a provincial level) | <ul style="list-style-type: none"> <li>• The impact of the training on sales became insignificant</li> <li>• The positive impact of the training on operations-related practices (with controls) became insignificant</li> </ul> | C.15, C.16, C.17, C.18 |

<sup>13</sup> We did not conduct regressions with a natural log of business outcomes in our main regressions since we would have had to remove businesses with profits, expenses, sales or a salary equal to (or below) zero.

<sup>14</sup> Tobit models estimate linear relationships between variables to correct for censoring (such as a ceiling effect of 1 and a floor effect of 0 in the business practices scores).

Regressions controlling for whether the business was present in the North-East of Sri Lanka<sup>15</sup>

- The impact on operations-related practices became insignificant

C.19, C.20

<sup>15</sup> This is done in view of the post-conflict context in Sri Lanka where businesses and inhabitants of the north-east are still negatively impacted by after-effects of the conflict, which was largely concentrated in that region.



## 6 Concluding remarks

Although trainees widely appreciated the training and emphasized its usefulness, there was no quantitative evidence that the online business training had a statistically significant impact on improving overall business performance. However, the impact evaluation did show that the training statistically significantly improved operations-related practices and the creation of business growth plans

### 6.1 Conclusion

**This report presented an analysis of the impact of the We-Fi training programme on participants by comparing a trainee group to a later created comparison group.** The Kandy Consulting Group (KCG) conducted base- and endline surveys in 2021 and 2022, respectively, among two groups of Sri Lankan women entrepreneurs (WEs). The first group received training on business practices from PwC Sri Lanka (treatment group), whilst the second group received no training and serves as a benchmark (comparison group). The conclusions from this analysis are based on a set of quantitative surveys that were analysed econometrically using difference-in-differences (DiD) design, complemented by qualitative Focus Group Discussions (FGDs).

The key findings of this evaluation are as follows:

- 1. There is no quantitative evidence that the online business training had a statistically significant impact on improving aggregate business practices of the general trainee group.** The level of self-reported business practices, summarised in an aggregated score, remained relatively stable from base- to endline. When controlling for key respondent and business characteristics, the impact of the training on business practices of general trainees was statistically insignificant in our difference-in-differences (DiD) estimations.
- 2. The online business training did have a statistically significant positive effect on the preparation of business growth plans, which is important for both business outcomes and improving access to finance.** However, after controlling for key business characteristics, this finding becomes statistically insignificant. This suggests that this finding was driven by differences in characteristics between the treatment and comparison groups.
- 3. Nevertheless, the online business training did have a statistically significant positive effect on operations-related business practices, which include business registration.** When controlling for key respondent and business characteristics, the training had a significantly positive impact on operations-related practices. Operations-related practices include business registration and the creation of an organisational chart. The former is especially important, as business registration can improve WEs' access to finance and chances of development.
- 4. There is no quantitative evidence that the online business training contributed to improved profitability of businesses that completed the training.** During the evaluation period, businesses in Sri Lanka suffered from multiple crises: the 2019 Easter Sunday Attacks, the COVID-19 pandemic and especially the 2022 financial crisis. All crises obviously had a negative impact on profitability, due to a combination of lower demand, supply chain bottlenecks and energy shortages. However, when we compared the trainee group with the comparison group, we did not find statistical evidence that the former did better in terms of profitability than the latter. There are a few possible explanations for this finding. First of all, the training might not have helped because business practices were stronger than anticipated at baseline level. This might mean that the training was not sufficiently

advanced, or that the effect of the training on improving business practices was limited due to a 'ceiling effect'. Secondly, training participants could have overstated how good they were at certain business practices at baseline level, because they were reluctant to admit that they did not implement a certain practice. Alternatively, the comparison group might have reported an improvement over time, because they felt that this was a socially desirable answer.

5. **However, there were some indications that the training had a positively significant effect on sales.** Even when controlling for key respondent and business characteristics, we found a statistically significant positive effect of business training on trainees' sales compared to those of the comparison group. However, there was no statistical evidence that the training contributed to other outcomes, such as lower expenses, a higher business owner salary or a higher number of paid employees.
6. **Nevertheless, there is qualitative evidence that both the in-person training (of bank-nominated trainees) and the online business training (of general trainees) were useful for WEs in Sri Lanka.** During multiple group discussions, FGD participants noted that the business training was useful with regard to improving their business outcomes. Both trainee groups appreciated the training and agreed on its usefulness (also confirmed by the fact that most of them fully completed the training programmes). The fact that the training programmes were geared towards completing a business plan was particularly well appreciated, also as the majority of trainees indicated that they needed time to rebuild their businesses following the various crises they experienced. In the trainees' view, the general business skills taught during the training programmes helped them to improve their business practices and business outcomes – even though the quantitative results suggest that the various crises constrained them from practically applying new insights, as a result of which the extent to which business outcomes improved was limited. Overall, respondents still expressed strong satisfaction and recommended the training programme to their peers.

## 6.2 Limitations

We would like to emphasise that there were several limitations due to which the econometric results of this study should be interpreted with some caution. These limitations can be divided into (a) data collection constraints, and (b) methodological constraints.

### Data collection constraints

1. **The CATI survey was relatively long for a phone survey, with an average completion time of 60 minutes.** An average completion time of 60 minutes is normally considered too long for a CATI-based questionnaire, as it could lead to interviewees becoming less focused on answering the questions to the best of their ability. KCG best practices recommend a maximum of 20 minutes per CATI questionnaire for successful data collection, but COVID-19 circumstances necessitated phone interviews. Often participants were responding to the interview while also engaging with their business activities, creating long delays in survey completion and requiring enumerators to reiterate questions. While this may have affected the precision of the answers, KCG was still able to complete most CATI surveys.
2. **WEs sometimes felt uncomfortable sharing sensitive information over the phone, sometimes resulting in potential underreporting of the financial performance.** Requesting sensitive information regarding e.g. profits and income over the phone, which is never easy, was particularly problematic during a period of economic crisis (when respondents may be even more concerned about potential tax implications). This may have resulted in potential underreporting (e.g. understating profits, sales or employment), as confirmed by

respondents during FGDs. However, since it also affected the comparison group it may not have affected the DiD findings too much.

3. **Survey rejection rates were high among the comparison group.** This was the case despite KCG's efforts to first conduct an initial contact survey confirming consent to join the comparison group survey. As a consequence, despite a target of 575 surveys only 396 were completed. Due to these difficulties, one of the enumerators working in the Ratnapura district terminated his contract prematurely, forcing the research team to reassign the remaining interviews to other convenient districts and their relevant DS divisions.
4. **Different modes of data collection were used to collect data for the treatment and comparison groups.** KCG collected baseline data for the treatment group via telephone interviews (CATI), because lockdowns resulting from the COVID-19 pandemic did not allow for in-person interviews (CAPI). During the endline, in-person interviews were possible, but the evaluation team decided to keep the mode of data collection the same, to avoid variance due to the mode of collection. For the comparison group, the evaluation team had to rely on in-person interviews, because the absence of a professional relation with these participants would make it difficult to collect (sensitive) data via phone. This barrier was less strongly present in the treatment group, because rapport had been built in the training sessions.

## Methodological constraints

The COVID-19 pandemic and the 2022 political crisis forced the evaluation team to change the design of the training programme and data collection. This had multiple methodological implications:

1. **Enrolment into the training was not random, causing selection bias that we could only partially control for.** In the case of bank nominee training, trainees were nominated by banks, which by definition meant that they were deemed 'better' than average. Any comparison between bank nominees and other trainees or the comparison group is therefore likely to be biased (which is why we limited these comparisons). In the case of online training it was decided, as a result of the crisis, that participation in the training programme should be open to anyone who satisfied the eligibility criteria, rather than selecting trainees at random from eligible applicants, as we would have done during the original RCT setup. This was also likely to lead to selection bias, as participants who 'self-selected' themselves into the training programme might have been more ambitious, more digitally literate, and/or might have had more time and resources available to attend the training.<sup>16</sup> While we attempted to control for this by constructing a somewhat similar comparison group and controlling for differences in characteristics (see point 2), we were not fully able to control for selection bias. Also, if the trainee group was not representative for the overall population of WEs in Sri Lanka, there are limitations to the external validity of our results, i.e. the extent to which they can be extrapolated.
2. **Similarly, the trainee groups and comparison group had different characteristics.** As noted, the various crises in Sri Lanka made it impossible to follow the initial plan of randomly selecting a control group. As an alternative, the evaluation team had to rely on a non-random comparison group selected from a list provided by the National Enterprise Development Authority (NEDA). Although this group was largely similar, the two groups were not perfectly comparable. Most enterprises included within the list were micro-enterprises, forcing the research team to relax a recruitment criterion from currently employing at least three employees (including the owner) to having had at least three employees (including the owner) at any point in time within the past 3 years. The list also contained an insufficient number of enterprises for certain districts and DS divisions, forcing

<sup>16</sup> One indication of such selection bias is that WEs who applied for the training already scored better than the comparison group on many business practices prior to the training (actual baseline for trainees; reconstructed baseline for comparison group). This might reflect self-selection bias, as WEs with stronger business practices were possibly more interested in further improving their practices, and therefore may have been more likely to apply for the training (or to apply more quickly, as eligible applicants were accepted on a 'first come, first served' basis).

the research team to place more weight on other districts in order to fulfil target sampling requirements. All of this suggests that the chosen comparison group might not strictly have been a valid control group for this study, as there were significant differences in characteristics. Additionally, despite controlling for multiple key background characteristics in our regression specifications, the ‘treatment’ variable remained significant, meaning that our regressions do not fully control for the pre-treatment differences between the treatment and comparison groups. Non-homogeneity could also make it less likely that the ‘parallel trend’ assumption would have held, which is central in difference-in-differences (DiD) analyses, although we do not have evidence of this.

3. **The reconstructed baseline for the comparison group might have resulted in ‘recall bias’.** Since the comparison group was not part of the initial evaluation design and was only chosen after the treatment was provided, the participants were only surveyed once. For this group, the evaluation team reconstructed a baseline by asking respondents to answer questions twice: once referring to the baseline period of the treatment group and once referring to the endline. However, the FGDs made it clear that providing information relating to multiple time periods was cognitively challenging and that the accuracy of their responses was negatively correlated with the recall period. Nevertheless, this recall bias was likely to be non-random as cognitive dissonance among respondents might have caused them to extrapolate their current situation to the past. For example, if a respondent’s business was performing well at the time of the survey, they might have remembered it as also doing well in the past. For business performance regressions, both the treatment and comparison group were asked to recall baseline data, so that it is possible that the effects of recall bias in both groups may have cancelled each other out. However, for business practices, recall data was used for the comparison group but not for the treatment group. Following the theory of cognitive dissonance, this increased the chances of us having conservative, rather than overestimated, treatment effects on business practices.
4. **WEs that closed their business were not surveyed for the comparison group.** The comparison group only included female-owned businesses that were operational at the time of conducting the endline survey. Because ‘going out of business’ is most likely negatively correlated with ‘business performance’, the comparison group likely consisted of businesses that were better than average.
5. **Relatively high dropout rates between the base- and endline survey might have led to an overestimation of the treatment effect.** We conducted all our regressions on a balanced dataset of WEs who were present in both the base- and endline. Nevertheless, the bias caused by the drop-out rates remained since the most successful WEs were less likely to drop out and therefore more likely to remain in our sample. These WEs were therefore also more likely to better improve their business practices and performance, causing us to potentially overestimate the treatment effect.
6. **Lack of time varying controls.** Although the main independent variable (after\*treatment) was a time varying variable, all of the controls included were time invariant controls. We could not add any time varying controls to the regressions since we did not collect pre-treatment background characteristics on the comparison group (recall questions were limited to business performance and business practices to reduce the complexity of the questionnaire). This causes a potential omitted variable bias.
7. **Other factors that might have led to inaccurate responses (‘response bias’).** Such response bias is not unique to this study but is often apparent in data collection methods with self-reported answers such as surveys and structured interviews. Examples of potential responses biases in this study are:
  - a. **Acquiescence bias** (i.e. a tendency to respond “yes” to every question). An indication for the presence of this bias can be found in the relatively high level of self-reported pre-training business practices.
  - b. **Social desirability bias** (i.e. a tendency to bring responses in line with social norms and expectations). This may again have affected the reported levels of pre-training business practices by the trainee group but may also have affected the reported levels of change by the comparison group. In particular, trainees may have indicated in the baseline survey that they already implemented certain business practices at baseline,

because the questions implied that these are 'good' business practices. Similarly, the comparison group may have felt that it was desirable for them to report a positive change in business practices.

- c. **Courtesy bias** (i.e. a tendency to be polite to the interviewer). Potential evidence for the presence of this bias can be found in respondents' general positive attitude towards the effectiveness of the training, whilst this was not always confirmed by the responses to other survey questions.

## 7 Recommendations

To further enhance the relevance and sustainable impact, we recommend to conduct a thorough needs assessment and differentiate content based on target groups' needs, while focusing on improving linkages between business practices and outcomes and providing regular follow-up training.

**Based on this study, SEO has a number of recommendations and lessons learned that could potentially help ADB to improve future similar training programmes and evaluations.** The recommendations are structured along four OECD-DAC evaluation criteria (relevance, effectiveness/impact, sustainability). We also offer some recommendations to improve the monitoring and evaluation of similar programmes in the future.

### **Relevance**

- 1. Prior to designing the training curriculum, conduct a more thorough initial needs assessment to determine what type of training is most needed**
  - As noted in our report, the majority of surveyed trainees stated to have already been implementing the business practices taught at baseline. If correct, this might suggest that, for many trainees, the training was not sufficiently advanced to have a significant impact on their usage of business practices. (Alternatively, it is also possible that participants overstated their pre-training practices due to a social desirability bias.)
  - In order to ensure that the training is at the right level to fill important knowledge gaps, we would recommend future training programmes to include resources to conduct an initial needs assessment with potential participants, for example through FGDs or a short survey or test.
  - Such an initial needs assessment could also help to identify training areas that are of particular interest to (potential) participants. For example, trainees noted in our FGDs that they would have liked to receive more training on information technologies such as digital marketing, as many lacked the knowledge on how to conduct marketing through social media. This could have been integrated into the training programme if their needs had been assessed prior to the design of the programme (although it is possible that the interest in digital marketing increased during the COVID pandemic when more business activities were moved online).
  
- 2. Consider differentiating the training content for different target groups, based on their needs and capabilities to implement and benefit from the training.**
  - The results from this study showed that some of the training content was not always perceived as equally relevant to all types of businesses. For example, learning how to develop a business plan was generally seen as most relevant for established medium-sized enterprises that were more likely to be 'bankable' (e.g., have reasonable business performance, have accumulated some collateral, and have experience applying for loans). It was seen as less relevant for smaller enterprises and recent startups who would for other reasons likely not be able to access loans from banks in the foreseeable future (e.g. due to their young age, small scale, or lack of collateral). Such less developed enterprises may have benefited more from training in areas such as business registration and financial recordkeeping (rather than learning how to draft a business plan).

- In order to improve the relevance of the training for different target groups, ADB could consider to let future training programmes first identify and differentiate the desired target group(s), and then develop separate training courses suited to their needs and their ability to benefit from the training content.
- 3. Design the training programme to alleviate unique barriers faced by women entrepreneurs.**
- Various academic studies have shown that training programmes are often less effective for women than for men.<sup>17</sup> This is potentially due to additional constraints to doing business that women typically face. For example, compared to men, women typically have less time available due to the burden of housework and childcare; lower access to finance; and less extensive networks. Focusing on women therefore makes sense, but only if their constraints and bottlenecks are addressed.
  - Future training programmes for women could potentially be more relevant if they focus more on alleviating the barriers typically faced by female entrepreneurs. For example, female entrepreneurs often have less access to business networks than male entrepreneurs, which makes it more difficult for them to access suppliers, customers, and business support services. Future training programmes can address this by including more chances for networking within the programme itself, not only with other participants, but also with chambers of commerce, business associations etc.
- 4. When combining a training programme with financial assistance, improve the transparency and communication on the linkages between the two.**
- One key concern expressed by FGD participants was that their loan applications were still not successful despite having completed the business training. This reflected an unrealistic expectation that successful completion of the training would automatically lead to obtaining a business loan from participating banks.
  - In future such training programmes that are combined with credit line programmes, we recommend to improve transparency and communication with trainees so as to clarify and manage their expectations regarding the chances of them receiving a loan after completing the training programme. One possibility, as suggested by FGD participants, is to establish one clear ADB contact point for trainees to whom they could ask questions about issues such as eligibility for bank loans.

### **Effectiveness/Impact**

- 5. Design training curricula that focus more on improving linkages between business practices and business outcomes**
- FGD participants suggested that the impact on business outcomes could be improved if training programmes were to focus more on business practices that can concretely help to reduce costs or increase sales (rather than general management training or training to improve business plans).
  - The academic literature has also shown that offering more specific training programmes, focused on specific business practices, are generally more effective at improving the business performance of MSMEs than general training programmes that offer an overview of traditional business practices.<sup>18</sup>
  - A prior needs assessment, such as the one suggested above under 'relevance', could usefully help to identify the specific training areas in which improved business practices could yield the highest potential impact in terms of improving business outcomes.

<sup>17</sup> Cho, Y., & Honorati, M. (2014). Entrepreneurship programs in developing countries: A meta regression analysis. *Labour Economics*, 28, 110-130.

<sup>18</sup> This was found in a draft (yet unpublished) meta-regression study conducted by SEO Amsterdam Economics on the impact of business training programmes on MSMEs in developing countries (available upon request).

**6. Continue to combine programmes to improve access to finance with training programmes.**

- There is clear evidence in the academic literature that training offered together with finance is more effective at improving MSME performance than training offered by itself.<sup>19</sup>
- When aiming to improve access to finance from regular commercial banks, training programmes should target entrepreneurs that are already 'bankable', i.e., already meet key requirements such as size, age, collateral, etc.
- When working with entrepreneurs who do not (yet) meet key commercial bank criteria, consider partnering with regional development banks or the existing SME facilities of commercial banks (e.g., working with banks on lowering their perceived and actual risk of financing certain target groups such as female entrepreneurs.)

### **Sustainability**

**7. To improve the likelihood of achieving sustainable impact, consider providing follow-up training with regular or repeated interventions.**

- To increase the impact of a training programme over the long term, it is recommended to build in a series of short-term interventions following a training programme, such as regular mentoring, exposure to market opportunities, etc.
- Alternatively, the training programme could be split up into multiple steps carried out over multiple years with increasingly advanced levels of training topics.

**8. Consider offering more 'blended' training programmes that combine online with in-person training.**

- Such blended training programmes can, for example, start with an online training to bring participants to a level playing field; then offer in-person training to maximise network opportunities, and follow up with more online mentoring and training to improve the long-term results of the training.
- Offering follow-up online dissemination of training materials following a training programmes can improve the retention of knowledge (for training participants) and broader impact of the programme (e.g. if the materials are also offered to the wider public).<sup>20</sup>

### **Monitoring and Evaluation**

**9. Always conduct qualitative research in parallel to quantitative studies**

- Given the challenges encountered with the quantitative part of this evaluation, the qualitative methods such as FGDs proved to be particularly valuable during this impact evaluation. They not only allowed to validate the (often statistically insignificant) survey findings but also provided ample opportunity to deepen and broaden these findings with rich individual 'stories' and new insights that would not have been identified through survey analysis.
- Based on this study and our wider evaluation experience, a clear recommendation is to always allocate sufficient impact evaluation resources for conducting FGDs and interviews so as to complement 'broad' quantitative with 'deep' qualitative findings.

<sup>19</sup> Cho, Y., & Honorati, M. (2014). Entrepreneurship programs in developing countries: A meta regression analysis. *Labour Economics*, 28, 110-130.

<sup>20</sup> A nice example of such dissemination is that, following the business training programme evaluated in this study, PwC Sri Lanka in partnership with NEDA developed an 'SME connect app' that provided online access to the contents of the training programme.



**10. Conduct rigorous impact evaluations only if a number of conditions are met.**

- If the aim is to collect rigorous evidence on the impact of training programmes, a randomised control trial (RCT) experiment continues to be the 'gold standard'. If having to 'refuse' certain applicants is seen as an ethical constraint, a solution could be to offer a staggered roll-out (where some applicants are trained first and others later, serving as a control group in the meantime) or clustered RCTs (where all applicants in certain regions are trained and none of the applicants in other regions - which again could be combined with a staggered design).
- If random assignment of treatment and control group are not possible, the next best alternative is a quasi-experimental study such as Propensity Score Matching (PSM), Regressions Discontinuity Design (RDD) or synthetic control.
- In order to optimally use available evaluation resources, we would recommend to conduct RCT experiments only if the following conditions are satisfied: (a) there is sufficient lead time for the evaluation firm to help influence the selection of participants through random assignment; (b) the study design should be finalised before the programme begins so that baseline data can be collected for both the treatment and control groups (as reconstructing a baseline ex post does not produce accurate results); (c) the intervention should be sufficiently significant to have a large expected effect size; (d) the period between baseline and endline measurements should be sufficiently large, as changes in business outcomes in particular are not likely to materialise in the short term.

## Appendix A Focus Group Discussions

**Kandy Consulting Group (KCG) conducted seven Focus Group Discussions (FGDs) with WEs from the comparison, general trainee and bank-nominated trainee group.** In total, 103 WEs participated in these FGDs conducted at four locations (see Table A.1).

Table A.1 The evaluation team conducted 7 FGDs with 103 participants in total

| Group                   | # FGDs conducted | Location                           | Participants | Date          |
|-------------------------|------------------|------------------------------------|--------------|---------------|
| Bank-nominated trainees | 2                | Colombo                            | 19           | November 2019 |
| General trainees        | 4                | Colombo, Gampaha, Kandy and Matara | 65           | November 2022 |
| Comparison group        | 1                | Kandy                              | 19           | December 2022 |

**Prior to these FGDs taking place, a training workshop on FGD methodology was conducted by SEO Amsterdam Economics for KCG staff and potential FGD facilitators in Kandy on 29 October 2019.** Immediately following this training, two FGDs involving the bank-nominated trainees track groups were conducted in Colombo on 31 October and 1 November 2019. These trainees were nominated by local banks and received the same business development training as offered by PwC in a physical form.

*This section describes the main findings from the FGDs conducted among the general trainees and the comparison group. A summary of the two FGDs with the bank-nominated trainees can be found in 'progress report 1'.*

### Appendix A.1 Introduction and background

**Out of the total of five FGDs, the four discussions held with the treatment group took place in Colombo, Kandy, Gampaha and Matara.** The only discussion with the comparison group took place in Kandy. All entrepreneurs carried out their business activities within or in close proximity to the districts within which the FGDs were held and offered a diverse range of manufacturing, services or a combination of both. These included enterprises operating within the garment industry, fashion design, a variety of food production and value addition industries, horticulture, Ayurveda, beauty culture, construction, the hotel industry, offset printing, tourism, professional education services and export-oriented industries. A total of 81 entrepreneurs participated in these FGDs, 80 percent of whom were engaged solely in production, 17.5 percent solely in services, and 2.5 percent in some combination of both production and service delivery. The minimum number of entrepreneurs to participate in a single FGD was 14 and the maximum number was 19. While all the FGDs represented diversity in terms of the scale of business operations, it should be noted that the FGD with the comparison group was dominated by entrepreneurs operating at a relatively small scale compared with the treatment group participants. All FGDs lasted roughly about three hours, including a 30-minute break (which also allowed for some in-depth one-on-one conversations). At the end of the sessions, participants were offered a small cash reimbursement as a token of appreciation for their participation/compensation for travel costs.

**The main difference between the treatment and comparison groups was their participation in an online business development training.** Hence participants from the treatment group were recruited from multiple sources, which included advertisements in local newspapers, social media, referrals from banks, state organizations

established for enterprise development and word of mouth. They were entrepreneurs who were interested in acquiring knowledge and finances in developing their businesses further, and had been exposed at a some point in time to the Asian Development Bank (ADB) funded We-Fi grant based loan scheme targeting female entrepreneurs. Although many WEs in the treatment group had applied for the grant, only a few had actually secured funds. Comparison group participants, on the contrary, had no knowledge of the training and surprisingly were unaware of ADB's We-Fi grant. Participants in both the treatment and comparison group had been affected differently by the country's ongoing financial instabilities, resulting from the Easter Sunday terrorist attacks in 2019 and the COVID-19 pandemic (2020-2021) up to the financial crisis of 2022.

**The FGDs were conducted in an open-ended but semi-structured conversational format where the discussion focused on the following aspects:** the impact of COVID-19 and coping mechanisms implemented by enterprises, the impact of the financial crisis and coping mechanisms implemented, if any, access to finance, the training programme and the loan programme (for treatment group FGDs), participant perceptions on female-owned enterprise success and access to finance, and finally the surveys conducted by Kandy Consulting Group (KCG). This report summarizes the feedback received on each of these aspects.

## Appendix A.2 COVID-19 (2020-2021)

### Impact of COVID-19 on enterprises

**The impact of COVID-19 was negative for most enterprises, with a few outliers expressing positive impacts on their businesses.** A few others reported mixed effects. Among the entrepreneurs affected negatively, many had faced drastically reduced sales whilst some reported zero sales - which led them to close business operations. Enterprises within the garment sector, Ayurveda medical tourism, gems & jewellery, the pan weaving industry catering to local and foreign tourism industries as well as entrepreneurs operating directly within the tourism sector, were equally affected by the lockdowns that prevented both local and international travel. Niche markets and sales opportunities related to these industries such as entrepreneur exhibitions, local and foreign tours were cancelled during the pandemic. Entrepreneurs that had no alternative markets nor alternative operations to fall back on were impacted the most. The beauty culture sector requires close customer contact and was greatly affected by COVID lockdowns. Entrepreneurs engaged within the sector stated that the adverse publicity provided through local media, calling salons a major COVID threat, further discouraged customers from obtaining services. With functions such as weddings being prohibited, and travellers and tourists losing valuable time over quarantine, the losses in sales for the beauty culture sector increased further. Frequent closures and re-openings during lockdowns affected stock management of entrepreneurs that dealt with highly perishable raw materials (e.g. coconut oil manufacturing requiring immediate processing of coconuts), which prevented entrepreneurs from restocking and led to cease of operations.

**Another reason for low sales reported by entrepreneurs in general, was that people focused on essential items such as food and spent less on nonessential products and services.** In fact, seeing the levels of uncertainty at the time, there were entrepreneurs who themselves had stockpiled food instead of allocating funds for raw materials and restocking. Despite the high demand for food, entrepreneurs engaged within the food production industry also reported difficulties in recovering funds for credit sales. Daily wage earners did not have sufficient work nor earn sufficient income during lockdowns; hence, food purchases made on credit forced entrepreneurs to temporarily shut down business operations to avoid further losses. The closure of businesses due to the inability to

recover credit sales was a common issue across several sectors, and often a cyclic effect as creditors themselves had closed business operations.

**Embargos placed by the state on imports and exports during the pandemic also affected enterprises.** Entrepreneurs operating within the garment sector experienced a price hike in imported raw materials, whereas restrictions imposed on exporting fauna and flora hindered operations for enterprises exporting Ayurveda products. Crashes within export markets and logistics impacted entrepreneurs engaged in export businesses. **As a result, some entrepreneurs stated that they lost their brand names.** Delays in shipments resulted in order rejections, goods perishing and huge fines paid as demurrage. Entrepreneurs held grievances against the state for not being considerate about SMEs during the pandemic. For instance, despite paying demurrage for delays in exporting locally manufactured bicycles, an entrepreneur was required to pay full duty when releasing her shipment back for the domestic market. Entrepreneurs were also disappointed for not receiving permission to check on their enterprises during COVID lockdowns. Business assets were robbed and destroyed due to adverse weather during lockdowns and despite their businesses being only a few kilometres away, entrepreneurs were not granted permission to cross lockdown borders to check on their enterprises.

**COVID-19 lockdowns and their negative impact on sales took place during the festive season (Sinhalese & Tamil New Year).** Entrepreneurs made investments in stocks and finished goods, but the lack of sales increased the effects on their enterprises. Such effects were stated to have been further compounded due to the Easter Sunday bombings of 2019, COVID-19 in 2020-2021 and the financial crisis of 2022, all falling within the festive seasons. An entrepreneur specializing in the production of Muslim ladies garments (Abayas) stated that she was mostly affected by the 2019 Easter Sunday attacks. The discrimination against ethnic Muslims and their attire had caused her a significant loss in sales, requiring subsequent changes to her business operations.

**Furthermore, entrepreneurs stated that lockdowns and their associated transport issues caused problems with bringing in employees to work.** Especially entrepreneurs operating at a smaller scale within their homes were unable to bring in employees due to the risk of COVID exposure. Despite low sales, entrepreneurs took care of their employees, continuing to pay salaries, rent and providing food during lockdowns, which were all stated to have impacted their enterprises.

**Among entrepreneurs that had been affected positively by the pandemic, spinoff beneficial effects of immobility were reported to be a key factor.** During a time where most opportunities for entertainment such as parties and holiday trips were non-existent, people spent less money on things like that, which motivated many of them to invest their savings in some kind of construction or hobby. This resulted in an increase in sales for entrepreneurs engaged within the construction industry. Apart from the heightened demand for constructions during lockdowns, an influx of employees from other sectors that were failing at the time, along with worker confinement within construction sites, saw construction projects being completed at a rapid pace during COVID. An entrepreneur engaged within the pan weaving industry experienced a similar increase in production due to her employees being confined to their homes and able to engage in work. This increased the entrepreneur's stock as well as sales. Horticulture is another area that adults and children alike seem to have taken up as a hobby during lockdowns, which resulted either in stable or even increased profits for several entrepreneurs engaged in ornamental and export crop based plant nurseries. The Ayurveda products and services industry was another sector positively impacted by COVID. On the one hand, a much-hyped interest was created in indigenous medicine and medical practices during the pandemic, increasing sales of alternative medicine products. On the other hand, a new market segment comprised of the local middle and upper middle classes was attracted to Ayurveda wellness treatments and services, especially with the closure of traditional hotels.

**Embargoes placed on imports that negatively affected certain entrepreneurs created a greater demand for others.** For instance, local producers of furniture, mother and baby products as well as knitted garments stated that the embargos imposed by the state during COVID created a greater demand for their products. Entrepreneurs engaged in the essential services category - for instance, a participant who ran a restaurant - operated businesses as usual during COVID.

**Those entrepreneurs that had rapidly adapted to the pandemic and its associated recession were satisfied with their sales during COVID-19.** For instance, beauticians had adapted by continuing services within their local geographies, adhering to health and safety guidelines. With shops closed, mushroom producers had recruited door-to-door sales personnel, whereas sweet producers had obtained travel permits and started their own distribution services. Discontinuing specialised business operations, such as knitting women's wear, and switching to the production/import of essential items that were in high demand during COVID, such as face masks and COVID protection kits, was another adaptation employed by several entrepreneurs within the garment sector. Some even made radical shifts in their business sector, transferring from running a professional training centre to operating a plant nursery. A business and education consultant turned to providing educational consultations full-time, altering her syllabus in a manner that catered to the psychological wellbeing of both children and parents during the lockdown.

**Some entrepreneurs considered the pandemic experience to have been beneficial to their enterprises in unexpected and different ways.** Some specific examples are listed below.

- An entrepreneur who went through a pregnancy during this time, realized the market need for products catering to pregnant mothers and babies. She then ventured into a mother and baby care line of products - and personally took the time to test out a variety of products.
- Another entrepreneur, who was engaged in the production of Kithul Treacle related products, continued to collect Kithul sap from her farmers during the pandemic despite the lack of sales, whereas her competitors stopped collection from farmers due to the downturn. As a result, the farmers rallied around her and her farmer base increased, thus ensuring her of a steady supply chain.
- Entrepreneurs within the garment industry had the opportunity to study new designs and transfer their skills to the next generation. Some entrepreneurs engaged in technical training related to their production lines.
- An entrepreneur engaged in the production of soft toys made the transition from sales on credit to cash sales. This transition helped to secure better cashflow management.
- Another entrepreneur in the beauty culture industry stated that getting used to the health and safety guidelines prescribed during COVID had benefited her indirectly. Continuing to use masks and other health and safety procedures proved to be helpful in view of the close contact with chemicals on a daily basis.

**There were also entrepreneurs who experienced mixed effects during COVID-19.** A coffee manufacturer experienced low sales due to the collapse of the tourism sector since she catered mostly to cafes. However, with embargos being placed on imports, a higher demand was simultaneously created locally. An entrepreneur who was in the process of establishing a theme/entertainment park experienced similar mixed effects on her business when construction was delayed during lockdowns and its associated transportation problems prevented employees from reporting to work. On the other hand, her bird breeding centre reported high sales as people acquired new hobbies such as rearing birds as pets.

*Participants from both the treatment and comparison group reported similar experiences with regard to the pandemic's effect on their enterprises.*

## Coping with COVID-19

**Entrepreneurs implemented various coping strategies to sustain their business operations during the pandemic.** A few entrepreneurs had no option but to temporarily close down their businesses and engage in subsistence living, often taking care of their employees, paying rent and depleting savings that were intended for investments in the process. Some utilized this time period to educate themselves or develop new skills by participating in training programmes. Others, despite low profits, used licenses and permits for essential services (i.e. entrepreneurs running restaurants, mother and baby care products) and maintained business operations during the pandemic. Entrepreneurs providing beauty culture services adapted to providing services within their localities, adhering to health and safety guidelines. Entrepreneurs within the garment industry, despite low sales, invested more in raw materials and utilized the time during closure to manufacture products or complete work-in-progress items. Some discontinued their own brand and sub-contracted orders from other mass producers.

**With traditional sales being disrupted due to lockdowns, entrepreneurs sought for alternative sales opportunities through the use of licenses for mobile sales, customer delivery, online advertising and sales.**

For instance, entrepreneurs within the garment industry, with the assistance of suppliers, set up a delivery system where suppliers would transport raw materials to their village and sent the finished products back. Entrepreneurs within the horticulture industry initiated home deliveries. Several entrepreneurs engaged in mushroom production employed a door-to-door salesman to compensate for their closed shops. In order to reduce the number of returns which then would go stale, the entrepreneurs priced the product at half price and engaged in dehydrating and bottling mushrooms. Some sought out an entirely different market segment. For instance, with the drop in sales within the tourism market some entrepreneurs began targeting more middle and upper middle classes within the local market. During COVID, most entrepreneurs started advertising their products online, especially through social media, or even providing home deliveries. By doing so, entrepreneurs were capable of capturing a market share previously owned by much bigger retail chains and also receiving funds much quicker than when selling their products through third parties on credit. However, entrepreneurs operating at a bigger scale, especially within the garment industry, stated that daily online sales figures were insufficient when compared to their daily production numbers. Furthermore, entrepreneurs who had switched to providing professional services online (i.e. professional educational services) had experienced difficulties in their service delivery due to network issues.

**Some entrepreneurs diversified their services as a coping strategy during the pandemic.** For instance, the aforementioned entrepreneur running an institution offering professional courses in finance, had now diversified her business to providing auditing, accounting and publishing services. An entrepreneur within the garment sector experiencing a price hike due to import embargos had offset her costs by diversifying and producing customized diabetic footwear from her garment offcuts. Some entrepreneurs had continued the most profitable ventures within their business portfolios, temporarily discontinuing loss making ones. Some of the continued or transferred ventures included the food production sector, i.e. spice production. Entrepreneurs had even changed their specialized business operations that were in low demand during COVID to producing essential items that were in high demand. Several manufactures within the garment field had stopped producing garments, utilizing their materials to produce face masks, COVID protection kits, and mother and baby care products that were in high demand during the pandemic. Even though entrepreneurs had initially adapted well, obtaining profits during the transition, they faced limitations later on due to a lack of technology/specialization within their new sector. For example, entrepreneurs within the garment industry transferring to producing masks, later experienced a loss in demand for their cloth-based mask as the demand increased for KN95 masks, whose production required different technology.

**Entrepreneurs also streamlined business operations to avoid COVID risks, such as providing accommodation for employees, creating a bio bubble and allocating specific time periods for suppliers and buyers to bring in vehicles.** Streamlining also included laying off employees to manage costs, quitting their fulltime job to focus more on the enterprise, shutting down business premises and working from home, and sourcing locally available materials as an alternative for costly imports.

*Similar to the aforementioned impacts, no significant differences were reported between participants from the treatment and comparison group with regard to their COVID related coping strategies.*

## Appendix A.3 Financial crisis (2022)

### Impact of the financial crisis on enterprises

**Apart from a few outliers, the majority of enterprises was negatively affected by the financial crisis (regardless of their treatment or comparison group status).** Some of the negative impacts shared by entrepreneurs of the two groups included the following. The price hike of raw materials was stated to be exponential and quite frequent, thus affecting numerous sectors such as the garment industry, horticulture, beauty culture, food production and the construction sector. The embargos on imports associated with Sri Lanka's foreign reserves issue created this price hike, along with scarcity of raw materials. Such embargos have resulted in a price increase in locally sourced raw materials as well, despite their impurities in comparison to imports. Material prices have increased by 200 to 300 percent and have had an effect on entrepreneur profit margins, especially among entrepreneurs operating at a higher scale. Within the construction sector, this price increase along with its constant fluctuation has caused difficulties in reaching contractual agreements with customers. By the time of completion, construction projects cost twice the amount that was initially planned, causing a heavy downturn within the industry. Previously, entrepreneurs were capable of absorbing small fluctuations over time, but now it is stated as being impractical even to ask customers to pay. Even raw materials that are scrap material from other industries have increased in price due to the crisis. For example, entrepreneurs engaged in mushroom cultivation stated that the most important raw material for production, saw dust, which is waste discarded by sawmills, has now quadrupled in price due to the fuel crisis and its associated costs in transport. Price increases in materials have forced entrepreneurs to change their quality standards. For example, an entrepreneur constructing a theme park was forced to substitute her concrete based hard landscaping for softer tree-based landscaping. According to the entrepreneurs, these alternatives have tripled in price as well. While there are some doubts about the reasons behind the extent of these price increases, entrepreneurs emphasized the need for producing raw material locally and bringing in the necessary technology for such production.

**Due to the above mentioned price surge, entrepreneurs, especially those operating at a smaller scale, stated to have not purchased raw materials in a significantly long time, affecting their production and associated operations.** Some stated that they were now forced to purchase smaller amounts, affecting their profit margins due to economies of scale. In order to survive with such small profit margins, entrepreneurs had to cut down other costs related to transportation and labour, which indirectly consumes a lot more of their time and energy. One entrepreneur stated that "to make half of the profit I made, I have to walk more and carry around raw materials myself". Despite the high costs of raw materials, entrepreneurs expressed their concerns about the low quality of raw materials affecting business operations.

**Seeing the general increase in prices for products and services, entrepreneurs are concerned with the fall in sales as customers focus more on purchasing essential items.** Many entrepreneurs stated that people are now extremely careful in their purchasing decisions. Several new trends have been established, such as resharing, re-using and in cases where new purchases are essential, customers searching for old stocks that are sold at previous low price levels. Women entrepreneurs also stated that they were unable to transfer the costs directly to their customers. In their view, customers would not purchase at such high prices, since customers' incomes have not increased, resulting in an overall reduction in sales. Another reason stated by entrepreneurs on the price hike issue is that intermediaries would not allow them to do so. Entrepreneurs supplying products to supermarkets cannot raise prices overnight as they print price lookups (PLUs). They have agreed with supermarket chains to gradually increase prices over time by 5, 10 or 15 percent. However, the supermarkets themselves are in a position to increase prices overnight. Hence, entrepreneurs are suppressed on the one hand by the price hike in raw materials and on the other by intermediaries who do not facilitate sudden price adjustments. As a consequence, entrepreneurs continue their business operations absorbing costs by reducing their profit margins on a monthly basis. For example, an entrepreneur engaged in the manufacturing of Kithul related products stated that her product is rated as 'Premium Quality' (100% natural Kithul treacle with no preservatives). Hence, she cannot compromise in terms of quality. In order to protect the quality and to protect her farmer base she has to pay them a substantial price. In order to protect her customer base, she has to keep the product at an affordable price range. Hence, she is sandwiched between these two competing forces - and ends up compromising on her profit margins.

**According to entrepreneurs, there is a large time lapse between providing a quotation to a supplier, getting a purchase order, purchasing raw materials, producing an order, delivering the order and realizing credit sales.** By the time funds have been received for sales, a lot has changed within the economy and entrepreneurs suffer large losses in between. At this point, entrepreneurs are forced to sell their products at any price and clear their stocks as they need to continue their business operations. They are unable to pause, despite the changes taking place within the external environment. Some entrepreneurs stated that their credit sales made to supermarkets affect their cash flow the most during such troubling times. Funds are sometimes only received after three months. Despite entrepreneurs selling products to suppliers on credit, their own raw material suppliers have ceased offering raw material on credit. In some industries, such as the mushroom based food production industry, purchasing raw material on cash is mandatory, as farmers require working capital to invest in their next harvest. In other industries, such as shoe and bag manufacturing, which have many links within their supply chains, entrepreneurs currently do not receive raw materials on credit because importers at another level refrain from providing their immediate suppliers credit. Even in instances where credit from suppliers is available, the costs are usually very high in comparison to cash purchases.

**According to the entrepreneurs, the reductions in production capacity occur despite a strong market-driven demand which entrepreneurs are unable to cater to due to the above-mentioned problems.** According to them, intermediaries seem to be profiting from these demand and supply price variations. Firstly, despite intermediaries requesting and taking advantage of their full credit period, they often place their next purchase order with the WEs relatively soon. This indicates the high demand, but also shows that some intermediaries reap great benefits of this exercise. On top of extended periods of credit requested from WEs, these intermediaries (mostly supermarket chains were mentioned) add different charges for transportation, shelving and warehousing, despite keeping a margin of around 32 percent for themselves (as mentioned by the WEs). These intermediaries do not absorb any of the costs. They simply pass on all their costs to the entrepreneurs or their customers. According to the entrepreneur producing Kithul products, after sourcing the best raw materials and producing a quality product with much effort, the entrepreneur receives roughly around LKR. 400 only for each unit whereas supermarket chains - both private and state-owned outlets - earn over LKR 1000 per unit, which the entrepreneur considers unjust. An



entrepreneur producing batik garments expressed similar outrage, stating that the intermediaries do not understand the concepts of value addition, producer effort and costs. According to the entrepreneurs, the intermediaries simply bargain to get products at the cheapest value possible and resell them at a higher price. All enterprises agree that this margin/benefit should reach the end customer. Furthermore, in this process of keeping the highest margin possible, these intermediaries lose sales as customers cannot afford products at such high prices. This burden is once again borne by the entrepreneurs as they are bound by a return policy to recall products at their own cost. The entrepreneurs stated that this exploitation by intermediaries has occurred throughout, but it affects them now the most due to the severe effects of the financial crisis.

**Other impacts of the financial crisis that have affected entrepreneurs include the current power crisis.**

Entrepreneurs within the restaurant industry have had interruptions to their business due to cooking gas shortages. It has become problematic especially for entrepreneurs who are unable to utilize alternative power sources such as firewood. For entrepreneurs dealing with highly perishable food items, such as coconut oil producers, interruptions in electricity resulting from the power crisis have brought production operations to a halt. This cessation of operations has had further repercussions for entrepreneurs in the form of losing income from the sale of by-products manufactured through production. For several industries, the price of raw materials including waste products has increased due to the fuel crisis and its associated transportation costs.

**The impacts associated with a range of costs were stated by several entrepreneurs to affect their enterprises differently.**

The current labour cost was mentioned as a great concern. High costs associated with shipping and transportation was stated to affect entrepreneur access to foreign markets, especially within the garment sector. The 'Aragalaya', a public reaction against the state due to the effects of the financial crisis, was also stated by entrepreneurs to aggravate export markets. "The civil unrests have discouraged foreign clients from placing large orders due to the uncertainty within the country", stated an entrepreneur who was engaged in the garments sector.. Due to the low sales recorded during the crisis, entrepreneurs stated that they were unable to treat their employees well, placing them on compulsory leave (and associated lower salary) even whilst the employees themselves go through hardship.

**Entrepreneurs constantly mentioned that they had lost their 'worth' due to the financial crisis.** They stated that previously there was a particular value that was given to the product and/or worth that was given to the skill that went into that production. An example cited was a hand-stitched made-to-fit garment by a small scale enterprise relative to mass-produced standard-sized garments made by a large-scale factory. But now with the high inflation, the market is not willing to pay the price premium associated with the former. This is seen by the entrepreneurs as a lack of appreciation of the skills and effort that go into such a specialized bespoke product.

Among the few outliers who have thrived during the financial crisis were (1) an entrepreneur who runs a professional training institution that trains employees on operating Juki sewing machines, (2) an entrepreneur supplying tuna fish for export markets, and (3) a few entrepreneurs engaged in the sale of mother and baby products.

*Participants from both the treatment and comparison group reported similar experiences with regard to the effect of the financial crisis on their enterprises.*

## Coping with the financial crisis

**Entrepreneurs adopted various coping strategies when faced with the challenges imposed by the financial crisis.** Some strategies mentioned were:

- Employing cheaper substitutes instead of high-priced raw material items (e.g. substituting hard landscaping (concrete) with soft landscaping (such as trees) in completing constructions for a theme park).
- Producing their own raw materials (e.g. purchasing a machine to produce saw dust (which was previously bought) for mushroom production).
- Stopping value-addition processes and creating new products instead by altering the production process (e.g. a mushroom producer stopped producing sausages and burger patties due to the high costs associated with imported raw materials and switched to producing dehydrated mushrooms instead).
- Placing greater emphasis on stock management and planning in order to avoid raw material wastage (e.g. in the construction industry).

**Some entrepreneurs have made changes to their business operations to better manage their costs.** For instance, an entrepreneur engaged in the production of coconut oil now outsources the entire production performing only bottling and distribution functions. Similarly, another entrepreneur engaged in the production of mother and baby care products has chosen to focus on aspects of the production that she actually specializes in and generates the most income. An entrepreneur engaged in weaving and producing pan-based products has become even more vigilant with regard to market sales, constantly monitoring products that have a greater sale value, adjusting their production levels and pricing. Transferring to a cumbersome but available alternative power source of firewood was another change made to production that was noted by an entrepreneur engaged in the production of Ayurveda products. Being tactful during the crisis and letting employees work from home instead of coming into the enterprise premises, was another strategy utilized by an entrepreneur engaged in the garments sector; by doing so, the entrepreneur avoided productivity losses during power cuts, transferring the responsibility of working efficiently back to her employees.

**Finding alternative markets and sales opportunities is another strategy implemented by entrepreneurs in negating low sales experienced during the current financial crisis.** For instance, due to low store sales, an entrepreneur engaged in the production of handloom and linen garments started performing direct sales at government offices and in special spaces created by the government's Small Enterprise Development Division. As a consequence of inflation, an entrepreneur engaged in the sale of mother and baby care products for all types of customers, now targets customers at the middle and upper-middle-income levels. Finding alternative sales opportunities in the form of mobile sales, online advertising and sales through social media were some other alternative markets utilized by the entrepreneurs as mitigating strategies.

## Appendix A.4 Perceived gender differences in coping strategies

**Women entrepreneurs seemed to have divided opinions on the differences between male and female entrepreneurship.** On one end of the spectrum, the entrepreneurs believed that women are mentally stronger, have higher tolerance levels, flexibility, a greater positive mind-set, patience, fortitude and courage, all necessary characteristics that are vital when coping with and surviving crisis situations. "We patiently wait for the economy to revive. Until then we will somehow adjust. We will neither give up nor migrate abroad", was a statement made by one entrepreneur. Men on the other hand were described by some as being unable to endure losses and quick to give up, closing down their businesses in the face of catastrophe and loss. These entrepreneurs further stated that women are capable of sacrificing their personal comforts and endure hardships in order to sustain their enterprises, whereas men are less able to do so. Several entrepreneurs stated that they had to play different roles within their family and business simultaneously. Men were stated by some to be focusing only on current profits and not on

values. The entrepreneurs stated that women, on the other hand, are concerned about values relating to product quality, fair price, and business ethics. Despite female entrepreneurs focusing more on quality, they also stated that due to the fact that they were women they experienced a lot of haggling by customers, which they perceived as targeting the quality standards established by themselves. Women were also described as meticulous in financial planning, often careful in not getting themselves into heavy debt. Men on the other hand were considered by some as high risk takers that are deceived easily. Several entrepreneurs proudly stated that they currently have full responsibility for their family. While their husbands have closed down their own businesses and are currently at home during the financial crisis, the women entrepreneurs are single-handedly providing for their families. Some are even financially helping out their spouses' enterprises. These women proudly stated that they were doing well within a male dominated sector that is often suppressive and even hostile towards female enterprise growth. "If a male operated our businesses, they would have terminated their operations and given up by now", was an often heard statement in all of the FGDs.

**At the other end of the spectrum, there were women entrepreneurs that stated that their husbands played a strongly supportive role in their enterprises.** Even though some spouses were unable to take up financial management aspects of the enterprise, entrepreneurs stated that they could not have had the level of success they enjoyed so far without their support in other areas of the business. Some husbands were praised for taking care of responsibilities within the family, enabling women entrepreneurs to focus 100 percent on running their enterprises. There were others who praised their spouses who are currently operating in rather demanding sectors such as construction which have been badly affected by the financial crisis. They emphasized the tactfulness and flexibility in their spouses' management styles in sustaining businesses during such troubled times. Some even stated that their spouses mentored them in sustaining their businesses as well.

**More nuanced statements made by entrepreneurs included an understanding that gender differences mattered based on the business sector.** Regardless of gender issues, commitment and mind-set are dependent on who comes up with a business idea and takes ownership. Crisis affects all enterprises regardless of gender.

Such differences in opinion on gender differences in coping strategies were present among participants from both the treatment and comparison group.

## Appendix A.5 Access to finance

### Access to formal finance

**Except for the WEs from Matara, most WEs from the treatment group had strong negative views on banks and their access to formal finance.** Securing a business loan was reported as being a difficult task and has led to the downturn of certain industries such as construction. Banks were reported as being unsupportive during the current crisis, despite their enterprises having survived the previous crises of the past few years. An entrepreneur stated that "these are the entrepreneurs who are left standing. If we wanted to give up, we would have done so by now. We are the ones who have worked hard to survive so far. So, why are the banks not supporting us?". Entrepreneurs also stated that banks had rejected financing certain sectors such as the beauty culture and hotel industries, especially during COVID, naming them as failing industries.

**These entrepreneurs were also of the opinion that most of Sri Lanka's entrepreneurs have negative experiences with banks.** They stated that the amount of stress induced by banks, especially when accessing

finance, is unbearable. "In order to obtain a loan of 1 million, you have to be prepared to experience a level of stress which is equivalent to 3 to 4 million", an entrepreneur stated. Banks were accused of requesting for varied information whilst also imposing several conditions. After exerting considerable effort, incurring costs and creating expectations, banks have been known to deny funds based on seemingly trivial reasons according to these entrepreneurs. From their perspective, some of the collateral requirements imposed by banks are irrational. For example, requesting a five-year lease rental agreement along with requests for collateral were considered too costly and unreasonable, as entrepreneurs were requesting funds to construct their own premises – so as to avoid being tied down to such a long-term lease. The imposing of conditions such as government issued environmental certificates and technical clearance certificates relating to production were stated by entrepreneurs as, at times, being difficult to comply with. Hence, this inhibits access to finance and blocks the developments in production facilities. This could even lead to a vicious cycle preventing them from developing their business operations.

**Even after going through a tough application process and securing loans, banks were accused of not releasing funds on the basis of the current economic downturn.** Banks seem to be suspecting a higher likelihood of enterprises defaulting on loans. The same issues were reported in regard to entrepreneur access to other low-interest loan schemes – for example, the 4 percent working capital loan issued during COVID (Saubagya COVID-19 Phase II). When attempting to access such concessionary loans, banks state that funds are depleted. Some bank branches are unaware of grant schemes – such as the We-Fi scheme – and refuse to even open loan accounts. Stating that funds have been fully disbursed, banks offer loans at regular bank rates that are much higher than the concessionary loan scheme rates. The success rate for securing such loans amongst the FGD participants was extremely low. Claims were also made by entrepreneurs that the concessionary loans/grants are offered only to known close contacts of the bank. Because of this, entrepreneurs stated that the whole purpose of a grant provided by the state in protecting entrepreneurs is lost. A previous banker, now a full-time entrepreneur, explained the process behind banks applying for ADB funds from the state when providing We-Fi funds for entrepreneurs. According to this entrepreneur, when a grant is involved an additional step is included within the banker's job description that involves writing project proposals to the Central Bank for releasing the required funds. With regard to the regular bank loan scheme, however, no such additional process is required – hence, the loan officers prefer working with bank initiated regular loan schemes. Even after obtaining approval of any kind of bank loan, entrepreneurs stated that banks add numerous costs such as title insurance and legal charges. Banks charge these costs to the loan principal amount, labelling them as 'bank charges'. This applied even to the few female entrepreneurs who had secured the ADB We-Fi grant. Banks were accused of being insensitive to entrepreneur needs during the financial crisis. For example, loans that had been taken out for construction were put on hold by banks as entrepreneurs were not able to complete their construction work due to the much higher costs of building materials. "At this time of crisis, banks should understand that working capital for sustaining a business and its employees is more important than construction work", an entrepreneur stated.

**Apart from being unsupportive when providing access to finance, women entrepreneurs have experienced banks being obstructive when providing other services to them.** For falling short a few thousand rupees, some entrepreneurs have had their checks for a few hundred thousand rupees bounced, causing delays in payments and subsequent penalties. Some entrepreneurs stated that despite their business accounts performing transactions in large amounts on a frequent basis, whenever they fall short a small amount they receive numerous calls from their banks in order to settle their accounts immediately.

**Some entrepreneurs stated that, in comparison to male entrepreneurs, they often found it more difficult and time consuming to obtain banking services.** Discrediting and offending women entrepreneurs and their enterprises were stated to be quite common place within banks, deterring them from obtaining the services they

require. Whenever entrepreneurs complained about branch level inefficiencies to regional or head offices, incidents were shared where such local branch managers were very aggressive and offensive towards these entrepreneurs. The enterprise owners were of the opinion that bankers showed poor judgment in assessing worthy enterprises. The process was heavily dependent on a single individual – the branch manager. One entrepreneur stated that she had received inappropriate sexual advances from the bank manager.

**Muslim entrepreneurs within the FGD were also unsatisfied with Islamic financial services offered by regular banks in Sri Lanka.** Services provided to them currently were stated to be simply high interest loans, not profit sharing recommended through Islamic practice.

**Due to these issues, the entrepreneurs requested for a single point of contact for all enterprise loans and services for a particular region.** This point of contact would then have up-to-date information regarding all facilities available for entrepreneurs at any given time. The need for grants or concessionary lending during such troubling times without imposing collateral requirements was indicated by entrepreneurs.

**Among the negative views expressed by treatment group participants from Colombo, Kandy and Gampaha was a general sense of collective fear in taking out loans during the ongoing economic crisis.** Despite having new business ideas, entrepreneurs expressed fear due to uncertainty about the future and their ability to sustain debt repayment.

**The FGD in Matara yielded somewhat different views, with many entrepreneurs from the treatment group reporting positive attitudes towards banks.** They stated that access to finance is available, especially if their businesses are performing well. The entrepreneurs stated that banks provide finance if they trust enterprises and their financial discipline. Banks were stated to take into account project proposals and transaction histories along with enterprise inspections prior to offering finances. However, these entrepreneurs reported that, despite putting in much effort into the enterprise activity, many small female-led enterprises are weak in their financial record-keeping – sometimes deliberately due to a fear of taxes. As a result, women entrepreneurs fail in securing loans as record keeping tends to be a strict banking requirement.

**Participants from the Kandy comparison group discussion who were entrepreneurs operating at a relatively small scale (in comparison to entrepreneurs from the treatment group) had mixed views on their experiences with banks and access to formal finance.** Whilst some of them stated that there were no particular obstacles in accessing finance, some agreed on the fact that loans were difficult to obtain – especially on concessionary terms. Many entrepreneurs from this group had obtained financial services from general banking and development banking institutions. During the current financial crisis, a majority of the entrepreneurs had not taken out any business loans – yet they indicated having the know-how and capacity to obtain loans if needed. Several women entrepreneurs from this group had applied and obtained Samurdhi Loans at a rate of 15 percent (from the government's Department of Samurdhi Development) through women's organizations; credit is provided based on having a Samurdhi (government support given to low income households) recipient within one's loan group, even though the applicant herself may not be a Samurdhi recipient.

## ADB We-Fi Grant

**Feedback received from entrepreneurs belonging to the treatment group regarding the ADB We-Fi grant was similar to their experiences in accessing formal finance - mostly negative.** The general comments on banks being unsupportive when trying to access finance were applicable even for the We-Fi grant. The whole process of

applying for the grant was stated to be extremely stressful and an overall negative experience for entrepreneurs. Despite satisfying all requirements, including mortgages, filling out applications and incurring a great cost, both time and money-wise, entrepreneurs stated that banks claimed that funds were completely disbursed. A few entrepreneurs reported that initially banks did not make them aware of the We-Fi facility, but when further information was requested by the entrepreneur the banks said that funds had run out. When inquiring through known contacts, they then discovered that funds were indeed available and were being given through known contacts. Hence, these entrepreneurs were quite disappointed with the way banks treated them.

**Another issue was that after being told that We-Fi funds were not available, banks suggested their own loan products at much higher interest rates.** After having gone through several stages of the loan approval process, entrepreneurs felt they had no other options despite the disadvantageous conditions attached. Furthermore, entrepreneurs stated that the interest rates of such alternative loans that were taken out prior to the financial crisis had now increased dramatically. For example, an overdraft facility obtained at 13 percent as a substitute for the We-Fi loan was now increased to 36 percent. The entrepreneurs believed that if they had received the We-Fi loan, its interest rate would not have been increased by such magnitude.

**Entrepreneurs were also concerned about several restrictions associated with the We-Fi loan scheme,** such as obtaining the grant within six months of completing the PwC business training, a significant time delay of up to 1 year between applying for and receiving funds, entrepreneurs being required to pay the loan at the regular bank interest rate until the We-Fi loan has been approved, banks requiring collateral equivalent to the amount of the loan or more, collateral being held against the loan preventing its usage for other purposes, and discrimination against some sectors considered as failing industries.

**Despite the funds being from ADB, entrepreneurs were puzzled as to why banks were seeking collateral and looking into entrepreneurs' repaying ability.** It was concluded among the entrepreneurs that banks have no interest in dispersing the ADB fund. At some bank branches, officials were not aware of the grant and had not even opened dossiers related to them. Several entrepreneurs stated that when presenting the We-Fi business training certificate, most bank branches were not aware of it and even discredited its importance. One bank manager made the following remark to an entrepreneur: "You need to fight for the ADB grant". Due to such issues, the women entrepreneurs stated that they preferred receiving precise knowledge and awareness regarding the We-Fi scheme directly from ADB rather than from the banks.

**The FGD discussions revealed a general sense of distrust in banks.** One entrepreneur went on to suggest that banks were profiting unethically through this scheme, by persuading entrepreneurs to create a business account (with a monthly fee) and then continuing to profit by charging for business related services even after refusing the We-Fi loan application.

*Entrepreneurs from the comparison group were not aware of the ADB funded We-Fi loan programme.*

## Access to informal finance

**Among the treatment group WEs, the use of informal finance was minimal.** Apart from a few entrepreneurs who had required urgent working capital, others stated that they had no requirement for informal finance within their enterprises. Among the entrepreneurs who had accessed informal finance, the requirements stated were a need for immediate cash for working capital requirements in the event of large-scale urgent orders. They stated that in such instances they did not have the luxury of pausing operations in pursuing a tedious application process, securing

guarantors, paying numerous bank charges and enduring a delayed realization of funds, all associated with formal financing. Another entrepreneur affected during the 'Aragalaya' period, where mass protests and instability within the country had significantly reduced sales, had accessed informal financing based on compound interest. She had done so to pay her suppliers, who are small-scale producers. The entrepreneur requires paying them at the point of product delivery in order to ensure that they start producing the next batch of products, guaranteeing a smooth flow of operations for the entrepreneur.

**A majority of others within the treatment group stated that they had not accessed informal finance.** They understood why other entrepreneurs did so, though, especially the ones who operate at a smaller level and find it difficult to endure the long and tedious process involving formal finance. At the same time, they were aware of the dangers associated with informal finance and its ability to trap entrepreneurs in a vicious cycle of debt, having the potential to eventually force entrepreneurs out of business. The entrepreneurs also stated that they were fortunate to be in urban areas where informal financial services are not popular compared to more rural areas where these services are more prevalent; if they had easy access, they might have been tempted to use these services during times of financial difficulties.

**The entrepreneurs stated that in the case of an urgent need they would resort to pawning jewellery and selling vehicles,** even though this too has become extremely difficult in the face of the current financial crisis and associated high interest rates. One entrepreneur who is employed full-time stated that she invests her salary in the business, recovering it later when profits are realized.

**Operating at a relatively small scale, comparison group entrepreneurs were more frequent users of informal finance. 'Seettus' - a form of Rotating Savings and Credit Association (ROSCA)** - was a common type of informal financing accessed by many comparison group participants, motivating them in buying raw material and manufactured goods. There were others who had purchased machinery using payout money from Seettus. Some entrepreneurs were organisers of such Seettus, which entitled them to be the initial recipient by default.

## Perceived differences in access to finance

**Most entrepreneurs were of the opinion that access to finance is biased towards men.** Men were stated to access finance more easily as they generally have close(r) relationships with managers through informal gatherings and networks. Women entrepreneurs have also sensed reluctance to carry out financial lending operations on the part of male-bankers - in the belief that women are not capable of running businesses efficiently. Even when loan applications are fully completed and accompanied with clear business plans, bankers tend to detect a lot of inadequacies within women entrepreneur applications, quite often delaying the release of funds. For some women entrepreneurs, bankers had bluntly enforced security/collateral requirements without even carrying out a proper business visit. Some banks had requested entrepreneurs to get approval from their husbands despite the enterprise being registered and managed by the women entrepreneurs themselves. "They think we should be confined to the kitchen. They do not realize that women have six times the capacity of a man, managing businesses, household and family responsibilities simultaneously", stated an entrepreneur.

**The entrepreneurs noted that the bankers themselves receive personal gains - in the form of an official commission from the bank - for successfully approved loans.** The entrepreneurs also wondered whether there was an expectation of an additional below-the-table payment for loan approval from the client. Such conversations would be easier with male enterprise owners and more difficult with female enterprise owners; hence, even these informal arrangements become more difficult for female enterprise owners. Enterprise owners were aware that

these stem from the clientelist/patronage and gender-biased culture that is in operation – even within business circles. However, entrepreneurs were of the opinion that the banking sector of a country should not be subject to such forces. Male owners are able to easily obtain finances even without any clear business idea or plan for repayment. Female owners tend to be much more careful and aware of risk when making these decisions – hence deserving access to finance resources. Yet, the general sense was that the societal belief structure stacks the cards heavily against the women.

A few entrepreneurs took a more neutral view, acknowledging that accessing finance is a painful process irrespective of gender – with no particular gender-based differences.

## Appendix A.6 Feedback on PwC training programme

**The WEs from the treatment group were very positive about the PricewaterhouseCoopers (PwC) online business training programme.** The fact that PwC was carrying out the training and participants were selected based on an interview, were stated as motivating factors for entrepreneurs to apply for and participate in the training. They were also extremely satisfied with the communications and the overall organization of the training programme. One entrepreneur stated that she had written a letter to PwC commending the training programme. The lecturers conducting the training were stated to be of high quality and the training designed in such a way that it was helpful even for those who had no prior knowledge of the topics covered. There was common agreement that the PwC trainers were very helpful and would go out of their way to answer calls and even call back entrepreneurs to assist them with their inquiries/take away doubts. Some entrepreneurs stated that their children also participated in the online sessions, helping them out with the technical aspects and also with understanding areas that were difficult.

**All participants stated that they had received the business training. A majority of them had submitted their business plans and had received their training certificates.** A few issues prevailed relating to not receiving e-certificates, misplacing e-certificates, and a few requests were also made for making available a hard copy of the certificate. The participants were aware of the training's completion criteria (which included participating in 90 percent of the online training modules, performing prescribed e-learnings, completing the business plan, and presenting the business plan to the trainers and bank representative).

**The entrepreneurs had been made aware of the training through multiple sources,** such as newspaper advertisements, Facebook advertisements, information through banks, and through known contacts (friends and family) within the business field, through the National Enterprise Development Authority (NEDA), Industrial Development Board, Export Development Board, Vidatha Resource Center, through divisional secretariat offices and through WhatsApp links. Some entrepreneurs had also shared information about the training with other entrepreneurs, who had then gone on to receive the We-Fi scheme despite the original informant not receiving it.

**When asked if they preferred online training over physical training, the entrepreneurs seemed to be aware of the advantages and disadvantages of both modes of training delivery.** Online training was stated to be advantageous since no travel was required, saving valuable entrepreneurial time. The online availability of all materials, assignments being emailed that can be reviewed at one's own convenience, and online meetings being safe and hygienic (in the COVID context) were stated as other advantages relating to the online mode. Some factors in favour of physical in-person training included distractions in the home environment, the possibility for interaction and networking among entrepreneurs participating in the programme, greater convenience in clarifying doubts by



asking questions, greater opportunities to express oneself, technical problems relating to information technology and the lack of sufficient IT knowledge.

**When asked for suggestions regarding training time, there was no particular consensus among entrepreneurs on a suitable time-slot for carrying out training.** Off-peak hours were considered more beneficial by some who were extremely busy with their enterprises during peak hours. Peak hours were preferred by some who stated that during such peak hours everyone was busy, including their children, thus limiting distractions. Evenings were also considered too hectic, with household chores and late-night hours making it difficult to remain focused.

**In terms of improving training content, entrepreneurs requested more basic IT related and computer technology related training.** Entrepreneurs stated that they found it difficult to familiarize themselves with technology at their current age, hence requiring more basic knowledge. Several entrepreneurs were interested in obtaining more in-depth knowledge on accounting and financial management, hence requiring more time allocation for such topics. The need for gaining further insights into performing market surveys, paying careful attention to competitors' profitability and future planning for businesses was also deemed important.

**The possibility for lecturers to connect the different topics back to the foundational roots of profitability and business sustainability was stated as being important to promote better understanding and motivation within the programme.** Suggestions were made to improve the e-learning platform within which the training was conducted. Problems related to not being able to stop training videos at specific preferred points in time in order to replay them and better understand concepts was considered a major issue. Another specific requirement stated by the entrepreneurs was the need for a mentoring forum as part of the training, where entrepreneurs are able to discuss various issues/injustices faced by women that they are uncomfortable with discussing even with their own spouses. The FGD moderators from KCG explained to the groups that the technical difficulties have now been rectified in a new platform called 'SME connect' that has recently been launched and that features more resources including free unlimited mentoring for female entrepreneurs. The entrepreneurs were also given information on other resources, such as the National Enterprise Development Authority's (NEDA) online trade portal named 'Made in Sri Lanka'.

**A possibility for including technical aspects relating to different industries was also discussed, where potential resources such as the Sri Lanka Export Development Board (EDI) and the Industrial Development Board (IDB) could be considered as relevant options.** Participants felt that the sessions on business plan development could be better conducted in person than online. Participants also felt that when screening for training participants, it would be better to select entrepreneurs who are operating their enterprises well and are genuinely interested in the training programme.

**When asked about the most useful aspects of the training, many stated that the section on accounting and bookkeeping was very important.** Entrepreneurs who had previously outsourced their accounting to third parties, were now able to do the accounts themselves, only requiring the approval/stamp of external accountants at a much lower price. The training on how to develop a business plan was also stated to be extremely helpful. Business plans were now created with a much better understanding. A few entrepreneurs had created a business plan for the first time. Similar to accounts, some had to previously hire an external party to have their business plans done. They were now capable of doing it themselves with accurate first-hand information. Instead of creating a business plan merely to obtain loans, they stated that they could now prepare a business plan for themselves in order to define what goals needed to be achieved by the business in the future.

**A few entrepreneurs stated that they had learnt to be vigilant, frequently performing product pricing and costing more accurately, revising product/service prices accordingly.** The importance of inquiring about competitors' products, their pricing and sales were stated to be important concepts learnt from the training. Some stated that such vigilance had enabled them to calculate and foresee the profitability of different business operations, making the transition to more profitable ones whilst terminating loss making ones.

**Human resource management was another topic considered important by entrepreneurs.** The entrepreneurs were also content with the improvement of their ICT skills, stating that they now had the potential to incorporate more technology within their businesses. The ability to network among entrepreneurs, place orders and help each other within the group was considered a valuable opportunity by some.

**Overall, the entrepreneurs stated that their expectations of the training prior to joining the programme were exceeded and that they a) would recommend the training highly to others and b) participate in future training sessions designed at a more advanced level.** A few entrepreneurs held the view that their expectations regarding the training and its benefits would have been realized to a greater extent if the situation in the country had been better, enabling them to implement the skills learnt within the training. Due to the current economic crisis, entrepreneurs were disappointed that even their final project reports were invalidated. For many, the We-Fi scheme was not the reason for applying for the training; they had only become aware of the scheme during the training itself.

**When asked whether the training had equipped entrepreneurs to handle challenges better, several entrepreneurs stated that completing the training during a difficult time period (such as COVID) in itself had given them the courage and determination to continue their business activities even in the face of dire circumstances.** "From the application process to the difficult time period during which the training was held, the entire process gave us courage", an entrepreneur stated. The entrepreneurs stated that the training had given them a clear idea about the difference between a businessman/woman and an entrepreneur; anyone can be a businessman/woman, but entrepreneurs are different. They are resilient and able to absorb both profits and losses.

Thanks to the interest in business development initiated through the training, a few entrepreneurs had enrolled themselves in postgraduate programmes and some were planning to get MBA-level training in the future.

*It should be noted that the comparison group entrepreneurs did not undergo the PwC business development training. When asked whether they knew of or had participated in such a training, none of them were aware of such a training programme.*

## Appendix A.7 Reflection on KCG surveys

**KCG conducted three surveys of both the treatment and comparison group in two main formats.** For the treatment group, a face-to-face baseline survey prior to their participation in the business development training between April 2021 and February 2022 was followed by an end-line telephone survey conducted just before the FGD. For the comparison group on the other hand, a single face-to-face survey was conducted prior to the FGD. Contact details and willingness to participate in an FGD were obtained from these recently concluded surveys.

**The surveys were generally well received by the different entrepreneur groups.** The overall survey experiences were described to be very interesting, friendly and professional. The enumerators were commended as being patient, persistent and respectful in approaching participants, introducing the survey, explaining questions and recording entrepreneur responses. In instances where grievances had been sternly expressed, especially with regard to problems associated with the We-Fi loan scheme, the enumerators were stated to have been courteous in their approach. The enumerators had been flexible, making appointments at times convenient to the entrepreneurs, often tolerating interruptions that arose due to their busy schedules, stopping and even re-scheduling interviews whenever required. The entrepreneurs expressed their appreciation for the inquiries and follow-ups made through the We-Fi project on the well-being of women's enterprises, especially during the current troubling times. "We feel as if someone out there actually cares about what we do", was an actual statement made by an entrepreneur at an FGD. Some entrepreneurs acknowledged the survey experience as being a useful self-evaluation and awareness exercise. They were also appreciative of the gift that was given as a token of gratitude for their time and effort in participating in the survey.

**The entrepreneurs also mentioned several inconveniences when doing the survey interview.** These included the survey requiring more than an hour and a half of the participants' time for completion. Also, the sensitive information collected created some suspicion in the minds of certain entrepreneurs. Some were concerned that the information might find its way to a competitor. Others were concerned about the possibility of this information ending up in the hands of the Inland Revenue Department for taxation purposes. As a consequence, the entrepreneurs, especially within the treatment group, indicated that they had not been truthful when providing information about sales and profit figures. However, entrepreneurs within the comparison group which operated on a smaller scale expressed the opinion that they had been more up-front with their financial information. The repetition of questions, especially with regard to different time periods, was considered to be cognitively demanding and monotonous by some enterprises. Some thought that they were checks that had been put in place to measure the accuracy of responses given. One entrepreneur even commended this feature of repetition as good questionnaire design. Suspicions related to information collection as well as fears generated due to the current crisis and its associated increase in crime rates, were stated as being somewhat mitigated through proper enumerator introductions, time taken for building rapport, the presentation of identification and project documentation, as well as the token of appreciation provided. The early communication that entrepreneurs were allowed to refuse/reject any question, as well as the ability to quit the survey at any point in time, along with the guarantee provided of maintaining confidentiality of given responses, were all stated to be extremely important in motivating entrepreneurs to participate in the survey.

**Entrepreneurs provided further feedback for subsequent survey attempts.** One such suggestion was to reduce the questionnaire length. Another suggestion from the treatment group who had their most recent survey experience in the form of a telephone survey, was to have face-to-face interviews for better information exchange. Another suggestion was using existing communication channels utilized for official PwC communications with entrepreneurs (e.g. WhatsApp group) to communicate information about the survey with the aim of mitigating any miscommunications and suspicions. Further recommendations made were utilizing the same enumerator for subsequent survey rounds, being accompanied by someone from the local community, as well as informing religious institutions within the community (e.g. community mosque) prior to field work. It was also suggested that the enumerators should familiarize themselves with each entrepreneur's business profile prior to contacting them - this would result in a more useful survey interview.

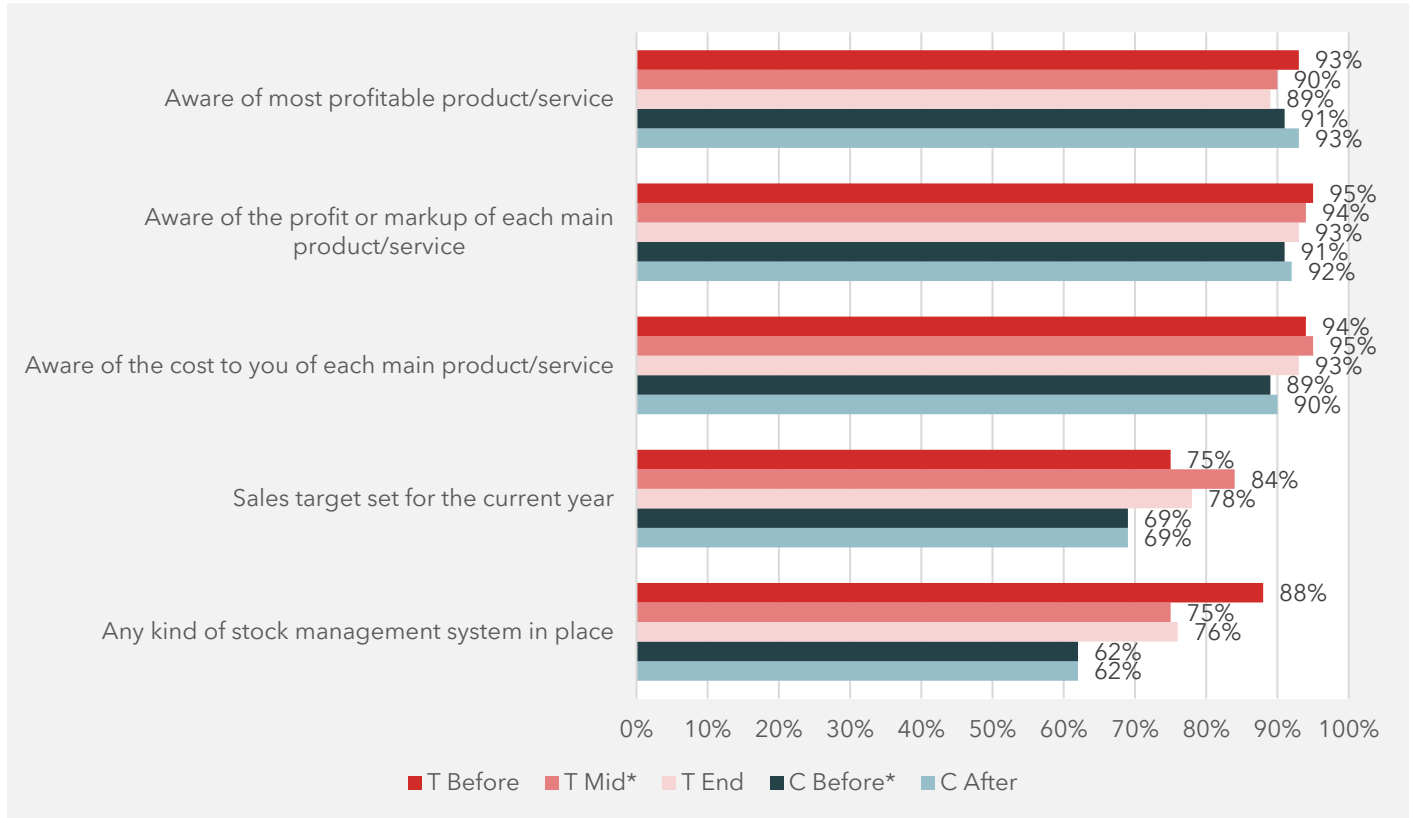
## Appendix A.8 Entrepreneur concluding comments

**At the end of the treatment and comparison group FGDs in Kandy, participants requested the following concluding points to be emphasized to state actors and other parties responsible for SME development.** WEs from the treatment group who had undergone the PwC business development training stated that the 200 entrepreneurs who completed the business training and received certificates had done so exerting great effort and that these entrepreneurs deserved to reap the benefits of the grant programme. These 200 enterprises should therefore be grouped and given special preference in obtaining the We-Fi loan/grant. If the loan/grant scheme is still available and on offer, they strongly requested that the information be made available directly to them. While PwC was responsible for the training and ADB for funding the We-Fi programme, the entrepreneurs stated that there was nobody coordinating the local banks and inquired about the possibility of allocating someone to coordinate the banks in carrying out their responsibilities pertaining to the We-Fi programme. A further request was to have ADB appoint someone like an ombudsman, enabling entrepreneurs to state their grievances with regard to the unfair treatment by banks they had experienced when applying for the We-Fi scheme. The need for such schemes to be more accessible to young entrepreneurs/new start-ups was also highlighted. The difficulties experienced by younger entrepreneurs to satisfy collateral requirements or finding guarantors were stated as being discriminatory against such young entrepreneurs. Hence, the need to setup a fund by organizations such as ADB that covers collateral/guarantor requirements for young entrepreneurs was emphasized. The need for entrepreneurs, especially those operating within the same industry, to work together (to synergize) in order to survive and thrive during challenging times was a point made by several entrepreneurs within the comparison group. The intricate relationship between suppliers and producers and their ethnicity being irrelevant for the nation to succeed was also discussed extensively. The need to change attitudes was also expressed.

**Entrepreneurs from the comparison group who had not undergone a business development related training were more adamant about receiving such a comprehensive training.** They highlighted the need to revive the training culture that used to exist through government GA offices. Even though they had not been exposed to the We-Fi scheme, they too emphasized the need for concessionary loans at lower interest rates. Those involved in agricultural enterprises in vulnerable areas were concerned about the threat of wild animals and sought immediate state intervention.

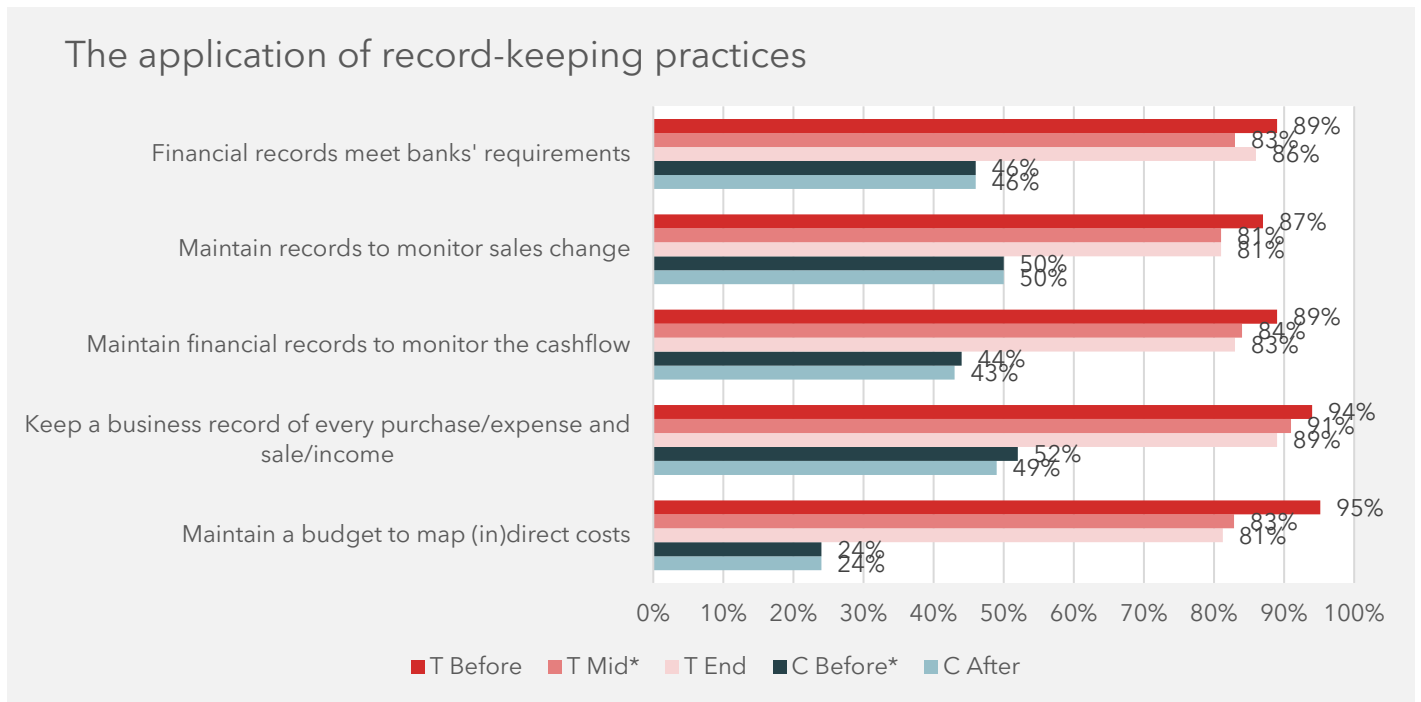
# Appendix B Additional Graphs

Figure B.1 Most respondents had stock management practices in place



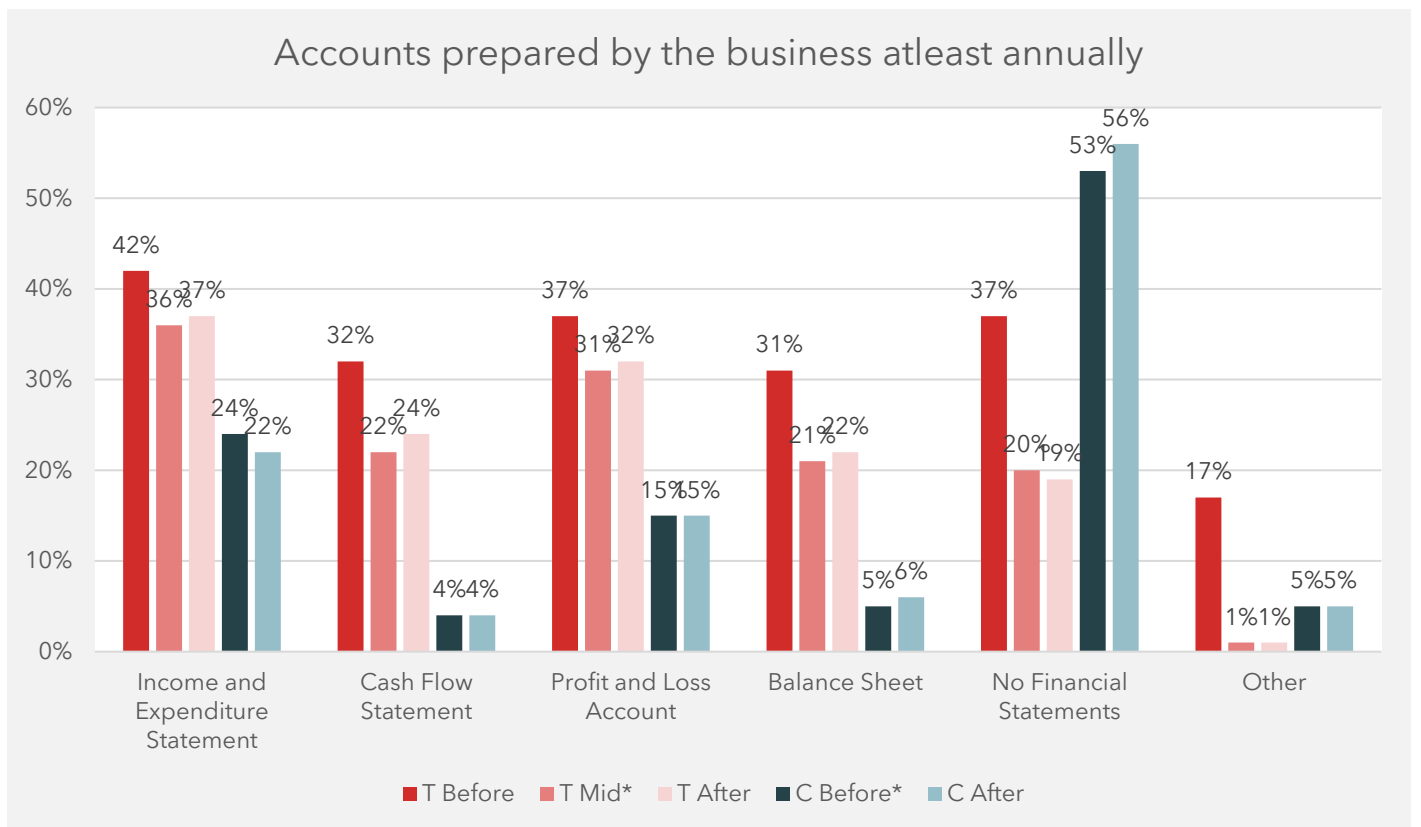
Source: SEO and KCG

Figure B.2 There is no evidence that record-keeping practices improved over time



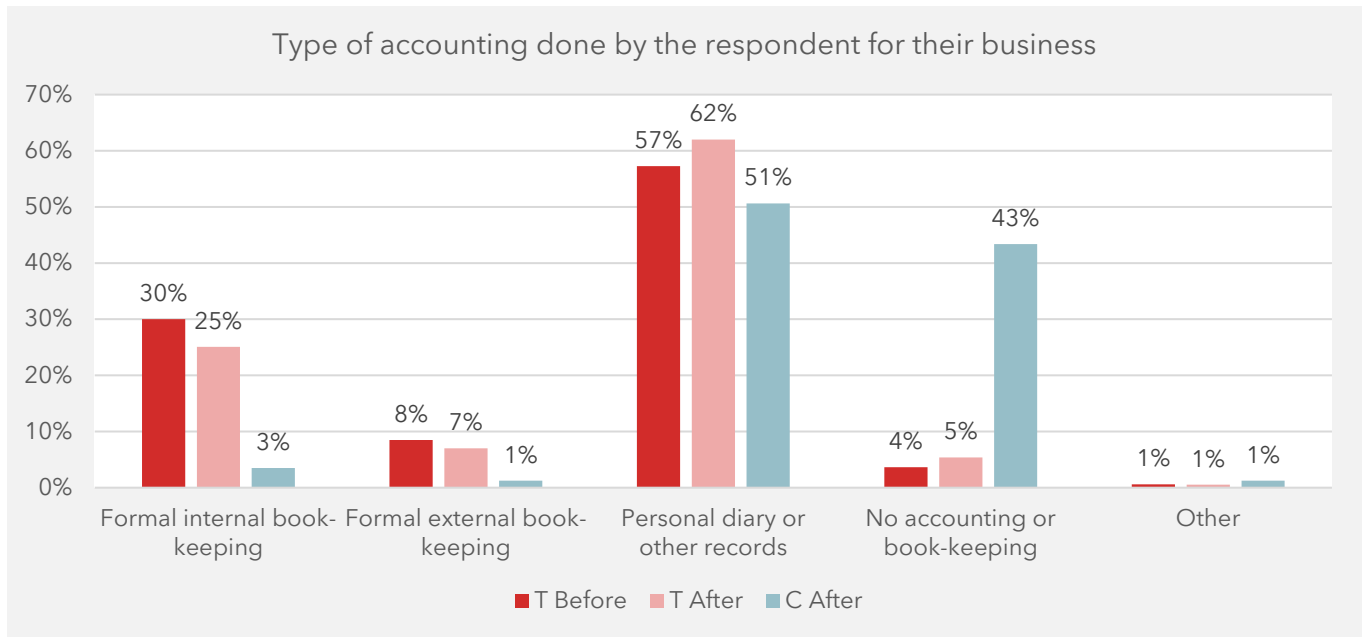
Source: SEO and KCG

Figure B.3 More respondents in the comparison group prepared no financial statements



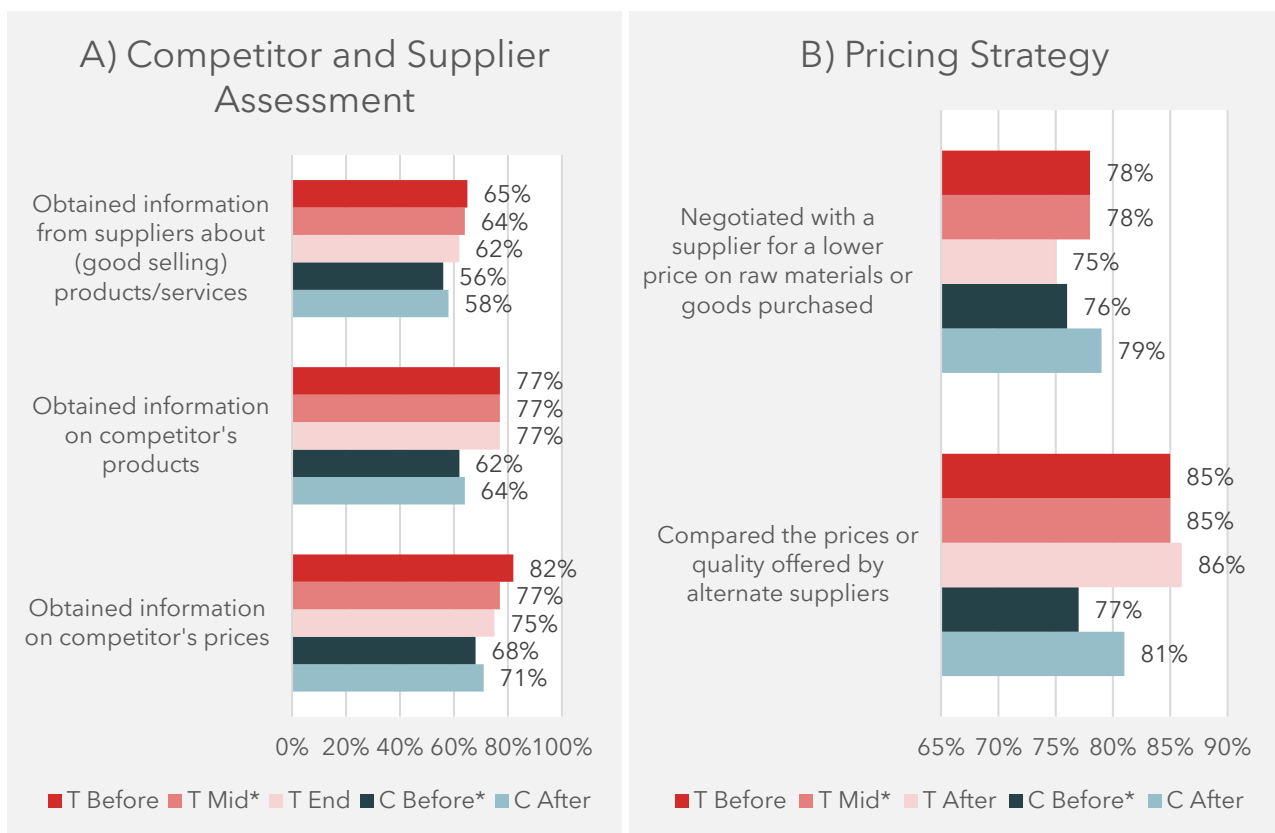
Source: SEO and KCG

Figure B.4 Most respondents maintained accounts of the income, assets and expenses of their business



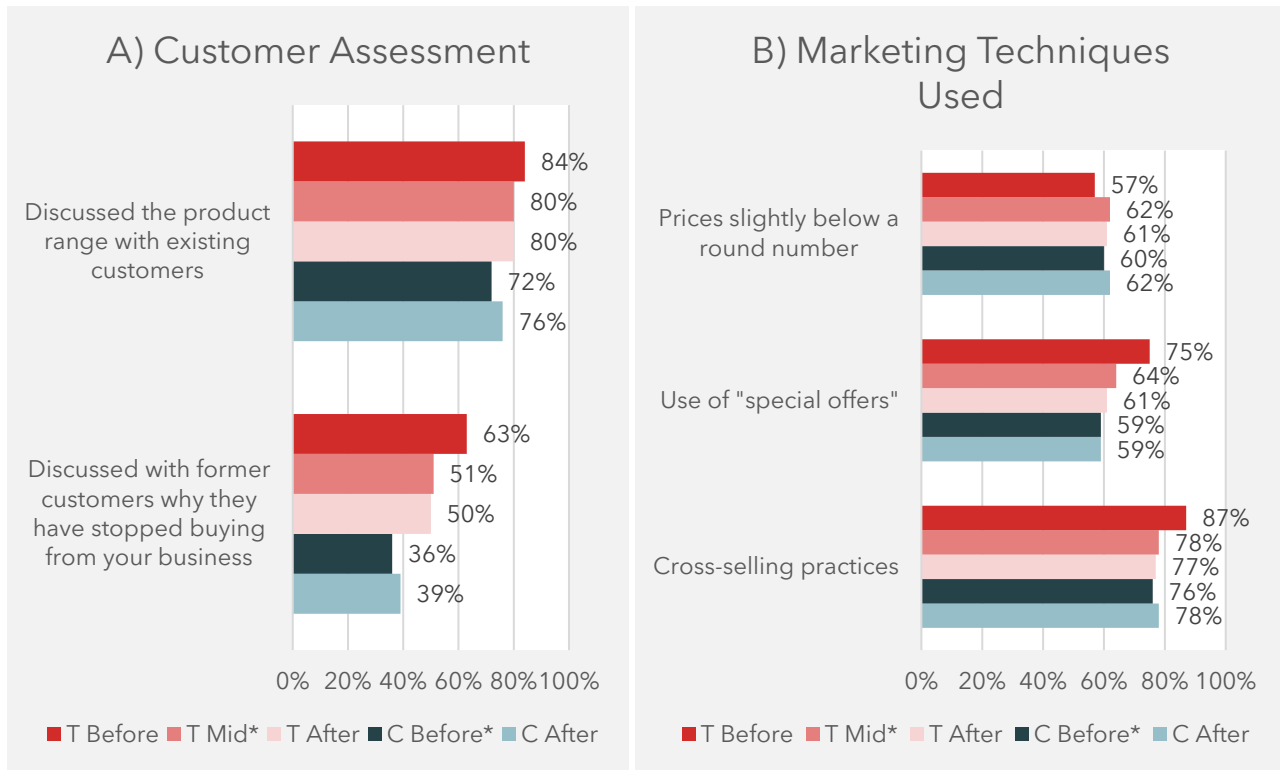
Source: SEO and KCG

Figure B.5 Respondents maintained a considerably high level of competitor and supplier assessment



Source: SEO and KCG

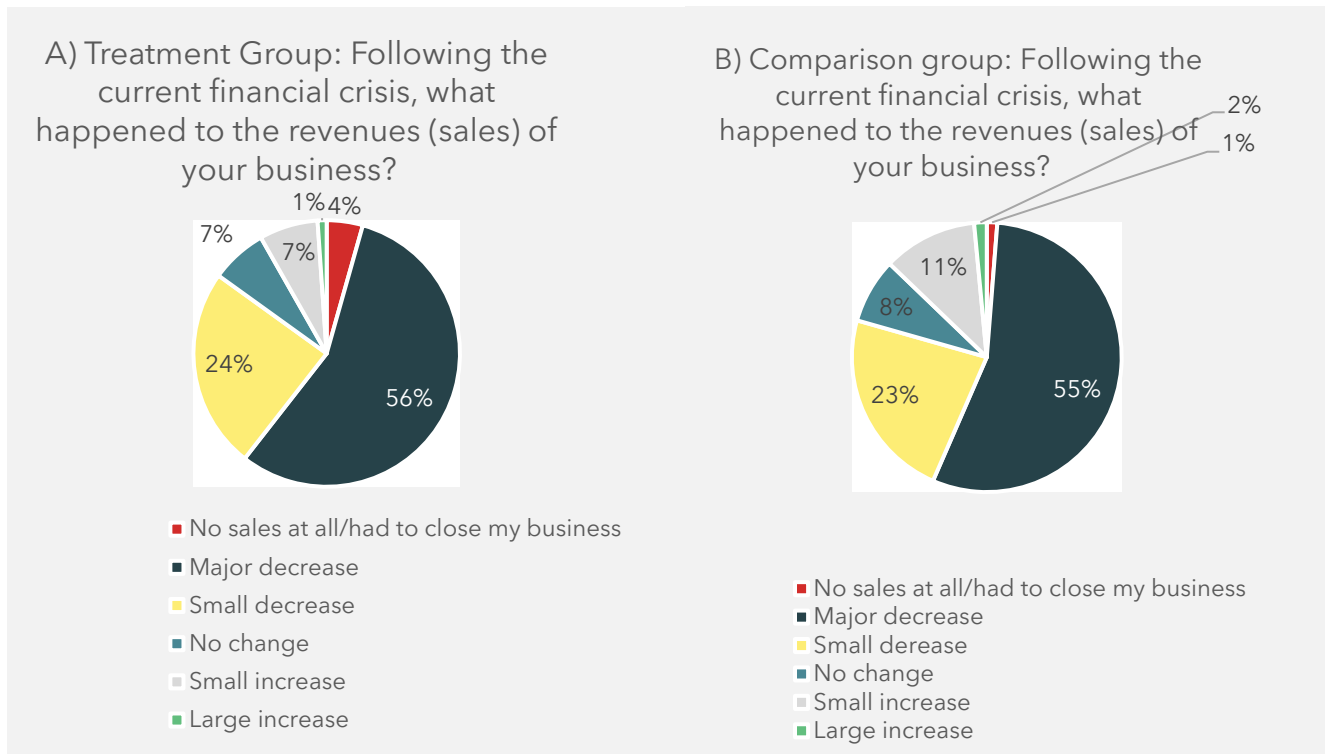
Figure B.6 Fewer endline businesses used customer assessment and marketing techniques



Source: SEO and KCG

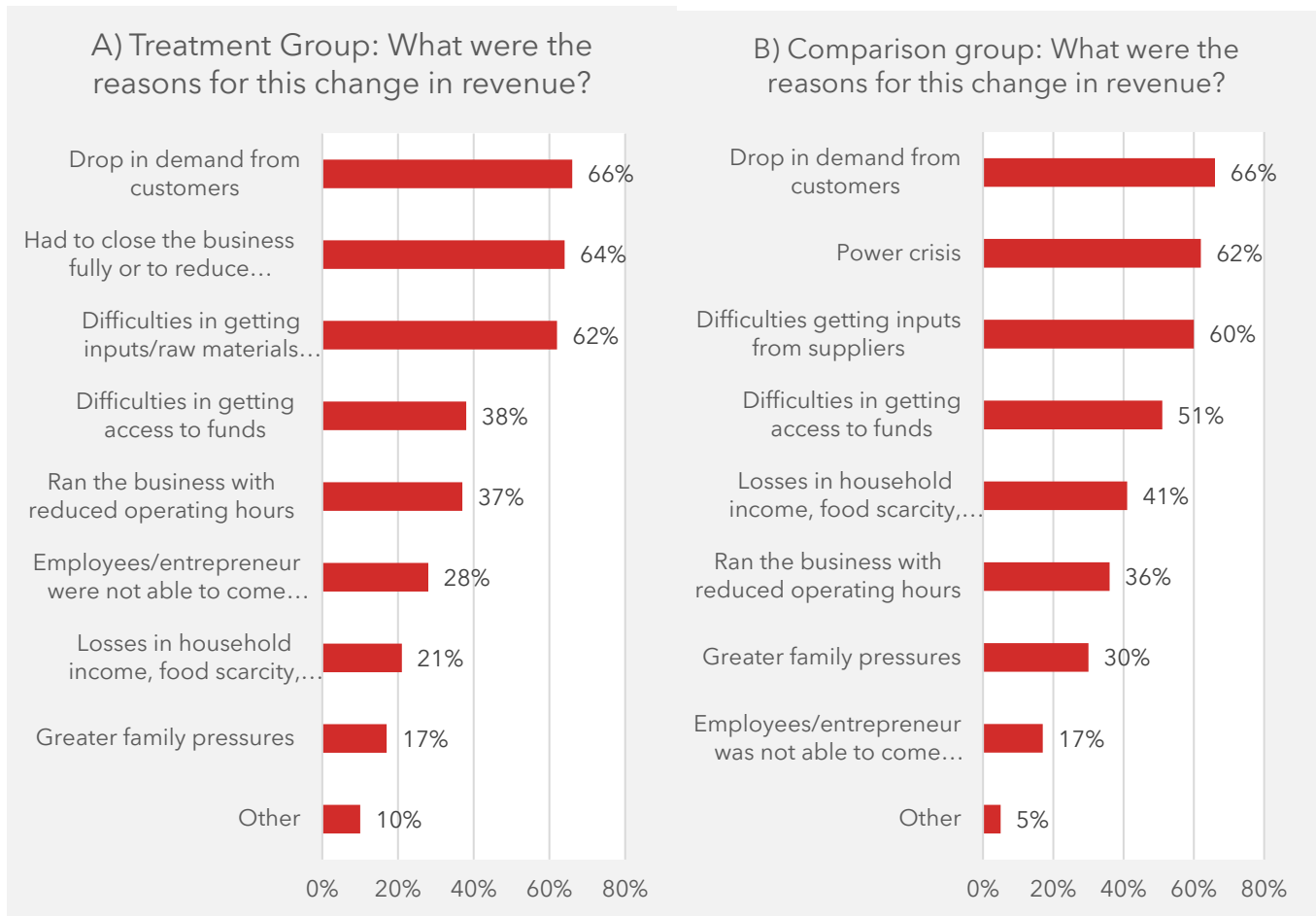


Figure B.7 Most treated and comparison businesses saw their revenues decrease following the financial crisis



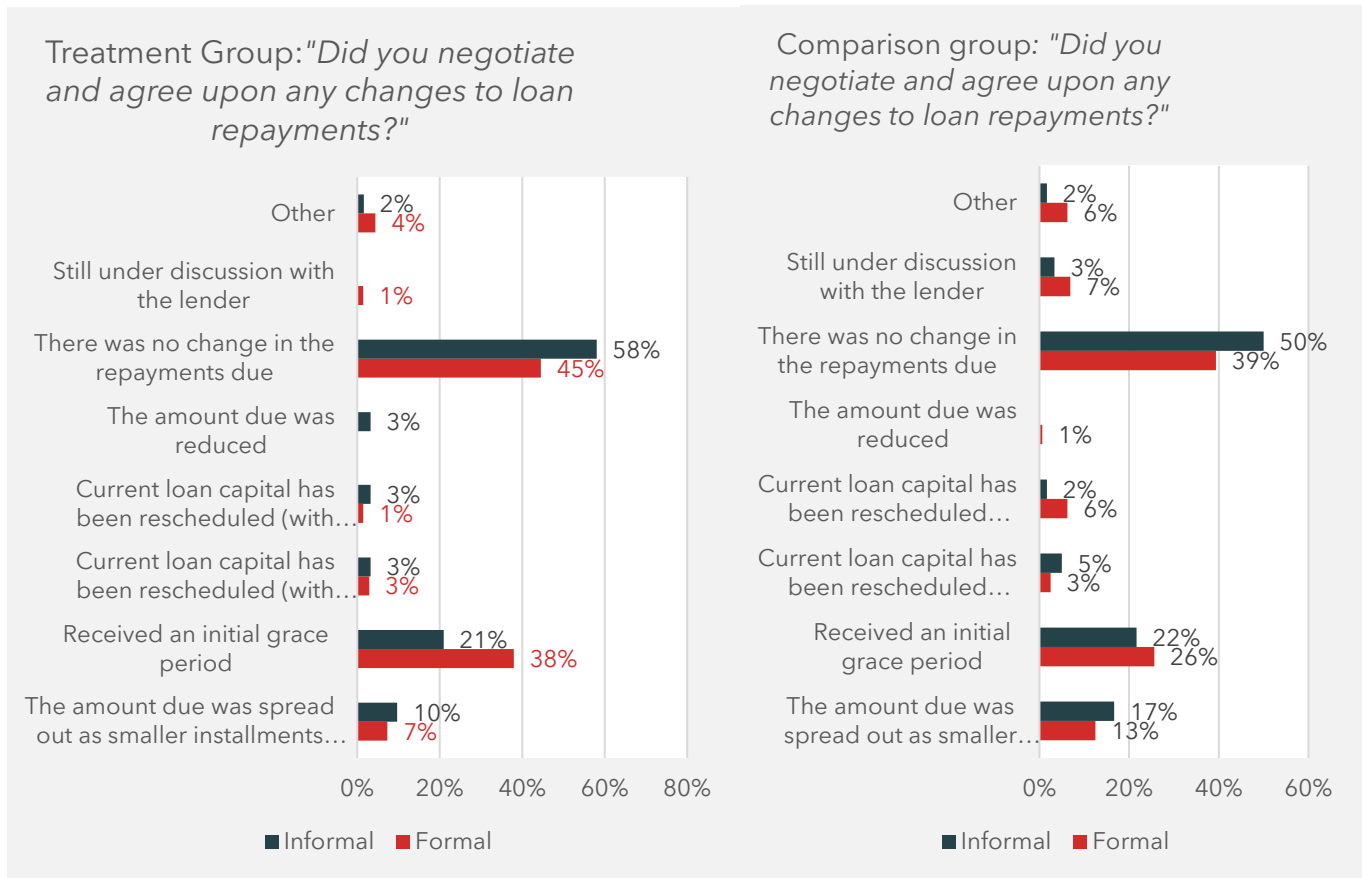
Source: SEO and KCG

Figure B.8 The power crisis, reduced customer demand and difficulties in accessing inputs were major causes for revenue decreases



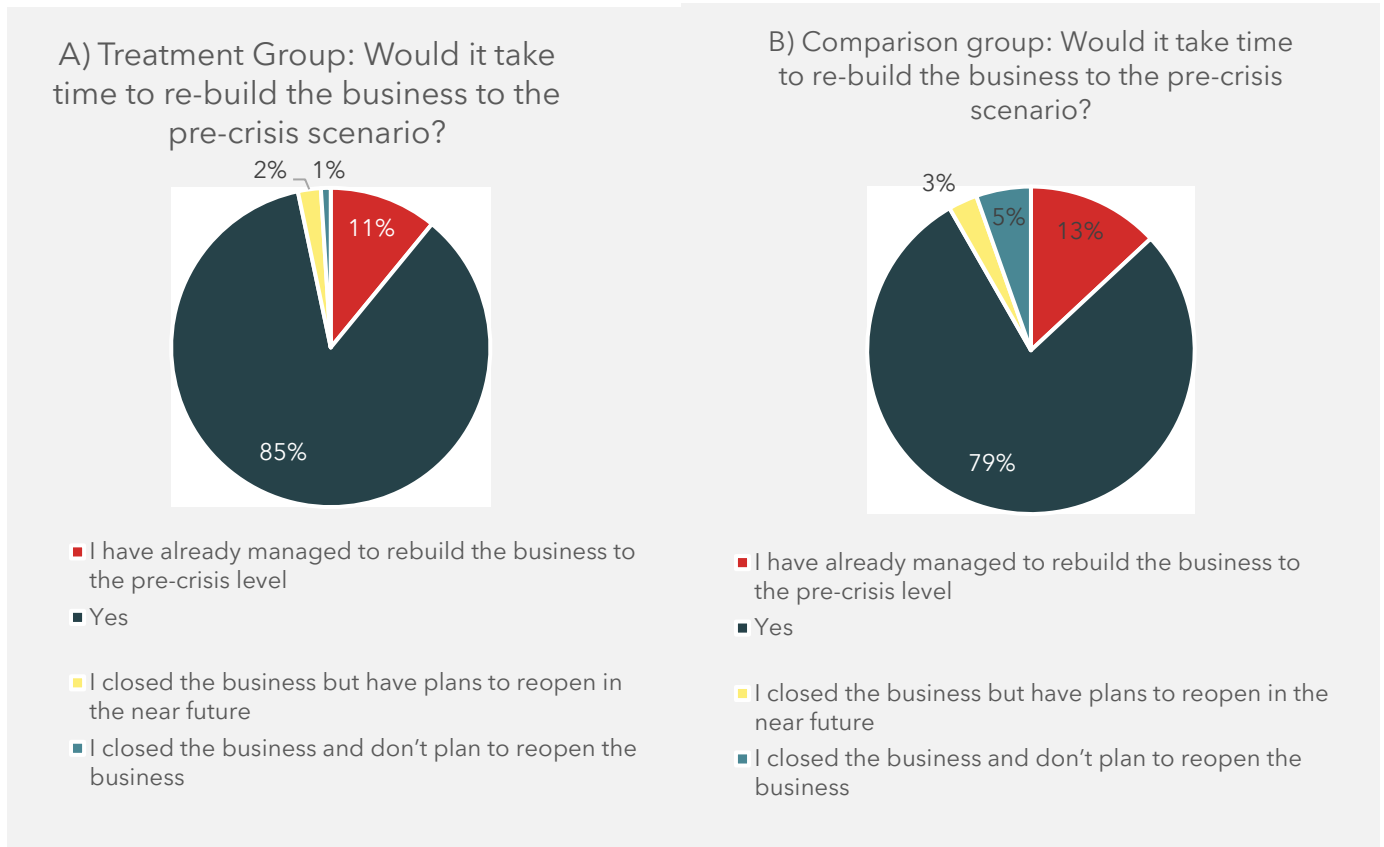
Source: SEO and KCG

Figure B.9 Formal sources were more flexible with loan repayments than informal sources



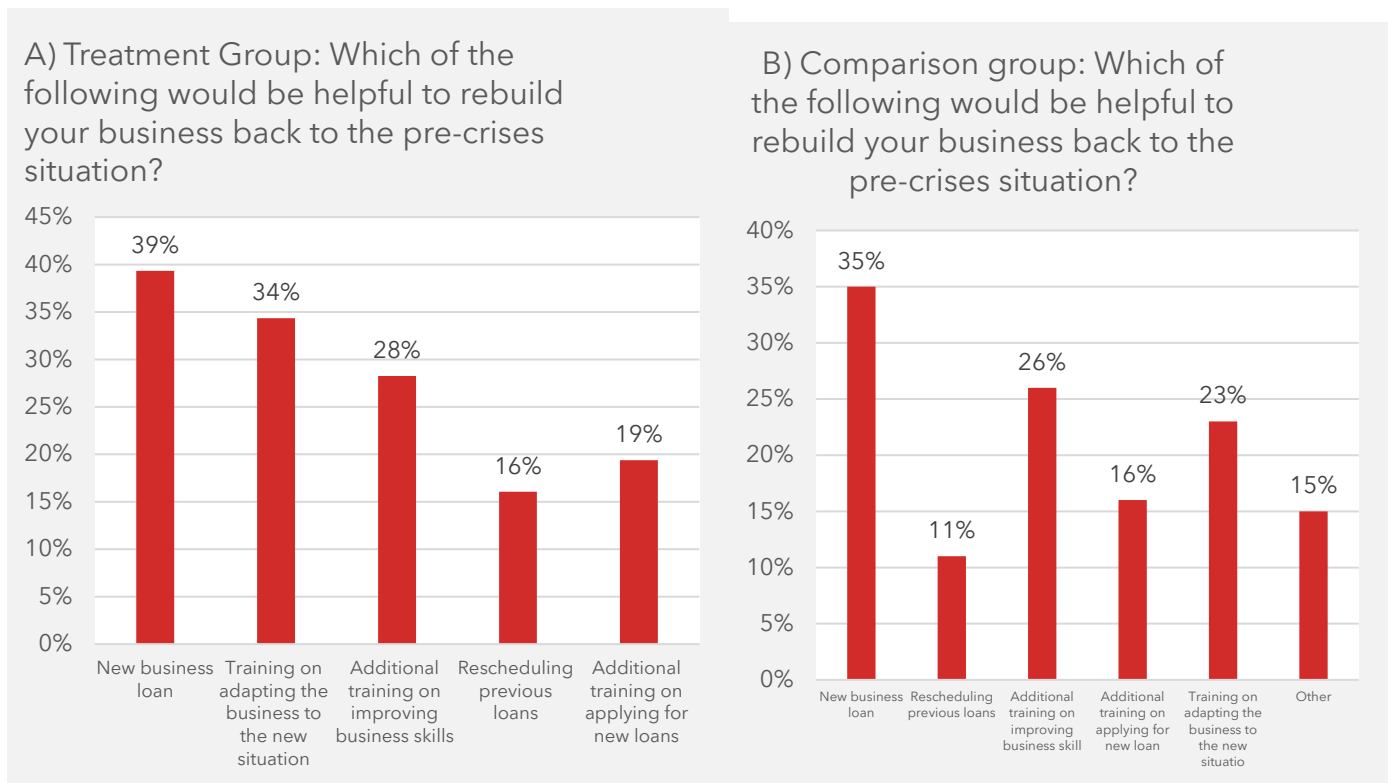
Source: SEO and KCG

Figure B.10 Most respondents reported that it would take time to rebuild their business to what it was before



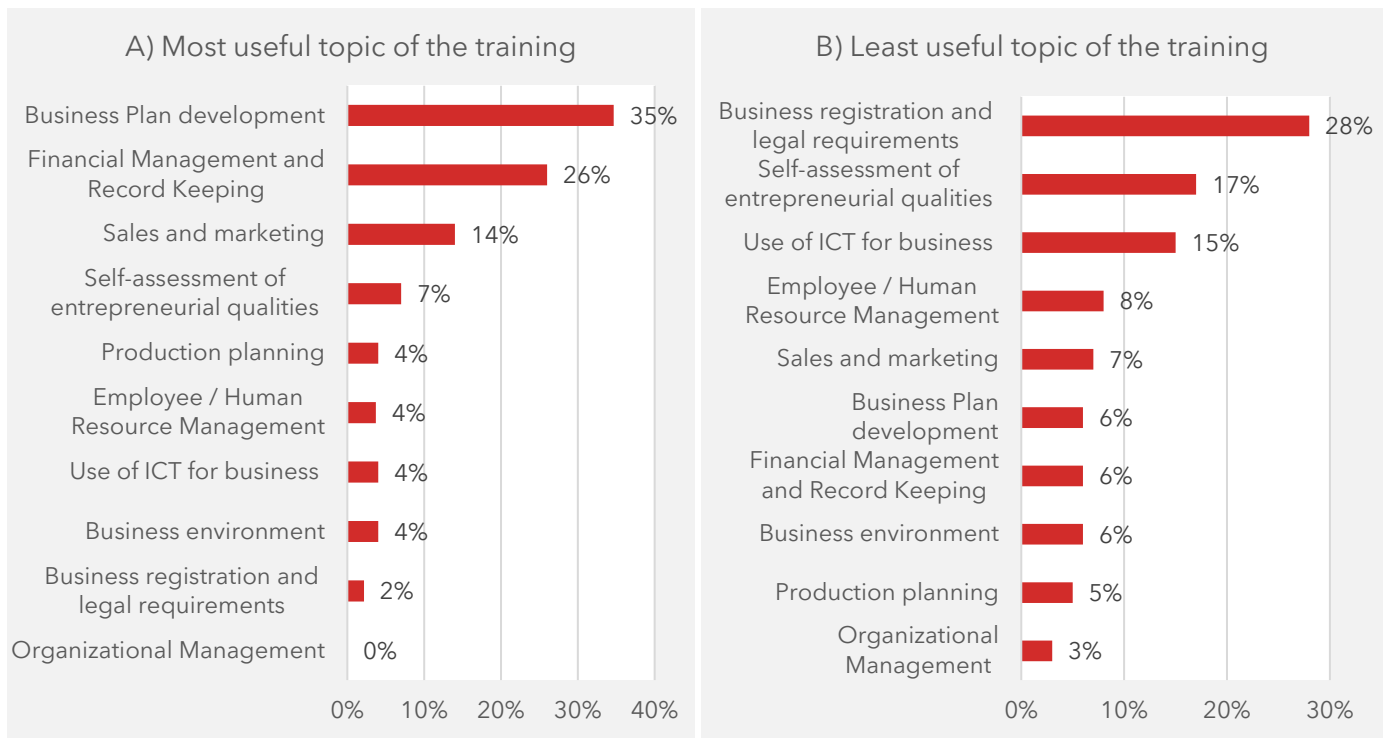
Source: SEO and KCG

Figure B.11 Most respondents reported that new business loans and follow-up business training would be most helpful in rebuilding their businesses



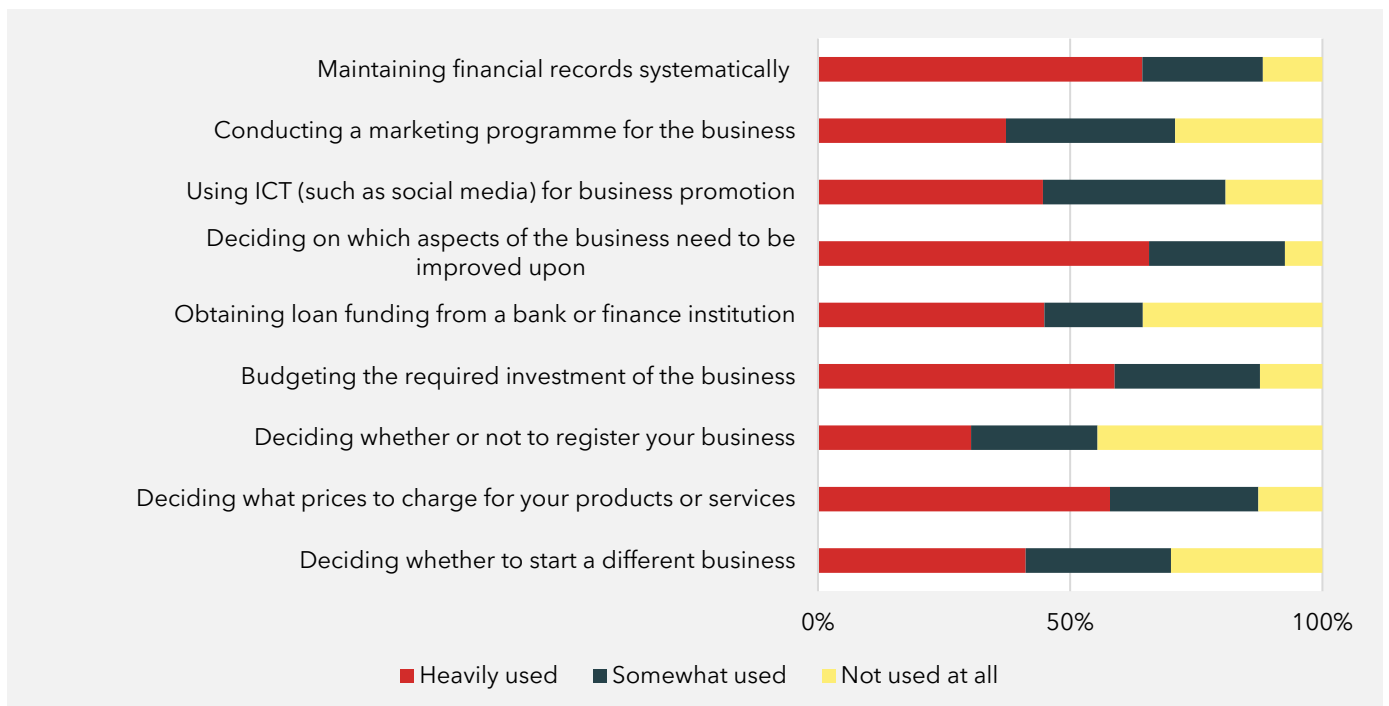
Source: SEO and KCG

Figure B.12 Business plan development was most commonly identified as the most useful topic of the training; business registration and legal requirements as the least useful



Source: SEO and KCG

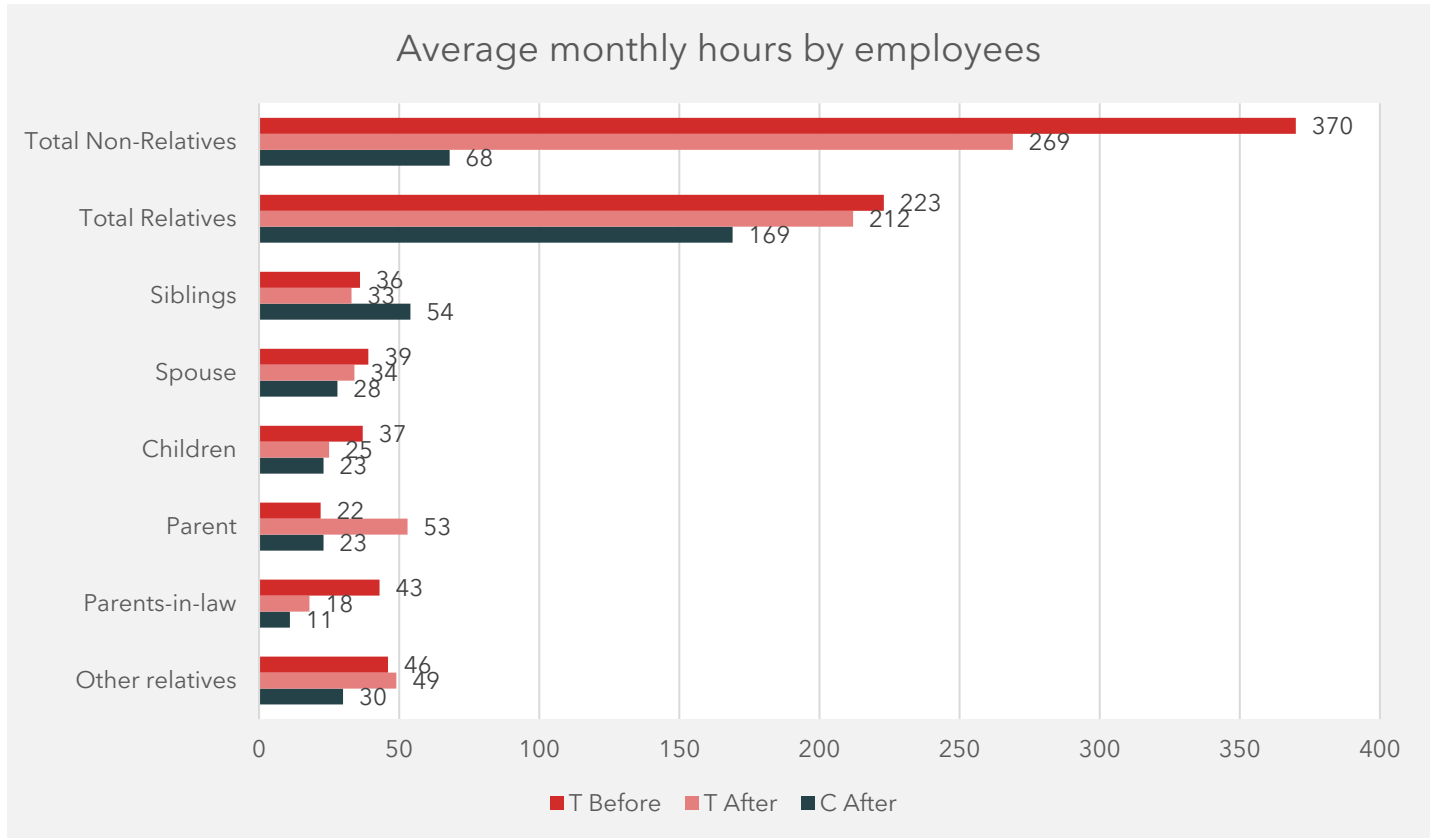
Figure B.13 Participants were sometimes unable to practically apply what they learned in the training course



Source: SEO and KCG

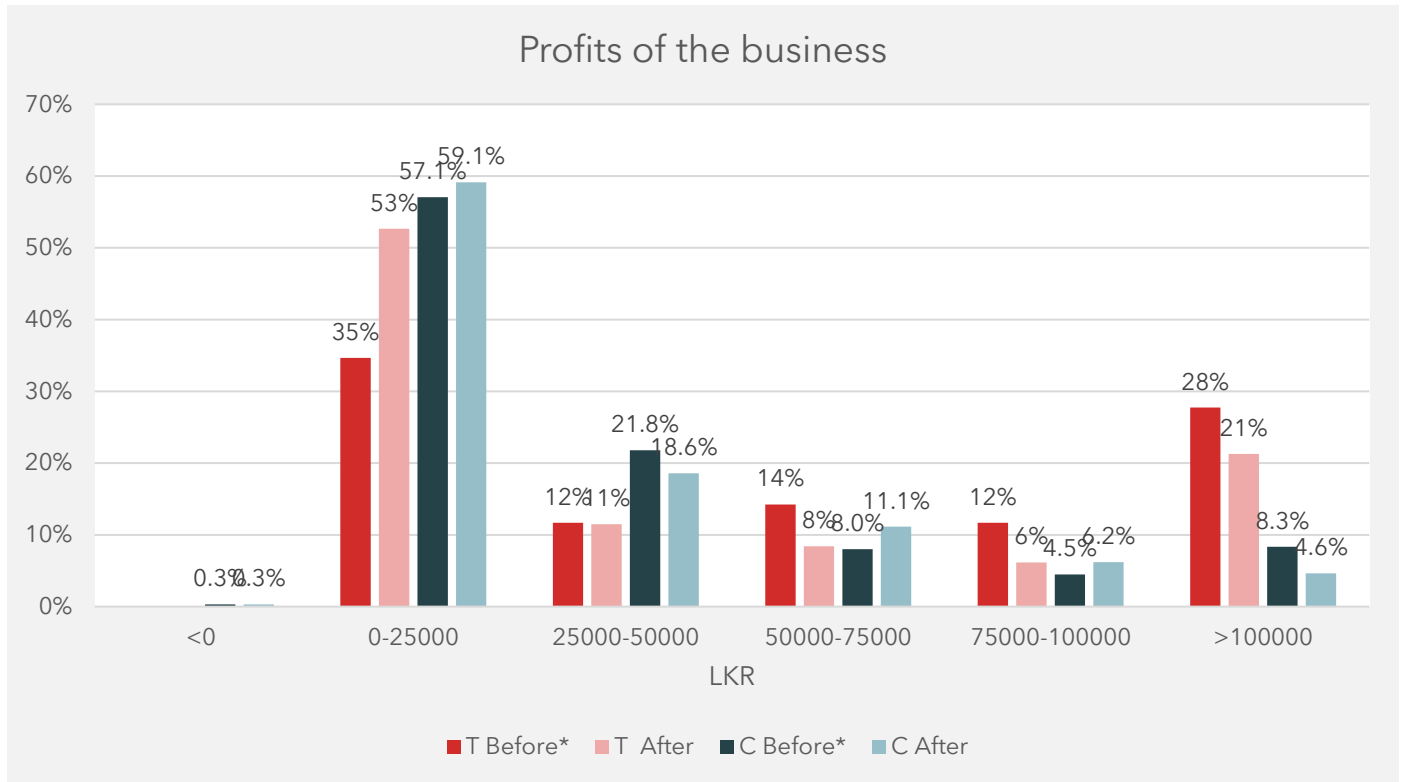
**SMEs from the comparison group employed a larger percentage of relatives than the treatment group.** Figure A.14 displays the average total number of hours worked by all employees within a certain category. Treatment group SMEs mostly employed people from outside the family sphere - with relatives working around 223 hours a month in total, while non-relatives worked 370 hours. In contrast, comparison group SMEs mostly employed relatives - with relatives working around 169 hours per month, while non-relatives only worked 68 hours a month.

Figure B.14 Employees were mostly non-family members in the treatment group, but largely relatives in the comparison group



Source: SEO and KCG. The graph shows the sum of all employees' hours in the respective group.

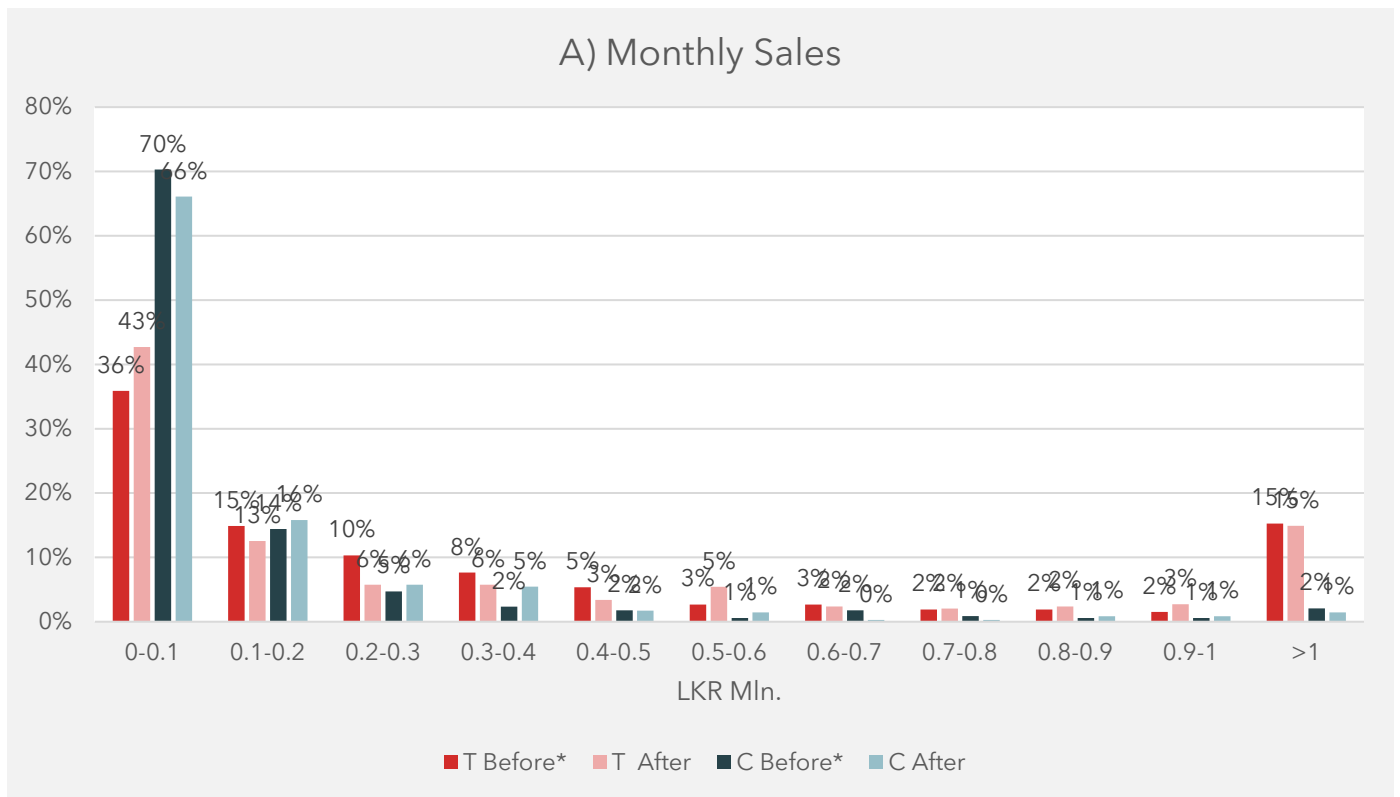
Figure B.15 The treatment group’s profitability worsened to a greater degree



Source: SEO and KCG

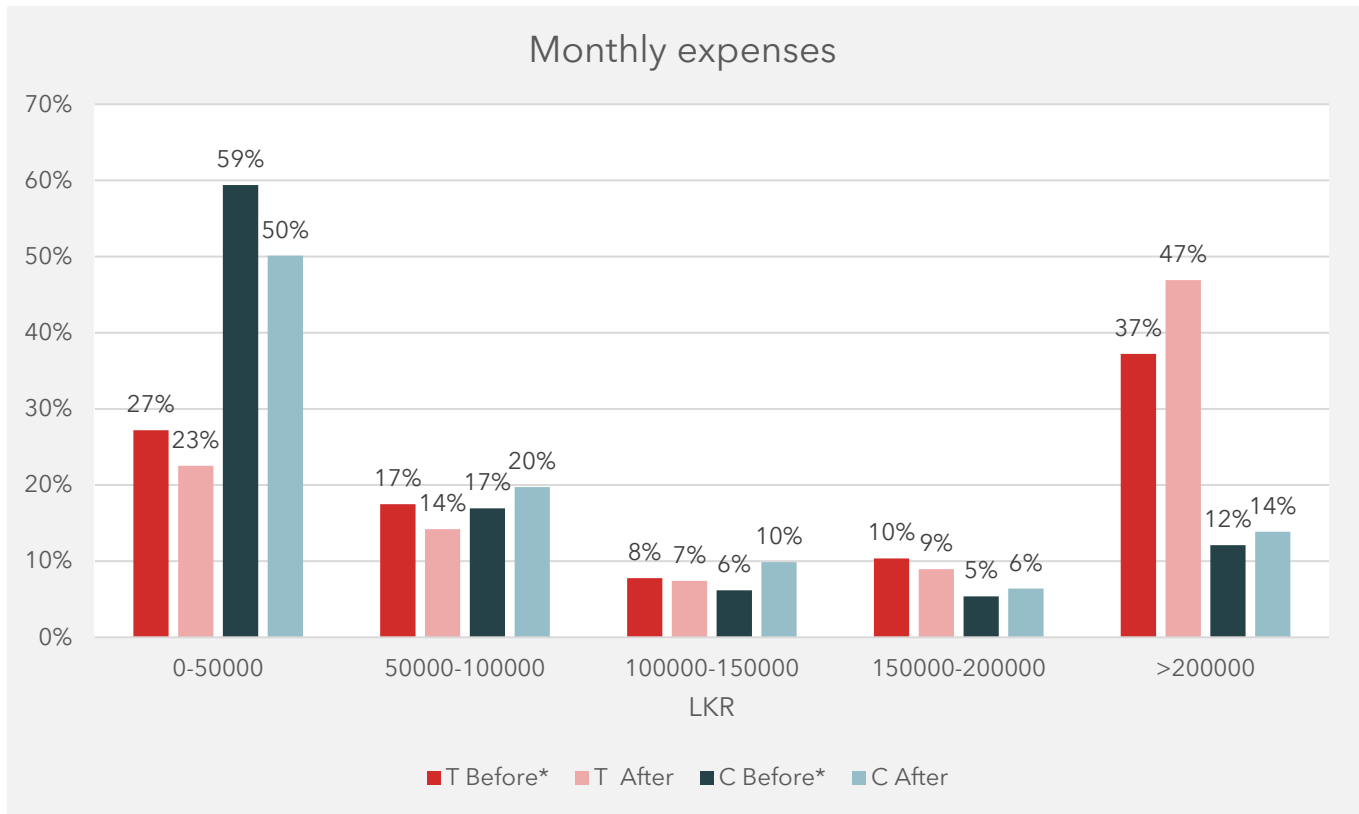


Figure B.16 Sales went down in both groups during the last year of the evaluation period



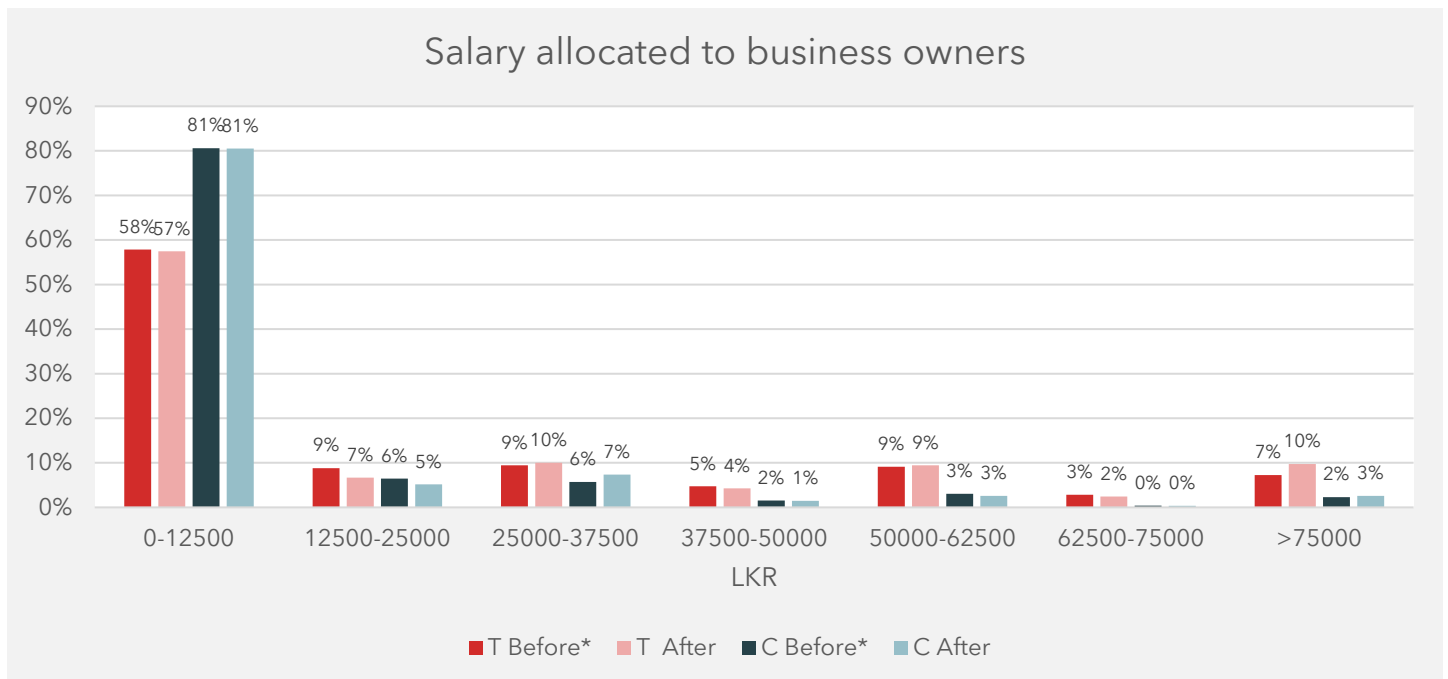
Source: SEO and KCG

Figure B.17 Monthly expenses increased for both the treatment and comparison group



Source: SEO and KCG

Figure B.18 More than half of the business owners had a salary of less than LKR 12,500



Source: SEO and KCG

## Appendix C Robustness Checks

## Appendix C.1 OLS Regressions

**As an alternative to the DiD design (the validity of which depends on e.g. the parallel trends assumption), we conduct simple OLS regressions comparing the comparison and treatment groups after the treatment.** These regressions compare the treatment and comparison groups strictly after the training (i.e. when 'after' = 1), following the below model structure:

$$Y_i = \alpha + \beta_1 Treatment + X_j + \varepsilon_i$$

Here,  $Y_i$  represents the outcome variables of interest – profit, sales, expenses, salary allocated to the business owner, number of paid employees (both full-time and part-time), and the business practices score. The vector of controls,  $X_j$ , remains the same as those included in the DiD regressions (see Section 2.4).

**Similarly, we also conduct before-after OLS regressions only for the treatment group.** These regressions compare the treatment group’s business practices scores before and after the training, following the below model structure:

$$BusinessPracticesScore_i = \alpha + \beta_1 After + X_j + \varepsilon_i$$

**The models do not perfectly meet the OLS assumptions.** We test if the OLS assumptions (namely linearity, normality, homogeneity, and independence of residual error terms) hold for the models using the R base function which creates a diagnostic plot for each OLS model. We find that for several models with controls, especially for regressions on business outcomes, the graphs diverge from the pattern needed to meet the OLS assumptions. However, none of the diagnostics show a sufficiently large divergence from the ideal to justify not using this model.

**OLS regressions studying the impact of the treatment also show an insignificant impact of the training on business practices.** Table B.2 (column 6) shows the results of OLS regressions comparing the treatment and comparison groups after the training. It shows that training had an insignificant impact on business practices when including controls.<sup>21</sup> Similarly, Table B.1 shows that the business practices of the treatment group did not significantly increase after the training period.

Table C.1 A before-after OLS regression for the treatment group finds that the studied business outcome and aggregated business practices score did not significantly increase post-training

|             | (1) Profit   | (2) Sales     | (3) Expenses  | (4) Salary  | (5) Paid Employees | (6) Business Practices Score |
|-------------|--------------|---------------|---------------|-------------|--------------------|------------------------------|
| (Intercept) | 24515.555    | 20618.021     | -1396893.077  | -11845.488  | 10.636             | 0.739***                     |
|             | (344587.155) | (3670325.650) | (4014130.765) | (28051.006) | (57.176)           | (0.062)                      |
| After       | 219067.741   | 2970190.132   | 2507656.381   | -9371.711   | 22.204             | 0.047                        |

<sup>21</sup> Training had a positively significant impact on respondents’ aggregated business practices score when excluding controls

|                     |              |               |               |             |          |         |
|---------------------|--------------|---------------|---------------|-------------|----------|---------|
|                     | (332970.283) | (3546590.033) | (3871711.784) | (27105.339) | (55.181) | (0.058) |
| Education_11        | 1270.835     | 2760625.024   | 615229.043    | 12614.566   | -7.533   | 0.010   |
|                     | (362528.768) | (3861428.430) | (4222784.626) | (29511.538) | (60.233) | (0.066) |
| Education_12        | -64986.929   | -1797963.293  | 810581.350    | 11104.582   | 1.717    | 0.024   |
|                     | (398347.888) | (4242951.168) | (4639630.418) | (32427.381) | (66.045) | (0.071) |
| Education_13        | 99298.225    | 521601.693    | 982964.603    | 25329.008   | 9.662    | 0.037   |
|                     | (345162.255) | (3676451.252) | (4020843.392) | (28097.822) | (57.278) | (0.062) |
| Education_14        | -229005.466  | 228152.149    | 484598.905    | 89372.919** | 7.012    | 0.029   |
|                     | (415049.160) | (4420842.615) | (4831924.742) | (33786.943) | (68.787) | (0.072) |
| Education_15        | 61382.362    | 776443.537    | 1198042.916   | 14263.792   | -0.265   | 0.020   |
|                     | (358672.693) | (3820355.942) | (4178077.953) | (29197.635) | (59.479) | (0.064) |
| Education_16        | 138569.025   | 397209.410    | 4164491.588   | 16426.017   | 13.156   | 0.111+  |
|                     | (382336.669) | (4072409.728) | (4453886.760) | (31123.993) | (63.418) | (0.067) |
| Education_17        | 67308.574    | 3252335.257   | 3723210.903   | 28326.269   | 34.464   | 0.005   |
|                     | (355620.468) | (3787845.562) | (4142400.967) | (28949.170) | (58.962) | (0.064) |
| Sector_Services     | -121227.304  | 675345.715    | -392143.096   | 10647.883   | -9.752   | -0.023  |
|                     | (119089.422) | (1268465.624) | (1384400.990) | (9694.436)  | (19.738) | (0.019) |
| Sector_Retail/Sales | -14823.533   | -21905.813    | -772946.741   | 7708.706    | -10.927  | -0.016  |
|                     | (97578.540)  | (1039345.233) | (1135879.758) | (7943.350)  | (16.213) | (0.017) |
| Age of business     | -1388.485    | 6363.842      | 73447.711     | 1071.627**  | 0.013    | 0.001   |
|                     | (4505.163)   | (47986.168)   | (52412.478)   | (366.741)   | (0.752)  | (0.001) |
| Central Province    | 52518.068    | -366614.904   | -347293.191   | -12810.103  | -4.787   | -0.011  |
|                     | (125643.070) | (1338270.958) | (1463632.856) | (10227.934) | (21.165) | (0.023) |
| Southern Province   | 133391.772   | -646296.816   | 3364228.553*  | -1902.092   | 29.525   | -0.010  |
|                     | (128791.855) | (1371809.837) | (1500287.952) | (10484.259) | (21.750) | (0.022) |
| Eastern Province    | 464082.400+  | -601766.643   | 868726.352    | 24885.986   | 1.033    | 0.008   |
|                     | (256358.785) | (2730572.544) | (2986032.501) | (20868.804) | (42.573) | (0.052) |

|                        |              |               |               |             |          |         |
|------------------------|--------------|---------------|---------------|-------------|----------|---------|
| North Western Province | 108578.039   | -472374.615   | -37986.215    | -17038.408  | -6.758   | 0.020   |
|                        | (144650.399) | (1540725.073) | (1685014.884) | (11775.219) | (24.037) | (0.024) |
| North Central Province | 305991.348   | -1380922.853  | 400369.864    | 2846.093    | -0.184   | 0.079*  |
|                        | (254029.718) | (2705764.785) | (2958839.204) | (20679.207) | (42.146) | (0.037) |
| Uva Province           | 141757.204   | 3972839.071+  | -204120.224   | -14471.768  | -11.244  | 0.088*  |
|                        | (195328.213) | (2080513.275) | (2275249.398) | (15900.630) | (32.405) | (0.040) |
| Sabaragamuwa Province  | 297544.209*  | -216744.923   | 764763.350    | -3567.827   | -10.237  | 0.000   |
|                        | (127873.444) | (1362027.505) | (1467069.734) | (10409.497) | (20.948) | (0.023) |
| Num. Obs.              | 237          | 237           | 238           | 237         | 233      | 335     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

**When using OLS to compare results between the two groups at endline, we find a positively significant impact of training on most business outcomes.** Even when we do control for differences in characteristics between the two groups at baseline (e.g., by education, sector, region, age), it is likely that these controls do not fully explain the pre-existent differences in business practices and outcomes. The results (see Table C.1) suggest that training had a significantly positive impact on all business outcomes except profits.<sup>22</sup> However, the descriptive statistics in Section 4.3.1 showed that the two groups had similar levels of performance deterioration. Therefore, the result that the treatment group had significantly better business outcomes post-treatment than the comparison group, is most likely due to the fact that it was doing better to begin with.

**An OLS before-after comparison of the treatment group finds that none of the business outcomes of the treatment group significantly increased after training.** OLS before-after comparisons of the treatment group without any controls suggest no changes in business performance of respondents following the training. The same is the case when including controls (see Table B.2).

Table C.2 A treatment-comparison OLS regression finds that the treatment group had a significantly higher business performance than the comparison group after the training period

|             | (1) Profit  | (2) Sales     | (3) Expenses | (4) Salary  | (5) Paid Employees | (6) Business Practices Score |
|-------------|-------------|---------------|--------------|-------------|--------------------|------------------------------|
| (Intercept) | 22846.921   | -217191.297   | 16902.747    | 17293.757   | 5.222              | 0.422**                      |
|             | (69149.732) | (2105601.209) | (539199.809) | (22960.195) | (4.499)            | (0.140)                      |

<sup>22</sup> Without any controls, treatment positively and significantly impacted all five business outcomes.

|                 |                            |                                     |                                    |                           |                      |                   |
|-----------------|----------------------------|-------------------------------------|------------------------------------|---------------------------|----------------------|-------------------|
| Treatment       | 40622.028<br>(39303.782)   | 7921357.602**<br>*<br>(1179622.482) | 1213747.053**<br>*<br>(306626.154) | 26537.995*<br>(12946.427) | 12.714***<br>(2.586) | 0.096<br>(0.078)  |
| Education_3     | 31750.672<br>(85329.323)   | 75451.749<br>(2621117.010)          | -57330.118<br>(682541.439)         | -17135.217<br>(27658.670) | -4.621<br>(5.566)    | 0.185<br>(0.179)  |
| Education_4     | 19812.823<br>(84659.065)   | 212541.929<br>(2601540.464)         | 908.679<br>(677887.176)            | 4187.694<br>(32994.832)   |                      | -0.024<br>(0.177) |
| Education_5     | 31778.408<br>(67058.892)   | 247138.057<br>(2028194.887)         | 39444.051<br>(527630.377)          | -3423.320<br>(22711.855)  | -1.785<br>(4.433)    | -0.021<br>(0.138) |
| Education_6     | 13360.192<br>(67440.919)   | 95619.272<br>(2087234.629)          | 28913.187<br>(543578.991)          | 223.172<br>(21822.362)    | 4.038<br>(4.354)     | -0.019<br>(0.140) |
| Education_7     | 17033.357<br>(104933.937)  |                                     | 28062.152<br>(838127.293)          | -28318.207<br>(34096.387) | -5.237<br>(6.844)    | -0.159<br>(0.219) |
| Education_8     | 37217.939<br>(70311.070)   | 216038.067<br>(2242105.060)         | 55038.097<br>(542084.996)          | 2055.838<br>(24796.591)   | -0.004<br>(4.741)    | 0.022<br>(0.142)  |
| Education_9     | 28999.158<br>(65100.142)   | 218163.164<br>(2015340.742)         | 100714.066<br>(518580.416)         | 12245.128<br>(21534.526)  | -0.994<br>(4.308)    | 0.108<br>(0.136)  |
| Education_10    | 39272.281<br>(63741.230)   | 205851.377<br>(1951977.295)         | 36291.173<br>(506626.957)          | -39.808<br>(20801.994)    | -0.680<br>(4.144)    | 0.124<br>(0.132)  |
| Education_11    | 47497.063<br>(61280.507)   | 203988.781<br>(1880670.044)         | 47738.175<br>(488931.873)          | 5046.841<br>(19871.468)   | -0.964<br>(3.988)    | 0.137<br>(0.128)  |
| Education_12    | 46421.435<br>(62981.489)   | 502999.534<br>(1937492.760)         | 132478.898<br>(501093.627)         | 2733.377<br>(20450.812)   | 1.147<br>(4.096)     | 0.160<br>(0.131)  |
| Education_13    | 47998.574<br>(61767.847)   | 136189.410<br>(1893601.397)         | 42139.082<br>(491852.461)          | 9242.322<br>(20042.068)   | -1.046<br>(4.016)    | 0.216+<br>(0.129) |
| Education_14    | 106657.673<br>(103684.265) | 278050.395<br>(2578065.518)         | 73134.503<br>(672333.033)          | 17447.743<br>(27105.754)  | 3.578<br>(5.041)     | 0.220<br>(0.162)  |
| Education_15    | 185333.858*<br>(76877.570) | -2687765.857<br>(2255696.406)       | -8900.718<br>(586610.143)          | -9517.811<br>(24946.744)  | -7.459<br>(5.011)    | 0.174<br>(0.152)  |
| Education_16    | 32073.051<br>(66688.268)   | 525972.729<br>(3196444.667)         | 1096018.384<br>(832462.499)        |                           |                      | 0.302*<br>(0.138) |
| Education_17    | -2637.476<br>(11972.115)   | 5058354.080*<br>(2043919.513)       | 1873277.872**<br>*<br>(528332.990) | 18003.671<br>(22011.380)  | 4.527<br>(4.344)     | -0.003<br>(0.022) |
| Sector_Services | -25209.540*<br>(10658.553) | 271694.990<br>(347705.250)          | 93365.117<br>(85261.992)           | -2795.608<br>(4289.278)   | -0.474<br>(0.764)    | 0.002<br>(0.020)  |

|                        |             |                |               |              |           |         |
|------------------------|-------------|----------------|---------------|--------------|-----------|---------|
| Sector_Retail/Sales    | 103.252     | -358194.593    | -147730.199+  | -8375.387*   | -1.225+   | -0.002+ |
|                        | (548.360)   | (319232.536)   | (79182.835)   | (3851.071)   | (0.708)   | (0.001) |
| Age of business        | 257.135     | 2843.555       | 761.807       | 91.208       | 0.017     | 0.071** |
|                        | (13650.731) | (15400.687)    | (3819.314)    | (192.027)    | (0.036)   | (0.025) |
| Central Province       | 19125.546   | -27660.904     | 96761.213     | -5403.059    | 0.537     | 0.065*  |
|                        | (13233.966) | (408051.470)   | (100931.000)  | (5120.204)   | (0.918)   | (0.025) |
| Southern Province      | -7304.805   | 162123.435     | 101107.102    | -2257.742    | 0.188     | 0.003   |
|                        | (18121.393) | (402747.403)   | (100127.518)  | (4764.806)   | (0.891)   | (0.032) |
| Northern Province      | 27796.814   | 46981.744      | 47387.438     | 33688.880*** | 5.348***  | 0.017   |
|                        | (18719.782) | (501717.613)   | (127824.809)  | (6511.497)   | (1.131)   | (0.035) |
| Eastern Province       | 597.313     | 226283.440     | 57297.025     | -416.365     | 1.830     | 0.087+  |
|                        | (27357.529) | (548324.111)   | (134536.466)  | (6666.016)   | (1.189)   | (0.050) |
| North Western Province | 27874.589   | 100922.386     | 55778.221     | -1193.787    | 1.447     | 0.105   |
|                        | (70764.475) | (835503.346)   | (207756.386)  | (11611.647)  | (2.475)   | (0.147) |
| Uva Province           | 14530.149   | -              | -             | -16949.494   | -14.391** | 0.054   |
|                        | (49930.545) | 10176187.461** | 1957942.327** |              |           |         |
|                        |             | (2164920.811)  | (564459.682)  | (22979.086)  | (4.633)   | (0.090) |
| Sabaragamuwa Province  |             | 385343.570     | 169576.706    | 32923.877*   | 1.095     | 0.447*  |
|                        |             | (1332235.503)  | (346231.418)  | (14211.341)  | (2.867)   | (0.218) |
| Num. Obs.              | 330         | 355            | 382           | 280          | 329       | 408     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001



## Appendix C.2 Other Robustness Checks

In this section, we present the regression tables of the various robustness checks we conducted (see section 5.3).

Table C.3 Adding additional controls makes the coefficient for the impact on record-keeping and financial management positively significant

|                | (1)<br>Aggregated<br>Business<br>Practices | (2) Marketing<br>and Sales | (3)<br>Production,<br>planning, and<br>costing | (4)<br>Operations   | (5) Record<br>Keeping and<br>Financial<br>Management | (6) Business<br>Growth Plans |
|----------------|--|----------------------------|--|---------------------|--|------------------------------|
| (Intercept)    | 0.749***<br>(0.103)                        | 0.282*<br>(0.135)          | 1.058***<br>(0.116)                            | 0.813***<br>(0.214) | 0.937***<br>(0.179)                                  | 0.434+<br>(0.233)            |
| treat          | 0.087*<br>(0.037)                          | 0.148**<br>(0.048)         | -0.005<br>(0.041)                              | -0.002<br>(0.076)   | 0.090<br>(0.064)                                     | 0.381***<br>(0.083)          |
| after          | 0.004<br>(0.013)                           | 0.006<br>(0.017)           | 0.010<br>(0.014)                               | 0.013<br>(0.027)    | -0.014<br>(0.022)                                    | 0.009<br>(0.029)             |
| aftertreatment | 0.079<br>(0.069)                           | -0.085<br>(0.090)          | 0.078<br>(0.078)                               | 0.252+<br>(0.144)   | 0.228+<br>(0.120)                                    | -0.001<br>(0.155)            |
| Education_3    | 0.205+<br>(0.116)                          | 0.386*<br>(0.152)          | 0.156<br>(0.131)                               | 0.136<br>(0.242)    | 0.165<br>(0.202)                                     | -0.044<br>(0.260)            |
| Education_4    | -0.068<br>(0.116)                          | 0.161<br>(0.151)           | -0.192<br>(0.130)                              | 0.021<br>(0.240)    | -0.089<br>(0.201)                                    | -0.539*<br>(0.259)           |
| Education_5    | -0.037<br>(0.091)                          | 0.182<br>(0.120)           | -0.130<br>(0.103)                              | 0.252<br>(0.190)    | -0.171<br>(0.159)                                    | -0.496*<br>(0.205)           |
| Education_6    | -0.053<br>(0.093)                          | 0.228+<br>(0.121)          | -0.089<br>(0.104)                              | -0.018<br>(0.193)   | -0.163<br>(0.161)                                    | -0.480*<br>(0.207)           |
| Education_7    | -0.168<br>(0.183)                          | 0.231<br>(0.239)           | -0.505*<br>(0.206)                             | -0.153<br>(0.380)   | -0.048<br>(0.318)                                    | -0.675+<br>(0.410)           |
| Education_8    | 0.115<br>(0.097)                           | 0.336**<br>(0.127)         | -0.312**<br>(0.109)                            | 0.283<br>(0.202)    | 0.238<br>(0.169)                                     | 0.128<br>(0.228)             |
| Education_9    | 0.112<br>(0.088)                           | 0.336**<br>(0.116)         | -0.012<br>(0.099)                              | 0.148<br>(0.185)    | 0.116<br>(0.153)                                     | -0.331+<br>(0.198)           |
| Education_10   | 0.118<br>(0.087)                           | 0.309**<br>(0.114)         | -0.067<br>(0.098)                              | 0.299<br>(0.182)    | 0.117<br>(0.151)                                     | -0.295<br>(0.195)            |
| Education_11   | 0.128                                      | 0.381***                   | -0.031   | 0.296+              | 0.082  | -0.239                       |

|                        |          |          |         |           |           |          |
|------------------------|----------|----------|---------|-----------|-----------|----------|
|                        | (0.083)  | (0.109)  | (0.094) | (0.173)   | (0.145)   | (0.187)  |
| Education_12           | 0.152+   | 0.355**  | 0.003   | 0.267     | 0.119     | -0.161   |
|                        | (0.086)  | (0.112)  | (0.096) | (0.178)   | (0.149)   | (0.192)  |
| Education_13           | 0.188*   | 0.396*** | -0.002  | 0.388*    | 0.201     | -0.239   |
|                        | (0.084)  | (0.110)  | (0.095) | (0.175)   | (0.146)   | (0.188)  |
| Education_14           | 0.178+   | 0.339**  | 0.074   | 0.431*    | 0.112     | -0.167   |
|                        | (0.100)  | (0.130)  | (0.112) | (0.207)   | (0.173)   | (0.223)  |
| Education_15           | 0.175+   | 0.366**  | -0.036  | 0.335+    | 0.204     | -0.114   |
|                        | (0.089)  | (0.117)  | (0.100) | (0.186)   | (0.155)   | (0.200)  |
| Education_16           | 0.259**  | 0.458*** | 0.022   | 0.390+    | 0.275+    | 0.185    |
|                        | (0.096)  | (0.126)  | (0.108) | (0.199)   | (0.167)   | (0.215)  |
| Education_17           | 0.175*   | 0.371**  | -0.054  | 0.319+    | 0.201     | -0.030   |
|                        | (0.088)  | (0.114)  | (0.098) | (0.182)   | (0.152)   | (0.196)  |
| Sector_Services        | -0.014   | 0.034+   | -0.008  | -0.148*** | -0.049+   | 0.059+   |
|                        | (0.015)  | (0.020)  | (0.017) | (0.031)   | (0.026)   | (0.034)  |
| Sector_Retail/Sales    | -0.017   | 0.033+   | -0.009  | -0.088**  | -0.047*   | 0.029    |
|                        | (0.013)  | (0.017)  | (0.015) | (0.027)   | (0.023)   | (0.029)  |
| age_business           | -0.001   | -0.001   | -0.001  | 0.000     | -0.001    | 0.000    |
|                        | (0.001)  | (0.001)  | (0.001) | (0.001)   | (0.001)   | (0.002)  |
| Central Province       | 0.067*** | 0.057**  | -0.002  | 0.149***  | 0.076**   | 0.149*** |
|                        | (0.016)  | (0.022)  | (0.019) | (0.035)   | (0.029)   | (0.038)  |
| Southern Province      | 0.024    | 0.082*** | 0.009   | 0.178***  | -0.054+   | -0.021   |
|                        | (0.016)  | (0.021)  | (0.018) | (0.034)   | (0.028)   | (0.036)  |
| Northern Province      | -0.032   | 0.047    | -0.042  | -0.147**  | -0.150*** | 0.413*** |
|                        | (0.025)  | (0.033)  | (0.029) | (0.053)   | (0.044)   | (0.058)  |
| Eastern Province       | -0.001   | 0.052+   | 0.043   | 0.138**   | -0.145*** | 0.130*   |
|                        | (0.024)  | (0.031)  | (0.027) | (0.050)   | (0.041)   | (0.053)  |
| North Western Province | 0.067*   | 0.051    | 0.009   | 0.110+    | 0.093*    | 0.135*   |

|  |           |           |           |         |           |          |
|--|-----------|-----------|-----------|---------|-----------|----------|
|  | (0.027)   | (0.035)   | (0.030)   | (0.056) | (0.047)   | (0.061)  |
| North Central Province                 | 0.096     | 0.073     | 0.124     | 0.173   | 0.092     | -0.235   |
|  | (0.074)   | (0.097)   | (0.083)   | (0.154) | (0.128)   | (0.165)  |
| Uva Province                           | 0.092+    | 0.121+    | 0.020     | 0.159   | 0.090     | 0.176    |
|  | (0.052)   | (0.067)   | (0.058)   | (0.107) | (0.090)   | (0.115)  |
| Sabaragamuwa Province                  | 0.003     | -0.029    | -0.026    | 0.105+  | 0.027     | -0.052   |
|  | (0.031)   | (0.040)   | (0.035)   | (0.064) | (0.053)   | (0.069)  |
| Age of Respondent                      | -0.002*** | -0.003*** | -0.001    | -0.003* | -0.003*   | -0.002   |
|  | (0.001)   | (0.001)   | (0.001)   | (0.001) | (0.001)   | (0.001)  |
| Number of hours worked in the business | 0.000     | 0.000     | 0.000     | 0.000   | 0.000     | 0.001*   |
|  | (0.000)   | (0.000)   | (0.000)   | (0.001) | (0.000)   | (0.001)  |
| Registered at business chamber         | -0.085*** | -0.048*   | -0.065*** | -0.074* | -0.149*** | -0.113** |
|  | (0.017)   | (0.022)   | (0.019)   | (0.034) | (0.029)   | (0.038)  |
| Profit                                 | 0.000     | 0.000     | 0.000     | 0.000   | 0.000     | 0.000*   |
|  | (0.000)   | (0.000)   | (0.000)   | (0.000) | (0.000)   | (0.000)  |
| Num.Obs.                               | 858       | 858       | 858       | 847     | 858       | 837      |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.4 Adding additional controls does not affect the results for business outcomes

|                | (1) Profit   | (2) Sales     | (3) Expenses  | (4) Salary  | (5) Paid Employees |
|----------------|--------------|---------------|---------------|-------------|--------------------|
| (Intercept)    | 79234.852    | -1600526.047  | -976044.801   | 9408.078    | 14.055             |
|                | (200502.423) | (2040772.375) | (2092522.137) | (20953.109) | (31.788)           |
| treat          | -427.833     | 876934.435    | 287833.138    | 13239.910+  | 11.211             |
|                | (71276.025)  | (701390.498)  | (696570.122)  | (7713.067)  | (11.225)           |
| after          | -7989.306    | 11704.498     | 30283.275     | 1087.548    | -0.629             |
|                | (25031.803)  | (246557.934)  | (246619.659)  | (2751.130)  | (3.945)            |
| aftertreatment | 68743.801    | 3635037.077** | 582916.914    | 11284.250   | -0.059             |
|                | (134490.674) | (1367572.832) | (1409522.211) | (13991.912) | (21.407)           |
| Education_3    | 68277.992    | 301673.764    | -253715.715   | -16100.290  | -5.987             |

|                     |              |               |               |             |          |
|---------------------|--------------|---------------|---------------|-------------|----------|
|                     | (226619.853) | (2319781.158) | (2414611.967) | (22965.335) | (35.958) |
| Education_4         | 48522.955    | 327145.047    | 143199.780    | 2472.149    |          |
|                     | (225152.099) | (2307105.404) | (2403406.341) | (35497.964) |          |
| Education_5         | 70423.929    | 376739.198    | 224625.607    | 1639.531    | 4.356    |
|                     | (178053.927) | (1794808.621) | (1867614.616) | (18765.537) | (28.528) |
| Education_6         | 31962.344    | 124948.473    | -4631.448     | 2229.381    | -2.353   |
|                     | (180407.246) | (1871600.434) | (1953945.577) | (18253.694) | (28.477) |
| Education_7         | 39322.480    |               | -137751.965   | -13319.944  | -5.444   |
|                     | (356283.640) |               | (2966986.059) | (28346.653) | (44.228) |
| Education_8         | 27258.994    | 69896.988     | 20172.395     | -659.055    | 1.151    |
|                     | (189287.037) | (1985457.606) | (1916969.033) | (20614.724) | (30.650) |
| Education_9         | 41483.526    | 263606.807    | 278158.008    | 6062.961    | -1.099   |
|                     | (172098.372) | (1781250.207) | (1837721.058) | (17894.489) | (27.820) |
| Education_10        | 75291.419    | 513967.049    | 186583.292    | 2241.341    | -1.153   |
|                     | (169111.025) | (1725884.513) | (1788875.225) | (17218.881) | (26.715) |
| Education_11        | 79966.705    | 578800.697    | 199219.615    | 3961.224    | -2.284   |
|                     | (162482.208) | (1661995.788) | (1728423.530) | (16476.578) | (25.747) |
| Education_12        | 52054.521    | 211765.372    | 303383.401    | 1828.641    | -0.024   |
|                     | (166576.997) | (1707277.930) | (1767796.369) | (16925.368) | (26.372) |
| Education_13        | 91104.148    | 431731.380    | 296786.108    | 10692.736   | 0.069    |
|                     | (163690.157) | (1672831.117) | (1738403.490) | (16609.840) | (25.915) |
| Education_14        | -19811.516   | 553485.870    | -112837.943   | 41337.439*  | 10.896   |
|                     | (194075.492) | (1947542.438) | (2027242.854) | (19256.856) | (30.184) |
| Education_15        | 86511.081    | 598160.602    | 309323.842    | 25.853      | -11.491  |
|                     | (173774.877) | (1769860.040) | (1839752.413) | (17595.552) | (27.525) |
| Education_16        | 128179.134   | 142276.117    | 2493888.665   | -1433.948   | 0.069    |
|                     | (186804.632) | (1892777.108) | (1968125.669) | (19147.130) | (29.950) |
| Education_17        | 82036.584    | 2803881.755   | 2839735.712   | 13176.798   | 21.764   |
|                     | (170362.933) | (1738120.202) | (1806160.753) | (17326.346) | (26.950) |
| Sector_Services     | -29718.328   | 139627.213    | -40469.630    | 694.224     | -0.411   |
|                     | (29201.537)  | (283753.166)  | (281227.823)  | (3130.429)  | (4.493)  |
| Sector_Retail/Sales | -22423.040   | -29172.081    | -314760.732   | 494.933     | -2.668   |
|                     | (25306.518)  | (253685.205)  | (253364.445)  | (2781.127)  | (4.057)  |
| age_business        | 8.005        | -4801.544     | 16413.404     | 361.620*    | 0.245    |
|                     | (1353.640)   | (12961.055)   | (13111.369)   | (145.041)   | (0.217)  |

|  |                             |                                 |                              |                            |                     |
|--|-----------------------------|---------------------------------|------------------------------|----------------------------|---------------------|
| Central Province                       | 12883.899<br>(32103.344)    | 17309.178<br>(322037.530)       | 21685.712<br>(321261.719)    | -8060.818*<br>(3590.768)   | 0.745<br>(5.206)    |
| Southern Province                      | 36673.878<br>(31319.134)    | 23545.923<br>(319414.543)       | 585679.031+<br>(319303.309)  | -5360.245<br>(3347.339)    | 5.505<br>(5.069)    |
| Northern Province                      | 14384.439<br>(49424.426)    | 94213.598<br>(443985.015)       | 252133.045<br>(451199.946)   | 22514.325***<br>(5471.226) | 6.222<br>(7.159)    |
| Eastern Province                       | 76938.471+<br>(46178.585)   | 269554.153<br>(452441.520)      | 339010.086<br>(451022.971)   | -5465.267<br>(5021.555)    | 4.405<br>(7.129)    |
| North Western Province                 | 38683.698<br>(52705.563)    | -81476.544<br>(527138.843)      | -131870.833<br>(541152.995)  | -13642.089*<br>(6034.168)  | -6.152<br>(9.624)   |
| North Central Province                 | 269476.755+<br>(143537.069) | -334241.378<br>(1472483.699)    | -341276.241<br>(1534232.856) | 9392.062<br>(14543.027)    | -13.886<br>(22.883) |
| Uva Province                           | 73337.805<br>(100442.510)   | 3751939.987***<br>(1029498.940) | -675152.756<br>(1072537.453) | -16803.638+<br>(10187.687) | -17.766<br>(16.001) |
| Sabaragamuwa Province                  | 183225.898**<br>(59417.696) | -148892.814<br>(591031.364)     | 250748.368<br>(607747.129)   | 3796.389<br>(5951.762)     | -10.973<br>(9.148)  |
| Age of Respondent                      | -1021.136<br>(1242.902)     | 16034.086<br>(12161.127)        | 7577.392<br>(12493.259)      | -141.870<br>(131.942)      | -0.410*<br>(0.197)  |
| Number of hours worked in the business | 440.919<br>(468.491)        | 6692.045<br>(4608.153)          | 3902.404<br>(4653.500)       | 103.050*<br>(51.144)       | 0.013<br>(0.076)    |
| Registered at business chamber         | -13057.855<br>(32250.257)   | -12293.571<br>(319942.107)      | 183878.525<br>(323632.903)   | -5252.658<br>(3386.376)    | 4.069<br>(5.133)    |
| Num.Obs.                               | 858                         | 910                             | 969                          | 762                        | 864                 |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.5 DiD regressions on business practices, without controls, for only those treatment respondents who completed the training did not change the main results

|             | (1) Aggregated Business Practices | (2) Marketing and Sales | (3) Production, planning, and costing | (4) Operations      | (5) Record Keeping and Financial Management | (6) Business Growth Plans |
|-------------|-----------------------------------|-------------------------|---------------------------------------|---------------------|---|---------------------------|
| (Intercept) | 0.572***<br>(0.010)               | 0.526***<br>(0.013)     | 0.831***<br>(0.011)                   | 0.510***<br>(0.021) | 0.439***<br>(0.017)                         | 0.200***<br>(0.023)       |
| treat       | 0.207***                          | 0.081***                | 0.058**                               | 0.457***            | 0.379***                                    | 0.267***                  |

|                |         |         |         |           |         |          |
|----------------|---------|---------|---------|-----------|---------|----------|
|                | (0.016) | (0.021) | (0.018) | (0.034)   | (0.028) | (0.037)  |
| after          | 0.016   | 0.010   | 0.019   | 0.038     | 0.000   | 0.023    |
|                | (0.013) | (0.017) | (0.015) | (0.028)   | (0.023) | (0.030)  |
| aftertreatment | -0.016  | -0.001  | 0.003   | -0.201*** | -0.040  | 0.261*** |
|                | (0.023) | (0.029) | (0.025) | (0.047)   | (0.039) | (0.051)  |
| Num.Obs.       | 1059    | 1059    | 1058    | 1044      | 1059    | 1036     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.6 DiD regressions on business practices, with controls, for only those treatment respondents who completed the training made the impact on operations-related practices insignificant

|                | (1)<br>Aggregated<br>Business<br>Practices | (2)<br>Marketing<br>and Sales | (3)<br>Production,<br>planning,<br>and costing | (4)<br>Operations | (5) Record<br>Keeping and<br>Financial<br>Management | (6) Business<br>Growth<br>Plans |
|----------------|--|-------------------------------|--|-------------------|--|---------------------------------|
| (Intercept)    | 0.400***<br>(0.108)                        | 0.047<br>(0.136)              | 0.823***<br>(0.124)                            | 0.484*<br>(0.221) | 0.363+<br>(0.187)                                    | 0.015<br>(0.236)                |
| treat          | 0.127***<br>(0.038)                        | 0.136**<br>(0.048)            | 0.081+<br>(0.043)                              | 0.006<br>(0.078)  | 0.163*<br>(0.066)                                    | 0.334***<br>(0.084)             |
| after          | 0.013<br>(0.013)                           | 0.010<br>(0.016)              | 0.019<br>(0.015)                               | 0.033<br>(0.027)  | -0.006<br>(0.023)                                    | 0.019<br>(0.029)                |
| aftertreatment | -0.036<br>(0.103)                          | -0.055<br>(0.130)             | -0.107<br>(0.118)                              | -0.138<br>(0.211) | 0.099<br>(0.179)                                     | -0.092<br>(0.225)               |
| Education_3    | 0.224+<br>(0.131)                          | 0.351*<br>(0.165)             | 0.150<br>(0.150)                               | 0.181<br>(0.267)  | 0.190<br>(0.227)                                     | 0.154<br>(0.285)                |
| Education_4    | -0.091<br>(0.139)                          | 0.055<br>(0.176)              | -0.208<br>(0.160)                              | 0.040<br>(0.285)  | -0.097<br>(0.242)                                    | -0.386<br>(0.303)               |
| Education_5    | 0.007<br>(0.106)                           | 0.122<br>(0.134)              | -0.086<br>(0.121)                              | 0.386+<br>(0.216) | -0.112<br>(0.184)                                    | -0.318<br>(0.230)               |
| Education_6    | 0.003<br>(0.107)                           | 0.148<br>(0.136)              | -0.095<br>(0.124)                              | 0.206<br>(0.219)  | -0.007<br>(0.186)                                    | -0.197<br>(0.234)               |
| Education_7    | -0.112<br>(0.157)                          | 0.239<br>(0.198)              | -0.446*<br>(0.180)                             | -0.118<br>(0.321) | -0.008<br>(0.272)                                    | -0.467<br>(0.342)               |
| Education_8    | 0.037<br>(0.112)                           | 0.280*<br>(0.141)             | -0.322*<br>(0.128)                             | 0.186<br>(0.229)  | 0.091<br>(0.194)                                     | 0.107<br>(0.247)                |
| Education_9    | 0.127<br>(0.106)                           | 0.317*<br>(0.134)             | -0.034<br>(0.121)                              | 0.278<br>(0.217)  | 0.138<br>(0.183)                                     | -0.178<br>(0.230)               |
| Education_10   | 0.156                                      | 0.303*<br>(0.134)             | -0.056<br>(0.121)                              | 0.317<br>(0.217)  | 0.178<br>(0.183)                                     | -0.131<br>(0.230)               |

|                        |          |          |         |           |          |          |
|------------------------|----------|----------|---------|-----------|----------|----------|
|                        | (0.102)  | (0.129)  | (0.117) | (0.210)   | (0.178)  | (0.223)  |
| Education_11           | 0.162    | 0.359**  | -0.043  | 0.359+    | 0.152    | -0.047   |
|                        | (0.100)  | (0.126)  | (0.114) | (0.204)   | (0.173)  | (0.217)  |
| Education_12           | 0.179+   | 0.319*   | 0.009   | 0.291     | 0.176    | -0.005   |
|                        | (0.101)  | (0.128)  | (0.116) | (0.207)   | (0.176)  | (0.221)  |
| Education_13           | 0.242*   | 0.397**  | -0.006  | 0.470*    | 0.306+   | -0.019   |
|                        | (0.100)  | (0.127)  | (0.115) | (0.205)   | (0.174)  | (0.218)  |
| Education_14           | 0.214+   | 0.251+   | 0.066   | 0.507*    | 0.203    | 0.189    |
|                        | (0.112)  | (0.141)  | (0.128) | (0.228)   | (0.194)  | (0.243)  |
| Education_15           | 0.228*   | 0.346**  | -0.026  | 0.446*    | 0.323+   | 0.036    |
|                        | (0.105)  | (0.132)  | (0.120) | (0.214)   | (0.182)  | (0.228)  |
| Education_16           | 0.335**  | 0.471*** | 0.009   | 0.519*    | 0.416*   | 0.496*   |
|                        | (0.111)  | (0.140)  | (0.127) | (0.227)   | (0.193)  | (0.242)  |
| Education_17           | 0.245*   | 0.397**  | -0.037  | 0.428*    | 0.317+   | 0.167    |
|                        | (0.103)  | (0.131)  | (0.119) | (0.212)   | (0.180)  | (0.226)  |
| Sector_Services        | -0.011   | 0.016    | 0.017   | -0.179*** | -0.029   | 0.036    |
|                        | (0.015)  | (0.019)  | (0.017) | (0.031)   | (0.026)  | (0.033)  |
| Sector_Retail/Sales    | 0.003    | 0.045**  | 0.015   | -0.073**  | -0.024   | 0.039    |
|                        | (0.013)  | (0.017)  | (0.015) | (0.027)   | (0.023)  | (0.029)  |
| Age of business        | -0.001   | -0.001   | -0.001  | 0.000     | -0.002   | 0.001    |
|                        | (0.001)  | (0.001)  | (0.001) | (0.001)   | (0.001)  | (0.001)  |
| Central Province       | 0.066*** | 0.048*   | -0.008  | 0.116**   | 0.089**  | 0.188*** |
|                        | (0.017)  | (0.022)  | (0.020) | (0.036)   | (0.030)  | (0.039)  |
| Southern Province      | 0.050**  | 0.105*** | 0.034+  | 0.202***  | -0.028   | -0.007   |
|                        | (0.017)  | (0.021)  | (0.019) | (0.034)   | (0.029)  | (0.036)  |
| Northern Province      | -0.032   | 0.036    | -0.063* | -0.131**  | -0.098*  | 0.351*** |
|                        | (0.022)  | (0.028)  | (0.026) | (0.046)   | (0.039)  | (0.049)  |
| Eastern Province       | 0.017    | 0.079*   | 0.060*  | 0.140**   | -0.132** | 0.160**  |
|                        | (0.025)  | (0.031)  | (0.028) | (0.051)   | (0.043)  | (0.054)  |
| North Western Province | 0.082**  | 0.088*   | 0.000   | 0.109+    | 0.093+   | 0.231*** |
|                        | (0.027)  | (0.035)  | (0.031) | (0.056)   | (0.047)  | (0.060)  |
| North Central Province | 0.106    | 0.128    | 0.109   | 0.156     | 0.105    | -0.119   |
|                        | (0.086)  | (0.108)  | (0.098) | (0.175)   | (0.149)  | (0.187)  |
| Uva Province           | 0.159*   | 0.276**  | 0.091   | 0.093     | 0.116    | 0.240    |
|                        | (0.071)  | (0.089)  | (0.081) | (0.144)   | (0.123)  | (0.154)  |

|                       |                  |                  |                   |                  |                  |                  |
|-----------------------|------------------|------------------|-------------------|------------------|------------------|------------------|
| Sabaragamuwa Province | 0.017<br>(0.034) | 0.000<br>(0.043) | -0.040<br>(0.039) | 0.105<br>(0.069) | 0.046<br>(0.059) | 0.007<br>(0.074) |
| Num.Obs.              | 875              | 875              | 874               | 860              | 875              | 852              |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.7 DiD regressions on business outcomes, without controls, for only those treatment respondents who completed the training give the same results as the main regressions

|                | (1) Profit                   | Sales                          | (3) Expenses                 | (4) Salary                 | (5) Paid Employees  |
|----------------|------------------------------|--------------------------------|------------------------------|----------------------------|---------------------|
| (Intercept)    | 48864.945*<br>(21179.468)    | 172672.190<br>(207894.478)     | 121234.353<br>(441786.843)   | 12037.843***<br>(3259.346) | 3.483<br>(3.869)    |
| treat          | 128379.672***<br>(32497.102) | 1195572.073***<br>(327015.153) | 1204154.397+<br>(709552.232) | 13020.379**<br>(4758.454)  | 17.827**<br>(5.968) |
| after          | -12034.868<br>(27887.386)    | 8552.804<br>(274340.322)       | 29727.557<br>(582980.106)    | -2345.380<br>(4284.449)    | -0.033<br>(5.093)   |
| aftertreatment | -36147.675<br>(44639.555)    | -297140.707<br>(450222.395)    | 620710.699<br>(977979.200)   | 3485.369<br>(6511.190)     | -6.225<br>(8.201)   |
| Num.Obs.       | 910                          | 956                            | 1005                         | 820                        | 900                 |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.8 DiD regressions on business outcomes, with controls, for only those treatment respondents who completed the training show a positively significant impact of the training on the salary of the entrepreneurs

|                | (1) Profit                 | (2) Sales                        | (3) Expenses                 | (4) Salary                | (5) Paid Employees |
|----------------|----------------------------|----------------------------------|------------------------------|---------------------------|--------------------|
| (Intercept)    | 34972.144<br>(219740.516)  | -1075140.521<br>(2120550.711)    | 41260.721<br>(2334459.456)   | 941.859<br>(22489.139)    | 7.854<br>(35.309)  |
| treat          | 24566.799<br>(82854.969)   | 1520758.890*<br>(774377.101)     | 558404.993<br>(833265.691)   | 11587.034<br>(9054.688)   | 16.687<br>(13.541) |
| after          | -10709.259<br>(28881.948)  | 33217.280<br>(269163.255)        | 42226.909<br>(288925.155)    | 453.654<br>(3187.534)     | 0.530<br>(4.657)   |
| aftertreatment | 166251.954<br>(207645.905) | 14827162.242***<br>(2013535.502) | 2456241.349<br>(2232703.767) | 48615.856*<br>(21221.250) | 2.870<br>(33.552)  |
| Education_3    | 65946.663<br>(261501.125)  | 95445.953<br>(2540209.793)       | -456608.598<br>(2821415.049) | -16084.072<br>(26463.022) | -7.018<br>(42.046) |
| Education_4    | 62864.884                  | -103696.175                      | -324852.304                  | -1000.890                 |                    |



|                     |              |               |               |             |          |
|---------------------|--------------|---------------|---------------|-------------|----------|
|                     | (278853.944) | (2708576.618) | (3009694.148) | (38978.535) |          |
| Education_5         | 60169.415    | 228080.284    | 12187.307     | 502.880     | 0.843    |
|                     | (214604.554) | (2058095.951) | (2285407.153) | (22296.649) | (34.838) |
| Education_6         | 30962.305    | 143806.774    | -128303.216   | 3081.644    | -0.070   |
|                     | (217754.758) | (2111196.293) | (2333622.799) | (21993.073) | (34.496) |
| Education_7         | 31050.833    |               | -349929.712   | -17073.744  | -8.829   |
|                     | (393589.644) |               | (3386144.467) | (31915.588) | (50.522) |
| Education_8         | 50322.514    | 229396.010    | -143799.215   | 2264.686    | -3.004   |
|                     | (238409.534) | (2335284.290) | (2415636.469) | (25977.929) | (39.574) |
| Education_9         | 45915.417    | 80003.472     | 140084.501    | 8115.938    | -0.269   |
|                     | (211758.465) | (2075849.665) | (2281655.766) | (21745.242) | (34.675) |
| Education_10        | 81263.021    | 379660.450    | -40293.126    | 3823.155    | -1.738   |
|                     | (206154.966) | (2000405.546) | (2214191.031) | (20937.540) | (33.065) |
| Education_11        | 82191.594    | 427683.926    | 16538.283     | 4688.293    | -2.867   |
|                     | (199567.041) | (1938224.375) | (2151339.059) | (20192.964) | (32.063) |
| Education_12        | 56151.706    | 113794.704    | 11057.375     | 1740.461    | -0.800   |
|                     | (203573.276) | (1982079.171) | (2192711.183) | (20674.047) | (32.720) |
| Education_13        | 92806.011    | 103854.262    | -18524.404    | 13942.807   | -0.548   |
|                     | (200713.500) | (1947901.002) | (2161164.695) | (20327.824) | (32.235) |
| Education_14        | -140912.866  | -313307.090   | -598588.236   | 60395.578** | -3.371   |
|                     | (234000.575) | (2225677.654) | (2472403.967) | (23133.559) | (35.957) |
| Education_15        | 63826.661    | -235926.334   | -209867.771   | -554.883    | -13.961  |
|                     | (210837.524) | (2038966.453) | (2263458.685) | (21287.420) | (33.901) |
| Education_16        | 123780.256   | -127016.544   | 2310402.862   | -1225.349   | -4.214   |
|                     | (224427.054) | (2160110.084) | (2397845.819) | (22933.764) | (36.462) |
| Education_17        | 70199.298    | 3208348.538   | 2932628.904   | 14195.687   | 23.541   |
|                     | (208064.270) | (2015665.058) | (2237408.542) | (21142.374) | (33.370) |
| Sector_Services     | -31192.729   | 277253.654    | -98519.762    | -840.771    | -2.208   |
|                     | (33117.454)  | (306798.836)  | (327114.164)  | (3593.056)  | (5.251)  |
| Sector_Retail/Sales | -24620.398   | 202424.854    | -267735.135   | -671.430    | -3.232   |
|                     | (28735.909)  | (272273.245)  | (292140.842)  | (3168.105)  | (4.711)  |
| Age of business     | -489.844     | 1584.345      | 19513.466     | 357.827*    | 0.038    |
|                     | (1426.737)   | (12951.788)   | (13889.165)   | (154.342)   | (0.233)  |
| Central Province    | 20706.328    | 127849.647    | 145611.708    | -7591.983+  | 1.730    |
|                     | (38159.058)  | (361100.107)  | (387013.177)  | (4322.164)  | (6.323)  |

|                        |                             |                                 |                              |                            |                     |
|------------------------|-----------------------------|---------------------------------|------------------------------|----------------------------|---------------------|
| Southern Province      | 42219.969<br>(35442.837)    | 156540.840<br>(343142.013)      | 783119.830*<br>(364761.670)  | -5728.281<br>(3811.451)    | 7.611<br>(5.909)    |
| Northern Province      | 18275.969<br>(53045.749)    | 37624.587<br>(457815.082)       | 262710.193<br>(499317.595)   | 23045.056***<br>(5945.880) | 9.312<br>(8.008)    |
| Eastern Province       | 87975.096<br>(54094.229)    | 180352.475<br>(504758.143)      | 392537.969<br>(538404.613)   | -2379.804<br>(5879.468)    | 5.510<br>(8.479)    |
| North Western Province | 50275.346<br>(59761.764)    | 169683.019<br>(566054.934)      | -10041.902<br>(618873.879)   | -12542.054+<br>(6954.746)  | -5.896<br>(11.360)  |
| North Central Province | 285233.548+<br>(171011.867) | -211828.550<br>(1664823.490)    | -283819.326<br>(1851404.085) | -1616.585<br>(17297.587)   | -14.842<br>(27.640) |
| Uva Province           | 146764.880<br>(140951.196)  | 9727880.449***<br>(1372046.598) | 120223.673<br>(1525347.111)  | -16438.273<br>(14249.050)  | -13.531<br>(22.766) |
| Sabaragamuwa Province  | 227850.639**<br>(70461.379) | 14682.080<br>(670467.258)       | 294148.295<br>(734099.779)   | 4415.199<br>(7014.583)     | -14.670<br>(11.029) |
| Num.Obs.               | 733                         | 780                             | 828                          | 645                        | 728                 |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.9 DiD regressions on business practices, without controls, using a natural log of business practices scores produce similar results

|                | (1) Aggregated Business Practices | (2) Marketing and Sales | (3) Production, planning, and costing | (4) Operations       | (5) Record Keeping and Financial Management | (6) Business Growth Plans |
|----------------|-----------------------------------|-------------------------|---------------------------------------|----------------------|---|---------------------------|
| (Intercept)    | -0.618***<br>(0.018)              | -0.761***<br>(0.029)    | -0.198***<br>(0.013)                  | -0.317***<br>(0.018) | -0.739***<br>(0.030)                        | -0.306***<br>(0.032)      |
| treat          | 0.349***<br>(0.029)               | 0.180***<br>(0.046)     | 0.057**<br>(0.021)                    | 0.288***<br>(0.027)  | 0.503***<br>(0.045)                         | 0.041<br>(0.042)          |
| after          | 0.020<br>(0.026)                  | 0.020<br>(0.040)        | 0.017<br>(0.019)                      | -0.009<br>(0.026)    | -0.005<br>(0.042)                           | 0.013<br>(0.044)          |
| aftertreatment | -0.032<br>(0.041)                 | -0.013<br>(0.065)       | 0.001<br>(0.030)                      | -0.154***<br>(0.038) | -0.016<br>(0.064)                           | 0.107+<br>(0.057)         |
| Num.Obs.       | 1292                              | 1276                    | 1280                                  | 1022                 | 1107  | 542                       |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.10 DiD regressions on business practices, with controls, using a natural log of business practices scores produce similar results

|                | (1)<br>Aggregated<br>Business<br>Practices | (2) Marketing<br>and Sales | (3)<br>Production,<br>planning, and<br>costing | (4)<br>Operations   | (5) Record<br>Keeping and<br>Financial<br>Management | (6) Business<br>Growth Plans |
|----------------|--|----------------------------|--|---------------------|--|------------------------------|
| (Intercept)    | -0.868***<br>(0.204)                       | -1.347**<br>(0.430)        | -0.183<br>(0.144)                              | -0.611**<br>(0.218) | -1.203**<br>(0.420)                                  | -0.216<br>(0.283)            |
| treat          | 0.187*<br>(0.073)                          | 0.175<br>(0.114)           | 0.075<br>(0.052)                               | 0.042<br>(0.063)    | 0.528***<br>(0.120)                                  | 0.128<br>(0.122)             |
| after          | 0.021<br>(0.026)                           | 0.018<br>(0.041)           | 0.018<br>(0.018)                               | -0.008<br>(0.024)   | 0.002<br>(0.044)                                     | 0.005<br>(0.047)             |
| aftertreatment | -0.037<br>(0.144)                          | -0.388+<br>(0.225)         | -0.162<br>(0.102)                              | 0.216+<br>(0.121)   | -0.134<br>(0.222)                                    | -0.218<br>(0.169)            |
| Education_3    | 0.464+<br>(0.263)                          | 0.546<br>(0.500)           | 0.152<br>(0.186)                               | -0.009<br>(0.288)   | 0.631<br>(0.556)                                     | 0.066<br>(0.354)             |
| Education_4    | -0.172<br>(0.261)                          | -0.356<br>(0.498)          | -0.229<br>(0.185)                              | 0.123<br>(0.285)    | 0.187<br>(0.550)                                     |                              |
| Education_5    | -0.046<br>(0.203)                          | -0.002<br>(0.428)          | -0.183<br>(0.144)                              | 0.382+<br>(0.218)   | -0.548<br>(0.431)                                    | 0.035<br>(0.424)             |
| Education_6    | -0.014<br>(0.207)                          | 0.041<br>(0.433)           | -0.115<br>(0.147)                              | 0.551*<br>(0.234)   | -0.459<br>(0.437)                                    | 0.037<br>(0.350)             |
| Education_7    | -0.428<br>(0.323)                          | 0.286<br>(0.580)           | -0.882***<br>(0.228)                           |                     | -0.626<br>(0.562)                                    |                              |
| Education_8    | -0.094<br>(0.209)                          | 0.210<br>(0.434)           | -0.427**<br>(0.150)                            | 0.628**<br>(0.234)  | 0.429<br>(0.439)                                     | 0.111<br>(0.299)             |
| Education_9    | 0.248<br>(0.200)                           | 0.332<br>(0.422)           | -0.026<br>(0.141)                              | 0.478*<br>(0.223)   | 0.041<br>(0.414)                                     | 0.030<br>(0.343)             |
| Education_10   | 0.259<br>(0.194)                           | 0.394<br>(0.416)           | -0.115<br>(0.137)                              | 0.509*<br>(0.213)   | 0.136<br>(0.406)                                     | -0.571*<br>(0.271)           |
| Education_11   | 0.269<br>(0.188)                           | 0.459<br>(0.409)           | -0.054<br>(0.133)                              | 0.440*<br>(0.206)   | 0.157<br>(0.399)                                     | -0.235<br>(0.255)            |
| Education_12   | 0.332+<br>(0.192)                          | 0.427<br>(0.413)           | -0.004<br>(0.136)                              | 0.487*<br>(0.210)   | 0.216<br>(0.405)                                     | -0.126<br>(0.257)            |
| Education_13   | 0.406*<br>(0.189)                          | 0.524<br>(0.410)           | -0.031<br>(0.134)                              | 0.486*<br>(0.207)   | 0.367<br>(0.400)                                     | -0.219<br>(0.257)            |

|                        |         |          |         |           |          |         |
|------------------------|---------|----------|---------|-----------|----------|---------|
| Education_14           | 0.419*  | 0.386    | 0.076   | 0.513*    | 0.269    | -0.177  |
|                        | (0.211) | (0.436)  | (0.150) | (0.219)   | (0.425)  | (0.282) |
| Education_15           | 0.406*  | 0.493    | -0.075  | 0.527*    | 0.418    | -0.077  |
|                        | (0.198) | (0.420)  | (0.140) | (0.212)   | (0.410)  | (0.267) |
| Education_16           | 0.524*  | 0.702    | 0.015   | 0.627**   | 0.508    | -0.110  |
|                        | (0.214) | (0.438)  | (0.151) | (0.223)   | (0.428)  | (0.276) |
| Education_17           | 0.432*  | 0.581    | -0.063  | 0.501*    | 0.387    | -0.159  |
|                        | (0.196) | (0.418)  | (0.139) | (0.211)   | (0.408)  | (0.263) |
| Sector_Services        | -0.033  | -0.035   | 0.019   | -0.055*   | 0.084+   | 0.082+  |
|                        | (0.030) | (0.046)  | (0.021) | (0.025)   | (0.049)  | (0.050) |
| Sector_Retail/Sales    | 0.004   | 0.097*   | 0.004   | -0.113*** | 0.033    | -0.029  |
|                        | (0.026) | (0.041)  | (0.019) | (0.023)   | (0.044)  | (0.043) |
| Age of business        | -0.003* | -0.001   | -0.001  | 0.001     | 0.002    | 0.000   |
|                        | (0.001) | (0.002)  | (0.001) | (0.001)   | (0.002)  | (0.002) |
| Central Province       | 0.097** | 0.064    | 0.018   | 0.117***  | 0.181*** | 0.023   |
|                        | (0.033) | (0.052)  | (0.024) | (0.030)   | (0.053)  | (0.055) |
| Southern Province      | 0.094** | 0.198*** | 0.061** | 0.125***  | -0.022   | -0.032  |
|                        | (0.033) | (0.052)  | (0.024) | (0.029)   | (0.055)  | (0.068) |
| Northern Province      | -0.075  | 0.025    | -0.034  | -0.119*   | -0.121   | 0.040   |
|                        | (0.046) | (0.072)  | (0.033) | (0.050)   | (0.083)  | (0.071) |
| Eastern Province       | 0.065   | 0.166*   | 0.058+  | 0.119**   | -0.140   | 0.077   |
|                        | (0.048) | (0.075)  | (0.034) | (0.045)   | (0.087)  | (0.084) |
| North Western Province | 0.161** | 0.192*   | 0.029   | 0.076     | 0.158+   | -0.003  |
|                        | (0.056) | (0.088)  | (0.040) | (0.047)   | (0.088)  | (0.074) |
| North Central Province | 0.156   | 0.169    | 0.156   | 0.146     | 0.109    | 0.336   |
|                        | (0.153) | (0.238)  | (0.108) | (0.119)   | (0.229)  | (0.343) |
| Uva Province           | 0.167   | 0.331+   | 0.062   | 0.115     | 0.187    | 0.054   |
|                        | (0.116) | (0.181)  | (0.082) | (0.091)   | (0.175)  | (0.125) |
| Sabaragamuwa Province  | 0.050   | 0.029    | -0.014  | 0.135**   | 0.081    | -0.101  |
|                        | (0.064) | (0.100)  | (0.045) | (0.052)   | (0.096)  | (0.097) |
| Num.Obs.               | 1047    | 1034     | 1036    | 795       | 878      | 359     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.11 DiD regressions on business practices, without controls, using a tobit model give the same results

|                | (1)<br>Aggregated<br>Business<br>Practices | (2)<br>Marketing<br>and Sales | (3)<br>Production,<br>planning,<br>and costing | (4)<br>Operations    | (5) Record<br>Keeping and<br>Financial<br>Management | (6) Business<br>Growth<br>Plans |
|----------------|--|-------------------------------|--|----------------------|--|---------------------------------|
| (Intercept)    | 0.578***<br>(0.009)                        | 0.525***<br>(0.011)           | 0.832***<br>(0.010)                            | 0.458***<br>(0.023)  | 0.415***<br>(0.017)                                  | -0.371***<br>(0.055)            |
| treat          | 0.197***<br>(0.014)                        | 0.076***<br>(0.018)           | 0.055***<br>(0.016)                            | 0.507***<br>(0.036)  | 0.394***<br>(0.028)                                  | 0.619***<br>(0.074)             |
| after          | 0.011<br>(0.012)                           | 0.011<br>(0.016)              | 0.017<br>(0.014)                               | 0.029<br>(0.032)     | -0.012<br>(0.024)                                    | 0.050<br>(0.070)                |
| aftertreatment | -0.016<br>(0.020)                          | -0.003<br>(0.026)             | 0.003<br>(0.022)                               | -0.200***<br>(0.050) | -0.041<br>(0.039)                                    | 0.286**<br>(0.102)              |
| Num.Obs.       | 1294                                       | 1294                          | 1292   | 1276                 | 1292   | 1263                            |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.12 DiD regressions on business practices, with controls, using a tobit model give the same results

|                | (1)<br>Aggregated<br>Business<br>Practices | (2) Marketing<br>and Sales | (3)<br>Production,<br>planning, and<br>costing | (4)<br>Operations | (5) Record<br>Keeping and<br>Financial<br>Management | (6) Business<br>Growth Plans |
|----------------|--|----------------------------|--|-------------------|--|------------------------------|
| (Intercept)    | 0.438***<br>(0.092)                        | -0.046<br>(0.128)          | 0.840***<br>(0.106)                            | 0.434+<br>(0.253) | 0.402*<br>(0.199)                                    | -0.615<br>(0.513)            |
| treat          | 0.112***<br>(0.033)                        | 0.117**<br>(0.043)         | 0.064+<br>(0.038)                              | -0.008<br>(0.086) | 0.107<br>(0.067)                                     | 0.970***<br>(0.207)          |
| after          | 0.011<br>(0.012)                           | 0.010<br>(0.015)           | 0.018<br>(0.014)                               | 0.029<br>(0.031)  | -0.011<br>(0.024)                                    | 0.056<br>(0.076)             |
| aftertreatment | -0.008<br>(0.065)                          | -0.128<br>(0.085)          | -0.084<br>(0.075)                              | 0.277+<br>(0.167) | 0.146<br>(0.130)                                     | -0.035<br>(0.345)            |
| Education_3    | 0.206+<br>(0.118)                          | 0.468**<br>(0.161)         | 0.156<br>(0.137)                               | 0.093<br>(0.337)  | 0.175<br>(0.257)                                     | -0.184<br>(0.661)            |
| Education_4    | -0.029<br>(0.118)                          | 0.267+<br>(0.160)          | -0.170<br>(0.136)                              | 0.052<br>(0.325)  | 0.012<br>(0.254)                                     | -4.800<br>(464.465)          |

|                     |                     |                     |                     |                      |                    |                     |
|---------------------|---------------------|---------------------|---------------------|----------------------|--------------------|---------------------|
| Education_5         | -0.021<br>(0.091)   | 0.228+<br>(0.128)   | -0.104<br>(0.106)   | 0.424+<br>(0.252)    | -0.189<br>(0.201)  | -1.662**<br>(0.588) |
| Education_6         | -0.015<br>(0.093)   | 0.279*<br>(0.130)   | -0.075<br>(0.108)   | 0.105<br>(0.259)     | -0.063<br>(0.204)  | -1.110*<br>(0.553)  |
| Education_7         | -0.132<br>(0.145)   | 0.350+<br>(0.195)   | -0.448**<br>(0.169) | -2.097<br>(135.996)  | 0.065<br>(0.301)   | -5.032<br>(657.514) |
| Education_8         | 0.018<br>(0.094)    | 0.377**<br>(0.131)  | -0.348**<br>(0.109) | 0.086<br>(0.262)     | 0.100<br>(0.205)   | -0.090<br>(0.527)   |
| Education_9         | 0.125<br>(0.090)    | 0.439***<br>(0.126) | -0.014<br>(0.104)   | 0.174<br>(0.251)     | 0.213<br>(0.196)   | -1.008+<br>(0.531)  |
| Education_10        | 0.135<br>(0.087)    | 0.415***<br>(0.123) | -0.055<br>(0.101)   | 0.320<br>(0.243)     | 0.205<br>(0.191)   | -0.747<br>(0.485)   |
| Education_11        | 0.142+<br>(0.085)   | 0.472***<br>(0.119) | -0.044<br>(0.098)   | 0.386<br>(0.235)     | 0.171<br>(0.186)   | -0.433<br>(0.459)   |
| Education_12        | 0.172*<br>(0.086)   | 0.441***<br>(0.122) | 0.014<br>(0.100)    | 0.313<br>(0.240)     | 0.205<br>(0.189)   | -0.262<br>(0.469)   |
| Education_13        | 0.214*<br>(0.085)   | 0.507***<br>(0.120) | -0.006<br>(0.099)   | 0.523*<br>(0.236)    | 0.322+<br>(0.186)  | -0.419<br>(0.462)   |
| Education_14        | 0.220*<br>(0.095)   | 0.418**<br>(0.132)  | 0.075<br>(0.110)    | 0.611*<br>(0.260)    | 0.290<br>(0.205)   | -0.112<br>(0.514)   |
| Education_15        | 0.212*<br>(0.089)   | 0.473***<br>(0.125) | -0.035<br>(0.103)   | 0.496*<br>(0.246)    | 0.358+<br>(0.194)  | -0.259<br>(0.484)   |
| Education_16        | 0.306**<br>(0.096)  | 0.583***<br>(0.134) | 0.017<br>(0.112)    | 0.565*<br>(0.263)    | 0.435*<br>(0.207)  | 0.384<br>(0.515)    |
| Education_17        | 0.226*<br>(0.088)   | 0.510***<br>(0.124) | -0.036<br>(0.102)   | 0.469+<br>(0.244)    | 0.363+<br>(0.192)  | 0.006<br>(0.478)    |
| Sector_Services     | -0.014<br>(0.013)   | 0.010<br>(0.017)    | 0.010<br>(0.015)    | -0.204***<br>(0.035) | -0.049+<br>(0.027) | 0.092<br>(0.084)    |
| Sector_Retail/Sales | -0.004<br>(0.012)   | 0.039*<br>(0.015)   | 0.015<br>(0.014)    | -0.073*<br>(0.031)   | -0.056*<br>(0.024) | 0.108<br>(0.073)    |
| Age of business     | -0.001+<br>(0.001)  | -0.001<br>(0.001)   | -0.001+<br>(0.001)  | 0.000<br>(0.002)     | -0.002+<br>(0.001) | 0.002<br>(0.004)    |
| Central Province    | 0.065***<br>(0.015) | 0.048*<br>(0.020)   | -0.003<br>(0.017)   | 0.145***<br>(0.040)  | 0.088**<br>(0.030) | 0.489***<br>(0.094) |
| Southern Province   | 0.051***            | 0.110***            | 0.032+              | 0.233***             | -0.037             | -0.056              |

|                        |  |         |         |          |           |           |          |
|------------------------|--|---------|---------|----------|-----------|-----------|----------|
|                        |  | (0.015) | (0.020) | (0.017)  | (0.039)   | (0.031)   | (0.102)  |
| Northern Province      |  | -0.039+ | 0.035   | -0.066** | -0.201*** | -0.148*** | 0.932*** |
|                        |  | (0.021) | (0.027) | (0.024)  | (0.057)   | (0.043)   | (0.125)  |
| Eastern Province       |  | 0.014   | 0.075** | 0.043+   | 0.165**   | -0.147**  | 0.425**  |
|                        |  | (0.022) | (0.028) | (0.025)  | (0.057)   | (0.045)   | (0.135)  |
| North Western Province |  | 0.080** | 0.086** | 0.008    | 0.125+    | 0.104*    | 0.527*** |
|                        |  | (0.025) | (0.033) | (0.029)  | (0.065)   | (0.051)   | (0.141)  |
| North Central Province |  | 0.093   | 0.073   | 0.121    | 0.229     | 0.108     | -0.665   |
|                        |  | (0.069) | (0.090) | (0.080)  | (0.175)   | (0.137)   | (0.460)  |
| Uva Province           |  | 0.113*  | 0.163*  | 0.030    | 0.198     | 0.117     | 0.364    |
|                        |  | (0.052) | (0.068) | (0.061)  | (0.133)   | (0.105)   | (0.268)  |
| Sabaragamuwa Province  |  | 0.024   | -0.002  | -0.025   | 0.139+    | 0.067     | -0.064   |
|                        |  | (0.029) | (0.038) | (0.033)  | (0.073)   | (0.057)   | (0.168)  |
| Num.Obs.               |  | 1049    | 1049    | 1048     | 1032      | 1049      | 1021     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.13 DiD regressions on business practices, including controls for the months in which the baseline and endline surveys were conducted, remove the significant impact on operations-related practices

|                | (1) Aggregated Business Practices | (2) Marketing and Sales | (3) Production, planning, and costing | (4) Operations   | (5) Record Keeping and Financial Management | (6) Business Growth Plans |
|----------------|-----------------------------------|-------------------------|---------------------------------------|------------------|---|---------------------------|
| (Intercept)    | 0.833<br>(0.650)                  | -0.137<br>(0.836)       | 0.458<br>(0.743)                      | 0.801<br>(1.286) | 1.907+<br>(1.134)                           | 0.501<br>(1.448)          |
| treat          | 0.100*<br>(0.046)                 | 0.112+<br>(0.059)       | 0.056<br>(0.052)                      | 0.056<br>(0.091) | 0.113<br>(0.080)                            | 0.375***<br>(0.104)       |
| after          | 0.009<br>(0.015)                  | 0.004<br>(0.019)        | 0.011<br>(0.017)                      | 0.040<br>(0.029) | -0.006<br>(0.026)                           | 0.043<br>(0.033)          |
| aftertreatment | -0.021<br>(0.067)                 | -0.132<br>(0.087)       | -0.069<br>(0.077)                     | 0.172<br>(0.134) | 0.066<br>(0.118)                            | -0.036<br>(0.151)         |
| Education_3    | 0.215<br>(0.145)                  | 0.380*<br>(0.187)       | 0.153<br>(0.166)                      | 0.138<br>(0.287) | 0.172<br>(0.253)                            | 0.030<br>(0.324)          |
| Education_4    | -0.030                            | 0.173                   | -0.125                                | 0.037            | -0.050                                      | -0.527                    |

|                     |         |          |         |           |         |         |
|---------------------|---------|----------|---------|-----------|---------|---------|
|                     | (0.166) | (0.213)  | (0.190) | (0.328)   | (0.289) | (0.369) |
| Education_5         | -0.004  | 0.160    | -0.100  | 0.341     | -0.128  | -0.427  |
|                     | (0.126) | (0.162)  | (0.144) | (0.249)   | (0.219) | (0.280) |
| Education_6         | -0.058  | 0.156    | -0.098  | 0.061     | -0.103  | -0.367  |
|                     | (0.127) | (0.164)  | (0.146) | (0.252)   | (0.222) | (0.283) |
| Education_7         | -0.133  | 0.232    | -0.471* | -0.149    | -0.013  | -0.609  |
|                     | (0.205) | (0.263)  | (0.234) | (0.405)   | (0.357) | (0.456) |
| Education_8         | 0.032   | 0.322+   | -0.347* | 0.163     | 0.098   | 0.007   |
|                     | (0.130) | (0.167)  | (0.149) | (0.257)   | (0.227) | (0.294) |
| Education_9         | 0.127   | 0.356*   | -0.025  | 0.210     | 0.132   | -0.295  |
|                     | (0.125) | (0.160)  | (0.143) | (0.248)   | (0.218) | (0.278) |
| Education_10        | 0.146   | 0.317*   | -0.061  | 0.294     | 0.176   | -0.264  |
|                     | (0.122) | (0.156)  | (0.139) | (0.241)   | (0.212) | (0.272) |
| Education_11        | 0.153   | 0.378*   | -0.038  | 0.308     | 0.138   | -0.177  |
|                     | (0.119) | (0.153)  | (0.136) | (0.236)   | (0.208) | (0.266) |
| Education_12        | 0.168   | 0.323*   | 0.012   | 0.274     | 0.161   | -0.131  |
|                     | (0.121) | (0.156)  | (0.138) | (0.240)   | (0.211) | (0.270) |
| Education_13        | 0.219+  | 0.400**  | -0.008  | 0.403+    | 0.268   | -0.153  |
|                     | (0.120) | (0.154)  | (0.137) | (0.237)   | (0.209) | (0.267) |
| Education_14        | 0.201   | 0.282+   | 0.055   | 0.467+    | 0.191   | -0.012  |
|                     | (0.129) | (0.166)  | (0.148) | (0.256)   | (0.226) | (0.288) |
| Education_15        | 0.221+  | 0.377*   | -0.030  | 0.383     | 0.303   | -0.042  |
|                     | (0.123) | (0.158)  | (0.140) | (0.243)   | (0.214) | (0.273) |
| Education_16        | 0.297*  | 0.458**  | 0.010   | 0.419     | 0.377+  | 0.258   |
|                     | (0.129) | (0.166)  | (0.147) | (0.255)   | (0.225) | (0.287) |
| Education_17        | 0.235+  | 0.408**  | -0.031  | 0.383     | 0.307   | 0.038   |
|                     | (0.122) | (0.158)  | (0.140) | (0.242)   | (0.214) | (0.273) |
| Sector_Services     | -0.009  | 0.014    | 0.008   | -0.153*** | -0.018  | 0.034   |
|                     | (0.015) | (0.019)  | (0.017) | (0.030)   | (0.026) | (0.035) |
| Sector_Retail/Sales | -0.005  | 0.032+   | 0.007   | -0.063*   | -0.033  | 0.048   |
|                     | (0.013) | (0.017)  | (0.015) | (0.026)   | (0.023) | (0.030) |
| Baseline_Month      | -0.012* | -0.022** | -0.012+ | 0.012     | -0.009  | -0.028* |
|                     | (0.006) | (0.007)  | (0.007) | (0.012)   | (0.010) | (0.013) |



|                        |          |          |         |           |          |          |
|------------------------|----------|----------|---------|-----------|----------|----------|
| Endline_Month          | -0.014   | 0.015    | 0.021   | -0.017    | -0.064   | -0.009   |
|                        | (0.028)  | (0.036)  | (0.032) | (0.055)   | (0.048)  | (0.062)  |
| Age of business        | -0.001+  | -0.001   | -0.001+ | 0.000     | -0.001   | 0.001    |
|                        | (0.001)  | (0.001)  | (0.001) | (0.001)   | (0.001)  | (0.001)  |
| Central Province       | 0.058*** | 0.047*   | -0.014  | 0.116**   | 0.070*   | 0.171*** |
|                        | (0.017)  | (0.022)  | (0.020) | (0.035)   | (0.030)  | (0.040)  |
| Southern Province      | 0.035*   | 0.088*** | 0.020   | 0.178***  | -0.044   | -0.005   |
|                        | (0.016)  | (0.021)  | (0.019) | (0.032)   | (0.029)  | (0.037)  |
| Northern Province      | -0.046*  | 0.015    | -0.063* | -0.156*** | -0.119** | 0.352*** |
|                        | (0.023)  | (0.029)  | (0.026) | (0.045)   | (0.039)  | (0.051)  |
| Eastern Province       | 0.009    | 0.040    | 0.028   | 0.130*    | -0.106*  | 0.190**  |
|                        | (0.028)  | (0.036)  | (0.032) | (0.056)   | (0.049)  | (0.063)  |
| North Western Province | 0.069*   | 0.065+   | 0.000   | 0.112*    | 0.083+   | 0.144*   |
|                        | (0.027)  | (0.035)  | (0.031) | (0.053)   | (0.047)  | (0.060)  |
| North Central Province | 0.084    | 0.068    | 0.122   | 0.178     | 0.075    | -0.236   |
|                        | (0.069)  | (0.089)  | (0.079) | (0.137)   | (0.120)  | (0.154)  |
| Uva Province           | 0.120*   | 0.172*   | 0.031   | 0.148     | 0.123    | 0.232*   |
|                        | (0.053)  | (0.068)  | (0.060) | (0.104)   | (0.092)  | (0.118)  |
| Sabaragamuwa Province  | 0.019    | 0.002    | -0.030  | 0.091     | 0.061    | -0.026   |
|                        | (0.031)  | (0.040)  | (0.035) | (0.061)   | (0.054)  | (0.069)  |
| Num.Obs.               | 848      | 848      | 847     | 833       | 848      | 827      |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.14 DiD regressions on business outcomes, including controls for the months in which the baseline and endline surveys were conducted, do not change the main results

|             | (1) Profit     | (2) Sales    | (3) Expenses | (4) Salary | (5) Paid Employees |
|-------------|----------------|--------------|--------------|------------|--------------------|
| (Intercept) | -4134611.275** | 17984081.092 | 17511751.120 | 232847.093 | -455.316*          |

|                |               |                |                |              |           |
|----------------|---------------|----------------|----------------|--------------|-----------|
|                | (1392593.888) | (14161784.608) | (15136861.863) | (145530.373) | (226.131) |
| treat          | 155420.642    | 138173.013     | -285454.345    | -3003.119    | 28.867+   |
|                | (101636.218)  | (1029464.959)  | (1061877.478)  | (11070.492)  | (16.825)  |
| after          | -7937.290     | 20076.007      | 65252.858      | 940.100      | 0.730     |
|                | (33005.593)   | (332851.514)   | (337742.200)   | (3655.550)   | (5.405)   |
| aftertreatment | 61409.440     | 3692175.794*   | 526144.177     | 13678.179    | -4.004    |
|                | (149423.921)  | (1548903.269)  | (1616875.376)  | (15650.824)  | (24.475)  |
| Education_3    | 78457.963     | 119696.271     | -383888.109    | -14025.670   | -7.170    |
|                | (296854.097)  | (3106932.809)  | (3273538.646)  | (30112.667)  | (48.155)  |
| Education_4    | 53895.452     | 31673.008      | -166311.966    | 829.089      |           |
|                | (337954.996)  | (3541406.486)  | (3735880.216)  | (41547.627)  |           |
| Education_5    | 74980.574     | 211603.364     | 104456.320     | 1340.087     | 0.345     |
|                | (259346.196)  | (2687984.891)  | (2831510.858)  | (26912.234)  | (42.287)  |
| Education_6    | 48393.657     | 125927.724     | -54698.667     | 4240.166     | 0.337     |
|                | (262610.831)  | (2761785.940)  | (2891647.915)  | (26614.060)  | (42.155)  |
| Education_7    | 36587.588     |                | -249705.669    | -15786.679   | -9.272    |
|                | (418239.717)  |                | (4612458.153)  | (42463.414)  | (67.898)  |
| Education_8    | 51750.081     | 170801.393     | -128118.609    | 3722.512     | -2.816    |
|                | (275427.662)  | (2902302.377)  | (2928291.361)  | (29589.512)  | (45.790)  |
| Education_9    | 57370.336     | 102183.149     | 220156.551     | 10629.884    | -1.074    |
|                | (255225.983)  | (2692775.482)  | (2811175.431)  | (26147.971)  | (42.073)  |
| Education_10   | 94178.729     | 220159.131     | 78831.442      | 5508.440     | -2.142    |
|                | (249881.196)  | (2613250.464)  | (2747246.689)  | (25439.460)  | (40.482)  |
| Education_11   | 92503.082     | 357608.093     | 95014.357      | 7008.364     | -3.257    |
|                | (244017.053)  | (2553945.505)  | (2689336.198)  | (24752.113)  | (39.566)  |
| Education_12   | 59416.824     | -217599.099    | 127925.793     | 4622.041     | -0.371    |
|                | (248123.548)  | (2598873.342)  | (2730765.897)  | (25221.478)  | (40.221)  |
| Education_13   | 100072.778    | 112363.175     | 148797.349     | 14672.186    | -1.427    |
|                | (245067.393)  | (2563623.010)  | (2698479.932)  | (24855.731)  | (39.719)  |
| Education_14   | -183931.953   | -145622.793    | -117159.602    | 63392.117*   | -8.693    |
|                | (273178.420)  | (2810531.651)  | (2962667.427)  | (27196.452)  | (43.161)  |
| Education_15   | 107399.777    | 126161.092     | 81596.935      | 6073.203     | -9.014    |
|                | (252030.722)  | (2631966.116)  | (2771268.765)  | (25527.485)  | (40.874)  |
| Education_16   | 95224.722     | -69568.154     | 2612284.834    | 3606.777     | -5.953    |
|                | (265540.857)  | (2759736.661)  | (2905767.872)  | (26918.815)  | (43.065)  |

|                        |                             |                                 |                              |                            |                     |
|------------------------|-----------------------------|---------------------------------|------------------------------|----------------------------|---------------------|
| Education_17           | 93180.660<br>(250904.900)   | 2660062.936<br>(2624995.584)    | 2945082.948<br>(2762060.174) | 20086.512<br>(25505.370)   | 22.571<br>(40.680)  |
| Sector_Services        | -40372.244<br>(34388.449)   | 163059.612<br>(346239.626)      | -46167.247<br>(348812.666)   | -991.766<br>(3731.425)     | -2.542<br>(5.551)   |
| Sector_Retail/Sales    | -12810.179<br>(29575.360)   | -87564.334<br>(302220.038)      | -291642.157<br>(307155.265)  | -1658.178<br>(3235.221)    | -1.789<br>(4.858)   |
| Baseline_Month         | -31814.787*<br>(12362.156)  | -10818.607<br>(128462.111)      | 20575.101<br>(135453.437)    | -3687.199**<br>(1253.778)  | -3.396+<br>(2.008)  |
| Endline_Month          | 188634.989**<br>(59694.052) | -789941.205<br>(605249.120)     | -771229.642<br>(647824.657)  | -9140.710<br>(6234.918)    | 21.003*<br>(9.662)  |
| Age of business        | -662.092<br>(1477.373)      | 1777.247<br>(14469.929)         | 23150.299<br>(14699.671)     | 358.582*<br>(157.220)      | 0.039<br>(0.240)    |
| Central Province       | 34040.337<br>(39145.939)    | -57569.010<br>(401926.088)      | -39424.544<br>(408545.556)   | -8782.605*<br>(4416.705)   | 1.143<br>(6.539)    |
| Southern Province      | 53342.571<br>(35721.193)    | -45825.642<br>(371633.385)      | 675731.278+<br>(376669.898)  | -5471.558<br>(3871.056)    | 6.313<br>(6.001)    |
| Northern Province      | 32993.394<br>(54491.008)    | -129594.191<br>(509204.204)     | 170782.682<br>(524409.954)   | 22620.143***<br>(6039.017) | 8.644<br>(8.341)    |
| Eastern Province       | 113061.583+<br>(62625.754)  | 64748.072<br>(632759.996)       | 293520.731<br>(637370.332)   | -1977.022<br>(6656.350)    | 3.618<br>(9.797)    |
| North Western Province | 58407.217<br>(59588.616)    | -26745.876<br>(607304.642)      | -141232.629<br>(630400.025)  | -12133.513+<br>(6618.249)  | -7.015<br>(10.659)  |
| North Central Province | 258725.992+<br>(141040.245) | -604372.274<br>(1478474.947)    | -446440.899<br>(1559215.354) | 8158.039<br>(14326.321)    | -6.681<br>(22.991)  |
| Uva Province           | 83803.554<br>(108049.909)   | 3776368.833***<br>(1132094.767) | -646423.169<br>(1194383.632) | -10648.536<br>(10978.008)  | -16.588<br>(17.598) |
| Sabaragamuwa Province  | 213525.856**<br>(66399.499) | -35137.918<br>(681992.593)      | 293912.484<br>(709948.996)   | 4934.446<br>(6647.447)     | -11.964<br>(10.528) |
| Num.Obs.               | 718                         | 757                             | 802                          | 644                        | 714                 |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.15 DiD regressions on business practices, without controls, using clustered standard errors (at an individual level) produce similar results

|                | (1) Aggregated Business Practices | (2) Marketing and Sales | (3) Production, planning, and costing | (4) Operations       | (5) Record Keeping and Financial Management | (6) Business Growth Plans |
|----------------|-----------------------------------|-------------------------|---------------------------------------|----------------------|---|---------------------------|
| (Intercept)    | 0.578***<br>(0.010)               | 0.526***<br>(0.012)     | 0.833***<br>(0.011)                   | 0.528***<br>(0.021)  | 0.449***<br>(0.017)                         | 0.205***<br>(0.019)       |
| treat          | 0.197***<br>(0.013)               | 0.075***<br>(0.018)     | 0.054***<br>(0.015)                   | 0.439***<br>(0.023)  | 0.361***<br>(0.021)                         | 0.269***<br>(0.034)       |
| after          | 0.010*<br>(0.005)                 | 0.010+<br>(0.006)       | 0.017*<br>(0.007)                     | 0.020**<br>(0.007)   | -0.010<br>(0.009)                           | 0.018*<br>(0.008)         |
| aftertreatment | -0.015<br>(0.011)                 | -0.002<br>(0.017)       | 0.004<br>(0.016)                      | -0.182***<br>(0.022) | -0.039*<br>(0.018)                          | 0.198***<br>(0.034)       |
| Num.Obs.       | 1294                              | 1294                    | 1292                                  | 1276                 | 1292  | 1263                      |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.16 DiD regressions on business practices, with controls, using clustered standard errors (at an individual level) result in an insignificant impact on operations-related practices

|                | (1) Aggregated Business Practices | (2) Marketing and Sales | (3) Production, planning, and costing | (4) Operations     | (5) Record Keeping and Financial Management | (6) Business Growth Plans |
|----------------|-----------------------------------|-------------------------|---------------------------------------|--------------------|---|---------------------------|
| (Intercept)    | 0.438***<br>(0.061)               | 0.034<br>(0.126)        | 0.841***<br>(0.075)                   | 0.524**<br>(0.197) | 0.416**<br>(0.148)                          | 0.206<br>(0.384)          |
| treat          | 0.112**<br>(0.039)                | 0.113*<br>(0.050)       | 0.063<br>(0.047)                      | 0.018<br>(0.081)   | 0.148*<br>(0.071)                           | 0.362***<br>(0.094)       |
| after          | 0.010*<br>(0.005)                 | 0.010<br>(0.006)        | 0.018**<br>(0.007)                    | 0.020**<br>(0.007) | -0.010<br>(0.009)                           | 0.019*<br>(0.009)         |
| aftertreatment | -0.008<br>(0.074)                 | -0.126<br>(0.098)       | -0.082<br>(0.107)                     | 0.220<br>(0.150)   | 0.099<br>(0.085)                            | 0.013<br>(0.165)          |
| Education_3    | 0.205***<br>(0.047)               | 0.394*<br>(0.170)       | 0.154*<br>(0.063)                     | 0.109<br>(0.172)   | 0.157<br>(0.245)                            | -0.032<br>(0.434)         |
| Education_4    | -0.029<br>(0.153)                 | 0.192<br>(0.209)        | -0.171*<br>(0.079)                    | 0.038<br>(0.240)   | -0.014<br>(0.236)                           | -0.540<br>(0.370)         |
| Education_5    | -0.021<br>(0.054)                 | 0.162<br>(0.120)        | -0.105<br>(0.078)                     | 0.310<br>(0.196)   | -0.149<br>(0.127)                           | -0.491<br>(0.373)         |

|                     |                     |                     |                      |                      |                    |                     |
|---------------------|---------------------|---------------------|----------------------|----------------------|--------------------|---------------------|
| Education_6         | -0.012<br>(0.076)   | 0.217<br>(0.147)    | -0.076<br>(0.059)    | 0.112<br>(0.229)     | -0.055<br>(0.156)  | -0.385<br>(0.380)   |
| Education_7         | -0.133*<br>(0.052)  | 0.274*<br>(0.116)   | -0.451***<br>(0.069) | -0.172<br>(0.179)    | -0.039<br>(0.133)  | -0.648+<br>(0.378)  |
| Education_8         | 0.017<br>(0.096)    | 0.302*<br>(0.125)   | -0.340**<br>(0.130)  | 0.102<br>(0.221)     | 0.082<br>(0.184)   | -0.073<br>(0.420)   |
| Education_9         | 0.125+<br>(0.064)   | 0.364**<br>(0.128)  | -0.014<br>(0.064)    | 0.159<br>(0.197)     | 0.141<br>(0.145)   | -0.329<br>(0.378)   |
| Education_10        | 0.135*<br>(0.052)   | 0.343**<br>(0.119)  | -0.056<br>(0.065)    | 0.261<br>(0.182)     | 0.146<br>(0.134)   | -0.315<br>(0.373)   |
| Education_11        | 0.142***<br>(0.042) | 0.397***<br>(0.112) | -0.043<br>(0.053)    | 0.293+<br>(0.166)    | 0.121<br>(0.123)   | -0.219<br>(0.371)   |
| Education_12        | 0.171***<br>(0.048) | 0.368**<br>(0.115)  | 0.014<br>(0.056)     | 0.246<br>(0.177)     | 0.149<br>(0.132)   | -0.145<br>(0.380)   |
| Education_13        | 0.214***<br>(0.043) | 0.431***<br>(0.113) | -0.006<br>(0.054)    | 0.405*<br>(0.168)    | 0.253*<br>(0.125)  | -0.218<br>(0.372)   |
| Education_14        | 0.220***<br>(0.052) | 0.343**<br>(0.124)  | 0.075<br>(0.056)     | 0.480**<br>(0.181)   | 0.215<br>(0.146)   | -0.069<br>(0.398)   |
| Education_15        | 0.212***<br>(0.051) | 0.399***<br>(0.120) | -0.035<br>(0.062)    | 0.385*<br>(0.173)    | 0.288*<br>(0.128)  | -0.113<br>(0.382)   |
| Education_16        | 0.306***<br>(0.057) | 0.507***<br>(0.121) | 0.017<br>(0.064)     | 0.449*<br>(0.199)    | 0.366**<br>(0.135) | 0.252<br>(0.384)    |
| Education_17        | 0.226***<br>(0.050) | 0.435***<br>(0.116) | -0.036<br>(0.060)    | 0.366*<br>(0.177)    | 0.291*<br>(0.131)  | -0.032<br>(0.380)   |
| Sector_Services     | -0.014<br>(0.017)   | 0.009<br>(0.021)    | 0.010<br>(0.021)     | -0.162***<br>(0.035) | -0.029<br>(0.031)  | 0.038<br>(0.039)    |
| Sector_Retail/Sales | -0.004<br>(0.015)   | 0.038+<br>(0.020)   | 0.014<br>(0.016)     | -0.068*<br>(0.033)   | -0.036<br>(0.027)  | 0.034<br>(0.033)    |
| Age of business     | -0.001<br>(0.001)   | -0.001<br>(0.001)   | -0.001<br>(0.001)    | 0.000<br>(0.002)     | -0.001<br>(0.001)  | 0.001<br>(0.002)    |
| Central Province    | 0.065**<br>(0.021)  | 0.047+<br>(0.027)   | -0.002<br>(0.023)    | 0.123**<br>(0.045)   | 0.084*<br>(0.034)  | 0.164***<br>(0.045) |

|                        |          |          |          |          |         |          |
|------------------------|----------|----------|----------|----------|---------|----------|
| Southern Province      | 0.051*   | 0.108*** | 0.032    | 0.192*** | -0.026  | -0.003   |
|                        | (0.022)  | (0.026)  | (0.022)  | (0.043)  | (0.038) | (0.036)  |
| Northern Province      | -0.038   | 0.032    | -0.064   | -0.137*  | -0.111* | 0.343*** |
|                        | (0.028)  | (0.033)  | (0.039)  | (0.063)  | (0.051) | (0.068)  |
| Eastern Province       | 0.014    | 0.072*   | 0.042    | 0.139*   | -0.114* | 0.147*   |
|                        | (0.026)  | (0.036)  | (0.026)  | (0.063)  | (0.048) | (0.062)  |
| North Western Province | 0.080*** | 0.084*   | 0.008    | 0.104+   | 0.094*  | 0.201*   |
|                        | (0.021)  | (0.033)  | (0.028)  | (0.060)  | (0.045) | (0.085)  |
| North Central Province | 0.093*   | 0.073    | 0.121*** | 0.196*** | 0.094+  | -0.239   |
|                        | (0.039)  | (0.084)  | (0.019)  | (0.039)  | (0.050) | (0.165)  |
| Uva Province           | 0.114**  | 0.162*   | 0.030    | 0.170*** | 0.113** | 0.207    |
|                        | (0.038)  | (0.066)  | (0.050)  | (0.048)  | (0.040) | (0.135)  |
| Sabaragamuwa Province  | 0.024    | -0.002   | -0.024   | 0.123*   | 0.062   | -0.037   |
|                        | (0.027)  | (0.045)  | (0.030)  | (0.058)  | (0.043) | (0.064)  |
| Num.Obs.               | 1049     | 1049     | 1048     | 1032     | 1049    | 1021     |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.17 DiD regressions on business outcomes, without controls, using clustered standard errors (at an individual level) give similar results to our main regressions

|                | (1) Profit   | (2) Sales     | (3) Expenses  | (4) Salary   | (5) Paid Employees |
|----------------|--------------|---------------|---------------|--------------|--------------------|
| (Intercept)    | 47207.875*** | 169633.559*** | 111091.987*** | 10783.624*** | 3.836***           |
|                | (5875.174)   | (37365.244)   | (17677.933)   | (2922.643)   | (0.540)            |
| treat          | 102920.395** | 943974.656**  | 980010.667*   | 11388.840**  | 12.998*            |
|                | (38334.923)  | (356005.797)  | (445941.814)  | (4309.014)   | (6.335)            |
| after          | -10377.798+  | 11591.435     | 39869.923+    | -1091.160    | -0.386             |
|                | (5301.952)   | (35317.384)   | (21907.043)   | (2993.957)   | (0.530)            |
| aftertreatment | -26882.868   | -253367.839   | 485956.812    | 2848.684     | -4.383             |
|                | (37316.990)  | (276726.773)  | (483090.848)  | (4231.185)   | (4.414)            |
| Num.Obs.       | 1101         | 1154          | 1215          | 1001         | 1103               |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.18 DiD regressions on business outcomes, with controls, using clustered standard errors (at an individual level) show an insignificant impact on sales

|                | (1) Profit                 | (2) Sales                    | (3) Expenses                | (4) Salary                | (5) Paid Employees |
|----------------|----------------------------|------------------------------|-----------------------------|---------------------------|--------------------|
| (Intercept)    | 45579.357<br>(84479.761)   | -427797.999<br>(621120.580)  | -72528.454<br>(446196.328)  | -10.205<br>(7778.146)     | 5.529<br>(8.964)   |
| treat          | -9507.198<br>(62431.085)   | 898642.087<br>(610074.487)   | 462728.259<br>(422851.872)  | 11080.732<br>(6889.523)   | 10.540*<br>(5.200) |
| after          | -8356.158<br>(5118.658)    | 13939.623<br>(36740.790)     | 31654.812<br>(23768.568)    | 1003.439<br>(1117.574)    | -0.400<br>(0.541)  |
| aftertreatment | 76551.094<br>(97447.190)   | 3795529.534<br>(5395412.202) | 582948.242<br>(996200.684)  | 13547.295<br>(21790.102)  | -0.991<br>(7.224)  |
| Education_3    | 57869.288<br>(45014.832)   | 132637.658<br>(146462.465)   | -352777.056<br>(462792.768) | -16312.341<br>(11430.309) | -5.371<br>(3.662)  |
| Education_4    | 43208.509<br>(41748.229)   | 6456.152<br>(143104.770)     | -148947.694<br>(328487.304) | -87.797<br>(2985.817)     |                    |
| Education_5    | 55999.750<br>(39315.307)   | 230058.589+<br>(129980.350)  | 91336.428<br>(221984.711)   | 581.764<br>(6004.417)     | 1.999<br>(2.804)   |
| Education_6    | 30514.019<br>(24162.427)   | 128548.033<br>(91928.315)    | -36261.332<br>(228193.491)  | 3024.891<br>(3652.235)    | 1.522<br>(3.574)   |
| Education_7    | 19115.818<br>(47563.362)   |                              | -207093.067<br>(261209.991) | -15843.862<br>(10298.842) | -6.263+<br>(3.439) |
| Education_8    | 25516.088<br>(34909.137)   | 146989.130<br>(144052.437)   | -6199.175<br>(230554.247)   | 2310.691<br>(4221.159)    | -0.623<br>(2.007)  |
| Education_9    | 40085.766<br>(31049.178)   | 148903.332<br>(104649.739)   | 181088.072<br>(243120.286)  | 7633.792<br>(6847.300)    | 1.108<br>(2.364)   |
| Education_10   | 70776.590+<br>(38201.465)  | 256041.053<br>(171754.906)   | 28847.323<br>(214538.461)   | 2355.559<br>(4873.467)    | -0.015<br>(2.770)  |
| Education_11   | 77300.663+<br>(42077.896)  | 383830.006*<br>(166238.602)  | 97018.968<br>(192255.659)   | 5227.853<br>(4769.303)    | -0.952<br>(2.211)  |
| Education_12   | 46864.599<br>(34568.001)   | -8713.472<br>(388762.356)    | 124709.996<br>(227002.832)  | 2587.475<br>(4743.608)    | 0.872<br>(2.685)   |
| Education_13   | 89449.022*<br>(36460.666)  | 179580.021<br>(205936.630)   | 99328.499<br>(209721.885)   | 12463.615*<br>(5350.806)  | 1.460<br>(2.343)   |
| Education_14   | -15560.962<br>(123431.161) | 376477.905<br>(640726.381)   | -256924.367<br>(316449.234) | 58968.629+<br>(34113.243) | 12.427<br>(12.439) |

|                        |                            |                              |                              |                            |                    |
|------------------------|----------------------------|------------------------------|------------------------------|----------------------------|--------------------|
| Education_15           | 81399.282<br>(57441.868)   | 196079.019<br>(785350.676)   | 9731.980<br>(320902.805)     | 1360.439<br>(8115.701)     | -7.746<br>(6.531)  |
| Education_16           | 130405.458<br>(89764.671)  | -62350.249<br>(386151.776)   | 2282617.492<br>(1904654.304) | 723.538<br>(8691.871)      | 2.510<br>(10.808)  |
| Education_17           | 77283.595<br>(74663.231)   | 2450706.395<br>(1766417.486) | 2524705.688<br>(1952905.199) | 13475.473<br>(9259.998)    | 22.069<br>(20.771) |
| Sector_Services        | -34949.848<br>(25984.824)  | 149855.809<br>(202107.412)   | -38372.384<br>(96516.071)    | -320.405<br>(2908.498)     | -1.687<br>(1.516)  |
| Sector_Retail/Sales    | -25385.262<br>(20527.101)  | -46553.526<br>(170847.334)   | -257614.115+<br>(146446.745) | -827.845<br>(3149.317)     | -2.438<br>(1.729)  |
| Age of business        | -176.110<br>(961.832)      | 2531.073<br>(4992.764)       | 18822.238<br>(16098.352)     | 348.823+<br>(189.674)      | 0.074<br>(0.141)   |
| Central Province       | 13102.279<br>(16284.585)   | 68972.304<br>(280878.791)    | 66370.108<br>(149880.369)    | -7936.273**<br>(2803.251)  | 0.252<br>(3.829)   |
| Southern Province      | 39849.035+<br>(24186.944)  | 66490.258<br>(198991.541)    | 656038.809<br>(611118.600)   | -4360.837<br>(2955.285)    | 5.518<br>(8.136)   |
| Northern Province      | 14870.514<br>(17187.602)   | -12925.486<br>(148422.034)   | 183887.375<br>(216192.890)   | 22326.490*<br>(9369.549)   | 7.433+<br>(4.147)  |
| Eastern Province       | 75791.852+<br>(42365.714)  | 198011.843<br>(191138.956)   | 301355.655<br>(258235.846)   | -3492.460<br>(4892.638)    | 5.168<br>(4.637)   |
| North Western Province | 45804.849<br>(46830.855)   | 6737.231<br>(260855.232)     | -120072.322<br>(157500.225)  | -12392.310**<br>(4496.362) | -6.484<br>(5.393)  |
| North Central Province | 219342.137<br>(243788.228) | -463134.701<br>(481974.206)  | -394733.112+<br>(230488.407) | 6292.336<br>(14699.115)    | -9.916<br>(7.565)  |
| Uva Province           | 83159.757<br>(58235.234)   | 3697622.133<br>(5680256.509) | -714667.359<br>(766490.078)  | -15649.470+<br>(8598.374)  | -14.504<br>(9.203) |
| Sabaragamuwa Province  | 181702.434<br>(215599.118) | -87048.160<br>(643946.344)   | 254315.985<br>(523472.258)   | 2489.679<br>(10078.517)    | -10.731<br>(7.394) |
| Num.Obs.               | 869                        | 923                          | 983                          | 771                        | 876                |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.19 DiD regressions on business practices with one control for the 'north-east' find that the training had an insignificant impact on business practices

| (1)<br>Aggregated | (2) Marketing<br>and Sales | (3)<br>Production, | (4) Operations | (5) Record<br>Keeping and | (6) Business<br>Growth Plans |
|-------------------|----------------------------|--------------------|----------------|---------------------------|------------------------------|
|-------------------|----------------------------|--------------------|----------------|---------------------------|------------------------------|



|                | Business Practices  |                     | planning, and costing |                     | Financial Management |                     |
|----------------|---------------------|---------------------|-----------------------|---------------------|----------------------|---------------------|
| (Intercept)    | 0.505***<br>(0.093) | 0.120<br>(0.120)    | 0.900***<br>(0.106)   | 0.773***<br>(0.192) | 0.426**<br>(0.159)   | 0.182<br>(0.208)    |
| treat          | 0.107***<br>(0.032) | 0.091*<br>(0.042)   | 0.070+<br>(0.037)     | 0.006<br>(0.067)    | 0.164**<br>(0.055)   | 0.308***<br>(0.073) |
| after          | 0.010<br>(0.012)    | 0.010<br>(0.015)    | 0.017<br>(0.014)      | 0.020<br>(0.025)    | -0.010<br>(0.021)    | 0.018<br>(0.027)    |
| aftertreatment | -0.005<br>(0.065)   | -0.103<br>(0.085)   | -0.089<br>(0.075)     | 0.201<br>(0.136)    | 0.092<br>(0.112)     | 0.075<br>(0.146)    |
| Education_3    | 0.171<br>(0.120)    | 0.390*<br>(0.155)   | 0.085<br>(0.137)      | -0.055<br>(0.248)   | 0.134<br>(0.206)     | 0.085<br>(0.266)    |
| Education_4    | -0.030<br>(0.120)   | 0.178<br>(0.156)    | -0.207<br>(0.137)     | -0.024<br>(0.249)   | 0.019<br>(0.206)     | -0.429<br>(0.268)   |
| Education_5    | -0.041<br>(0.092)   | 0.142<br>(0.120)    | -0.172<br>(0.105)     | 0.149<br>(0.191)    | -0.123<br>(0.158)    | -0.326<br>(0.205)   |
| Education_6    | -0.029<br>(0.094)   | 0.212+<br>(0.123)   | -0.115<br>(0.109)     | 0.015<br>(0.195)    | -0.059<br>(0.162)    | -0.300<br>(0.210)   |
| Education_7    | -0.186<br>(0.147)   | 0.225<br>(0.191)    | -0.553**<br>(0.168)   | -0.451<br>(0.304)   | -0.030<br>(0.252)    | -0.467<br>(0.327)   |
| Education_8    | -0.004<br>(0.096)   | 0.280*<br>(0.125)   | -0.373***<br>(0.110)  | 0.006<br>(0.199)    | 0.081<br>(0.165)     | -0.017<br>(0.219)   |
| Education_9    | 0.098<br>(0.092)    | 0.339**<br>(0.119)  | -0.057<br>(0.105)     | 0.043<br>(0.190)    | 0.136<br>(0.157)     | -0.278<br>(0.204)   |
| Education_10   | 0.106<br>(0.088)    | 0.322**<br>(0.115)  | -0.112<br>(0.101)     | 0.116<br>(0.184)    | 0.143<br>(0.152)     | -0.222<br>(0.197)   |
| Education_11   | 0.113<br>(0.086)    | 0.374***<br>(0.111) | -0.102<br>(0.098)     | 0.141<br>(0.177)    | 0.122<br>(0.147)     | -0.110<br>(0.191)   |
| Education_12   | 0.144<br>(0.088)    | 0.347**<br>(0.114)  | -0.044<br>(0.100)     | 0.095<br>(0.181)    | 0.152<br>(0.150)     | -0.039<br>(0.195)   |
| Education_13   | 0.183*<br>(0.086)   | 0.403***<br>(0.112) | -0.064<br>(0.098)     | 0.253<br>(0.178)    | 0.256+<br>(0.148)    | -0.114<br>(0.192)   |
| Education_14   | 0.203*<br>(0.097)   | 0.310*<br>(0.125)   | 0.013<br>(0.110)      | 0.379+<br>(0.200)   | 0.248<br>(0.166)     | 0.038<br>(0.215)    |
| Education_15   | 0.179*<br>(0.090)   | 0.363**<br>(0.117)  | -0.099<br>(0.103)     | 0.211<br>(0.187)    | 0.296+<br>(0.155)    | 0.010<br>(0.201)    |

|                     |                      |                     |                    |                      |                      |                     |
|---------------------|----------------------|---------------------|--------------------|----------------------|----------------------|---------------------|
| Education_16        | 0.263**<br>(0.098)   | 0.459***<br>(0.127) | -0.051<br>(0.111)  | 0.244<br>(0.202)     | 0.366*<br>(0.167)    | 0.383+<br>(0.217)   |
| Education_17        | 0.195*<br>(0.089)    | 0.403***<br>(0.116) | -0.099<br>(0.102)  | 0.202<br>(0.185)     | 0.297+<br>(0.153)    | 0.087<br>(0.199)    |
| Sector_Services     | -0.013<br>(0.014)    | 0.003<br>(0.018)    | 0.009<br>(0.015)   | -0.166***<br>(0.028) | -0.021<br>(0.023)    | 0.041<br>(0.031)    |
| Sector_Retail/Sales | -0.006<br>(0.012)    | 0.035*<br>(0.015)   | 0.021<br>(0.013)   | -0.065**<br>(0.024)  | -0.040*<br>(0.020)   | 0.006<br>(0.026)    |
| Age of business     | -0.001<br>(0.001)    | -0.001<br>(0.001)   | -0.001+<br>(0.001) | 0.000<br>(0.001)     | -0.001<br>(0.001)    | 0.001<br>(0.001)    |
| northeast           | -0.052***<br>(0.015) | 0.001<br>(0.020)    | -0.024<br>(0.017)  | -0.105***<br>(0.032) | -0.135***<br>(0.026) | 0.200***<br>(0.034) |
| Num.Obs.            | 1049                 | 1049                | 1048               | 1032                 | 1049                 | 1021                |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table C.20 DiD regressions on business outcomes with one control for the 'north-east' also find that training only had a positively significant impact on sales

|                | (1) Profit                | (2) Sales                       | (3) Expenses                 | (4) Salary                | (5) Paid Employees |
|----------------|---------------------------|---------------------------------|------------------------------|---------------------------|--------------------|
| (Intercept)    | 73656.493<br>(175696.218) | -208985.068<br>(1790439.169)    | 308930.350<br>(1850351.413)  | -15687.922<br>(18479.125) | 9.343<br>(27.730)  |
| treat          | 41541.014<br>(66415.731)  | 995955.244<br>(658881.416)      | 248201.239<br>(654921.301)   | 11295.612<br>(7370.271)   | 3.484<br>(10.354)  |
| after          | -8692.001<br>(24866.276)  | 13035.196<br>(244890.943)       | 30510.078<br>(245004.810)    | 1309.156<br>(2814.321)    | -0.395<br>(3.902)  |
| aftertreatment | 35009.142<br>(131251.823) | 4565034.673***<br>(1335751.890) | 474234.101<br>(1376908.458)  | 12656.908<br>(13992.451)  | 1.112<br>(20.746)  |
| Education_3    | 20296.772<br>(221676.852) | -20100.542<br>(2275813.821)     | -231032.246<br>(2372999.572) | 2133.382<br>(23079.018)   | -1.703<br>(35.143) |
| Education_4    | 19593.628<br>(222930.194) | -40406.831<br>(2286941.156)     | -256047.460<br>(2383929.387) | 342.920<br>(36337.054)    |                    |
| Education_5    | 25511.282                 | 84963.918                       | -69502.845                   | 9458.876                  | 1.447              |

|                     |              |               |               |              |          |
|---------------------|--------------|---------------|---------------|--------------|----------|
|                     | (174023.845) | (1754762.014) | (1829540.976) | (18893.163)  | (27.831) |
| Education_6         | 15017.033    | 36565.897     | 4312.188      | 9937.028     | 3.305    |
|                     | (179062.915) | (1822096.180) | (1900465.644) | (18633.711)  | (27.717) |
| Education_7         | -29469.602   |               | -391343.883   | 9506.026     | -5.790   |
|                     | (350690.931) |               | (2914723.013) | (28367.492)  | (43.179) |
| Education_8         | 19742.182    | 94572.507     | -79587.058    | 6748.085     | 0.561    |
|                     | (188478.606) | (1975187.066) | (1908122.320) | (21082.429)  | (30.403) |
| Education_9         | 27621.984    | 41791.312     | 154622.855    | 17740.481    | 1.227    |
|                     | (170502.534) | (1767431.964) | (1823609.724) | (18239.726)  | (27.494) |
| Education_10        | 39039.847    | 112748.753    | 12144.543     | 13878.801    | 1.731    |
|                     | (166008.714) | (1693343.644) | (1758772.410) | (17368.858)  | (26.145) |
| Education_11        | 46188.845    | 241780.432    | 32265.269     | 17534.049    | 0.421    |
|                     | (159220.540) | (1629751.370) | (1698554.549) | (16594.835)  | (25.157) |
| Education_12        | 19660.293    | -8502.836     | 16607.665     | 13427.511    | 1.065    |
|                     | (163349.546) | (1670862.315) | (1737925.020) | (17089.292)  | (25.809) |
| Education_13        | 55732.592    | 5473.069      | 30256.061     | 24719.662    | 2.624    |
|                     | (160389.143) | (1641214.014) | (1709474.893) | (16724.115)  | (25.348) |
| Education_14        | 2422.557     | 146256.344    | -294619.692   | 68496.489*** | 10.629   |
|                     | (187288.857) | (1891620.759) | (1972030.307) | (19194.875)  | (28.598) |
| Education_15        | 35406.592    | -30324.487    | -128815.774   | 13950.113    | -6.196   |
|                     | (169346.704) | (1726366.629) | (1799064.228) | (17591.542)  | (26.764) |
| Education_16        | 56872.600    | -342995.585   | 2116209.814   | 13311.274    | 5.672    |
|                     | (183099.150) | (1857404.108) | (1935389.470) | (19277.256)  | (29.268) |
| Education_17        | 33297.955    | 2381890.328   | 2405551.589   | 25751.406    | 23.392   |
|                     | (166613.112) | (1702086.673) | (1772479.299) | (17403.261)  | (26.293) |
| Sector_Services     | -26385.010   | 124503.078    | -77893.767    | 42.297       | -2.708   |
|                     | (28361.232)  | (277959.113)  | (275132.052)  | (3140.165)   | (4.360)  |
| Sector_Retail/Sales | -18652.447   | -32712.129    | -292130.903   | -1994.995    | -3.718   |
|                     | (23886.110)  | (238111.781)  | (240007.985)  | (2702.279)   | (3.796)  |

|                 |                          |                           |                           |                            |                  |
|-----------------|--------------------------|---------------------------|---------------------------|----------------------------|------------------|
| Age of business | -205.704<br>(1235.925)   | 1770.294<br>(11911.657)   | 20072.583+<br>(11899.158) | 379.847**<br>(137.832)     | 0.090<br>(0.196) |
| northeast       | 21068.056<br>(32604.110) | 20245.388<br>(302751.634) | 33782.335<br>(307670.923) | 12623.390***<br>(3641.783) | 5.081<br>(4.796) |
| Num.Obs.        | 869                      | 923                       | 983                       | 771                        | 876              |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

## Appendix D Additional Regressions

Table D.1 Business practices were positively associated with higher education levels of respondents and being located in certain provinces in DiD regressions

|                      | (1)<br>Aggregated<br>business<br>practices | (2) Marketing<br>and Sales | (3)<br>Production,<br>planning, and<br>costing | (4) Operations     | (5) Record<br>Keeping and<br>Financial<br>Management | (6) Business<br>Growth Plans |
|----------------------|--|----------------------------|--|--------------------|--|------------------------------|
| (Intercept)          | 0.438***<br>(0.093)                        | 0.034<br>(0.120)           | 0.841***<br>(0.107)                            | 0.524**<br>(0.189) | 0.416**<br>(0.161)                                   | 0.206<br>(0.206)             |
| Treatment            | 0.112***<br>(0.033)                        | 0.113**<br>(0.043)         | 0.063<br>(0.038)                               | 0.018<br>(0.068)   | 0.148*<br>(0.058)                                    | 0.362***<br>(0.075)          |
| After                | 0.010<br>(0.012)                           | 0.010<br>(0.015)           | 0.018<br>(0.014)                               | 0.020<br>(0.024)   | -0.010<br>(0.020)                                    | 0.019<br>(0.026)             |
| After<br>Treatment * | -0.008<br>(0.066)                          | -0.126<br>(0.085)          | -0.082<br>(0.075)                              | 0.220+<br>(0.134)  | 0.099<br>(0.113)                                     | 0.013<br>(0.145)             |
| Education_3          | 0.205+<br>(0.120)                          | 0.394*<br>(0.155)          | 0.154<br>(0.138)                               | 0.109<br>(0.244)   | 0.157<br>(0.207)                                     | -0.032<br>(0.264)            |
| Education_4          | -0.029<br>(0.119)                          | 0.192<br>(0.154)           | -0.171<br>(0.137)                              | 0.038<br>(0.242)   | -0.014<br>(0.206)                                    | -0.540*<br>(0.262)           |
| Education_5          | -0.021<br>(0.093)                          | 0.162<br>(0.120)           | -0.105<br>(0.106)                              | 0.310+<br>(0.188)  | -0.149<br>(0.160)                                    | -0.491*<br>(0.204)           |
| Education_6          | -0.012<br>(0.094)                          | 0.217+<br>(0.122)          | -0.076<br>(0.109)                              | 0.112<br>(0.191)   | -0.055<br>(0.162)                                    | -0.385+<br>(0.207)           |
| Education_7          | -0.133<br>(0.147)                          | 0.274<br>(0.190)           | -0.451**<br>(0.169)                            | -0.172<br>(0.299)  | -0.039<br>(0.254)                                    | -0.648*<br>(0.324)           |
| Education_8          | 0.017<br>(0.095)                           | 0.302*<br>(0.123)          | -0.340**<br>(0.109)                            | 0.102<br>(0.194)   | 0.082<br>(0.165)                                     | -0.073<br>(0.214)            |
| Education_9          | 0.125<br>(0.091)                           | 0.364**<br>(0.118)         | -0.014<br>(0.105)                              | 0.159<br>(0.186)   | 0.141<br>(0.157)                                     | -0.329<br>(0.201)            |
| Education_10         | 0.135<br>(0.088)                           | 0.343**<br>(0.114)         | -0.056<br>(0.102)                              | 0.261<br>(0.181)   | 0.146<br>(0.153)                                     | -0.315<br>(0.195)            |
| Education_11         | 0.142+<br>(0.086)                          | 0.397***<br>(0.111)        | -0.043<br>(0.099)                              | 0.293+<br>(0.174)  | 0.121<br>(0.148)                                     | -0.219<br>(0.189)            |

|                        |          |          |          |           |          |          |
|------------------------|----------|----------|----------|-----------|----------|----------|
| Education_12           | 0.171+   | 0.368**  | 0.014    | 0.246     | 0.149    | -0.145   |
|                        | (0.088)  | (0.113)  | (0.101)  | (0.178)   | (0.151)  | (0.193)  |
| Education_13           | 0.214*   | 0.431*** | -0.006   | 0.405*    | 0.253+   | -0.218   |
|                        | (0.086)  | (0.112)  | (0.099)  | (0.175)   | (0.149)  | (0.190)  |
| Education_14           | 0.220*   | 0.343**  | 0.075    | 0.480*    | 0.215    | -0.069   |
|                        | (0.096)  | (0.125)  | (0.111)  | (0.196)   | (0.167)  | (0.212)  |
| Education_15           | 0.212*   | 0.399*** | -0.035   | 0.385*    | 0.288+   | -0.113   |
|                        | (0.090)  | (0.117)  | (0.104)  | (0.184)   | (0.156)  | (0.199)  |
| Education_16           | 0.306**  | 0.507*** | 0.017    | 0.449*    | 0.366*   | 0.252    |
|                        | (0.098)  | (0.126)  | (0.112)  | (0.198)   | (0.169)  | (0.215)  |
| Education_17           | 0.226*   | 0.435*** | -0.036   | 0.366*    | 0.291+   | -0.032   |
|                        | (0.089)  | (0.116)  | (0.103)  | (0.181)   | (0.154)  | (0.197)  |
| Sector_Services        | -0.014   | 0.009    | 0.010    | -0.162*** | -0.029   | 0.038    |
|                        | (0.013)  | (0.017)  | (0.015)  | (0.028)   | (0.023)  | (0.030)  |
| Sector_Retail/Sales    | -0.004   | 0.038*   | 0.014    | -0.068**  | -0.036+  | 0.034    |
|                        | (0.012)  | (0.015)  | (0.014)  | (0.024)   | (0.021)  | (0.027)  |
| Age of business        | -0.001+  | -0.001   | -0.001+  | 0.000     | -0.001   | 0.001    |
|                        | (0.001)  | (0.001)  | (0.001)  | (0.001)   | (0.001)  | (0.001)  |
| Central Province       | 0.065*** | 0.047*   | -0.002   | 0.123***  | 0.084**  | 0.164*** |
|                        | (0.015)  | (0.020)  | (0.017)  | (0.031)   | (0.026)  | (0.034)  |
| Southern Province      | 0.051*** | 0.108*** | 0.032+   | 0.192***  | -0.026   | -0.003   |
|                        | (0.015)  | (0.020)  | (0.017)  | (0.031)   | (0.026)  | (0.034)  |
| Northern Province      | -0.038+  | 0.032    | -0.064** | -0.137**  | -0.111** | 0.343*** |
|                        | (0.021)  | (0.027)  | (0.024)  | (0.043)   | (0.036)  | (0.047)  |
| Eastern Province       | 0.014    | 0.072*   | 0.042+   | 0.139**   | -0.114** | 0.147**  |
|                        | (0.022)  | (0.028)  | (0.025)  | (0.045)   | (0.038)  | (0.048)  |
| North Western Province | 0.080**  | 0.084*   | 0.008    | 0.104*    | 0.094*   | 0.201*** |
|                        | (0.026)  | (0.033)  | (0.029)  | (0.052)   | (0.044)  | (0.056)  |

|                        |                   |                   |                   |                   |                  |                   |
|------------------------|-------------------|-------------------|-------------------|-------------------|------------------|-------------------|
| North Central Province | 0.093<br>(0.070)  | 0.073<br>(0.090)  | 0.121<br>(0.080)  | 0.196<br>(0.141)  | 0.094<br>(0.120) | -0.239<br>(0.153) |
| Uva Province           | 0.114*<br>(0.053) | 0.162*<br>(0.068) | 0.030<br>(0.061)  | 0.170<br>(0.108)  | 0.113<br>(0.091) | 0.207+<br>(0.117) |
| Sabaragamuwa Province  | 0.024<br>(0.029)  | -0.002<br>(0.038) | -0.024<br>(0.033) | 0.123*<br>(0.059) | 0.062<br>(0.050) | -0.037<br>(0.064) |
| Num.Obs.               | 1049              | 1049              | 1048              | 1032              | 1049             | 1021              |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

Table D.2 In DiD regressions, most controls have an insignificant impact on business outcomes

|                | (1) Profit                | (2) Sales                      | (3) Expenses                 | (4) Salary                | (5) Paid Employees |
|----------------|---------------------------|--------------------------------|------------------------------|---------------------------|--------------------|
| (Intercept)    | 45579.357<br>(178464.661) | -427797.999<br>(1817291.607)   | -72528.454<br>(1877286.580)  | -10.205<br>(18610.154)    | 5.529<br>(28.245)  |
| treat          | -9507.198<br>(70156.839)  | 898642.087<br>(692186.796)     | 462728.259<br>(690847.180)   | 11080.732<br>(7740.754)   | 10.540<br>(11.077) |
| after          | -8356.158<br>(24785.760)  | 13939.623<br>(244014.608)      | 31654.812<br>(245131.783)    | 1003.439<br>(2777.434)    | -0.400<br>(3.908)  |
| aftertreatment | 76551.094<br>(133270.378) | 3795529.534**<br>(1355046.234) | 582948.242<br>(1403441.590)  | 13547.295<br>(14097.284)  | -0.991<br>(21.226) |
| Education_3    | 57869.288<br>(224916.073) | 132637.658<br>(2304552.374)    | -352777.056<br>(2410110.760) | -16312.341<br>(23210.500) | -5.371<br>(35.730) |
| Education_4    | 43208.509<br>(222835.320) | 6456.152<br>(2286373.870)      | -148947.694<br>(2392679.615) | -87.797<br>(35829.831)    |                    |
| Education_5    | 55999.750<br>(176325.522) | 230058.589<br>(1779725.226)    | 91336.428<br>(1860417.639)   | 581.764<br>(18930.330)    | 1.999<br>(28.317)  |
| Education_6    | 30514.019<br>(179290.117) | 128548.033<br>(1831400.794)    | -36261.332<br>(1920917.136)  | 3024.891<br>(18471.407)   | 1.522<br>(27.990)  |
| Education_7    | 19115.818<br>(353739.779) |                                | -207093.067<br>(2960004.472) | -15843.862<br>(28635.057) | -6.263<br>(43.931) |
| Education_8    | 25516.088<br>(188017.065) | 146989.130<br>(1973066.028)    | -6199.175<br>(1915466.394)   | 2310.691<br>(20820.836)   | -0.623<br>(30.475) |

|                     |                            |                              |                              |                            |                    |
|---------------------|----------------------------|------------------------------|------------------------------|----------------------------|--------------------|
| Education_9         | 40085.766<br>(170912.184)  | 148903.332<br>(1771097.815)  | 181088.072<br>(1835321.308)  | 7633.792<br>(18103.988)    | 1.108<br>(27.651)  |
| Education_10        | 70776.590<br>(167542.396)  | 256041.053<br>(1712342.875)  | 28847.323<br>(1783764.075)   | 2355.559<br>(17361.192)    | -0.015<br>(26.522) |
| Education_11        | 77300.663<br>(161135.938)  | 383830.006<br>(1650393.886)  | 97018.968<br>(1724440.817)   | 5227.853<br>(16637.108)    | -0.952<br>(25.574) |
| Education_12        | 46864.599<br>(165149.396)  | -8713.472<br>(1694488.969)   | 124709.996<br>(1762638.193)  | 2587.475<br>(17077.566)    | 0.872<br>(26.178)  |
| Education_13        | 89449.022<br>(162155.418)  | 179580.021<br>(1659686.007)  | 99328.499<br>(1732839.811)   | 12463.615<br>(16743.155)   | 1.460<br>(25.721)  |
| Education_14        | -15560.962<br>(188719.653) | 376477.905<br>(1903018.900)  | -256924.367<br>(1990642.771) | 58968.629**<br>(19116.718) | 12.427<br>(28.916) |
| Education_15        | 81399.282<br>(171251.123)  | 196079.019<br>(1747577.655)  | 9731.980<br>(1825578.949)    | 1360.439<br>(17635.846)    | -7.746<br>(27.197) |
| Education_16        | 130405.458<br>(185246.738) | -62350.249<br>(1880208.633)  | 2282617.492<br>(1964229.400) | 723.538<br>(19313.431)     | 2.510<br>(29.742)  |
| Education_17        | 77283.595<br>(168469.525)  | 2450706.395<br>(1722091.477) | 2524705.688<br>(1797834.883) | 13475.473<br>(17430.440)   | 22.069<br>(26.707) |
| Sector_Services     | -34949.848<br>(28615.925)  | 149855.809<br>(279256.958)   | -38372.384<br>(277455.850)   | -320.405<br>(3130.858)     | -1.687<br>(4.409)  |
| Sector_Retail/Sales | -25385.262<br>(24716.339)  | -46553.526<br>(247847.337)   | -257614.115<br>(249093.320)  | -827.845<br>(2761.017)     | -2.438<br>(3.958)  |
| Age of business     | -176.110<br>(1237.375)     | 2531.073<br>(11944.516)      | 18822.238<br>(11981.344)     | 348.823*<br>(136.606)      | 0.074<br>(0.198)   |
| Central Province    | 13102.279<br>(31626.786)   | 68972.304<br>(317613.062)    | 66370.108<br>(318179.674)    | -7936.273*<br>(3605.656)   | 0.252<br>(5.127)   |
| Southern Province   | 39849.035<br>(30709.108)   | 66490.258<br>(313583.293)    | 656038.809*<br>(314518.156)  | -4360.837<br>(3356.689)    | 5.518<br>(4.983)   |



|                        |              |                |               |              |          |
|------------------------|--------------|----------------|---------------|--------------|----------|
| Northern Province      | 14870.514    | -12925.486     | 183887.375    | 22326.490*** | 7.433    |
|                        | (48088.936)  | (428830.076)   | (437286.348)  | (5421.430)   | (6.951)  |
| Eastern Province       | 75791.852+   | 198011.843     | 301355.655    | -3492.460    | 5.168    |
|                        | (45331.969)  | (445350.059)   | (446065.397)  | (5007.708)   | (7.012)  |
| North Western Province | 45804.849    | 6737.231       | -120072.322   | -12392.310*  | -6.484   |
|                        | (52000.555)  | (520905.092)   | (537319.109)  | (6064.968)   | (9.550)  |
| North Central Province | 219342.137+  | -463134.701    | -394733.112   | 6292.336     | -9.916   |
|                        | (130374.990) | (1338834.975)  | (1401255.825) | (13456.426)  | (20.815) |
| Uva Province           | 83159.757    | 3697622.133*** | -714667.359   | -15649.470   | -14.504  |
|                        | (99378.180)  | (1020079.900)  | (1067726.383) | (10259.446)  | (15.856) |
| Sabaragamuwa Province  | 181702.434** | -87048.160     | 254315.985    | 2489.679     | -10.731  |
|                        | (58124.113)  | (578180.528)   | (597542.496)  | (5929.706)   | (8.944)  |
| Num.Obs.               | 869          | 923            | 983           | 771          | 876      |

Note: + p < 0.1, \* p < 0.05, \*\* p < 0.01, \*\*\* p < 0.001

## Appendix E Timeline

The impact evaluation was divided in six phases:

- **Phase 1: Baseline survey for the bank-nominated trainees.** KCG conducted this survey from June to December 2019 and included questions related to:
  - Pre-training business practices;
  - Pre-training access to finance; and
  - Pre-training business outcomes.
- **Phase 2: Training provided to bank-nominated trainees by PwC Sri Lanka.** PwC provided the training in a 'staggered' manner across eight locations from July 2019 to January 2020. In total there were eight training sessions in eight locations.
- **Phase 3: FGDs with bank-nominated trainees.** KCG and SEO conducted two FGDs with bank-nominated trainees in Colombo on 31 October and 1 November 2019.
- **Phase 4: Midline survey for the bank-nominated trainees.** A two-phased midline survey. The first phase took place in January and February 2020 when respondents from Colombo, Gampaha, Galla and Matara were surveyed face-to-face. The midline surveys for Kalutara, Ratnapura, Kandy and Anuradhapura were initially scheduled for March and June, but were postponed due to COVID-19. Ultimately, these were done over the phone in July 2020. The midline survey was initially designed to assess the progress made towards the three outcomes areas, along with getting feedback on the We-Fi programme. Due to the COVID-19 pandemic, an additional module was added to also assess the implications of COVID-19 on the selected respondents. This module was simply added to the phone surveys that took place in July 2020. The respondents who were surveyed in January and February 2020 were contacted by phone again in August 2020 to complete the COVID-19 module as well.
- **Phase 5: Endline survey for the bank-nominated trainees.** The endline survey was originally scheduled for the second half of 2020, to assess progress made towards the three outcomes areas. However, due to the COVID-19 pandemic and the political crises starting at the beginning of 2022, this survey was only conducted in July 2022 (approximately 2 years after the midline). Like the midline survey, a module was added (as compared to the original baseline questionnaire) to capture the effects of the two recent crises.
- **Phase 6: Baseline survey for the general trainees.** Initially, the plan was to conduct the full baseline survey in a 'staggered' manner (similar as for the 'bank-nominated trainee group'), face-to-face across 14 groups in 14 locations. Due to the COVID-19 pandemic, the baseline survey was split in two parts and conducted by phone instead. Directly before each participant commenced the training, KCG conducted the first part of the survey instrument, mostly consisting of the non-sensitive and shorter questions (given the lack of face-to-face contact and the associated credibility problems).
- **Phase 7: Training provided to general trainees by PwC Sri Lanka.** Initially, this physical training was planned for the first half of 2020 in a 'staggered' manner. However, due to the COVID-19 pandemic, the training was rescheduled, reshaped into an online method and postponed to March-November 2021. Nevertheless, the training was still geared towards completing a business plan for the women-owned enterprises:
  - PwC recruited 30-40 eligible training participants who also completed the first part of the baseline survey. PwC worked according to the principle of 'first-come-first-served'. As a result, participants were self-allocated to the various training groups based on the moment of their application.
  - In total, PwC provided 14 training sessions (12 in Sinhala and 2 in Tamil) in the aforementioned period. KCG planned to conduct the second part of the baseline survey directly after the training. However, due to circumstances this part had to be discontinued. This part, mostly containing the more sensitive and

complicated questions, was later added to the endline survey as 'recall' questions referring to the period directly after receiving the training.

- **Phase 8: Endline survey for the general trainees.** The endline survey was originally scheduled for the first half of 2021, to assess progress made towards the three outcomes areas. However, due to the COVID-19 pandemic and the political crises starting at the beginning of 2022, KCG completed this survey only in November 2022 (approximately 2.5 years after the baseline). This survey contained three sets of questions:
  - Questions that were also asked during part 1 of the baseline.
  - The more complicated questions that were initially part of part 2 of the baseline. KCG asked these questions twice during the endline, once referring to the period shortly after the training and once referring to the moment of conducting the endline.
  - In addition, a module was added to capture the effects of the recent crises. Everything combined, the survey assessed the business practices, access to finance and training business outcomes, pre- and post-training. In the remainder of this report, the data from the baseline period will be referred to as 'Before', the data from the recall questions in the endline survey as 'Before\*' and the actual endline questions as 'After'.
- **Phase 9: Endline survey + reconstructed baseline survey comparison group.** In November 2022, KCG completed a survey of the comparison group - randomly chosen from a NEDA database of over 70,000 WEs. The survey included similar questions to those in the survey of the general trainee group and collected data for two time periods: before the treatment group received training (June 2019-June 2021) and after (June 2021-November 2022).
- **Phase 10: FGDs with general trainees and the comparison group.** KCG conducted four FGDs with the general trainee group and one FGD with the comparison group in November 2022.<sup>23</sup>

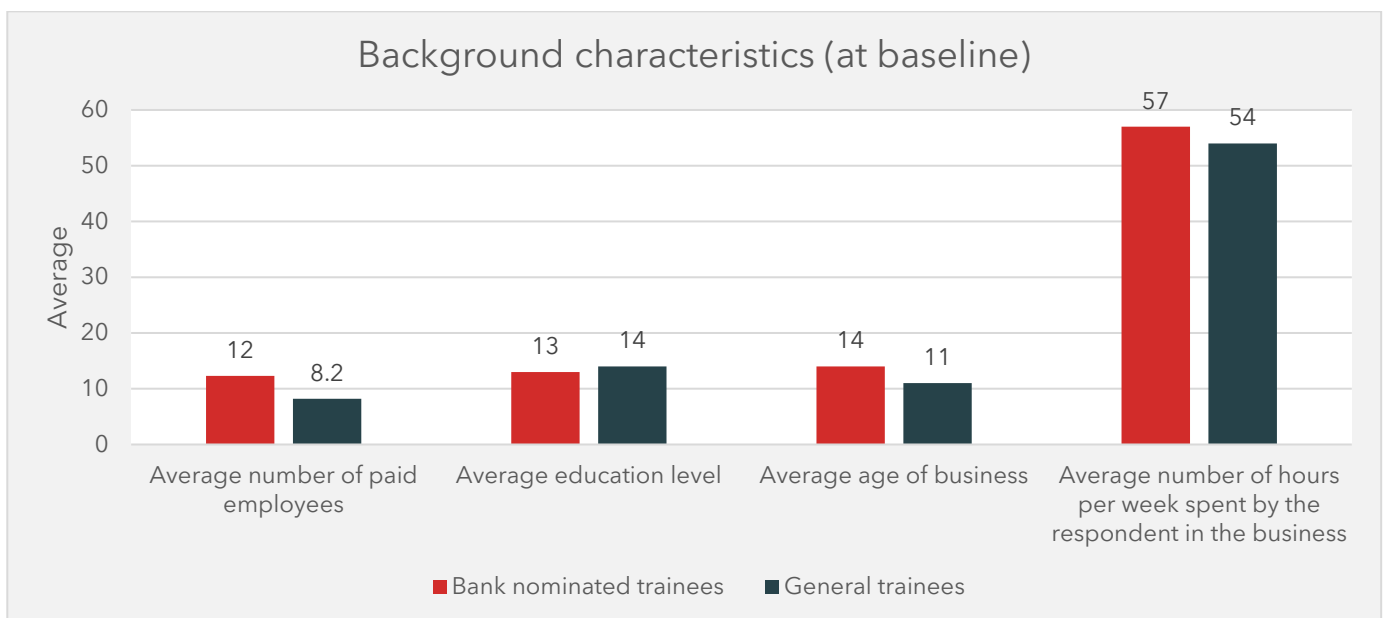
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<sup>23</sup> The initial plan was to conduct four FGDs in Sinhala and one in Tamil. Unfortunately, the latter did not work out and the resources were spent on conducting an FGD with the 'comparison group'. This group of WEs did not receive training and served as a 'benchmark', which will be discussed in more detail in the final report.

## Appendix F Comparison with Bank-nominated trainees

**The general and bank-nominated trainees had similar background characteristics at baseline (see Figure F.1).** However, the bank-nominated trainees had a higher average number of paid employees (12 compared to the 8 of general trainees) and had older businesses (an average age of 14 years instead of 11), although the differences were not large. As seen in Figure F.3, both groups also had similar levels of business performance to begin with. However, although their characteristics were fairly comparable, the differences in the way they were selected into the training (through advertisements for general trainees and by banks for bank-nominated trainees) suggest that they were not comparable groups.

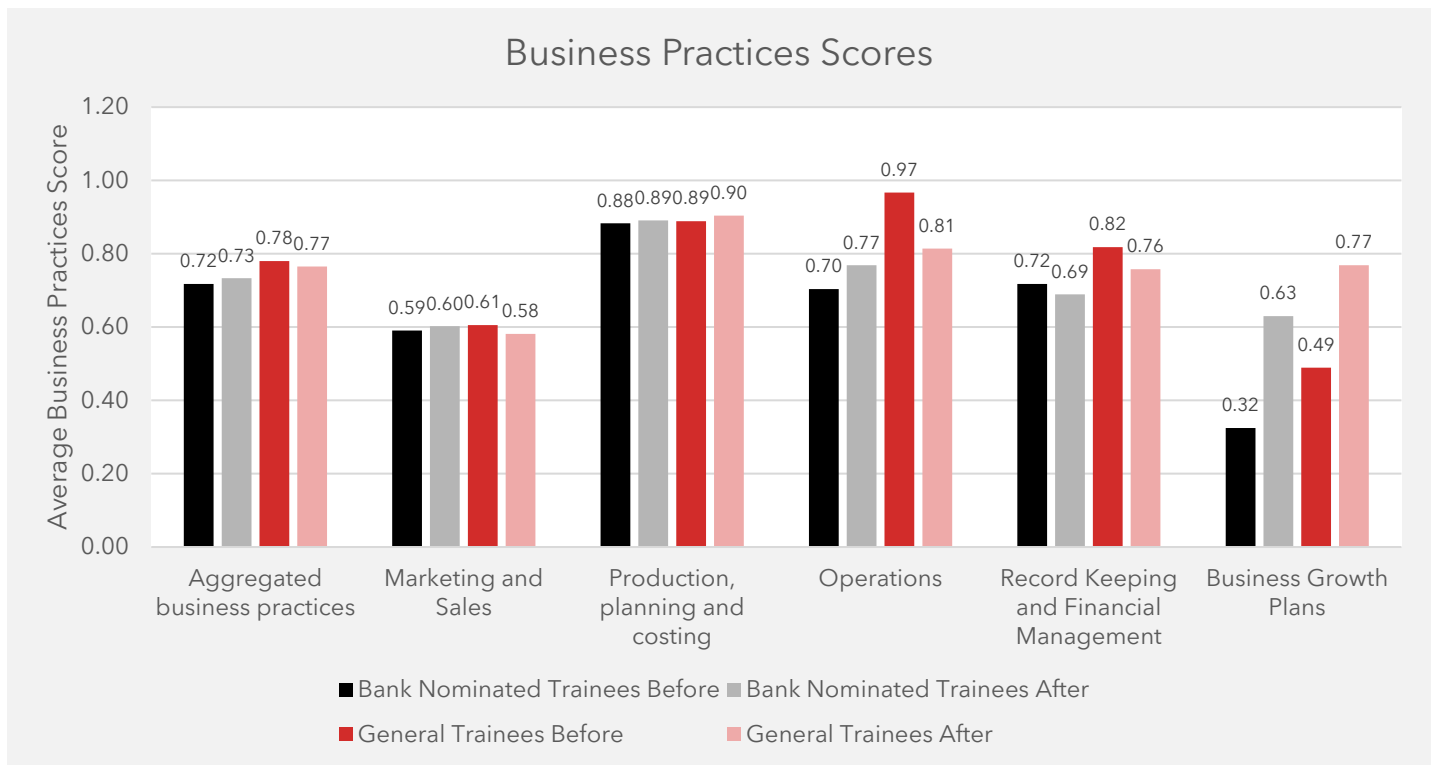
Figure F.1 The general and bank-nominated trainees had similar background characteristics at baseline



Source: SEO and KCG

**The general trainee and bank-nominated trainee group had similar levels of business practices, before and after receiving training.** Figure F.2 shows that general and bank-nominated trainees had similar levels of business practices, except for operations-related practices, where the general trainees had a much higher score pre-treatment. Both groups did not experience major changes post-treatment for most business practices. However, the general trainees saw a major reduction in their operations-related practices and both groups saw a major increase in their usage of business growth plans. Differences in the impact on business practices between online training (of general trainees) and in-person training (to bank-nominated trainees) do not appear in this analysis

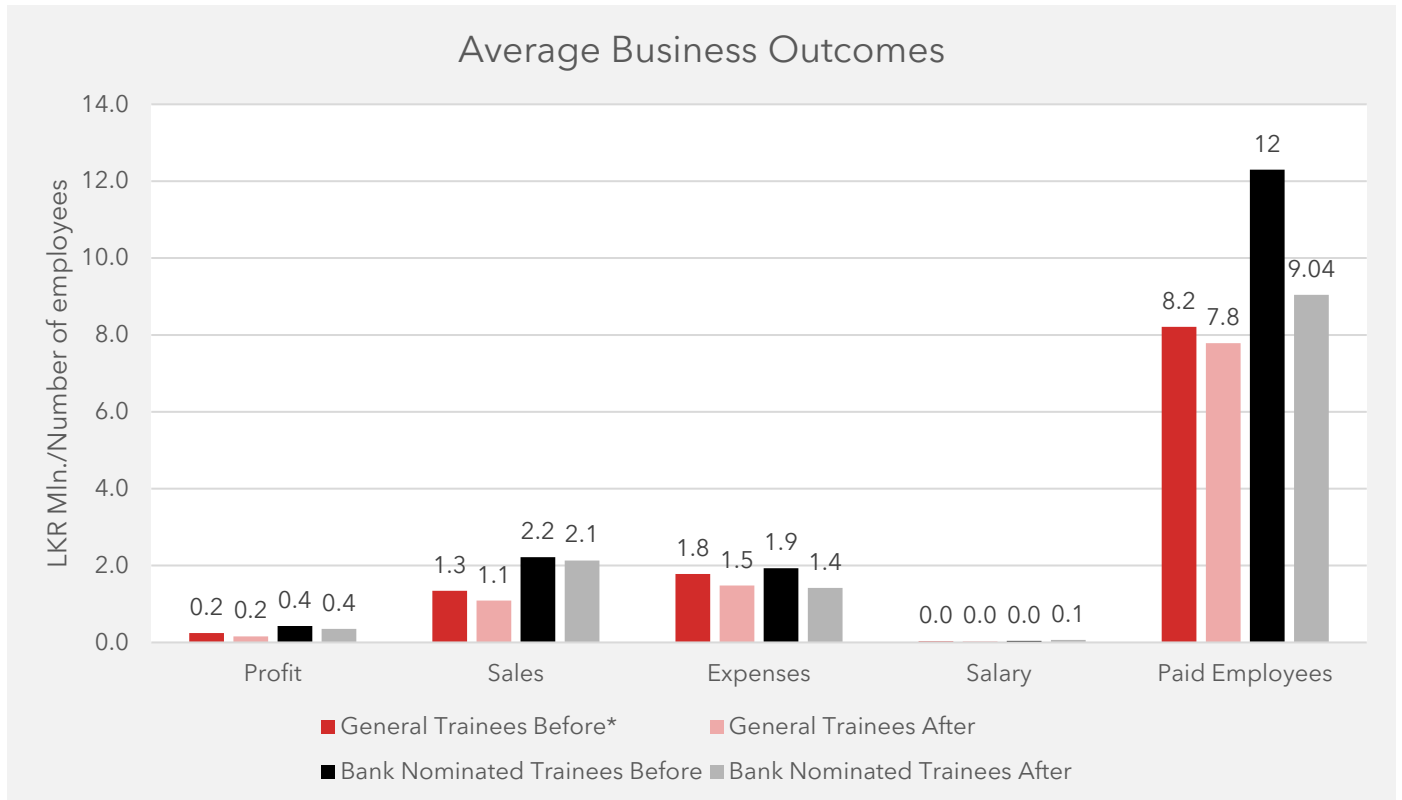
Figure F.2 The general and bank-nominated trainees had similar levels of business practices



Source: SEO and KCG

**Respondents from the bank-nominated and general trainees also had similar levels of average business outcome measures.** As shown in Figure F.3, the bank-nominated and general trainees had similar average levels of average profits, sales expenses and salaries of business owners to begin with. Bank-nominated trainees had a higher number of average paid (full-time and part-time) employees before treatment - 12 compared to the 8.2 in the general trainee group.

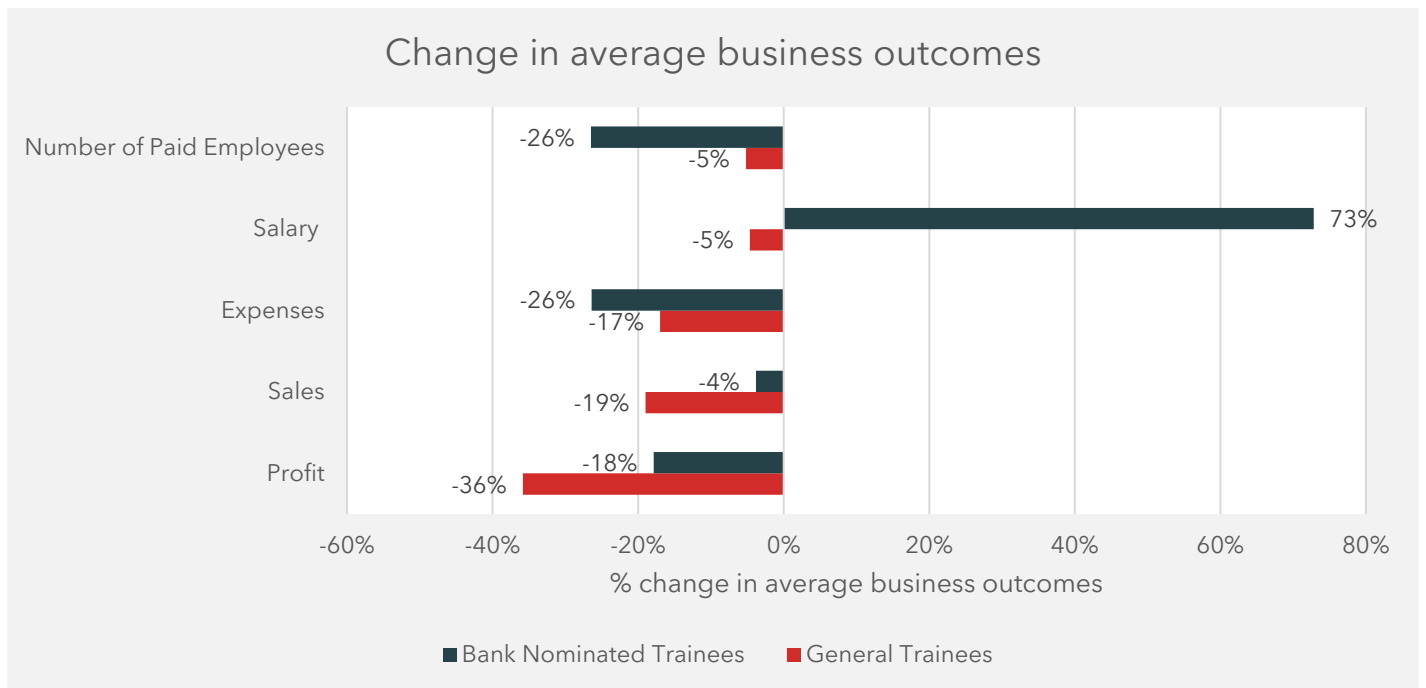
Figure F.3 The general and bank-nominated trainees had similar levels of business outcomes



Source: SEO and KCG

**Both groups experienced similar levels of deterioration in profits and sales.** As shown in Figure F.4, both the general and bank-nominated trainee group experienced reductions in their average expenses, sales, profits, and number of paid employees after the treatment. Bank-nominated trainees saw a larger reduction in average number of paid employees, but still had a higher average number of employees post-treatment (see Figure F.3). Other than this, the general trainees experienced a greater worsening of their business performance - with greater deterioration of their average sales profits, salary of business owners, and a smaller decrease in their expenses. The bank-nominated trainees even saw a 73 percent increase in their average monthly salary from the business - from LKR 38,664 to LKR 66,823. Therefore, although both groups saw a general deterioration in their business performance (probably due to the multiple national crises they faced over the survey period), the bank-nominated trainees appear to have been more resilient to the effects of the crisis. Nevertheless, the deterioration in business performance in absolute values was similar for both groups (see Figure F.3).

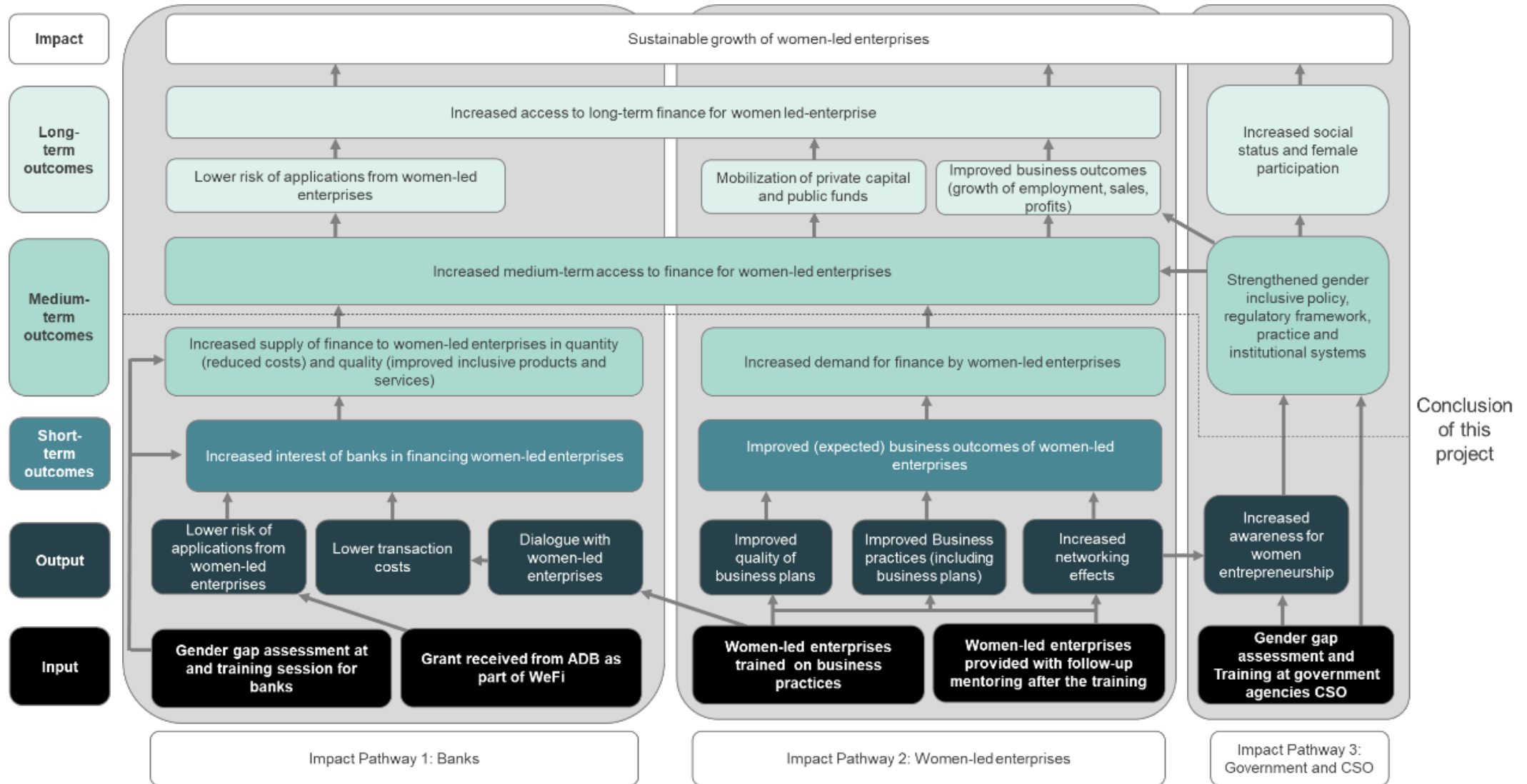
Figure F.4 General and bank-nominated trainees saw a worsening of most of their business outcomes, except expenses



Source: SEO and KCG

# Appendix G Theory of Change

Figure G.1 Reconstructed Theory of Change of the We-Fi programme





**The ToC diagram presented above consists of three ‘impact pathways’ through which the We-Fi programme was expected to contribute to the overall goal.** A ToC is a means to understand how the activities of an intervention are expected to lead to a desired outcome and other effects. It makes explicit the impact pathways (the links from inputs, outputs and outcomes to the ultimate impact) and also explains the underlying assumptions, showing why and under what conditions the various links in the impact pathway are expected to work. The three pathways are:

1. Banks
2. Women-led enterprises
3. Government and Civil Society Organisations (CSOs)

Each pathway starts at the bottom of the figure with a different set of inputs and follows a different trajectory towards the overall goal of sustainable growth of women-led enterprises in Sri Lanka.

### **Impact pathway 1: Banks**

- **Inputs:** This pathway starts with a gender gap assessment and training sessions for banks, as well as a grant provided to banks by ADB.
- **Outputs:** The grant is expected to contribute to a lower risk of applications from women-led enterprises (de-risking). At the same time, the training provided to WEs through the We-Fi programme (Impact pathway 2) provides an opportunity to open up the dialogue. In turn, this is expected to contribute to a better mutual understanding and therefore to lower transactions costs.
- **Short-term outcomes:** The lower transactions costs as well as the lower risks associated with financing women-led enterprises, combined with the gender gap assessment and the training provided to banks, is expected to lead to higher interest from banks in financing these enterprises.
- **Medium-term outcomes:** As a result, the overall access to finance for women-led enterprises is expected to increase, both in quantity (more widely available at lower costs) and in quality (improved inclusive services and products).
- **Long-term outcomes:** In the long term, access to finance is expected to increase even further due to the fact that banks have become more familiar with financing female SMEs in general, possibly positively influenced by the fact that the first wave of WEs have shown to be proper borrowers (demonstration effects).

*This impact pathway is not part of this impact evaluation.*

### **Impact pathway 2: Women-led enterprises**

- **Inputs:** This pathway starts with the training provided by PwC Sri Lanka to selected WEs (the bank-nominated and general trainees).
- **Outputs:** The expected outputs are threefold: 1) the training is expected to directly contribute to improved business practices among participating WEs (hypothesis 1), 2) the training is expected to directly contribute to better business plans (that WEs can present to banks), and 3) by being in contact with others, participating WEs are expected to be able to exchange best practices and develop a network of peers.
- **Short-term outcomes:** These improved business practices are in turn expected to contribute to improved business outcomes (hypothesis 3).
- **Medium-term outcomes:** In the medium term, the development of women-led enterprises is expected to increase the demand for finance from these same enterprises. Combined with the increased supply of finance (as a result of developments in impact pathway 1), this is expected to contribute to increased access to finance for women-led enterprises.

- Long-term outcomes: The increased financing from partnering banks is expected to further increase the business outcomes of women-led enterprises and, further encouraged by the demonstration effects, to mobilize other financiers to engage in SME finance for women.

### **Impact pathway 3: Government and CSOs**

- Inputs: This pathway starts with a gender gap assessment at the government and CSOs.
- Outputs: This gender gap assessment is expected to contribute to increased awareness of female entrepreneurship.
- Medium-term outcomes: In the medium term, this increased awareness is expected to contribute to more inclusive regulatory frameworks and institutional systems.
- Long-term outcomes: In the long term, this is expected to contribute to the increased social status of women and overall female participation.

*This impact pathway is not part of this impact evaluation.*



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